REMEDIAL ACTION WORKPLAN
DOBBS FERRY WATERFRONT PARK
SITE NO. V-00628-3
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

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EXECUTIVE SUMMARY

The Village of Dobbs Ferry has conducted soil and groundwater quality investigations on a vacant parcel of land formerly operated as a municipal landfill by the Village of Dobbs Ferry. The property is intended for reuse as a 300 feet by 170 feet recreational field known as the Dobbs Ferry Waterfront Park. This Remedial Action Workplan (RAWP) has been prepared on behalf of the Village of Dobbs in order to redevelop the property. The work conducted by the Village of Dobbs Ferry is being conducted in accordance with the Voluntary Cleanup Agreement (VCA) between the Village of Dobbs Ferry and the New York State Department of Environmental Conservation (NYSDEC) dated July 3, 2003 and the Amendment to the Voluntary Cleanup Agreement executed on October 25, 2005.

The results of investigations conducted at the Dobbs Ferry Waterfront Park have revealed that soil and groundwater contamination are present. The Site surface soils have been found to contain concentrations of pesticides, semi-volatile organic compounds (SVOCs) (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene), and metals (chromium, copper, nickel, zinc) above the NYSDEC Recommended Soil Cleanup Objective (RSCO). The Site subsurface soils have been found to contain concentrations of SVOCs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene), chlordane, and metals (arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, and zinc) above the NYSDEC RSCO.

Groundwater samples collected at the Site indicate concentrations of VOCs (benzene, chlorobenzene, toluene, xylenes) and pesticides (4,4-DDD and 4,4-DDE), and metals (antimony, iron, lead, manganese, sodium) above the NYSDEC Groundwater Standard (GS).

Visual observations of subsurface material indicated the presence of a large amount of debris (household and construction type). Aside from the concentrations of soil contaminants above the NYSDEC RSCO, the presence of this type of debris has been considered in the design of the field. Geotechnical issues such as soil settling and debris shifting have been taken into consideration in the final site design.

Engineering and institutional controls are proposed for Site soil and groundwater contamination. The conceptual plan for soil remediation and construction of the field includes the following:

- Clearing and grubbing of the Site.
- Installation of erosion controls and regrading to level the Site.

- Placement of a geotextile fabric as a demarcation barrier.

- Placement of a cover system to include 18 inches of imported fill, 6 inches of top soil and a covering of sod or seeded grass. Both the imported fill and the top soil will be sampled and shall meet all soil cleanup objectives stated in TAGM 4046.

- Installation of an entrance pathway from the parking lot.

- Installation of a 6 feet high chain-link perimeter fence.

Since the proposed remedy will result in contamination above unrestricted levels remaining onsite, institutional control in the form of a Deed Restriction will be required for the remedy. The Deed Restriction will:

- Restrict the contemplated use of the Site to "active recreational use" which is a land use for the primary purpose of establishing an athletic playing field;

- Restrict any development that would impact the integrity of the engineered cap;

- Restrict the use of onsite groundwater; and

- Require operation, management and monitoring of the Site is in accordance with the provisions of the Site Management Plan (SMP) approved by the NYSDEC.

The Site Management Plan (SMP) will include:

- An Institutional Controls/Engineering Controls (IC/EC) control plan that will:

  (i) manage residual contaminated soils that are excavated during future activities;
  (ii) evaluate potential for/mitigation of vapor intrusion for future buildings onsite;
  (iii) maintain EE's use restrictions regarding site development or groundwater use
  (iv) establish requirements for IC/EC certification on a periodic basis.

- A long term groundwater monitoring plan.

- An operation and maintenance plan with detailed procedures for maintenance of the engineered cap, related storm water management system and Site fencing.

- The method(s) for managing the settling of historic fill after regrading in cap construction, and in the maintenance and monitoring of the cap and the playing fields.

An active remedial approach is not being proposed for the groundwater contamination, however groundwater use will be prohibited and long-term groundwater quality monitoring will be conducted as detailed in the SMP.

Documents that will be submitted to NYSDEC for review and approval, subsequent to receiving an RAWP approval and prior to implementation of the RAWP, include the above mentioned Deed Restriction and Site Management Plan. In addition, the following construction contractor documents will also be submitted:

- Waste Management Plan to include the management of all waste generated (decon water, soil, solid waste, etc.).

- Erosion Control Plan which, in general, will include erosion control around the entire site unless there is a site-specific justification.

- Construction Site Management Plan which shall include, but not be limited to, line of communications, site security, tentative schedule and order of performance of the work elements.

REMEDIAL ACTION WORKPLAN
DOBBS FERRY WATERFRONT PARK
SITE NO. V-00628-3
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

1.0 INTRODUCTION AND PURPOSE

This Remedial Action Workplan (RAWP) has been prepared on behalf of the Village of Dobbs Ferry, New York in accordance with the New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Program (VCP) Guide. The RAWP is being prepared for the open field that was formerly a municipal landfill located at the Dobbs Ferry Waterfront Park in Dobbs Ferry, New York (hereafter "the Site"). The regional location of the Site is shown as **Figure 1**. A Site Plan is presented in **Figure 2** based upon the recent survey conducted by Paul J. Petretti dated July 27, 2005 appearing in **Appendix 1**.

The work at the Dobbs Ferry Waterfront Park is being conducted in accordance with the Voluntary Cleanup Agreement (VCA) between the Village of Dobbs Ferry and the NYSDEC dated July 3, 2003 and the Amendment to the Voluntary Cleanup Agreement executed on October 25, 2005 (Site No. V-00628-3).

The purpose of this RAWP is to (i) provide information related to the soil and groundwater contamination present at the Site, and (ii) provide details regarding the selection, design and implementation of a remedial action for the Site that is protective of both public health and the environment.

Citizen Participation Plan activities planned for the Site and conducted by the NYSDEC include (i) the issuance of a notice of the availability of the RAWP for review and comment in the Environmental Notice Bulletin, (ii) notification to Westchester County and the Village of Dobbs Ferry that the RAWP is available for review, and (iii) preparation of a Site Fact Sheet for distribution to adjacent property owners, elected officials, any relevant community groups and local media.

1.1 SITE DESCRIPTION

The Site is presently a vacant parcel of land formerly operated as a municipal landfill by the Village of Dobbs Ferry. The property is intended for reuse as a 300 feet by 170 feet recreational field. The area immediately surrounding the Site consists of railroad tracks to the east, private property to the north, parking lot to the south and the Hudson River to the west. The site elevation ranges from approximately 18 to 20 feet NGVD.

1.2 SITE HISTORY

Based on the review of a Site Inspection Report and Hazard Ranking System Model of the Dobbs Ferry Riverfront Park prepared by NUS Corporation in 1986 for the US Environmental Protection Agency (USEPA), the Site was utilized as a municipal landfill from 1950 to the early 1970's. The landfill, which is not capped or lined, was apparently utilized for construction and demolition debris. However, Stauffer Chemical Corp. Ardsley Plant reportedly backfilled the landfill with approximately 200 tons of inorganic and salt bearing wastes between 1950 and 1956. The NUS Corporation Sample Location Map showing the approximate locations of buried waste and fill appears in **Appendix 2**.

Based on information provided by the Director of Public Works Mr. Jim Dunn for the Village of Dobbs Ferry, as much as five feet of materials consisting of soil, rock, street sweepings and mulch have been placed on top of the original landfill surface since closure.

1.3 PREVIOUS INVESTIGATIONS

US Environmental Protection Agency (1986)

A Site Inspection Report and Hazard Ranking System Model of the Dobbs Ferry Riverfront Park was prepared by NUS Corporation in 1986 for the USEPA. The results indicated that the site was utilized as a municipal landfill. NUS collected seven surface samples from the site in 1986 for analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/PCBs and metals. The analytical data tables for this investigation appear in **Appendix 2**. The analytical results indicated the presence of pesticides and SVOCs. The pesticides were thought to be from the gardening plot next to the site. The SVOCs were thought to be from asphalt materials that had been disposed.

Village of Dobbs Ferry (2002)

The Village of Dobbs Ferry collected five surface soil samples from 0 to 0.5 feet below ground surface (bgs) in May 2002 from the four corners of the field and one from the center, and analyzed them for metals, hydrocarbons and pesticides/PCBs. The sample location plan and analytical data tables for this investigation appear in **Appendix 3**. The results indicated that the concentrations of several metals (chromium, copper, nickel, zinc) were above the NYSDEC Recommended Soil Cleanup Objective (RSCO) concentrations.

Potomac-Hudson Environmental, Inc. (2002)

A limited site investigation consisting of the installation and sampling of five test pits was performed by PHEnv in October 2002 on behalf of the Village of Dobbs Ferry in order to supplement the May 2002 investigation conducted independently by the Village of Dobbs Ferry. The test pits were excavated to a depth between 10 and 11 feet bgs. Two soil samples (one surface at 0 to 0.5 ft bgs and one subsurface at 9.5 to 10 ft bgs) were obtained from each test pit location. The surface samples were analyzed only for VOCs and SVOCs in order to fill in

missing data from the May 2002 Village of Dobbs Ferry sampling program. The subsurface samples were analyzed for the full Priority Pollutant plus 40 unknowns (PP+40) and total petroleum hydrocarbons (TPHC). Appropriate field blank and duplicates samples were obtained as part of this investigation. The Site Investigation Report for this sampling and analysis program was submitted to NYSDEC in December 2002. The sample location plan and analytical data tables for this investigation appear in **Appendix 3**.

The results of the soil sampling and analysis program were compared to the NYSDEC RSCOs. Material observed at all test pit locations to the depths investigated (10 to 11 feet bgs) can be described as manmade fill. The soil matrix consisted of black and brown fine to coarse sand, silt, gravel, cobbles and boulders. Manmade material encountered included processed wood, styrofoam, tiles, newspapers, books, rope, concrete, wood chips, cloth, plastic bags, fan blades, wire, rubber, miscellaneous metal, movie film, a can of tire inflator, slate, and clay pipe. A greater quantity of these manmade materials was observed in test pits TP-1, TP-2 and TP-3. Water appeared to be approximately 10 to 11 feet bgs. Given the nature of materials encountered, it is uncertain whether this was true groundwater or water trapped or perched in the manmade fill.

The analytical results indicate the following:

- The concentrations of volatile organics in the five surface and five subsurface samples were all below the NYSDEC RSCOs.

- The concentrations of one or more polycyclic aromatic hydrocarbons (PAH) were found to exceed the NYSDEC RSCOs in all but one surface sample (TP-3A). The PAH compounds that exceeded the NYSDEC RSCOs at one or more of these locations are benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene.

- Metals were found in exceedance of the NYSDEC RSCOs at all five subsurface locations (and the duplicate location). The metals in exceedance of the RSCO at one or more of these locations are cadmium, chromium, copper, lead, mercury, nickel and zinc. Although there is no specific standard for lead, the concentrations were compared to the USEPA Residential Lead Hazard Standards (TSCA Section 403) that are intended to be protective of children in playground situations. Since the Site is intended for redevelopment as a recreational field, the concentrations found in the Site soils were compared to the standards for lead in soil. Under the USEPA regulation, a soil is considered hazardous if the concentrations are greater than 400 ppm in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. On this basis, the lead concentrations at sample locations TP-2B and TP-3B were both above 400 ppm.

- The concentrations of all PCBs were not-detected. All pesticides concentrations were below the NYSDEC RSCOs with the exception of chlordane in the duplicate sample (TP-5C) at location TP-5B in the subsurface, which was only very slightly elevated above the

NYSDEC RSCO of 0.54 ppm. The concentration was below the NYSDEC RSCO Protective of Groundwater Quality of 2 ppm.

- The concentrations of cyanide and phenols were all not-detected in the five subsurface samples analyzed.

- Although there is no specific standard for TPH, the concentrations detected ranged from 1000 ppm to 2730 ppm.

The soil contaminants in exceedance of the NYSDEC RSCOs are generally scattered throughout the Site, with no readily apparent pattern of soil contamination.

Photoionization detector readings were not detected in all test pits except TP-1 (10 - 12 ppm at 10 feet bgs) and TP-3 (3-6 ppm from 6 to 10 feet bgs). Generally, detected readings were encountered in the deeper portion of the test pits at the sample locations within the center and southeastern portion of the Site.

VCP Supplemental Site Investigation - Potomac-Hudson Environmental, Inc. (2005)

A Supplemental Site Investigation (SI) was conducted under the Voluntary Cleanup Program in 2005. The purpose of the SI was to assess the landfill's impact on groundwater quality, to directly observe subsurface conditions in the fill area and to supplement subsurface soil data. The SI consisted of the sampling and analysis of three (3) groundwater grab samples collected from temporary well points, the observation of fill materials and soil beneath the fill material during the excavation of four (4) test pits, the collection and analysis of soil samples from within the fill material, and the collection and analysis of three (3) soil samples obtained during temporary well point installation. Appropriate field blank and duplicates samples were obtained as part of this investigation. The Data Usability Summary Report (DUSR) for the SI appears in **Appendix 4**. The SI was formulated to address investigation issues raised by NYSDEC in the correspondence dated September 23, 2003 and January 15, 2004. NYSDEC requested additional test pits based on the previous observations of municipal and other types of waste. NYSDEC requested a groundwater quality investigation to address potential impact of the previously identified presence of metals and SVOCs in the subsurface soil.

The four test pits designated TP-6 through TP-9 were excavated to a depth between 13 and 15 feet bgs. The sample location plan and analytical data tables for this investigation appear in **Appendix 4**.

Following are findings regarding soil:

- The results for all volatile organic compounds, PCB's pesticides, herbicides and cyanide were either reported as Not-Detected or at concentrations below the RSCOs.

- The sample obtained from TP-6 had concentrations that exceeded the RSCOs for benzo(a)anthracene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, cadmium, chromium, copper, iron, mercury, nickel and zinc.

- The sample obtained from TP-7 had concentrations that exceeded the RSCOs for benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, chromium, copper, iron, mercury, nickel and zinc.

- The sample obtained from TP-8 had concentrations that exceeded the RSCOs for benzo(a)pyrene, chromium, iron, mercury, nickel and zinc.

- The sample obtained from TP-9 had concentrations that exceeded the RSCOs for benzo(a)anthracene, benzo(a)pyrene, arsenic chromium, copper, iron, nickel and zinc.

Soil samples were also collected from the temporary well points (W1-S, W2-S and W3-S).

- The results for all volatile organic compounds, PCB's pesticides, herbicides and cyanide were either reported as Not-Detected or at concentrations below the RSCOs.

- The sample W1-S had concentrations that exceeded the RSCOs for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, arsenic, chromium, copper, iron, mercury, nickel, selenium, and zinc.

- The sample W2-S had concentrations that exceeded the RSCOs for benzo(a)pyrene, cadmium chromium, copper, iron, mercury, nickel, selenium, and zinc.

- The sample W3-S had concentrations that exceeded the RSCOs for benzo(a)anthracene, benzo(a)pyrene, arsenic, cadmium, chromium, copper, iron, mercury, nickel, selenium, and zinc.

The results of the supplemental soil investigation confirmed the presence of metals and PAH compounds at depth in the four test pits and three soil borings.

Groundwater samples were collected from the three temporary well points (W1-W, W2-W/and its duplicate sample W4-W and W3-W). The results were compared to the NYSDEC Groundwater Standards (GS). For metals, the results were compared to the groundwater standards for individual metals (Water Class GA) found in the "Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations, 6 NYCRR Part 703.

The following findings regarding groundwater were made:

- The results for all SVOCs, PCB's and cyanide were either reported as Not-Detected or at concentrations below the GS.

- The results for VOC analyses found that sample W1-W had concentrations that exceeded the GS for benzene, chlorobenzene, and toluene. The sample W3-W had concentrations that exceeded the GS for benzene, chlorobenzene, and xylene.

- The sample W2-W had concentrations that exceeded the GS for xylenes, 4,4'-DDD, and 4,4'-DDE.

- The results for all metals indicate that the concentrations of antimony in W2-W and W3-W were above the GS of 3 ug/l. The concentrations of iron in all three samples and the duplicate were above the GS of 300 ug/l. The concentrations of lead in W1-W and W2-W were above the GS of 25 ug/l. The concentrations of manganese in all three samples and the duplicate were above the GS of 300 ug/l. The concentrations of sodium in all three samples and the duplicate were above the GS of 20,000 ug/l.

The NYSDEC, via email dated June 28, 2005, indicated that groundwater use at the Site should be prohibited and that it did not appear likely that the Site is impacting the Hudson River.

1.4 SUMMARY OF ENVIRONMENTAL CONDITIONS

Based on the results of the previous soil investigations conducted in 1986, 2002 and 2005, the Site surface soils have been found to contain concentrations of pesticides, SVOCs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene), and metals (chromium, copper, nickel, zinc) above the NYSDEC RSCO. The Site subsurface soils have been found to contain concentrations of SVOCs ((benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene), chlordane, and metals (arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, and zinc) above the NYSDEC RSCO.

Groundwater samples collected at the Site indicate concentrations of VOCs (benzene, chlorobenzene, toluene, xylenes) and pesticides (4,4-DDD and 4,4-DDE), and metals (antimony, iron, lead, manganese, sodium) above the NYSDEC GS.

Visual observations during both test pit programs indicated the presence of a large amount of debris (household and construction type). Aside from the concentrations of soil contaminants above the NYSDEC RSCO, the presence of this type of debris will be considered in the design of the field. Geotechnical issues such as soil settling and debris shifting will be taken into consideration in the final site design.

1.5 SUMMARY OF REMEDY

Engineering and institutional controls are proposed for Site soil and groundwater contamination. The engineering control consists of a two feet clean soil cap. A Site Plan showing the final site grades after capping is included as **Appendix 1**. The conceptual plan for soil remediation and construction of the field includes:

- Scraping off high spots and filling in low spots
- Capping of the Site soils with geotextile fabric underneath two feet of clean fill, including sod and/or grass cover
- Fencing the field area and providing an entrance pathway from the parking lot area
- Completion of a Deed Restriction for Contaminated Fill

- Prohibiting groundwater use

Appendix 5 provides the Waterfront Park Open Field Plan & Notes (Drawing S-1) and Additional Notes & Details (Drawing S-2) for the proposed remedial action. A draft Deed Restriction and draft Site Management Plan will be prepared for the Site. The Site Management Plan will be prepared to address the management of any subsurface materials that may be brought to the surface in the future for maintenance/repair activities conducted in the vicinity of the field and will provide details of the long-term monitoring of groundwater quality. The draft Deed Restriction will be prepared for the Site to address the presence of soil contamination underneath the cap. The Deed Restriction will be the institutional control that serves as the enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and of ensuring the potential restriction of future uses of the Site. The Deed Restriction will provide a legal description of the property subject to the Deed Restriction, and will detail the engineering controls at the Site and the applicable Site restrictions that will include, but not be limited to, prohibiting the use of groundwater for any purposes, and prohibiting any excavation below the geo-membrane marker layer without the implementation of the Site Management Plan for the Site.

1.6 CONTEMPLATED USE

The Village of Dobbs Ferry is interested in redevelopment of the Site as a restricted, active recreational playing field measuring 300 feet by 170 feet. The field will be fenced with 15 feet safety zones on sidelines and 10 feet safety zones on the end lines.

2.0 ENGINEERING EVALUATION OF THE REMEDY/REMEDIAL ACTION SELECTION REPORT

2.1 INTRODUCTION

This Remedial Action Selection (RAS) Report for the proposed Dobbs Ferry Waterfront Park in Dobbs Ferry, New York (the Site) has been prepared in accordance with the NYSDEC Voluntary Cleanup Program Guide and 6 NYCRR 375-1.10(c). The Site is presently a vacant parcel of land formerly operated as a municipal landfill by the Village of Dobbs Ferry. The property is intended for reuse as a 300 feet by 170 feet recreational field. The area immediately surrounding the Site consists of railroad tracks to the east, private property to the north, parking lot to the south and the Hudson River to the west. The Village of Dobbs Ferry has conducted two Site Investigation (SI) programs in order to identify environmental issues related to the redevelopment of the site as an athletic field.

The purpose of the RAS Report is to demonstrate and document to the NYSDEC how the selected remedial action attains the criteria specified in 6 NYCRR 375-1.10(c).

The report is intended to provide information on the remedy-specific and site-specific characteristics to allow NYSDEC to evaluate the selected remedial action. The remedial action

will include the recreational field which will act as a cap of surface soils, the preparation of a Deed Restriction, the preparation of a Site Management Plan that will be used to manage any subsurface material brought to the surface at some future date, and a prohibition on the use of groundwater. A remedial action is not being proposed that meets the Standards, Criteria and Guidance (SCG) due to the low levels of contamination, volume of material that would require excavation, relatively high levels of groundwater and the excessive costs associated with a SCG compliant remedial action.

2.2 DESCRIPTION OF THE PROPOSED REMEDIAL ACTION

2.2.1 State Environmental Quality Review Act (SEQRA)

The Dobbs Ferry Waterfront Park will be an unlisted action under SEQRA. The Village of Dobbs Ferry submitted a negative declaration on April 4, 2006. The Dobbs Ferry Village Board has been declared lead agency.

2.2.2 Description of Site Conditions/Contaminants

All media of concern have been identified from the remedial investigations of the Site. Based on the results of two Site Investigation programs conducted at the Site in 2002 and 2005, the subsurface material observed at test pit locations can be described as manmade fill. The soil matrix consisted of black and brown fine to coarse sand, silt, gravel, cobbles and boulders. Visual observations during both test pit programs indicated the presence of a large amount of debris (household and construction type). Manmade material encountered included processed wood, styrofoam, tiles, newspapers, books, rope, concrete, wood chips, cloth, plastic bags, fan blades, wire, rubber, miscellaneous metal, movie film, a can of tire inflator, slate, clay pipe and other assorted debris. Aside from the concentrations of soil contaminants above the NYSDEC RSCOs, the presence of this type of debris have been considered in the design of the field. Geotechnical issues such as soil settling and debris shifting have been taken into consideration in the final site design.

The soil analytical results indicated that the concentrations of volatile organics, PCBs, cyanide and phenols were below the NYSDEC RSCOs. The concentrations of several PAH were found to exceed the NYSDEC RSCOs in the majority of the soil samples. The PAH compounds that exceeded the NYSDEC RSCOs at one or more of these locations are benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene. The concentrations of several metals were found in exceedance of the NYSDEC RSCOs at a number of locations. The metals in exceedance of the RSCO at one or more of these locations are arsenic, cadmium, chromium, copper, lead, iron, mercury, nickel, selenium and zinc. Although there is no specific standard for lead, the concentrations were compared to the USEPA Residential Lead Hazard Standards (TSCA Section 403) that are intended to be protective of children in playground situations. Since the Site is intended for redevelopment as a recreational field, the concentrations found in the Site soils were compared to the standards for lead in soil. Under the USEPA regulation, a soil is considered hazardous if the concentrations are greater than 400 ppm in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. On this basis, the lead concentrations at three

locations were above 400 ppm. The concentrations of all pesticides concentrations were below the NYSDEC RSCOs with the exception of chlordane in one duplicate sample (TP-5C) at location TP-5B in the subsurface, which was only very slightly elevated above the NYSDEC RSCO of 0.54 ppm. The concentration was below the NYSDEC RSCO Protective of Groundwater Quality of 2 ppm.

The groundwater results from the 2005 sampling event indicated that the results for all SVOCs, PCB's and cyanide were either reported as Not-Detected or at concentrations below the NYSDEC GS. One sample (W1-W) had concentrations that exceeded the GS for benzene, chlorobenzene, and toluene. One sample (W2-W) had concentrations that exceeded the GS for xylenes, 4,4'-DDD, and 4,4'-DDE. One sample (W3-W) had concentrations that exceeded the GS for benzene, chlorobenzene, and xylene. The results for all metals indicate that the concentrations of antimony in W2-W and W3-W were above the GS of 3 ug/l. The concentrations of iron in all three samples and the duplicate were above the GS of 300 ug/l. The concentrations of lead in W1-W and W2-W were above the GS of 25 ug/l. The concentrations of manganese in all three samples and the duplicate were above the GS of 300 ug/l. The concentrations of sodium in all three samples and the duplicate were above the GS of 20,000 ug/l. A remedial action is not being proposed for groundwater contamination due to low levels of contamination and a lack of off-site impact.

2.2.3 Description of Proposed Remedial Action

An unrestricted use remedy was not selected to address soil contamination at the Site based on the following:

- The landfill is characterized as containing urban fill and municipal trash with relatively low levels of contamination in subsurface soil and groundwater. No hazardous wastes or areas that could be defined as a "source area" were identified during the investigation that would justify a removal action. Excavation of the entire waste mass is not feasible due to large volume, high groundwater which would require extensive dewatering and the associated, excessive costs. Further, USEPA guidance identifies capping as a 'presumptive remedy' for municipal landfills and that guidance is appropriate for this site. The remedy will include a cover system to prevent direct contact with surface and subsurface soil/wastes and a Site Management Plan (SMP) will be developed to manage residual contamination at the Site that might be brought to the surface after the completion of the cap.

An active remedial approach is not being proposed to address the groundwater contaminant concentrations above Standards, Criteria, Guidance (SCGs) based upon the following:

- The source of the contamination is urban fill and municipal solid waste. No hazardous waste or "source areas" have been identified during the investigation that could be addressed. Active groundwater remediation is not justified because of the relatively low level of site contaminants and the lack use of the groundwater resource. The area is serviced by municipal water and there are no structures on-site that could pose a potential

vapor intrusion concern. The remedy will include a Deed Restriction that will restrict the use of site groundwater.

Engineering and institutional controls are proposed for Site soil and groundwater contamination. The conceptual plan for soil remediation and construction of the field includes the following:

- Clearing and grubbing of the Site.
- Installation of erosion controls and regrading to level the Site.
- Placement of a geotextile fabric as a demarcation barrier.
- Placement of a cover system to include 18 inches of imported fill, 6 inches of top soil and a covering of sod or seeded grass. Both the imported fill and the top soil will be sampled and shall meet all soil cleanup objectives stated in TAGM 4046.
- Installation of an entrance pathway from the parking lot.
- Installation of a 6 feet high chain-link perimeter fence.

Since the proposed remedy will result in contamination above unrestricted levels remaining onsite, institutional control in the form of a Deed Restriction will be required for the remedy. The Deed Restriction will:

- Restrict the contemplated use of the site to "active recreational use" which is a land use for the primary purpose of establishing an athletic playing field;
- Restrict any development that would impact the integrity of the engineered cap;
- Restrict the use of onsite groundwater; and
- Require operation, management and monitoring of the site is in accordance with the provisions of the Site Management Plan (SMP) approved by the NYSDEC.

The Site Management Plan (SMP) will include:

- An Institutional Controls/Engineering Controls (IC/EC) control plan that will:

  (i) manage residual contaminated soils that are excavated during future activities;
  (ii) evaluate potential for/mitigation of vapor intrusion for future buildings onsite;
  (iii) maintain EE's use restrictions regarding site development or groundwater use
  (iv) establish requirements for IC/EC certification on a periodic basis.

- A long term groundwater monitoring plan.

- An operation and maintenance plan with detailed procedures for maintenance of the engineered cap, related storm water management system and Site fencing.

- The method(s) for managing the settling of historic fill after regrading in cap construction, and in the maintenance and monitoring of the cap and the playing fields.

The Village of Dobbs Ferry is interested in redevelopment of the Site as a recreational playing field. **Appendix 5** provides the Waterfront Park Open Field Plan & Notes (Drawing S-1) and Additional Notes & Details (Drawing S-2) for the proposed remedial action. These plans provide all details related to the implementation of the proposed remedial action including but not limited to grading and removals, planting, sedimentation and erosion control, fencing construction details and anti-tracking pad design. Provisions will be made for work pertaining to implementation of the RAWP so that vehicles leaving the Site do not transport contaminated soils off-site. The conceptual plan for soil remediation and construction of the field includes scraping off high spots and filling in low spots, then covering the Site with a geotextile fabric underneath two feet of clean fill, including six inches of topsoil and the covering with sod and/or grass. As shown on the Waterfront Park Open Field Plan & Notes drawing the grading extends beyond the perimeter fence line. The Village of Dobbs Ferry has indicated that there would be no excavation for subsurface utilities or drains. The recreational field will not have any bleachers, lights, backstops or other structures that would require excavation of soil to a depth of greater than two feet. The only excavation will involve the installation of the fence posts around the final Site boundary as determined by the surveyed metes and bounds. A 6 feet high fence will be installed around the perimeter of the playing field, and access will be through a gate on the southern end of the field. The gate will be accessible from the commuter parking lot to the south of the playing field. The fence post excavations will be approximately 10-12 inches in diameter every five feet to a depth of approximately 3 and ½ feet below grade. Soils excavated from above the liner will be stockpiled on plastic and kept separate from other subsurface soils. The liner will be cut in the area of the excavation to allow installation of the fence post. Prior to Site capping along the fence line, fence posts will be installed so that any excavated materials can be placed underneath the geotextile fabric and cleanfill cap and remain onsite. A Site Management Plan will be prepared for any excavations that may be conducted in the future to a depth greater than the final thickness of the proposed two feet clean fill cap. The Village shall maintain the Site fencing that effectively discourages public access to the areas outside the VCA boundary.

Use of the groundwater from the Site for any purpose will be prohibited.

Upon completion of the capping, an Deed Restriction will be prepared for the Site which will identify the contaminants remaining in place beneath the implemented engineering control (capping), and will indicate that a prohibition on the land use exists in a manner consistent with the engineering controls which are intended to ensure the long-term effectiveness of a brownfield site remedial site or eliminate potential exposure pathways to hazardous materials.

The Village agrees that the terms of this account will apply to any future development of the remaining landfill area and/or the previously excluded riverbank and shoreline.

2.2.4 Remedial Action Objectives

The Remedial Action Objective (RAO) for public health protection for soil is:

- Prevent ingestion/direct contact with soil contaminated with PAHs, several metals (arsenic, cadmium, chromium, copper, lead, iron, mercury, nickel, selenium and zinc), and chlordane above the NYSDEC RSCOs through the installation of the geotextile fabric and two feet of clean fill

The RAO's for public health protection for groundwater are:

- Prevent ingestion of groundwater with contaminant levels of benzene, chlorobenzene, toluene, xylene, 4,4-DDD, 4,4-DDE, antimony, iron, lead, manganese and sodium exceeding the NYSDEC GS by prohibiting the use of groundwater at the Site for any purpose
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater by prohibiting the use of groundwater at the Site for any purpose

2.3 EVALUATION OF THE REMEDY

2.3.1 Protection of Human Health and the Environment

The proposed remedy of capping the Site will achieve the RAOs described above. Capping the contaminated soil with a geotextile fabric and two feet of clean fill will prevent contact with the underlying, contaminated soil by future occupants of the recreational field. Implementation of the remedial action will virtually eliminate the potential risk to human health associated with ingestion, inhalation, or dermal contact with contaminated soil. Capping has been shown to be a reliable remediation technique. It has been used successfully at Sites within other waterfront areas with contaminated fill. Constituents detected in soil at concentrations above the NYSDEC RSCOs will be virtually immobilized by an extensive cap. The entire playing field area will be capped, with a buffer around the edges. All areas not included within the capped area will be segregated from the playing field area by a fence.

Since the groundwater at the Site will not be utilized for any purpose, there is no potential for ingestion of groundwater with contaminant levels exceeding the drinking water standards, or contact with, or inhalation of volatiles, from contaminated groundwater.

There are no special issues regarding protection of human health and the environment with the exception of future work to be conducted in the capped area. A Site Management Plan will be prepared for any excavations that may be conducted in the future to a depth greater than the final thickness of the proposed two feet clean fill cap.

2.3.2 Standards, Criteria and Guidance (SCG)

For soil contaminants, NYSDEC RSCOs have been adopted as presented in the NYSDEC Technical Assistance Guidance Memorandum (TAGM) #4046 – Determination of Soil Cleanup

Objectives and Cleanup Levels – Appendix A, Tables 1 through 4. Remediation standards for groundwater are the NYSDEC Groundwater Standards/Criteria cited in TAGM #4046 Appendix A.

The work at the Dobbs Ferry Waterfront Park is being conducted in accordance with the VCA between the Village of Dobbs Ferry and the NYSDEC dated July 3, 2003 and the Amendment to the Voluntary Cleanup Agreement executed on October 25, 2005. All site investigation work has been conducted in accordance with the NYSDEC Division of Environmental Remediation Voluntary Cleanup Program Guide and reviewed by the NYSDEC Division of Environmental Remediation and the NYS Department of Health (DOH).

An RAWP has been prepared consistent with the guidance set forth by the NYSDEC Voluntary Cleanup Program Guide. The remedial action is consistent with other Federal, state, and local laws and regulations. Necessary approvals and permits will be acquired prior to implementation.

A Deed Restriction will be placed on the Site upon completion of the engineering control.

2.3.3 Short-term Effectiveness and Impacts

There will be some increased short-term risk to the community, workers, and the environment associated with implementation of the remedial action. The primary risks would be limited and temporary, and associated with the potential for fugitive dust during soil grading activities. In addition, there would be temporary risks associated with construction. Dust control will be addressed through watering to minimize this risk. This measure is effective in reducing dust levels. Monitoring for fugitive dust emissions will also be performed during site grading activities and placement of fill until the cap is complete. The monitoring will be effective in determining whether down-gradient dust levels are impacting the surrounding community.

Implementation of the remedial action will provide for beneficial use of an area previously occupied by a municipal dump and will enable the Site to be redeveloped for recreational use in accordance with plans adopted by the Village of Dobbs Ferry. Adverse impacts to the community are short-term in nature and are related to increased truck traffic through the area of the adjacent commuter parking lot as a result of importing clean fill to the Site and the presence of construction vehicles related to soil grading and capping. Traffic control would be implemented to reduce the risk of accidents and congestion.

The remedy of capping the Site with clean fill will achieve the RAOs immediately upon completion. Upon completion of the capping of the Site, potential impacts to off-site areas will be eliminated. The cap will be monitored to ensure that the integrity is maintained. Details of the cap monitoring program will be presented in the Site Management Plan.

2.3.4 Long-term Effectiveness and Permanence

The remedial action would provide long-term protection of public health and safety and the environment by eliminating exposure pathways for any contaminated soil that remains on-site.

Implementation of the capping remedial action will result in a long-term reduction in risk. The proposed remedy relies upon containment of the contaminants beneath a clean fill cap.

The ability of the proposed remedy to achieve RAOs will not lessen over time. The integrity of the cap will be maintained as part of the daily operations as a recreational field by the Village of Dobbs Ferry.

After completion, there will be no significant threats, exposure pathways or risks to the public or environment from the remaining contaminated soil and groundwater. Any activities that intrude upon the integrity of the cap will be handled in accordance with a soils management plan to prevent the risk of exposure to workers, public and the environment.

2.3.5 Reduction of Toxicity, Mobility or Volume

The entire soil column containing the contaminants above the NYSDEC RSCO will be capped. The migration of contaminants from the soil to the groundwater beneath the entire Site will be reduced across the entire recreational playing field area.

If it is determined in the future that the proposed remedy is no longer effective at protecting the public and environment, then it can be addressed through an alternative approach.

Mobility of the contaminants will be reduced through the placement of the soil cap across the playing field area.

2.3.6 Implementability

Implementation is related to the feasibility and availability of the technologies and to implementation within a reasonable time frame. Common construction methods will be utilized for the scraping and capping. Capping is an established and well-demonstrated remedial technique. There are no potential construction difficulties anticipated. Any debris encountered during the re-grading activities that cannot be adequately placed beneath the cap will be removed and disposed in accordance with all applicable regulations. Maintenance of the field will consist of maintaining the grass area to be planted over the clean fill. All services and materials for implementation of the proposed remedy and future operations and maintenance activities are readily available. There are no anticipated issues related to the coordination with other agencies.

2.3.7 Long-term Groundwater Monitoring

Three permanent groundwater monitoring wells will be installed at the Site in accordance with all NYSDEC rules, regulations and guidance documents. The details of the well installation and the long-term monitoring of groundwater quality conditions at the Site will be presented in the Site Management Plan.

2.4 REMEDIAL ACTION SELECTION REPORT CONCLUSIONS

The selected remedial action satisfies evaluation factors set forth by the NYSDEC for the following reasons:

- The selected remedial action will limit potential exposure to long-term health risks.
- Short-term risks can be controlled through implementation of a Community Air Monitoring Plan (CAMP), Health and Safety Plan and Site Management Plan.
- The selected remedial action can be readily implemented in a timely manner.

3.0 PROJECT PLANS AND SPECIFICATIONS

The open field will be developed into a recreational playing field. The Village of Dobbs Ferry has indicated that there would be no excavation for subsurface utilities or drains. The recreational field will not have any bleachers, lights, backstops or other structures that would require excavation of soil to a depth of greater than two feet. The only excavation will involve the installation of the fence posts around the final Site boundary as determined by the surveyed metes and bounds. The fence post excavations will be approximately 10-12 inches in diameter every five feet to a depth of approximately 3 and ½ feet below grade. The proposed site development plan, Waterfront Park Open Field Plan & Notes (Drawing S-1) and Additional Notes & Details (Drawing S-2) prepared by the Village of Dobbs Ferry's Village Engineer dated October 17, 2006 are provided in **Appendix 5**. The Waterfront Park Open Field Drawing S-1 and S-2 show all relevant details with respect to Site redevelopment and the final site grades which include the two feet clean soil cap. The clean fill material will be certified as clean and will be accompanied by analytical documentation that meets the New York State soil guidance levels established in Technical Guidance Memorandum (TAGM) 4046.

Upon approval of the RAWP, a Site Management Plan will be prepared for submittal to the NYSDEC that addresses any excavations that may be conducted in the future to a depth greater than the final thickness of the proposed two feet clean fill cap. The Site Management Plan will address the proper management of subsurface materials that may be brought to the surface after completion of the clean fill cap. The Site Management Plan will discuss the monitoring, inspection, operations and maintenance, repair, and reporting requirements for the engineering control utilized at the Site as required by the institutional control (Deed Restriction).

In addition, subsequent to receiving an RAWP approval and prior to implementation of the RAWP, the following construction contractor documents will also be submitted:

- Waste Management Plan to include the management of all waste generated (decon water, soil, solid waste, etc.).

- Erosion Control Plan which, in general, will include erosion control around the entire site unless there is a site-specific justification.

- Construction Site Management Plan which shall include, but not be limited to, line of communications, site security, tentative schedule and order of performance of the work elements.

4.0 INSTITUTIONAL CONTROLS

Based on the proposed remedial action (capping), a use restriction will be required. A draft Deed Restriction will be prepared for submission to NYSDEC upon approval of the RAWP. Upon approval, the Deed Restriction will be recorded for the Site prior to preparation of the final Remediation Report. The purposes of the Deed Restriction are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the above-stated purpose.

The Deed Restriction will:

- Restrict the contemplated use of the site to "active recreational use" which is a land use for the primary purpose of establishing an athletic playing field;
- Restrict any development that would impact the integrity of the engineered cap;
- Restrict the use of onsite groundwater; and
- Require operation, management and monitoring of the site is in accordance with the provisions of the SMP approved by the NYSDEC.

5.0 HEALTH AND SAFETY PLAN

A Health and Safety Plan (HASP) has been prepared to define the health and safety requirements necessary to protect workers involved in the site grading and capping activities to be conducted at the former municipal landfill located in Dobbs Ferry, New York. The HASP appears in **Appendix 6.** A copy of this HASP will be provided to all contractors who may work on this project. However, the contractors themselves will be responsible for the health and safety of their own employees. They will be required to develop their own task specific Health and Safety Plan that complies with the requirements contained in OSHA rules governing hazardous waste site operations (29 CFR 1910.120). At a minimum, the content of their HASP will include all elements included in this HASP.

