GEC Project Number 444-5010

REMEDIAL DESIGN PLAN
FOR
JAMECO INDUSTRIES SITE
NYSDEC: Site #1-52-006

248 Wyandanch Avenue
Wyandanch, NY

August 11, 2005

Prepared For:
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1.0 INTRODUCTION AND PURPOSE

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts has been retained by Watts Water Technologies, Inc. (Watts), to prepare the following Remedial Design Plan for the disposal site ("Site") located at 248 Wyandanch Avenue, Wyandanch, NY. The Site (#1-52-006) is 7.4 acres in size and located in a mixed industrial/commercial/residential area. A Site Locus is included as Figure 1 and a Site Plan of Remediation Areas is included as Figure 2A.

GEC completed and prepared for New York State Department of Environmental Conservation (NYSDEC) review a Draft Final Pre-Remedial Design / Remedial Action Plan. GEC made recommendations to amend the Record of Decision based on the results of supplemental subsurface investigations. GEC received notice from the NYSDEC that it was likely that the NYSDEC would issues an Explanation of Significant Differences (ESD) and an amended Record of Decision (ROD) in the near future. GEC also received a Record of Decision Amendment letter dated May 11, 2005, which outlines amendments to the selected alternative remedies for the affected areas. The purpose of this document is to present the selected remedial design plan along with the appropriate technical plans.

The following presents a site description and history, a summary of previous remedial investigations, and the contemplated use of the site.

1.1 Site Description

The Site is located at 248 Wyandanch Avenue in Wyandanch, New York. The longitude and latitude of the Site are 73° 21' 19" (west) and 40° 44' 28" (north) as identified on the Bay Shore West, NY USGS Quadrangle. A Site Locus is included as Figure 1. Information included in previous reports indicates that the Site is listed at the Babylon Assessor's Office as District 0100, Section 82, Block 2, Lot 37.5, and the area of the lot is 7.4-acres. The building at the property consists of a one story concrete block building surrounded by paved and unpaved parking and storage areas as well as areas that have been overgrown by shrubs and grasses.

The Site is currently occupied by Linzer Products, Inc., (Linzer) a manufacturer of painting industry products, who has occupied the Site since early 1999. Prior to 1999 Jameco Industries (Jameco) occupied the property. Jameco was a manufacturer of plumbing fixtures, which employed approximately 350 people at the facility.

Much of the development of this area of Wyandanch occurred in the late 1950s. The Site property was developed in the early 1960s. The Site was developed for Jameco Industries (Jameco), which through the years completed several additions to the original building structure as business changed and grew. Jameco's manufacturing of plumbing fixtures involved plating parts with chrome and nickel. These activities occurred since early 1960s until 1998. Plating operations at the facility resulted in the current conditions, namely soil and groundwater contaminated generally with metals.

1.2 Site History

A review of aerial photographs, on file at the Babylon Building and Engineering Departments, indicates that in 1938 the Site consisted of partially undeveloped and entirely vacant land. Wyandanch Avenue had been paved, or covered with oiled stone at this time, but development of this area had not yet taken place. Later photographs taken in 1961 indicate that residential properties had been developed on surrounding lots, but conditions at the Site remained unchanged. Initial development of the Site apparently occurred in 1963 when a permit was issued for the construction of a manufacturing facility. Records on file indicate that Jamaica Manufacturing Company, Inc. (later Jameco) was granted a permit on March 4, 1964 for the construction of a single building. Additions were constructed in 1973 and 1980, enlarging the footprint of the Jameco facility. Jameco Industries, Inc. or its predecessor occupied the Site from approximately 1963 to 1998.

Jameco used the Site to manufacture plumbing fixtures, some of which involved plating parts with chrome and nickel. Prior to 1975, wastewater was treated by adjusting the pH to precipitate metals out of solution and then discharging the effluent containing the precipitate to one of two seepage lagoons in the rear yard of the plant treated plating waste. One lagoon would be used until the sludge accumulated to a point where effluent infiltration was hindered. The second lagoon would then be used and the first lagoon allowed to dry so that sludge could be removed to allow the lagoon to function again as an infiltration bed. An overflow lagoon was also present to prevent off-Site spillage from the active lagoon if it became too full.

In 1975, this method of operation was replaced with a treatment system that separated the sludge from the effluent by the use of clarifiers. The clarified effluent discharged into a set of 48 leaching pools in the rear yard. Discharge to the leaching pools was conducted in accordance with a NYSDEC State Pollutant Discharge Elimination System (SPDES) permit via underground piping between the leaching pools and the plating area. Based on GEC's understanding of the operations, sludge collected in the clarifiers was disposed off-Site.

Sometime after 1975, the original sludge lagoons were closed. The way in which the lagoons were closed has been the subject of several investigations. The wastewater treatment system was removed from the Site when Jameco vacated the property in 1998.

1.3 Previous Remedial Investigations

The most recent previous remedial investigations included a limited subsurface investigation to evaluate soil and groundwater conditions at the Site. This work was conducted in accordance with a Pre-Remedial Design/Remedial Action Soil and Groundwater Sampling Work Plan (Work Plan) submitted to NYSDEC on June 17, 2003 and in accordance with an Order of Consent entered into for the Site effective November 3, 2003. NYSDEC approved the Work Plan on October 22, 2003.

The Work Plan included the installation of 31 soil borings, five of which completed as monitoring wells; the replacement of three previously destroyed monitoring wells and the collection and laboratory analysis of soil and groundwater samples for metals, volatile organic compounds (VOCs), and Semi-VOCs (SVOCs). Given that extensive soil removal activities were previously completed in other areas of the Site, the objective of the Work Plan was to better understand the extent of soil contamination beneath and proximate to the building located at the Site and to understand the degree to which contaminated soil in comparatively inaccessible locations may be affecting groundwater quality. This additional information was a necessary component of the predesign investigation for the remedial alternatives described in NYSDEC's ROD for the Site dated March 2003.

In summary, updated analytical information produced in accordance with the Work Plan confirms that concentrations of potential compounds of concern under and adjacent to the Linzer Products building do not pose any current or continuing risk to human health or the environment. The physical constraints of the Site, particularly the inaccessibility of soils and groundwater located under and around an occupied building served by active truck traffic, make implementation of remedial alternatives in those areas difficult if not impractical. In addition, new information obtained from Linzer Products indicates that the ROD significantly underestimated the cost and potential long-term business impacts of attempting to implement remedial alternatives under a building actively used for manufacturing, shipping, and related business activities. As a result of this new information, the ROD's feasibility analysis was not consistent with currently available information, and required amendments. This report presents the amendments to the selected alternative remedies for the affected areas outlined in the ROD amendment letter.

1.4 Contemplated Use of the Site

The contemplated use of the Site is continued manufacturing, shipping, and related business activities. There is no anticipated change in Site use.

2.0. SUMMARY OF ENVIRONMENTAL CONDITIONS, ALTERNATIVES, AND REMEDIES

The environmental conditions at the Site are broken down into Areas of Concern (AOC). The following is a summary of the five AOCs identified on Site along with the AOC-specific remedial alternative. The remedial alternatives evaluated for metals contaminated soil and groundwater include no further action with groundwater monitoring, containment via capping, treatment via solidification/stabilization, and excavation and off-site disposal. The remedial alternatives evaluated for semi-VOCs contaminated soil and groundwater include no further action with monitoring natural attenuation, extraction and treatment of groundwater and excavation of contaminated soil, enhanced bioremediation of groundwater and excavation of contaminated soil, and air sparging of groundwater and excavation of contaminated soil. Please review the ROD for a summary of the alternatives identified by the alternatives analysis report.

AOC#1 – Former Seepage Lagoon Area

Metals contaminated soil remains within the former seepage lagoon area. Refer to Figure 3. However, non detectable to very low concentrations of total metals were reported for groundwater samples collected from monitoring wells located throughout this area, indicating very little leaching of metals to the water table. Refer to Table 2 and Figure 4 for a summary of the concentrations of metals in groundwater. A downward trend in contaminant levels has been observed based on several rounds of sampling.

Initially the ROD selected soil excavation and off-site disposal of contaminated soil as the preferred remedy for this area, however based on the most recent sampling the residual soil contamination is not currently impacting groundwater quality to any significant degree. As a result, the amended ROD has selected in-situ solidification/stabilization as the preferred alternative. Institutional controls will also be imposed preventing the use of groundwater as a source of potable or process water without appropriate water quality treatment. Deed restrictions will be imposed to ensure safety in the event that contaminated soils were to be disturbed. A Soil Management Plan will be developed for any subsurface construction activities. The NYSDEC must be notified in the event that such activities are necessary. Watts will also be required to provide periodic inspections and certification, which would certify that the institutional controls are still in place and effective.

AOC#2 – Degreasing Area

Relatively low concentrations of metals were detected in soil in AOC#2. Refer to Table 3 and Figure 3 for a summary of the concentrations of metals in soil. The concentrations of metals in groundwater do not indicate an ongoing source or significant leaching of metals from soil to the groundwater. Refer to Figure 4 for a summary of the concentrations of metals in groundwater. The concentration of CVOCs has also decreased significantly.

No specific remedial action is required for this area however; remedial actions are proposed for AOC#5 former metal plating area, located directly adjacent to AOC#2.

AOC#3 – Former Leaching Pool Area

Moderate to elevated concentrations of metals were detected in soil in this area. Refer to Figure 3. Low to moderate concentrations of metals were detected in monitoring wells located in the former leaching pool area. Please refer to Figure 4 which indicates the concentrations of residual metals in groundwater. The ROD selected soil excavation and off-site disposal for this area. The amended ROD has not changed.

AOC#4 – Cutting Oil Release Area

Recent soil samples collected from this area indicate that residual concentrations of semi-volatile organic compounds (SVOCs) remain in soil located near the water table and within the smear zone. SVOCs were not detected in on-Site monitoring wells during the most recent sample event, and no measurable product was detected in the on-Site monitoring wells. As has been documented previously, contaminated soil is present beyond the limits of the soil excavation grave that resulted when approximately 500 cubic yards of soil were removed adjacent to the Site building. The soil excavation project was terminated due to physical constraints including the presence of the building, roadway, and major utilities. The data does not indicate that soil contamination extends significantly beyond the limits of the former excavation.

Chlorinated VOCs and MTBE were detected in monitoring wells downgradient of this area. However, the concentrations of CVOCs and MTBE decrease quickly toward the southeast (downgradient). The CVOC concentrations have decreased steadily over the last few years, and the plume has decreased in size due to natural attenuation and likely biodegradation. The presence of natural degradation products and reduced contaminant concentrations supports the presence of a shrinking and naturally degrading plume.

The ROD selected excavation of contaminated soil and treatment of contaminated groundwater for this area. Based on the resent sampling results, the amended ROD selected in-situ treatment of residual soil and groundwater contamination via the introduction of oxygen release compounds (ORC) or similar compound to enhance natural degradation. GEC proposes an alternative in-situ treatment method, presented in detail below. This alternative will also include a soil management plan to insure safe conditions during any future excavation work, and groundwater monitoring to evaluate the effectiveness of the remedy.

Institutional controls will be put in place once again to prevent the use of groundwater as a source of potable or process water without appropriate water quality treatment. A deed restriction will restrict and control access to subsurface soil. Notification to the NYSDEC for soil excavation would be required, along with periodic certifications that the institutional controls are still in place and affective.

AOC#5 – Former Metals Plating Area

Low to moderate concentrations of metals were detected in soil in AOC#5. Low concentrations of metals were also detected in groundwater in this area, indicating no significant impact to groundwater. Metals concentrations in groundwater have also declined steadily over the past several years nearing the Recommended Clean-up Objectives.

Initially the ROD selected soil excavation and off-site disposal of contaminated soil as the preferred remedy for this area (similar to AOC#1); however based on the most recent sampling the residual soil contamination is not significantly impacting groundwater. As a result, the amended ROD has selected in-situ solidification/stabilization as the preferred alternative. Institutional controls will also be imposed preventing the use of groundwater as a source of potable or process water without water appropriate quality treatment. Deed restrictions will be imposed to ensure safety in the event that contaminated soils were to be disturbed. A Soil Management Plan will be developed for any subsurface construction activities. The NYSDEC must be notified in the event that such activities are necessary. Watts will also be required to provide periodic certification, which would demonstrate that the institutional controls are still in place and effective.

3.0 PILOT TESTS

The amended ROD selected in-situ solidification/stabilization for metals in soil (AOC#1 and AOC#5) and in-situ treatment via ORC injection (or equivalent) for CVOCs in soil and groundwater (AOC#4). GEC proposes to utilize steam-catalyzed sodium persulfate injections to address the organic soil and groundwater contamination in AOC#4. Prior to initiating a full-scale remediation program, GEC recommends conduction pilot tests (and/or laboratory bench scale tests) to finalize the design plans and specifications for the field application.

AOC#1 and AOC#5

For AOC#1 and AOC#5, GEC proposes to stabilize the metals in place utilizing a specially formulated mixture; however bench scale laboratory testing is necessary to design the optimum mixture. The goal of the bench-scale application and final application is to stabilize the metals through chemical precipitation and binding in the subsurface.

Chromium, copper, nickel and zinc are the primary contaminants of concern. The soils subject to stabilization are believed to be relatively homogeneous, predominantly sand, and have limited buffering capacity. The remediation goal is assumed to reduce the leaching of the metals of concern to the underlying groundwater to less than the applicable state and federal standards.

The amount of leaching that will occur before and after stabilization will be analyzed using the Synthetic Precipitation Leaching Procedure (SPLP, USEPA SW-846 Method 1312). The SPLP is the appropriate test under the planned on-site and in situ management of the stabilized soil. The test simulates the leachability of inorganic and organic constituents subjected to exposure to "acid rain". The test is comparable to the Toxicity Characteristic Leaching Procedure (TCLP, USEPA SW-846 Method 1311), which was developed to evaluate leaching under simulated exposure to organic acids in landfill leachates. The SPLP uses a sulfuric and nitric acid solution as the extractant. Because the Site is east of the Mississippi River, the pH of the extract will be adjusted to 4.20±0.5 SU to reflect the more acidic precipitation found in the eastern United States. As with the TCLP, solid to liquid ratios are 1 to 20 on a weight basis. After 18 hours of tumbling, the mixture will be filtered at 0.6 μm and the resulting solution subjected to analyses for desired constituents in accordance with the methods provided in USEPA SW-846.

Sample Requirements

GEC will collect one representative soil sample with a geoprobe rig from each area, AOC#1 and AOC#5. Samples will be collected continuously to 12 feet below grade in up to three boring per location (0-4, 4-8, and 8-12 feet). Each sample will be analyzed for total chromium, copper, nickel, and zinc. The samples that are most representative of each area will be composited for further testing. The goal of the sampling is to collect a representative sample of the top 75th percentile of chromium, copper, nickel, and zinc concentrations from each area. Each composite sample will contain 3 kilograms of soil that is less than 9.5 mm (3/8-inch) in size. The soil samples will be sieved to remove material greater than 9.5 mm in size and then homogenized prior to treatment trials. Trials will be completed on 100-gram aliquots as described below. The proposed sampling locations are shown on the attached Figure 2B. However, additional samples may be conducted depending of the amount of soil recovery, and soil characteristics.

Treatment Trials

The selected sample for each area will be further tested via three treatment reagents as follows:

- Blend 1. This blend (EnviroBlend® HX) uses the iron in ferrous sulfate ($FeSO_4$) to reduce any hexavalent chromium (Cr^{6+}) to trivalent chromium (Cr^{3+}). The sulfate helps to desorb chromate ions, increasing the efficiency of the reduction process. The resulting Cr^{3+} is precipitated as chromium hydroxide and chromium-iron hydroxides. The addition may decrease the pH of the soil to unacceptable levels if there is little or no buffering capacity in the soil. The reagent is provided as a granular solid that can be solubilized in water for injection.
- Blend 2. This reagent (ViroSoil™) is pH-neutralized bauxite processing residue, also known as "red mud". The material is a fine-grained (80 percent <10 µm), alkaline (pH 9.0 to 9.5 SU) soil-like material containing hematite, boehmite, gibbsite, sodalite, and quartz. The material has a very high acid neutralization capacity (15 moles/kg) and very high sorptive capacity for metals (2,000 milliequivalents /kg). The material is provided as an aqueous slurry that can be injected as delivered or diluted prior to injection.
- Blend 3. This reagent (EnviroMetal) is zero-valent iron (Fe^0). The iron reduces the Cr^{6+} and results in the precipitation of the Cr^{3+} as described above. The fine-grained iron can be entrained in air or delivered as an aqueous slurry.

The treatment design is summarized as follows:

Test	Analysis	AOC 1	AOC 5
Untreated	Composition	1	1
Untreated	SPLP	1	1
EnviroBlend® HX	SPLP	3	3
ViroSoil™	SPLP	3	3
EnviroMetal	SPLP	3	3
pH buffering contingency	SPLP	2	2
Contingency analyses	SPLP	3	3
Replicates	SPLP	1	1
TOTAL	Composition	1	1

TOTAL	SPLP	16	16

The composition, or metals content, of each sample will be tested to ensure that the samples are representative of the metals contaminated soil being targeted for stabilization. Each untreated sample will be subjected to an SPLP to establish baseline conditions.

Three dosages of each reagent are planned. The dosages will be determined on the basis of the chromium content of the untreated samples and will reflect the necessity of the fluid injection approach required for the Site. The samples will be allowed to react for 12 to 24 hours before being subjected to the SPLP. All solutions from the SPLP will be tested for total chromium.

If the pH of the Blend 1 soil is less than the untreated pH of the soil, the SPLP extract will be tested for total arsenic, barium, cadmium, lead, mercury, and zinc to assess whether the decreased pH contributes to metals leaching. If increased leaching is found, trials will be run with pH buffers (magnesium hydroxide [MgO] and sodium carbonate [$NaCO_3$]) to neutralize the acidity produced by the ferrous sulfate addition.