6.0 COMMUNITY AIR MONITORING PLAN (CAMP)

6.1 CONTINUOUS MONITORING

As required in NYSDEC's September 23, 2004 letter, continuous monitoring for volatile organics and particulates will be conducted at upwind and downwind locations during grubbing and re-grading activities.

6.1.1 Volatile Organic Compounds (VOC) Monitoring

Utilizing a MiniRAE 2000 PID instrument, VOC concentrations will be continuously monitored at the upwind and downwind perimeters of the work area during grubbing and re-grading activities. The equipment will be calibrated daily and operated as per manufacturer's guidelines. All equipment will fall within annual certifications. 15-minute running averages, as well as relevant instantaneous readings, will be recorded by field personnel and compared to the levels specified below to determine appropriate mitigative actions:

- If the ambient air concentrations of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

Recorded VOC readings will be maintained by field personnel and made available for review by NYSDEC and/or NYSDOH personnel.

6.1.2 Particulate Monitoring

Utilizing a real-time TSI DustTrak Aerosol Monitor with an audible alarm (Model 8520, PM-10), particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the work area during grubbing and re-grading activities. 15-minute running

averages, as well as visual observations, will be recorded by field personnel and compared to the levels specified below to determine appropriate mitigative actions:

- If the downwind PM-10 particulate level is 100 mg/m^3 greater than background (upwind perimeter, measured during the periodic monitoring) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mg/m^3 of the upwind level and in preventing visible dust migration.

Recorded particulate readings will be maintained by field personnel and made available for review by NYSDEC and/or NYSDOH personnel.

6.2 Periodic Monitoring

When the Site is being grubbed and re-graded, periodic monitoring for particulates and volatiles will be conducted at the work area. Periodic monitoring will generally consist of monitoring total VOCs with a single MiniRAE 2000 PID and particulates utilizing a real-time TSI DustTrak Aerosol Monitor with an audible alarm (Model 8520, PM-10). Instantaneous readings will be taken at arrival at the start of the work day, and several times throughout the work day, and once at the end of the work day.

In addition, as indicated in NYSDEC's September 23, 2004 letter, as the geotextile fabric and clean fill final cover material are installed over the re-graded areas, only periodic monitoring of particulates (nuisance dust) will be necessary.

7.0 QA/QC PLAN

Remedial action sampling and analysis of soil is not being proposed as part of this Remedial Action. Since there is no soil sampling proposed, a Quality Assurance/Quality Control (QA/QC) Plan for soil is not required. The groundwater sampling QA/QC Plan is provided below.

7.1 Designated Analytical Laboratory/Project Organization

All sample analyses conducted as part of this investigation will be done by Accutest Laboratories, a New York State ASP/DOH certified laboratory (#10983). A copy the Accutest

Laboratories Quality Systems Manual has been previously submitted to NYSDEC in the Site Investigation Work Plan (SIWP) dated November 2004.

The Project Manager will be Ed Phillips. The Quality Assurance Officer will be John Kerber. Resumes for these persons were previously submitted to NYSDEC in the Site Investigation Work Plan (SIWP) dated November 2004.

7.2 Sample Containers and Chain of Custody Procedures

Clean sample containers will be supplied by the laboratory for all sampling events. The appropriate sample preservatives will be added to the sample bottles by the laboratory prior to shipment. Chain of custody procedures will be initiated by the person responsible for cleaning the sample containers. The chain of custody will accompany the bottles during transportation from the laboratory to the field, sample collection, transportation back to the laboratory, analysis and final disposal of the sample. Samples will be stored on ice at 4°C in a secure area until they are relinquished to a courier for delivery to the laboratory.

7.3 Sample Handling

The sample containers will be labeled with sample number, date, time of collection, analytical parameters and site name. A detailed log of subsurface conditions encountered, sample depths and sampling locations will be recorded. The sample holding time will begin at the time of sample collection.

7.4 Field Instrumentation

A PID will be utilized during investigatory and sampling activities. The PID lamp is cleaned regularly and the battery is fully recharged at the end of each day of field use. The PID is sent to the manufacturer for routine maintenance approximately once per year.

The PID will be calibrated at the beginning of each day of field use by comparing the response with a test atmosphere referenced to a primary calibration standard of known concentration. The calibration gas used for the PID is 100 ppm isobutylene in air.

7.5 Record Keeping

Field measurements and observations will be recorded daily in a bound field log book, including: documentation of all sampling locations, number of samples, sample depths, sample collection time, analytical parameters and documentation of all sample location landmarks, including the location of sample points on a map. Upon collection of samples for analysis, additional documentation will be completed on the chain of custody form.

7.6 ANALYTICAL METHODS/QA SUMMARY TABLE

Quality Assurance (QA) sampling will be conducted to provide control over the collection of samples and subsequent review, interpretation and validation of analytical data. All samples will be analyzed using standard USEPA SW-846 methodologies.

The following table presents a summary of the matrix type, number of samples, number of field and trip blanks, analytical parameters, and analytical methods.

# of Samples	Matrix	Parameter	EPA Method	Sample Duplicates	Field Blank/Trip Blank
3	Aqueous	TCL VO	624	1	1
3	Aqueous	TCL SVO	625	1	1
3	Aqueous	TCL Pesticide/ PCB	608	1	1
3	Aqueous	Cyanide	335.2	1	1
3	Aqueous	Phenols	420.1	1	1
3	Aqueous	TAL Metals	200.8	1	1

7.7 FIELD BLANKS

A field blank will be collected and analyzed for the same parameters as the samples analyzed that day. The field blank sample will be collected by pouring demonstrated analyte-free water over the decontaminated sampling device so that the rinsate flows into the empty sample container. The demonstrated analyte-free water used for the field blank will originate from one common source and physical location within the laboratory as the method blank water used by the laboratory performing the analyses.

Field blank water will arrive on-Site within one day of preparation in the lab, will be held on-site for no longer than two days, and will be shipped back to the laboratory at the end of the second day and will be received at the laboratory within one day. Blanks will be maintained at 4°C while on-Site and during shipment. One field blank will be collected for each day of sampling activity.

7.8 DUPLICATES

One duplicate sample will be collected and analyzed for the same parameters as the samples analyzed that day.

7.9 RELIABILITY OF DATA

The laboratory data will be reviewed for accuracy and usability in accordance with the guidelines set forth in Appendix B of the NYSDEC's Voluntary Cleanup Guide dated May 2002.

7.10 DELIVERABLES

The sample analysis reporting level will be the NYSDEC Analytical Services Protocol (ASP) Category B deliverables.

8.0 SCHEDULE

A schedule for the implementation of the Remedial Action will be consistent with the proposed redevelopment of the Site. It is anticipated that the entire project will take approximately 20 weeks to complete from the time of NYSDEC approval. This time frame includes management tasks such as preparation of specifications, bidding period, review of bids and award of contract. The anticipated schedule for onsite construction work is as follows.

Grading/site preparation	2 weeks
Installation of geotextile fabric	1 week
Placement of clean fill cap	2 weeks
Placement of final top soil layer	1 week
Installation of fence	2 weeks

9.0 REPORTING

Upon completion of the remedial action, a Remediation Report will be prepared for submission to NYSDEC in accordance with the NYSDEC Voluntary Cleanup Program Guide. The Remediation Report will include the final as-built drawings for the recreational field. The report will be signed and sealed by a professional engineer. A Deed Restriction will be filed prior to submission of the Remediation Report.

10.0 PROJECT ORGANIZATION

The Village of Dobbs Ferry will be the overall project manager. Anthony Giaccio, the Village Administrator, will be the main contact for all matters. Vollmer Associates LLP has been retained by the Village of Dobbs Ferry for the engineering aspects of the Site redevelopment. Potomac-Hudson Environmental, Inc. has been retained by the Village for the conduct of the Site Investigation and preparation of the RAWP, RAS and Site Management Plan. A contract has not yet been awarded by the Village for the components of Site redevelopment relating to compliance with the Remedial Action Workplan. The Village of Dobbs Ferry will award a firm with the responsibility of oversight of the implementation of the RAWP upon approval of the documents. NYSDEC and NYSDOH will be the government entities responsible for the review and approval of the RAWP, RAS and Site Management Plan.

11.0 REFERENCES

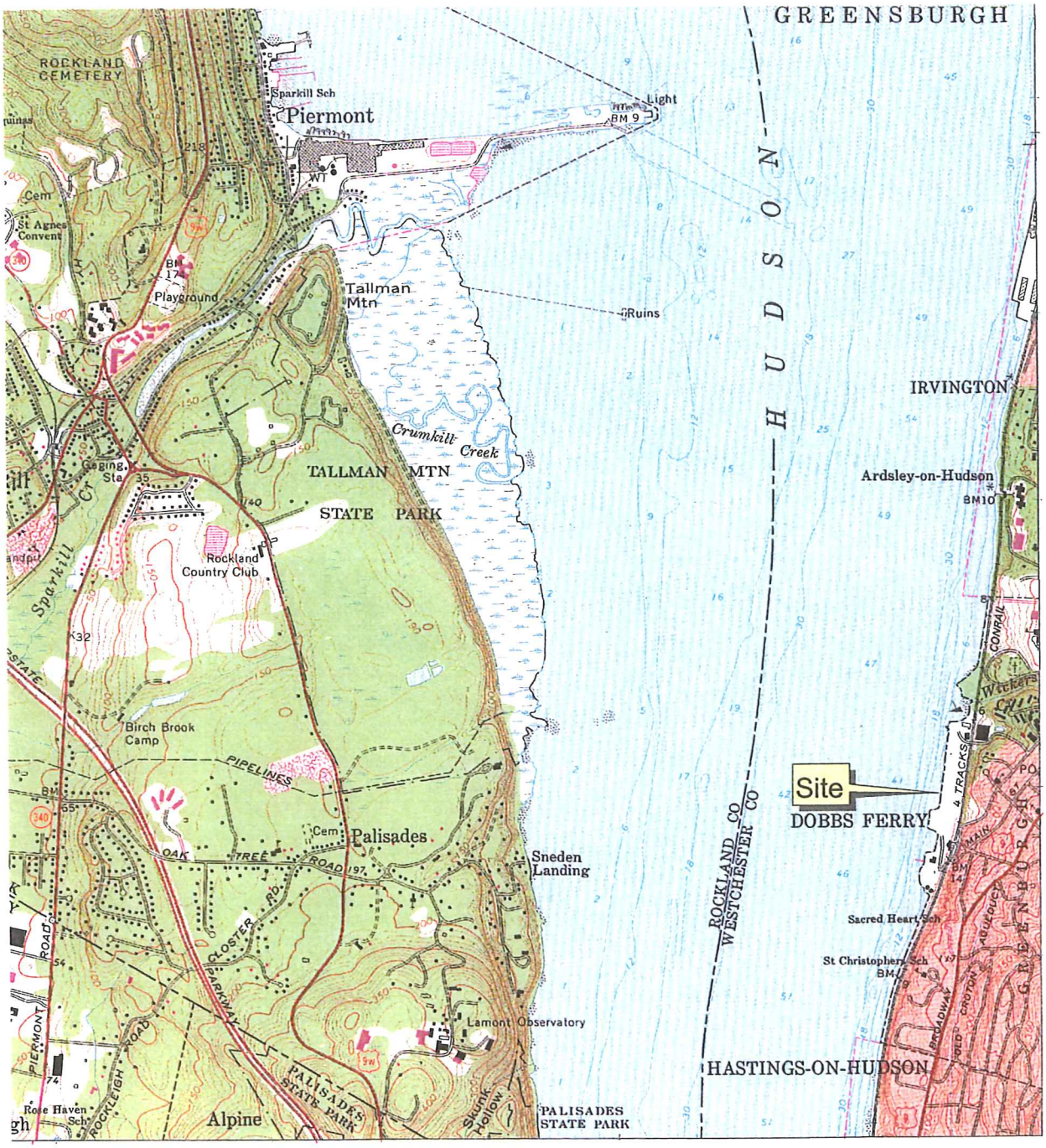
Analytical data report dated 5/30/2002, York Analytical Labs. Conducted for the Village of Dobbs Ferry, New York.

Final Draft Site Inspection Report and Hazard Ranking System Model, Dobbs Ferry Riverfront Park, Dobbs Ferry, New York. Prepared Under Technical Directive Document No. 02-8603-37A, Contract No. 68-01-6699 for the US Environmental Protection Agency. September 18, 1986. NUS Corporation.

Site Investigation Report, Dobbs Ferry Waterfront Park. Potomac-Hudson Environmental, Inc. September 2003.

Site Investigation Workplan, Dobbs Ferry Waterfront Park. Potomac-Hudson Environmental, Inc. May 2004 (Revised November 2004).

Supplemental Site Investigation Report, Dobbs Ferry Waterfront Park. Potomac-Hudson Environmental, Inc. September 2005.



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DATE:	DRAWN BY:	REVIEWED BY:	SCALE:	PROJECT #	SHEET #
May 2004	MDS	KEP	AS SHOWN	454	1 OF 1

POTOMAC-HUDSON ENVIRONMENTAL, INC.

166 John Street
PO Box 7
South Amboy, NJ 08879

23 Chapel Avenue
Jersey City, NJ 07305

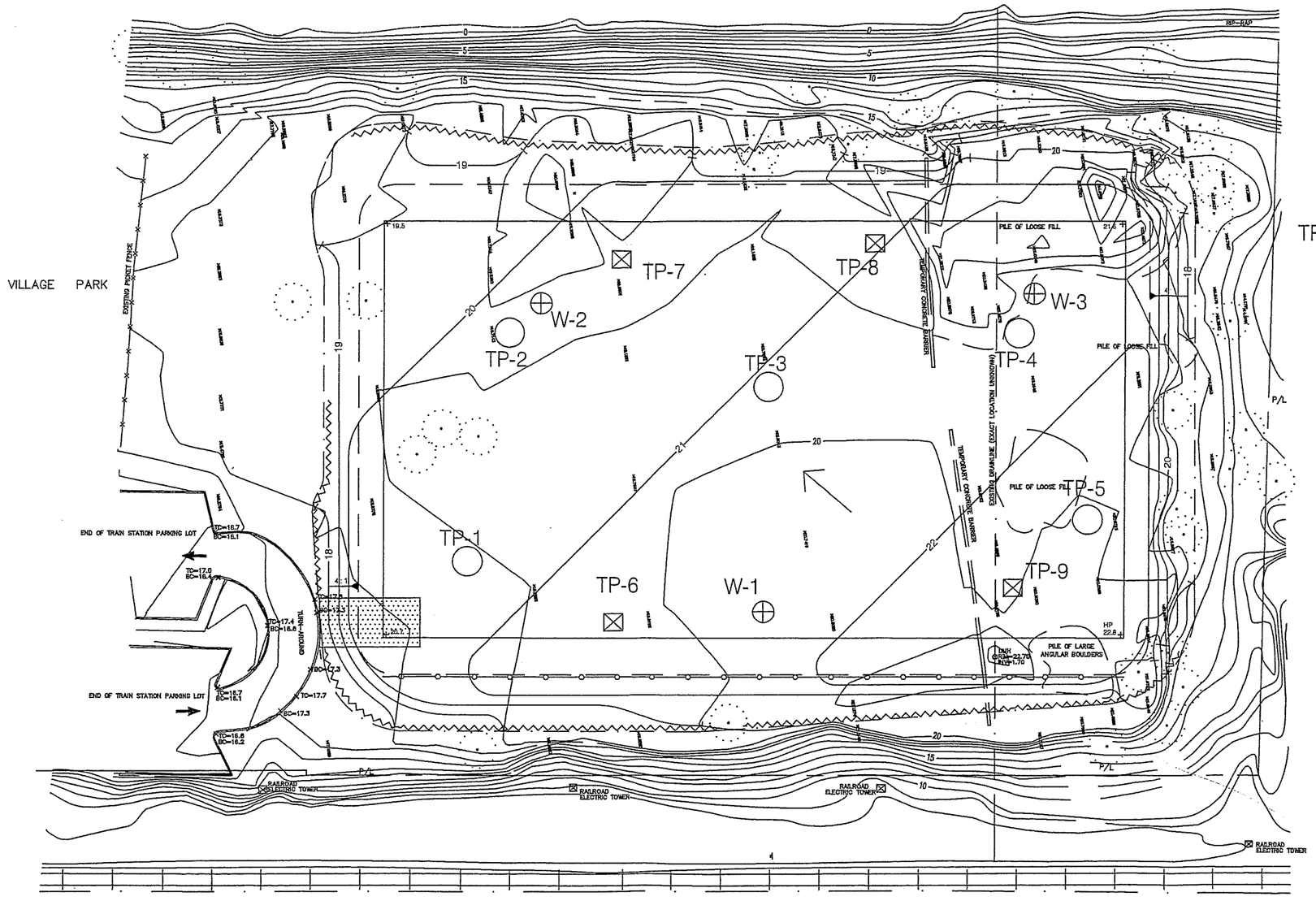
136 W. 16th Street
Suite 3E, POB 1206
New York, NY 10011

Project Location
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

SOURCE: Nyack, NY USGS Quadrangle

FIGURE # 1

HUDSON RIVER



TP-3 ○ Previous Test Pit Location (Oct. 2002)

W-1 ⊕ Temporary Well Location

TP-6 ⊠ Test Pit Location 2005

METRO NORTH COMMUTER RAILROAD

NAD 83

GRAPHIC SCALE (IN FEET)

0 50 100 150

DATE:	DRAWN BY:	REVIEWED BY:	SCALE:	PROJECT #	SHEET #
Sept. 05	MDS	KEP	AS SHOWN	454	1 OF 1

POTOMAC-HUDSON ENVIRONMENTAL, INC.

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Site Plan/Sample Locations Waterfront Park Recreational Field Dobbs Ferry, New York

SOURCE: Paul J. Petretti

FIGURE # 2

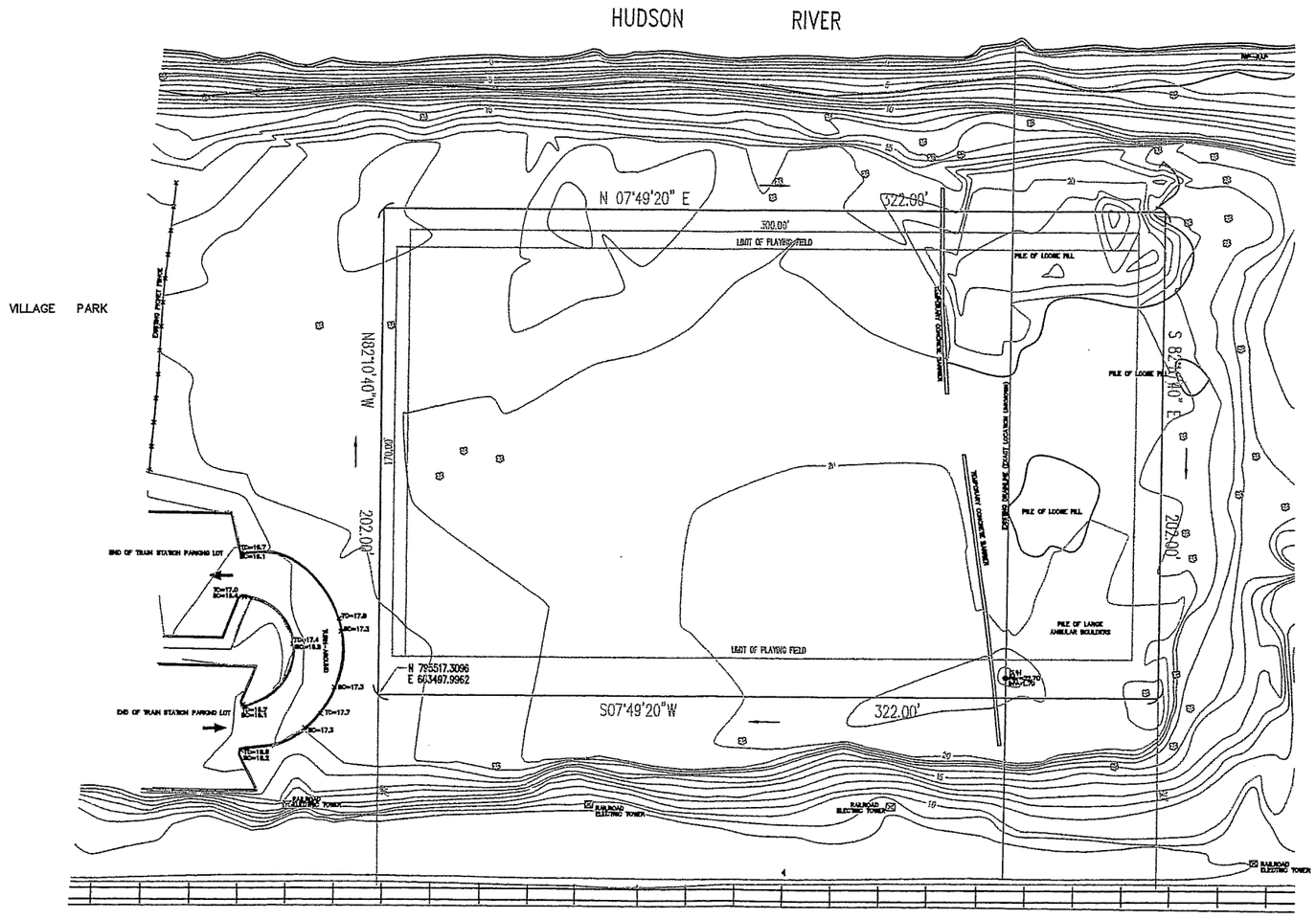
C:\Projects\DobbsFerryWaterfront Park\layout1.dwg LAYOUT: CorrectLayout3

APPENDIX 1

Site Plan/Survey

NAD 83

VERTICAL DATUM: NGSSVD 1929
SCALE : 1" = 50'



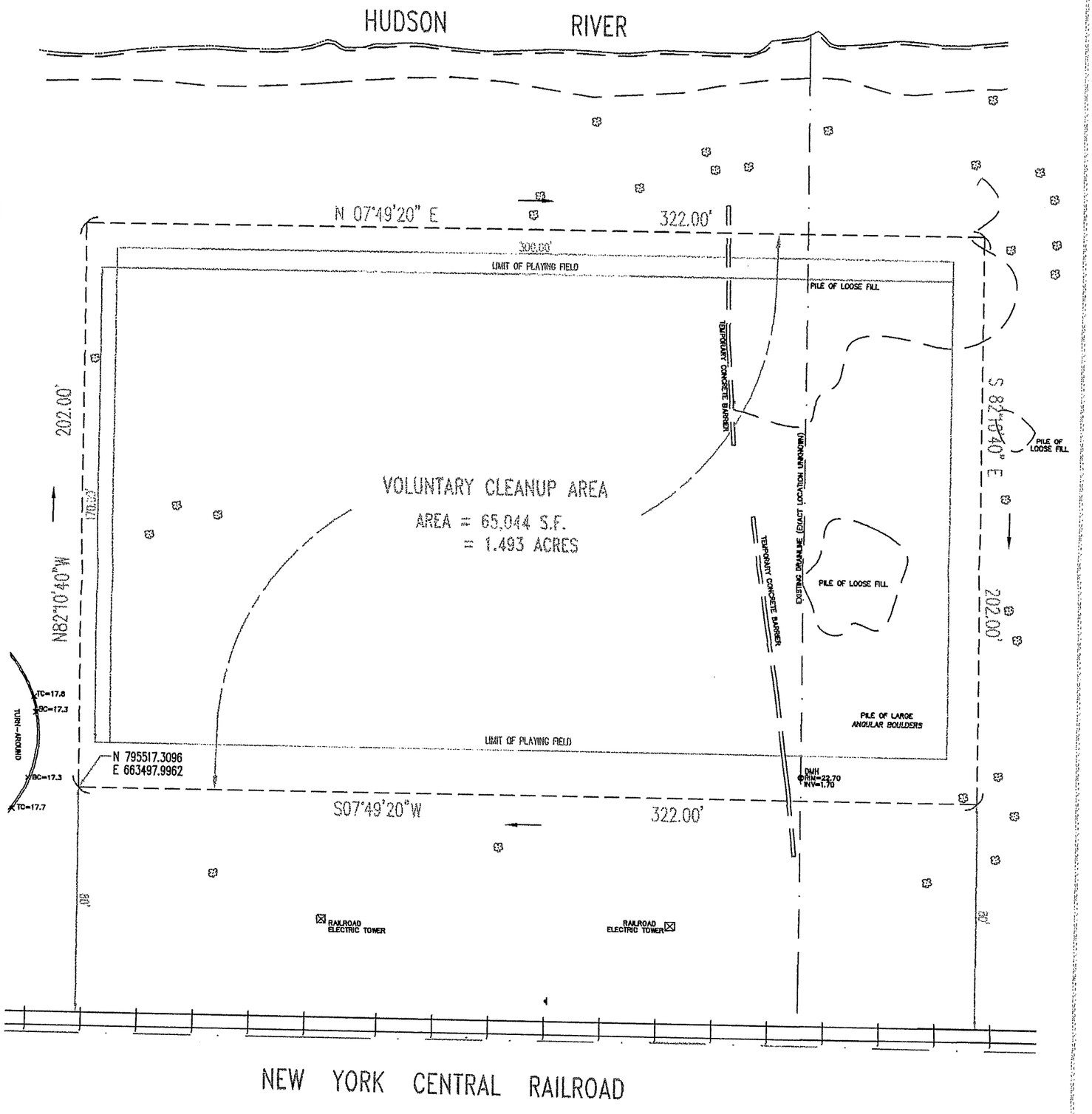
NEW YORK CENTRAL RAILROAD

TOPOGRAPHICAL SURVEY
WATERFRONT
(PART OF SHEETS 3/5 AND 4/5 REVISED)
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK
PAUL J. PETRETTA - CIVIL ENGINEERING - LAND SURVEYING & MAPPING

1/1

NAD 83

VERTICAL DATUM: NGVD 1929
HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983
SCALE : 1" = 40'



ENCROACHMENTS BELOW GRADE AND OR SUB-GRADE FEATURES, IF ANY, NOT LOCATED OR SHOWN HEREON.

ANY ALTERATION OR ADDITIONS TO THE PLANS AND SPECIFICATIONS SHOWN HEREON IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PER SECTION 7209, SUBDIVISION 2.

CPSWQ No. 0051
CPESC No. 2851

N. Y. S. P. E. No. 55191

REVISIONS		
NO.	DATE	DESCRIPTION

ORIGINAL: JULY 27, 2005

WATERFRONT PARK RECREATIONAL FIELD
VOLUNTARY CLEANUP AREA

PREPARED FOR
VILLAGE OF DOBBS FERRY
TOWN OF GREENBURGH
WESTCHESTER COUNTY, NEW YORK

PAUL J. PETRETTI
CIVIL ENGINEER & LAND SURVEYOR
CPSWQ / CPESC
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CIVIL ENGINEERING – LAND SURVEYING & MAPPING – SITE DESIGN & PLANNING
ENVIRONMENTAL & GEOTECHNICAL – DRAINAGE & STORMWATER QUALITY
EROSION & SEDIMENT CONTROL STORMWATER POLLUTION PREVENTION PLANS
Phone Number 914-674-9827 Cell 914-672-1518 E-Mail PJPCELS@Aol.com

APPENDIX 2

NUS Corporation Sample Location Map and US Environmental Protection Agency (1986) Data Tables

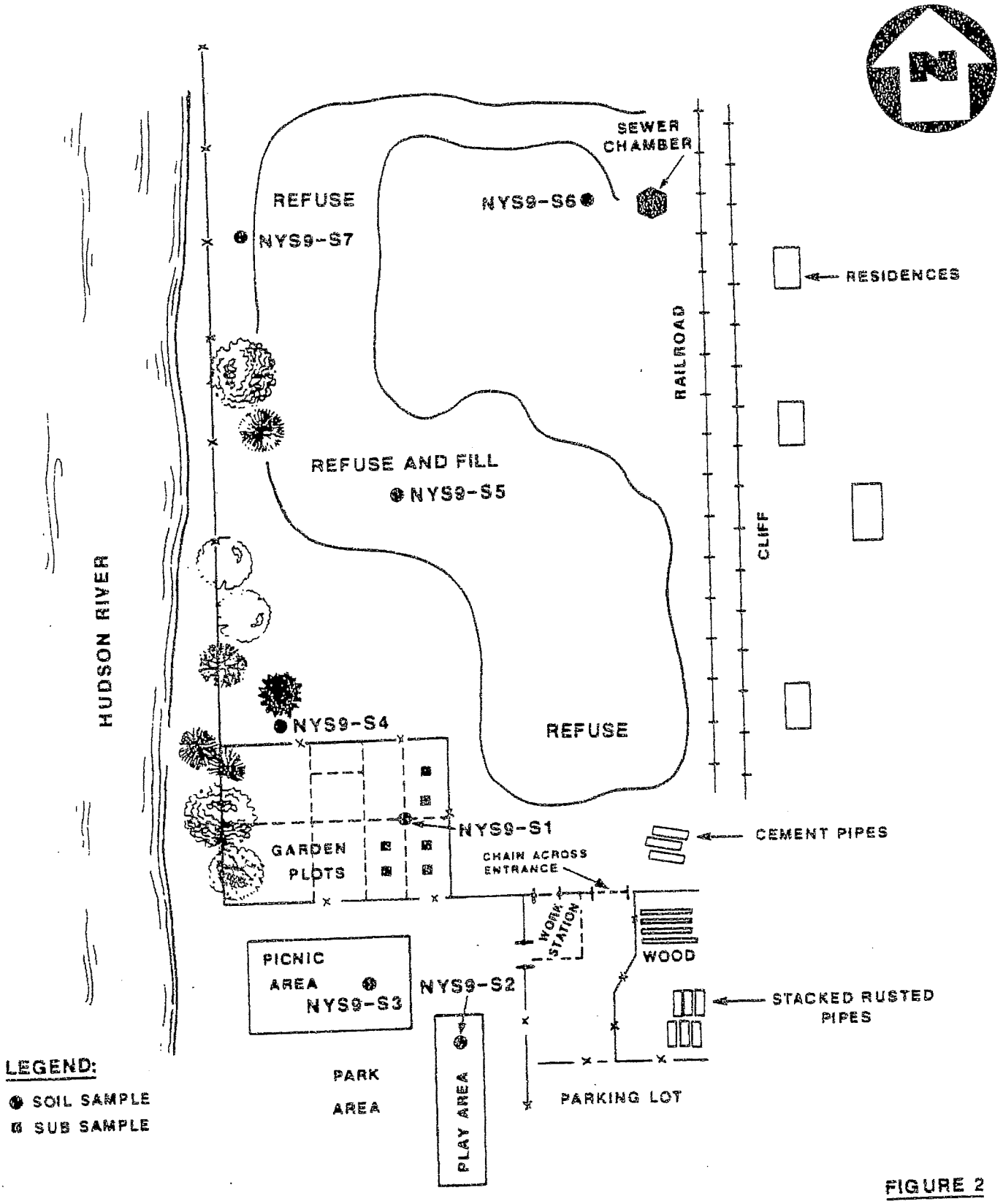


FIGURE 2

SAMPLE LOCATION MAP
DOBBS FERRY RIVERFRONT PARK,
DOBBS FERRY, N.Y.

(NOT TO SCALE)

NUS CORPORATION
A Halliburton Company

TABLE 1

SAMPLE DESCRIPTIONS
DOBBS FERRY LANDFILL
DOBBS FERRY, NEW YORK
CASE #6099

Sample ID Number	Organic Traffic Report #	Inorganic Traffic Report #	Time (Hours)	Sample Type	Sample Location
NYS9-S1	BG065	MBE211	1148	Soil	Composite of six (6) sub-samples collected from three (3) of the nine (9) garden plots located at Southwest corner of lanc Sample depth 0-6 inches.
NYS9-S2	BG066	MBE212	1205	Soil	Sample collected along slide in the playground area along the Northeast fence line. Sample depth inches.
NYS9-S3	BG067	MBE213	1215	Soil	Sample collected in the vicinity of the picnic area along the North fen line. Sample depth 0-6 inches.
NYS9-S4	BG068	MBE214	1244	Soil	Sample collected along the North fence line of t garden plot area in the Southwest corner of land Sample depth 0-6 inches.
NYS9-S5	BG069	MBE215	1256	Soil	Sample collected at center of landfill. Sampl depth 0-6 inches.
NYS9-S6	BG070	MBE216	1326	Soil	Sample collected at the Northeast corner of land. Sample depth 0-6 inches.
NYS9-S7	BG071	MBE217	1338	Soil	Sample collected at Northeast corner of land: Sample depth 0-6 inches.
NYS9-BL1	BG072	N/A*	N/A*	Water	Field VOA water blank collected at EPA Edison, New Jersey.

*N/A = Not Applicable

ORGANIC DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of such flags must be explicit.

Value -If the result is a value greater than or equal to the detection limit, report the value.

U -Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J -Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g., 10J)

C -This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/ul in the final extract should be confirmed by GC/MS.

B -This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other -Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ANALYTICAL DATA
NAME: DOBB'S FERRY
SAMPLING DATE: 6/18/86
CASE: 6099

VOLATILES

SAMPLE NUMBER	NYS9-S1	NYS9-S2	NYS9-S3	NYS9-S4	NYS9-S5	NYS9-S6	NYS9-S7	NYS9-BL1
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L
Chloromethane					J			
Bromomethane								
Vinyl Chloride								
Chloroethane								
Methylene Chloride	E	5.1B	E	E	E	E	E	E
Acetone	E	BE	E	E	E		E	E
Carbon Disulfide	J				J			
1,1-Dichloroethene								
1,1-Dichloroethane								
Trans-1,2-Dichloroethene								
Chloroform								
1,2-Dichloroethane								
2-Butanone								
1,1,1-Trichloroethane					J			
Carbon Tetrachloride								
Vinyl Acetate								
Bromodichloromethane								
1,1,2,2-Tetrachloroethane								
1,2-Dichloropropane								
Trans-1,3-Dichloropropene								
Trichloroethene								
Dibromochloromethane								
1,1,2-Trichloroethane								
Benzene	J	E	J	E	J	J	J	E
Cis-1,3-Dichloropropene								
2-Chloroethylvinylether								
Bromoform								
2-Hexanone								
4-Methyl-2-Pentanone								
Tetrachloroethene								
Toluene			J					E
Chlorobenzene								
Ethylbenzene								
Styrene								
Total Xylenes								

NOTES:
Blank space - compound analyzed for but not detected
E - analysis did not meet QA/QC requirements
J - compound present below the specified detection limit
B - compound found in laboratory blank as well as the sample,
indicates possible/probable blank contamination

ANALYTICAL DATA
NAME: DOBB'S FERRY
SAMPLING DATE: 6/18/86
CASE: 6099

SEMI-VOLATILES								
SAMPLE NUMBER	NYS9-S1	NYS9-S2	NYS9-S3	NYS9-S4	NYS9-S5	NYS9-S6	NYS9-S7	NYS9-BL1
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	N/A
N-Nitrosodimethylamine								
Phenol								
Aniline								
Bis(2-Chloroethyl)Ether								
2-Chlorophenol								
1,3-Dichlorobenzene								
1,4-Dichlorobenzene								
Benzyl Alcohol								
1,2-Dichlorobenzene								
2-Methylphenol								
Bis(2-Chloroisopropyl)Ether								
4-Methylphenol								
N-Nitroso-Di-n-Propylamine								
Hexachloroethane								
Nitrobenzene								
Isophorone								
2-Nitrophenol								
2,4-Dimethylphenol								
Benzoic Acid								
Bis(2-Chloroethoxy)Methane								
2,4-Dichlorophenol								
1,2,4-Trichlorobenzene								
Naphthalene								
4-Chloroaniline								
Hexachlorobutadiene								
4-Chloro-3-Methylphenol								
2-Methylnaphthalene								
Hexachlorocyclopentadiene								
2,4,6-Trichlorophenol								
2,4,5-Trichlorophenol								
2-Chloronaphthalene								
2-Nitroaniline								
Dimethyl Phthalate								
Acenaphthylene		700						
3-Nitroaniline								
Acenaphthene		430						
2,4-Dinitrophenol								
4-Nitrophenol								
Dibenzofuran								
2,4-Dinitrotoluene								

ANALYTICAL DATA
NAME: DOBB'S FERRY
SAMPLING DATE: 6/18/86
CASE: 6099

SEMI-VOLATILES								
SAMPLE NUMBER	NYS9-S1	NYS9-S2	NYS9-S3	NYS9-S4	NYS9-S5	NYS9-S6	NYS9-S7	NYS9-BL1
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	N/A
2,6-Dinitrotoluene								
Diethylphthalate								
4-Chlorophenylphenyl ether								
Fluorene		1700						
4-Nitroaniline								
4,6-Dinitro-2-Methylphenol								
N-Nitrosodiphenylamine								
4-Bromophenylphenyl ether								
Hexachlorobenzene								
Pentachlorophenol								
Phenanthrene		1500			5800	1200		
Anthracene		2800						
Di-n-Butylphthalate								
Fluoranthene		17000			8200	2300	1400	
Pyrene		9200			4700	1300		
Butylbenzylphthalate								
3,3'-Dichlorobenzidine								
Benzo(a)Anthracene		5900			2800			
Bis(2-Ethylhexyl)Phthalate	E	E			E		E	
Chrysene		5400			3000		680	
Di-n-Octyl Phthalate								
Benzo(b)Fluoranthene		2500			1500	520	410	
Benzo(k)Fluoranthene		3000			1500	520		
Benzo(a)Pyrene		2500			1900	590		
Indeno(1,2,3-cd)Pyrene		2000			1200			
Dibenzo(a,h)Anthracene								
Benzo(ghi)Perylene		2100			1350	360		

NOTES:
Blank space - compound analyzed for but not detected
E - analysis did not pass QA/QC requirements
J - compound present below the specified detection limit
B - compound found in laboratory blank as well as the sample, indicates possible/probable blank contamination

ANALYTICAL DATA
NAME: DOBB'S FERRY
SAMPLING DATE: 6/18/86
CASE: 6099

PESTICIDES/PCBs									
SAMPLE NUMBER	NYS9-S1	NYS9-S2	NYS9-S3	NYS9-S4	NYS9-S5	NYS9-S6	NYS9-S7	NYS9-BL1
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	N/A
Alpha-BHC								
Beta-BHC								
Delta-BHC								
Gamma-BHC (Lindane)								
Heptachlor	E							
Aldrin								
Heptachlor Epoxide								
Endosulfan I								
Dieldrin				J		J	J	
4,4'-DDE								
Endrin								
Endosulfan II								
4,4 -DDD							J	
Endosulfan sulfate		E					135	
Endrin Aldehyde								
4,4 -DDT	E		E		E			
Methoxychlor								
Endrin Ketone								
0.54 Chlordane	J	.336		J	J	J	J	
Toxaphene								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
1.10 Aroclor-1260	505.15	25968	E	E	E	E		

NOTES:
Blank space - compound analyzed for but not detected
E - analysis did not meet QA/QC requirements
J - compound present below the specified detection limit
B - compound found in laboratory blank as well as the sample, indicates possible/probable blank contamination

INORGANIC DATA QUALIFIER

Footnotes:

NR - not required by contract at this time.

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]. Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).

U - Indicates elemant was analyzed for but not detected. Report with the detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

s - Indicates value determined by Method of Standard Addition.

R - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis in not within control limits.