The SPLP extracts from samples amended with ViroSoil™ will also be tested for total arsenic, barium, cadmium, lead, mercury, and zinc to assess the degree to which these metals may be mobilized in the alkaline conditions produced by this reagent.

One replicate of a randomly selected treated sample will be tested from each AOC as a quality control measure. CT Laboratories will implement the quality control and quality assurance procedures specified under USEPA SW-846 and the state certification program.

Reporting

A report summarizing the findings of the treatment trials will be prepared and the results evaluated against the applicable remediation goal for the SPLP extracts. Any unusual reactions not addressed by the laboratory analyses will be described. All laboratory reports will be included. GEC will re-evaluate the unit treatment costs with respect to reagents only.

Schedule

All analyses will be completed under routine analytical turn-around times (nominally 7 working days). Completion of the initial composition and SPLP through the specified treatment trials is expected to require about 21 calendar days. Contingent analyses and buffering tests, if required will require an additional 12 days. A copy of the treatability study report will be completed within 5 days after receipt of the last laboratory analyses. The total study duration is therefore estimated to require from 26 to 38 days.

The implementation will be designed after the bench-scale treatability studies are completed. GEC expects that injection points will be placed on 20-foot centers for a total of 40 in AOC#1 and 18 in AOC#5. Please refer to Figure 2B for the proposed injection points.

It is possible that the initial SPLP tests indicate that metals are already not leaching at a concentration that is of concern, and that remediation is not warranted. If this occurs the NYSDEC will be notified prior to conducting remedial actions.

AOC#4

GEC proposes to utilize steam-catalyzed sodium persulfate injections to remediate the organic soil and groundwater contamination in AOC#4. The initial proposal is to inject 13,200 pounds of sodium persulfate followed by 40 million BTUs of steam. The heat will catalyze the persultfate injection. Air will also be injected to enhance the removal of the organics while they have higher vapor pressures.

To determine the appropriate amount of sodium persulfate injection, the total oxidant demand must be determined. The oxidant demand will be determined with up to three oxidant demand tests. The results of these laboratory bench scale test will be used to amend and finalize the plans and specification presented below.

Proper design of a field-scale implementation of in-situ chemical oxidation (ISCO) requires data on target contaminant levels as well as quantitative estimates of other oxidant sinks. If all of the reactions that consume oxidant are not properly estimated, the amount of oxidant that needs to be injected will be underestimated, and it is likely that the ISCO effort will fail. Estimating the mass of oxidant cannot be reliably estimated from the target contaminant levels alone. Besides the target contaminant, other subsurface components will consume oxidant, such as reduced minerals and naturally-occurring organic materials (NOM). The amount of reduced minerals that will be deplete oxidant depends upon the present oxidation-reduction potential (ORP) of the subsurface environment, as well as the chemical composition of the soil matrix (percentage of iron, for example).

Rough estimates of the oxidant demand for reduced minerals can be made based upon soil description and semi-qualitative descriptions of the ORP of the aquifer (for example, iron- or sulfate-reducing conditions). However, this type of estimate can easily be in error as much as an order-of-magnitude and result in under- or over-injection of oxidants. The other major oxidant sink is NOM. Obviously, not all NOM will consume oxidant, and the level of oxidation of NOM depends upon the oxidant. Therefore, a simple analytical measurement such as total organic carbon may not provide an accurate estimate of the oxidant required for NOM.

There are a number of chemical and physical factors that contribute to the total oxidant demand (TOD) of a subsurface environment. These include: 1) dissolved phase contaminant, 2) sorbed phase contaminant, 3) free phase contaminant, 4) dissolved phase reduced minerals, 5) solid phase (or sorbed phase) reduced minerals, 6) dissolved and sorbed phase NOM, 7) and thermal and chemical decomposition. Dissolved phase and sorbed phase contaminant levels can be estimated by widely accepted analytical techniques. Estimating the oxidant required is just a simple stoichiometric calculation thereafter. Estimation of free phase contaminants (or free products) is very difficult. In fact, free phase product is seldom seen with chlorinated solvents. In addition, sampling techniques may be so disruptive, that it inhibits capture of chlorinated solvents.

Simple colorimetric techniques can be used to estimate the total oxidant demand (TOD) of the aquifer or soil material. The colorimetric technique uses varying ratios of oxidant mass to soil mass prepared in separate vials. If the oxidant is permanganate, no color indicator is necessary because of the strong purple color from permanganate. If the oxidant is persulfate or other oxidants, a starch-iodide indicator is necessary. The varying ratios of oxidant/soil mixtures are allowed to react, and the color is observed. The TOD can be narrowed down to the mixture ratio where color remains and mixture ratio where color is depleted. Based upon numerous TOD tests, the TOD can be as little as 0.05 grams of oxidant per kilogram of saturated soil (for carbonate aquifers, for example) or as high as 15 grams of oxidant per kilogram of saturated soil (for organic rich sediments under sulfate-reducing conditions, for example).

Another variation of the colorimetric technique utilizes a single aquifer or soil sample and excess oxidant (and color indicator, if necessary). The oxidant is allowed to react and the excess oxidant is "titrated" back with a reductant, such as sodium bisulfite. This colorimetric technique has the advantage that it only requires one sample, but it does require the additional titration step at the end of the reaction time. Four TOD tests will be completed on samples collected within AOC#4. Each TOD test requires at least 100 grams of soil, and will be collected with acetate liners and a geoprobe. Refer to Figure 2B for the sample locations

4.0 APPROPRIATE TECHNICAL PLAN

The following is a discussion of the appropriate technical plans including project plans and specifications, health and safety plan, and QA/QC plan among others.

4.1 Project Plans and Specifications

The results of the pilot test discussed above will be utilized to modify the plans and specifications presented here. In addition to providing the necessary information to finalize the remedial design the pilot test should also demonstrate that the selected remedial alternatives would accomplish the remediation goal.

4.1.1 Soil Excavation

AOC#3 will be excavated to the groundwater table, the soil stockpiled, analyzed for disposal characteristics and transported off-site to a permitted disposal facility. The approximate total volume of soil is estimated to be 1,600 cubic yards. This estimate is based on an assumed depth to groundwater of 5 feet and a footprint of 8,800 square feet (80 feet by 110 feet). Shoring will not be required prior to excavation activities, as a 2 to 1 slope will be maintained. The excavated area will be backfilled to original grade with certified clean fill.

4.1.2 In-Situ Solidification/Stabilization

AOC#1 and AOC#5 will be remediated utilizing in-situ solidification/stabilization. As discussed above, metals contamination will be stabilized through chemical precipitation and binding via an injection of a specially formulated mixture. To determine the optimum mixture a laboratory scale test will be conducted with various mixtures applied to soil samples collected from the Site. A SPLP test will be run on each sample to evaluate the separate mixtures. The precise mixture will then be determined from the laboratory scale test. The mixture will be applied over both AOC#1 and AOC#5 utilizing approximately 40 and 18 injection well points, respectively.

The geoprobe borings will be used for the injections of the metals solution. The mixture is prepared on-site. There may be more than one injection into each well during the initial treatment operation, depending of field observations. Injection wells will be constructed with 2-inch diameter PVC piping and slotted well screen installed from 2 to 12 feet below grade. Currently we anticipate one application, to occur at night when the facility is closed. The treatment may take up to one week to complete.

GEC will conduct periodic groundwater monitoring to evaluate the effectiveness of the remedial activities. Please refer to the following section for detail pertaining to periodic groundwater monitoring. Also refer to Figure 2B for the location of the injection wells.

4.1.3 In-Situ Treatment via Sodium Persulfate Injections

AOC#4 will be remediated utilizing steam-catalyzed sodium persulfate injections. The initial proposal is to inject 13,200 pounds of sodium persulfate followed by 40 million BTUs of steam. The heat will catalyze the persulfate injection. Air will also be injected to enhance the removal of the organics while they have higher vapor pressures. To determine the appropriate amount of sodium persulfate injection, the total oxidant demand must be determined. The oxidant demand will be determined with up to three oxidant demand tests, as discussed above. The results of the laboratory bench scale test will be used to amend and finalize these plans and specification.

The sodium persulfate will be mixed as a twenty weight percent solution. There will be a total of 7,800 gallons of solution injected. Injection points will be placed on approximately 20-foot centers, so there will be a total of 36 injection points. Please refer to Figure 2B for injection points. Each injection point will receive about 215 gallons of persulfate solution. A small amount of base will be added to the persulfate mixture to bring the pH to neutral so that it is not likely to solvate metals. The amount of sodium persulfate is based upon a TOD of 2 grams per kilogram of aquifer. After the persulfate is injected it will be followed by about 40 million BTU of steam. The heat will catalyze the persulfate injection. We will also inject air to enhance the removal of the organics while they have higher vapor pressure.

For the persulfate injections, permanent stainless steel one-inch diameter wells will be installed. They will be screened over the target interval. The spacing of the injection points was determined predominantly by soil type and depth to contamination. We will use a geoprobe drill rig for the well installations and the metals solution injection. The mixture is prepared on-site. There may be more than one injection per well during the injection project, depending on field observations. Steam is generated on-site prior to injection with a 10-horsepower boilers. The steam is manifolded and connected directly to each well. The injections will occur at night during non-work hours. The steam and chemical injections are anticipated to take about one week.

GEC will conduct periodic groundwater monitoring to evaluate the effectiveness of the remedial activities. Please refer to the following section for detail pertaining to periodic groundwater monitoring. Also refer to Figure 2B for the location of the injection wells.

4.1.4 Groundwater Monitoring Plan

There are currently 24 existing groundwater-monitoring wells on Site, two of which (MW-3 and MW-4) will be destroyed during the soil excavation activities within

AOC#3. These wells will be replaced in approximately the same locations and screened at the same depths once the area has been backfilled and the Site restored. The existing monitoring well network will be utilized for long term monitoring.

Ten monitoring wells will be sampled quarterly for one year after initiation of the remedy for metals in AOC#1, AOC#3, and AOC#5, and thirteen monitoring wells will be sampled quarterly for one year after initiation of the remedy for semi-VOC in AOC#4.

Prior to sample collected the groundwater level in each well will be measured and recorded. Groundwater samples will be collected with low-flow method and field parameters such as percent dissolved oxygen, pH, temperature, and specific conductance will be monitored. Once the parameters stabilize within ten percent, then sample collection will begin. Laboratory analysis will include total chromium, copper, nickel, and zinc via EPA Method 60108/7000s and/or semi-VOCs via EPA Method 8270C. Please refer to Table 1 for a summary of the groundwater-monitoring plan.

Samples will be submitted to a certified New York state laboratory under proper chain-of-custody documentation. The analytical results will be reported to the NYSDEC in accordance with Section 4.6 below.

4.2 Institutional and Engineering Controls

Institutional controls will be imposed preventing the use of groundwater as a source of potable or process water without water appropriate quality treatment. Deed restrictions will be imposed to ensure safety in the event that contaminated soils were to be disturbed. A soil management plan will be developed for any subsurface construction activities. The NYSDEC will be notified in the event that such activities are necessary. Watts will also be required to provide periodic certification, which would certify that the institutional controls are still in place and effective.

4.3 Health and Safety Plan

A site specific Health and Safety Plan has been developed for site remedial actions as well as long term groundwater monitoring. In the event that excavation work is required upon completion of the remedial design the Health and Safety Plan (HASP) can be modified and included in a soils management plan. Please refer to Appendix B for a copy of the HASP.

4.4 QA/QC Plan

The remedial activities, soil sampling, monitoring well installation, injection well installation, and groundwater monitoring will be implemented in accordance with GECs

QA/QC Plan. Please refer to the Standard Operating Procedures (SOPs) provided in Appendix A.

4.5 Schedule

GEC will oversee the soil excavation and in-situ treatment of the four AOCs. The remedial actions will be conducted in accordance with the construction plans and specifications presented in Section 4.0 and as modified based on the results of the pilot testing. A qualified and licensed contractor will be hired to conduct the excavation and in-situ treatment. Once completed GEC will monitor affect of the treatment via groundwater monitoring to ensure adequate performance.

4.6 Reporting

The results of the excavation work and in-situ treatment activities, and quarterly groundwater monitoring will be documented and submitted to the NYSDEC six months after approval to initiate the selected remedies. Additional monitoring data will be submitted to the NYSDEC every six months in reports that will include the following:

- description of monitoring activities and frequency;
- description of any significant modifications since submission of preceding monitoring report;
- description of any conditions or problems noted during monitoring periods that affect the performance of the remedial system;
- description of any measures taken to correct conditions which are affecting the performance of the remedial action;
- results of sampling analyses and screening conducted as part of the monitoring program; and
- the name and signature of the project manager overseeing these activities.

4.7 Project Organization

The following table contains the names and phone numbers of the emergency contacts including the local fire and police departments, ambulance, and hospital, and GEC project manager, along with other emergency phone numbers.

FIRE: Wyandanch Fire Station	911 (643-5300 business)
POLICE: Wyandanch Police Station	911 (854-8100 business)
AMBULANCE	911
Good Samaritan Medical Center	(631)-376-3000

Goldman Environmental Consultants	(781) 356-9140
Chemtrec	(800) 424-9300
National Response Center	(800) 424-8802
ATSDR	DAY: (404) 329-2888
AT & F (Explosive Information)	(800) 424-9555
Pesticide Information Service	(800) 845 7633
CMA Chemical Referral Center	(800) 262-8200
National Poison Control Center	(800) 942-5969
U. S. DOT	DAY: (202) 366-0656
LEPC Contact:	Fire Chief

4.8 Citizen Participation Plan for Construction Activities

Citizen Participation provides the interested/affected public with various opportunities to become informed and involved with this Site. The following measures will be carried out.

A copy of the Remedial Design Plan report will be placed into the Information Repositories. A public meeting may be held at this juncture, as determined by NYSDEC, based on the level of public interest and other factors. A public meeting, as part of a public comment period, to present and receive comment on the Remedial Design Plan, will be conducted, with notification through a fact-sheet and a NYSDEC press notice. This Fact Sheet is intended to provide a brief but clear overview of the investigations that have taken place at the Jameco facility and the additional work that will be completed in the near future. We recognize that this Fact Sheet may not answer all questions regarding the upcoming work. Please contact the undersigned at GEC at 781-762-3250 for the site contacts and for additional information requested not contained in this report.

5.0 WARRANTY

The conclusions and recommendations contained in this report are based on the information available to GEC as of the date of this document. The conclusions and recommendations may require revision if future regulatory changes occur. GEC provides no warranties on information provided by third parties and contained herein. Data compiled was in accordance with GEC's existing procedures and consistent with the NYSDEC regulations, and should not be construed beyond its limitations. Any interpretations or use of this report other than those expressed herein are not warranted.

The use, partial use, or duplication of this report without the written consent of Goldman Environmental Consultants, Inc., and the Watts Industries, Inc. is strictly prohibited.

Respectfully submitted,
Goldman Environmental Consultants, Inc.

Prepared By:

Brian T. Butler, PG
Senior Project Manager

Approved By:

Samuel W. Butcher, CHMM, PG
V.P. Operations

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TABLES

Table 1
Groundwater Monitoring Plan
Watts Industries, Inc.

Monitoring Well	Metals (1)	Semi-VOCs (2)
MW-2	X	
MW-3	X	X
MW-4	X	
MW-5R	X	X
MW-6R	X	
MW-7	X	X
MW-10	X	X
MW-11	X	X
MW-12	X	X
MW-16		X
MW-17		X
MW-19		X
MW-20		X
MW-21		X
MW-23		X
MW-26R	X	X
Total	**10**	**13**

(1) Total metals analysis for chromium, copper, nickel, and zinc.
Analysis via EPA Method 60108/7000s.

(2) Semi-VOCs analysis.
Analysis via EPA Method 8270C.

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Aluminum	SQL	Antimony	SQL	Arsenic	SQL	Barium	SQL	Beryllium	SQL	Cadmium	SQL	Calcium	SQL	Chromium(III)	SQL
MW-1																	
5/23/1994	NG	NA	- -	0.046	- -	0.019	- -	NA	- -	ND	- -	ND	- -	NA	- -	0.029	- -
1/27/1995	NG	NA	- -	ND	- -	0.042	- -	NA	- -	ND	- -	0.0068	- -	NA	- -	0.065	- -
11/17/1998	3010/6010	NA	- -	ND	0.004	0.0052 B	--	NA	- -	ND U	0.001	ND N	0.001	NA	- -	0.0075 B	- -
11/15/2000	NG	NA		NA		ND	0.02	0.1170	0.0005	NA		0.0006	0.0002	NA		0.0250	0.002
MW-2																	
5/23/1994	NG	NA	- -	0.038	- -	0.0070	- -	NA	- -	ND	- -	ND	- -	NA	- -	8.88	- -
1/27/1995	NG	NA	- -	ND	- -	0.030	- -	NA	- -	ND	- -	0.014	- -	NA	- -	4.0	- -
11/18/1998	3010/6010	NA	- -	ND	0.004	0.0034 B	- -	NA	- -	ND U	0.001	ND N	0.001	NA	- -	0.165	- -
11/15/2000	NG	NA		NA		ND	0.02	0.0849	0.0005	NA		ND	0.0002	NA		0.256	0.002
12/11/2002	6010/7470/7196	NA	- -	ND	0.020	ND	0.04	NA	- -	ND	0.005	ND	0.01	NA	- -	0.389	0.010
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.0978	0.001	NA	- -	0.0006	0.0005	NA	- -	ND	0.007
MW-2 (SS)																	
11/18/1998	NG	1.93	- -	0.0037 B	- -	0.0018 B	- -	0.214	- -	ND U	0.00021	ND U	0.00021	28.6	- -	0.201	- -
MW-3																	
5/23/1994	NG	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	ND	- -	NA	- -	0.119	- -
1/27/1995	NG	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	ND	- -	NA	- -	0.32	- -
11/17/1998	3010/6010	NA	- -	ND	0.004	ND	0.00	NA	- -	ND U	0.001	ND N	0.001	NA	- -	0.0039 B	- -
12/11/2002	6010/7470/7196	NA	- -	ND	0.020	ND	0.04	NA	- -	ND	0.005	ND	0.01	NA	- -	0.2030	0.010
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.0703	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007
MW-4																	
12/11/2002	6010/7470/7196	NA	- -	ND	0.020	ND	0.04	NA	- -	ND	0.005	ND	0.01	NA	- -	0.0490	0.010
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.0885	0.001	NA	- -	ND	0.00050	NA	- -	ND	0.007
MW-5																	
5/23/1994	NG	NA	- -	0.040	- -	0.029	- -	NA	- -	ND	- -	ND	- -	NA	- -	0.117	- -
1/27/1995	NG	NA	- -	ND	- -	0.046	- -	NA	- -	ND	- -	0.0066	- -	NA	- -	0.1	- -
11/18/1998	3010/6010	NA	- -	ND	0.004	0.0079 B	- -	NA	- -	ND U	0.001	ND N	0.001	NA	- -	0.0011 B	- -
MW-5 D																	
11/18/1998	3010/6010	NA	- -	ND	0.004	0.0053 B	- -	NA	- -	ND U	0.001	ND	0.001	NA	- -	0.0012 B	- -
MW-5R																	
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.0500	0.0767	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007
MW-6																	
5/23/1994	NG	NA	- -	0.050	- -	0.032	- -	NA	- -	ND	- -	27.1	- -	NA	- -	0.046	- -
MW-6R																	
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.0500	0.1140	0.001	NA	- -	0.0009	0.0005	NA	- -	ND	0.007
MW-7																	
5/23/1994	NG	NA	- -	ND	- -	0.0050	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -
1/27/1995	NG	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -
11/17/1998	3010/6010	NA	- -	ND	0.004	ND	0.0030	NA	- -	ND U	0.001	ND N	0.001	NA	- -	ND	0.001
11/15/2000	NG	NA		NA		ND	0.0200	0.2980	0.0005	NA		0.0003	0.0002	NA		0.0090	0.002
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.0500	0.0974	0.001	NA	- -	0.0006	0.0005	NA	- -	ND	0.007

Notes:

NS= Not Sampled
SQL= Sample Quantitation Limit
NA= Not Analyzed
ND= Not detected above SQL
NG= Not Given
3010/6010= USEPA Method 3010/6010
- - = Sample quantitation limits not provided or not available.

SS= Data for NYSDEC split samples.
B= Analytical result is between the instrument detection limit and the contract required detection limit.
E= Detected concentration exceeds calibration curve range.
N= Spiked sample recovery not within control limits.
U= Analyte not detected at sample quanititation limit.
*= Duplicate analysis not within control limit.

Prepared By: PCS/EAF
Reviewed By: SWB
Revised: 7/19/2005

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Chromium (VI)	SQL	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury	SQL
MW-1																	
5/23/1994	NG	0.020	--	NA	--	0.026	--	NA	--	0.035	--	NA	--	NA	--	0	--
1/27/1995	NG	ND	--	NA	--	0.084	--	NA	--	0.056	--	NA	--	NA	--	0.00029	--
11/17/1998	3010/6010	NA	--	NA	--	0.0218 B	--	NA	--	0.014	--	NA	--	NA	--	ND	0.00010
11/15/2000	NG	ND	0.0040	NA		NA		NA		0.020	0.01	NA		NA		ND	0.00004
MW-2																	
5/23/1994	NG	0.24	--	NA	--	3.16	--	NA	--	0.087	--	NA	--	NA	--	0	--
1/27/1995	NG	ND	--	NA	--	3.8	--	NA	--	0.079	--	NA	--	NA	--	0.00048	--
11/18/1998	3010/6010	NA	--	NA	--	0.231	--	NA	--	0.0022 B	--	NA	--	NA	--	ND	0.00010
11/15/2000	NG	ND	0.0040	NA		NA		NA		ND	0.01	NA		NA		ND	0.00004
12/11/2002	6010/7470/7196	ND	0.010	NA	--	0.292	0.010	NA	--	ND	0.010	NA	--	NA	--	ND	0.00020
12/15/2003	200.7/6010	ND	0.004	NA	--	0.0197	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
MW-2 (SS)																	
11/18/1998	NG	NA	--	0.039 B	--	0.384	--	2.68	--	0.0092	--	5.03	--	7.63	--	ND	0.00011
MW-3																	
5/23/1994	NG	0.020	--	NA	--	0.597	--	NA	--	ND	--	NA	--	NA	--	ND	--
1/27/1995	NG	ND	--	NA	--	4.5	--	NA	--	ND	--	NA	--	NA	--	ND	--
11/17/1998	3010/6010	NA	--	NA	--	0.13	--	NA	--	ND	0.0020	NA	--	NA	--	ND	0.00010
12/11/2002	6010/7470/7196	ND	0.010	NA	--	0.30	0.010	NA	--	0.014	0.010	NA	--	NA	--	ND	0.00020
12/16/2003	200.7/6010	0.05600	0.004	NA	--	0.0837	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
MW-4																	
12/11/2002	6010/7470/7196	ND	0.010	NA	--	0.102	0.010	NA	--	ND	0.010	NA	--	NA	--	ND	0.00020
12/16/2003	200.7/6010	0.01040	0.008	NA	--	0.0769	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
MW-5																	
5/23/1994	NG	0.020	--	NA	--	0.639	--	NA	--	0.022	--	NA	--	NA	--	0	--
1/27/1995	NG	ND	--	NA	--	0.73	--	NA	--	0.020	--	NA	--	NA	--	ND	--
11/18/1998	3010/6010	NA	--	NA	--	0.0095 B	--	NA	--	ND	0.0020	NA	--	NA	--	ND	0.00010
MW-5 D																	
11/18/1998	3010/6010	NA	--	NA	--	0.0094 B	--	NA	--	ND	0.0020	NA	--	NA	--	ND	0.00010
MW-5R																	
12/16/2003	200.7/6010	ND	0.004	NA	--	0.0419	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
MW-6																	
5/23/1994	NG	0.046	--	NA	--	1.21	--	NA	--	0.285	--	NA	--	NA	--	ND	--
MW-6R																	
12/16/2003	200.7/6010	ND	0.004	NA	--	0.0076	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
MW-7																	
5/23/1994	NG	0.010	--	NA	--	ND	--	NA	--	0.0060	--	NA	--	NA	--	ND	--
1/27/1995	NG	ND	--	NA	--	ND	--	NA	--	ND	--	NA	--	NA	--	ND	--
11/17/1998	3010/6010	NA	--	NA	--	0.0019 B	--	NA	--	ND	0.0020	NA	--	NA	--	ND	0.00010
11/15/2000	NG	ND	0.004	NA		NA		NA		ND	0.0100	NA		NA		ND	0.00004
12/15/2003	200.7/6010	ND	0.004	NA	--	0.0097	0.00050	NA	--	0.004	0.0020	NA	--	NA	--	ND	0.000040

Prepared By: PCS/EAF
Reviewed By: SWB
Revised: 7/19/2005

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Nickel	SQL	Potassium	SQL	Selenium	SQL	Silver	SQL	Sodium	SQL	Thallium	SQL	Vanadium	SQL	Zinc	SQL
MW-1																	
5/23/1994	NG	ND	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.173	- -
1/27/1995	NG	0.042	- -	NA	- -	ND	- -	0.010	- -	NA	- -	ND	- -	NA	- -	0.25	- -
11/17/1998	3010/6010	ND	0.0060	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	0.105 *	- -
11/15/2000	NG	NA		NA		ND	0.02	ND	0.002	NA		NA		NA		NA	
MW-2																	
5/23/1994	NG	4.49	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.747	- -
1/27/1995	NG	5.7	- -	NA	- -	ND	- -	0.010	- -	NA	- -	ND	- -	NA	- -	0.70	- -
11/18/1998	3010/6010	10.6	- -	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	0.263 *	- -
11/15/2000	NG	NA		NA		ND	0.02	ND	0.002	NA		NA		NA		NA	
12/11/2002	6010/7470/7196	1.4	0.010	NA	- -	ND	0.03	ND	0.006	NA	- -	ND	0.04	NA	- -	0.048 B	0.05
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.015	0.01
MW-2 (SS)																	
11/18/1998	NG	15.6	- -	5.9	- -	0.0044 B	- -	ND U	0.00061	43.7	- -	0.0144	- -	0.0029 B	- -	0.345	- -
MW-3																	
5/23/1994	NG	1.75	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.109	- -
1/27/1995	NG	3.5	- -	NA	- -	ND	- -	0.011	- -	NA	- -	ND	- -	NA	- -	0.68	- -
11/17/1998	3010/6010	0.195	- -	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.005	NA	- -	0.0492 *	- -
12/11/2002	6010/7470/7196	1.39	0.010	NA	- -	ND	0.03	ND	0.006	NA	- -	ND	0.04	NA	- -	0.0956	0.05
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.050	ND	0.005	NA	- -	NA	- -	NA	- -	0.071	0.01
MW-4																	
12/11/2002	6010/7470/7196	2.1	0.010	NA	- -	ND	0.03	ND	0.006	NA	- -	ND	0.04	NA	- -	0.0561	0.05
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.151	0.01
MW-5																	
5/23/1994	NG	0.373	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.582	- -
1/27/1995	NG	0.23	- -	NA	- -	ND	- -	0.013	- -	NA	- -	ND	- -	NA	- -	0.48	- -
11/18/1998	3010/6010	0.0637	- -	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	0.0239 *	- -
MW-5 D																	
11/18/1998	3010/6010	0.0641	- -	NA	- -	ND	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	0.017 *	- -
MW-5R																	
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.090	0.005
MW-6																	
5/23/1994	NG	3.96	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.537	- -
MW-6R																	
12/16/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.106	0.005
MW-7																	
5/23/1994	NG	0.025	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.026	- -
1/27/1995	NG	ND	- -	NA	- -	ND	- -	0.011	- -	NA	- -	ND	- -	NA	- -	ND	- -
11/17/1998	3010/6010	ND	0.0060	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	ND *	0.017
11/15/2000	NG	NA		NA		ND	0.02	ND	0.002	NA		NA		NA		NA	
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.030	0.0050

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SUMMARY OF GROUNDWATER ANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Aluminum	SQL	Antimony		SQL	Arsenic		SQL	Barium		SQL	Beryllium		SQL	Cadmium		SQL	Calcium	SQL	Chromium(III)		SQL
MW-7 D																							
11/17/1998	3010/6010	NA	- -	ND		0.004	0.0043	B	- -	NA		- -	ND		0.001	ND		0.001	NA	- -	0.0014	B	- -
MW-8																							
5/23/1994	NG	NA	- -	ND		- -	ND		- -	NA		- -	ND		- -	ND		- -	NA	- -	ND		- -
MW-9																							
5/23/1994	NG	NA	- -	ND		- -	ND		- -	NA		- -	ND		- -	ND		- -	NA	- -	ND		- -
1/27/1995	NG	NA	- -	ND		- -	ND		- -	NA		- -	ND		- -	ND		- -	NA	- -	ND		- -
11/17/1998	3010/6010	NA	- -	ND		0.004	ND		0.0030	NA		- -	ND	U	0.001	ND	N	0.001	NA	- -	ND		0.001
MW-10																							
7/6/1994	NG	NA	- -	ND		- -	ND		- -	NA		- -	ND		- -	ND			NA	- -	0.040		- -
11/17/1998	3010/6010	NA	- -	ND		0.004	ND		0.0030	NA		- -	ND	U	0.001	ND	N	0.001	NA	- -	0.0031	B	- -
12/15/2003	200.7/6010	NA	- -	NA		- -	ND		0.0500	0.0486		0.001	NA		- -	ND		0.0005	NA	- -	0.011		0.007
MW-11																							
7/6/1994	NG	NA	- -	ND		- -	ND		- -	NA		- -	ND			ND		- -	NA	- -	0.08		- -
11/17/1998	3010/6010	NA	- -	ND		0.004	ND		0.0030	NA		- -	ND	U	0.001	ND	N	0.001	NA	- -	0.018		- -
12/15/2003	200.7/6010	NA	- -	NA		- -	ND		0.0500	0.0621		0.001	NA		- -	0.0008		0.0005	NA	- -	0.015		0.007
MW-12																							
5/23/1994	NG	NA	- -	NS		- -	NS		- -	NA		- -	NS		- -	NS		- -	NA	- -	NS		- -
7/6/1994	NG	NA	- -	ND		- -	ND		- -	NA		- -	ND		- -	ND		- -	NA	- -	ND		- -
1/27/1995	NG	NA	- -	0.18		- -	0.11		- -	NA		- -	0.019		- -	0.082		- -	NA	- -	18		- -
11/17/1998	3010/6010	NA	- -	0.0047	B	- -	ND		0.0030	NA		- -	ND	U	0.001	ND	N	0.001	NA	- -	0.0288		- -
12/15/2003	200.7/6010	NA	- -	NA		- -	ND		0.0500	0.1030		0.001	NA		- -	0.0008		0.0005	NA	- -	0.007		0.007
MW-15																							
4/5/1999	3010/6010	NA	- -	ND	U	0.01	0.0090	B	- -	NA		- -	ND	U	0.001	0.0039	B	- -	NA	- -	0.026		- -
MW-16																							
12/15/2003	200.7/6010	NA	- -	NA		- -	ND		0.0500	0.3020		0.001	NA		- -	0.0040		0.0005	NA	- -	ND		0.007
MW-17																							
4/6/1999	3010/6010	NA	- -	ND	U	0.01	0.019		- -	NA		- -	ND	U	0.001	0.0032	B	- -	NA	- -	0.054		- -
12/15/2003	200.7/6010	NA	- -	NA		- -	ND		0.0500	0.137		0.001	NA		- -	0.0040		0.0005	NA	- -	ND		0.004
MW-17 Dup																							
4/6/1999	3010/6010	NA	- -	ND	U	0.01	0.016		- -	NA		- -	ND	U	0.001	0.0033	B	- -	NA	- -	0.055		- -
MW-20																							
4/6/1999	3010/6010	NA	- -	ND	U	0.01	ND	U	0.0060	NA		- -	ND	U	0.001	0.0026	B	- -	NA	- -	0.016		- -
MW-25																							
11/18/1998	3010/6010	NA	- -	0.0178	B	- -	0.0037	B	- -	NA		- -	0.0010	B	- -	ND	N	0.001	NA	- -	2.74		- -
12/15/2003	200.7/601	NA	- -	NA		- -	ND		0.05	0.115		0.001	NA		- -	ND		0.0005	NA	- -	0.009		0.007
MW-25 (SS)																							
11/18/1998	NG	0.936	- -	0.0055	B	- -	0.0032	B	- -	0.926	B	- -	ND	.U	0.00021	ND	U	0.00021	11.7	- -	0.358		- -
MW-26																							
11/17/1998	3010/6010	NA	- -	ND		0.004	0.0069	B	- -	NA		- -	ND	U	0.001	ND	N	0.001	NA	- -	0.0080	B	- -

Notes:

NS= Not Sampled
SQL= Sample Quantitation Limit
NA= Not Analyzed
ND= Not detected above SQL
NG= Not Given
3010/6010= USEPA Method 3010/6010
- - = Sample quantitation limits not provided or not available.

SS= Data for NYSDEC split samples.
B= Analytical result is between the instrument detection limit and the contract required detection limit.
E= Detected concentration exceeds calibration curve range.
N= Spiked sample recovery not within control limits.
U= Analyte not detected at sample quanititation limit.
*= Duplicate analysis not within control limit.