\+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

ANALYTICAL DATA
NAME: DOBB'S FERRY
SAMPLING DATE: 6/18/86
CASE: 6099

INORGANICS									
SAMPLE NUMBER	NYS9-S1	NYS9-S2	NYS9-S3	NYS9-S4	NYS9-S5	NYS9-S6	NYS9-S7	NYS9-BL1
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
UNITS	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	N/A
Aluminum	9570	19100	12200	7030	7550	3080	6440	
Antimony								
Arsenic	J	15	16	3.4	6.5	J		
Barium	J	J	475	J	J	J	J	
Beryllium								
Cadmium								
Calcium	9470	7940	10400	13700	21200	12000	11600	
Chromium	19	39	21	10	16	9	14	
Cobalt								
Copper	32	55	20	J	30	15	36	
Iron	17100	27500	16000	11800	14300	7190	15200	
Lead	188	179	76	J	195	145	238	
Magnesium	5230	7580	6940	6970	10700	4700	5160	
Manganese	339	484	345	232	296	118	232	
Mercury	0.225	0.230	0.410	0.300	0.120		0.120	
Nickel	J	J					J	
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Tin								
Vanadium	J	45	32	J	J		25	
Zinc	184	227	307	75	128	92	165	

NOTES:
Blank space - compound analyzed for but not detected
E - analysis did not pass QA/QC requirements
J - compound present below the specified detection limit
B - compound found in laboratory blank as well as the sample.
indicates possible/probable blank contamination

ORGANICS ANALYSIS DATA SHEET
(PAGE 1)

SAMPLE NUMBER
BG-065

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2661
Sample Matrix: SOIL
Data Release Authorized By: _____

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 7.2
Percent Moisture: 23

ber		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
87-3	Chloromethane	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
83-9	Bromomethane	10.0 U	78-87-5	1,2-Dichloropropane	5.0 U
01-4	Vinyl Chloride	10.0 U	10061-02-6	Trans-1,3-Dichloropropene	5.0 U
00-3	Chloroethane	10.0 U	79-01-6	Trichloroethene	5.0 U
09-2	Methylene Chloride	~~6.8~~ B	124-48-1	Dibromochloromethane	5.0 U
64-1	Acetone	4.9 JB	79-00-5	1,1,2-Trichloroethane	5.0 U
15-0	Carbon Disulfide	0.4 J	71-43-2	Benzene	0.9 J
35-4	1,1-Dichloroethene	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
34-3	1,1-Dichloroethane	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
-60-5	Trans-1,2-Dichloroethene	5.0 U	75-25-2	Bromoform	5.0 U
66-3	Chloroform	5.0 U	591-78-6	2-Hexanone	10.0 U
-06-2	1,2-Dichloroethane	10.0 U	108-10-1	4-Methyl-2-Pentanone	10.0 U
93-3	2-Butanone	5.0 U	127-18-4	Tetrachloroethene	5.0 U
55-6	1,1,1-Trichloroethane	5.0 U	108-88-3	Toluene	5.0 U
23-5	Carbon Tetrachloride	5.0 U	108-90-7	Chlorobenzene	5.0 U
-05-4	Vinyl Acetate	10.0 U	100-41-4	Ethylbenzene	5.0 U
27-4	Bromodichloromethane	5.0 U	100-42-5	Styrene	5.0 U
				Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

JE
:he result is a value greater than or equal to the detection t, report the value.

cates compound was analyzed for but not detected. Report minimum detection limit for the sample with the U(e.g.10U cd on necessary concentration dilution actions. (This is not essarily the instrument detection limit.) The footnote should d U-Compound was analyzed for but not detected.The number is minimum attainable detection limit for the sample.

icates an estimated value.This flag is used either when timating a concentration for tentatively identified compounds here a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B
This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER
BG-065

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2661
Sample Matrix: SOIL
Data Release Authorized By: George Odell

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

resubmitted w/percent moisture

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 7.2
Percent Moisture: 23

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10.0 U
74-83-9	Bromomethane	10.0 U
75-01-4	Vinyl Chloride	10.0 U
75-00-3	Chloroethane	10.0 U
75-09-2	Methylene Chloride	6.8 B
67-64-1	Acetone	4.9 JB
75-15-0	Carbon Disulfide	0.4 J
75-35-4	1,1-Dichloroethene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	5.0 U
78-93-3	2-Butanone	10.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	5.0 U
108-05-4	Vinyl Acetate	10.0 U
75-27-4	Bromodichloromethane	5.0 U

CAS Number		ug/l or ug/Kg (Circle One)
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	0.9 J
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	10.0 U
75-25-2	Bromoform	5.0 U
591-78-6	2-Hexanone	10.0 U
108-10-1	4-Methyl-2-Pentanone	10.0 U
127-18-4	Tetrachloroethene	5.0 U
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE

If the result is a value greater than or equal to the detection limit, report the value.

U

Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U(e.g.10U based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected.The number is the minimum attainable detection limit for the sample.

J

Indicates an estimated value.This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identificat has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confir by GC/MS

B

This flag is used when the analyte is found in the blank as wel as a sample. It indicates possible/probable blank contaminatio and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 6099

SAMPLE NO.
BG-065

SEMIVOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/02/86
Conc/Dil Factor: -----> 1
Percent Moisture : 23

GPC Cleanup: Yes Y No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes__

CAS Number		ug/l or (ug/Kg) (Circle One)
62-75-9	N-Nitrosodimethylamine	330.0 U
108-95-2	Phenol	330.0 U
111-44-4	bis(-2-Chloroethyl)Ether	330.0 U
95-57-8	2-Chlorophenol	330.0 U
541-73-1	1,3-Dichlorobenzene	330.0 U
106-46-7	1,4-Dichlorobenzene	330.0 U
100-51-6	Benzyl Alcohol	330.0 U
95-50-1	1,2-Dichlorobenzene	330.0 U
95-48-7	2-Methylphenol	330.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	330.0 U
106-44-5	4-Methylphenol	330.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	330.0 U
67-72-1	Hexachloroethane	330.0 U
98-95-3	Nitrobenzene	330.0 U
78-59-1	Isophorone	330.0 U
88-75-5	2-Nitrophenol	330.0 U
105-67-9	2,4-Dimethylphenol	330.0 U
65-85-0	Benzoic Acid	1600.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	330.0 U
120-83-2	2,4-Dichlorophenol	330.0 U
120-82-1	1,2,4-Trichlorobenzene	330.0 U
91-20-3	Naphthalene	330.0 U
106-47-8	4-Chloroaniline	330.0 U
87-68-3	Hexachlorobutadiene	330.0 U
59-50-7	4-Chloro-3-Methylphenol	330.0 U
91-57-6	2-Methylnaphthalene	330.0 U
77-47-4	Hexachlorocyclopentadiene	330.0 U
88-06-2	2,4,6-Trichlorophenol	1600.0 U
95-95-4	2,4,5-Trichlorophenol	330.0 U
91-58-7	2-Chloronaphthalene	1600.0 U
88-74-4	2-Nitroaniline	330.0 U
131-11-3	Dimethyl Phthalate	330.0 U
208-96-8	Acenaphthylene	1600.0 U
99-09-2	3-Nitroaniline	

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	330.0 U
51-28-5	2,4-Dinitrophenol	1600.0 U
100-02-7	4-Nitrophenol	1600.0 U
132-64-9	Dibenzofuran	330.0 U
121-14-2	2,4-Dinitrotoluene	330.0 U
606-20-2	2,6-Dinitrotoluene	330.0 U
84-66-2	Diethylphthalate	330.0 U
7005-72-3	4-Chlorophenyl-phenylether	330.0 U
86-73-7	Fluorene	330.0 U
100-01-6	4-Nitroaniline	1600.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
101-55-3	4-Bromophenyl-phenylether	330.0 U
118-74-1	Hexachlorobenzene	330.0 U
87-86-5	Pentachlorophenol	1600.0 U
85-01-8	Phenanthrene	330.0 U
120-12-7	Anthracene	330.0 U
84-74-2	Di-n-Butylphthalate	330.0 U
206-44-0	Fluoranthene	330.0 U
129-00-0	Pyrene	330.0 U
85-68-7	Butylbenzylphthalate	330.0 U
91-94-1	3,3'-Dichlorobenzidine	660.0 U
56-55-3	Benzo(a)Anthracene	330.0 U
117-81-7	bis(2-Ethylhexyl)Phthalate	1400.0 B
218-01-9	Chrysene	330.0 U
117-84-0	Di-n-Octyl Phthalate	330.0 U
205-99-2	Benzo(b)Fluoranthene	330.0 U
207-08-9	Benzo(k)Fluoranthene	330.0 U
50-32-8	Benzo(a)Pyrene	330.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	330.0 U
53-70-3	Dibenz(a,h)Anthracene	330.0 U
191-24-2	Benzo(g,h,i)Perylene	

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-065

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: -----> 1
Percent Moisture: 23

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	0.40 J
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	32.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	162.00
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	102.80 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	505.10 B

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

$$\frac{\quad}{\quad} \text{ or } \frac{Ws}{30} \quad \frac{Vt}{40000} \quad \frac{Vi}{3}$$

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-065

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/2/86
Conc/Dil Factor: -----> 1
Percent Moisture: 23

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

corrected dates

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	16.00	U
319-85-7	Beta-BHC	16.00	U
319-86-8	Delta-BHC	16.00	U
58-89-9	Gamma-BHC (Lindane)	16.00	U
76-44-8	Heptachlor	0.40	J
309-00-2	Aldrin	16.00	U
1024-57-3	Heptachlor Epoxide	16.00	U
959-98-8	Endosulfan I	16.00	U
60-57-1	Dieldrin	32.00	U
72-55-9	4,4'-DDE	32.00	U
72-20-8	Endrin	32.00	U
33213-65-9	Endosulfan II	32.00	U
72-54-8	4,4'-DDD	32.00	U
7421-93-4	Endrin Aldehyde	32.00	U
1031-07-8	Endosulfan Sulfate	32.00	U
50-29-3	4,4'-DDT	162.00	
53494-70-5	Endrin Ketone	32.00	U
72-43-5	Methoxychlor	160.00	U
57-74-9	Chlordane	102.80	J
8001-35-2	Toxaphene	320.00	U
12674-11-2	Aroclor-1016	160.00	U
11104-28-2	Aroclor-1221	160.00	U
11141-16-5	Aroclor-1232	160.00	U
53469-21-9	Aroclor-1242	160.00	U
12672-29-6	Aroclor-1248	160.00	U
11097-69-1	Aroclor-1254	320.00	U
11096-82-5	Aroclor-1260	505.10	B

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

Form I A

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBE 211

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts. CASE NO. 6099

SOW NO. 784

LAB SAMPLE ID. NO. 73-3423 QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	9570	P	13.	Magnesium	5230	P
2.	Antimony	32 U	P	14.	Manganese	339	P
3.	Arsenic	[5.8]	F	15.	Mercury	.225	Cold.V.
4.	Barium	[101]	P	16.	Nickel	[16]	P
5.	Beryllium	2.6 U	P	17.	Potassium	3220 U	A
6.	Cadmium	3.2 U	P	18.	Selenium	2.8 U	F
7.	Calcium	9470	P	19.	Silver	6.3 U	P
8.	Chromium	19	P	20.	Sodium	3030 U	P
9.	Cobalt	11 U	P	21.	Thallium	3.4 U	F
10.	Copper	32	P	22.	Tin	19 U	P
11.	Iron	17100	P	23.	Vanadium	[17]	P
12.	Lead	188 *	P	24.	Zinc	184	P

Cyanide NR Auto An Percent Solids (%) 77.62

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager _____

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER
BG-066

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2662
Sample Matrix: SOIL
Data Release Authorized By: [signature]

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 7.7
Percent Moisture: 15

ber		ug/l or (ug/Kg) (Circle One)	CAS Number		ug/l or (ug/Kg) (Circle One)
37-3	Chloromethane	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
83-9	Bromomethane	10.0 U	78-87-5	1,2-Dichloropropane	5.0 U
01-4	Vinyl Chloride	10.0 U	10061-02-6	Trans-1,3-Dichloropropene	5.0 U
00-3	Chloroethane	10.0 U	79-01-6	Trichloroethene	5.0 U
09-2	Methylene Chloride	5.1 B	124-48-1	Dibromochloromethane	5.0 U
64-1	Acetone	6.2 JB	79-00-5	1,1,2-Trichloroethane	5.0 U
15-0	Carbon Disulfide	5.0 U	71-43-2	Benzene	0.5 J
35-4	1,1-Dichloroethene	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
34-3	1,1-Dichloroethane	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
-60-5	Trans-1,2-Dichloroethene	5.0 U	75-25-2	Bromoform	5.0 U
66-3	Chloroform	5.0 U	591-78-6	2-Hexanone	10.0 U
-06-2	1,2-Dichloroethane	5.0 U	108-10-1	4-Methyl-2-Pentanone	10.0 U
93-3	2-Butanone	10.0 U	127-18-4	Tetrachloroethene	5.0 U
55-6	1,1,1-Trichloroethane	5.0 U	108-88-3	Toluene	5.0 U
23-5	Carbon Tetrachloride	5.0 U	108-90-7	Chlorobenzene	5.0 U
-05-4	Vinyl Acetate	10.0 U	100-41-4	Ethylbenzene	5.0 U
27-4	Bromodichloromethane	5.0 U	100-42-5	Styrene	5.0 U
				Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

E

he result is a value greater than or equal to the detection t, report the value.

icates compound was analyzed for but not detected. Report minimum detection limit for the sample with the U(e.g.10U ed on necessary concentration dilution actions. (This is not essarily the instrument detection limit.) The footnote should d U-Compound was analyzed for but not detected.The number is minimum attainable detection limit for the sample.

icates an estimated value.This flag is used either when mating a concentration for tentatively identified compounds re a 1 1 response is assumed or when the mass spectral data icates the presence of a compound that meets the identification teria but the result is less than the specified detection limit greater than zero (e.g. 10J).

C

This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B

This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER

Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET
(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 6099

SAMPLE NO.
BG-066

SEMIVOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/02/86
Conc/Dil Factor:----------> 1
Percent Moisture : 15

GPC Cleanup: Yes X No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes__

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	330.0 U
108-95-2	Phenol	330.0 U
111-44-4	bis(-2-Chloroethyl)Ether	330.0 U
95-57-8	2-Chlorophenol	330.0 U
541-73-1	1,3-Dichlorobenzene	330.0 U
106-46-7	1,4-Dichlorobenzene	330.0 U
100-51-6	Benzyl Alcohol	330.0 U
95-50-1	1,2-Dichlorobenzene	330.0 U
95-48-7	2-Methylphenol	330.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	330.0 U
106-44-5	4-Methylphenol	330.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	330.0 U
67-72-1	Hexachloroethane	330.0 U
98-95-3	Nitrobenzene	330.0 U
78-59-1	Isophorone	330.0 U
88-75-5	2-Nitrophenol	330.0 U
105-67-9	2,4-Dimethylphenol	1600.0 U
65-85-0	Benzoic Acid	330.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	330.0 U
120-83-2	2,4-Dichlorophenol	330.0 U
120-82-1	1,2,4-Trichlorobenzene	330.0 U
91-20-3	Naphthalene	330.0 U
106-47-8	4-Chloroaniline	330.0 U
87-68-3	Hexachlorobutadiene	330.0 U
59-50-7	4-Chloro-3-Methylphenol	330.0 U
91-57-6	2-Methylnaphthalene	330.0 U
77-47-4	Hexachlorocyclopentadiene	330.0 U
88-06-2	2,4,6-Trichlorophenol	1600.0 U
95-95-4	2,4,5-Trichlorophenol	330.0 U
91-58-7	2-Chloronaphthalene	1600.0 U
88-74-4	2-Nitroaniline	330.0 U
131-11-3	Dimethyl Phthalate	700.0
208-96-8	Acenaphthylene	1600.0 U
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	430.0
51-28-5	2,4-Dinitrophenol	1600.0 U
100-02-7	4-Nitrophenol	1600.0 U
132-64-9	Dibenzofuran	330.0 U
121-14-2	2,4-Dinitrotoluene	330.0 U
606-20-2	2,6-Dinitrotoluene	330.0 U
84-66-2	Diethylphthalate	330.0 U
7005-72-3	4-Chlorophenyl-phenylether	330.0 U
86-73-7	Fluorene	1700.0
100-01-6	4-Nitroaniline	1600.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
101-55-3	4-Bromophenyl-phenylether	330.0 U
118-74-1	Hexachlorobenzene	330.0 U
87-86-5	Pentachlorophenol	1600.0 U
85-01-8	Phenanthrene	1500.0
120-12-7	Anthracene	2800.0
84-74-2	Di-n-Butylphthalate	330.0 U
206-44-0	Fluoranthene	17000.0
129-00-0	Pyrene	9200.0
85-68-7	Butylbenzylphthalate	330.0 U
91-94-1	3,3'-Dichlorobenzidine	660.0 U
56-55-3	Benzo(a)Anthracene	5900.0
117-81-7	bis(2-Ethylhexyl)Phthalate	~~2200.0~~ B
218-01-9	Chrysene	5600.0
117-84-0	Di-n-Octyl Phthalate	330.0 U
205-99-2	Benzo(b)Fluoranthene	2500.0
207-08-9	Benzo(k)Fluoranthene	3000.0
50-32-8	Benzo(a)Pyrene	2500.0
193-39-5	Indeno(1,2,3-cd)Pyrene	2000.0
53-70-3	Dibenz(a,h)Anthracene	330.0 U
191-24-2	Benzo(g,h,i)Perylene	2100.0

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-066

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: -----> 1
Percent Moisture: 15

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	32.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	~~965~~.00
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	336.00
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	2298.00 B

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER
BG-066

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/2/86
Conc/Dil Factor: ----> 1
Percent Moisture: 15

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

resubmitted
w/ corrected
data.

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	32.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	965.00
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	336.00
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	2298.00 B

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

Form I B

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBE 212

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts. CASE NO. 6094

SOW NO. 784

LAB SAMPLE ID. NO. 73 3424 QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	19100	P	13.	Magnesium	7580	P
2.	Antimony	47U	P	14.	Manganese	484	P
3.	Arsenic	t6 D	F	15.	Mercury	0.230	Cold.V.
4.	Barium	[151]	P	16.	Nickel	[32]	P
5.	Beryllium	3.8U ~~2.0U~~ MH	P	17.	Potassium	4745 ~~3200U~~ MH	A
6.	Cadmium	4.6U ~~2.5U~~ MH	P	18.	Selenium	4.7U	F
7.	Calcium	7940	P	19.	Silver	9.3U	P
8.	Chromium	39	P	20.	Sodium	4460U	P
9.	Cobalt	16U	P	21.	Thallium	5.0U	F
10.	Copper	55	P	22.	Tin	28U	P
11.	Iron	27500	P	23.	Vanadium	49	P
12.	Lead	179 *	P	24.	Zinc	227	P

Cyanide NR Auto An Percent Solids (%) 52.7

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager _____

ORGANIC ANALYSIS DATA SHEET
(PAGE 2)

SAMPLE NO.
BG-067

LABORATORY NAME: NANCO LABS, INC.
CASE NO: 6099

SEMIVOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/02/86
Conc/Dil Factor: -----> 1
Percent Moisture : 18

GPC Cleanup: Yes X No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes___

ber		ug/l or (ug/Kg) (Circle One)
75-9	N-Nitrosodimethylamine	330.0 U
-95-2	Phenol	330.0 U
-44-4	bis(-2-Chloroethyl)Ether	330.0 U
57-8	2-Chlorophenol	330.0 U
1-73-1	1,3-Dichlorobenzene	330.0 U
3-46-7	1,4-Dichlorobenzene	330.0 U
)-51-6	Benzyl Alcohol	330.0 U
-50-1	1,2-Dichlorobenzene	330.0 U
-48-7	2-Methylphenol	330.0 U
638-32-9	bis(2-chloroisopropyl)Ether	330.0 U
5-44-5	4-Methylphenol	330.0 U
1-64-7	N-Nitroso-Di-n-Propylamine	330.0 U
-72-1	Hexachloroethane	330.0 U
-95-3	Nitrobenzene	330.0 U
-59-1	Isophorone	330.0 U
-75-5	2-Nitrophenol	330.0 U
5-67-9	2,4-Dimethylphenol	1600.0 U
-85-0	Benzoic Acid	330.0 U
11-91-1	bis(-2-Chloroethoxy)Methane	330.0 U
0-83-2	2,4-Dichlorophenol	330.0 U
0-82-1	1,2,4-Trichlorobenzene	330.0 U
1-20-3	Naphthalene	330.0 U
6-47-8	4-Chloroaniline	330.0 U
-68-3	Hexachlorobutadiene	330.0 U
-50-7	4-Chloro-3-Methylphenol	330.0 U
1-57-6	2-Methylnaphthalene	330.0 U
7-47-4	Hexachlorocyclopentadiene	330.0 U
8-06-2	2,4,6-Trichlorophenol	1600.0 U
5-95-4	2,4,5-Trichlorophenol	330.0 U
1-58-7	2-Chloronaphthalene	1600.0 U
38-74-4	2-Nitroaniline	330.0 U
131-11-3	Dimethyl Phthalate	330.0 U
208-96-8	Acenaphthylene	1600.0 U
99-09-2	3-Nitroaniline	

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	330.0 U
51-28-5	2,4-Dinitrophenol	1600.0 U
100-02-7	4-Nitrophenol	1600.0 U
132-64-9	Dibenzofuran	330.0 U
121-14-2	2,4-Dinitrotoluene	330.0 U
606-20-2	2,6-Dinitrotoluene	330.0 U
84-66-2	Diethylphthalate	330.0 U
7005-72-3	4-Chlorophenyl-phenylether	330.0 U
86-73-7	Fluorene	330.0 U
100-01-6	4-Nitroaniline	1600.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
101-55-3	4-Bromophenyl-phenylether	330.0 U
118-74-1	Hexachlorobenzene	330.0 U
87-86-5	Pentachlorophenol	1600.0 U
85-01-8	Phenanthrene	330.0 U
120-12-7	Anthracene	330.0 U
84-74-2	Di-n-Butylphthalate	330.0 U
206-44-0	Fluoranthene	330.0 U
129-00-0	Pyrene	330.0 U
85-68-7	Butylbenzylphthalate	660.0 U
91-94-1	3,3'-Dichlorobenzidine	330.0 U
56-55-3	Benzo(a)Anthracene	330.0 U
117-81-7	bis(2-Ethylhexyl)Phthalate	330.0 U
218-01-9	Chrysene	330.0 U
117-84-0	Di-n-Octyl Phthalate	330.0 U
205-99-2	Benzo(b)Fluoranthene	330.0 U
207-08-9	Benzo(k)Fluoranthene	330.0 U
50-32-8	Benzo(a)Pyrene	330.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	330.0 U
53-70-3	Dibenz(a,h)Anthracene	330.0 U
191-24-2	Benzo(g,h,i)Perylene	

(1) - Cannot be separated from diphenylamine

COMMENT: NO HSL'S FOUND

ORGANICS ANALYSIS DATA SHEET
(PAGE 1)

SAMPLE NUMBER
BG-067

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2663
Sample Matrix: SOIL
Data Release Authorized By:

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 7.3
Percent Moisture: 18

		ug/l or (ug/Kg) (Circle One)	CAS Number		ug/l or (ug/Kg) (Circle One)
3	Chloromethane	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
9	Bromomethane	10.0 U	78-87-5	1,2-Dichloropropane	5.0 U
4	Vinyl Chloride	10.0 U	10061-02-6	Trans-1,3-Dichloropropene	5.0 U
3	Chloroethane	10.0 U	79-01-6	Trichloroethene	5.0 U
2	Methylene Chloride	5.2 B	124-48-1	Dibromochloromethane	5.0 U
1	Acetone	5.8 JB	79-00-5	1,1,2-Trichloroethane	5.0 U
0	Carbon Disulfide	5.0 U	71-43-2	Benzene	0.6 J
.4	1,1-Dichloroethene	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
.3	1,1-Dichloroethane	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
0-5	Trans-1,2-Dichloroethene	5.0 U	75-25-2	Bromoform	5.0 U
.3	Chloroform	5.0 U	591-78-6	2-Hexanone	10.0 U
6.2	1,2-Dichloroethane	5.0 U	108-10-1	4-Methyl-2-Pentanone	10.0 U
.3	2-Butanone	10.0 U	127-18-4	Tetrachloroethene	5.0 U
.6	1,1,1-Trichloroethane	5.0 U	108-88-3	Toluene	0.8 J
.5	Carbon Tetrachloride	5.0 U	108-90-7	Chlorobenzene	5.0 U
5.4	Vinyl Acetate	10.0 U	100-41-4	Ethylbenzene	5.0 U
.4	Bromodichloromethane	5.0 U	100-42-5	Styrene	5.0 U
				Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

ie result is a value greater than or equal to the detection
:, report the value.

:ates compound was analyzed for but not detected. Report
ninimum detection limit for the sample with the U(e.g.10U
d on necessary concentration dilution actions. (This is not
ssarily the instrument detection limit.) The footnote should
U-Compound was analyzed for but not detected.The number is
inimum attainable detection limit for the sample.

cates an estimated value.This flag is used either when
ating a concentration for tentatively identified compounds
e a 1 1 response is assumed or when the mass spectral data
:ates the presence of a compound that meets the identification
teria but the result is less than the specified detection limit
greater than zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B
This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-067

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: ----> 1
Percent Moisture: 18

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	32.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	~~89.00~~ 32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	160.00 U
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	309.00 JB

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

FORM I

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-067

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/2/86
Conc/Dil Factor: -----> 1
Percent Moisture: 18

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	32.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	89.00
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	160.00 U
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	309.00 JB

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

Form I C

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MGE213

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts. CASE NO. 6099

SOW NO. 784

LAB SAMPLE ID. NO. 73425 QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	12200	P	13.	Magnesium	6940	P
2.	Antimony	30U	P	14.	Manganese	345	P
3.	Arsenic	16	F	15.	Mercury	0.410	Cold.V.
4.	Barium	475	P	16.	Nickel	12U	P
5.	Beryllium	2.4U	P	17.	Potassium	3020U	A
6.	Cadmium	3.0U	P	18.	Selenium	3.0U	F
7.	Calcium	10400	P	19.	Silver	5.9U	P
8.	Chromium	21	P	20.	Sodium	2840U	P
9.	Cobalt	10U	P	21.	Thallium	3.2U	F
10.	Copper	20	P	22.	Tin	18U	P
11.	Iron	16000	P	23.	Vanadium	32	P
12.	Lead	76 *	F	24.	Zinc	307	P

Cyanide NR Auto An Percent Solids (%) 82.6

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager [signature]

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER
BG-068

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2672
Sample Matrix: SOIL
Data Release Authorized By:

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: 6/20/86
Date Analyzed: 6/20/86
Conc/Dil Factor: 1 pH: 7.4
Percent Moisture: 12

ber		ug/l or ug/Kg (Circle One)	CAS Number		ug/l or ug/Kg (Circle One)
87-3	Chloromethane	10.0 U	79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
83-9	Bromomethane	10.0 U	78-87-5	1,2-Dichloropropane	5.0 U
-01-4	Vinyl Chloride	10.0 U	10061-02-6	Trans-1,3-Dichloropropene	5.0 U
-00-3	Chloroethane	10.0 U	79-01-6	Trichloroethene	5.0 U
-09-2	Methylene Chloride	12.0 B	124-48-1	Dibromochloromethane	5.0 U
-64-1	Acetone	4.3 JB	79-00-5	1,1,2-Trichloroethane	5.0 U
-15-0	Carbon Disulfide	5.0 U	71-43-2	Benzene	0.7 JB
-35-4	1,1-Dichloroethene	5.0 U	10061-01-5	cis-1,3-Dichloropropene	5.0 U
-34-3	1,1-Dichloroethane	5.0 U	110-75-8	2-Chloroethylvinylether	10.0 U
6-60-5	Trans-1,2-Dichloroethene	5.0 U	75-25-2	Bromoform	5.0 U
-66-3	Chloroform	5.0 U	591-78-6	2-Hexanone	10.0 U
7-06-2	1,2-Dichloroethane	10.0 U	108-10-1	4-Methyl-2-Pentanone	10.0 U
-93-3	2-Butanone	5.0 U	127-18-4	Tetrachloroethene	5.0 U
-55-6	1,1,1-Trichloroethane	5.0 U	108-88-3	Toluene	5.0 U
-23-5	Carbon Tetrachloride	10.0 U	108-90-7	Chlorobenzene	5.0 U
8-05-4	Vinyl Acetate	5.0 U	100-41-4	Ethylbenzene	5.0 U
-27-4	Bromodichloromethane		100-42-5	Styrene	5.0 U
				Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

...UE
the result is a value greater than or equal to the detection mit, report the value.

...dicates compound was analyzed for but not detected. Report ...e minimum detection limit for the sample with the U(e.g.10U ...ased on necessary concentration dilution actions. (This is not ...ecessarily the instrument detection limit.) The footnote should ...ead U-Compound was analyzed for but not detected.The number is ...he minimum attainable detection limit for the sample.

...Indicates an estimated value.This flag is used either when ...estimating a concentration for tentatively identified compounds ...where a 1 1 response is assumed or when the mass spectral data ...indicates the presence of a compound that meets the identification ...criteria, but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identifica... has been confirmed by GC/MS Single component pesticides greate... than or equal to 10 ng/ul in the final extract should be confi... by GC/MS

B
This flag is used when the analyte is found in the blank as we... as a sample. It indicates possible/probable blank contaminati... and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER
BG-072

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2660
Sample Matrix: WATER
Data Release Authorized By:

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 8.0
Percent Moisture: N/A

CAS Number		ug/l (Circle One) or ug/Kg
74-87-3	Chloromethane	10.0 U
74-83-9	Bromomethane	10.0 U
75-01-4	Vinyl Chloride	10.0 U
75-00-3	Chloroethane	7.0 B
75-09-2	Methylene Chloride	11.0 B
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	10.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	10.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	5.0 U

CAS Number		ug/l (Circle One) or ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	0.7 JB
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	10.0 U
75-25-2	Bromoform	5.0 U
591-78-6	2-Hexanone	10.0 U
108-10-1	4-Methyl-2-Pentanone	10.0 U
127-18-4	Tetrachloroethene	5.0 U
108-88-3	Toluene	0.8 JB
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

[illegible]
the result is a value greater than or equal to the detection [illegible], report the value.

[illegible] indicates compound was analyzed for but not detected. Report the [illegible] detection limit for the sample with the U(e.g.10U [illegible] necessary concentration dilution actions. (This is not [illegible] the instrument detection limit.) The footnote should [illegible] compound was analyzed for but not detected.The number is [illegible] attainable detection limit for the sample.

[illegible] an estimated value.This flag is used either when [illegible] concentration for tentatively identified compounds [illegible] response is assumed or when the mass spectral data [illegible] the presence of a compound that meets the identification [illegible] the result is less than the specified detection limit [illegible] zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identification has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS

B
This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET
(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 6099

SAMPLE NO.
BG-068

SEMIVOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/02/86
Conc/Dil Factor:----------> 1
Percent Moisture : 12

GPC Cleanup: Yes X No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)	CAS Number		ug/l or (ug/Kg) (Circle One)
2-75-9	N-Nitrosodimethylamine	330.0 U	83-32-9	Acenaphthene	330.0 U
08-95-2	Phenol	330.0 U	51-28-5	2,4-Dinitrophenol	1600.0 U
11-44-4	bis(-2-Chloroethyl)Ether	330.0 U	100-02-7	4-Nitrophenol	1600.0 U
5-57-8	2-Chlorophenol	330.0 U	132-64-9	Dibenzofuran	330.0 U
41-73-1	1,3-Dichlorobenzene	330.0 U	121-14-2	2,4-Dinitrotoluene	330.0 U
06-46-7	1,4-Dichlorobenzene	330.0 U	606-20-2	2,6-Dinitrotoluene	330.0 U
00-51-6	Benzyl Alcohol	330.0 U	84-66-2	Diethylphthalate	330.0 U
5-50-1	1,2-Dichlorobenzene	330.0 U	7005-72-3	4-Chlorophenyl-phenylether	330.0 U
5-48-7	2-Methylphenol	330.0 U	86-73-7	Fluorene	330.0 U
7633-32-9	bis(2-chloroisopropyl)Ether	330.0 U	100-01-6	4-Nitroaniline	1600.0 U
06-44-5	4-Methylphenol	330.0 U	534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
21-64-7	N-Nitroso-Di-n-Propylamine	330.0 U	86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
7-72-1	Hexachloroethane	330.0 U	101-55-3	4-Bromophenyl-phenylether	330.0 U
3-95-3	Nitrobenzene	330.0 U	118-74-1	Hexachlorobenzene	330.0 U
8-59-1	Isophorone	330.0 U	87-86-5	Pentachlorophenol	1600.0 U
8-75-5	2-Nitrophenol	330.0 U	85-01-8	Phenanthrene	330.0 U
05-67-9	2,4-Dimethylphenol	330.0 U	120-12-7	Anthracene	330.0 U
5-85-0	Benzoic Acid	1600.0 U	84-74-2	Di-n-Butylphthalate	330.0 U
11-91-1	bis(-2-Chloroethoxy)Methane	330.0 U	206-44-0	Fluoranthene	330.0 U
20-83-2	2,4-Dichlorophenol	330.0 U	129-00-0	Pyrene	330.0 U
20-82-1	1,2,4-Trichlorobenzene	330.0 U	85-68-7	Butylbenzylphthalate	330.0 U
1-20-3	Naphthalene	330.0 U	91-94-1	3,3'-Dichlorobenzidine	660.0 U
06-47-8	4-Chloroaniline	330.0 U	56-55-3	Benzo(a)Anthracene	330.0 U
7-68-3	Hexachlorobutadiene	330.0 U	117-81-7	bis(2-Ethylhexyl)Phthalate	330.0 U
9-50-7	4-Chloro-3-Methylphenol	330.0 U	218-01-9	Chrysene	330.0 U
1-57-6	2-Methylnaphthalene	330.0 U	117-84-0	Di-n-Octyl Phthalate	330.0 U
77-47-4	Hexachlorocyclopentadiene	330.0 U	205-99-2	Benzo(b)Fluoranthene	330.0 U
88-06-2	2,4,6-Trichlorophenol	330.0 U	207-08-9	Benzo(k)Fluoranthene	330.0 U
95-95-4	2,4,5-Trichlorophenol	1600.0 U	50-32-8	Benzo(a)Pyrene	330.0 U
[illegible]	2-Chloronaphthalene	330.0 U	193-39-5	Indeno(1,2,3-cd)Pyrene	330.0 U
[illegible]	2-Nitroaniline	1600.0 U	53-70-3	Dibenz(a,h)Anthracene	330.0 U
[illegible]	Dimethyl Phthalate	330.0 U	191-24-2	Benzo(g,h,i)Perylene	330.0 U
[illegible]	Acenaphthylene	330.0 U			
99-09-2	3-Nitroaniline	1600.0 U			

(1) - Cannot be separated from diphenylamine

COMMENT: NO HSL'S FOUND

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-068

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: ----->
Percent Moisture: 12

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	9.60 J
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	24.70 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	288.00 JB

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

$$\frac{\quad}{\quad} \quad \text{or Ws} \ \frac{30}{\quad} \qquad \text{Vt} \ \frac{40000}{\quad} \qquad \text{Vi} \ \frac{3}{\quad}$$

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-068

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/2/86
Conc/Dil Factor: ----> 1
Percent Moisture: 12

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	9.60 J
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	24.70 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	288.00 JB

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

Form I D

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBE 214

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts. CASE NO. 6099

SOW NO. 784

LAB SAMPLE ID. NO. 73 3426 QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	7030	P	13.	Magnesium	6970	P
2.	Antimony	29U	P	14.	Manganese	232	P
3.	Arsenic	2.8 S	F	15.	Mercury	0.30U	Cold.V.
4.	Barium	[56]	P	16.	Nickel	11U	P
5.	Beryllium	2.3U	P	17.	Potassium	2850U	A
6.	Cadmium	2.9U	P	18.	Selenium	2.5U	F
7.	Calcium	13700	P	19.	Silver	5.6U	P
8.	Chromium	10	P	20.	Sodium	2680U	P
9.	Cobalt	9.7U	P	21.	Thallium	3.0U	F
10.	Copper	[16]	P	22.	Tin	17U	P
11.	Iron	11800	P	23.	Vanadium	[17]	P
12.	Lead	25 *	F	24.	Zinc	75	P

Cyanide NR Auto An Percent Solids (%) 87.7

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager EP

ORGANICS ANALYSIS DATA SHEET

(PAGE 1)

SAMPLE NUMBER
BG-069

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2665
Sample Matrix: SOIL
Data Release Authorized By:

Ca No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 7.7
Percent Moisture: 12

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	1.7 J
74-83-9	Bromomethane	10.0 U
75-01-4	Vinyl Chloride	10.0 U
75-00-3	Chloroethane	10.0 U
75-09-2	Methylene Chloride	5.2 JB
67-64-1	Acetone	6.6 JB
75-15-0	Carbon Disulfide	0.8 J
75-35-4	1,1-Dichloroethene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	5.0 U
78-93-3	2-Butanone	10.0 U
71-55-6	1,1,1-Trichloroethane	0.8 J
56-23-5	Carbon Tetrachloride	5.0 U
108-05-4	Vinyl Acetate	10.0 U
75-27-4	Bromodichloromethane	5.0 U

CAS Number		ug/l or ug/Kg (Circle One)
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	0.7 J
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	10.0 U
75-25-2	Bromoform	5.0 U
591-78-6	2-Hexanone	10.0 U
108-10-1	4-Methyl-2-Pentanone	10.0 U
127-18-4	Tetrachloroethene	5.0 U
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

ALUE
f the result is a value greater than or equal to the detection imit, report the value.