Prepared By: PCS/EAF
Reviewed By: SWB
Revised: 7/19/2005

TABLE 2
SUMMARY OF GROUNDWATERANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Chromium (VI)	SQL	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury	SQL
MW-7 D																	
11/17/1998	3010/6010	NA	- -	NA	- -	0.0028 B	- -	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.00010
MW-8																	
5/23/1994	NG	0.010	- -	NA	- -	ND	- -	NA	- -	ND	- -	NA	- -	NA	- -	ND	- -
MW-9																	
5/23/1994	NG	0.01	- -	NA	- -	ND	- -	NA	- -	0.0050	- -	NA	- -	NA	- -	0.0	- -
1/27/1995	NG	ND	- -	NA	- -	ND	- -	NA	- -	ND	- -	NA	- -	NA	- -	ND	- -
11/17/1998	3010/6010	NA	- -	NA	- -	0.0014 B	- -	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.00010
MW-10																	
7/6/1994	NG	ND	- -	NA	- -	0.010	- -	NA	- -	ND	- -	NA	- -	NA	- -	ND	- -
11/17/1998	3010/6010	NA	- -	NA	- -	0.0044 B	- -	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.00010
12/15/2003	200.7/6010	ND	0.004	NA	- -	0.0099	0.00050	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.000040
MW-11																	
7/6/1994	NG	ND	- -	NA	- -	0.22	- -	NA	- -	0.010	- -	NA	- -	NA	- -	0.00082	- -
11/17/1998	3010/6010	NA	- -	NA	- -	0.0105 B	- -	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.00010
12/15/2003	200.7/6010	ND	0.004	NA	- -	0.0071	0.00050	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.000040
MW-12																	
5/23/1994	NG	NS	- -	NA	- -	NS	- -	NA	- -	NS	- -	NA	- -	NA	- -	NS	- -
7/6/1994	NG	ND	- -	NA	- -	ND	- -	NA	- -	ND	- -	NA	- -	NA	- -	ND	- -
1/27/1995	NG	ND	- -	NA	- -	21	- -	NA	- -	0.310	- -	NA	- -	NA	- -	0.0013	- -
11/17/1998	3010/6010	NA	- -	NA	- -	5.31	- -	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.00010
12/15/2003	200.7/6010	ND	0.004	NA	- -	0.530	0.00050	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.000040
MW-15																	
4/5/1999	3010/6010	NA	- -	NA	- -	0.034	- -	NA	- -	0.016	- -	NA	- -	NA	- -	ND U	0.00010
MW-16																	
12/15/2003	200.7/6010	ND	0.004	NA	- -	0.010	0.00050	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.000040
MW-17																	
4/6/1999	3010/6010	NA	- -	NA	- -	0.041	- -	NA	- -	0.015	- -	NA	- -	NA	- -	ND U	0.00010
12/15/2003	200.7/6010	NA		NA	- -	0.0015	0.00050	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.000040
MW-17 Dup																	
4/6/1999	3010/6010	NA	- -	NA	- -	0.041	- -	NA	- -	0.015	- -	NA	- -	NA	- -	ND U	0.00010
MW-20																	
4/6/1999	3010/6010	NA	- -	NA	- -	0.045	- -	NA	- -	0.010	- -	NA	- -	NA	- -	ND U	0.00010
MW-25																	
11/18/1998	3010/6010	NA	- -	NA	- -	0.483	- -	NA	- -	0.031	- -	NA	- -	NA	- -	0.00018 B	- -
12/15/2003	200.7/601	0.064	0.004	NA	- -	0.0132	0.00050	NA	- -	ND	0.0020	NA	- -	NA	- -	ND	0.000040
MW-25 (SS)																	
11/18/1998	NG	NA	- -	0.0079 B	- -	0.0701	- -	1.21	- -	0.0035	- -	2.10 B	- -	0.367	- -	ND JN	0.00021
MW-26																	
11/17/1998	3010/6010	NA	- -	NA	- -	0.156	- -	NA	- -	0.0142	- -	NA	- -	NA	- -	ND	0.00010

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA: TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Nickel	SQL	Potassium	SQL	Selenium	SQL	Silver	SQL	Sodium	SQL	Thallium	SQL	Vanadium	SQL	Zinc	SQL
MW-7 D																	
11/17/1998	3010/6010	ND	0.0060	NA	- -	ND	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	ND *	0.017
MW-8																	
5/23/1994	NG	0.066	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.023	- -
MW-9																	
5/23/1994	NG	ND	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.034	- -
1/27/1995	NG	ND	- -	NA	- -	ND	- -	0.011	- -	NA	- -	ND	- -	NA	- -	0.024	- -
11/17/1998	3010/6010	ND	0.0060	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	ND *	0.017
MW-10																	
7/6/1994	NG	0.15	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.13	- -
11/17/1998	3010/6010	ND	0.0060	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	ND *	0.017
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.029	0.005
MW-11																	
7/6/1994	NG	0.07	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.23	- -
11/17/1998	3010/6010	ND	0.0060	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	ND *	0.017
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.014	0.005
MW-12																	
5/23/1994	NG	NS	- -	NA	- -	NS	- -	NS	- -	NA	- -	NS	- -	NA	- -	NS	- -
7/6/1994	NG	ND	- -	NA	- -	ND	- -	ND	- -	NA	- -	ND	- -	NA	- -	0.06	- -
1/27/1995	NG	21	- -	NA	- -	0.0055	- -	ND	- -	NA	- -	ND	- -	NA	- -	5.60	- -
11/17/1998	3010/6010	7.07	- -	NA	- -	ND N	0.003	ND	0.001	NA	- -	ND	0.0050	NA	- -	0.859 *	- -
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.289	0.005
MW-15																	
4/5/1999	3010/6010	0.020 B	- -	NA	- -	ND JN	0.004	ND U	0.002	NA	- -	ND U	0.0070	NA	- -	0.099 *	- -
MW-16																	
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.017	0.005
MW-17																	
4/6/1999	3010/6010	0.026 B	- -	NA	- -	ND JN	0.004	ND U	0.002	NA	- -	ND U	0.0070	NA	- -	0.055 *	- -
12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.0070	0.005	NA	- -	NA	- -	NA	- -	0.011	0.005
MW-17 Dup																	
4/6/1999	3010/6010	0.027 B	- -	NA	- -	ND JN	0.004	ND U	0.002	NA	- -	ND U	0.0070	NA	- -	0.079 *	- -
MW-20																	
4/6/1999	3010/6010	0.013 B	- -	NA	- -	ND U	0.004	ND U	0.002	NA	- -	ND U	0.0070	NA	- -	0.050 *	- -
MW-25																	
11/18/1998	3010/6010	0.212	- -	NA	- -	ND N	0.003	ND N	0.001	NA	- -	ND	0.0050	NA	- -	0.144 *	- -
12/15/2003	200.7/601	NA	- -	NA	- -	ND	0.05	ND	0.005	NA	- -	NA	- -	NA	- -	0.042	0.005
MW-25 (SS)																	
11/18/1998	NG	0.134	- -	2.44 B	- -	ND U	0.0025	ND U	0.00061	10.4	- -	0.0047 B	- -	0.0025 B	- -	0.0738	- -
MW-26																	
11/17/1998	3010/6010	0.0064 B	- -	NA	- -	ND N	0.0030	ND	0.001	NA	- -	ND	0.0050	NA	- -	0.0576 *	- -

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Reviewed By: SWB
Revised: 7/19/2005

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Aluminum	SQL	Antimony	SQL	Arsenic	SQL	Barium	SQL	Beryllium	SQL	Cadmium	SQL	Calcium	SQL	Chromium(III)	SQL
MW-26R 12/15/2003	200.7/601	NA	- -	NA	- -	ND	0.05	0.123	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007
TCE-1 1/29/1998	3010/6010	NA	- -	0.0944	- -	0.0082 B	- -	NA	- -	0.0018 B	- -	0.0023 B	- -	NA	- -	17.6	- -
TCE-1 (SS) 11/18/1998	NG	61.3	- -	0.0576 B	- -	0.0073 B	- -	2.94	- -	0.0029 B	- -	0.00075 B	- -	28.3	- -	7.49	- -
PA-1 1/23/1998	3010/6010	NA	- -	0.302 B	- -	0.095	- -	NA	- -	0.0050	- -	ND JN	0.001	NA	- -	55.7	- -
PA-2 1/23/1998	3010/6010	NA	- -	0.224 B	- -	0.306	- -	NA	- -	0.0278	- -	ND JN	0.001	NA	- -	41	- -
PA-3 1/23/1998	3010/6010	NA	- -	0.0174 B	- -	0.0521	- -	NA	- -	0.0078	- -	ND JN	0.001	NA	- -	3.59	- -
R4-6 4/6/1999	3010/6010	NA	- -	ND U	0.01	0.097 B	- -	NA	- -	ND U	0.001	0.0022 B	- -	NA	- -	0.0391	- -
Field Blank 11/17/1998	3010/6010	NA	- -	ND	0.004	ND	0.0030	NA	- -	ND	0.001	ND N	0.001	NA	- -	ND	0.001
GEC-1 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.0397	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007
GEC-2 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.193	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007
GEC-3 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.162	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007
GEC-4 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.05	0.0624	0.001	NA	- -	ND	0.0005	NA	- -	ND	0.007

Notes:

NS= Not Sampled
SQL= Sample Quantitation Limit
NA= Not Analyzed
ND= Not detected above SQL
NG= Not Given
3010/6010= USEPA Method 3010/6010
- - = Sample quantitation limits not provided or not available.

SS= Data for NYSDEC split samples.
B= Analytical result is between the instrument detection limit and the contract required detection limit.
E= Detected concentration exceeds calibration curve range.
N= Spiked sample recovery not within control limits.
U= Analyte not detected at sample quanititation limit.
*= Duplicate analysis not within control limit.

TABLE 2
SUMMARY OF GROUNDWATERANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Chromium (VI)	SQL	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury	SQL
MW-26R 12/15/2003	200.7/601	ND	0.004	NA	--	0.0018	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
TCE-1 1/29/1998	3010/6010	NA	--	NA	--	10.6	--	NA	--	0.291	--	NA	--	NA	--	0.0025	--
TCE-1 (SS) 11/18/1998	NG	NA	--	0.0098 B	--	10.9	--	0.19	--	0.188	--	3.98 B	--	0.896	--	0.0034	--
PA-1 1/23/1998	3010/6010	NA	--	NA	--	15	--	NA	--	0.1754	--	NA	--	NA	--	0.00032 *N	--
PA-2 1/23/1998	3010/6010	NA	--	NA	--	5.91	--	NA	--	5.85	--	NA	--	NA	--	0.0023 *N	--
PA-3 1/23/1998	3010/6010	NA	--	NA	--	0.687	--	NA	--	0.23	--	NA	--	NA	--	0.0010 *N	--
R4-6 4/6/1999	3010/6010	NA	--	NA	--	0.0178 B	--	NA	--	0.0265	--	NA	--	NA	--	ND U	0.00010
Field Blank 11/17/1998	3010/6010	NA	--	NA	--	0.0085 B	--	NA	--	0.0020	--	NA	--	NA	--	ND	0.00010
GEC-1 12/15/2003	200.7/6010	ND	0.004	NA	--	0.0012	0.00050	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
GEC-2 12/15/2003	200.7/6010	ND	0.004	NA	--	0.0006	0.0005	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
GEC-3 12/15/2003	200.7/6010	ND	0.004	NA	--	0.0010	0.0005	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040
GEC-4 12/15/2003	200.7/6010	ND	0.004	NA	--	0.0038	0.0005	NA	--	ND	0.0020	NA	--	NA	--	ND	0.000040

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TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA:
TOTAL METALS
248 Wyandanch Avenue
Wyandanch, New York
(unit, parts per million [ppm], mg/L)

Sample Identification	Analytical Method	Nickel	SQL	Potassium	SQL	Selenium	SQL	Silver	SQL	Sodium	SQL	Thallium	SQL	Vanadium	SQL	Zinc	SQL
MW-26R 12/15/2003	200.7/601	NA	- -	NA	- -	ND	0.050	ND	0.005	NA	- -	NA	- -	NA	- -	0.019	0.005
TCE-1 1/29/1998	3010/6010	1.7 E	- -	NA	- -	ND U	0.0020	ND U	0.00061	NA	- -	ND U	0.0020	NA	- -	2.3 E	- -
TCE-1 (SS) 11/18/1998	NG	0.726	- -	3.03 B	- -	ND U	0.0025	ND U	0.00061	10.7	- -	0.0069 B	- -	0.0309 B	- -	1.41	- -
PA-1 1/23/1998	3010/6010	2.41	- -	NA	- -	ND JN	- -	ND U	- -	NA	- -	ND JN	0.0020	NA	- -	1.13 E	- -
PA-2 1/23/1998	3010/6010	14.8	- -	NA	- -	0.0046 BN	- -	0.0175	- -	NA	- -	ND JN	0.0020	NA	- -	3.18 E	- -
PA-3 1/23/1998	3010/6010	40.4	- -	NA	- -	ND JN	- -	ND U	- -	NA	- -	ND JN	0.0020	NA	- -	1.1 E	- -
R4-6 4/6/1999	3010/6010	0.013 B	- -	NA	- -	ND U	0.0040	ND U	0.002	NA	- -	ND U	0.0070	NA	- -	0.130	- -
Field Blank 11/17/1998	3010/6010	ND	0.0060	NA	- -	ND N	0.0030	ND	0.001	NA	- -	ND	0.0050	NA	- -	ND *	0.017
GEC-1 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.050	ND	0.005	NA	- -	NA	- -	NA	- -	0.015	0.005
GEC-2 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.050	ND	0.005	NA	- -	NA	- -	NA	- -	0.010	0.005
GEC-3 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.050	ND	0.005	NA	- -	NA	- -	NA	- -	0.023	0.005
GEC-4 12/15/2003	200.7/6010	NA	- -	NA	- -	ND	0.050	ND	0.005	NA	- -	NA	- -	NA	- -	0.016	0.005

TABLE 3

SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS

248 Wyandanch Avenue, Wyandanch, New York

(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Aluminum	SQL	Antimony	SQL	Arsenic	SQL	Barium	SQL	Beryllium	SQL	Cadmium	SQL	Calcium	SQL	Chromium (III)	SQL	Chromium (VI)	SQL
B-1	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	10.0	--	ND	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	14.0	--	ND	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	92.0	--	ND	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	100	--	ND	--
	10-12	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	130	--	ND	--
	14-15	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	200	--	ND	--
	19-20.5	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	100	--	ND	--
B-2	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	14.0	--	ND	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	240	--	ND	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	39.0	--	ND	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	330	--	ND	--
	14-16	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	230	--	ND	--
B-3	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	1,340	--	ND	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	150	--	ND	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	1,460	--	ND	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	200	--	ND	--
	14-16	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	35.0	--	ND	--
B-4	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	7.50	--	ND	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	4.00	--	ND	--
	6-7.5	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	5.90	--	ND	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	8.10	--	ND	--
B-5	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	26.0	--	ND	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	71.0	--	ND	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	25.0	--	ND	--
	NV	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	340	--	ND	--
B-6	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	3.80	--	ND	--
B-7	14-15	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--	71.0	--	ND	--
B-7-L	2-4	11/91	NG	4,760	--	NA	--	5.50	--	18.4	--	NA	--	NA	--	NA	--	1050	--	NA	--
	4-6	11/91	NG	3,070	--	NA	--	12.3	--	15.5	--	NA	--	NA	--	NA	--	327	--	NA	--
	6-8	11/91	NG	1,900	--	NA	--	6.87	--	12.0	--	NA	--	NA	--	NA	--	294	--	NA	--
B-8-L	2-4	11/91	NG	4,860	--	NA	--	1.20	--	19.7	--	NA	--	NA	--	NA	--	115	--	NA	--
	4-6	11/91	NG	3,790	--	NA	--	7.80	--	23.0	--	NA	--	NA	--	NA	--	3420	--	NA	--
	6-10	11/91	NG	1,080	--	NA	--	2.15	--	13.0	--	NA	--	NA	--	NA	--	120	--	NA	--
B-9-OB	0-4	11/91	NG	4,070	--	NA	--	9.67	--	27.2	--	NA	--	NA	--	NA	--	89.9	--	NA	--
B-10-OB	0-4	11/91	NG	6,420	--	NA	--	171	--	24.4	--	NA	--	NA	--	NA	--	348	--	NA	--
B-11-T	0-3	11/91	NG	5,650	--	NA	--	27.8	--	18.0	--	NA	--	NA	--	NA	--	0.60	--	NA	--
B-12-T	0-5	11/91	NG	4,430	--	NA	--	9.62	--	29.7	--	NA	--	NA	--	NA	--	750	--	NA	--
B-13-T	0-4	11/91	NG	4,260	--	NA	--	7.42	--	61.6	--	NA	--	NA	--	NA	--	736	--	NA	--
B-14-T	0-4	11/91	NG	4,630	--	NA	--	8.62	--	20.3	--	NA	--	NA	--	NA	--	44.8	--	NA	--
B-15-T	0-4	11/91	NG	3,920	--	NA	--	8.45	--	242	--	NA	--	NA	--	NA	--	171	--	NA	--
MW-1	4-6	11/91	NG	1,320	--	NA	--	1.85	--	6.55	--	NA	--	NA	--	NA	--	5.87	--	NA	--
	9-11	11/91	NG	506	--	NA	--	8.25	--	4.12	--	NA	--	NA	--	NA	--	4.12	--	NA	--
	14-16	11/91	NG	779	--	NA	--	1.42	--	3.90	--	NA	--	NA	--	NA	--	3.40	--	NA	--
	19-21	11/91	NG	642	--	NA	--	2.45	--	3.67	--	NA	--	NA	--	NA	--	3.67	--	NA	--
MW-2	4-6	11/91	NG	3,180	--	NA	--	2.67	--	9.36	--	NA	--	NA	--	NA	--	29.9	--	NA	--
	9-11	11/91	NG	1,260	--	NA	--	2.52	--	6.48	--	NA	--	NA	--	NA	--	33.9	--	NA	--
	14-16	11/91	NG	1,600	--	NA	--	2.75	--	5.12	--	NA	--	NA	--	NA	--	28.6	--	NA	--
	19-21	11/91	NG	559	--	NA	--	1.20	--	3.19	--	NA	--	NA	--	NA	--	5.70	--	NA	--
MW-3	4-6	11/91	NG	829	--	NA	--	4.50	--	3.09	--	NA	--	NA	--	NA	--	2.99	--	NA	--
	9-11	11/91	NG	1,900	--	NA	--	6.75	--	6.38	--	NA	--	NA	--	NA	--	8.13	--	NA	--
	14-16	11/91	NG	876	--	NA	--	8.75	--	5.92	--	NA	--	NA	--	NA	--	19.6	--	NA	--
	19-21	11/91	NG	743	--	NA	--	7.70	--	6.45	--	NA	--	NA	--	NA	--	27.2	--	NA	--
MW-4	4-6	11/91	NG	2,850	--	NA	--	2.70	--	5.72	--	NA	--	NA	--	NA	--	9.43	--	NA	--
	9-11	11/91	NG	1,080	--	NA	--	1.88	--	6.49	--	NA	--	NA	--	NA	--	57.1	--	NA	--
	14-16	11/91	NG	752	--	NA	--	1.30	--	9.77	--	NA	--	NA	--	NA	--	68.2	--	NA	--
	19-21	11/91	NG	715	--	NA	--	0.67	--	5.90	--	NA	--	NA	--	NA	--	43.7	--	NA	--

Prepared by: PCS/EAF
Reviewed by: SWB
Revised: 7/19/2005

TABLE 3
SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS
248 Wyandanch Avenue, Wyandanch, New York
(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Aluminum	SQL	Antimony		SQL	Arsenic		SQL	Barium		SQL	Beryllium		SQL	Cadmium		SQL	Calcium		SQL	Chromium (III)		SQL	Chromium (VI)		SQL
MW-5	4-6	11/91	NG	2,240	--	NA		--	6.52		--	92.9		--	NA		--	NA		--	NA		--	118		--	NA		--
	9-11	11/91	NG	1,410	--	NA		--	5.00		--	4.62		--	NA		--	NA		--	NA		--	16.0		--	NA		--
	14-16	11/91	NG	554	--	NA		--	3.90		--	6.49		--	NA		--	NA		--	NA		--	5.42		--	NA		--
	19-21	11/91	NG	477	--	NA		--	2.55		--	7.25		--	NA		--	NA		--	NA		--	3.40		--	NA		--
MW-6	4-6	11/91	NG	2,340	--	NA		--	12.3		--	8.05		--	NA		--	NA		--	NA		--	361		--	NA		--
	9-11	11/91	NG	1,260	--	NA		--	4.70		--	4.89		--	NA		--	NA		--	NA		--	15.4		--	NA		--
	14-16	11/91	NG	619	--	NA		--	1.75		--	3.49		--	NA		--	NA		--	NA		--	27.7		--	NA		--
	19-21	11/91	NG	563	--	NA		--	1.44		--	5.96		--	NA		--	NA		--	NA		--	6.09		--	NA		--
B-8 GREEN	NG	11/91	NG	NA	--	NA		--	NA		--	NA		--	NA		--	NA		--	NA		--	3,800		--	NA		--
LP-GRAB	NG	11/91	NG	NA	--	NA		--	NA		--	NA		--	NA		--	NA		--	NA		--	2,870		--	NA		--
LP-1	NG	11/91	NG	NA	--	NA		--	NA		--	287		--	NA		--	NA		--	NA		--	474		--	NA		--
LP-2	NG	11/91	NG	NA	--	NA		--	NA		--	330		--	NA		--	NA		--	NA		--	800		--	NA		--
LP-3	NG	11/91	NG	NA	--	NA		--	NA		--	373		--	NA		--	NA		--	NA		--	1,340		--	NA		--
LP-4	NG	11/91	NG	NA	--	NA		--	NA		--	765		--	NA		--	NA		--	NA		--	1,100		--	NA		--
AQ-1	0-2	1/29/1998	3010/6010	NA	--	2.00	BN	--	1.50	B	--	NA		--	ND	U	0.21	0.34	B	--	NA		--	124		--	ND		--
AQ-1	4-6	1/29/1998	3010/6010	NA	--	0.93	BN	--	1.00	B	--	NA		--	ND	U	0.21	ND	U	0.21	NA		--	20.7		--	ND		--
AQ-1	8-10	1/29/1998	3010/6010	NA	--	1.20	BN	--	0.63	B	--	NA		--	ND	U	0.22	ND	U	0.22	NA		--	21.6		--	ND		--
PA-1	0-2	1/23/1998	3010/6010	743	--	23.3		--	1.90	B	--	9.80	B	--	ND	U	0.20	ND	U	0.20	51.5	B	--	2,620		--	NA		--
PA-1 Duplicate	0-2	1/23/1998	3010/6010	782	--	28.2		--	2.00	B	--	11.4	B	--	ND	U	0.20	ND	U	0.20	69.4	B	--	2,710		--	NA		--
PA-1	4-6	1/23/1998	3010/6010	2,160	--	44.7		--	1.80	B	--	8.00	B	--	ND	U	0.20	ND	U	0.20	259	B	--	8,750		--	NA		--
PA-1	8-10	1/23/1998	3010/6010	1,620	--	2.80	B	--	0.81	B	--	2.10	B	--	ND	U	0.19	ND	U	0.19	59.6	B	--	371		--	NA		--
PA-2	0-2	1/23/1998	3010/6010	2,100	--	11.6	B	--	1.80	B	--	3.20	B	--	ND	U	0.19	ND	U	0.19	136	B	--	1,060		--	NA		--
PA-2	4-6	1/23/1998	3010/6010	3,390	--	4.30	B	--	0.70	B	--	5.10	B	--	ND	U	0.18	ND	U	0.18	109	B	--	340		--	NA		--
PA-2	8-10	1/23/1998	3010/6010	1,430	--	1.00	B	--	ND	U	0.40	3.90	B	--	ND	U	0.20	ND	U	0.20	59.2	B	--	8.60		--	NA		--
PA-3	0-2	1/23/1998	3010/6010	3,120	--	1.80	B	--	1.10	B	--	8.30	B	--	ND	U	0.18	ND	U	0.18	213	B	--	102		--	NA		--
PA-3	4-6	1/23/1998	3010/6010	3,500	--	0.82	B	--	1.90		--	5.60	B	--	ND	U	0.17	ND	U	0.17	119	B	--	6.00		--	NA		--
PA-3	8-10	1/23/1998	3010/6010	1,360	--	0.88	B	--	0.49	B	--	2.10	B	--	ND	U	0.20	ND	U	0.20	154	B	--	3.90		--	NA		--
PA-4	0-2	1/23/1998	3010/6010	1,820	--	57.9		--	3.80		--	10.1	B	--	ND	U	0.18	ND	U	0.18	369	B	--	4,510		--	NA		--
PA-4	4-6	1/23/1998	3010/6010	3,870	--	2.30	B	--	0.97	B	--	8.10	B	--	ND	U	0.17	ND	U	0.17	87.3	B	--	356		--	NA		--
PA-4	8-10	1/23/1998	3010/6010	4,670	--	2.60	B	--	1.10	B	--	10.1	B	--	ND	U	0.17	ND	U	0.17	200	B	--	359		--	NA		--
PA-5	0-2	1/23/1998	3010/6010	3,030	--	2.10	B	--	2.10		--	23.1	B	--	ND	U	0.18	ND	U	0.18	9,600		--	185		--	NA		--
PA-5	4-6	1/23/1998	3010/6010	11,800	--	ND	U	0.71	4.00		--	17.5	B	--	ND	U	0.24	ND	U	0.24	324	B	--	12.6		--	NA		--
PA-5	8-10	1/23/1998	3010/6010	1,450	--	1.40	B	--	0.55	B	--	2.70	B	--	ND	U	0.18	ND	U	0.18	107	B	--	2.40		--	NA		--
MW-26	5-7	9/15/1998	3010/6010	NA	--	3.60	B	--	5.40		--	NA		--	ND	U	0.21	1.00	B	--	NA		--	23.2		--	ND	U	0.17
MW-26	10-12	9/15/1998	3010/6010	NA	--	1.10		--	ND	U	0.68	NA		--	ND	U	0.23	ND	U	0.23	NA		--	4.60		--	ND	U	0.18
B-27	10-12†	9/15/1998	3010/6010	NA	--	12.6	B	--	6.80		--	NA		--	0.91	B	--	4.90		--	NA		--	930		--	ND	U	0.25
B-28	10-12†	9/15/1998	3010/6010	NA	--	13.4	B	--	8.10		--	NA		--	1.50		--	5.80		--	NA		--	858		--	ND	U	0.26
Field Blank		9/16/1998	3010/6010	NA	--	5.10	B	--	ND	U	3.00	NA		--	ND	U	1.0	1.20	B	--	NA		--	5.50	B	--	NA		--
MW-25	0-2	9/15/1998	3010/6010	NA	--	1.70	B	--	3.70		--	NA		--	0.66	B	--	ND	U	0.21	NA		--	214		--	0.21		--
MW-25	5-7	9/15/1998	3010/6010	NA	--	ND	U	1.1	0.81	B	--	NA		--	ND	U	0.21	ND	U	0.21	NA		--	11.8		--	ND	U	0.17
MW-26	0-2	9/15/1998	3010/6010	NA	--	1.10	B	--	1.90		--	NA		--	0.33		--	ND	U	0.22	NA		--	6.80		--	ND	U	0.17
B-29	0-2	9/15/1998	3010/6010	NA	--	4.30	B	--	3.10		--	NA		--	0.43	B	--	0.36	B	--	NA		--	696		--	ND	U	0.18
B-29 Duplicate	0-2	9/15/1998	3010/6010	NA	--	3.70	B	--	3.10		--	NA		--	0.44	B	--	0.27	B	--	NA		--	694		--	ND	U	0.18
B-36	5-7	9/14/1998	3010/6010	NA	--	ND	U	1.0	1.20	B	--	NA		--	0.26	B	--	ND	U	0.21	NA		--	4.10		--	ND	U	0.17
B-37	5-7	9/14/1998	3010/6010	NA	--	ND	U	1.0	1.40	B	--	NA		--	ND	U	0.21	ND	U	0.21	NA		--	112		--	ND	U	0.17
B-31	10-12	9/14/1998	3010/6010	NA	--	ND	U	1.0	2.60		--	NA		--	0.24	B	--	ND	U	0.23	NA		--	11.4		--	ND	U	0.17
B-35	5-7	9/15/1998	3010/6010	NA	--	ND	U	1.0	1.80	B	--	NA		--	0.23	B	--	ND	U	0.21	NA		--	8.80		--	ND	U	0.17
B-30	5-7	9/15/1998	3010/6010	NA	--	ND	U	1.0	0.80	B	--	NA		--	ND	U	0.21	ND	U	0.21	NA		--	3.80		--	ND	U	0.16

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TABLE 3

SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS

248 Wyandanch Avenue, Wyandanch, New York

(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Aluminum		SQL	Antimony		SQL	Arsenic		SQL	Barium		SQL	Beryllium		SQL	Cadmium		SQL	Calcium		SQL	Chromium (III)		SQL	Chromium (VI)		SQL
Field Blank		11/20/1998	3010/6010	NA		--	6.50	B	--	ND	U	3.00	NA		--	ND	U	1.00	1.60	B	--	NA		--	ND	U	1.00	ND	U	0.010
LP-1	6-8	11/18/1998	3010/6010	NA		--	2.60	BN	--	ND	U	0.42	NA		--	ND	U	0.14	ND	U	0.14	NA		--	602	*	--	ND	U	0.22
LP-1**		11/18/1998	NG	638		--	127		--	5.00		--	307		--	ND	U	0.05	ND	U	0.05	772	B	--	17,500		--			--
LP-2	6-8	11/18/1998	3010/6010	NA		--	121	N	--	3.4		--	NA		--	ND	U	0.23	0.71	B	--	NA		--	23,700	*	--	ND	U	0.34
LP-2**		11/18/1998	NG	1,460		--	233		--	9.40		--	561		--	ND	U	####	ND	U	####	1,230	B	--	31,700		--			--
LP-3	6-8	11/18/1998	3010/6010	NA		--	5.30	BN	--	ND	U	0.47	NA		--	ND	U	0.16	ND	U	0.16	NA		--	905	*	--	ND	U	0.23
LP-4	6-8	11/18/1998	3010/6010	NA		--	5.70	B	--	ND	U	0.63	NA		--	ND	U	0.21	0.45	B	--	NA		--	580		--	ND	U	0.22
LP-4 Duplicate	6-8	11/18/1998	3010/6010	NA		--	6.20	B	--	ND	U	0.63	NA		--	ND	U	0.21	0.40	B	--	NA		--	693		--	ND	U	0.22
HB-1	0-3	11/19/1998	3010/6010	NA		--	1.40	B	--	3.00		--	NA		--	ND	U	0.23	1.00	B	--	NA		--	49.4		--	ND	U	0.24
HB-1	2	11/19/1998	3010/6010	NA		--	1.20	B	--	2.10		--	NA		--	ND	U	0.21	0.53	B	--	NA		--	7.80		--	ND	U	0.21
HB-2	0-3	11/19/1998	3010/6010	NA		--	1.10	B	--	2.10		--	NA		--	ND	U	0.21	0.73	B	--	NA		--	15.0		--	ND	U	0.22
HB-2	2	11/19/1998	3010/6010	NA		--	1.20	B	--	1.80	B	--	NA		--	ND	U	0.22	0.80	B	--	NA		--	17.6		--	ND	U	0.22
HB-3	2	11/19/1998	3010/6010	NA		--	ND	U	0.82	0.90	B	--	NA		--	ND	U	0.20	0.54	B	--	NA		--	4.10		--	ND	U	0.20
HB-4	2	11/19/1998	3010/6010	NA		--	0.88	B	--	0.82	B	--	NA		--	ND	U	0.21	0.56	B	--	NA		--	4.00		--	ND	U	0.21
HB-5	2	11/19/1998	3010/6010	NA		--	1.50	B	--	ND		0.66	NA		--	ND	U	0.22	0.69	B	--	NA		--	19.8		--	ND	U	0.22
HB-6	2	11/19/1998	3010/6010	NA		--	ND	U	0.87	1.50	B	--	NA		--	ND	U	0.22	0.68	B	--	NA		--	31.8		--	ND	U	0.22
HB-7	2	11/19/1998	3010/6010	NA		--	ND	U	0.86	3.50		--	NA		--	ND	U	0.22	0.63	B	--	NA		--	34.4		--	ND	U	0.22
Tea Garden	2	11/19/1998	3010/6010	NA		--	ND	U	0.85	1.70	B	--	NA			ND	U	0.21	0.80	B	--	NA		--	24.0		--	ND	U	0.21
B-32	0-2	11/18/1998	3010/6010	NA		--	4.40	BN	--	2.10		--	NA		--	ND	U	0.18	ND	U	0.18	NA		--	961	*	--	ND	U	0.22
B-32	5-7	11/18/1998	3010/6010	NA		--	0.78	BN	--	ND	U	0.42	NA		--	ND	U	0.14	ND	U	0.14	NA		--	3.40	*	--	ND	U	0.20
B-33	0-2	11/18/1998	3010/6010	NA		--	ND	UN	0.06	ND	U	0.44	NA		--	ND	U	0.15	ND	U	0.15	NA		--	85.1	*	--	ND	U	0.21
B-33	5-7	11/18/1998	3010/6010	NA		--	ND	UN	0.44	ND	U	0.33	NA		--	ND	U	0.11	ND	U	0.11	NA		--	2.00	*	--	ND	U	0.21
B-34	0-2	11/18/1998	3010/6010	NA		--	1.30	BN	--	ND	U	0.48	NA		--	ND	U	0.16	ND	U	0.16	NA		--	182	*	--	ND	U	0.21
B-34	5-7	11/18/1998	3010/6010	NA		--	ND	UN	0.72	ND	U	0.54	NA		--	ND	U	0.18	ND	U	0.18	NA		--	3.70	*	--	ND	U	0.20
R4-2	4-6	4/6/1999	3010/6010	NA		--	ND	U	1.70	1.40	B	--	NA		--	ND	U	0.17	0.33	B	--	NA		--	3.20		--	NA		--
R4-5	4-6	4/6/1999	3010/6010	NA		--	ND	U	1.80	1.40	B	--	NA		--	ND	U	0.18	0.45	B	--	NA		--	5.20		--	NA		--
R4-6	4-6	4/6/1999	3010/6010	NA		--	ND	U	1.80	1.30	B	--	NA		--	ND	U	0.18	0.26	B	--	NA		--	1.80	B	--	NA		--
WWT FL	6-8	4/6/1999	3010/6010	NA		--	ND	U	1.60	1.60		--	NA		--	ND	U	0.16	0.24	B	--	NA		--	24.6		--	NA		--
LP-1A	15-17	6/23/1999	3010/6010	NA		--	ND	U	0.53	2.40		--	NA		--	0.22	B	--	0.21	B	--	NA		--	140		--	NA		--
LP-1B	20-22	6/23/1999	3010/6010	NA		--	ND	U	0.61	4.80		--	NA		--	0.21	B	--	ND	U	0.20	NA		--	41.5		--	NA		--
LP-1C	25-27	6/23/1999	3010/6010	NA		--	ND	U	0.45	ND	U	0.45	NA		--	0.19	B	--	0.18	B	--	NA		--	14.4		--	NA		--
LP-2A	15-17	6/23/1999	3010/6010	NA		--	0.52	B	--	0.68	B	--	NA		--	0.15	B	--	ND	U	0.13	NA		--	47.2		--	NA		--
LP-2B	20-22	6/23/1999	3010/6010	NA		--	0.55	B	--	0.72	B	--	NA		--	0.16	B	--	0.17	B	--	NA		--	19.1		--	NA		--
LP-2C	25-27	6/23/1999	3010/6010	NA		--	0.12	B	--	0.18	B	--	NA		--	0.28	B	--	0.40	B	--	NA		--	10.1		--	NA		--
LP-5A	15-17	6/23/1999	3010/6010	NA		--	0.80	B	--	ND	U	0.69	NA		--	0.26	B	--	0.31	B	--	NA		--	125		--	NA		--
LP-5B	20-22	6/23/1999	3010/6010	NA		--	ND	U	0.64	0.95	B	--	NA		--	0.22	B	--	ND	U	0.21	NA		--	53.7		--	NA		--
LP-5C	25-27	6/23/1999	3010/6010	NA		--	ND	U	0.65	ND	U	0.65	NA		--	0.23	B	--	ND	U	0.22	NA		--	9.40		--	NA		--

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TABLE 3
SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS
248 Wyandanch Avenue, Wyandanch, New York