)
ndicates compound was analyzed for but not detected. Report he minimum detection limit for the sample with the U(e.g.10U ased on necessary concentration dilution actions. (This is not ecessarily the instrument detection limit.) The footnote should ead U-Compound was analyzed for but not detected.The number is he minimum attainable detection limit for the sample.

ndicates an estimated value.This flag is used either when stimating a concentration for tentatively identified compounds here a 1 1 response is assumed or when the mass spectral data ndicates the presence of a compound that meets the identification riteria but the result is less than the specified detection limit ut greater than zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identificatio has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirme by GC/MS

B
This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

ORGANIC ANALYSIS DATA SHEET
(PAGE 2)

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 6099

SAMPLE NO.
83-069

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/02/86
Conc/Dil Factor:----------> 1
Percent Moisture : 12

GPC Cleanup: Yes X No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	330.0 U
[illegible]-95-2	Phenol	330.0 U
111-44-4	bis(-2-Chloroethyl)Ether	330.0 U
95-57-8	2-Chlorophenol	330.0 U
541-73-1	1,3-Dichlorobenzene	330.0 U
106-46-7	1,4-Dichlorobenzene	330.0 U
100-51-6	Benzyl Alcohol	330.0 U
95-50-1	1,2-Dichlorobenzene	330.0 U
95-48-7	2-Methylphenol	330.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	330.0 U
106-44-5	4-Methylphenol	330.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	330.0 U
67-72-1	Hexachloroethane	330.0 U
98-95-3	Nitrobenzene	330.0 U
78-59-1	Isophorone	330.0 U
88-75-5	2-Nitrophenol	330.0 U
105-67-9	2,4-Dimethylphenol	330.0 U
65-85-0	Benzoic Acid	1600.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	330.0 U
120-83-2	2,4-Dichlorophenol	330.0 U
120-82-1	1,2,4-Trichlorobenzene	330.0 U
91-20-3	Naphthalene	330.0 U
106-47-8	4-Chloroaniline	330.0 U
87-68-3	Hexachlorobutadiene	330.0 U
59-50-7	4-Chloro-3-Methylphenol	330.0 U
[illegible]-57-6	2-Methylnaphthalene	330.0 U
77-47-[illegible]	Hexachlorocyclopentadiene	330.0 U
88-06-2	2,4,6-Trichlorophenol	330.0 U
95-95-4	2,4,5-Trichlorophenol	1600.0 U
91-58-7	2-Chloronaphthalene	330.0 U
88-74-4	2-Nitroaniline	1600.0 U
131-11-3	Dimethyl Phthalate	330.0 U
208-96-8	Acenaphthylene	330.0 U
99-09-2	3-Nitroaniline	1600.0 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330.0 U
51-28-5	2,4-Dinitrophenol	1600.0 U
100-02-7	4-Nitrophenol	1600.0 U
132-64-9	Dibenzofuran	330.0 U
121-14-2	2,4-Dinitrotoluene	330.0 U
606-20-2	2,6-Dinitrotoluene	330.0 U
84-66-2	Diethylphthalate	330.0 U
7005-72-3	4-Chlorophenyl-phenylether	330.0 U
86-73-7	Fluorene	330.0 U
100-01-6	4-Nitroaniline	1600.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
101-55-3	4-Bromophenyl-phenylether	330.0 U
118-74-1	Hexachlorobenzene	330.0 U
87-86-5	Pentachlorophenol	1600.0 U
85-01-8	Phenanthrene	5800,0
120-12-7	Anthracene	330.0 U
84-74-2	Di-n-Butylphthalate	330.0 U
206-44-0	Fluoranthene	8200.0
129-00-0	Pyrene	4700.0
85-68-7	Butylbenzylphthalate	330.0 U
91-94-1	3,3'-Dichlorobenzidine	660.0 U
56-55-3	Benzo(a)Anthracene	2800.0
117-81-7	bis(2-Ethylhexyl)Phthalate	4600.0
218-01-9	Chrysene	3000.0
117-84-0	Di-n-Octyl Phthalate	330.0 U
205-99-2	Benzo(b)Fluoranthene	1500.0
207-08-9	Benzo(k)Fluoranthene	1500.0
50-32-8	Benzo(a)Pyrene	1900.0
193-39-5	Indeno(1,2,3-cd)Pyrene	1200.0
53-70-3	Dibenz(a,h)Anthracene	330.0 U
191-24-2	Benzo(g,h,i)Perylene	1350.0

(1) - Cannot be separated from diphenylamine

COMMENTS: NO HSL'S FOUND

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER
BG-069

LABORATORY NAME: NYTCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: -----> 1
Percent Moisture: 12

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	16.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	~~180.00~~
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	142.00 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	320.00

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

FORM I

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER
BG-069

LABORATORY NAME: NANCO LABS, INC.

CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6/19/86

Date Analyzed: 7/2/86

Conc/Dil Factor: ------> 1

Percent Moisture: 12

GPC Cleanup: Yes__X__ No____

Separatory Funnel Extraction: Yes____

Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	16.00 U
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	180.00
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	142.00 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	320.00

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

FORM I

Form I E

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBE 215

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts.

CASE NO. 6099

SOW NO. 784

LAB SAMPLE ID. NO. 73-3427

QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1. Aluminum	7550	P	13. Magnesium	10700	P
2. Antimony	29U	P	14. Manganese	296	P
3. Arsenic	6.5	F	15. Mercury	0.120	Cold.V.
4. Barium	[62]	P	16. Nickel	12U	P
5. Beryllium	2.3U	P	17. Potassium	2930U	A
6. Cadmium	2.9U	P	18. Selenium	2.6U	F
7. Calcium	21200	P	19. Silver	5.8U	P
8. Chromium	16	P	20. Sodium	2760U	P
9. Cobalt	10U	P	21. Thallium	3.1U	F
10. Copper	30	P	22. Tin	18U	P
11. Iron	14300	P	23. Vanadium	[23]	P
12. Lead	195*	F	24. Zinc	128	P

yanide NR Auto An

Percent Solids (%) 85.2

ootnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

mments:

Lab Manager EF

ORGANICS ANALYSIS DATA SHEET
(PAGE 1)

SAMPLE NUMBER
BG-079

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2666
Sample Matrix: SOIL
Data Release Authorized By:

Case No: 6099
GC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 6/19/86
Conc/Dil Factor: 1 pH: 7.6
Percent Moisture: 7

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10.0 U
74-83-9	Bromomethane	10.0 U
75-01-4	Vinyl Chloride	10.0 U
75-00-3	Chloroethane	10.0 U
75-09-2	Methylene Chloride	11.0 B
67-64-1	Acetone	10.0 U
75-15-0	Carbon Disulfide	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	5.0 U
78-93-3	2-Butanone	10.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	5.0 U
108-05-4	Vinyl Acetate	10.0 U
75-27-4	Bromodichloromethane	5.0 U

CAS Number		ug/l or ug/Kg (Circle One)
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	1.3 J
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	10.0 U
75-25-2	Bromoform	5.0 U
591-78-6	2-Hexanone	10.0 U
108-10-1	4-Methyl-2-Pentanone	10.0 U
127-18-4	Tetrachloroethene	5.0 U
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE
If the result is a value greater than or equal to the detection limit, report the value.

U
The cated compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U(e.g.10U based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read "Compound was analyzed for but not detected.The number is the minimum attainable detection limit for the sample.

J
Indicates an estimated value.This flag is used either when calculating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identificat has been confirmed by GC/MS Single component pesticides greate than or equal to 10 ng/ul in the final extract should be confi by GC/MS

B
This flag is used when the analyte is found in the blank as wel as a sample. It indicates possible/probable blank contaminatic and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 6099

SAMPLE NO.
BG-070

SEMIVOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/03/86
Conc/Dil Factor:----------> 1
Percent Moisture : 7

GPC Cleanup: Yes X No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes_

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	330.0 U
108-95-2	Phenol	330.0 U
111-44-4	bis(-2-Chloroethyl)Ether	330.0 U
95-57-8	2-Chlorophenol	330.0 U
541-73-1	1,3-Dichlorobenzene	330.0 U
106-46-7	1,4-Dichlorobenzene	330.0 U
100-51-6	Benzyl Alcohol	330.0 U
95-50-1	1,2-Dichlorobenzene	330.0 U
95-48-7	2-Methylphenol	330.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	330.0 U
106-44-5	4-Methylphenol	330.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	330.0 U
67-72-1	Hexachloroethane	330.0 U
98-95-3	Nitrobenzene	330.0 U
78-59-1	Isophorone	330.0 U
88-75-5	2-Nitrophenol	330.0 U
105-67-9	2,4-Dimethylphenol	330.0 U
65-85-0	Benzoic Acid	1600.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	330.0 U
120-83-2	2,4-Dichlorophenol	330.0 U
120-82-1	1,2,4-Trichlorobenzene	330.0 U
91-20-3	Naphthalene	330.0 U
106-47-8	4-Chloroaniline	330.0 U
87-68-3	Hexachlorobutadiene	330.0 U
59-50-7	4-Chloro-3-Methylphenol	330.0 U
91-57-6	2-Methylnaphthalene	330.0 U
77-47-4	Hexachlorocyclopentadiene	330.0 U
88-06-2	2,4,6-Trichlorophenol	330.0 U
95-95-4	2,4,5-Trichlorophenol	1600.0 U
91-58-7	2-Chloronaphthalene	330.0 U
[illegible]	2-Nitroaniline	1600.0 U
[illegible]	Dimethyl Phthalate	330.0 U
[illegible]	Acenaphthylene	330.0 U
[illegible]	3-Nitroaniline	1600.0 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330.0 U
51-28-5	2,4-Dinitrophenol	1600.0 U
100-02-7	4-Nitrophenol	1600.0 U
132-64-9	Dibenzofuran	330.0 U
121-14-2	2,4-Dinitrotoluene	330.0 U
606-20-2	2,6-Dinitrotoluene	330.0 U
84-66-2	Diethylphthalate	330.0 U
7005-72-3	4-Chlorophenyl-phenylether	330.0 U
86-73-7	Fluorene	330.0 U
100-01-6	4-Nitroaniline	1600.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
101-55-3	4-Bromophenyl-phenylether	330.0 U
118-74-1	Hexachlorobenzene	330.0 U
87-86-5	Pentachlorophenol	1600.0 U
85-01-8	Phenanthrene	1200.0
120-12-7	Anthracene	330.0 U
84-74-2	Di-n-Butylphthalate	330.0 U
206-44-0	Fluoranthene	2300.0
129-00-0	Pyrene	1300.0
85-68-7	Butylbenzylphthalate	330.0 U
91-94-1	3,3'-Dichlorobenzidine	660.0 U
56-55-3	Benzo(a)Anthracene	330.0 U
117-81-7	bis(2-Ethylhexyl)Phthalate	330.0 U
218-01-9	Chrysene	330.0 U
117-84-0	Di-n-Octyl Phthalate	330.0 U
205-99-2	Benzo(b)Fluoranthene	520.0
207-08-9	Benzo(k)Fluoranthene	520.0
50-32-8	Benzo(a)Pyrene	590.0
193-39-5	Indeno(1,2,3-cd)Pyrene	330.0 U
53-70-3	Dibenz(a,h)Anthracene	330.0 U
191-24-2	Benzo(g,h,i)Perylene	380.0

(1) - Cannot be separated from diphenylamine

NO HSL'S FOUND

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-070

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: -----> 1
Percent Moisture: 7

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	11.80 J
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	160.00 U
72-43-5	Methoxychlor	56.80 J
57-74-9	Chlordane	320.00 U
8001-35-2	Toxaphene	160.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	320.00 U
11097-69-1	Aroclor-1254	351.00 B
11096-82-5	Aroclor-1260	

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

$$\frac{\quad}{\quad} \text{ or } \frac{30}{Ws} \quad \frac{Vt}{40000} \quad \frac{Vi}{3}$$

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER
BG-070

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/2/86
Conc/Dil Factor: -----> 1
Percent Moisture: 7

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

results that were not detected

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	11.80 J
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	32.00 U
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	32.00 U
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	56.80 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	351.00 B

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

Form I F

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MGE216

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts. CASE NO. 6099

SOW NO. 784

LAB SAMPLE ID. NO. 73 3428 QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1.	Aluminum	3080	P	13.	Magnesium	4700	P
2.	Antimony	29 U	P	14.	Manganese	118	P
3.	Arsenic	4.6	F	15.	Mercury	0.10 U	Cold.V.
4.	Barium	38	P	16.	Nickel	121 U	P
5.	Beryllium	2.3 U	P	17.	Potassium	2890 U	A
6.	Cadmium	2.9 U	P	18.	Selenium	2.5 U	F
7.	Calcium	12000	P	19.	Silver	5.7 U	P
8.	Chromium	9	P	20.	Sodium	2710 U	P
9.	Cobalt	9.8 U	P	21.	Thallium	3.1 U	F
10.	Copper	15	P	22.	Tin	17 U	P
11.	Iron	7190	P	23.	Vanadium	13 U	P
12.	Lead	145 *	P	24.	Zinc	92	P

Cyanide NR Auto An Percent Solids (%) 86.6

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager EB

ORGANICS ANALYSIS DATA SHEET
(PAGE 1)

SAMPLE NUMBER
BG-071

Laboratory Name:NANCO LABORATORY INC.
Lab Sample ID No:>P2667
Sample Matrix: SOIL
Data Release Authorized By:

Case No: 6099
QC Report No: 055
Contract No:68-01-7102
Date Sample Received: 6/19/86

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/20/86
Date Analyzed: 6/20/86
Conc/Dil Factor: 1
pH: 7.6
Percent Moisture: 7

CAS Number		ug/l or ug/Kg (Circle One)
,-87-3	Chloromethane	10.0 U
,-83-9	Bromomethane	10.0 U
;-01-4	Vinyl Chloride	10.0 U
;-00-3	Chloroethane	4.9 JB
;-09-2	Methylene Chloride	5.7 JB
'-64-1	Acetone	5.0 U
;-15-0	Carbon Disulfide	5.0 U
-35-4	1,1-Dichloroethene	5.0 U
-34-3	1,1-Dichloroethane	5.0 U
6-60-5	Trans-1,2-Dichloroethene	5.0 U
-66-3	Chloroform	5.0 U
7-06-2	1,2-Dichloroethane	10.0 U
-93-3	2-Butanone	5.0 U
-55-6	1,1,1-Trichloroethane	5.0 U
-23-5	Carbon Tetrachloride	10.0 U
3-05-4	Vinyl Acetate	5.0 U
-27-4	Bromodichloromethane	5.0 U
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	0.5 J
71-43-2	Benzene	5.0 U
10061-01-5	cis-1,3-Dichloropropene	10.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	10.0 U
591-78-6	2-Hexanone	10.0 U
108-10-1	4-Methyl-2-Pentanone	5.0 U
127-18-4	Tetrachloroethene	5.0 U
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

E
he result is a value greater than or equal to the detection t, report the value.

cates compound was analyzed for but not detected. Report minimum detection limit for the sample with the U(e.g.10U d on necessary concentration dilution actions. (This is not ssarily the instrument detection limit.) The footnote should U-Compound was analyzed for but not detected.The number is minimum attainable detection limit for the sample.

:ates an estimated value.This flag is used either when ating a concentration for tentatively identified compounds a 1:1 response is assumed or when the mass spectral data ates the presence of a compound that meets the identification ria but the result is less than the specified detection limit greater than zero (e.g. 10J).

C
This flag applies to pesticide parameters where the identificat has been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confir by GC/MS

B
This flag is used when the analyte is found in the blank as wel as a sample. It indicates possible/probable blank contaminatio and warns the data user to take appropriate action.

OTHER
Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

FORM I

LABORATORY NAME: NANCO LABS. INC.
CASE NO: 6099

SAMPLE NO.
BG-071

SEMIVOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/03/86
Conc/Dil Factor:----------> 1
Percent Moisture : 7

GPC Cleanup: Yes X No____
Separatory Funnel Extraction: Yes____
Continuous Liquid - Liquid Extraction: Yes_

CAS Number		ug/l or ug/Kg (Circle One)
62-75-9	N-Nitrosodimethylamine	330.0 U
108-95-2	Phenol	330.0 U
111-44-4	bis(-2-Chloroethyl)Ether	330.0 U
95-57-8	2-Chlorophenol	330.0 U
541-73-1	1,3-Dichlorobenzene	330.0 U
106-46-7	1,4-Dichlorobenzene	330.0 U
100-51-6	Benzyl Alcohol	330.0 U
95-50-1	1,2-Dichlorobenzene	330.0 U
95-48-7	2-Methylphenol	330.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	330.0 U
106-44-5	4-Methylphenol	330.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	330.0 U
67-72-1	Hexachloroethane	330.0 U
98-95-3	Nitrobenzene	330.0 U
78-59-1	Isophorone	330.0 U
88-75-5	2-Nitrophenol	330.0 U
105-67-9	2,4-Dimethylphenol	330.0 U
65-85-0	Benzoic Acid	1600.0 U
111-91-1	bis(-2-Chloroethoxy)Methane	330.0 U
120-83-2	2,4-Dichlorophenol	330.0 U
120-82-1	1,2,4-Trichlorobenzene	330.0 U
91-20-3	Naphthalene	330.0 U
106-47-8	4-Chloroaniline	330.0 U
87-68-3	Hexachlorobutadiene	330.0 U
59-50-7	4-Chloro-3-Methylphenol	330.0 U
91-57-6	2-Methylnaphthalene	330.0 U
77-47-4	Hexachlorocyclopentadiene	330.0 U
88-06-2	2,4,6-Trichlorophenol	330.0 U
95-95-4	2,4,5-Trichlorophenol	1600.0 U
91-58-7	2-Chloronaphthalene	330.0 U
88-74-4	2-Nitroaniline	1600.0 U
131-11-3	Dimethyl Phthalate	330.0 U
208-96-8	Acenaphthylene	330.0 U
606-20-2	3-Nitroaniline	1600.0 U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330.0 U
51-28-5	2,4-Dinitrophenol	1600.0 U
100-02-7	4-Nitrophenol	1600.0 U
132-64-9	Dibenzofuran	330.0 U
121-14-2	2,4-Dinitrotoluene	330.0 U
606-20-2	2,6-Dinitrotoluene	330.0 U
84-66-2	Diethylphthalate	330.0 U
7005-72-3	4-Chlorophenyl-phenylether	330.0 U
86-73-7	Fluorene	330.0 U
100-01-6	4-Nitroaniline	1600.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600.0 U
86-30-6	N-Nitrosodiphenylamine (1)	330.0 U
101-55-3	4-Bromophenyl-phenylether	330.0 U
118-74-1	Hexachlorobenzene	330.0 U
87-86-5	Pentachlorophenol	1600.0 U
85-01-8	Phenanthrene	330.0 U
120-12-7	Anthracene	330.0 U
84-74-2	Di-n-Butylphthalate	330.0 U
206-44-0	Fluoranthene	1400.0
129-00-0	Pyrene	330.0 U
85-68-7	Butylbenzylphthalate	330.0 U
91-94-1	3,3'-Dichlorobenzidine	660.0 U
56-55-3	Benzo(a)Anthracene	330.0 U
117-81-7	bis(2-Ethylhexyl)Phthalate	4200.0 B
218-01-9	Chrysene	680.0
117-84-0	Di-n-Octyl Phthalate	330.0 U
205-99-2	Benzo(b)Fluoranthene	410.0
207-08-9	Benzo(k)Fluoranthene	330.0 U
50-32-8	Benzo(a)Pyrene	330.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	330.0 U
53-70-3	Dibenz(a,h)Anthracene	330.0 U
191-24-2	Benzo(g,h,i)Perylene	330.0 U

(1) - Cannot be separated from diphenylamine

ORGANICS ANALYSIS DATA SHEET
(PAGE 3)

SAMPLE NUMBER
BG-071

LABORATORY NAME: NANCO LABS, INC.
CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 6/19/86
Date Analyzed: 7/1/86
Conc/Dil Factor: -----> 1
Percent Moisture: 7

GPC Cleanup: Yes__X__ No____
Separatory Funnel Extraction: Yes____
Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16.00 U
319-85-7	Beta-BHC	16.00 U
319-86-8	Delta-BHC	16.00 U
58-89-9	Gamma-BHC (Lindane)	16.00 U
76-44-8	Heptachlor	16.00 U
309-00-2	Aldrin	16.00 U
1024-57-3	Heptachlor Epoxide	16.00 U
959-98-8	Endosulfan I	16.00 U
60-57-1	Dieldrin	4.80 J
72-55-9	4,4'-DDE	32.00 U
72-20-8	Endrin	32.00 U
33213-65-9	Endosulfan II	32.00 U
72-54-8	4,4'-DDD	9.70 J
7421-93-4	Endrin Aldehyde	32.00 U
1031-07-8	Endosulfan Sulfate	135.00
50-29-3	4,4'-DDT	32.00 U
53494-70-5	Endrin Ketone	32.00 U
72-43-5	Methoxychlor	160.00 U
57-74-9	Chlordane	46.30 J
8001-35-2	Toxaphene	320.00 U
12674-11-2	Aroclor-1016	160.00 U
11104-28-2	Aroclor-1221	160.00 U
11141-16-5	Aroclor-1232	160.00 U
53469-21-9	Aroclor-1242	160.00 U
12672-29-6	Aroclor-1248	160.00 U
11097-69-1	Aroclor-1254	320.00 U
11096-82-5	Aroclor-1260	320.00 U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (

Vt = Volume of total extract (ul)

$$\frac{\quad}{\text{or Ws}} \quad \frac{30}{\quad} \qquad \frac{40000}{Vt} \quad \frac{3}{Vi}$$

FORM I

ORGANICS ANALYSIS DATA SHEET

(PAGE 3)

SAMPLE NUMBER
BG-071

LABORATORY NAME: NANCO LABS, INC.

CASE NO: EPA 6099

PESTICIDE/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 6/19/86

Date Analyzed: 7/2/86

Conc/Dil Factor: -----> 1

Percent Moisture: 7

GPC Cleanup: Yes__X__ No____

Separatory Funnel Extraction: Yes____

Continuous Liquid-Liquid Extraction: Yes____

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	16.00	U
319-85-7	Beta-BHC	16.00	U
319-86-8	Delta-BHC	16.00	U
58-89-9	Gamma-BHC (Lindane)	16.00	U
76-44-8	Heptachlor	16.00	U
309-00-2	Aldrin	16.00	U
1024-57-3	Heptachlor Epoxide	16.00	U
959-98-8	Endosulfan I	16.00	U
60-57-1	Dieldrin	4.80	J
72-55-9	4,4'-DDE	32.00	U
72-20-8	Endrin	32.00	U
33213-65-9	Endosulfan II	32.00	U
72-54-8	4,4'-DDD	9.70	J
7421-93-4	Endrin Aldehyde	32.00	U
1031-07-8	Endosulfan Sulfate	135.00	
50-29-3	4,4'-DDT	32.00	U
53494-70-5	Endrin Ketone	32.00	U
72-43-5	Methoxychlor	160.00	U
57-74-9	Chlordane	46.30	J
8001-35-2	Toxaphene	320.00	U
12674-11-2	Aroclor-1016	160.00	U
11104-28-2	Aroclor-1221	160.00	U
11141-16-5	Aroclor-1232	160.00	U
53469-21-9	Aroclor-1242	160.00	U
12672-29-6	Aroclor-1248	160.00	U
11097-69-1	Aroclor-1254	320.00	U
11096-82-5	Aroclor-1260	320.00	U

Vi = Volume of extract injected (ul)

Vs = Volume of water extracted (ml)

Ws = Weight of sample extracted (g)

Vt = Volume of total extract (ul)

Vs _____ or Ws 30 Vt 40000 Vi 3

FORM I

Form I G

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MBE 217

Date 7 17 86

INORGANIC ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cnslts. CASE NO. 6099

SOW NO. 784

LAB SAMPLE ID. NO. 73 3429 QC REPORT NO. 269

Elements Identified and Measured

Concentration: Low ✓ Medium _____

Matrix: Water _____ Soil ✓ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	6440	P	13.	Magnesium	5160	P
2.	Antimony	29U	P	14.	Manganese	232	P
3.	Arsenic	5.8U	F	15.	Mercury	0.12U	Cold.V.
4.	Barium	[59]	P	16.	Nickel	[14]	P
5.	Beryllium	2.3U	P	17.	Potassium	2890U	A
6.	Cadmium	2.9U	P	18.	Selenium	3.0U	F
7.	Calcium	11600	P	19.	Silver	5.7U	P
8.	Chromium	14	P	20.	Sodium	2720U	P
9.	Cobalt	9.8U	P	21.	Thallium	3.1U	F
10.	Copper	36	P	22.	Tin	17U	P
11.	Iron	15200	P	23.	Vanadium	25	P
12.	Lead	238 *	P	24.	Zinc	169	P

yanide NR Auto An Percent Solids (%) 86.5

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

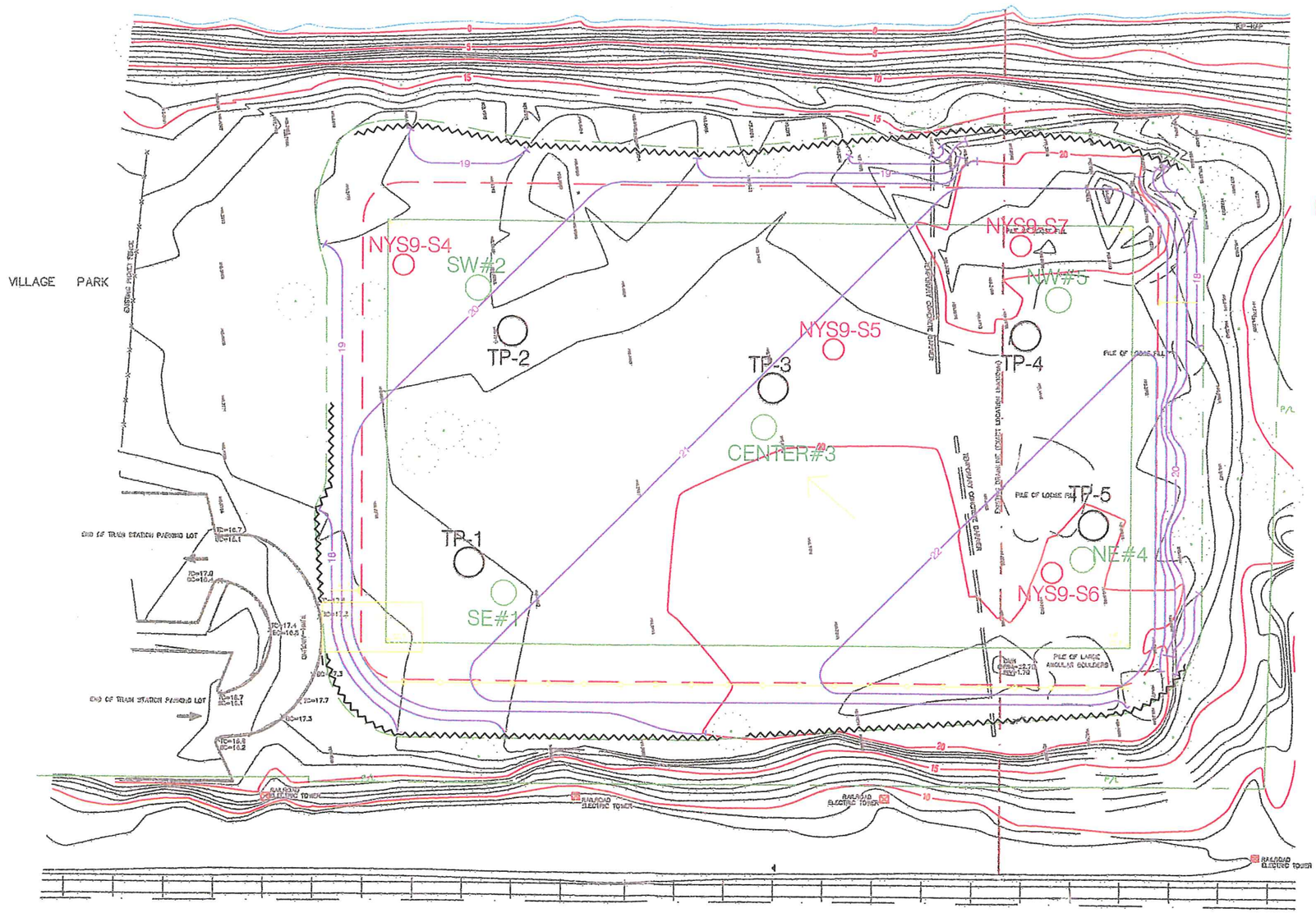
ments: _____

Lab Manager EB

APPENDIX 3

Sample Location Plan, Village of Dobbs Ferry (2002) and Potomac-Hudson Environmental, Inc. (2002) Data Tables

HUDSON RIVER



NYS9-S4 Approximate location of USEPA/NUS 1986 Sample

SW#2 Approximate Location Village of Dobbs Ferry May 2002 Sample

TP-3 Potomac-Hudson Env. October 2002 Test Pit Location

METRO NORTH COMMUTER RAILROAD

NAD 83

GRAPHIC SCALE (IN FEET)

0 50 100 150

DATE:	DRAWN BY:	REVIEWED BY:	SCALE:	PROJECT #	SHEET #
5/18/04	MDS	KEP	AS SHOWN	454	1 OF 1

POTOMAC-HUDSON ENVIRONMENTAL, INC.

157 John Street
PO Box 7
South Amboy, NJ 08879

23 Chapel Avenue
Jersey City, NJ 07305

136 W. 16th Street
Suite 3E, POB 1206
New York, NY 10011

DATE	REVISION	DRAWN BY	REVIEWED BY	RELEASED BY

Previous Sample Locations Waterfront Park Recreational Field Dobbs Ferry, New York

SOURCE: Vollmer Associates LLP

FIGURE # 2

TABLE 2
SOIL SAMPLE RESULTS - VOLATILE ORGANICS
PHE (OCTOBER 2002)
DOBBS FERRY WATERFRONT PARK, DOBBS FERRY, NY

Client ID:	NYSDEC Recommended	NYSDEC Soil Cleanup	TP1A			TP1B			TP2A			TP2B			TP3A			TP3B			TP4A			TP4B			TP5A			TP5B			TP5C [1]		
Sample Depth (ft):	Soil	Obj. Protective	0-0.5			9.5-10			0-0.5			9.5-10			0-0.5			9.5-10			0-0.5			10-11			0-0.5			9.5-10			9.5-10		
Lab ID:	Cleanup	of GW	7622-001			7622-002			7622-003			7622-004			7622-005			7622-006			7622-007			7622-008			7622-009			7622-010			7622-011		
Date Sampled:	Objective	quality	10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002			10/01/2002		
Matrix:	(ppm)	(ppm)	Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Volatiles (ppm)			Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Chloromethane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Vinyl Chloride	0.2	0.12	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Bromomethane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Chloroethane	1.9	1.9	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Trichlorofluoromethane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Acrolein	NA	NA	ND		0.012	ND		0.012	ND		0.014	ND		0.012	ND		0.011	ND		0.013	ND		0.011	ND		0.013	ND		0.011	ND		0.012	ND		0.012
1,1-Dichloroethene	0.4	0.4	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Methylene Chloride	0.1	0.1	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Acrylonitrile	NA	NA	ND		0.012	ND		0.012	ND		0.014	ND		0.012	ND		0.011	ND		0.013	ND		0.011	ND		0.013	ND		0.011	ND		0.012	ND		0.012
trans-1,2-Dichloroethene	0.3	0.3	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,1-Dichloroethane	0.2	0.2	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Chloroform	0.3	0.3	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,1,1-Trichloroethane	0.8	0.76	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Carbon Tetrachloride	0.6	0.6	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,2-Dichloroethane(EDC)	0.1	0.1	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Benzene	0.06	0.06	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	0.00264	J	0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Trichloroethene	0.7	0.7	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,2-Dichloropropane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Bromodichloromethane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
2-Chloroethylvinyl Ether	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
cis-1,3-Dichloropropene	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Toluene	1.5	1.5	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
trans-1,3-Dichloropropene	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,1,2-Trichloroethane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Tetrachloroethene	1.4	1.4	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Dibromochloromethane	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Chlorobenzene	1.7	1.7	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	0.027		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Ethylbenzene	5.5	5.5	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	0.00322	J	0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Total Xylenes	1.2	1.2	ND		0.00575	0.082		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	0.018		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
Bromoform	NA	NA	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,1,2,2-Tetrachloroethane	0.6	0.6	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,3-Dichlorobenzene	1.6	1.55	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,4-Dichlorobenzene	8.5	8.5	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	0.00393	J	0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
1,2-Dichlorobenzene	7.9	7.9	ND		0.00575	ND		0.0061	ND		0.00705	ND		0.0061	ND		0.0055	ND		0.0063	ND		0.00555	ND		0.0067	ND		0.0054	ND		0.006	ND		0.0058
TOTAL VO's:			ND			0.082			ND			ND			ND			0.055	J		ND			ND			ND			ND			ND		
TOTAL TIC's:			ND			0.00952			ND			0.00756			ND			0.183			ND			ND			ND			ND			ND		
TOTAL VO's & TIC's:	10 [2]	NA	ND			0.091			ND			0.00756			ND			0.238	J		ND			ND			ND			ND			ND		

(1) Sample TP5C is duplicate of sample TP5B

(2) Total VO's should be less than 100 ppm

~ = Sample not analyzed for

ND = Analyzed for but Not Detected at the MDL

NA = Not Available

J = The concentration was detected at a value below the MDL

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

Concentration exceeds NYSDEC Recommended Soil Cleanup Objective

TABLE 3
SOIL SAMPLE RESULTS - SEMIVOLATILE ORGANICS
PHE (OCTOBER 2002)
DOBBS FERRY WATERFRONT PARK, DOBBS FERRY, NY

Client ID:	NYSDEC Recommended	NYSDEC Soil Cleanup	TP1A	TP1B	TP2A	TP2B	TP3A	TP3B	TP4A	TP4B	TP5A	TP5B	TP5C [1]
Sample Depth (ft):	Soil	Obj. Protective	0-0.5	9.5-10	0-0.5	9.5-10	0-0.5	9.5-10	0-0.5	10-11	0-0.5	9.5-10	9.5-10
Lab ID:	Cleanup	of GW	7622-001	7622-002	7622-003	7622-004	7622-005	7622-006	7622-007	7622-008	7622-009	7622-010	7622-011
Date Sampled:	Objective	quality	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002	10/01/2002
Matrix:	(ppm)	(ppm)	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Semivolatiles - BNA (ppm)													
N-Nitrosodimethylamine	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Phenol	0.03 or MDL	0.03	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Aniline	0.1	0.1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
bis(2-Chloroethyl)ether	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2-Chlorophenol	0.8	0.8	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
1,3-Dichlorobenzene	1.6	1.55	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
1,4-Dichlorobenzene	8.5	8.5	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Benzyl alcohol	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
1,2-Dichlorobenzene	7.9	7.9	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2-Methylphenol	0.1 or MDL	0.1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
bis(2-chloroisopropyl)ether	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
4-Methylphenol	0.9	0.9	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
N-Nitroso-di-n-propylamine	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Hexachloroethane	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Nitrobenzene	0.2 or MDL	0.2	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Isophorone	4.4	4.4	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2-Nitrophenol	0.33 or MDL	0.33	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2,4-Dimethylphenol	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
bis(2-Chloroethoxy)methane	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Benzoic acid	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2,4-Dichlorophenol	0.4	0.4	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
1,2,4-Trichlorobenzene	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Naphthalene	13	13	ND 0.217	0.167 J 0.214	ND 0.258	ND 0.206	ND 0.199	0.246 0.227	ND 0.199	ND 0.254	0.364 0.194	0.167 J 0.228	1.04 0.462
4-Chloroaniline	0.22 or MDL	0.22	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Hexachlorobutadiene	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
4-Chloro-3-methylphenol	0.24 or MDL	0.24	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2-Methylnaphthalene	36.4	36.4	ND 0.217	0.370 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	0.560 0.462
Hexachlorocyclopentadiene	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2,4,6-Trichlorophenol	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2,4,5-Trichlorophenol	0.1	0.1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2-Chloronaphthalene	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2-Nitroaniline	0.43 or MDL	0.43	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Dimethylphthalate	2	2	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2,6-Dinitrotoluene	1	1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Acenaphthylene	41	41	ND 0.217	0.538 0.214	0.280 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	0.159 J 0.254	1.72 0.194	0.326 0.228	1.23 0.462
3-Nitroaniline	0.5 or MDL	0.5	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Acenaphthene	50 [2]	90	ND 0.217	2.58 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	0.214 J 0.228	2.61 0.462
2,4-Dinitrophenol	0.2 or MDL	0.2	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
4-Nitrophenol	0.1 or MDL	0.1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
2,4-Dinitrotoluene	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Dibenzofuran	6.2	6.2	ND 0.217	1.80 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	0.170 J 0.194	ND 0.228	2.31 0.462
Diethylphthalate	7.1	7.1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Fluorene	50 [2]	350	ND 0.217	4.02 0.214	0.221 J 0.258	ND 0.206	ND 0.199	0.139 J 0.227	ND 0.199	ND 0.254	0.235 0.194	0.276 0.228	3.32 0.462
4-Chlorophenyl-phenylether	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
4-Nitroaniline	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
4,6-Dinitro-2-methylphenol	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
N-Nitrosodiphenylamine	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
1,2-Diphenylhydrazine/Azobenzene	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
4-Bromophenyl-phenylether	NA	NA	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Hexachlorobenzene	0.41	1.4	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462
Pentachlorophenol	1 or MDL	1	ND 0.217	ND 0.214	ND 0.258	ND 0.206	ND 0.199	ND 0.227	ND 0.199	ND 0.254	ND 0.194	ND 0.228	ND 0.462

TABLE 3
SOIL SAMPLE RESULTS - SEMIVOLATILE ORGANICS
PHE (OCTOBER 2002)
DOBBS FERRY WATERFRONT PARK, DOBBS FERRY, NY

Client ID:	NYSDEC Recommended	NYSDEC Soil Cleanup	TP1A		TP1B		TP2A		TP2B		TP3A		TP3B		TP4A		TP4B		TP5A		TP5B		TP5C [1]	
Sample Depth (ft):	Soil	Obj. Protective	0-0.5		9.5-10		0-0.5		9.5-10		0-0.5		9.5-10		0-0.5		10-11		0-0.5		9.5-10		9.5-10	
Lab ID:	Cleanup	of GW	7622-001		7622-002		7622-003		7622-004		7622-005		7622-006		7622-007		7622-008		7622-009		7622-010		7622-011	
Date Sampled:	Objective	quality	10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002	
Matrix:	(ppm)	(ppm)	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Semivolatiles - BNA (ppm) (CONT.)																								
Phenanthrene	50 [2]	220	0.398	0.217	29.3	0.214	2.32	0.258	0.181 J	0.206	ND	0.199	0.467	0.227	0.409	0.199	0.696	0.254	1.71	0.194	2.23	0.228	38.2	0.462
Anthracene	50 [2]	700	ND	0.217	13.7	0.214	0.668	0.258	ND	0.206	ND	0.199	0.163 J	0.227	ND	0.199	0.303	0.254	1.21	0.194	0.758	0.228	8.16	0.462
Carbazole	NA	NA	ND	0.217	1.71	0.214	0.155 J	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	0.183 J	0.194	0.312	0.228	4.05	0.462
Di-n-butylphthalate	8.1	8.1	ND	0.217	ND	0.214	ND	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	ND	0.194	ND	0.228	ND	0.462
Fluoranthene	50 [2]	1900	1.23	0.217	30.8	0.214	3.81	0.258	0.283	0.206	ND	0.199	1.01	0.227	0.799	0.199	1.38	0.254	10.6	0.194	4.25	0.228	44.6	0.462
Benzidine	NA	NA	ND	0.217	ND	0.214	ND	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	ND	0.194	ND	0.228	ND	0.462
Pyrene	50 [2]	665	1.11	0.217	24.9	0.214	3.46	0.258	0.275	0.206	0.119 J	0.199	1.17	0.227	0.777	0.199	1.54	0.254	9.04	0.194	3.13	0.228	35.3	0.462
3,3'-Dimethylbenzidine	NA	NA	ND	0.217	ND	0.214	ND	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	ND	0.194	ND	0.228	ND	0.462
Butylbenzylphthalate	50 [2]	122	ND	0.217	ND	0.214	ND	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	ND	0.194	ND	0.228	ND	0.462
3,3'-Dichlorobenzidine	NA	NA	ND	0.217	ND	0.214	ND	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	ND	0.194	ND	0.228	ND	0.462
Benzo[a]anthracene	0.224 or MDL	3	0.826	0.217	13.4	0.214	1.98	0.258	0.188 J	0.206	ND	0.199	0.822	0.227	0.482	0.199	0.933	0.254	8.25	0.194	2.55	0.228	18.6	0.462
Chrysene	0.4	0.4	1.08	0.217	15.3	0.214	2.08	0.258	0.277	0.206	ND	0.199	1.33	0.227	0.621	0.199	1.22	0.254	8.93	0.194	2.97	0.228	20.4	0.462
bis(2-Ethylhexyl)phthalate	50 [2]	435	0.587	0.217	0.255	0.214	ND	0.258	0.501	0.206	ND	0.199	2.14	0.227	ND	0.199	0.526	0.254	ND	0.194	0.148 J	0.228	ND	0.462
Di-n-octylphthalate	50 [2]	120	ND	0.217	ND	0.214	ND	0.258	ND	0.206	ND	0.199	ND	0.227	ND	0.199	ND	0.254	ND	0.194	ND	0.228	ND	0.462
Benzo[b]fluoranthene	1.1	1.1	0.864	0.217	7.76	0.214	1.09	0.258	0.136 J	0.206	ND	0.199	0.718	0.227	0.336	0.199	0.798	0.254	6.09	0.194	2.65	0.228	13.1	0.462
Benzo[k]fluoranthene	1.1	1.1	0.671	0.217	8.13	0.214	1.44	0.258	0.166 J	0.206	ND	0.199	0.639	0.227	0.484	0.199	0.749	0.254	6.90	0.194	1.65	0.228	13.5	0.462
Benzo[a]pyrene	0.061 or MDL	11	0.901	0.217	10.3	0.214	1.58	0.258	0.176 J	0.206	ND	0.199	1.06	0.227	0.480	0.199	1.10	0.254	7.64	0.194	2.65	0.228	15.6	0.462
Indeno[1,2,3-cd]pyrene	3.2	3.2	0.690	0.217	6.03	0.214	1.08	0.258	0.137 J	0.206	ND	0.199	0.514	0.227	0.335	0.199	0.745	0.254	4.36	0.194	1.72	0.228	11.4	0.462
Dibenz[a,h]anthracene	0.014 or MDL	165,000	0.439	0.217	3.04	0.214	0.490	0.258	ND	0.206	ND	0.199	0.308	0.227	0.182 J	0.199	0.403	0.254	2.30	0.194	0.846	0.228	5.40	0.462
Benzo[g,h,i]perylene	50 [2]	800	0.791	0.217	6.03	0.214	1.13	0.258	0.190 J	0.206	ND	0.199	0.887	0.227	0.366	0.199	0.777	0.254	4.07	0.194	1.68	0.228	11.6	0.462
TOTAL BNA'S:			9.59		180 J		21.8 J		2.51 J		0.119 J		11.6 J		5.27 J		11.3 J		73.8 J		28.5 J		251	
TOTAL TIC's:			ND		21.9		1.63		ND		ND		9.53		ND		ND		23.3		2.41		40.7	
TOTAL BNA'S & TIC's:	500 [3]	NA	9.59		202 J		23.4 J		2.51 J		0.119 J		21.1 J		5.27 J		11.3 J		97.0 J		30.9 J		292	