(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Aluminum	SQL	Antimony	SQL	Arsenic	SQL	Barium	SQL	Beryllium	SQL	Cadmium	SQL	Calcium	SQL	Chromium (III)	SQL	Chromium (VI)	SQL
L2(15,20)	0-4	12/1/2003	3050/6010	NA	- -	NA	- -	ND	5.18	24	0.10	NA	- -	ND	0.26	NA	- -	3.41	0.36	ND	1.0
L2(15,20)	8-12	12/1/2003	3050/6010	NA	- -	NA	- -	ND	5.32	2.84	0.11	NA	- -	ND	0.27	NA	- -	58.1	0.37	ND	0.2
L3(20,15)	4-8	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.46	9.62	0.11	NA	- -	ND	0.27	NA	- -	238.0	0.38	16.4	0.38
L3(20,15)	8-12	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.18	4.76	0.10	NA	- -	ND	0.26	NA	- -	137	0.36	5.0	0.36
L4(00,30)	0-4	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.38	53.4	0.11	NA	- -	ND	0.05	NA	- -	20.9	0.39	ND	1
L4(00,30)	8-12	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.63	2.61	0.11	NA	- -	ND	0.28	NA	- -	3.06	0.39	ND	0.4
L5(05,35)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.62	10.2	0.11	NA	- -	ND	0.28	NA	- -	4.30	0.39	ND	2.2
L5(05,35)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.27	6.21	0.11	NA	- -	ND	0.26	NA	- -	3.0	0.37	ND	0.4
L5(30,50)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.58	9.05	0.11	NA	- -	0.28	0.06	NA	- -	186	0.39	ND	2.1
L5(30,50)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.44	2.38	0.11	NA	- -	0.27	0.05	NA	- -	8.7	0.38	ND	1.9
L5(30,15)	0-4	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.46	1.87	0.11	NA	- -	ND	0.27	NA	- -	3.1	0.38	ND	0.2
L5(30,15)	8-12	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.26	11.3	0.11	NA	- -	ND	0.26	NA	- -	5.7	0.37	ND	1.9
O2(15,10)	0-4	12/1/2003	3050/6010	NA	- -	NA	- -	ND	5.15	7.68	0.10	NA	- -	ND	0.26	NA	- -	13.5	0.36	ND	0.9
O2(15,10)	8-12	12/1/2003	3050/6010	NA	- -	NA	- -	ND	7.39	5.44	0.15	NA	- -	ND	0.37	NA	- -	4.90	0.52	ND	0.3
O3(10,10)	4-8	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.50	12.7	0.11	NA	- -	ND	0.27	NA	- -	5.81	0.38	ND	2
O3(10,10)	8-12	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.44	2.33	0.11	NA	- -	ND	0.27	NA	- -	2.33	0.38	ND	0.2
O4(10,30)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.38	10.9	0.11	NA	- -	ND	0.27	NA	- -	5.16	0.38	ND	5
O4(10,30)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.36	6.54	0.11	NA	- -	ND	0.27	NA	- -	3.73	0.38	ND	0.2
O4(20,10)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.18	3.64	0.10	NA	- -	ND	0.26	NA	- -	2.12	0.36	ND	5
O4(20,10)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.58	14.1	0.11	NA	- -	ND	0.28	NA	- -	5.03	0.39	ND	0.2
O5(05,25)	0-4	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.33	8.46	0.11	NA	- -	ND	0.27	NA	- -	4.46	0.37	ND	1.0
O5(05,25)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.29	2.62	0.11	NA	- -	ND	0.26	NA	- -	2.27	0.37	ND	0.2
O5(30,25)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.19	5.18	0.10	NA	- -	ND	0.26	NA	- -	3.43	0.36	ND	1.0
O5(30,25)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.49	2.81	0.11	NA	- -	ND	0.27	NA	- -	2.03	0.38	ND	0.2
Q2(15,05)	0-4	12/1/2003	3050/6010	NA	- -	NA	- -	ND	5.18	7.30	0.10	NA	- -	ND	0.26	NA	- -	3.46	0.36	ND	0.2
Q2(15,05)	8-12	12/1/2003	3050/6010	NA	- -	NA	- -	ND	5.73	2.20	0.11	NA	- -	ND	0.29	NA	- -	1.77	0.40	ND	0.2
Q3(20,10)	4-8	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.26	7.00	0.11	NA	- -	ND	0.26	NA	- -	4.20	0.37	ND	1.0
Q3(20,10)	8-12	12/2/2003	3050/6010	NA	- -	NA	- -	ND	6.28	3.19	0.13	NA	- -	ND	0.31	NA	- -	2.28	0.44	ND	0.2
Q4(20,10)	0-4	12/2/2003	3050/6010	NA	- -	NA	- -	ND	5.19	10.9	0.10	NA	- -	ND	0.26	NA	- -	4.37	0.36	ND	0.4
Q4(20,10)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	6.51	10.9	0.13	NA	- -	ND	0.33	NA	- -	3.74	0.46	ND	10
Q4(20,10)	8-12	12/2/2003	3050/6010	NA	- -	NA	- -	8.27	5.79	8.04	0.12	NA	- -	ND	0.29	NA	- -	5.13	0.41	ND	0.2
Q5(30,05)	4-8	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.34	8.29	0.11	NA	- -	ND	0.27	NA	- -	4.45	0.37	ND	1.0
Q5(30,05)	8-12	12/3/2003	3050/6010	NA	- -	NA	- -	ND	5.28	2.05	0.11	NA	- -	ND	0.26	NA	- -	2.71	0.37	ND	0.2
Recommended Clean-up Level to Protect Groundwater Quality				n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a			
Recommended Clean-up Objective				SB		SB		7.5 or SB		300 or SB		0.16 or SB		1 or SB		SB		10 or SB			

Notes:

NA= Not Analyzed
ND= Not Detected
NG= None Given
NV= Not Available
SQL= Sample Quantitation Limit
n/a= no recommended cleanup objective available
SB= Site Background
†= Sludge/sediment from bottom of storm drain
‡= Mecury analyzed via USEPA Method 7471
U= Analyte was not detected at the SQL
E= Estimated reported value due to interference.
3010/6010= USEPA Method 3010/6010

1) The laboratory did not provide the SQL for samples in which the constituent was detected. No sample quantitation limits are available for samples collected by other consultants in 1981 and 1991.
2) The analytical data for the field blank is grouped with the appropriate laboratory sample batch. Dates provided for field blanks represent the date of laboratory analysis.

B= Analytical result is betweeen the instrument detection limit and the contract required detection limit.
**= Sample analyzed by New York State Department of Environmental Control
*= Duplicate analysis not within control limit
N= Spiked sample recovery not within control limits.

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Revised: 7/19/2005

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248 Wyandanch Avenue, Wyandanch, New York

(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury ‡	SQL	Nickel	SQL	Potassium	SQL
B-1	2-4	12/22/1981	NG	NA	--	10.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	7.00	--	NA	--
	4-6	12/22/1981	NG	NA	--	12.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	8.10	--	NA	--
	6-8	12/22/1981	NG	NA	--	290	--	NA	--	NA	--	NA	--	NA	--	NA	--	48.0	--	NA	--
	8-10	12/22/1981	NG	NA	--	76.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	42.0	--	NA	--
	10-12	12/22/1981	NG	NA	--	93.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	57.0	--	NA	--
	14-15	12/22/1981	NG	NA	--	76.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	44.0	--	NA	--
	19-20.5	12/22/1981	NG	NA	--	37.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	34.0	--	NA	--
B-2	2-4	12/22/1981	NG	NA	--	13.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	8.00	--	NA	--
	4-6	12/22/1981	NG	NA	--	170	--	NA	--	NA	--	NA	--	NA	--	NA	--	170	--	NA	--
	6-8	12/22/1981	NG	NA	--	32.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	110	--	NA	--
	8-10	12/22/1981	NG	NA	--	260	--	NA	--	NA	--	NA	--	NA	--	NA	--	130	--	NA	--
	14-16	12/22/1981	NG	NA	--	77.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	58.0	--	NA	--
B-3	2-4	12/22/1981	NG	NA	--	920	--	NA	--	NA	--	NA	--	NA	--	NA	--	560	--	NA	--
	4-6	12/22/1981	NG	NA	--	98.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	77.0	--	NA	--
	6-8	12/22/1981	NG	NA	--	960	--	NA	--	NA	--	NA	--	NA	--	NA	--	500	--	NA	--
	8-10	12/22/1981	NG	NA	--	79.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	110	--	NA	--
	14-16	12/22/1981	NG	NA	--	38.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	5.80	--	NA	--
B-4	2-4	12/22/1981	NG	NA	--	3.60	--	NA	--	NA	--	NA	--	NA	--	NA	--	5.80	--	NA	--
	4-6	12/22/1981	NG	NA	--	2.00	--	NA	--	NA	--	NA	--	NA	--	NA	--	4.10	--	NA	--
	6-7.5	12/22/1981	NG	NA	--	2.80	--	NA	--	NA	--	NA	--	NA	--	NA	--	6.60	--	NA	--
	8-10	12/22/1981	NG	NA	--	4.40	--	NA	--	NA	--	NA	--	NA	--	NA	--	12.0	--	NA	--
B-5	2-4	12/22/1981	NG	NA	--	22.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	170	--	NA	--
	4-6	12/22/1981	NG	NA	--	39.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	59.0	--	NA	--
	6-8	12/22/1981	NG	NA	--	29.0	--	NA	--	NA	--	NA	--	NA	--	NA	--	75.0	--	NA	--
	NV	12/22/1981	NG	NA	--	170	--	NA	--	NA	--	NA	--	NA	--	NA	--	99.0	--	NA	--
B-6	4-6	12/22/1981	NG	NA	--	2.10	--	NA	--	NA	--	NA	--	NA	--	NA	--	3.00	--	NA	--
B-7	14-15	12/22/1981	NG	NA	--	150	--	NA	--	NA	--	NA	--	NA	--	NA	--	34.0	--	NA	--
B-7-L	2-4	11/91	NG	6.05	--	893	--	NA	--	87.8	--	421	--	87.8	--	0.063	--	332	--	NA	--
	4-6	11/91	NG	7.15	--	261	--	NA	--	29.4	--	375	--	29.4	--	0.18	--	112	--	NA	--
	6-8	11/91	NG	6.55	--	242	--	NA	--	ND	--	330	--	ND	--	0.016	--	124	--	NA	--
B-8-L	2-4	11/91	NG	7.60	--	5640	--	NA	--	ND	--	304	--	ND	--	0.060	--	162	--	NA	--
	4-6	11/91	NG	9.45	--	3380	--	NA	--	420	--	153	--	420	--	0.055	--	962	--	NA	--
	6-10	11/91	NG	6.00	--	194	--	NA	--	ND	--	105	--	ND	--	0.012	--	65.4	--	NA	--
B-9-OB	0-4	11/91	NG	8.55	--	235	--	NA	--	21.5	--	354	--	21.5	--	0.095	--	69.9	--	NA	--
B-10-OB	0-4	11/91	NG	7.45	--	284	--	NA	--	30.7	--	358	--	30.7	--	0.14	--	470	--	NA	--
B-11-T	0-3	11/91	NG	7.35	--	39.7	--	NA	--	ND	--	351	--	73.8	--	0.066	--	16.9	--	NA	--
B-12-T	0-5	11/91	NG	9.85	--	654	--	NA	--	84.7	--	969	--	100	--	0.044	--	227	--	NA	--
B-13-T	0-4	11/91	NG	7.20	--	647	--	NA	--	71.6	--	413	--	61.0	--	0.31	--	378	--	NA	--
B-14-T	0-4	11/91	NG	5.55	--	140	--	NA	--	ND	--	314	--	51.1	--	0.071	--	33.1	--	NA	--
B-15-T	0-4	11/91	NG	8.30	--	338	--	NA	--	24.2	--	249	--	30.7	--	0.12	--	106	--	NA	--
MW-1	4-6	11/91	NG	7.35	--	6.15	--	NA	--	ND	--	384	--	52.7	--	0.0030	--	16.2	--	NA	--
	9-11	11/91	NG	7.15	--	6.46	--	NA	--	ND	--	131	--	22.1	--	0.0010	--	2.55	--	NA	--
	14-16	11/91	NG	5.85	--	3.25	--	NA	--	ND	--	174	--	20.4	--	0.034	--	ND	--	NA	--
	19-21	11/91	NG	6.75	--	4.06	--	NA	--	ND	--	82.0	--	13.5	--	ND	--	28.2	--	NA	--
MW-2	4-6	11/91	NG	8.30	--	76.8	--	NA	--	ND	--	1160	--	29.0	--	0.059	--	52.7	--	NA	--
	9-11	11/91	NG	7.15	--	77.7	--	NA	--	ND	--	1280	--	30.2	--	0.068	--	42.1	--	NA	--
	14-16	11/91	NG	6.30	--	54.1	--	NA	--	ND	--	1040	--	22.6	--	0.031	--	60.4	--	NA	--
	19-21	11/91	NG	5.35	--	14.6	--	NA	--	ND	--	218	--	25.2	--	0.012	--	8.46	--	NA	--
MW-3	4-6	11/91	NG	6.30	--	6.15	--	NA	--	ND	--	65.8	--	21.7	--	0.028	--	5.83	--	NA	--
	9-11	11/91	NG	6.95	--	14.3	--	NA	--	ND	--	128	--	34.2	--	0.0010	--	18.3	--	NA	--
	14-16	11/91	NG	6.90	--	40.0	--	NA	--	ND	--	92.3	--	29.2	--	0.0010	--	13.4	--	NA	--
	19-21	11/91	NG	6.25	--	65.4	--	NA	--	ND	--	122	--	19.5	--	ND	--	40.6	--	NA	--
MW-4	4-6	11/91	NG	6.35	--	3.25	--	NA	--	ND	--	136	--	25.4	--	ND	--	28.7	--	NA	--
	9-11	11/91	NG	4.63	--	83.1	--	NA	--	ND	--	129	--	18.1	--	ND	--	33.7	--	NA	--
	14-16	11/91	NG	7.30	--	89.7	--	NA	--	ND	--	107	--	17.1	--	0.0030	--	37.9	--	NA	--
	19-21	11/91	NG	6.35	--	90.6	--	NA	--	ND	--	124	--	14.0	--	0.044	--	42.5	--	NA	--