(1) Sample TP5C is duplicate of sample TP5B
(2) Individual SVOs should be less 50 ppm
(3) Total SVOs should be less than 500 ppm
~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
NA = Not Available
J = The concentration was detected at a value below the MDL
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
Concentration exceeds NYSDEC Recommended Soil Cleanup Objective

TABLE 4
SOIL SAMPLE RESULTS - PESTICIDES/PCBs/METALS/GENERAL CHEMISTRY
VILLAGE OF DOBBS FERRY (MAY 2002) and PHE (OCTOBER 2002)
DOBBS FERRY WATERFRONT PARK, DOBBS FERRY, NY

Client ID:	NYSDEC Recommended	NYSDEC Soil Cleanup	SE#1		SW#2		CENTER #3		NE#4		NW#5		TP1B		TP2B		TP3B		TP4B		TP5B		TP5C [1]	
Sample Depth (ft):	Soil	Obj. Protective	0-0.5		0-0.5		0-0.5		0-0.5		0-0.5		9.5-10		9.5-10		9.5-10		10-11		9.5-10		9.5-10	
Lab ID:	Cleanup	of GW	02050532-01		02050532-02		02050532-03		02050532-04		02050532-05		7622-002		7622-004		7622-006		7622-008		7622-010		7622-011	
Date Sampled:	Objective	quality	05/22/2002		05/22/2002		05/22/2002		05/22/2002		05/22/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002	
Matrix:	(ppm)	(ppm)	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
PCB's (ppm)																								
Aroclor-1016	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Aroclor-1221	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Aroclor-1232	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Aroclor-1242	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Aroclor-1248	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Aroclor-1254	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Aroclor-1260	1 surf; 10 subsurf [2]	10	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.02	ND	0.019	ND	0.016	ND	0.019	ND	0.020	ND	0.018	ND	0.017
Pesticides (ppm)																								
alpha-BHC	0.11	0.2	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
beta-BHC	0.2	0.2	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
gamma-BHC (Lindane)	0.06	0.06	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
delta-BHC	0.3	0.3	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
Heptachlor	0.1	0.1	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
Aldrin	0.041	0.5	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
Heptachlor epoxide	0.02	0.02	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
Endosulfan I	0.9	0.9	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
4,4'-DDE	2.1	4.4	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	0.00815	0.00409	0.00986	0.00472	0.033	0.00491	0.018	0.00461	0.00602	0.00421
Dieldrin	0.044	0.1	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	0.011	0.00491	ND	0.00461	0.00867	0.00421
Endrin	0.1	0.1	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
Endosulfan II	0.9	0.9	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
4,4'-DDD	2.9	7.7	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	0.036	0.00409	0.021	0.00472	0.056	0.00491	0.011	0.00461	ND	0.00421
Endrin aldehyde	NA	NA	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
Endosulfan sulfate	1	1	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	ND	0.00461	ND	0.00421
4,4'-DDT	2.1	2.5	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.00464	ND	0.00409	ND	0.00472	ND	0.00491	0.00881	0.00461	ND	0.00421
Chlordane	0.54	2	0.148	0.050	0.123	0.050	ND	0.050	ND	0.050	0.0632	0.050	ND	0.023	0.245	0.021	0.160	0.024	0.150	0.024	0.171	0.023	0.556	0.021
Methoxychlor	(4)	900	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	~	~	~	~	~	~	~	~	~	~	~	~
Toxaphene	NA	NA	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND	0.023	ND	0.021	ND	0.024	ND	0.024	ND	0.023	ND	0.021
Metals (ppm)																								
Antimony	SB	NA	ND	0.80	ND	0.80	ND	0.80	ND	0.80	ND	0.80	ND	1.22	ND	1.22	ND	1.25	ND	1.32	ND	1.20	ND	1.15
Arsenic	7.5 or SB	NA	7.33	1.00	5.00	1.00	4.81	1.00	2.78	1.00	4.75	1.00	3.75	1.22	3.47	1.22	4.80	1.25	4.45	1.32	4.39	1.20	3.51	1.15
Beryllium	0.16 or SB	NA	ND	0.10	ND	0.10	ND	0.10	ND	0.10	ND	0.10	ND	0.608	ND	0.608	ND	0.625	ND	0.662	ND	0.598	ND	0.573
Cadmium	1 or SB	NA	ND	0.30	ND	0.30	ND	0.30	ND	0.30	ND	0.30	0.674	0.304	0.579	0.304	2.71	0.313	1.09	0.331	0.367	0.299	0.479	0.287
Chromium	10 or SB	NA	16.1	0.50	16.1	0.50	12.8	0.50	15.6	0.50	13.8	0.50	29.8	2.43	55.2	2.43	40.1	2.50	25.1	2.65	22.0	2.39	23.4	2.29
Copper	25 or SB	NA	34.7	0.60	29.0	0.60	20.2	0.60	13.1	0.60	25.9	0.60	33.8	2.43	47.4	2.43	640	2.50	48.7	2.65	39.3	2.39	36.6	2.29
Lead	SB [3]	NA	71.5	0.30	66.1	0.30	49.8	0.30	7.28	0.30	54.4	0.30	228	0.608	573	0.608	1000	0.625	341	0.662	146	0.598	139	0.573
Mercury	0.1	NA	~	~	~	~	~	~	~	~	~	~	0.379	0.015	0.242	0.015	0.960	0.062	0.343	0.017	0.761	0.060	0.438	0.014
Nickel	13 or SB	NA	16.4	0.90	15.3	0.90	14.5	0.90	14.4	0.90	14.9	0.90	20.2	1.22	18.7	1.22	25.2	1.25	20.4	1.32	19.0	1.20	14.9	1.15
Selenium	2 or SB	NA	1.36	1.00	1.51	1.00	ND	1.00	ND	1.00	ND	1.00	ND	2.43	ND	2.43	ND	2.50	ND	2.65	ND	2.39	ND	2.29
Silver	SB	NA	ND	0.30	ND	0.30	ND	0.30	ND	0.30	ND	0.30	ND	0.608	ND	0.608	ND	0.625	ND	0.662	ND	0.598	ND	0.573
Thallium	SB	NA	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	0.122	ND	0.122	ND	0.125	ND	0.132	ND	0.120	ND	0.115
Zinc	20 or SB	NA	102	0.60	80.8	0.60	54.1	0.60	34.5	0.60	77.6	0.60	195	2.43	210	2.43	535	2.50	330	2.65	145	2.39	131	2.29

TABLE 4
SOIL SAMPLE RESULTS - PESTICIDES/PCBs/METALS/GENERAL CHEMISTRY
VILLAGE OF DOBBS FERRY (MAY 2002) and PHE (OCTOBER 2002)
DOBBS FERRY WATERFRONT PARK, DOBBS FERRY, NY

Client ID:	NYSDEC Recommended	NYSDEC Soil Cleanup	SE#1		SW#2		CENTER #3		NE#4		NW#5		TP1B		TP2B		TP3B		TP4B		TP5B		TP5C [1]	
Sample Depth (ft):	Soil	Obj. Protective	0-0.5		0-0.5		0-0.5		0-0.5		0-0.5		9.5-10		9.5-10		9.5-10		10-11		9.5-10		9.5-10	
Lab ID:	Cleanup	of GW	02050532-01		02050532-02		02050532-03		02050532-04		02050532-05		7622-002		7622-004		7622-006		7622-008		7622-010		7622-011	
Date Sampled:	Objective	quality	05/22/2002		05/22/2002		05/22/2002		05/22/2002		05/22/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002		10/01/2002	
Matrix:	(ppm)	(ppm)	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
General Analytical																								
Cyanide, Total (ppm)	NA	NA	~	~	~	~	~	~	~	~	~	~	ND	1.22	ND	1.22	ND	1.26	ND	1.34	ND	1.20	ND	1.16
Total Recoverable Phenols (ppm)	NA	NA	~	~	~	~	~	~	~	~	~	~	ND	3.06	ND	3.05	ND	3.15	ND	3.36	ND	3.00	ND	2.90
Total Petroleum Hydrocarbons (ppr	NA	NA	~	~	~	~	~	~	~	~	~	~	2450	97.8	1500	48.7	2000	50.4	1000	26.9	1160	48.0	2730	92.8

(1) Sample TP5C is duplicate of sample TP5B

(2) Total PCB Cleanup Objective

(3) USEPA Residential Lead Standard for soil = 400 ppm in bare soil in childrens play area or 1200 ppm for bare soil in rest of yard

(4) As per TAGM #4046, Total VOCs <10 ppm

~ = Sample not analyzed for

ND = Analyzed for but Not Detected at the MDL

NA = Not Available

J = The concentration was detected at a value below the MDL

Concentration exceeds NYSDEC Recommended Soil Cleanup Objective

APPENDIX 4

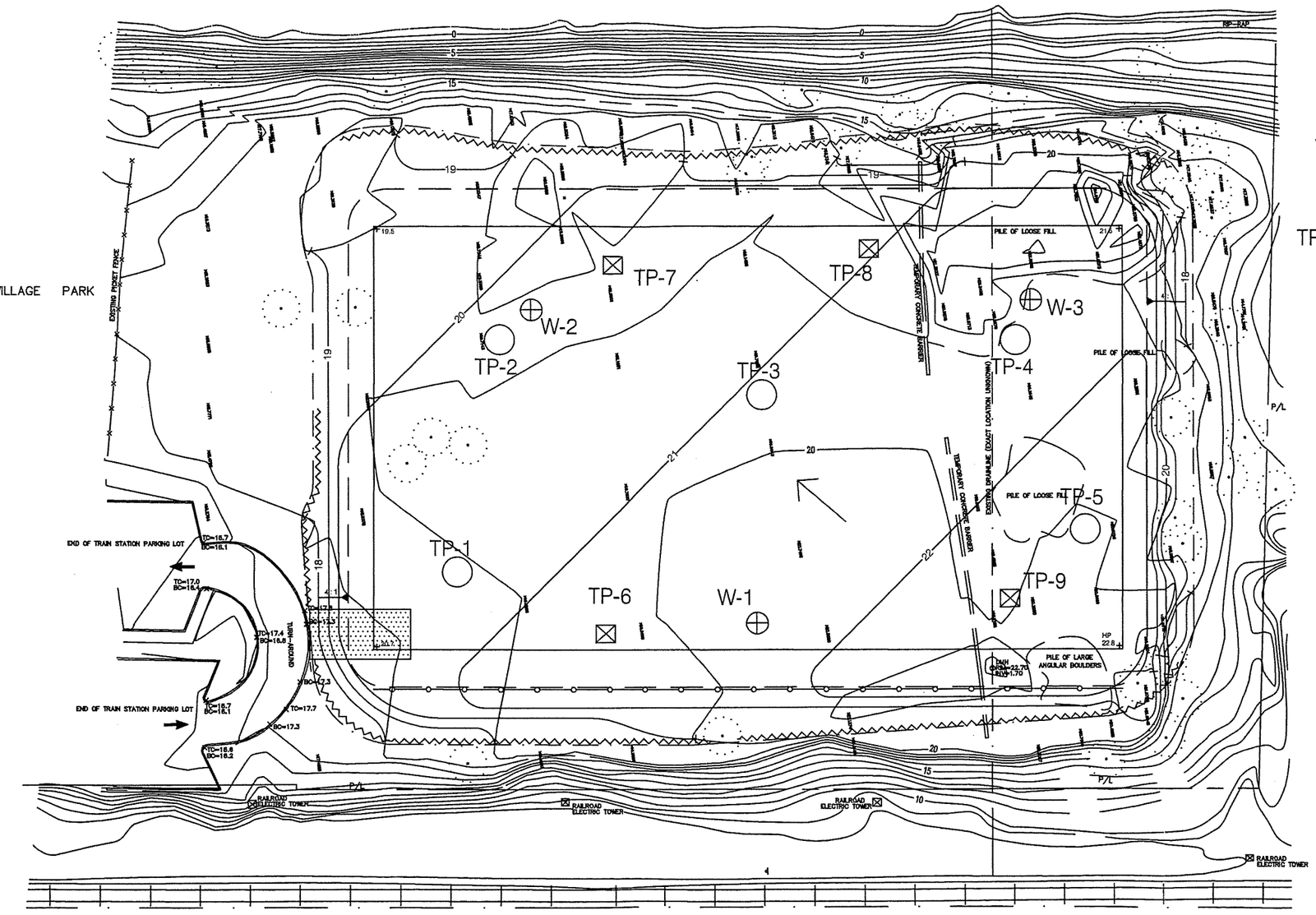
Sample Location Plan and Potomac-Hudson Environmental, Inc. (2005) Data Tables and Data Usability Summary Report

APPENDIX 4

Sample Location Plan and Potomac-Hudson Environmental, Inc. (2005) Data Tables and Data Usability Summary Report

HUDSON RIVER

VILLAGE PARK



TP-3 ○ Previous Test Pit Location (Oct. 2002)

W-1 ⊕ Temporary Well Location

TP-6 ⊠ Test Pit Location 2005

METRO NORTH COMMUTER RAILROAD

NAD 83

GRAPHIC SCALE (IN FEET)

0 50 100 150

DATE:	DRAWN BY:	REVIEWED BY:	SCALE:	PROJECT #	SHEET #
Sept. 05	MDS	KEP	AS SHOWN	454	1 OF 1

POTOMAC-HUDSON ENVIRONMENTAL, INC.

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South Amboy, NJ 08879

23 Chapel Avenue
Jersey City, NJ 07305

136 W. 16th Street
Suite 3E, POB 1206
New York, NY 10011

Site Plan/Sample Locations Waterfront Park Recreational Field Dobbs Ferry, New York

SOURCE: Paul J. Petretti

FIGURE # 2

C:\Projects\DobbsFerryWaterfront Park\Layout1.dwg LAYOUT:CorrectLayout3

TABLE 2
Soil Sample Summary - Test Pits 1/28/2005
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

	Client ID:	TP6			TP7			TP8			TP9			TP10			FB		
	Sample Depth:	9			6			7			7.5			9					
	Lab ID:	N89577-2			N89577-3			N89577-4			N89577-5			N89577-6			N89577-1		
	Date Sampled:	1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005		
	Matrix:	Soil			Soil			Soil			Soil			Soil			Field Blank Soil		
		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
GC/MS Volatiles (ppm)	NYSDEC Recommended Soil Cleanup Objective (ppm)																		
Acetone	0.2	0.192		0.014	0.0046	J	0.014	0.0179		0.012	0.0177		0.013	0.156		0.013	ND		10
Benzene	0.06	ND		0.0014	ND		0.0014	ND		0.0012	ND		0.0013	ND		0.0013	ND		1
Bromodichloromethane	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Bromoform	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		4
Bromomethane	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		2
2-Butanone (MEK)	0.3	0.0646		0.014	ND		0.014	0.0073	J	0.012	ND		0.013	0.0512		0.013	ND		10
Carbon disulfide	2.7	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		2
Carbon tetrachloride	0.6	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Chlorobenzene	1.7	ND		0.0071	ND		0.0068	ND		0.0058	0.0051	J	0.0064	0.0026	J	0.0067	ND		1
Chloroethane	1.9	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Chloroform	0.3	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Chloromethane	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Dibromochloromethane	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
1,1-Dichloroethane	0.2	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
1,2-Dichloroethane	0.1	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
1,1-Dichloroethene	0.4	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
cis-1,2-Dichloroethene	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
trans-1,2-Dichloroethene	0.3	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
1,2-Dichloropropane	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
cis-1,3-Dichloropropene	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
trans-1,3-Dichloropropene	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Ethylbenzene	5.5	ND		0.0014	ND		0.0014	ND		0.0012	0.0018		0.0013	ND		0.0013	ND		1
2-Hexanone	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		5
4-Methyl-2-pentanone(MIBK)	1	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		5
Methylene chloride	0.1	0.0242		0.0071	0.0029	J	0.0068	0.0034	J	0.0058	0.0025	J	0.0064	0.0094		0.0067	ND		2
Styrene	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		5
1,1,2,2-Tetrachloroethane	0.6	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Tetrachloroethene	1.4	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Toluene	1.5	ND		0.0014	ND		0.0014	ND		0.0012	0.0017		0.0013	ND		0.0013	ND		1
1,1,1-Trichloroethane	0.8	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
1,1,2-Trichloroethane	NA	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Trichloroethene	0.7	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Vinyl chloride	0.2	ND		0.0071	ND		0.0068	ND		0.0058	ND		0.0064	ND		0.0067	ND		1
Xylene (total)	1.2	ND		0.0028	ND		0.0027	ND		0.0023	0.0061		0.0026	0.0014	J	0.0027	ND		1
TOTAL TARGETED GC/MS Volatiles (ppm)		0.2808			0.0075			0.0286			0.0349			0.2206			0		
TOTAL NON-TARGETED GC/MS Volatiles (ppm)		1.4468	J		0.9673	J		0.69	J		1.2	J		1.5898	J		0		
TOTAL GC/MS Volatiles (ppm)	10 [1]	1.7276			0.9748			0.7186			1.2349			1.8104			0		

TABLE 2
Soil Sample Summary - Test Pits 1/28/2005
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

	Client ID:	TP6			TP7			TP8			TP9			TP10			FB		
	Sample Depth:	9			6			7			7.5			9					
	Lab ID:	N89577-2			N89577-3			N89577-4			N89577-5			N89577-6			N89577-1		
	Date Sampled:	1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005		
	Matrix:	Soil			Soil			Soil			Soil			Soil			Field Blank Soil		
		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
	NYSDEC Recommended Soil Cleanup Objective (ppm)																		
GC/MS Semi-volatiles (ppm)																			
2-Chlorophenol	0.8	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
4-Chloro-3-methyl phenol	0.240 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
2,4-Dichlorophenol	0.4	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
2,4-Dimethylphenol	NA	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
2,4-Dinitrophenol	0.2 or MDL	ND		0.85	ND		0.83	ND		4	ND		0.81	ND		0.86	ND		20
4,6-Dinitro-o-cresol	NA	ND		0.85	ND		0.83	ND		4	ND		0.81	ND		0.86	ND		20
2-Methylphenol	0.1 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
3&4-Methylphenol	0.9 (2)	ND		0.21	ND		0.21	ND		0.99	0.0965	J	0.2	ND		0.21	ND		5
2-Nitrophenol	0.33 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
4-Nitrophenol	0.1 or MDL	ND		0.85	ND		0.83	ND		4	ND		0.81	ND		0.86	ND		20
Pentachlorophenol	1.0 or MDL	ND		0.85	ND		0.83	ND		4	ND		0.81	ND		0.86	ND		20
Phenol	0.03 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
2,4,5-Trichlorophenol	0.1	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
2,4,6-Trichlorophenol	NA	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
Acenaphthene	50(1)	0.481		0.085	0.0249	J	0.083	ND		0.4	0.0253	J	0.081	0.0645	J	0.086	ND		2
Acenaphthylene	41	0.134		0.085	0.0393	J	0.083	ND		0.4	0.0472	J	0.081	0.0506	J	0.086	ND		2
Anthracene	50(1)	0.575		0.085	0.0688	J	0.083	ND		0.4	0.0877		0.081	0.0753	J	0.086	ND		2
Benzo(a)anthracene	0.224 or MDL	1.41		0.085	0.301		0.083	0.163	J	0.4	0.232		0.081	0.243		0.086	ND		2
Benzo(a)pyrene	0.061 or MDL	0.965		0.085	0.332		0.083	0.194	J	0.4	0.238		0.081	0.23		0.086	ND		2
Benzo(b)fluoranthene	1.1	0.791		0.085	0.353		0.083	0.19	J	0.4	0.297		0.081	0.234		0.086	ND		2
Benzo(g,h,i)perylene	50(1)	0.256		0.085	0.149		0.083	ND		0.4	ND		0.081	0.0887		0.086	ND		2
Benzo(k)fluoranthene	1.1	0.606		0.085	0.202		0.083	ND		0.4	0.243		0.081	0.247		0.086	ND		2
4-Bromophenyl phenyl ether	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
Butyl benzyl phthalate	50(1)	ND		0.085	0.0443	J	0.083	ND		0.4	ND		0.081	0.233		0.086	ND		2
2-Chloronaphthalene	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		5
4-Chloroaniline	0.220 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
Carbazole	NA	0.168		0.085	ND		0.083	ND		0.4	0.064	J	0.081	0.0334	J	0.086	ND		2
Chrysene	0.4	1.34		0.085	0.341		0.083	0.173	J	0.4	0.277		0.081	0.276		0.086	ND		2
bis(2-Chloroethoxy)methane	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
bis(2-Chloroethyl)ether	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
bis(2-Chloroisopropyl)ether	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
4-Chlorophenyl phenyl ether	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
1,2-Dichlorobenzene	7.9	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
1,3-Dichlorobenzene	1.6	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
1,4-Dichlorobenzene	8.5	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
2,4-Dinitrotoluene	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
2,6-Dinitrotoluene	1	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
3,3'-Dichlorobenzidine	NA	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
Dibenzo(a,h)anthracene	0.014 or MDL	0.129		0.085	0.0721	J	0.083	ND		0.4	ND		0.081	0.0354	J	0.086	ND		2
Dibenzofuran	6.2	0.332		0.085	ND		0.083	ND		0.4	0.0224	J	0.081	0.0406	J	0.086	ND		5
Di-n-butyl phthalate	8.1	ND		0.085	ND		0.083	ND		0.4	ND		0.081	0.0859	J	0.086	ND		2
Di-n-octyl phthalate	50(1)	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2

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	Client ID:	TP6			TP7			TP8			TP9			TP10			FB		
	Sample Depth:	9			6			7			7.5			9					
	Lab ID:	N89577-2			N89577-3			N89577-4			N89577-5			N89577-6			N89577-1		
	Date Sampled:	1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005		
	Matrix:	Soil			Soil			Soil			Soil			Soil			Field Blank Soil		
		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
	NYSDEC Recommended Soil Cleanup Objective (ppm)																		
Diethyl phthalate	7.1	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
Dimethyl phthalate	2	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
bis(2-Ethylhexyl)phthalate	50(1)	0.133		0.085	0.198		0.083	0.666		0.4	1.54		0.081	0.146		0.086	ND		2
Fluoranthene	50(1)	2.74		0.085	0.474		0.083	0.275	J	0.4	0.422		0.081	0.459		0.086	ND		2
Fluorene	50(1)	0.636		0.085	0.0289	J	0.083	ND		0.4	0.0386	J	0.081	0.0715	J	0.086	ND		2
Hexachlorobenzene	0.41	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
Hexachlorobutadiene	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
Hexachlorocyclopentadiene	NA	ND		0.85	ND		0.83	ND		4	ND		0.81	ND		0.86	ND		20
Hexachloroethane	NA	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
Indeno(1,2,3-cd)pyrene	3.2	0.264		0.085	0.142		0.083	ND		0.4	ND		0.081	0.085	J	0.086	ND		2
Isophorone	4.4	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
2-Methylnaphthalene	36.4	0.328		0.085	ND		0.083	ND		0.4	0.0424	J	0.081	0.0636	J	0.086	ND		2
2-Nitroaniline	0.43 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
3-Nitroaniline	0.5 or MDL	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
4-Nitroaniline	NA	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
Naphthalene	13	0.775		0.085	0.0234	J	0.083	ND		0.4	0.0703	J	0.081	0.209		0.086	ND		2
Nitrobenzene	0.2 or MDL	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
N-Nitroso-di-n-propylamine	NA	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
N-Nitrosodiphenylamine	NA	ND		0.21	ND		0.21	ND		0.99	ND		0.2	ND		0.21	ND		5
Phenanthrene	50(1)	2.32		0.085	0.215		0.083	0.147	J	0.4	0.33		0.081	0.264		0.086	ND		2
Pyrene	50(1)	2.15		0.085	0.466		0.083	0.249	J	0.4	0.304		0.081	0.375		0.086	ND		2
1,2,4-Trichlorobenzene	3.4	ND		0.085	ND		0.083	ND		0.4	ND		0.081	ND		0.086	ND		2
TOTAL TARGETED GC/MS Semi-volatiles (ppm)		16.533			3.4747			2.057			4.3774			3.6105			0		
TOTAL NON-TARGETED GC/MS Semi-volatiles (ppm)		9.96	J		3.13	J		34.84	J		67.11	J		5.73	J		0		
TOTAL GC/MS Semi-volatiles (ppm)	500 (1)	26.493			6.6047			36.897			71.4874			9.3405			0		
GC Semi-volatiles (ppm) (SW846 8081A)																			
Aldrin	0.041	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
alpha-BHC	0.11	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
beta-BHC	0.2	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
delta-BHC	0.3	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
gamma-BHC (Lindane)	0.06	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
alpha-Chlordane	NA	0.0914		0.0032	0.0347		0.0016	0.003		0.0015	0.0672		0.0032	0.0491		0.0034	ND		0.02
gamma-Chlordane	0.54	0.0954		0.0032	0.0378		0.0016	0.0031		0.0015	0.0653		0.0032	0.045		0.0034	ND		0.02
Dieldrin	0.044	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
4,4'-DDD	2.9	0.108		0.0032	0.0101		0.0016	0.0016		0.0015	0.0148		0.0016	0.0471		0.0034	ND		0.02
4,4'-DDE	2.1	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
4,4'-DDT	2.1	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Endrin	0.1	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Endosulfan sulfate	1	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Endrin aldehyde	NA	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Endosulfan-I	0.9	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.05

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	Client ID:	TP6			TP7			TP8			TP9			TP10			FB		
	Sample Depth:	9			6			7			7.5			9					
	Lab ID:	N89577-2			N89577-3			N89577-4			N89577-5			N89577-6			N89577-1		
	Date Sampled:	1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005		
	Matrix:	Soil			Soil			Soil			Soil			Soil			Field Blank Soil		
		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
	NYSDEC Recommended Soil Cleanup Objective (ppm)																		
Endosulfan-II	0.9	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Heptachlor	0.1	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Heptachlor epoxide	0.02	ND		0.0016	ND		0.0016	ND		0.0015	ND		0.0016	ND		0.0017	ND		0.02
Methoxychlor	(1)	ND		0.0041	ND		0.004	ND		0.0038	ND		0.004	ND		0.0042	ND		0.02
Endrin ketone	NA	ND		0.0041	ND		0.004	ND		0.0038	ND		0.004	ND		0.0042	ND		0.05
Toxaphene	NA	ND		0.02	ND		0.02	ND		0.019	ND		0.02	ND		0.021	ND		0.25
Aroclor 1016	1 surf., 10 subsurf (3)	ND		0.041	ND		0.04	ND		0.038	ND		0.04	ND		0.042	ND		0.5
Aroclor 1221	1 surf., 10 subsurf (3)	ND		0.041	ND		0.04	ND		0.038	ND		0.04	ND		0.042	ND		0.5
Aroclor 1232	1 surf., 10 subsurf (3)	ND		0.041	ND		0.04	ND		0.038	ND		0.04	ND		0.042	ND		0.5
Aroclor 1242	1 surf., 10 subsurf (3)	ND		0.041	ND		0.04	ND		0.038	ND		0.04	ND		0.042	ND		0.5
Aroclor 1248	1 surf., 10 subsurf (3)	0.86		0.041	ND		0.04	ND		0.038	ND		0.04	0.767		0.042	ND		0.5
Aroclor 1254	1 surf., 10 subsurf (3)	1.4		0.041	ND		0.04	0.0397		0.038	ND		0.04	1.31		0.042	ND		0.5
Aroclor 1260	1 surf., 10 subsurf (3)	0.47		0.041	0.0444		0.04	ND		0.038	ND		0.04	0.397		0.042	ND		0.5
TOTAL TARGETED GC Semi-volatiles (ppm)		3.0248			0.127			0.0474			0.1473			2.6152			0		
Metals Analysis (ppm)																			
Aluminum	SB	7410		25	7300		24	10800		23	11300		24	8640		25	<200		200
Antimony	SB	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<5.0		5
Arsenic	7.5 or SB	5.9		1.2	2.7		1.2	6.1		1.2	8.3		1.2	3.8		1.2	<5.0		5
Barium	300 or SB	78.3		25	77.3		24	110		23	90.4		24	103		25	<200		200
Beryllium	0.16 (HEAST) or SB	<0.62		0.62	<0.61		0.61	<0.58		0.58	<0.59		0.59	<0.62		0.62	<5.0		5
Cadmium	1 or SB	1.1		0.62	<0.61		0.61	<0.58		0.58	<0.59		0.59	1		0.62	<4.0		4
Calcium	SB	8090		620	9290		610	8050		580	7630		590	12400		620	<5000		5000
Chromium	10 or SB	22.1		1.2	16.8		1.2	20.9		1.2	31.2		1.2	26.5		1.2	<10		10
Cobalt	30 or SB	9.9		6.2	<6.1		6.1	7.8		5.8	9.6		5.9	6.5		6.2	<50		50
Copper	25 or SB	104		3.1	32.2		3	25		2.9	70.9		2.9	78.7		3.1	<25		25
Iron	2,000 or SB	20900		12	13100		12	15700		12	25600		12	16700		12	<100		100
Lead	SB (4)	162		1.2	140		1.2	173		1.2	152		1.2	168		1.2	<3.0		3
Magnesium	SB	4260		620	5480		610	6210		580	5540		590	4690		620	<5000		5000
Manganese	SB	286		1.9	211		1.8	254		1.7	521		1.8	293		1.9	<15		15
Mercury	0.1	0.3		0.041	0.15		0.038	0.16		0.036	<0.036		0.036	<0.043		0.043	<0.20		0.2
Nickel	13 or SB	20.6		4.9	16.1		4.9	16.3		4.7	19.9		4.7	16.3		5	<40		40
Potassium	SB	1040		620	1310		610	1810		580	1930		590	1110		620	<5000		5000
Selenium	2 or SB	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<5.0		5
Silver	SB	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<10		10
Sodium	SB	<620		620	<610		610	<580		580	<590		590	<620		620	<5000		5000
Thallium	SB	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<1.2		1.2	<10		10
Vanadium	150 or SB	18.6		6.2	21.9		6.1	28		5.8	30.3		5.9	19.6		6.2	<50		50
Zinc	20 or SB	168		2.5	109		2.4	97.1		2.3	184		2.4	177		2.5	<20		20

TABLE 2
Soil Sample Summary - Test Pits 1/28/2005
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

	Client ID:	TP6			TP7			TP8			TP9			TP10			FB		
	Sample Depth:	9			6			7			7.5			9					
	Lab ID:	N89577-2			N89577-3			N89577-4			N89577-5			N89577-6			N89577-1		
	Date Sampled:	1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005			1/28/2005		
	Matrix:	Soil			Soil			Soil			Soil			Soil			Field Blank Soil		
		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
	NYSDEC Recommended Soil Cleanup Objective (ppm)																		
General Chemistry (ppm)																			
Cyanide	NA	<0.29		0.29	<0.30		0.3	<0.26		0.26	<0.27		0.27	<0.30		0.3	<0.010		0.01
Solids, Percent (%)	NA	78.5			79.7			84.2			82.6			77.2					

(1) As per TAGM #4046, Total VOCs <10 ppm, Total Semi-VOCs <500 ppm, and Individual Semi-VOCs <50 ppm
(2) Soil Cleanup Objective for 4-Methylphenol
(3) Total PCB Cleanup Objective
(4) USEPA Residential Lead Standard for soil = 400 ppm bare soil in childrens play area or 1200 ppm for bare soil in rest of yard
NA = Not Available
SB = Site Background
ND = Not Detected at Indicated Method Detection Limit
Concentration Exceeds NYSDEC Groundwater Standard

TABLE 3
Soil Sample Summary - Well Locations 1/28/2005
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

	Client ID:	W1-S			W2-S			W3-S		
	Depth:	22-24			16-20			14-16		
	Lab ID:	N94857-1			N94857-4			N94857-7		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Soil			Soil			Soil		
	NYSDEC Recommended Soil Cleanup Objective (ppm)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
GC/MS Volatiles (ppm)										
Acetone	0.2	ND		0.021	0.0484		0.018	ND		0.023
Benzene	0.06	ND		0.0021	ND		0.0018	ND		0.0023
Bromodichloromethane	NA	ND		0.011	ND		0.0089	ND		0.011
Bromoform	NA	ND		0.011	ND		0.0089	ND		0.011
Bromomethane	NA	ND		0.011	ND		0.0089	ND		0.011
2-Butanone (MEK)	0.3	ND		0.021	ND		0.018	ND		0.023
Carbon disulfide	2.7	0.0076	J	0.011	0.0062	J	0.0089	0.011		0.011
Carbon tetrachloride	0.6	ND		0.011	ND		0.0089	ND		0.011
Chlorobenzene	1.7	0.0041	J	0.011	0.0134		0.0089	0.197		0.011
Chloroethane	1.9	ND		0.011	ND		0.0089	ND		0.011
Chloroform	0.3	ND		0.011	ND		0.0089	ND		0.011
Chloromethane	NA	ND		0.011	ND		0.0089	ND		0.011
Dibromochloromethane	NA	ND		0.011	ND		0.0089	ND		0.011
1,1-Dichloroethane	0.2	ND		0.011	ND		0.0089	ND		0.011
1,2-Dichloroethane	0.1	ND		0.011	ND		0.0089	ND		0.011
1,1-Dichloroethene	0.4	ND		0.011	ND		0.0089	ND		0.011
cis-1,2-Dichloroethene	NA	ND		0.011	ND		0.0089	ND		0.011
trans-1,2-Dichloroethene	0.3	ND		0.011	ND		0.0089	ND		0.011
1,2-Dichloropropane	NA	ND		0.011	ND		0.0089	ND		0.011
cis-1,3-Dichloropropene	NA	ND		0.011	ND		0.0089	ND		0.011
trans-1,3-Dichloropropene	NA	ND		0.011	ND		0.0089	ND		0.011
Ethylbenzene	5.5	ND		0.0021	0.004		0.0018	ND		0.0023
2-Hexanone	NA	ND		0.011	ND		0.0089	ND		0.011
4-Methyl-2-pentanone(MIBK)	1	ND		0.011	ND		0.0089	ND		0.011
Methylene chloride	0.1	0.0091	J	0.011	0.0063	J	0.0089	0.0066	J	0.011
Styrene	NA	ND		0.011	ND		0.0089	ND		0.011
1,1,2,2-Tetrachloroethane	0.6	ND		0.011	ND		0.0089	ND		0.011
Tetrachloroethene	1.4	ND		0.011	ND		0.0089	ND		0.011
Toluene	1.5	ND		0.0021	0.0024		0.0018	ND		0.0023
1,1,1-Trichloroethane	0.8	ND		0.011	ND		0.0089	ND		0.011
1,1,2-Trichloroethane	NA	ND		0.011	ND		0.0089	ND		0.011
Trichloroethene	0.7	ND		0.011	ND		0.0089	ND		0.011
Vinyl chloride	0.2	ND		0.011	ND		0.0089	ND		0.011
Xylene (total)	1.2	0.0049		0.0043	0.0649		0.0036	0.0051		0.0046
TOTAL TARGETED GC/MS Volatiles (ppm)		0.0257			0.1456			0.2197		
TOTAL NON-TARGETED GC/MS Volatiles (ppm)		1.256	J		1.032	J		0.244	J	

TABLE 3
Soil Sample Summary - Well Locations 1/28/2005
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

	Client ID:	W1-S			W2-S			W3-S		
	Depth:	22-24			16-20			14-16		
	Lab ID:	N94857-1			N94857-4			N94857-7		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Soil			Soil			Soil		
	NYSDEC Recommended Soil Cleanup Objective (ppm)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
TOTAL GC/MS Volatiles (ppm)	10 [1]	1.2817			1.1776			0.4637		
GC/MS Semi-volatiles (ppm)										
2-Chlorophenol	0.8	ND		0.27	ND		0.24	ND		0.84
4-Chloro-3-methyl phenol	0.240 or MDL	ND		0.27	ND		0.24	ND		0.84
2,4-Dichlorophenol	0.4	ND		0.27	ND		0.24	ND		0.84
2,4-Dimethylphenol	NA	ND		0.27	ND		0.24	ND		0.84
2,4-Dinitrophenol	0.2 or MDL	ND		1.1	ND		0.97	ND		3.3
4,6-Dinitro-o-cresol	NA	ND		1.1	ND		0.97	ND		3.3
2-Methylphenol	0.1 or MDL	ND		0.27	ND		0.24	ND		0.84
3&4-Methylphenol	0.9 [2]	ND		0.27	ND		0.24	0.677	J	0.84
2-Nitrophenol	0.33 or MDL	ND		0.27	ND		0.24	ND		0.84
4-Nitrophenol	0.1 or MDL	ND		1.1	ND		0.97	ND		3.3
Pentachlorophenol	1.0 or MDL	ND		1.1	ND		0.97	ND		3.3
Phenol	0.03 or MDL	ND		0.27	ND		0.24	ND		0.84
2,4,5-Trichlorophenol	0.1	ND		0.27	ND		0.24	ND		0.84
2,4,6-Trichlorophenol	NA	ND		0.27	ND		0.24	ND		0.84
Acenaphthene	50[1]	0.0356	J	0.11	0.0572	J	0.097	ND		0.33
Acenaphthylene	41	0.266		0.11	0.0232	J	0.097	ND		0.33
Anthracene	50[1]	0.17		0.11	0.0844	J	0.097	0.154	J	0.33
Benzo(a)anthracene	0.224 or MDL	0.702		0.11	0.156		0.097	0.262	J	0.33
Benzo(a)pyrene	0.061 or MDL	1.07		0.11	0.171		0.097	0.238	J	0.33
Benzo(b)fluoranthene	1.1	1.49		0.11	0.238		0.097	0.299	J	0.33
Benzo(g,h,i)perylene	50[1]	0.432		0.11	0.0665	J	0.097	ND		0.33
Benzo(k)fluoranthene	1.1	0.528		0.11	0.0832	J	0.097	0.153	J	0.33
4-Bromophenyl phenyl ether	NA	ND		0.11	ND		0.097	ND		0.33
Butyl benzyl phthalate	50[1]	ND		0.11	ND		0.097	1.26		0.33
2-Chloronaphthalene	NA	ND		0.11	ND		0.097	ND		0.33
4-Chloroaniline	0.220 or MDL	ND		0.27	ND		0.24	ND		0.84
Carbazole	NA	0.0576	J	0.11	0.0386	J	0.097	ND		0.33
Chrysene	0.4	0.702		0.11	0.189		0.097	0.287	J	0.33
bis(2-Chloroethoxy)methane	NA	ND		0.11	ND		0.097	ND		0.33
bis(2-Chloroethyl)ether	NA	ND		0.11	ND		0.097	ND		0.33
bis(2-Chloroisopropyl)ether	NA	ND		0.11	ND		0.097	ND		0.33
4-Chlorophenyl phenyl ether	NA	ND		0.11	ND		0.097	ND		0.33
1,2-Dichlorobenzene	7.9	ND		0.11	0.0299	J	0.097	ND		0.33
1,3-Dichlorobenzene	1.6	ND		0.11	ND		0.097	ND		0.33
1,4-Dichlorobenzene	8.5	ND		0.11	0.0684	J	0.097	0.261	J	0.33
2,4-Dinitrotoluene	NA	ND		0.11	ND		0.097	ND		0.33
2,6-Dinitrotoluene	1	ND		0.11	ND		0.097	ND		0.33
3,3'-Dichlorobenzidine	NA	ND		0.27	ND		0.24	ND		0.84
Dibenzo(a,h)anthracene	0.014 or MDL	0.127		0.11	ND		0.097	ND		0.33
Dibenzofuran	6.2	0.0299	J	0.11	0.0451	J	0.097	ND		0.33
Di-n-butyl phthalate	8.1	ND		0.11	0.0758	J	0.097	0.467		0.33
Di-n-octyl phthalate	50[1]	ND		0.11	0.355		0.097	ND		0.33

TABLE 3
Soil Sample Summary - Well Locations 1/28/2005
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

	Client ID:	W1-S			W2-S			W3-S		
	Depth:	22-24			16-20			14-16		
	Lab ID:	N94857-1			N94857-4			N94857-7		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Soil			Soil			Soil		
	NYSDEC Recommended Soil Cleanup Objective (ppm)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Diethyl phthalate	7.1	ND		0.11	ND		0.097	ND		0.33
Dimethyl phthalate	2	ND		0.11	ND		0.097	ND		0.33
bis(2-Ethylhexyl)phthalate	50[1]	0.584		0.11	3.76		0.097	8.01		0.33
Fluoranthene	50[1]	1.21		0.11	0.462		0.097	0.546		0.33
Fluorene	50[1]	0.0597	J	0.11	0.0976		0.097	0.141	J	0.33
Hexachlorobenzene	0.41	ND		0.11	ND		0.097	ND		0.33
Hexachlorobutadiene	NA	ND		0.11	ND		0.097	ND		0.33
Hexachlorocyclopentadiene	NA	ND		1.1	ND		0.97	ND		3.3
Hexachloroethane	NA	ND		0.27	ND		0.24	ND		0.84
Indeno(1,2,3-cd)pyrene	3.2	0.438		0.11	0.0612	J	0.097	ND		0.33
Isophorone	4.4	ND		0.11	ND		0.097	ND		0.33
2-Methylnaphthalene	36.4	0.0775	J	0.11	0.0627	J	0.097	0.4		0.33
2-Nitroaniline	0.43 or MDL	ND		0.27	ND		0.24	ND		0.84
3-Nitroaniline	0.5 or MDL	ND		0.27	ND		0.24	ND		0.84
4-Nitroaniline	NA	ND		0.27	ND		0.24	ND		0.84
Naphthalene	13	0.0335	J	0.11	0.149		0.097	0.53		0.33
Nitrobenzene	0.2 or MDL	ND		0.11	ND		0.097	ND		0.33
N-Nitroso-di-n-propylamine	NA	ND		0.11	ND		0.097	ND		0.33
N-Nitrosodiphenylamine	NA	ND		0.27	ND		0.24	ND		0.84
Phenanthrene	50[1]	0.395		0.11	0.479		0.097	0.648		0.33
Pyrene	50[1]	1.19		0.11	0.431		0.097	0.598		0.33
1,2,4-Trichlorobenzene	3.4	ND		0.11	ND		0.097	ND		0.33
TOTAL TARGETED GC/MS Semi-volatiles (ppm)		9.5978			7.1838			14.931		
TOTAL NON-TARGETED GC/MS Semi-volatiles (ppm)		27.64	J		82.23	J		83.14	J	
TOTAL GC/MS Semi-volatiles (ppm)	500[1]	37.2378			89.4138			98.071		
GC Semi-volatiles (ppm) (SW846 8081A)										
Aldrin	0.041	ND		0.0021	ND		0.0019	ND		0.0018
alpha-BHC	0.11	ND		0.0021	ND		0.0019	ND		0.0018
beta-BHC	0.2	ND		0.0021	ND		0.0019	ND		0.0018
delta-BHC	0.3	ND		0.0021	ND		0.0019	ND		0.0018
gamma-BHC (Lindane)	0.06	ND		0.0021	ND		0.0019	ND		0.0018
alpha-Chlordane	NA	ND		0.0021	ND		0.0019	ND		0.0018
gamma-Chlordane	0.54	ND		0.0021	ND		0.0019	ND		0.0018
Dieldrin	0.044	0.0063		0.0021	0.0164		0.0019	0.0216		0.0018
4,4'-DDD	2.9	ND		0.0021	0.784		0.019	0.0063		0.0018
4,4'-DDE	2.1	0.0103		0.0021	0.147		0.019	0.022		0.0018
4,4'-DDT	2.1	0.0059		0.0021	0.0268		0.0019	0.005		0.0018

TABLE 3
Soil Sample Summary - Well Locations 1/28/2005
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

	Client ID:	W1-S			W2-S			W3-S		
	Depth:	22-24			16-20			14-16		
	Lab ID:	N94857-1			N94857-4			N94857-7		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Soil			Soil			Soil		
	NYSDEC Recommended Soil Cleanup Objective (ppm)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Endrin	0.1	ND		0.0021	ND		0.0019	ND		0.0018
Endosulfan sulfate	1	ND		0.0021	ND		0.0019	ND		0.0018
Endrin aldehyde	NA	ND		0.0021	ND		0.0019	ND		0.0018
Endosulfan-I	0.9	ND		0.0021	ND		0.0019	ND		0.0018
Endosulfan-II	0.9	ND		0.0021	ND		0.0019	ND		0.0018
Heptachlor	0.1	ND		0.0021	ND		0.0019	ND		0.0018
Heptachlor epoxide	0.02	ND		0.0021	ND		0.0019	ND		0.0018
Methoxychlor	(1)	ND		0.0053	ND		0.0048	ND		0.0046
Endrin ketone	NA	ND		0.0053	ND		0.0048	ND		0.0046
Toxaphene	NA	ND		0.026	ND		0.024	ND		0.023
Aroclor 1016	1 surf., 10 subsurf (3)	ND		0.036	ND		0.034	ND		0.033
Aroclor 1221	1 surf., 10 subsurf (3)	ND		0.036	ND		0.034	ND		0.033
Aroclor 1232	1 surf., 10 subsurf (3)	ND		0.036	ND		0.034	ND		0.033
Aroclor 1242	1 surf., 10 subsurf (3)	0.521		0.036	0.356		0.034	0.237		0.033
Aroclor 1248	1 surf., 10 subsurf (3)	ND		0.036	ND		0.034	ND		0.033
Aroclor 1254	1 surf., 10 subsurf (3)	0.171		0.036	ND		0.034	0.138		0.033
Aroclor 1260	1 surf., 10 subsurf (3)	ND		0.036	0.0557		0.034	ND		0.033
TOTAL TARGETED GC Semi-volatiles (ppm)		0.7145			1.3859			0.4299		
Metals Analysis (ppm)										
Aluminum	SB	5890		33	6770		29	3520		28
Antimony	SB	<1.6		1.6	<1.4		1.4	<1.4		1.4
Arsenic	7.5 or SB	9		1.6	5.6		1.4	13.3		1.4
Barium	300 or SB	60.4		33	214		29	71.6		28
Beryllium	0.16 (HEAST) or SB	<0.81		0.81	<0.72		0.72	<0.70		0.7
Cadmium	1 or SB	<0.81		0.81	1.1		0.72	1.3		0.98
Calcium	SB	18800		810	11900		720	14400		700
Chromium	10 or SB	34.6		1.6	27.3		1.4	33		1.4
Cobalt	30 or SB	<8.1		8.1	7.9		7.2	8.8		7
Copper	25 or SB	97.5		4.1	41.2		3.6	70.3		3.5
Iron	2,000 or SB	67200		16	65300		14	108000		20
Lead	SB (4)	147		1.6	185		1.4	2830		1.4
Magnesium	SB	7180		810	4990		720	2250		700
Manganese	SB	326		2.4	366		2.2	709		2.1
Mercury	0.1	0.52		0.051	1.1		0.048	0.37		0.042
Nickel	13 or SB	22.7		6.5	17.6		5.8	24.9		5.6
Potassium	SB	1170		810	1210		720	<700		700
Selenium	2 or SB	2.9		1.6	2.1		1.4	7		1.4
Silver	SB	<1.6		1.6	<1.4		1.4	<1.4		1.4
Sodium	SB	<810		810	<720		720	799		700
Thallium	SB	<1.1		1.1	<1.0		1	<2.0		2
Vanadium	150 or SB	14.6		8.1	17.3		7.2	15		7
Zinc	20 or SB	256		3.3	1830		2.9	1250		2.8

TABLE 3
Soil Sample Summary - Well Locations 1/28/2005
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

		Client ID:	W1-S			W2-S			W3-S		
		Depth:	22-24			16-20			14-16		
		Lab ID:	N94857-1			N94857-4			N94857-7		
		Date Sampled:	3/31/2005			3/31/2005			3/31/2005		
		Matrix:	Soil			Soil			Soil		
	NYSDEC Recommended Soil Cleanup Objective (ppm)		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
General Chemistry (ppm)											
Cyanide	NA		<0.37		0.37	<0.34		0.34	<1.6		1.6
Solids, Percent (%)	NA		89.7			95.6			99.8		

(1) As per TAGM #4046, Total VOCs <10 ppm, Total Semi-VOCs <500 ppm, and Individual Semi-VOCs <50 ppm
(2) Soil Cleanup Objective for 4-Methylphenol
(3) Total PCB Cleanup Objective
(4) USEPA Residential Lead Standard for soil = 400 ppm bare soil in childrens play area or 1200 ppm for bare soil in rest of yard
NA = Not Available
SB = Site Background
ND = Not Detected at Indicated Method Detection Limit
Concentration Exceeds NYSDEC Groundwater Standard

TABLE 4
Groundwater Sample Summary - Temporary Well Points
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

1/16/2006

	Client ID:	FB-S			FB-W			TB			W1-W			W2-W			W3-W			W4-W		
	Sample Depth:																					
	Lab ID:	N94857-2			N94857-9			N94857-10			N94857-3			N94857-5			N94857-8			N94857-6		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Field Blank Soil			Field Blank Soil			Trip Blank Soil			Ground Water			Ground Water			Ground Water			Ground Water		
		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
	NYSDEC Groundwater Standards (ppb)																					
GC/MS Volatiles (ppb)																						
Acetone	50	ND		10	ND		10	ND		10	ND		10	6.7	J	10	25.5		10	17.1		10
Benzene	0.7	ND		1	ND		1	ND		1	1.6		1	ND		1	2.3		1	ND		1
Bromodichloromethane		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Bromoform		ND		4	ND		4	ND		4	ND		4	ND		4	ND		4	ND		4
Bromomethane		ND		2	ND		2	ND		2	ND		2	ND		2	ND		2	ND		2
2-Butanone (MEK)	50	ND		10	ND		10	ND		10	ND		10	ND		10	ND		10	ND		10
Carbon disulfide	50	ND		2	ND		2	ND		2	ND		2	0.49	J	2	1.1	J	2	ND		2
Carbon tetrachloride	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Chlorobenzene	5	ND		1	ND		1	ND		1	57		1	4.8		1	78.9		1	4.5		1
Chloroethane	50	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Chloroform	7	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Chloromethane		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Dibromochloromethane	50	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
1,1-Dichloroethane	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
1,2-Dichloroethane	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
1,1-Dichloroethene	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
cis-1,2-Dichloroethene		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
trans-1,2-Dichloroethene	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
1,2-Dichloropropane		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
cis-1,3-Dichloropropene		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
trans-1,3-Dichloropropene		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Ethylbenzene	5	ND		1	ND		1	ND		1	ND		1	0.98	J	1	1.7		1	0.9	J	1
2-Hexanone		ND		5	ND		5	ND		5	ND		5	ND		5	ND		5	ND		5
4-Methyl-2-pentanone(MIBK)	50	ND		5	ND		5	ND		5	ND		5	ND		5	ND		5	ND		5
Methylene chloride	5	ND		2	ND		2	ND		2	ND		2	ND		2	ND		2	ND		2
Styrene		ND		5	ND		5	ND		5	ND		5	ND		5	ND		5	ND		5
1,1,2,2-Tetrachloroethane	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Tetrachloroethene	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Toluene	5	ND		1	ND		1	ND		1	179		1	0.64	J	1	0.7	J	1	0.54	J	1
1,1,1-Trichloroethane	5	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
1,1,2-Trichloroethane		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Trichloroethene		ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Vinyl chloride	2	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1	ND		1
Xylene (total)	5	ND		1	ND		1	ND		1	ND		1	20.8		1	12.8		1	18.8		1
TOTAL TARGETED GC/MS Volatiles (ppb)		0			0			0			237.6			34.41			123			41.84		
TOTAL NON-TARGETED GC/MS Volatiles (ppb)		0			0			0			0			0			49.7	J		0		
TOTAL GC/MS Volatiles (ppb)		0			0			0			237.6			34.41			172.7			41.84		

TABLE 4
Groundwater Sample Summary - Temporary Well Points
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

1/16/2006

	Client ID:	FB-S			FB-W			TB			W1-W			W2-W			W3-W			W4-W		
	Sample Depth:																					
	Lab ID:	N94857-2			N94857-9			N94857-10			N94857-3			N94857-5			N94857-8			N94857-6		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Field Blank Soil			Field Blank Soil			Trip Blank Soil			Ground Water			Ground Water			Ground Water			Ground Water		
	NYSDEC Groundwater Standards (ppb)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
GC/MS Semi-volatiles (ppb)																						
2-Chlorophenol	50	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
4-Chloro-3-methyl phenol	5	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
2,4-Dichlorophenol	1	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
2,4-Dimethylphenol		ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
2,4-Dinitrophenol	5	ND		20	ND		20	NA			ND		20	ND		22	ND		20	ND		21
4,6-Dinitro-o-cresol		ND		20	ND		20	NA			ND		20	ND		22	ND		20	ND		21
2-Methylphenol	5	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
3&4-Methylphenol	50 (1)	ND		5	ND		5.1	NA			ND		5	2.9	J	5.4	ND		5	2.9	J	5.2
2-Nitrophenol	5	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
4-Nitrophenol	5	ND		20	ND		20	NA			ND		20	ND		22	ND		20	ND		21
Pentachlorophenol	1	ND		20	ND		20	NA			ND		20	ND		22	ND		20	ND		21
Phenol	1	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
2,4,5-Trichlorophenol	1	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
2,4,6-Trichlorophenol		ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
Acenaphthene	20	ND		2	ND		2	NA			2.8		2	0.57	J	2.2	ND		2	ND		2.1
Acenaphthylene	20	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Anthracene	50	ND		2	ND		2	NA			0.91	J	2	ND		2.2	ND		2	ND		2.1
Benzo(a)anthracene	0.002	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Benzo(a)pyrene	0.002 (ND)	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Benzo(b)fluoranthene	0.002	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Benzo(g,h,i)perylene	5	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Benzo(k)fluoranthene	0.002	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
4-Bromophenyl phenyl ether		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Butyl benzyl phthalate	50	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
2-Chloronaphthalene		ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
4-Chloroaniline	5	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
Carbazole		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Chrysene	0.002	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
bis(2-Chloroethoxy)methane		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
bis(2-Chloroethyl)ether		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
bis(2-Chloroisopropyl)ether		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
4-Chlorophenyl phenyl ether		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
1,2-Dichlorobenzene	4.7	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
1,3-Dichlorobenzene	5	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
1,4-Dichlorobenzene	5	ND		2	ND		2	NA			2		2	0.74	J	2.2	0.94	J	2	0.77	J	2.1
2,4-Dinitrotoluene		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
2,6-Dinitrotoluene	5	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
3,3'-Dichlorobenzidine	NA	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
Dibenzo(a,h)anthracene	50	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Dibenzofuran	5	ND		5	ND		5.1	NA			1.3	J	5	ND		5.4	ND		5	ND		5.2

TABLE 4
Groundwater Sample Summary - Temporary Well Points
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

	Client ID:	FB-S			FB-W			TB			W1-W			W2-W			W3-W			W4-W		
	Sample Depth:																					
	Lab ID:	N94857-2			N94857-9			N94857-10			N94857-3			N94857-5			N94857-8			N94857-6		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Field Blank Soil			Field Blank Soil			Trip Blank Soil			Ground Water			Ground Water			Ground Water			Ground Water		
	NYSDEC Groundwater Standards (ppb)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Di-n-butyl phthalate	50	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Di-n-octyl phthalate	50	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Diethyl phthalate	50	ND		2	ND		2	NA			ND		2	ND		2.2	1.9	J	2	ND		2.1
Dimethyl phthalate	50	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
bis(2-Ethylhexyl)phthalate	50	ND		2	1.7	J	2	NA			3		2	3.6		2.2	12.4		2	2	J	2.1
Fluoranthene	50	ND		2	ND		2	NA			1.8	J	2	ND		2.2	0.77	J	2	ND		2.1
Fluorene	50	ND		2	ND		2	NA			2.2		2	ND		2.2	ND		2	ND		2.1
Hexachlorobenzene	0.35	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Hexachlorobutadiene		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Hexachlorocyclopentadiene		ND		20	ND		20	NA			ND		20	ND		22	ND		20	ND		21
Hexachloroethane		ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
Indeno(1,2,3-cd)pyrene	0.002	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
Isophorone	50	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
2-Methylnaphthalene	50	ND		2	ND		2	NA			1.5	J	2	1	J	2.2	ND		2	0.9	J	2.1
2-Nitroaniline	5	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
3-Nitroaniline	5	ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
4-Nitroaniline		ND		5	ND		5.1	NA			ND		5	ND		5.4	ND		5	ND		5.2
Naphthalene	10	ND		2	ND		2	NA			1.2	J	2	2.2		2.2	4.5		2	2.2		2.1
Nitrobenzene	5	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
N-Nitroso-di-n-propylamine		ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
N-Nitrosodiphenylamine		ND		5	ND		5.1	NA			1.7	J	5	ND		5.4	ND		5	ND		5.2
Phenanthrene	50	ND		2	ND		2	NA			5		2	1.2	J	2.2	0.99	J	2	1	J	2.1
Pyrene	50	ND		2	ND		2	NA			1.2	J	2	ND		2.2	0.76	J	2	ND		2.1
1,2,4-Trichlorobenzene	5	ND		2	ND		2	NA			ND		2	ND		2.2	ND		2	ND		2.1
TOTAL TARGETED GC/MS Semi-volatiles (ppb)		0			1.7			NA			24.61			12.21			22.26			9.77		
TOTAL NON-TARGETED GC/MS Semi-volatiles (ppb)		0			0			NA			894.6	J		1855	J		671.3	J		1902	J	
TOTAL GC/MS Semi-volatiles (ppb)		0			1.7			NA			919.21			1867.21			693.56			1911.77		
GC Semi-volatiles (ppb) (SW846 8081A)																						
Aldrin	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
alpha-BHC	ND (<0.05)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
beta-BHC	ND (<0.05)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
delta-BHC	ND (<0.05)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
gamma-BHC (Lindane)	ND (<0.05)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
alpha-Chlordane		ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
gamma-Chlordane	0.1	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Dieldrin	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
4,4'-DDD	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	0.037		0.02	ND		0.021	0.023		0.02
4,4'-DDE	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	0.025		0.02	ND		0.021	0.02		0.02

TABLE 4
Groundwater Sample Summary - Temporary Well Points
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

	Client ID:	FB-S			FB-W			TB			W1-W			W2-W			W3-W			W4-W		
	Sample Depth:																					
	Lab ID:	N94857-2			N94857-9			N94857-10			N94857-3			N94857-5			N94857-8			N94857-6		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Field Blank Soil			Field Blank Soil			Trip Blank Soil			Ground Water			Ground Water			Ground Water			Ground Water		
	NYSDEC Groundwater Standards (ppb)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
4,4'-DDT	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Endrin	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Endosulfan sulfate	0.1	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Endrin aldehyde		ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Endrin ketone	NA	ND		0.05	ND		0.051	NA			ND		0.05	ND		0.05	ND		0.052	ND		0.051
Endosulfan-I	0.1	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Endosulfan-II	0.1	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Heptachlor	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Heptachlor epoxide	ND (<0.01)	ND		0.02	ND		0.02	NA			ND		0.02	ND		0.02	ND		0.021	ND		0.02
Methoxychlor	35	ND		0.05	ND		0.051	NA			ND		0.05	ND		0.05	ND		0.052	ND		0.051
Toxaphene		ND		0.25	ND		0.25	NA			ND		0.25	ND		0.25	ND		0.26	ND		0.25
Aroclor 1016	0.1 (2)	ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
Aroclor 1221	0.1 (2)	ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
Aroclor 1232	0.1 (2)	ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
Aroclor 1242	0.1 (2)	ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
Aroclor 1248	0.1 (2)	ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
Aroclor 1254	0.1 (2)	ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
Aroclor 1260		ND		0.5	ND		0.51	NA			ND		0.5	ND		0.5	ND		0.52	ND		0.51
TOTAL TARGETED GC Semi-volatiles (ppb)		0			0			NA			0			0.062			0			0.043		
Metals Analysis (ppb)																						
Aluminum	NA	<200		200	<200		200	NA			1330		200	1040		200	316		200	<200		200
Antimony	3	<5.0		5	<5.0		5	NA			<5.0		5	5.9		5	5.2		5	<5.0		5
Arsenic	25	<5.0		5	<5.0		5	NA			13.4		5	18.1		5	10.8		5	19.5		5
Barium	1000	<200		200	<200		200	NA			375		200	274		200	<200		200	266		200
Beryllium	NA	<5.0		5	<5.0		5	NA			<5.0		5	<5.0		5	<5.0		5	<5.0		5
Cadmium	5	<4.0		4	<4.0		4	NA			<4.0		4	<4.0		4	<4.0		4	<4.0		4
Calcium	NA	<5000		5000	<5000		5000	NA			208000		5000	145000		5000	154000		5000	158000		5000
Chromium	50	<10		10	<10		10	NA			12.1		10	<10		10	<10		10	<10		10
Cobalt	NA	<50		50	<50		50	NA			<50		50	<50		50	<50		50	<50		50
Copper	200	<25		25	<25		25	NA			32.2		25	<25		25	<25		25	<25		25
Iron	300	<100		100	<100		100	NA			45800		100	28400		100	22000		100	27300		100
Lead	25	<3.0		3	<3.0		3	NA			36.8		3	20.1		3	13		3	<3.0		3
Magnesium	NA	<5000		5000	<5000		5000	NA			59700		5000	81400		5000	30200		5000	85800		5000
Manganese	300	<15		15	<15		15	NA			577		15	2340		15	1010		15	2360		15
Mercury	0.7	<0.20		0.2	<0.20		0.2	NA			0.35		0.2	<0.20		0.2	<0.20		0.2	<0.20		0.2
Nickel	100	<40		40	<40		40	NA			<40		40	<40		40	<40		40	<40		40
Potassium	NA	<5000		5000	<5000		5000	NA			81300		5000	56000		5000	49000		5000	59200		5000
Selenium	10	<5.0		5	<5.0		5	NA			<5.0		5	<5.0		5	<5.0		5	<5.0		5
Silver	50	<10		10	<10		10	NA			<10		10	<10		10	<10		10	<10		10

TABLE 4
Groundwater Sample Summary - Temporary Well Points
Dobbs Ferry Waterfront Park, Dobbs Ferry, NY

1/16/2006

	Client ID:	FB-S			FB-W			TB			W1-W			W2-W			W3-W			W4-W		
	Sample Depth:																					
	Lab ID:	N94857-2			N94857-9			N94857-10			N94857-3			N94857-5			N94857-8			N94857-6		
	Date Sampled:	3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005			3/31/2005		
	Matrix:	Field Blank Soil			Field Blank Soil			Trip Blank Soil			Ground Water			Ground Water			Ground Water			Ground Water		
	NYSDEC Groundwater Standards (ppb)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Sodium	20,000	<5000		5000	<5000		5000	NA			410000		5000	295000		5000	310000		5000	308000		5000
Thallium	NA	<10		10	<10		10	NA			<10		10	<10		10	<10		10	<10		10
Vanadium	NA	<50		50	<50		50	NA			<50		50	<50		50	<50		50	<50		50
Zinc	NA	<20		20	<20		20	NA			110		20	445		20	181		20	389		20
General Chemistry (ppm)																						
Cyanide	200	<0.010		0.01	<0.010		0.01	NA			0.16		0.01	0.025		0.01	0.11		0.01	0.044		0.01

(1) Groundwater Standard for 4-Methylphenol
(2) Total PCB Groundwater Standard
NA = Not Available
ND = Not Detected at Indicated Method Detection Limit
Concentration Exceeds NYSDEC Groundwater Standard

DATA USABILITY SUMMARY REPORT (DUSR) 2005 DATA

The objective of the Data Usability Summary Report (DUSR) is to determine whether the data meets the site/project specific criteria for data quality and data use. The DUSR has been prepared by the Quality Assurance Officer, John Kerber. Mr. Kerber's resume was previously submitted to NYSDEC as part of the Site Investigation Workplan.

The laboratory data was reviewed for accuracy and usability in accordance with the guidelines set forth in Appendix B of the NYSDEC's Voluntary Cleanup Guide dated May 2002. The sample analysis reporting level was the NYSDEC Analytical Services Protocol (ASP) Category B deliverables.

All sample analyses conducted as part of this investigation were done by Accutest Laboratories, a New York State ASP/DOH certified laboratory (#10983). All samples were analyzed using standard USEPA SW-846 methodologies.

The following table presents a summary of the matrix type, number of samples, number of field and trip blanks, analytical parameters, and analytical methods.

Analytical Methods/QA Summary Table

# of Samples	Matrix	Parameter	EPA Method	Sample Duplicates	Field Blanks
7	Soil	TCL VO	8260B	1	1
7	Soil	TCL SVOCs	8270C	1	1
7	Soil	TCL Pesticide/ PCB	8081A/ 8082	1	1
7	Soil	Cyanide	9012M	1	1
7	Soil	TAL Metals	6010B/7471A	1	1
3	Aqueous	TCL VOCs	8260B	1	1
3	Aqueous	TCL SVOCs	8270C	1	1
3	Aqueous	TCL Pesticide/ PCB	8081A/ 8082	1	1
3	Aqueous	Cyanide	335.3	1	1
3	Aqueous	TAL Metals	6010B/7470A	1	1

Upon review, the data packages were found to be complete as defined under the requirements for the NYSDEC ASP Category B deliverables.

All holding times were met for the soil and groundwater sample analyses.

All of the QC data (i.e, blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data) fall within the protocol required limits and specifications with the following exceptions:

1. Job No. N89577 (Test Pit Soil Samples)

Volatiles (aqueous) Method 8260B

- Matrix spike/matrix spike duplicates recovery for benzene, ethylbenzene, xylene (total) are outside control limits due to high level in sample relative to spike amount.
- Matrix spike/matrix spike duplicates recovery for 2-butanone (MEK0 and benzene are outside control limits due to probable matrix interference.
- Sample N89228-3MSD has surrogate outside control limits due to probable matrix interference.
- N89626-6MS/MSD for 2-butanone (MEK) outside control limits due to matrix interference.
- N89626-6MS/MSD for acetone outside control limits due to matrix interference.

Volatiles (solid) Method 8260B

- Matrix spike recoveries for 1,1,2,2-tetrachloroethane, acetone, trichloroethene are outside control limits due to matrix interference.
- Matrix spike duplicate recoveries for 1,1,2,2-tetrachloroethane, acetone, trichloroethene are outside control limits due to matrix interference.
- RPD for MSD for 1,1,2,2-tetrachloroethane are outside control limits due to probable sample homogeneity.
- Sample N89228-3MSD has surrogates outside control limits due to probable matrix interference.
- N89228-3MSD for dibromofluoromethane outside control limits due to probable matrix interference/sample inhomogeneity.
- Matrix spike recovery for acetone is outside control limits due to high level in sample relative to spike amount.

Extractables (aqueous) Method 8270C

- Matrix spike recovery for 2-methylnaphthalene, 4-chloro-3-methyl- phenol, 4-chloroaniline, bis(2-chloroethyl)ether, hexachlorocyclopentadiene, N-Nitroso-di-n-propylamine are outside control limits due to matrix interference.
- Matrix spike duplicate recovery for 2-methylnaphthalene, 4-chloro-3-methyl-phenol, 4-chloroaniline, bis(2-chloroethyl)ether, hexachlorocyclopentadiene, N-

Nitroso-di-n-propylamine, N-Nitrosodiphenylamine are outside control limits due to matrix interference.

- Matrix spike recovery for 2,4-dimethylphenol, 2-methylphenol 3&4-methylphenol, phenol are outside control limits due to high level in sample relative to spike amount.
- RPD for MSD for 2,4,5-trichlorophenol, 2,4-dinitrophenol, 2-nitroaniline, 4-chloroaniline, 4-nitroaniline, n-nitrosodiphenylamine are outside control limits for sample OP19379-MSD due to probable sample homogeneity.
- OP19379-MSD for 4-nitroaniline, 2-nitroaniline and 2,4-dinitrophenol are outside control limits due to matrix interference.
- OP19379-MS for N-Nitroso-di-n-propylamine, hexachlorocyclopentadiene, bis(2-chloroethyl)ether, -chloroaniline, 4-chloro-3-methyl- phenol are outside control limits due to matrix interference.
- OP19379-MSD for 2,4,5-trichlorophenol outside control limits due to high level in sample relative to spike amount.

Extractables (solid) Method 8081A

- N89577-6 for gamma-Chlorodane reported 2nd signal. Percent D of end check (ECC) on 1st signal excess method criteria (15%) so using for confirmation only.
- N89577-4 for alpha-Chlorodane more than 40% RPD for detected concentrations between the two GC columns.
- N89577-3 for alpha-Chlorodane more than 40% RPD for detected concentrations between the two GC columns.
- N89577-2 for gamma-Chlorodane more than 40% RPD for detected concentrations between the two GC columns.
- N89577-2 for alpha-Chlorodane more than 40% RPD for detected concentrations between the two GC columns.
- N89577-5 for gamma-Chlorodane reported 2nd signal. Percent D of end check (ECC) on 1st signal excess method criteria (15%) so using for confirmation only.

Extractables (solid) Method 8082

- N89577-2 for aroclor-1260 reported 2nd due to interference on 1st signal.
- N89577-6 for aroclor-1260 reported 2nd due to interference on 1st signal.

Metals (solid) Method 6010B

- Matrix spike recovery for aluminum, iron, lead, magnesium, manganese, zinc outside control limits due to possible matrix interference and/or sample nonhomogeneity.
- Matrix spike duplicate recovery for antimony, manganese are outside control limits due to probable matrix interference.
- Matrix spike recovery for calcium outside control limits due to skipe amount low relative to sample amount.
- RPD for MSD for iron outside control limits for sample MP28901-S2 due to possible sample nonhomogeneity.

- RPD for serial dilution for arsenic, beryllium, cadmium, selenium, silver, copper, zinc outside control limits for sample MP28901-SD1. Percent difference acceptable due to low initial sample concentrations (<50 times IDL).
- MP28901-SD1 for copper- serial dilution indicates possible matrix interference.
- MP28901-SD1 for zinc - serial dilution indicates possible matrix interference.

Wet Chemistry (aqueous) Method 335.3
- Blank spike recovery for cyanide is outside control limits.
- GP27006-EXT4 for cyanide, spike blank indicates possible high bias, but all associated samples <DL.

2. Job No.N94857 (soil borings and groundwater samples)

Volatiles (aqueous) Method 8260B
- N94857-2, N94857-5 sample pH did not satisfy field preservation criteria.

Volatiles (solid) Method 8260B
- RPD for MSD for carbon disulfide are outside control limits due to matrix interference.

Extractables (aqueous) Method 8270C
- Blank spike recovery for carbazole is outside control limits. High percent recoveries as no associated positive found in the QC batch.
- Matrix spike duplicate recovery for carbazole is outside in house control limits.
- Sample N94857-8 has surrogate recovery outside control limit due to matrix interference.
- Sample N94857-8 re-extraction due to one surrogate outside QC limit performed outside holding time. Original prep date within holding time.

Extractables (aqueous) Method 8081A
- Sample N94857-8 has surrogate outside control limits due to matrix interference.
- OP19887-BS1 for heptachlor – reported 2nd signal, percent D of check on 1st signal exceed method criteria (15%) so using for confirmation only.
- RPD for MSD for heptachlor – reported 2nd signal, percent D of check on 1st signal exceed method criteria (15%) so using for confirmation only.
- OP19887-BS3 for endosulfan sulfate - reported 2nd signal, percent D of end check calibration on 1st signal exceed method criteria (15%) so using for confirmation only.
- N94857-5 for 4,4-DDE, 4,4-DDD – more than 40% RPD for detected concentrations between the two GC columns.
- N94857-6 for 4,4-DDE, 4,4-DDD – more than 40% RPD for detected concentrations between the two GC columns.

Extractables (Aqueous) Method 8082
- N94857-3, N94857-5 after TBA clean up.

Extractables (Solid) Method 8081a

- N94857-7 for 4,4-DDT – more than 40% RPD for detected concentrations between the two GC columns. Reported from 2nd signal.
- N94857-4 for 4,4-DDE - reported 2nd signal, percent D of end check calibration on 1st signal exceed method criteria (15%) so using for confirmation only.
- N94857-7 for 4,4-DDE - reported 2nd signal, percent D of end check calibration on 1st signal exceed method criteria (15%) so using for confirmation only.
- N94857-1 for dieldrin – more than 40% RPD for detected concentrations between the two GC columns. Reported from 2nd signal.
- OP19876-MS, OP19876-MSD for delta-BHC - reported 2nd signal, percent D of end check calibration on 1st signal exceed method criteria (15%) so using for confirmation only.
- OP19876-MS, OP19876-MSD for alpha-chlordane- reported from 2nd signal due to interference on 1st signal.
- N94857-1 for 4,4-DDT - reported from 1st signal. Percent D of end check (ECC) on 2nd signal exceed method criteria (15%) so using for confirmation only.

Extractables (Solid) Method 8082

- N94857-4 for aroclor 1242 – reported from 1st signal due to interference on 2nd signal.

Metals (aqueous) Method 6010B

- RPD for MSD for cadmium is outside control limits due to possible sample nonhomogeneity.
- RPD for serial dilution for arsenic, nickel, selenium, vanadium are outside control limits – percent difference acceptable due to low initial sample concentration (<50 times IDL).
- Matrix spike duplicate recovery for iron, sodium outside control limits – spike amount low relative to sample amount.

Metals (solid) Method 6010B

- Matrix spike recovery for antimony, chromium, magnesium, manganese, zinc are outside control limits indicating possible matrix interference and/or sample nonhomogeneity.
- Matrix spike duplicate recovery for antimony, copper, magnesium are outside control limits indicating possible matrix interference and/or sample nonhomogeneity.
- Matrix spike and matrix spike duplicate recovery for calcium, iron outside control limits – spike amount low relative to sample amount.
- RPD for MSD for calcium, iron, manganese are outside control limits due to possible sample homogeneity.
- RPD for serial dilution for antimony, beryllium, cadmium, selenium, silver are outside control limits – percent difference acceptable due to low initial sample concentration (<50 times IDL).

- RPD for serial dilution for potassium are outside control limits indicating possible matrix interference.
- N94857-7 for cadmium, thallium – elevated detection limit due to dilution required for high interfering element.

Wet Chemistry (aqueous) Method 335.3

- RPD for duplicate for cyanide are outside control limits for sample GP27799-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry (solid) Method 9012M

- Matrix spike recovery for cyanide is outside control limits indicating possible matrix interference and/or sample nonhomogeneity.
- RPD for duplicate for cyanide are outside control limits for sample GP27791-D1 due to possible sample nonhomogeneity.
- GP27791-ICV3 for cyanide – blank spike recovery outside control limits indicating possible high bias, but only the associated samples <DL are reported.
- N94857-7 for cyanide – detection limit raised due to matrix interference – result confirmed on later run.

All of the data have been generated using the established and agreed upon analytical protocols.

An evaluation of the raw data confirms the results provided in the data summary sheets and quality control verification forms.

The correct data qualifiers have been used.

Despite the listed exceedances of the quality control data, we find no reason to resample or reanalyze any of the samples.

APPENDIX 5

Open Field at Waterfront Park Drawings S-1 and S-2

APPENDIX 6

Health and Safety Plan

Health and Safety Plan (HASP)

Site Remedial Activities

DOBBS FERRY WATERFRONT PARK
SITE NO. V-00628-3
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

Prepared for:

Village of Dobbs Ferry
112 Main Street
Dobbs Ferry, New York 10522

Prepared by:

Potomac-Hudson Environmental, Inc.
PO Box 7, 207 S. Stevens Avenue
South Amboy, New Jersey 08879

June 2006

HEALTH AND SAFETY PLAN
DOBBS FERRY WATERFRONT PARK
SITE NO. V-00628-3
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

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HEALTH AND SAFETY PLAN
DOBBS FERRY WATERFRONT PARK
SITE NO. V-00628-3
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

PREFACE

The Health and Safety Plan (HASP) contained herein has been prepared in compliance with applicable guidelines and requirements provided in 29 CFR 1910.120.

The HASP represents the minimum health and safety measures appropriate for the grading and final capping with clean fill of the Dobbs Ferry Waterfront Park. For construction activities other than those operations described in this Plan, it will be necessary to modify the plan to protect against potential additional hazards that may be present.

HEALTH AND SAFETY PLAN
DOBBS FERRY WATERFRONT PARK
SITE NO. V-00628-3
VILLAGE OF DOBBS FERRY
WESTCHESTER COUNTY, NEW YORK

1.0 INTRODUCTION

1.1 BACKGROUND

The purpose of this Health and Safety Plan (HASP) is to define the health and safety requirements necessary to protect workers involved in the site grading and capping activities to be conducted at the former municipal landfill located in Dobbs Ferry, New York known as the Dobbs Ferry Waterfront Park ("the Site"). The Site is intended for redevelopment as a recreational field. This HASP is not intended for use beyond the scope of work described herein.

A copy of this HASP will be provided to all contractors who may work on this project. However, the contractors themselves will be responsible for the health and safety of their own employees. They will be required to develop their own task specific Health and Safety Plan that complies with the requirements contained in OSHA rules governing hazardous waste site operations (29 CFR 1910.120). At a minimum, the content of their training program will include all elements included in this HASP.

Enforcement of the guidelines contained within this HASP will be the responsibility of the designated Health and Safety Officer (HSO). The HSO will have the authority to enforce all applicable elements of the Plan and to take all measures required to ensure the health and safety of the workers. Failure to comply with the orders of the HSO may result in a range of actions, including the cessation of work at this Site.

While every effort has been made to ensure that this plan provides adequate protection for the operations specified, it is the responsibility of any contractor undertaking this work to satisfy themselves that the plan is adequate for their own requirements. Changes to this plan must be approved by the Designated Health & Safety Officer and Project Manager.