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Revised: 7/19/2005

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(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury ‡	SQL	Nickel	SQL	Potassium	SQL
MW-5	4-6	11/91	NG	8.10	- -	214	- -	NA	- -	10.6	- -	397	- -	48.4	- -	0.15	- -	80.3	- -	NA	- -
	9-11	11/91	NG	7.75	- -	10.2	- -	NA	- -	ND	- -	200	- -	42.5	- -	0.02	- -	42.1	- -	NA	- -
	14-16	11/91	NG	6.55	- -	12.2	- -	NA	- -	ND	- -	79.6	- -	7.85	- -	0.14	- -	8.36	- -	NA	- -
	19-21	11/91	NG	7.50	- -	8.13	- -	NA	- -	ND	- -	78.6	- -	7.20	- -	1.35	- -	20.7	- -	NA	- -
MW-6	4-6	11/91	NG	7.85	- -	245	- -	NA	- -	41.5	- -	203	- -	21.2	- -	0.21	- -	226	- -	NA	- -
	9-11	11/91	NG	7.15	- -	29.6	- -	NA	- -	ND	- -	161	- -	24.6	- -	ND	- -	60.7	- -	NA	- -
	14-16	11/91	NG	5.85	- -	8.98	- -	NA	- -	ND	- -	126	- -	5.85	- -	0.023	- -	14.0	- -	NA	- -
	19-21	11/91	NG	7.35	- -	9.17	- -	NA	- -	ND	- -	129	- -	7.35	- -	ND	- -	13.2	- -	NA	- -
B-8 GREEN	NG	11/91	NG	NA	- -	3,646	- -	NA	- -	556	- -	NA	- -	NA	- -	NA	- -	1,000	- -	NA	- -
LP-GRAB	NG	11/91	NG	NA	- -	906	- -	NA	- -	158	- -	NA	- -	NA	- -	NA	- -	2,650	- -	NA	- -
LP-1	NG	11/91	NG	NA	- -	182	- -	NA	- -	NA	- -	NA	- -	NA	- -	NA	- -	326	- -	NA	- -
LP-2	NG	11/91	NG	NA	- -	496	- -	NA	- -	NA	- -	NA	- -	NA	- -	NA	- -	754	- -	NA	- -
LP-3	NG	11/91	NG	NA	- -	299	- -	NA	- -	NA	- -	NA	- -	NA	- -	NA	- -	1,095	- -	NA	- -
LP-4	NG	11/91	NG	NA	- -	280	- -	NA	- -	NA	- -	NA	- -	NA	- -	NA	- -	938	- -	NA	- -
AQ-1	0-2	1/29/1998	3010/6010	NA	- -	423	- -	NA	- -	24.4 E	- -	NA	- -	NA	- -	ND UN	0.10	73.6	- -	NA	- -
AQ-1	4-6	1/29/1998	3010/6010	NA	- -	120	- -	NA	- -	10.9 E	- -	NA	- -	NA	- -	ND UN	0.10	5.90 B	- -	NA	- -
AQ-1	8-10	1/29/1998	3010/6010	NA	- -	109	- -	NA	- -	1.70 E	- -	NA	- -	NA	- -	ND UN	0.088	2.50 B	- -	NA	- -
PA-1	0-2	1/23/1998	3010/6010	0.23 B	- -	230	- -	3,170 *	- -	31.3 *	- -	73.5 B	- -	6.20	- -	0.10 N	- -	308 N	- -	168 B	- -
PA-1 Duplicate	0-2	1/23/1998	3010/6010	0.32 B	- -	225	- -	3,980 *	- -	39.0 *	- -	76.6 B	- -	9.10	- -	0.15	- -	317	- -	184 B	- -
PA-1	4-6	1/23/1998	3010/6010	ND U	0.20	727	- -	2,670 *	- -	21.6 *	- -	144 B	- -	15.5	- -	ND UN	0.096	654 N	- -	144 B	- -
PA-1	8-10	1/23/1998	3010/6010	0.55 B	- -	57.8	- -	4,020 *	- -	2.40 *	- -	156 B	- -	28.4	- -	ND UN	0.091	74.7 N	- -	68.8 B	- -
PA-2	0-2	1/23/1998	3010/6010	18.0	- -	104	- -	1,200 *	- -	22.9 *	- -	216 B	- -	10.9	- -	ND UN	0.11	5,480 N	- -	92.8 B	- -
PA-2	4-6	1/23/1998	3010/6010	3.40 B	- -	266	- -	2,700 *	- -	40.2 *	- -	186 B	- -	9.80	- -	0.21 N	- -	1,120 N	- -	96.0 B	- -
PA-2	8-10	1/23/1998	3010/6010	0.75 B	- -	1.80 B	- -	2,160 *	- -	1.80 *	- -	236 B	- -	10.4	- -	ND UN	0.094	332 N	- -	116 B	- -
PA-3	0-2	1/23/1998	3010/6010	7.50 B	- -	104	- -	2,410 *	- -	32.8 *	- -	328 B	- -	14.0	- -	ND UN	0.098	6,300 N	- -	123 B	- -
PA-3	4-6	1/23/1998	3010/6010	15.6	- -	4.00 B	- -	3,620 *	- -	4.00 *	- -	259 B	- -	44.7	- -	ND UN	0.092	10,200 N	- -	111 B	- -
PA-3	8-10	1/23/1998	3010/6010	2.40 B	- -	1.90 B	- -	1,720 *	- -	1.20 *	- -	190 B	- -	9.20	- -	ND UN	0.098	723 N	- -	75.4 B	- -
PA-4	0-2	1/23/1998	3010/6010	4.20 B	- -	514	- -	6,110 *	- -	2,300 *	- -	297 B	- -	16.6	- -	ND UN	0.18	2,600 N	- -	144 B	- -
PA-4	4-6	1/23/1998	3010/6010	5.20 B	- -	21.6	- -	3,540 *	- -	3.40 *	- -	242 B	- -	13.7	- -	0.24 N	- -	1,380 N	- -	118 B	- -
PA-4	8-10	1/23/1998	3010/6010	4.30 B	- -	70.8	- -	2,510 *	- -	3.80 *	- -	443 B	- -	15.7	- -	0.21 N	- -	1,250 N	- -	143 B	- -
PA-5	0-2	1/23/1998	3010/6010	2.00 B	- -	502	- -	7,470 *	- -	36.1 *	- -	643 B	- -	45.2	- -	ND UN	0.092	759 N	- -	428 B	- -
PA-5	4-6	1/23/1998	3010/6010	3.60 B	- -	8.80	- -	15,700 *	- -	12.9 *	- -	1,030 B	- -	74.4	- -	0.16 N	- -	10.4 N	- -	935 B	- -
PA-5	8-10	1/23/1998	3010/6010	0.78 B	- -	6.70	- -	1,330 *	- -	1.20 *	- -	190 B	- -	8.80	- -	ND UN	0.10	98.2 N	- -	116 B	- -
MW-26	5-7	9/15/1998	3010/6010	NA	- -	15,600	- -	NA	- -	593	- -	NA	- -	NA	- -	0.11 B*N	- -	154	- -	NA	- -
MW-26	10-12	9/15/1998	3010/6010	NA	- -	17.3	- -	NA	- -	1.40	- -	NA	- -	NA	- -	0.11 B*N	- -	1.80 B	- -	NA	- -
B-27	10-12†	9/15/1998	3010/6010	NA	- -	44,400	- -	NA	- -	1,930	- -	NA	- -	NA	- -	0.11 B*N	- -	2050	- -	NA	- -
B-28	10-12†	9/15/1998	3010/6010	NA	- -	36,500	- -	NA	- -	1,310	- -	NA	- -	NA	- -	0.49 *N	- -	3960	- -	NA	- -
Field Blank		9/16/1998	3010/6010	NA	- -	12.9 B	- -	NA	- -	ND U	2.00	NA	- -	NA	- -	ND UN	0.10	9.10 B	- -	NA	- -
MW-25	0-2	9/15/1998	3010/6010	NA	- -	295	- -	NA	- -	28.6	- -	NA	- -	NA	- -	0.30 N	- -	301	- -	NA	- -
MW-25	5-7	9/15/1998	3010/6010	NA	- -	10.4	- -	NA	- -	1.90	- -	NA	- -	NA	- -	ND UN	0.051	36.4	- -	NA	- -
MW-26	0-2	9/15/1998	3010/6010	NA	- -	3.50 B	- -	NA	- -	4.70	- -	NA	- -	NA	- -	ND UN	0.052	4.00 B	- -	NA	- -
B-29	0-2	9/15/1998	3010/6010	NA	- -	787	- -	NA	- -	77.9	- -	NA	- -	NA	- -	77.9	- -	336	- -	NA	- -
B-29 Duplicate	0-2	9/15/1998	3010/6010	NA	- -	846	- -	NA	- -	86.1	- -	NA	- -	NA	- -	0.42	- -	361	- -	NA	- -
B-36	5-7	9/14/1998	3010/6010	NA	- -	5.50	- -	NA	- -	1.60	- -	NA	- -	NA	- -	ND	0.035	2.90 B	- -	NA	- -
B-37	5-7	9/14/1998	3010/6010	NA	- -	72.8	- -	NA	- -	10.0	- -	NA	- -	NA	- -	ND	0.039	32.5	- -	NA	- -
B-31	10-12	9/14/1998	3010/6010	NA	- -	10.6	- -	NA	- -	2.30	- -	NA	- -	NA	- -	ND	0.036	4.50 B	- -	NA	- -
B-35	5-7	9/15/1998	3010/6010	NA	- -	4.60 B	- -	NA	- -	3.80	- -	NA	- -	NA	- -	0.074 BN	- -	7.00 B	- -	NA	- -
B-30	5-7	9/15/1998	3010/6010	NA	- -	4.40 B	- -	NA	- -	1.20	- -	NA	- -	NA	- -	0.090 N	- -	5.50 B	- -	NA	- -

Prepared by: PCS/EAF
Reviewed by: SWB
Revised: 7/19/2005

TABLE 3

SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS

248 Wyandanch Avenue, Wyandanch, New York

(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury ‡	SQL	Nickel	SQL	Potassium	SQL
Field Blank		11/20/1998	3010/6010	NA	--	4.40 B	--	NA	--	ND U	2.00	NA	--	NA	--	ND UN	0.10	ND U	6.0	NA	--
LP-1	6-8	11/18/1998	3010/6010	NA	--	98.3	--	NA	--	17.1	--	NA	--	NA	--	0.052 B	--	777	--	NA	--
LP-1**		11/18/1998	NG	4.90 B	--	1,900	--	1,960	--	296	--	225 B	--	21.5	--	ND U	0.056	13,300	--	68.9 B	--
LP-2	6-8	11/18/1998	3010/6010	NA	--	4,400	--	NA	--	328	--	NA	--	NA	--	0.14 B	--	8,420	--	NA	--
LP-2**		11/18/1998	NG	8.00 B	--	4,760	--	5,310	--	684	--	331	--	31.7	--	0.082 B	--	20,600	--	85.6 B	--
LP-3	6-8	11/18/1998	3010/6010	NA	--	197	--	NA	--	16	--	NA	--	NA	--	0.040 B	--	1,220	--	NA	--
LP-4	6-8	11/18/1998	3010/6010	NA	--	106	--	NA	--	12.7	--	NA	--	NA	--	0.042 B	--	752	--	NA	--
LP-4 Duplicate	6-8	11/18/1998	3010/6010	NA	--	119	--	NA	--	15.4	--	NA	--	NA	--	0.053 B	--	904	--	NA	--
HB-1	0-3	11/19/1998	3010/6010	NA	--	44.1	--	NA	--	49.6	--	NA	--	NA	--	0.53	--	28.5	--	NA	--
HB-1	2	11/19/1998	3010/6010	NA	--	9.80	--	NA	--	5.60	--	NA	--	NA	--	0.040 B	--	6.10 B	--	NA	--
HB-2	0-3	11/19/1998	3010/6010	NA	--	30.0	--	NA	--	31.4	--	NA	--	NA	--	0.080 B	--	10.2	--	NA	--
HB-2	2	11/19/1998	3010/6010	NA	--	25.6	--	NA	--	32.9	--	NA	--	NA	--	0.091 B	--	13.2	--	NA	--
HB-3	2	11/19/1998	3010/6010	NA	--	3.70 B	--	NA	--	2.50	--	NA	--	NA	--	0.037 B	--	2.70 B	--	NA	--
HB-4	2	11/19/1998	3010/6010	NA	--	3.00 B	--	NA	--	5.20	--	NA	--	NA	--	0.050 B	--	3.10 B	--	NA	--
HB-5	2	11/19/1998	3010/6010	NA	--	38.9	--	NA	--	21.9	--	NA	--	NA	--	0.12	--	12.8	--	NA	--
HB-6	2	11/19/1998	3010/6010	NA	--	31.0	--	NA	--	14.2	--	NA	--	NA	--	0.037 B	--	20.0	--	NA	--
HB-7	2	11/19/1998	3010/6010	NA	--	32.4	--	NA	--	30.2	--	NA	--	NA	--	0.085 B	--	24.8	--	NA	--
Tea Garden	2	11/19/1998	3010/6010	NA	--	42.3	--	NA	--	20.4	--	NA	--	NA	--	0.046	--	20.8	--	NA	--
B-32	0-2	11/18/1998	3010/6010	NA	--	955	--	NA	--	102	--	NA	--	NA	--	0.17	--	516	--	NA	--
B-32	5-7	11/18/1998	3010/6010	NA	--	1.60 B	--	NA	--	1.40	--	NA	--	NA	--	0.048 B	--	2.20 B	--	NA	--
B-33	0-2	11/18/1998	3010/6010	NA	--	51.6	--	NA	--	11.4	--	NA	--	NA	--	0.046 B	--	32.3	--	NA	--
B-33	5-7	11/18/1998	3010/6010	NA	--	1.20 B	--	NA	--	0.93	--	NA	--	NA	--	0.043 B	--	1.90 B	--	NA	--
B-34	0-2	11/18/1998	3010/6010	NA	--	262	--	NA	--	36.8	--	NA	--	NA	--	0.046 B	--	440	--	NA	--
B-34	5-7	11/18/1998	3010/6010	NA	--	1.90 B	--	NA	--	1.60	--	NA	--	NA	--	0.039 B	--	2.40 B	--	NA	--
R4-2	4-6	4/6/1999	3010/6010	NA	--	2.00 B	--	NA	--	1.30	--	NA	--	NA	--	ND U	0.012	1.50 B	--	NA	--
R4-5	4-6	4/6/1999	3010/6010	NA	--	7.00	--	NA	--	15.1	--	NA	--	NA	--	ND U	0.016	4.80 B	--	NA	--
R4-6	4-6	4/6/1999	3010/6010	NA	--	1.50 B	--	NA	--	1.20	--	NA	--	NA	--	ND U	0.017	1.40 B	--	NA	--
WWT FL	6-8	4/6/1999	3010/6010	NA	--	87.3	--	NA	--	0.96	--	NA	--	NA	--	ND U	0.010	10.7	--	NA	--
LP-1A	15-17	6/23/1999	3010/6010	NA	--	119	--	NA	--	5.20	--	NA	--	NA	--	ND U	0.036	100	--	NA	--
LP-1B	20-22	6/23/1999	3010/6010	NA	--	59.1	--	NA	--	1.80	--	NA	--	NA	--	ND U	0.037	34.5	--	NA	--
LP-1C	25-27	6/23/1999	3010/6010	NA	--	37.4	--	NA	--	1.60	--	NA	--	NA	--	ND U	0.026	34.8	--	NA	--
LP-2A	15-17	6/23/1999	3010/6010	NA	--	48.6	--	NA	--	3.60	--	NA	--	NA	--	ND U	0.030	27.6	--	NA	--
LP-2B	20-22	6/23/1999	3010/6010	NA	--	28.2	--	NA	--	2.10	--	NA	--	NA	--	ND U	0.037	16.8	--	NA	--
LP-2C	25-27	6/23/1999	3010/6010	NA	--	53.5	--	NA	--	2.60	--	NA	--	NA	--	ND U	0.040	21.1	--	NA	--
LP-5A	15-17	6/23/1999	3010/6010	NA	--	68.7	--	NA	--	7.70	--	NA	--	NA	--	ND U	0.032	69.3	--	NA	--
LP-5B	20-22	6/23/1999	3010/6010	NA	--	71.8	--	NA	--	3.30	--	NA	--	NA	--	ND U	0.035	46.7	--	NA	--
LP-5C	25-27	6/23/1999	3010/6010	NA	--	29.8	--	NA	--	1.60	--	NA	--	NA	--	ND U	0.028	17.4	--	NA	--

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(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Cobalt	SQL	Copper	SQL	Iron	SQL	Lead	SQL	Magnesium	SQL	Manganese	SQL	Mercury ‡	SQL	Nickel	SQL	Potassium	SQL
L2(15,20)	0-4	12/1/2003	3050/6010	NA	- -	4.23	0.52	NA	- -	4.08	2.59	NA	- -	NA	- -	0.028	0.003	2.43	0.26	NA	- -
L2(15,20)	8-12	12/1/2003	3050/6010	NA	- -	66.80	0.53	NA	- -	ND	2.66	NA	- -	NA	- -	ND	0.008	10.9	0.27	NA	- -
L3(20,15)	4-8	12/2/2003	3050/6010	NA	- -	233	0.55	NA	- -	5.74	2.73	NA	- -	NA	- -	0.007	0.005	17.40	0.27	NA	- -
L3(20,15)	8-12	12/2/2003	3050/6010	NA	- -	390	0.52	NA	- -	4.40	2.59	NA	- -	NA	- -	ND	0.004	98.2	0.26	NA	- -
L4(00,30)	0-4	12/2/2003	3050/6010	NA	- -	174	0.54	NA	- -	32.10	2.69	NA	- -	NA	- -	0.029	0.005	26.1	0.27	NA	- -
L4(00,30)	8-12	12/2/2003	3050/6010	NA	- -	ND	2.82	NA	- -	ND	2.82	NA	- -	NA	- -	ND	0.004	53.10	0.28	NA	- -
L5(05,35)	4-8	12/3/2003	3050/6010	NA	- -	3.93	0.56	NA	- -	4.25	2.81	NA	- -	NA	- -	0.011	0.006	136	0.28	NA	- -
L5(05,35)	8-12	12/3/2003	3050/6010	NA	- -	3.55	0.53	NA	- -	ND	2.64	NA	- -	NA	- -	ND	0.005	57.2	0.26	NA	- -
L5(30,50)	4-8	12/3/2003	3050/6010	NA	- -	178	0.56	NA	- -	57.8	2.79	NA	- -	NA	- -	0.020	0.005	2,040	0.28	NA	- -
L5(30,50)	8-12	12/3/2003	3050/6010	NA	- -	9.24	0.54	NA	- -	ND	2.72	NA	- -	NA	- -	ND	0.003	30.2	0.27	NA	- -
L5(30,15)	0-4	12/2/2003	3050/6010	NA	- -	21.3	0.55	NA	- -	ND	2.73	NA	- -	NA	- -	ND	0.004	9.63	0.27	NA	- -
L5(30,15)	8-12	12/2/2003	3050/6010	NA	- -	2.82	0.53	NA	- -	3.89	2.63	NA	- -	NA	- -	0.012	0.004	4.40	0.26	NA	- -
O2(15,10)	0-4	12/1/2003	3050/6010	NA	- -	24.00	0.51	NA	- -	ND	3.70	NA	- -	NA	- -	0.009	0.005	5.51	0.26	NA	- -
O2(15,10)	8-12	12/1/2003	3050/6010	NA	- -	4.50	0.74	NA	- -	ND	3.70	NA	- -	NA	- -	ND	0.007	2.43	0.37	NA	- -
O3(10,10)	4-8	12/2/2003	3050/6010	NA	- -	2.94	0.55	NA	- -	5.19	2.75	NA	- -	NA	- -	0.010	0.004	2.56	0.27	NA	- -
O3(10,10)	8-12	12/2/2003	3050/6010	NA	- -	ND	2.72	NA	- -	ND	2.72	NA	- -	NA	- -	ND	0.005	0.96	0.27	NA	- -
O4(10,30)	4-8	12/3/2003	3050/6010	NA	- -	4.25	0.54	NA	- -	6.88	2.69	NA	- -	NA	- -	0.012	0.004	3.00	0.27	NA	- -
O4(10,30)	8-12	12/3/2003	3050/6010	NA	- -	3.34	0.54	NA	- -	ND	2.68	NA	- -	NA	- -	0.008	0.005	2.93	0.27	NA	- -
O4(20,10)	4-8	12/3/2003	3050/6010	NA	- -	3.90	0.52	NA	- -	3.38	2.59	NA	- -	NA	- -	0.004	0.004	1.37	0.26	NA	- -
O4(20,10)	8-12	12/3/2003	3050/6010	NA	- -	4.48	0.56	NA	- -	4.12	2.79	NA	- -	NA	- -	0.010	0.004	3.91	0.28	NA	- -
O5(05,25)	0-4	12/3/2003	3050/6010	NA	- -	4.43	0.53	NA	- -	4.81	2.67	NA	- -	NA	- -	0.006	0.004	46.9	0.27	NA	- -
O5(05,25)	8-12	12/3/2003	3050/6010	NA	- -	3.07	0.53	NA	- -	ND	2.65	NA	- -	NA	- -	ND	0.004	1.14	0.26	NA	- -
O5(30,25)	4-8	12/3/2003	3050/6010	NA	- -	2.61	0.52	NA	- -	4.30	2.60	NA	- -	NA	- -	0.008	0.004	1.46	0.26	NA	- -
O5(30,25)	8-12	12/3/2003	3050/6010	NA	- -	ND	2.75	NA	- -	ND	2.75	NA	- -	NA	- -	ND	0.004	1.28	0.27	NA	- -
Q2(15,05)	0-4	12/1/2003	3050/6010	NA	- -	3.25	0.52	NA	- -	ND	2.59	NA	- -	NA	- -	0.004	0.004	1.74	0.26	NA	- -
Q2(15,05)	8-12	12/1/2003	3050/6010	NA	- -	3.12	0.57	NA	- -	ND	2.87	NA	- -	NA	- -	ND	0.006	1.00	0.29	NA	- -
Q3(20,10)	4-8	12/2/2003	3050/6010	NA	- -	2.76	0.53	NA	- -	3.37	2.63	NA	- -	NA	- -	0.007	0.004	2.43	0.26	NA	- -
Q3(20,10)	8-12	12/2/2003	3050/6010	NA	- -	ND	3.14	NA	- -	3.62	3.14	NA	- -	NA	- -	ND	0.004	1.22	0.31	NA	- -
Q4(20,10)	0-4	12/2/2003	3050/6010	NA	- -	5.46	0.52	NA	- -	4.17	2.59	NA	- -	NA	- -	0.005	0.004	2.52	0.26	NA	- -
Q4(20,10)	4-8	12/3/2003	3050/6010	NA	- -	5.92	0.65	NA	- -	17.1	3.25	NA	- -	NA	- -	0.025	0.007	1.75	0.33	NA	- -
Q4(20,10)	8-12	12/2/2003	3050/6010	NA	- -	3.78	0.58	NA	- -	2.97	2.90	NA	- -	NA	- -	ND	0.005	2.50	0.29	NA	- -
Q5(30,05)	4-8	12/3/2003	3050/6010	NA	- -	4.37	0.53	NA	- -	4.67	2.67	NA	- -	NA	- -	0.010	0.005	2.32	0.27	NA	- -
Q5(30,05)	8-12	12/3/2003	3050/6010	NA	- -	3.20	0.53	NA	- -	ND	2.64	NA	- -	NA	- -	ND	0.003	1.10	0.26	NA	- -
Recommended Clean-up Level to Protect Groundwater Quality				n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a	
Recommended Clean-up Objective				30 or SB		25 or SB		2000 or SB		SB		SB		SB		0.10		13 or SB		SB	