1.2 GENERAL INFORMATION

Project Name:	**Dobbs Ferry Waterfront Park** (See **Figure 1**)
Site Location:	Dobbs Ferry, New York
Project Description:	Site grading and capping contaminated soil
Project Manager:	*To Be Determined*
Field Supervisor:	*To Be Determined*

Contractor: *To Be Determined*

Site Health and Safety Officer: *To Be Determined*

Alternate HSO: *To Be Determined*

Dates of Planned Activities: Fall 2006

Site History:

Based on a review of a Site Inspection Report and Hazard Ranking System Model of the Dobbs Ferry Riverfront Park prepared by NUS Corporation for the US Environmental Protection Agency (USEPA), the Site was utilized as a municipal landfill from 1950 to the early 1970's. The landfill, which is not capped or lined, was apparently utilized for construction and demolition debris. However, Stauffer Chemical Corp. Ardsley Plant reportedly backfilled the landfill with approximately 200 tons of inorganic and salt bearing wastes between 1950 and 1956. Since the Site was not secure, the potential for other illegal dumping existed. NUS collected four surface samples from the area of the proposed recreation field in 1986 for analysis of volatile organic compounds (VOCs), Semivolatile organic compounds (SVOCs), pesticides/PCBs and metals. The analytical results indicated the presence of metals and SVOCs above the New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objectives.

The Village of Dobbs Ferry collected five surface soil samples in May 2002. The results indicated that the concentrations of several metals were above the NYSDEC RSCO.

In October 2002 PHEnv obtained soil samples from five test pits. Contaminants of concern that were identified include PAH, several metals and a very slightly elevated chlordane concentration.

In 2005, PHEnv obtained additional soil and groundwater samples from test pits and temporary well points. Contaminants of concern that were identified include PAH, metals and pesticides in the soil and volatile organics and pesticides in the groundwater.

Activities in which Site personnel may come in contact with Site contaminants involve site grading, placement of clean fill and installation of a fence.

The Health and Safety Plan has been developed (i) to minimize worker exposure to respirable particles and vapors, (ii) to protect the skin and face from dermal contact with potentially hazardous materials and (iii) to establish hygiene guidance to prevent accidental ingestion of contaminants.

Summary of Activity and Hazard Potential:

Field Task Objective	Overall Hazard Assessment
Grading of Contaminated Soil	Low contaminant exposure

Capping With Clean Fill	Low contaminant exposure
Installation of Fence Posts	Low contaminant exposure

See **Attachment 1** for a description of the health hazards and exposure pathways for site contaminants.

1.3 STAFF ORGANIZATION, QUALIFICATIONS AND RESPONSIBILITIES

The following organizational structure is proposed for the project:

Project Manager

Oversees all aspects of contract, and ensuring that workers have all necessary resources, including appropriate 40-hour training and instruction and fit-testing for appropriate personal protection equipment (PPE). This individual shall have 40-hour OSHA HAZWOPER (Hazardous Waste Operations and Emergency Response) training as a minimum.

Field Supervisor

Responsible for all field operations, including the implementation and enforcement of the Site Health and Safety Plan (HASP). Reports to Project Manager. This individual shall have 40-hour OSHA HAZWOPER training plus eight-hour OSHA HAZWOPER supervisory training. This person will also conduct frequent random inspections to assure respirators and other PPE is being worn, as appropriate.

Site Health and Safety Officer (HSO)

This should be a qualified Industrial Hygienist (IH), Safety Professional, or individual with experience in the use of:

- Heat/cold stress monitoring equipment;
- Implementing Health and Safety programs at sites where Level C and D personal protective equipment was required;
- Experience in construction techniques and construction safety procedures;
- Working knowledge of Federal regulations, State statutes, and local ordinances;
- Specific training in personal and respiratory protective equipment program implementation; and
- Proper use of air monitoring equipment.

And holding:

- 40-hour OSHA HAZWOPER training plus eight-hour OSHA HAZWOPER refresher training; and
- Medical Surveillance Program (MSP) clearance.

The HSO will be responsible to the Project Manager for the day to-day implementation of the HASP, for the provision of start-up and periodic safety briefings, and for implementation and interpretation of all air monitoring measurements and appropriate recommendations.

The HSO will also respond to routine or non-routine emergencies in coordination with the Project Manager.

The HSO will develop and maintain site health safety logs for training, daily safety inspection, employee and visitor register, and environmental and personal monitoring/sampling results.

Construction Personnel

All personnel working on the site (including any subconsultants) will have current OSHA HAZWOPER 40-hour certification (with eight-hour annual OSHA HAZWOPER refresher course, if required), and have been fit-tested for PPE within the past year.

Documentation of Training Requirements

Verification of personnel training and certifications will be the responsibility of the Site HSO and Project Manager.

1.4 HAZARDOUS MATERIALS SPILL/RELEASE

In the event of a spill or release of a hazardous material, the following response will be implemented with a common-sense approach:

1) Administer first aid and obtain emergency medical assistance, if necessary.
2) Warn unsuspecting persons of the hazard, if necessary.
3) Stop the spill/release at the source, if possible.
4) Use available clean-up methods or containment methods.
5) Notify the HSO and the Project Manager
6) Call the NYSDEC Region III office (845-256-3000) to report the spill within 15 minutes of discovery. Notify them of the following:

    - Company name
    - Location
    - Estimated volume of the spill/release
    - Date and time of spill/release
    - Request and record the spill number in the field notebook or other pertinent logbook.

1.5 EMERGENCY RESPONSE

Emergency Telephone Numbers:

Project Manager:	*To Be Determined*
Owner's Representative:	Anthony Giaccio, Village Administrator Village of Dobbs Ferry 914-693-2203
Contractor Contact:	*To Be Determined*
Field Supervisor:	*To Be Determined*
Health & Safety Officer:	*To Be Determined*
Alternate HSO:	*To Be Determined*
Fire Department:	911
Police Department:	911 or 914-693-5500
Ambulance:	911
Hospital:	914-693-0700 (Main Number)
Poison Control Center	(800) 962-1253
National Response Center DOT-USCG Chemical toxin spills, oil spills and pollutant discharges	(800) 424-8802
NYSDEC Region III Office (Westchester County included)	845-256-3000
Chemtrec	(800) 424-9300

Hospital Name, Address and Route:

Name:	Community Hospital at Dobbs Ferry (**see Figure 2**)
Address:	128 Ashford Avenue Dobbs Ferry, New York 10522
Route:	Exit the Site onto High Street. Take High Street east and bear left onto Main Street. Continue on Main Street and make a right turn onto Cedar. Take Cedar to Broadway and make a left turn onto Broadway. Continue on Broadway which turns into Ashford Avenue. Continue on Ashford Avenue until to you see the Hospital on the right side of road (128 Ashford Avenue).

All subcontractors proposing to work on this site will be required to familiarize themselves with the site pre-emergency plan in accordance with 29 CFR 1910.120(b)(4)(ii)(H). The following components make up the plan:

- During a site emergency, all site personnel are instructed to locate either the Field Supervisor or HSO, whoever is more proximal, and briefly and accurately describe the emergency.
- The Field Supervisor or HSO will evaluate the nature and severity of the emergency and contact the appropriate emergency services and/or evacuate the site, if necessary. In the event that site personnel cannot locate the Field Supervisor or HSO in a timely enough manner to avoid further problems, then site personnel shall attempt to evacuate and engage emergency responses.
- In the event that a site evacuation is required, then all site personnel are instructed to exit the site and assemble at **the south entrance to the property.** If a site emergency is localized, then site personnel will be instructed to go to the appropriate location within the site boundaries.
- During a site emergency, the Field Supervisor or HSO will assure that all site personnel have evacuated the site and physically secure the site by closing and locking the perimeter fence.
- During a site emergency, all site personnel will exit the site from the main entrance gate on **the south side of the property.** Depending on the nature of the emergency and its relative location, site personnel will follow the instructions of either the Field Supervisor and/or HSO as to the safest route to take. In the unlikely event that the main entrance is cut-off from use, it may be necessary to climb the fence to evacuate the site.
- Depending on the severity of the emergency, it may be necessary to either scale-down or eliminate the decontamination procedure. The HSO will determine, on a case-by-case situation, the level of decontamination required for affected site personnel during a site emergency. This decision will be made in conjunction with emergency services, if required. Site personnel are instructed not to pass through the Decon Zone without instruction from the HSO unless a severe emergency exists.
- Remediation will be occurring within the confines of the playing field, thereby allowing close communications between site management and their downrange workers. If appropriate, due to the limited number of construction personnel expected to be on-site, a buddy-type system will be employed to facilitate site communications and alerting. In case of emergency, the site personnel will be alerted by a pre-agreed three-blast signal delivered with an airhorn. The HSO will be outfitted with a cell phone.
- Following a site emergency, all affected personnel will be interviewed to determine specifics of the emergency and receive critiques of procedures used to handle the emergency.
- The following contacts are provided for a site emergency:
  - **Fire Department 911**
  - **Police Department 911 or 914-693-5500**
  - **Ambulance 911**
  - **Community Hospital at Dobbs Ferry 914-693-0700 (Main Number)**
  - **HSO, if not on-site, *To Be Determined* (office), *To Be Determined* (cell)**
  - **Alternate HSO, if not on-site, *To Be Determined* (office), *To Be Determined* (cell)**

Name of Subcontractors (Field Work) (To be determined)

1. **Name:**_____ **Telephone No.**_____
   Address_____
   Authorized Representative: _____
   Site Representative: _____
   Health & Safety Officer _____
   Corporate Physician _____

2. **Name:**_____ **Telephone No.**_____
   Address_____
   Authorized Representative: _____
   Site Representative: _____
   Health & Safety Officer _____
   Corporate Physician _____

3. **Name:**_____ **Telephone No.**_____
   Address_____
   Authorized Representative: _____
   Site Representative: _____
   Health & Safety Officer _____
   Corporate Physician _____

Approvals:

_____ _____
Project Manager **Date**

_____ _____
Site Safety Officer **Date**

1.6 SIGNATURES AND ACKNOWLEDGMENT

This Health & Safety Plan does not guarantee the health or safety of any person entering this Site. Due to the potentially hazardous nature of this Site and the activity occurring thereon, it is not feasible to identify, evaluate, and provide protection for all possible hazards that may be encountered.

Strict adherence to the health and safety guidelines set forth herein will, likewise, reduce, but not eliminate, the potential for injury at this Site. The health and safety guidelines in this Plan were prepared specifically for this Site.

All persons working at or visiting the exclusion zone (see Section 4.2, of this Plan) of the Site must acknowledge by signing below that the contents of this Plan have been discussed with them. Each person agrees that they have read and understand the Plan, and agrees to comply with it.

	Name	Signature
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2.0 SITE CHARACTERISTICS AND HAZARD ASSESSMENT

2.1 SITE CHARACTERISTICS

The following description of the character of the soil at the Dobbs Ferry Waterfront Park is based on the results of testing and analysis conducted at the Site between 1986 and 2005 by a number of different entities.

Based on the results of the previous soil investigations conducted in 1986, 2002 and 2005, the Site surface soils have been found to contain concentrations of pesticides, SVOCs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene), and metals (chromium, copper, nickel, zinc) above the NYSDEC RSCO. The Site subsurface soils have been found to contain concentrations of SVOCs ((benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene), chlordane, and metals (arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, and zinc) above the NYSDEC RSCO.

Groundwater samples collected at the Site indicate concentrations of VOCs (benzene, chlorobenzene, toluene, xylenes) and pesticides (4,4-DDD and 4,4-DDE), and metals (antimony, iron, lead, manganese, sodium) above the NYSDEC Groundwater Standards (GS).

Visual observations during both test pit programs indicated the presence of a large amount of debris (household and construction type). Aside from the concentrations of soil contaminants above the NYSDEC RSCO, the presence of this type of debris will be considered in the design of the field. Geotechnical issues such as soil settling and debris shifting will be taken into consideration in the final site design.

2.2 HAZARD ASSESSMENT

Hazards at the site during construction include contact with contaminants and activities associated with construction and the operation of heavy equipment, including potential slip, trip, and fall hazards.

2.2.1 Contaminant Hazards

Contaminant hazards for metals, pesticides and SVOCs in soils include direct skin contact, inhalation, and ingestion as pathways of personal exposure. Therefore, primary health and safety efforts will be towards the suppression of dust and the use of personal protective clothing and, if necessary, respiratory protection.

A summary of the exposure pathways, health hazards, and risks associated with soil contaminants is presented as **Attachment 1**.

The potential for worker contact with contaminated groundwater does not exist during grading or capping activities.

2.2.2 General Physical Hazards

Physical hazards will vary with site activities and conditions. Some general and site-specific hazards and precautions are given below:

- Elevated noise levels may be anticipated in the presence of heavy equipment. Hearing protection shall be used by all who work within 50 feet of noisy equipment or operations.

- Underground utility locations will be identified prior to the commencement of any ground penetration operations. Overhead utilities will be identified and a minimum distance of 20 feet will be maintained at all times.

- Heat stress may be a hazard for work done in protective clothing at temperatures above 70° F. When ambient temperatures reach 70° F and workers wear impervious clothing, work/rest cycles will be scheduled on a regular basis, and liquids with electrolytes will be available to replenish body fluids. Because the incidence of heat stress depends upon a variety of factors, all workers, even those not wearing protective clothing, should be observed and encouraged to report any symptoms of heat stress and all personnel should be instructed to take breaks as they see necessary.

A description of General Construction Safety is provided in **Attachment 2**, Heavy Equipment Operation Safety in **Attachment 3**, and General First Aid is provided in **Attachment 4**.

General Safety Practices

The following are required safety precautions:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited within all zones of the construction site.
- Hands and face must be thoroughly washed upon leaving the work area and before eating, drinking, or other activities.
- No excessive facial hair, which could interfere with the satisfactory fit of the respirator mask-to-face seal, is permitted for workers potentially required to wear respiratory protective equipment.

3.0 CONSTRUCTION OPERATIONS AND PERSONAL PROTECTION

3.1 CONSTRUCTION OPERATIONS

The Waterfront Park Open Field Site Plan and the Waterfront Park Open Field Site Details appears in **Attachment 5**. Three types of construction operations will be occurring on the site that will result in the movement of site soils and increased potential for the generation of airborne dust and worker contact with hazardous contaminants. These activities are grading/scraping, capping and fence installation. Grading/scraping of existing Site soils will be

conducted in order to level the Site prior to the installation of the geotextile fabric and clean fill cap. Certain other construction activities, such as seeding, should not disturb existing soils.

Subsequent to the placement of topsoil materials, activities that do not penetrate this cover to reach the underlying existing soil would not require application of this plan.

3.1.1 Grading/Scraping

Grading and scraping will involve the movement (displacement) of soils typically requiring the use of a bulldozer, scraper, and/or front end loader. This activity will involve the movement of existing Site soils in order to grade the Site prior to the placement of the clean fill cap. No loading or unloading of existing soils are anticipated as part of this task. This task is anticipated to be short-term, but somewhat intensive.

During grading and scraping of existing soils and prior to placement of clean fill and topsoil, personnel may be exposed to potentially contaminated airborne particulates and direct soil contact.

3.1.2 Installation of Fence

A fence will be constructed around the perimeter of the playing field as shown on the Site Plan included in **Attachment 5**. Prior to Site capping along the fence line, fence posts will be installed so that any excavated materials can be placed underneath the geotextile fabric and clean fill cap and remain on-site. During excavation of existing soils for fence post installation, personnel may be exposed to potentially contaminated airborne particulates and direct soil contact.

3.1.3 Placement of Clean Fill

Upon completion of Site grading activities, the geotextile fabric and clean fill cap will be placed on the Site. During the placement of the fabric and clean fill, personnel may be exposed to potentially contaminated airborne particulates and direct soil contact. Upon completion of this activity, workers will no longer be exposed to existing Site soils.

3.2 PERSONAL PROTECTION

3.2.1 Standard Level of Protection

Standard personal protection during site work will be Level D and will include:

- Leather work gloves
- Safety glasses of goggles
- Safety boots with optional dust booties or chemical-resistant boots with safety toe
- Tyvek coveralls
- Hardhat

- If dust concentrations are greater than 5 mg/m3 (total dust), a full face respirator with HEPA cartridges will be used to provide respiratory protection from potentially contaminated particulates or personnel will be evacuated from the Site until appropriate mitigative measures can reduce dust concentrations to below 5 mg/m3 (see Section 3.2.2, Air Monitoring)

The HSO will be responsible for determining worker upgrades in respiratory protection based on ambient monitoring, as described below. All respiratory protection must be utilized in accordance with OSHA regulations per 29 CFR 1910.134, which includes requirements of training, fit testing, medical fitness, maintenance and storage. A description of the OSHA Levels of Protection is provided as **Attachment 6**.

3.2.2 Air Monitoring

Organic Vapors

A direct reading PID instrument (MiniRAE 2000) will be used to determine the adequacy of respiratory protection in the immediate work zone during grubbing and re-grading activities. The MiniRAE 2000 operation instructions have been included in **Attachment 7**. The level of respiratory protection to be used will be based upon the PID readings. Periodic readings will be obtained during the sampling activities. In order to obtain the maximum degree of protection, the following procedure will be followed:

a. A full-face air purifying respirator will be used when the organic vapor level is 5 ppm above background but is below 25 ppm in the breathing zone.

b. If organic vapor levels exceed 25 ppm in the breathing zone, then the field activities will be halted until the organic vapor levels drop below 25 ppm. If the levels do not drop below 25 ppm in the breathing zone, then a decision will be made whether or not to obtain additional respiratory protection (positive pressure demand Self-Contained Breathing Apparatus (SCBA)), or to abandon activities at that time.

Particulates

The particulate monitoring will follow the procedures specified in TAGM 4031. The contractor shall be responsible for complying with TAGM 4031.

Personal DataRAM instruments (pDR-1000AN) will be used to monitor on-site, real-time particulate levels during any activities that generate dust during soil disturbance. The DataRAM operation instructions have been included in **Attachment 7**. One instrument will be utilized in the work zone during grubbing and re-grading activities and will run for an 8-hour period (longer or shorter, if the workday permits). The air intake will be set for worker breathing level.

The OSHA Permissible Exposure Limit (PEL) for respirable dust is 15 mg/m^3 (total dust). Because the total particulates are being used as a surrogate for potentially contaminated dust, the instruments will be conservatively set for a threshold value of 5 mg/m3. The HSO will manually record the peak and time-weighted average (TWA) concentrations every 30 minutes during each

workers shift. Any running TWA exceeding 5 mg/m3 will result in either PPE upgrade, employment of mitigative measures, or cessation of operations.

3.3 COMMUNITY AIR MONITORING PLAN (CAMP)

3.3.1 Continuous Monitoring

As required in NYSDEC's September 23, 2004 letter, continuous monitoring for volatile organics and particulates will be conducted at upwind and downwind locations during grubbing and re-grading activities.

3.3.1.1 Volatile Organic Compounds (VOC) Monitoring

Utilizing a MiniRAE 2000 PID instrument, VOC concentrations will be continuously monitored at the upwind and downwind perimeters of the work area during grubbing and re-grading activities. The equipment will be calibrated daily and operated as per manufacturer's guidelines. All equipment will fall within annual certifications. 15-minute running averages, as well as relevant instantaneous readings, will be recorded by field personnel and compared to the levels specified below to determine appropriate mitigative actions:

- If the ambient air concentrations of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

Recorded VOC readings will be maintained by field personnel and made available for review by NYSDEC and/or NYSDOH personnel.

3.3.1.2 Particulate Monitoring

Utilizing a real-time TSI DustTrak Aerosol Monitor with an audible alarm (Model 8520, PM-10), particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the work area during grubbing and re-grading activities. The TSI DustTrak

operations manual has been included in **Attachment 7**. 15-minute running averages, as well as visual observations, will be recorded by field personnel and compared to the levels specified below to determine appropriate mitigative actions:

- If the downwind PM-10 particulate level is 100 mg/m^3 greater than background (upwind perimeter, measured during the periodic monitoring) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mg/m^3 of the upwind level and in preventing visible dust migration.

Recorded particulate readings will be maintained by field personnel and made available for review by NYSDEC and/or NYSDOH personnel.

3.3.2 Periodic Monitoring

When the site is being grubbed and re-graded, periodic monitoring for particulates and volatiles will be conducted at the work area. Periodic monitoring will generally consist of monitoring total VOCs with a single MiniRAE 2000 PID and particulates utilizing a real-time TSI DustTrak Aerosol Monitor with an audible alarm (Model 8520, PM-10). Instantaneous readings will be taken at arrival at the start of the work day, and several times throughout the work day, and once at the end of the work day.

In addition, as indicated in NYSDEC's September 23, 2004 letter, as the geotextile fabric and clean fill final cover material are installed over the re-graded areas, only periodic monitoring of particulates (nuisance dust) will be necessary.

3.3.3 Site Communications and Alerting

The establishment of an effective communication system is an essential element for the safety of site personnel. At any one time, construction at the Waterfront Park will be occurring at one location, thereby allowing close communications between site management and their downrange workers. If appropriate, due to the limited number of construction personnel expected to be on-site, a buddy-type system will be employed to facilitate site communications and alerting.

In case of emergency, the site personnel will be alerted by a pre-agreed three-blast signal delivered with an airhorn.

3.3.4 Personal Protective Equipment (PPE) Program

All subcontractors proposing to work on this site are required to have their own Personal Protective Equipment Program, addressing the following components in accordance with 29 CFR 1910.120(b)(4)(ii)(C):

- PPE selection based on Site hazards
- PPE use and limitations;
- Work mission duration;
- PPE maintenance and storage
- PPE training and proper fitting;
- PPE donning and doffing procedures;
- PPE inspections (prior to, during, and following use);
- Evaluation of effectiveness of PPE program, and
- Limitations during temperature extremes.

Prior to the start of site operations, it will be the responsibility of the subcontractor(s) to provide the HSO with all listed PPE equipment and site-specific PPE Program(s) in order to verify completeness and applicability.

3.3.5 Medical Surveillance

All workers engaging in on-site construction activities for 30-days or more per year must be enrolled in a Medical Surveillance Program that provides, at minimum, for the following elements in accordance with 29 CFR 1910.120(b)(4)(ii)(D):

- Inclusion of annual updates;
- Provision of termination examinations;
- Provision of examinations following known or suspected exposures;
- Listing of the components of the medical examination;
- Statement regarding the availability of the results and opinions to the employees;
- Name and address of physician or medical group providing the examinations; and
- Provision by the employer for the retention of the employee medical records for at least 30-years plus employment duration.

Prior to the start of site operations, it will be the responsibility of the subcontractor(s) to provide the HSO with all Medical Surveillance Program(s) in order to verify completeness and applicability.

4.0 SITE CONTROLS

4.1 SECURITY

The primary purpose for site controls is to establish the hazardous area perimeter and to prevent access or exposure to hazardous materials by unauthorized persons. At the end of each workday, the site will be secured to prevent unauthorized activities.

4.2 WORK ZONES

Site work zones will include clean, decontamination (decon), and exclusion zones.

- Clean Zone: The clean zone will be located outside the exclusion and decon zones. This area will be used for construction staging, clean fill material stockpiles, and parking. There will be one controlled entry/exit from the clean zone to the decon zone.

- Decon Zone: The decon zone will provide a location for removal of contaminated personal protective equipment, personnel washing, and checkpoint for documentation of personnel and equipment. All personnel and equipment in the exclusion zone should exit through the decon zone. The procedure for decontamination is included as **Attachment 8**. All contaminated disposable clothing will be placed in appropriate containers, as necessary. Personnel will not be permitted to leave the Site with clothing suspected of being contaminated. Soap and water will be provided for cleaning hands and face.

  Provisions will be made for work pertaining to implementation of the RAWP so that vehicles leaving the Site do not transport contaminated soils off-site. Specifically, as shown on the Waterfront Park Open Field Site Plan and the Waterfront Park Open Field Site Details in **Attachment 5**, an anti-tracking pad will be installed at the entrance to the Site. The anti-tracking pad is designed to eliminate the transfer of soils from the Site onto the adjacent parking lot. The anti-tracking pad consists of a geotextile foundation beneath a two inch stone base, and a riprap surface (six inch minimum). The pad will be a minimum of 50 feet long. All vehicles and/or heavy equipment that come in contact with contaminated soil will be rinsed on the anti-tracking pad to prevent the transfer of contaminated soil to offsite locations. The anti-tracking pad will be constructed so that rinse water infiltrates into the Site soils and not to off-site locations. Subsequent to final capping of the Site, the anti-tracking pad will be removed and capping will be conducted in that area.

- Exclusion Zone: The exclusion zone will demarcate the contaminated area inside the Site perimeter where grading/scraping activities are occurring. The exclusion zone will be the entire area of the proposed recreational field. Entry to and exit from this zone will be made through the gate located at the southern end of the field, and all personnel will be required to sign the Health & Safety Plan. Communication within the exclusion zone will be through audible alerts and visual signals. Where two or more workers are employed at an activity, the buddy system must be employed.

5.0 REMEDIAL AND MITIGATIVE MEASURES

5.1 DUST SUPPRESSION DURING CONSTRUCTION

During grading/scraping activities, air monitoring for air particulates will be conducted by personnel designated by the HSO using DataRAM and DustTrak instruments. Dust suppression, by spraying the area with water, will be implemented when instrument readings exceed 5 mg/m^3 total particulates.

5.2 MITIGATION MEASURES

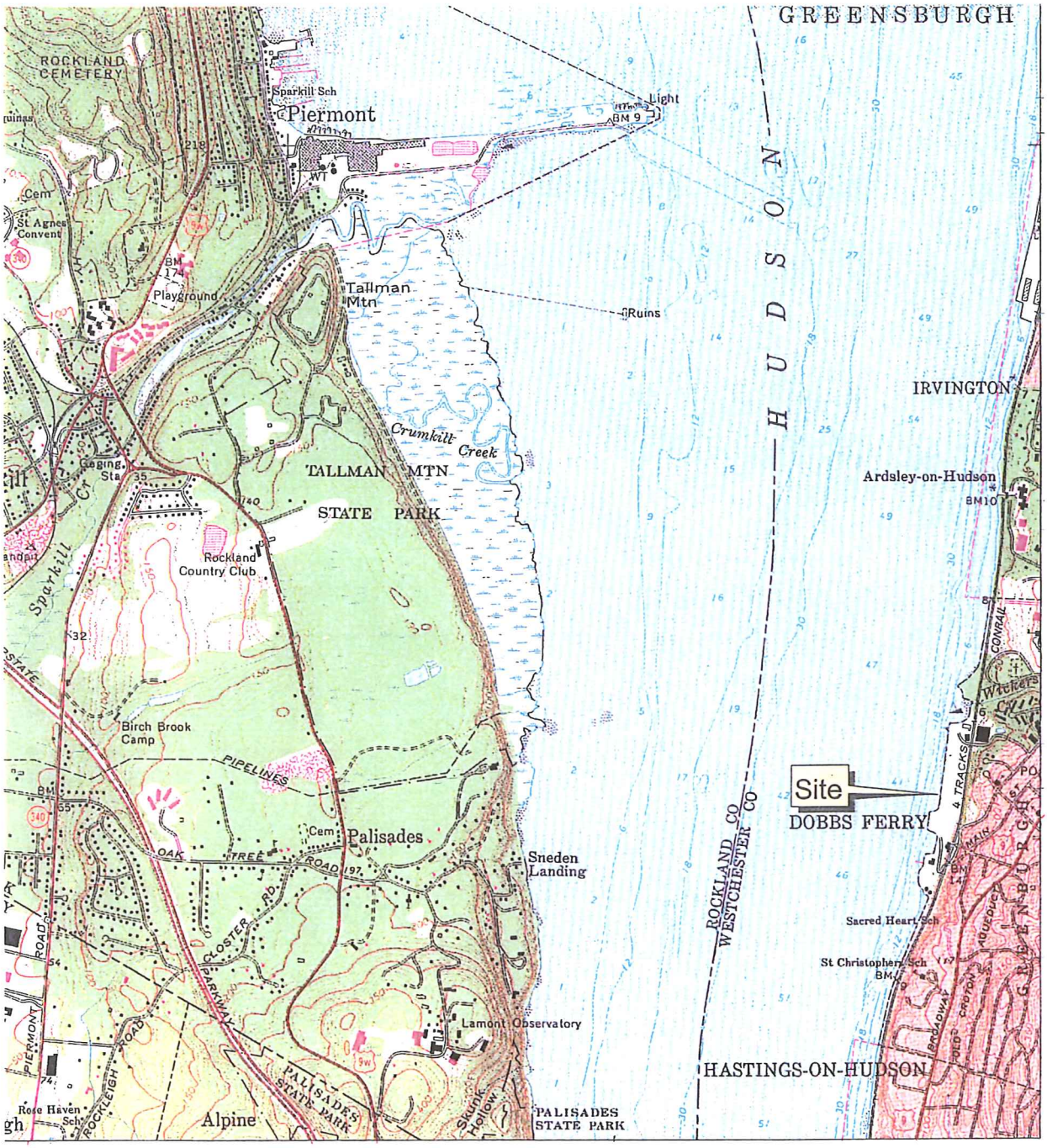
As a result of the Remedial Action Selection Report, it was determined that the risks to the playing field workers and occupants could be mitigated by:

- Placement of a geotextile fabric and clean fill to eliminate the soil direct contact exposure route.
- Provision of fencing around the playing field upon completion of placement of the clean fill cap and seeding;
- Provision of one entrance/egress into the playing field area.

Implementation of these measures can eliminate these routes of exposure and significantly reduce risk to the above identified receptor groups.

5.3 WASTE HANDLING

Since the remedial activities involve only grading/scraping to level the surface of the playing field prior to placement of clean fill, there will be no waste material generated. Excavated soils from fencepost installations will be placed back on the Site underneath the geotextile fabric and clean fill cap. Any debris that is brought to the surface during grading that cannot be placed back into the Site will be disposed in a manner consistent with local, state and federal regulations. If unexpected hazardous material is encountered, this material will be excavated and placed on an impervious plastic liner for subsequent sampling and appropriate disposal. It is not anticipated that any materials will be removed off-site. Groundwater is not expected to be encountered during the grading and scraping activities.



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DATE:	DRAWN BY:	REVIEWED BY:	SCALE:	PROJECT #	SHEET #
May 2004	MDS	KEP	AS SHOWN	454	1 OF 1

Project Location
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

POTOMAC-HUDSON ENVIRONMENTAL, INC.

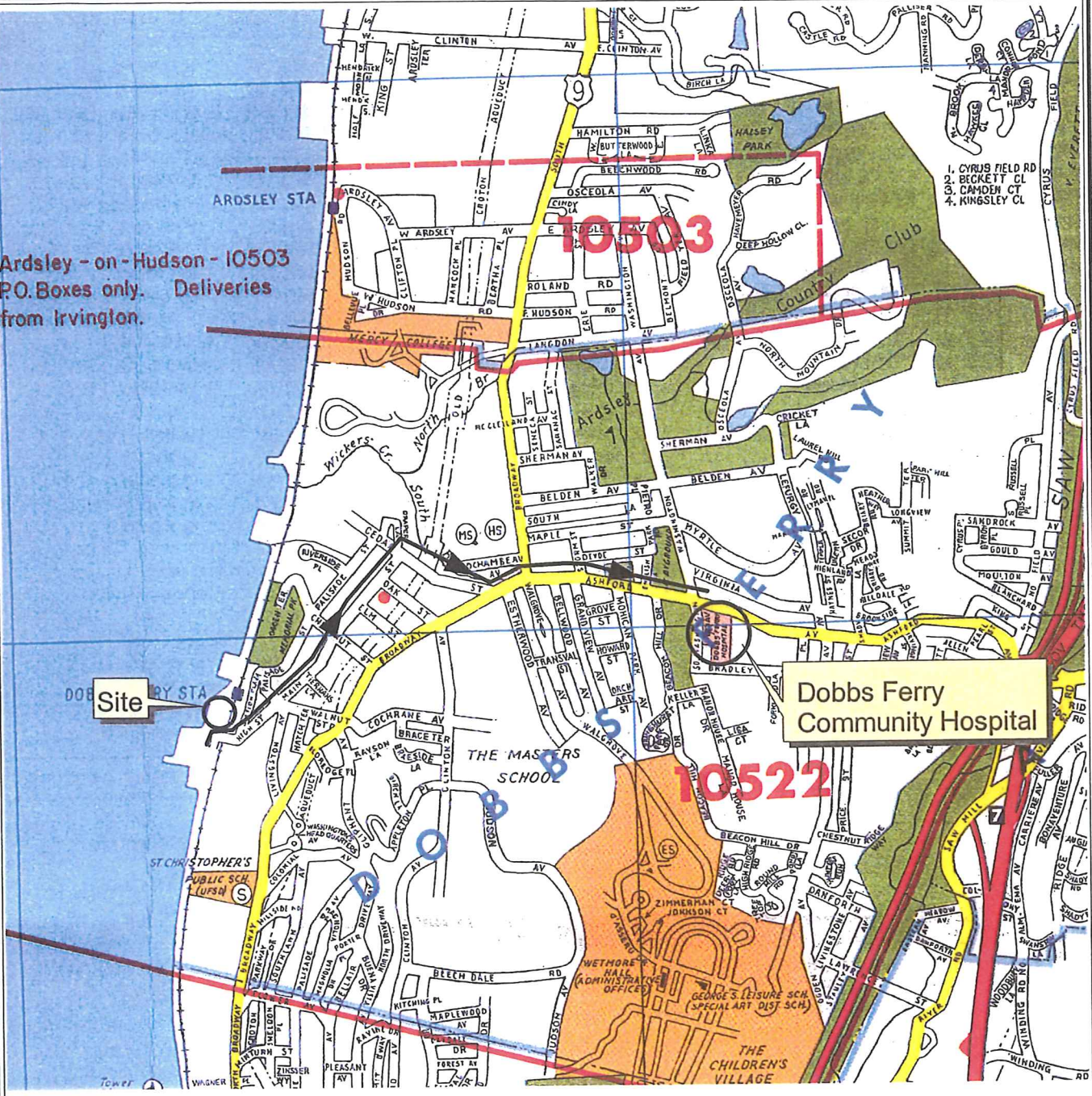
166 John Street
PO Box 7
South Amboy, NJ 08879

23 Chapel Avenue
Jersey City, NJ 07305

136 W. 16th Street
Suite 3E, POB 1206
New York, NY 10011

SOURCE: Nyack, NY USGS Quadrangle

FIGURE # 1



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DATE:	DRAWN BY:	REVIEWED BY:	SCALE:	PROJECT #	SHEET #
May 2004	MDS	KEP	AS SHOWN	454	1 OF 1

Route to Hospital
Dobbs Ferry Waterfront Park
Dobbs Ferry, New York

POTOMAC-HUDSON ENVIRONMENTAL, INC.

166 John Street
PO Box 7
South Amboy, NJ 08879

23 Chapel Avenue
Jersey City, NJ 07305

136 W. 16th Street
Suite 3E, POB 1206
New York, NY 10011

SOURCE: Westchester County Hagstrom Map

FIGURE # 2

ATTACHMENT 1

Summary of Soil Contaminants, Health Hazards, and Exposure Pathways

Contaminant	Exposure Pathway	Health Hazard
Chlordane	inhalation, skin absorption, ingestion, skin and/or eye contact	Symptoms: Blurred vision; confusion; ataxia, delirium; cough; abdominal pain, nausea, vomiting, diarrhea; irritability, tremor, convulsions; anuria; in animals: lung, liver, kidney damage; [potential occupational carcinogen]. Target organs: central nervous system, eyes, lungs, liver, kidneys
Arsenic (As)	inhalation, skin absorption, skin and/or eye contact ingestion	Symptoms: Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin, [potential occupational carcinogen] Target Organs: Liver, kidneys, skin, lungs, lymphatic system
Cadmium (Cd)	inhalation, ingestion	Symptoms: Pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen] Target Organs: respiratory system, kidneys, prostate, blood
Chromium (Cr)	inhalation, ingestion, skin and/or eye contact	Symptoms: Irritation eyes, skin; lung fibrosis (histologic) Target Organs: Eyes, skin, respiratory system
Copper (Cu) (dusts and mists)	inhalation, ingestion, skin and/or eye contact	Symptoms: Irritation eyes, respiratory system; cough, dyspnea (breathing difficulty), wheezing; [potential occupational carcinogen] Target Organs: Eyes, skin, respiratory system, liver, kidneys (increase(d) risk with Wilson's disease)
Iron (Fe) (iron oxide dust and fume)	inhalation	Symptoms: Benign pneumoconiosis with X-ray shadows indistinguishable from fibrotic pneumoconiosis (siderosis) Target Organs: respiratory system

Contaminant	Exposure Pathway	Health Hazard
Lead (Pb)	inhalation, ingestion, skin and/or eye contact	Symptoms: Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypotension Target Organs: Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue
Mercury (Hg)	inhalation, skin absorption, ingestion, skin and/or eye contact	Symptoms: Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria Target Organs: Eyes, skin, respiratory system, central nervous system, kidneys
Nickel (Ni)	inhalation, ingestion, skin and/or eye contact	Symptoms: Sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen] Target Organs: Nasal cavities, lungs, skin
Selenium (Se)	inhalation, ingestion, skin and/or eye contact	Symptoms: Irritation eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; in animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage Target Organs: Eyes, skin, respiratory system, liver, kidneys, blood, spleen
Zinc (Zn) (oxide)	inhalation	Symptoms: Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function Target Organs: respiratory system
Polycyclic Aromatic hydrocarbons (PAH)	dermal, ingestion, inhalation	Skin irritation; dermatitis; bronchitis; include carcinogens targeting skin, lung and kidney.

ATTACHMENT 2

General Construction Safety

A. All material, tools, and equipment shall be stored in a stable manner (tied, stacked, chocked, blocked) to prevent rolling, sliding or falling.

B. Material shall never be thrown to the ground from upper levels. All hoisting activities will require the use of a signal man. Hoisting areas shall be barricaded, roped off, and identified.

C. Material hoists are to be operated only by an "authorized operator". They are not to be used for personnel. Gasoline engines must be turned off before refueling.

D. All rigging shall be in accordance with the most stringent of pertinent local, state, and federal regulations.

E. The moving of heavy or oversize equipment may constitute a hazardous situation. Preparation for such movement shall be coordinated with the Site Manager. Particular attention must be given to the location of overhead or underground power lines and piping during construction.

F. Barriers, warning signs, and/or warning lights shall be installed wherever necessary to identify hazardous conditions, and shall be removed as soon as they are no longer needed.

G. Guy wires, winch lines, and/or temporary bracing shall not be attached to any structure or piece of equipment without specific approval from the Project Manager.

H. Cords, hoses, ropes, etc. that are used in walkways, stairways, aisles, and/or other work areas shall be routed and supported in a safe manner that will prevent tripping hazards and other body contact.

I. Flammable liquids, in quantities less than 55 gallon drums, are to be in "Safety " cans which are labeled according to their contents. Drums and tanks of 55 gallons or more must be labeled, grounded, equipped with self-venting bungs and self-closing faucets, and placed within a barricade located at least 20-feet away from smoking, welding, burning, or other heat sources. Gasoline and other flammable materials shall be dispensed from containers of approved design (e.g., NFPA, UL, OSHA).

J. The handling, storage, and use of explosives shall meet all OSHA requirements as stated in 29 CFR 1910.109.

K. Provisions shall be made to provide portable fire fighting equipment for material storage areas and construction supplies for the work to be performed. Temporary storage areas are to be maintained free of fire hazards, and every precaution shall be taken to prevent a fire from occurring. Employees shall be familiar with the location of fire fighting equipment and shall be trained in its use.

L. Safety work permits when required for welding, burning, or open flame work shall be completed and recorded in accordance with local policy and procedure.

M. Temporary heating devices shall be installed and maintained in a safe manner.

N. Compressed gas cylinders shall be properly secured in an upright position whether or not in use. The cylinders must be capped when not in use to prevent valve damage.

O. All Contractors shall provide the equipment necessary for safe performance of the work to be done. All tools and equipment brought to the site shall meet pertinent OSHA standards and be subject to inspection and approval.

P. Power tools must meet all local, state, and federal standards. Power tools shall not be operated without proper training and shall be inspected daily. Safety devices shall be kept in working order and shall never be by-passed.

Q. Employees shall become familiar with local electrical grounding requirements, and the pertinent standards set by OSHA and the National Electric Code. Any unsafe condition shall be reported to the Site Manager.

ATTACHMENT 3

General Rules for Operating Heavy Equipment

A. Only experienced personnel must operate heavy equipment; qualified by practical experience and/or formal training.

B. Rated load capacities of machines must not be exceeded.

C. Counterweights for heavy loads must not be used unless they are provided by the manufacturer and corresponding alternative rated capacities are clearly shown on the vehicle.

D. Riders must not attempt to get on or off a moving vehicle and must not indulge in horseplay. Loaders or forklifts will not be used to lift or move personnel.

E. When transporting a load down an incline with a front-end loader, the vehicle must be operated in reverse gear to prevent tipping.

F. Vehicles must be operated at a safe speed. Speed must be reduced during dusty conditions.

G. Before putting a machine into operation or backing, the driver must visually inspect the area around the vehicle for obstructions.

H. Excessive noise levels must be determined through measurement with a sound level meter. Hearing protection must be worn when operating or working in proximity to machines having excessive noise levels in compliance with OSHA 29 CFR 1910.95.

I. Vehicles must not be operated so close to steep embankments so as to create a sliding or rollover potential, or cause excessive sliding of bank material.

J. Speed must be reduced and the horn sounded when approaching areas where vision is obstructed.

K. Heavy machinery, equipment, and parts thereof, which are suspended or held aloft by use of slings, hoists, or jacks shall be substantially blocked or cribbed to prevent falling or shifting before employees are permitted to work beneath or between them.

L. Whenever equipment is parked, the parking brake must be set. Equipment parked on an incline must have the wheels chocked and the parking brake set.

M. Equipment must not be left unattended with the motor running.

ATTACHMENT 4

First Aid Information

(in alphabetic order)

Bites

Animal Bites:

Thoroughly wash the wound with soap and water. Flush the area with running water and apply a sterile dressing. Immobilize affected part until the victim has been attended by a physician. See that the animal is kept alive and in quarantine. Obtain name and address of the animal's owner.

Insect Bites:

Remove "stinger" if present. Keep affected part down below the level of the heart. Apply ice bag. For minor bites and stings, apply soothing lotions, such as calamine. Personnel should be instructed to visually scan their person to determine the presence of ticks. If ticks are observed, they should be removed.

Burns and Scalds

Treatment: Minor Burns

Do not apply Vaseline or grease of any kind. Apply cold water application until pain subsides. Cover with a dry, sterile gauze dressing. Do not break blisters or remove tissue. Seek medical attention.

Treatment: Severe Burns

Do not remove adhered particles of clothing. Do not apply ointment, grease, or Vaseline. Cover burns with thick sterile dressings. Keep burned feet or legs elevated. Seek medical attention immediately.

Treatment: Chemical Burns

Wash away the chemical soaked clothing with large amounts of water. Remove victim's chemical soaked clothing. If chemical is dry, like lime, brush away before flushing. Apply sterile dressing and seek medical attention.

Cramps

Symptoms:

Cramps in muscles of abdomen and extremities. Heat exhaustion may also be present.

Treatment:

Same as for Heat Exhaustion.

Eyes

Foreign Objects:

Keep the victim from rubbing eyes. Flush the eye with water. If flushing fails to remove the object, apply a dry, protective dressing and consult a physician.

Chemicals:

Flood the eye thoroughly with water for 15 minutes. Cover the eye with a dry pad and seek medical attention.

Fainting

Treatment:

Keeps the victim lying down. Loosen tight clothing. If victim vomits, roll them onto their side or turn their head to the side; if necessary, wipe out their mouth to maintain an open airway. Bathe face gently with cool water. Unless recovery is prompt, seek medical attention.

Fractures

Treatment:

Deformity of an injured part usually indicates a fracture. If fracture is suspected, splint the part. Do not attempt to move injured person. Seek medical attention immediately.

Frostbite

Symptoms:

Just before frostbite occurs, victims skin may be flushed, then change to white or grayish-yellow. Pain may be felt early, then subsides. Blisters may appear. Affected part of body feels very cold and numb.

Treatment:

Bring victim indoors, cover the affected area, provide extra clothing and blankets. Rewarm frozen area quickly by immersion in warm water-NOT HOT WATER. DO NOT RUB the area. Seek medical attention immediately.

Heat Exhaustion

Symptoms:

Near normal body temperature. Skin is pale and clammy. Profuse sweating, tiredness, weakness, headache, perhaps nausea, cramps, dizziness, or possible fainting.

Treatment:

Keep victim in lying position and raise feet. Loosen clothing, apply cool wet cloths. If conscious, give sips of diluted fruit drink or salt water over a period of one hour. If vomiting occurs, discontinue the fluids. Seek medical attention immediately.

Poisoning

Treatment:

Call the Poison Control Center for instruction on immediate care. If victim becomes unconscious, keep the airway open. If breathing stops, give mouth-to-mouth resuscitation. Call an emergency squad as soon as possible.

Poison Ivy

Treatment:

Remove contaminated clothing. Wash all exposed areas with soap and water followed by rubbing alcohol. If rash is mild, apply calamine or other soothing lotion. If a severe reaction occurs, seek medical attention.

Puncture Wounds

Treatment:

If puncture wound is deeper than skin surface, seek medical attention. Serious infection can arise unless proper treatment is received.

Sprains

Treatment:

Elevate injured part and apply ice bag or cold packs. Do not soak in hot water. If pain and swelling persist, seek medical attention.

Sunstroke

Symptoms:

Body temperature is high (106°F or higher). Skin is hot, red, and dry. Pulse is rapid and strong. Victim may be unconscious.

Treatment

Keep victim in lying position with head elevated. Remove clothing and repeatedly sponge the bare skin with cool water or rubbing alcohol. Seek immediate medical attention.

Unconsciousness

Treatment:

Never attempt to give anything by mouth. Keep victim lying flat. Maintain open airway. If victim is not breathing, provide mouth-to-mouth resuscitation and call an emergency squad as soon as possible.

ATTACHMENT 6

Levels of Worker Protection

The following four levels have been used for many years as generic guidance and afford varying degrees of respiratory protection, dermal protection, and protection from traumatic injury.

Level A consists of a totally encapsulating, chemically-protective suit with supplied air or self-contained breathing apparatus, offering the highest degree of respiratory and dermal protection.

Level B provides maximal respiratory protection through the use of supplied-air or self-contained breathing apparatus; the level of dermal protection is selected on the basis of anticipated hazards.

Level C incorporates a full-face air-purifying respirator, which is specific to the contaminant(s) of concern; the degree of dermal protection, as with Level B, depends on the anticipated dermal hazards. A supplied-air escape pack may be required in some Level C protection protocols.

Level D is a basic work uniform without respiratory protection. Air-purifying respirators should be immediately available for use if the site should require upgrading to Level C.

ATACHMENT 7

Equipment Operations Manuals

1. MiniRAE 2000
2. Personal DataRAM instruments (pDR-1000AN)
3. TSI DustTrak Aerosol Monitor with an audible alarm (Model 8520, PM-10)

MiniRAE 2000

TO BE ADDED TO FINAL

TO BE ADDED TO FINAL

TSI DustTrak Aerosol Monitor with an audible alarm (Model 8520, PM-10)

TO BE ADDED TO FINAL

ATTACHMENT 8

Decontamination Procedure

In general, everything that enters the exclusion zone must either be decontaminated or properly discarded upon exit from the exclusion zone. All personnel, including visitors, must enter and exit the Exclusion Zone through the Decon Zone. Provisions will be made for work pertaining to implementation of the RAWP so that vehicles leaving the Site do not transport contaminated soils off-site. Prior to demobilization, contaminated equipment will be decontaminated before it is moved into the Clean Zone. An anti-tracking pad will be installed at the entrance to the Site. The anti-tracking pad is designed to eliminate the transfer of soils from the Site onto the adjacent parking lot. The anti-tracking pad consists of a geotextile foundation beneath a two inch stone base, and a riprap surface (six inch minimum). The pad will be a minimum of 50 feet long. All vehicles and/or heavy equipment that come in contact with contaminated soil will be rinsed on the anti-tracking pad to prevent the transfer of contaminated soil to offsite locations. The anti-tracking pad will be constructed so that rinse water infiltrates into the Site soils and not to off-site locations. Subsequent to final capping of the Site, the anti-tracking pad will be removed and capping will be conducted in that area.

Following decon and prior to exit from the Exclusion Zone, the Project Engineer or designated alternate shall be responsible for insuring that the equipment has been sufficiently decontaminated.

If other than Level D Personnel Protection is required, the following personnel decontamination stations should be set up:

Station 1: Equipment Drop

Deposit equipment used on-site (tools, monitoring instruments, radios, etc.) on plastic drop cloths. These items must be decontaminated or discarded as waste prior to removal from the Exclusion Zone.

Station 2: Outer Boot and Outer Glove Wash and Rinse

Scrub outer boots, outer gloves, and/or splash suit with decon solution or detergent water. Rinse off using water.

Station 3: Outer Boot Removal

Remove outer boots. If outer boots are disposable, deposit in container with plastic liner. If non-disposable, store in a clean, dry place.

Station 4: Outer Garment Removal

Remove the chemically resistant outer garments and deposit them in a container lined with plastic. Decontaminate or dispose of splash suits as necessary.

Station 5: Respiratory Protection Removal

Remove hardhat, face-piece, and, if applicable, deposit the SCBA on a clean surface. APR cartridges will be discarded as appropriate. Wash and rinse respirator at least once daily. Wipe off and store respiratory gear in a clean, dry location.

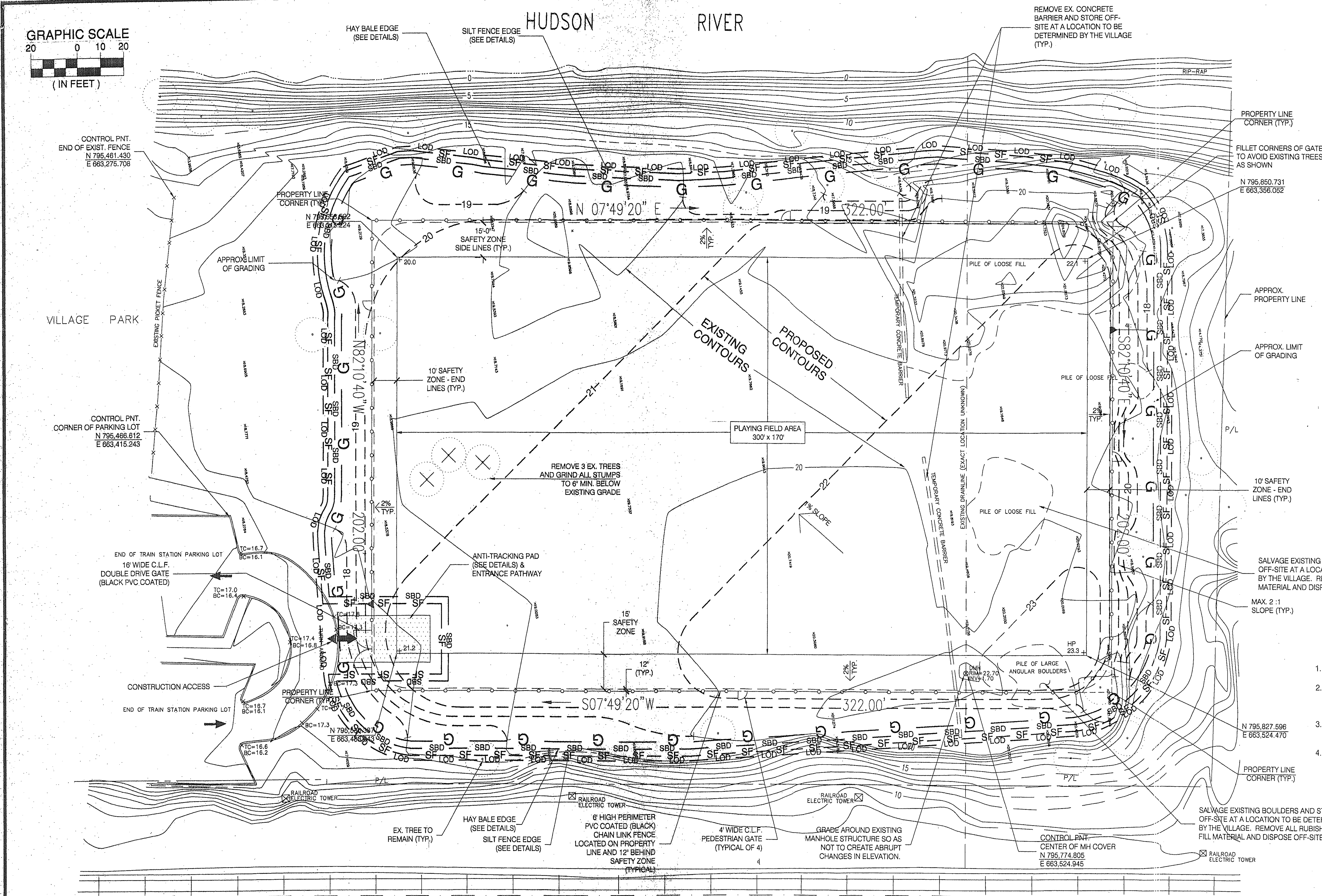
Station 6: Nitrile Glove Removal

Remove gloves, turning inside out as they are removed, and deposit them in a container lined with plastic.

Station 7: Field Wash

Thoroughly wash hands and face with soap and water. Shower as soon as possible.

Any material that is generated by decon procedures will be stored in a designated area in the Exclusion Zone until disposal arrangements are made.



GRAPHIC SCALE
20 0 10 20
(IN FEET)
HUDSON RIVER
HAY BALE EDGE (SEE DETAILS)
SILT FENCE EDGE (SEE DETAILS)
REMOVE EX. CONCRETE BARRIER AND STORE OFF-SITE AT A LOCATION TO BE DETERMINED BY THE VILLAGE (TYP.)
CONTROL PNT. END OF EXIST. FENCE N 795,461.430 E 663,275.708
PROPERTY LINE CORNER (TYP.)
APPROX LIMIT OF GRADING
VILLAGE PARK
EXISTING PICKET FENCE
15'-0" SAFETY ZONE SIDE LINES (TYP.)
N 07°49'20" E
322.00'
10' SAFETY ZONE - END LINES (TYP.)
CONTROL PNT. CORNER OF PARKING LOT N 795,466.612 E 663,415.243
N82°10'40"W
202.00'
REMOVE 3 EX. TREES AND GRIND ALL STUMPS TO 6" MIN. BELOW EXISTING GRADE
EXISTING CONTOURS
PROPOSED CONTOURS
PLAYING FIELD AREA 300' x 170'
PILE OF LOOSE FILL
TEMPORARY CONCRETE BARRIER
EXISTING DRAINLINE (EXACT LOCATION UNKNOWN)
1% SLOPE
END OF TRAIN STATION PARKING LOT
16' WIDE C.L.F. DOUBLE DRIVE GATE (BLACK PVC COATED)
ANTI-TRACKING PAD (SEE DETAILS) & ENTRANCE PATHWAY
15' SAFETY ZONE
12' (TYP.)
CONSTRUCTION ACCESS
S07°49'20"W
PILE OF LARGE ANGULAR BOULDERS
HP 23.3
S82°10'40"E
PROPERTY LINE CORNER (TYP.)
FILLET CORNERS OF GATE TO AVOID EXISTING TREES AS SHOWN
N 795,850.731 E 663,356.052
APPROX. PROPERTY LINE
APPROX. LIMIT OF GRADING
10' SAFETY ZONE - END LINES (TYP.)
SALVAGE EXISTING GRANITE CURBING - STORE OFF-SITE AT A LOCATION TO BE DETERMINED BY THE VILLAGE. REMOVE ALL RUBISH AND FILL MATERIAL AND DISPOSE OFF-SITE.
MAX. 2:1 SLOPE (TYP.)
N 795,827.596 E 663,524.470
PROPERTY LINE CORNER (TYP.)
RAILROAD ELECTRIC TOWER
EX. TREE TO REMAIN (TYP.)
HAY BALE EDGE (SEE DETAILS)
SILT FENCE EDGE (SEE DETAILS)
6' HIGH PERIMETER PVC COATED (BLACK) CHAIN LINK FENCE LOCATED ON PROPERTY LINE AND 12' BEHIND SAFETY ZONE (TYPICAL)
4' WIDE C.L.F. PEDESTRIAN GATE (TYPICAL OF 4)
GRADE AROUND EXISTING MANHOLE STRUCTURE SO AS NOT TO CREATE ABRUPT CHANGES IN ELEVATION.
CONTROL PNT. CENTER OF MH COVER N 795,774.805 E 663,524.945
SALVAGE EXISTING BOULDERS AND STORE OFF-SITE AT A LOCATION TO BE DETERMINED BY THE VILLAGE. REMOVE ALL RUBISH AND FILL MATERIAL AND DISPOSE OFF-SITE (TYP.)
METRO NORTH COMMUTER RAILROAD

NAD 83

VERTICAL DATIM: NGSSVD 1929

LEGEND

- EX. TREE TO REMAIN
- EX. TREE TO BE REMOVED
- —15— EX. CONTOUR
- — —15— — PROPOSED CONTOUR
- ×18.2683 EX. SPOT ELEV
- +20.2 PROPOSED SPOT ELEV.
- LOD LIMIT OF DISTURBANCE
- SBD HAY BALE EDGE
- SF SF SF SILT FENCE EDGE
- APPROX. PROPERTY LINE
- G GRADING LIMIT
- CONTRACT LIMIT LINE
- FIELD SAFETY ZONE

SEQUENCE OF GRADING OPERATIONS

1. STAKE EXISTING F.G. ELEVATION AT ±25' O.C.
2. FORM SUBGRADE LEVEL 16" BELOW F.G. PLACE FILTER FABRIC AS SHOWN ON DETAILS. EXISTING SOIL MATERIAL SHALL BE USED IN FILLING LOW AREAS.
3. PLACE CLEAN FILL MATERIAL TO A DEPTH 6" BELOW F.G. MINIMUM DEPTH OF CLEAN FILL MATERIAL IS 18". SEE DETAILS.
4. PLACE TOPSOIL TO A UNIFORM DEPTH OF 6" OVER PLAYING FIELD AREA. ALL OTHER AREAS SHALL RECEIVE 4" TOPSOIL MINIMUM. SEED AND FERTILIZE.

NOTE:

CONTRACTOR SHALL SALVAGE ALL BOULDERS, GRANITE CURBING, FRAMES, ETC. AS DIRECTED BY THE VILLAGE. ALL SALVAGABLE MATERIAL SHALL BE DELIVERED TO A STORAGE FACILITY BY THE CONTRACTOR AS DIRECTED BY THE VILLAGE.

LIMIT OF DISTURBANCE- L.O.D.

LOD = LIMIT OF DISTURBANCE. TO BE DEMARKATION BARRIER ON GROUND WITH GEOTEXTILE FABRIC

ENVIRONMENTAL NOTES

1. CONFORMANCE WITH THE DOBBS FERRY REMEDIAL ACTION WORKPLAN (RAWP) IS PART OF THIS CONTRACT, AND WILL BE STRICTLY ENFORCED (SEE SPECIFICATIONS).
2. CONFORMANCE WITH THE DOBBS FERRY HEALTH AND SAFETY PLAN (HASP) IS PART OF THIS CONTRACT, AND WILL BE STRICTLY ENFORCED (SEE SPECIFICATIONS).
3. THE VILLAGE WILL PROVIDE ENVIRONMENTAL MONITORING SERVICES, AND THOSE SERVICES ARE NOT PART OF THE CONTRACT.

NOTE:

PROPERTY LINE INFORMATION FROM MAP ENTITLED "WATERFRONT PARK RECREATIONAL FIELD VOLUNTARY CLEANUP AREA," PREPARED FOR VILLAGE OF DOBBS FERRY BY PAUL J. PETRETTI, CIVIL ENGINEER AND LAND SURVEYOR, JULY 27, 2005.

OPEN FIELD AT WATERFRONT PARK

VILLAGE OF DOBBS FERRY
WESTCHESTER CO., NEW YORK

DATE: OCTOBER 17, 2006 | SCALE: 1" = 20'

VILLAGE OF DOBBS FERRY

JACK GOLDSTEIN, P.E., VILLAGE ENGINEER
112 MAIN STREET, DOBBS FERRY, NEW YORK 10522

914-693-2203
914-693-3470 FAX

REVISION #1 00-00-00

PLAN & NOTES

DWG. NO. S - 1

1.0 GENERAL NOTES

1.1 CONTRACTOR SHALL CALL 1-800-962-7962 ("CALL-BEFORE-YOU-DIG") TO HAVE EXISTING UTILITIES MARKED OUT A MINIMUM OF 2 DAYS BEFORE BEGINNING ANY CONSTRUCTION AT THE SITE. THE LOCATION OF ALL UTILITIES AND SUB-SURFACE STRUCTURES AS SHOWN ON THIS PLAN IS FROM SURVEY INFORMATION PROVIDED BY OTHERS AND OBSERVATIONS MADE IN THE FIELD AND IS TO BE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION.

1.2 SURVEY BASED ON MAP BY PAUL J. PETRETTI, DOBBS FERRY, NY. PHOTOGAMMETRY BY GEOMAPS INTERNATIONAL, BETHPAGE, NY. (PHOTO DATE: JANUARY 26, 1999), VERTICAL DATUM NGVD 1929. PROPERTY LINE INFORMATION BASED ON MAP TITLED "MAP OF PROPERTY AT DOBBS FERRY, IN THE VILLAGE OF DOBBS FERRY, TOWN OF GREENBURGH, WESTCHESTER COUNTY, NEW YORK", BY SEELYE, STEVENSON, VALUE & KNECHT, ENGINEERS AND PLANNERS, ONE DUPONT STREET, PLAINVIEW N.Y., AT A SCALE OF 1" = 40'-0", DATED AUGUST 28, 1987, AND SIGNED BY ROBERT G. TUFANO, N.Y.S. LICENSE NO. 33131.

1.3 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION. ANY RESULTING CHANGES TO THE PLANS WILL REQUIRE APPROVAL BY THE ENGINEER. ALL CHANGES AND APPROVALS SHALL BE SUBMITTED IN WRITING.

1.4 ALL CONSTRUCTION MATERIALS, METHODS AND PROCEDURES SHALL COMPLY WITH THE APPROPRIATE SECTION OF THE TECHNICAL SPECIFICATIONS, "DOBBS FERRY WATERFRONT PARK OPEN FIELD", AS AMENDED, UNLESS OTHERWISE SPECIFIED HEREIN.

1.5 WHERE SPECIFIED, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE NEW YORK STATE D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION.

1.6 ALL DISTURBED AREAS ARE TO BE TOPSOILED (4" DEPTH MIN.) AND SEEDED.

1.7 THE CONTRACTOR SHALL PROVIDE ALL MEANS NECESSARY TO SECURE THE WORK ZONE FROM UNAUTHORIZED VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE ENTIRE CONSTRUCTION PERIOD, BOTH DURING AND AFTER WORK HOURS IN ACCORDANCE WITH THE SPECIFICATIONS AND THE ENGINEER'S DIRECTION.

2.0 GRADING AND REMOVALS

2.1 THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ITEMS INDICATED ON THE PLANS AND IN THE SPECIFICATIONS. ALL EXCAVATED SOIL DESIGNATED TO BE REMOVED FROM THE SITE SHALL BE HANDLED AND REMOVED ACCORDING TO THE PLANS AND SPECIFICATIONS, AND TO THE SATISFACTION OF THE ENGINEER AND OWNER. ALL CONSTRUCTION ACTIVITIES INCLUDING OFF-SITE ACTIVITIES ARE SUBJECT TO AND SHALL BE IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

2.2 PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INSPECT THE SITE AND VERIFY ALL DIMENSIONS AND LOCATIONS AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER. LOCATIONS OF STRUCTURES AND UTILITIES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

2.3 THE CONTRACTOR SHALL BRING TO THE ENGINEER'S ATTENTION ANY UNFORESEEN SUBSURFACE CONDITIONS ENCOUNTERED THAT MAY INTERFERE WITH THE PROPOSED WORK (i.e. FOUNDATIONS, PIPE, ROCK, WOOD, ETC.).

2.4 ANY DISCREPANCIES SHOWN ON THE PLANS OR IN THE SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. ANY MODIFICATIONS TO THE PROPOSED GRADING AS SHOWN ON THESE PLANS SHALL BE APPROVED IN WRITING BY THE ENGINEER.

2.5 SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED i.e. WITH TURF, PAVEMENTS, ETC.

2.6 THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL ADJACENT AND UNDERGROUND UTILITIES AND STRUCTURES. ANY DAMAGE RESULTING FROM THIS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER AND THE AFFECTED UTILITY COMPANY.

2.7 CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO STAKE OUT THE PROPOSED WORK. NO CHANGES SHALL BE MADE TO THE DESIGN OR LAYOUT OF THE PROJECT WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

3.0 PLANTING

3.1 ALL EXISTING TREES NOT SPECIFICALLY CALLED OUT IN THE PLANS TO BE REMOVED ARE TO REMAIN. ANY TREES MISTAKENLY REMOVED WILL BE REPLACED BY THE CONTRACTOR IN KIND, IN CALIPER INCHES, WITH NEW MATERIAL. THE CONTRACTOR SHALL NOT REMOVE ANY PLANT MATERIAL UNLESS SPECIFICALLY INSTRUCTED TO DO SO ON THE PLANS AND BY THE ENGINEER.

3.2 EVERY PRECAUTION SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING TREES, SHRUBS, AND VEGETATION TO REMAIN FROM DAMAGE DUE TO CONSTRUCTION. THESE PRECAUTIONS INCLUDE, BUT ARE NOT LIMITED TO KEEPING ALL CONSTRUCTION MATERIALS AND REMOVALS AWAY FROM WITHIN THE DRIPLINE OF ANY TREES. NO VEHICULAR TRAFFIC WILL BE PERMITTED OVER TREE ROOTS OR WITHIN THE DRIPLINE OF EXISTING TREES. CONSTRUCTION EQUIPMENT PATHS SHALL BE CLEARLY DEFINED, AND SHALL DIRECT VEHICULAR TRAFFIC AWAY FROM PLANTINGS.

3.3 ALL EXISTING LAWN AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE LIMED, FERTILIZED AND SEEDED WITH LOFT'S TRI-PLEX BLUEGRASS OR APPROVED EQUAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEEDED AREAS UNTIL TURF IS ESTABLISHED AND THE WORK IS APPROVED BY THE ENGINEER. SEE SPECIFICATIONS.

4.0 SEDIMENTATION AND EROSION CONTROL

4.1 THE OWNER HAS THE AUTHORITY TO CONTROL THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION OPERATIONS AND TO DIRECT THE CONTRACTOR TO IMMEDIATELY PROVIDE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS, WATERCOURSES, LAKES, PONDS, OR OTHER AREAS OF WATER IMPOUNDMENT. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO PREVENT EROSION ON THE SITE AND ABUTTING PROPERTY.

4.2 THE EROSION CONTROL FEATURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR AND SHALL BE CHECKED DAILY AND AFTER EACH SEVERE RAIN STORM FOR DAMAGE, UNTIL SUCH FEATURES ARE, IN THE OPINION OF THE ENGINEER, NO LONGER NEEDED. ALL SEDIMENTATION TRAPS AND SEDIMENTATION BASINS SHALL HAVE THE ACCUMULATED SEDIMENT AND/OR CLEAN WATER REMOVED BEFORE IT SIGNIFICANTLY REDUCES THEIR STORAGE VOLUME OR FUNCTION, PRIOR TO THE NEXT RAIN STORM FORECAST FOR THE REGION.

4.3 THE CONTRACTOR SHALL, AT ALL TIMES, HAVE ON HAND THE NECESSARY MATERIALS AND EQUIPMENT TO PROVIDE FOR EARLY SLOPE STABILIZATION AND CORRECTIVE MEASUREMENTS TO DAMAGED SLOPES. THE CONTRACTOR SHALL RESPOND TO MAINTENANCE OR ADDITIONAL MEASURES ORDERED BY THE ENGINEER WITHIN 24 HOURS.

4.4 THE CONTRACTOR SHALL OPERATE ALL EQUIPMENT AND PERFORM ALL CONSTRUCTION OPERATIONS SO AS TO MINIMIZE POLLUTION. THE CONTRACTOR SHALL CEASE ANY OF HIS OPERATIONS WHICH WILL INCREASE POLLUTION DURING RAIN STORMS.

4.5 ALL SLOPES OF STOCKPILE MATERIAL AND OTHER DISTURBED AREAS SHALL BE STABILIZED AND PROTECTED BY SURROUNDING WITH SILT FENCING OR HAYBALES, OR OTHERWISE PROTECTED AS APPROVED BY THE ENGINEER. ALL DAMAGED AREAS SHALL BE REPAIRED AS SOON AS POSSIBLE. THE ENGINEER SHALL LIMIT THE SURFACE AREA OF EACH MATERIAL EXPOSED IF THE CONTRACTOR FAILS TO SUFFICIENTLY PROTECT THE SLOPES TO PREVENT POLLUTION.

4.6 MULCHES: SHALL BE HAY, STRAW, WOOD CELLULOSE, WOOD CHIPS, STONE, NETTING, BURLAP OR OTHER SUITABLE MULCH MATERIAL AS APPROVED BY THE ENGINEER. MULCHES SHALL BE REASONABLY CLEAN AND FREE OF NOXIOUS WEEDS AND DELETERIOUS MATERIALS. ASPHALT SPRAYS WILL NOT BE ALLOWED. THE CONTRACTOR SHALL PREVENT STRAW, WOOD CHIPS, ETC., FROM ENTERING ANY RESERVOIRS OR WATERCOURSES.

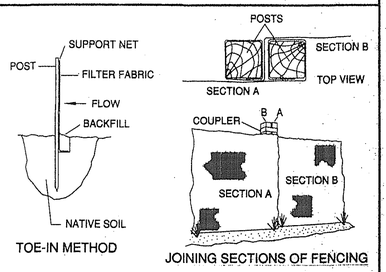
4.7 HAY BALES: SHALL BE PLACED AROUND ALL EXISTING DRAINAGE INLETS OR AS DIRECTED BY THE ENGINEER. THEY SHALL BE HELD IN PLACE BY TWO WOODEN STAKES IN EACH BALE. BALES SHALL BE MAINTAINED OR REPLACED AS ORDERED BY THE ENGINEER UNTIL THEY ARE NO LONGER NECESSARY FOR THE PURPOSE INTENDED OR ARE ORDERED REMOVED BY THE ENGINEER. HAY BALES SHALL BE MADE OF HAY WITH 40 POUNDS MINIMUM WEIGHT AND 120 POUNDS MAXIMUM WEIGHT. WOOD STAKES SHALL BE A MINIMUM OF 1 INCH BY 1 INCH NOMINAL SIZE BY A MINIMUM OF 3 FEET LONG.

4.8 TEMPORARY SWALES AND SEDIMENTATION BASINS MAY BE CONSTRUCTED OF RIP-RAP, MULCH, HAYBALES OR JUTE MESH. PORTLAND CONCRETE OR BITUMINOUS CONCRETE WILL NOT BE ALLOWED.

4.9 TEMPORARY GRASS SEED SHALL BE PERENNIAL RYE-GRASS (LOLIUM PERENNE) OR AN IMPROVED VARIETY THEROF, SUCH AS MANHATTAN, HAVING A MINIMUM PURITY OF 98 PERCENT AND A MINIMUM GERMINATION OF 90 PERCENT. THE SEEDING MAY BE ALTERED BY THE ENGINEER IF REQUESTED BY THE CONTRACTOR TO SUIT SPECIAL AREAS OR CONDITIONS.

4.10 AT THE COMPLETION OF THE PROJECT, AND AFTER ALL DISTURBED AREAS ARE STABILIZED, THE CONTRACTOR SHALL COMPLETELY REMOVE ALL SEDIMENTATION AND EROSION CONTROL MEASURES. SILT FENCING SHALL BE CUT FLUSH WITH THE GROUND AND ANY ACCUMULATED SEDIMENTATION SHALL BE THINLY SPREAD UPON EXISTING GROUND COVER. ALL MULCH, HAYBALES AND RIP-RAP SHALL BE REMOVED FROM THE SITE, UNLESS SPECIFICALLY ORDERED BY THE ENGINEER TO REMAIN IN PLACE.

Silt Fence Detail
SF

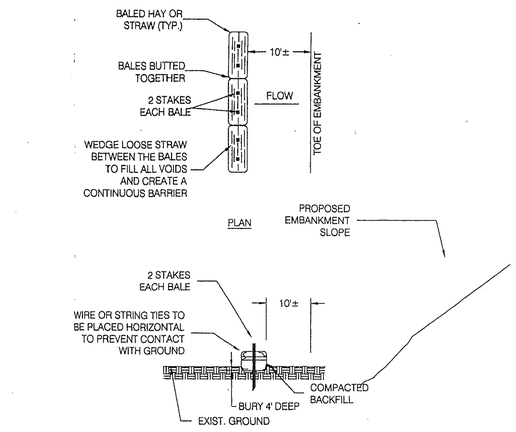


INSTALLATION NOTES

1. EXCAVATE A 4 INCH x 4 INCH TRENCH ALONG THE LOWER PERMITER OF THE SITE.
2. UNROLL A SECTION AT A TIME AND POSITION WALL OF THE TRENCH (NET SIDE AWAY FROM DIRECTION OF FLOW). THE POSTS AGAINST THE BACK (DOWNSTREAM) LOWER PERIMETER OF THE SITE.
3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS APPROXIMATELY 2 INCHES FROM THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. STEEPER SLOPES REQUIRE AN INTERCEPT TRENCH.
5. JOIN SECTIONS AS SHOWN ABOVE.

ENVIRONMENTAL NOTES

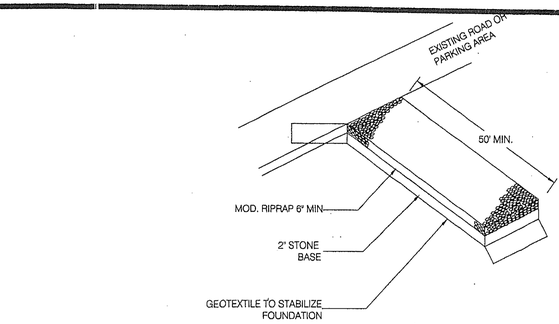
1. CONFORMANCE WITH THE DOBBS FERRY REMEDIAL ACTION WORKPLAN (RAWP) IS PART OF THIS CONTRACT, AND WILL BE STRICTLY ENFORCED (SEE SPECIFICATIONS).
2. CONFORMANCE WITH THE DOBBS FERRY HEALTH AND SAFETY PLAN (HASP) IS PART OF THIS CONTRACT, AND WILL BE STRICTLY ENFORCED (SEE SPECIFICATIONS).



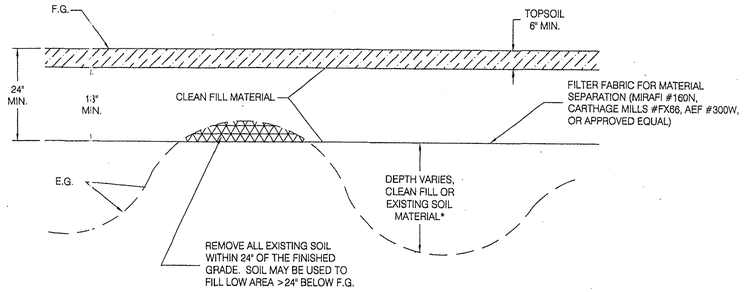
2 HAY BALE DETAIL
NTS

ENVIRONMENTAL NOTES

1. CONFORMANCE WITH THE DOBBS FERRY REMEDIAL ACTION WORKPLAN (RAWP) IS PART OF THIS CONTRACT, AND WILL BE STRICTLY ENFORCED (SEE SPECIFICATIONS).
2. CONFORMANCE WITH THE DOBBS FERRY HEALTH AND SAFETY PLAN (HASP) IS PART OF THIS CONTRACT, AND WILL BE STRICTLY ENFORCED (SEE SPECIFICATIONS).
3. THE VILLAGE WILL PROVIDE ENVIRONMENTAL MONITORING SERVICES, AND THOSE SERVICES ARE NOT PART OF THE CONTRACT.



3 ANTI - TRACKING PAD DETAIL
NTS



*NOTE: ONLY SOIL MATERIAL WITHIN THE CONTRACT LIMIT LINE SHALL BE USED. THE CONTRACTOR SHALL NOT EXCAVATE ANY AREAS OUTSIDE OF THE C.L.L. TO OBTAIN FILL MATERIAL.

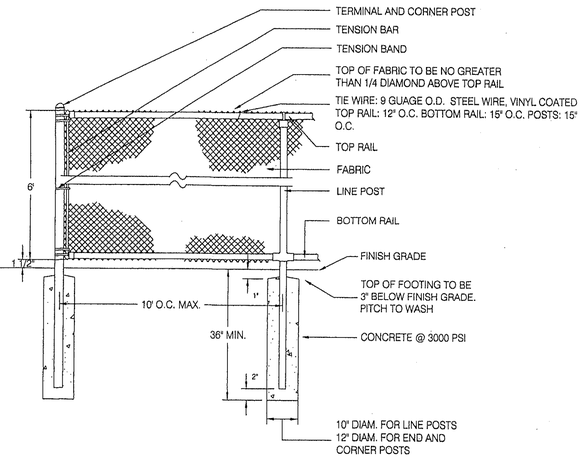
1 TYPICAL GRADING SECTION
NTS

END & CORNER POST TOP	TOP & BOTTOM FABRIC SELVAGE
DOME	KNUCKLE

SCHEDULE CHAIN LINK FENCE FRAMEWORK SIZES	NPS Designator	O.D. inches	WEIGHT lbs/ft
LINE POSTS:	1 1/2	1.900	2.72
TERMINAL POSTS:	2	2.375	3.65
TOP, CENTER, BOTTOM AND BRACE RAILS:	1 1/4	1.66	2.27

NOTES

1. ALL FABRIC AND APPURTENANCES TO BE PVC COATED (COLOR: BLACK)
2. ALL FRAMEWORK TO BE EPOXY AND POLYESTER POWDER COATED OR PVC COATED (COLOR: BLACK)
3. ALL NUTS AND BOLTS TO BE GALVANIZED
4. TOP SELVAGE KNUCKLED, BOTTOM SELVAGE TWISTED
5. SEE SECTION 02830



4 4' HEIGHT CHAIN LINK FENCE
NTS

914-693-2203
914-693-3470 FAX

REVISION #1 00-00-00

OPEN FIELD AT WATERFRONT PARK
VILLAGE OF DOBBS FERRY
WESTCHESTER CO., NEW YORK

DATE: OCTOBER 17, 2006 | SCALE: AS SHOWN

VILLAGE OF DOBBS FERRY
JACK GOLDSTEIN, P.E., VILLAGE ENGINEER
112 MAIN STREET, DOBBS FERRY, NEW YORK 10522

ADDITIONAL NOTES & DETAILS

DWG. NO. S - 2