Notes:

NA= Not Analyzed
ND= Not Detected
NG= None Given
NV= Not Available
SQL= Sample Quantitation Limit
n/a= no recommended cleanup objective available
SB= Site Background
†= Sludge/sediment from bottom of storm drain
‡= Mecury analyzed via USEPA Method 7471
U= Analyte was not detected at the SQL
E= Estimated reported value due to interference.
3010/6010= USEPA Method 3010/6010

1) The laboratory did not provide the SQL for samples in which the constituent was detected. No sample quantitation limits are available for samples collected by other consultants in 1981 and 1991.
2) The analytical data for the field blank is grouped with the appropriate laboratory sample batch. Dates provided for field blanks represent the date of laboratory analysis.
B= Analytical result is betweeen the instrument detection limit and the contract required detection limit.
**= Sample analyzed by New York State Department of Environmental Control
*= Duplicate analysis not within control limit
N= Spiked sample recovery not within control limits.

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Reviewed by: SWB
Revised: 7/19/2005

TABLE 3
SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS
248 Wyandanch Avenue, Wyandanch, New York
(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Selenium	SQL	Silver	SQL	Sodium	SQL	Thallium	SQL	Vanadium	SQL	Zinc	SQL
B-1	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	10-12	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	14-15	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	19-20.5	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-2	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	14-16	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-3	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	14-16	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-4	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	6-7.5	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	8-10	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-5	2-4	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	6-8	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
	NV	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-6	4-6	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-7	14-15	12/22/1981	NG	NA	--	NA	--	NA	--	NA	--	NA	--	NA	--
B-7-L	2-4	11/91	NG	5.50	--	NA	--	NA	--	ND	--	2.57	--	375	--
	4-6	11/91	NG	4.00	--	NA	--	NA	--	ND	--	1.96	--	92.4	--
	6-8	11/91	NG	2.70	--	NA	--	NA	--	ND	--	ND	--	101	--
B-8-L	2-4	11/91	NG	5.00	--	NA	--	NA	--	ND	--	4.45	--	71.1	--
	4-6	11/91	NG	1.00	--	NA	--	NA	--	ND	--	ND	--	859	--
	6-10	11/91	NG	4.80	--	NA	--	NA	--	671	--	ND	--	46.6	--
B-9-OB	0-4	11/91	NG	3.35	--	NA	--	NA	--	2120	--	3.98	--	186	--
B-10-OB	0-4	11/91	NG	2.50	--	NA	--	NA	--	ND	--	4.51	--	186	--
B-11-T	0-3	11/91	NG	3.35	--	NA	--	NA	--	2180	--	5.25	--	46.2	--
B-12-T	0-5	11/91	NG	1.86	--	NA	--	NA	--	3620	--	4.66	--	291	--
B-13-T	0-4	11/91	NG	2.90	--	NA	--	NA	--	ND	--	2.22	--	244	--
B-14-T	0-4	11/91	NG	3.50	--	NA	--	NA	--	ND	--	4.34	--	44.0	--
B-15-T	0-4	11/91	NG	5.50	--	NA	--	NA	--	ND	--	3.18	--	129	--
MW-1	4-6	11/91	NG	1.31	--	NA	--	NA	--	1099	--	0.58	--	2.51	--
	9-11	11/91	NG	1.35	--	NA	--	NA	--	ND	--	ND	--	2.58	--
	14-16	11/91	NG	2.65	--	NA	--	NA	--	ND	--	3.45	--	11.0	--
	19-21	11/91	NG	3.41	--	NA	--	NA	--	750	--	ND	--	4.64	--
MW-2	4-6	11/91	NG	1.95	--	NA	--	NA	--	1690	--	2.94	--	32.1	--
	9-11	11/91	NG	2.65	--	NA	--	NA	--	2290	--	1.60	--	27.9	--
	14-16	11/91	NG	2.30	--	NA	--	NA	--	2930	--	5.08	--	8.44	--
	19-21	11/91	NG	1.65	--	NA	--	NA	--	ND	--	ND	--	11.2	--
MW-3	4-6	11/91	NG	5.20	--	NA	--	NA	--	380	--	ND	--	5.03	--
	9-11	11/91	NG	3.55	--	NA	--	NA	--	1040	--	1.06	--	7.53	--
	14-16	11/91	NG	2.32	--	NA	--	NA	--	1970	--	ND	--	12.1	--
	19-21	11/91	NG	3.87	--	NA	--	NA	--	1460	--	ND	--	15.5	--
MW-4	4-6	11/91	NG	3.25	--	NA	--	NA	--	1640	--	4.19	--	16.6	--
	9-11	11/91	NG	2.70	--	NA	--	NA	--	1120	--	1.24	--	11.9	--
	14-16	11/91	NG	2.00	--	NA	--	NA	--	1210	--	0.54	--	11.5	--
	19-21	11/91	NG	1.05	--	NA	--	NA	--	1010	--	1.84	--	12.0	--

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(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Selenium		SQL	Silver		SQL	Sodium		SQL	Thallium		SQL	Vanadium		SQL	Zinc	SQL
MW-5	4-6	11/91	NG	4.00		--	NA		--	NA		--	1580		--	0.99		--	80.6	--
	9-11	11/91	NG	1.60		--	NA		--	NA		--	ND		--	1.50		--	14.6	--
	14-16	11/91	NG	1.30		--	NA		--	NA		--	750		--	ND		--	19.0	--
	19-21	11/91	NG	2.70		--	NA		--	NA		--	522		--	ND		--	6.85	--
MW-6	4-6	11/91	NG	2.70		--	NA		--	NA		--	960		--	ND		--	127	--
	9-11	11/91	NG	1.10		--	NA		--	NA		--	1640		--	2.04		--	13.5	--
	14-16	11/91	NG	0.98		--	NA		--	NA		--	495		--	ND		--	5.03	--
	19-21	11/91	NG	3.35		--	NA		--	NA		--	551		--	ND		--	4.58	--
B-8 GREEN	NG	11/91	NG	NA		--	NA		--	NA		--	NA		--	NA		--	975	--
LP-GRAB	NG	11/91	NG	NA		--	NA		--	NA		--	NA		--	NA		--	675	--
LP-1	NG	11/91	NG	NA		--	NA		--	NA		--	NA		--	NA		--	104	--
LP-2	NG	11/91	NG	NA		--	NA		--	NA		--	NA		--	NA		--	317	--
LP-3	NG	11/91	NG	NA		--	NA		--	NA		--	NA		--	NA		--	468	--
LP-4	NG	11/91	NG	NA		--	NA		--	NA		--	NA		--	NA		--	236	--
AQ-1	0-2	1/29/1998	3010/6010	0.63	B	--	ND	U	0.21	NA		--	ND	U	0.43	NA		--	212	--
AQ-1	4-6	1/29/1998	3010/6010	0.55	B	--	ND	U	0.21	NA		--	ND	U	0.43	NA		--	17.3	--
AQ-1	8-10	1/29/1998	3010/6010	ND	U	0.44	0.23	B	--	NA		--	ND	U	0.43	NA		--	23.3	--
PA-1	0-2	1/23/1998	3010/6010	ND	U	0.40	0.48	B	--	313	B	--	ND	UN	0.40	3.40	B	--	21.4	--
PA-1 Duplicate	0-2	1/23/1998	3010/6010	ND	U	0.40	0.49	B	--	339	B	--	ND	U	0.40	3.80	B	--	23.6	--
PA-1	4-6	1/23/1998	3010/6010	ND	U	0.41	ND	U	0.20	605	B	--	ND	UN	0.41	6.20	B	--	268	--
PA-1	8-10	1/23/1998	3010/6010	ND	U	0.38	ND	U	0.19	18.0	B	--	ND	UN	0.38	2.80	B	--	24.1	--
PA-2	0-2	1/23/1998	3010/6010	ND	U	0.38	ND	U	0.19	246	B	--	ND	UN	0.38	4.60	B	--	71.8	--
PA-2	4-6	1/23/1998	3010/6010	ND	U	0.36	ND	U	0.18	120	B	--	ND	UN	0.36	5.10	B	--	16.9	--
PA-2	8-10	1/23/1998	3010/6010	ND	U	0.40	ND	U	0.20	34.4	B	--	ND	UN	0.40	2.90	B	--	5.00	--
PA-3	0-2	1/23/1998	3010/6010	ND	U	0.36	ND	U	0.18	1,100	B	--	ND	UN	0.36	4.80	B	--	37.0	--
PA-3	4-6	1/23/1998	3010/6010	ND	U	0.34	ND	U	0.17	1,590		--	ND	UN	0.34	6.10	B	--	55.5	--
PA-3	8-10	1/23/1998	3010/6010	ND	U	0.40	ND	U	0.20	176	B	--	ND	UN	0.40	3.10	B	--	14.9	--
PA-4	0-2	1/23/1998	3010/6010	ND	U	0.37	ND	U	0.18	287	B	--	ND	UN	0.37	6.20	B	--	70.2	--
PA-4	4-6	1/23/1998	3010/6010	0.36	B	--	ND	U	0.17	281	B	--	ND	UN	0.34	6.40	B	--	30.0	--
PA-4	8-10	1/23/1998	3010/6010	ND	U	0.34	ND	U	0.17	201	B	--	ND	UN	0.34	6.40	B	--	32.5	--
PA-5	0-2	1/23/1998	3010/6010	ND	U	0.37	ND	U	0.18	722	B	--	ND	UN	0.37	6.20	B	--	95.1	--
PA-5	4-6	1/23/1998	3010/6010	1.8		--	ND	U	0.24	2,300		--	ND	UN	0.47	20.3	B	--	21.5	--
PA-5	8-10	1/23/1998	3010/6010	ND	U	0.36	ND	U	0.18	131	B	--	ND	UN	0.36	2.40	B	--	5.10	--
MW-26	5-7	9/15/1998	3010/6010	ND	U	0.64	0.88	B	--	NA		--	ND	U	1.30	NA		--	5,090	--
MW-26	10-12	9/15/1998	3010/6010	0.68		--	ND	U	0.23	NA		--	ND	U	1.40	NA		--	19.0	--
B-27	10-12†	9/15/1998	3010/6010	ND	U	0.92	3.10	B	--	NA		--	ND	U	1.80	NA		--	8,660	--
B-28	10-12†	9/15/1998	3010/6010	ND	U	0.82	3.10		--	NA		--	ND	U	1.60	NA		--	7,620	--
Field Blank		9/16/1998	3010/6010	ND	U	3.00	ND	U	1.00	NA		--	ND	U	6.00	NA		--	38.1	--
MW-25	0-2	9/15/1998	3010/6010	0.75	B	--	ND	U	0.21	NA		--	ND	U	1.30	NA		--	115	--
MW-25	5-7	9/15/1998	3010/6010	ND	U	0.64	ND	U	0.21	NA		--	ND	U	1.30	NA		--	26.1	--
MW-26	0-2	9/15/1998	3010/6010	0.88	B	--	ND	U	0.22	NA		--	ND	U	1.30	NA		--	20.9	--
B-29	0-2	9/15/1998	3010/6010	0.67	B	--	ND	U	0.22	NA		--	ND	U	1.30	NA		--	408	--
B-29 Duplicate	0-2	9/15/1998	3010/6010	ND	U	0.67	ND	U	0.22	NA		--	ND	U	1.30	NA		--	424	--
B-36	5-7	9/14/1998	3010/6010	0.73	B	--	ND	U	0.21	NA		--	ND	U	1.20	NA		--	24.7	--
B-37	5-7	9/14/1998	3010/6010	ND	U	0.63	ND	U	0.21	NA		--	ND	U	1.20	NA		--	46.2	--
B-31	10-12	9/14/1998	3010/6010	ND	U	0.68	ND	U	0.23	NA		--	ND	U	1.40	NA		--	21.9	--
B-35	5-7	9/15/1998	3010/6010	ND	U	0.62	ND	U	0.21	NA		--	ND	U	1.20	NA		--	22.2	--
B-30	5-7	9/15/1998	3010/6010	0.68	B	--	ND	U	0.21	NA		--	ND	U	1.20	NA		--	15.2	--

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Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Selenium		SQL	Silver		SQL	Sodium		SQL	Thallium		SQL	Vanadium		SQL	Zinc		SQL
Field Blank		11/20/1998	3010/6010	ND	U	3.00	ND	U	1.00	NA		- -	ND	U	5.00	NA		- -	ND	U	17
LP-1	6-8	11/18/1998	3010/6010	ND	UN	0.42	ND	U	0.14	NA		- -	ND	U	0.71	NA		- -	155		- -
LP-1**		11/18/1998	NG	ND	U	0.58	ND	U	0.14	23.8	B	- -	4.20		- -	7.10	B	- -	3440		- -
LP-2	6-8	11/18/1998	3010/6010	ND	UN	0.70	ND	U	0.23	NA		- -	ND	U	1.20	NA		- -	2,120		- -
LP-2**		11/18/1998	NG	ND	U	0.85	0.39	B	- -	65.5	B	- -	7.30		- -	17.7		- -	6,800		- -
LP-3	6-8	11/18/1998	3010/6010	ND	UN	0.47	ND	U	0.16	NA		- -	ND	U	0.78	NA		- -	226		- -
LP-4	6-8	11/18/1998	3010/6010	ND	U	0.63	ND	U	0.21	NA		- -	ND	U	1.00	NA		- -	164	*	- -
LP-4 Duplicate	6-8	11/18/1998	3010/6010	ND	U	0.63	ND	U	0.21	NA		- -	ND	U	1.00	NA		- -	203	*	- -
HB-1	0-3	11/19/1998	3010/6010	ND	U	0.69	ND	U	0.23	NA		- -	ND	U	1.10	NA		- -	164	*	- -
HB-1	2	11/19/1998	3010/6010	ND	U	0.63	ND	U	0.21	NA		- -	ND	U	1.00	NA		- -	23.3	*	- -
HB-2	0-3	11/19/1998	3010/6010	ND	U	0.64	ND	U	0.21	NA		- -	ND	U	1.10	NA		- -	49.5	*	- -
HB-2	2	11/19/1998	3010/6010	ND	U	0.66	ND	U	0.22	NA		- -	ND	U	1.10	NA		- -	62.4	*	- -
HB-3	2	11/19/1998	3010/6010	ND	U	0.62	ND	U	0.20	NA		- -	ND	U	1.00	NA		- -	8.90	*	- -
HB-4	2	11/19/1998	3010/6010	ND	U	0.63	ND	U	0.21	NA		- -	ND	U	1.00	NA		- -	17.4	*	- -
HB-5	2	11/19/1998	3010/6010	ND	U	0.66	ND	U	0.22	NA		- -	ND	U	1.10	NA		- -	87.4	*	- -
HB-6	2	11/19/1998	3010/6010	ND	U	0.65	ND	U	0.22	NA		- -	ND	U	1.10	NA		- -	45.2	*	- -
HB-7	2	11/19/1998	3010/6010	ND	U	0.65	ND	U	0.22	NA		- -	ND	U	1.10	NA		- -	81.6	*	- -
Tea Garden	2	11/19/1998	3010/6010	ND	U	0.64	ND	U	0.21	NA		- -	ND	U	1.00	NA		- -	53.2	*	- -
B-32	0-2	11/18/1998	3010/6010	0.57	BN		ND	U	0.18	NA		- -	ND	U	0.90	NA		- -	190		- -
B-32	5-7	11/18/1998	3010/6010	0.60	BN		ND	U	0.14	NA		- -	ND	U	0.70	NA		- -	28.9		- -
B-33	0-2	11/18/1998	3010/6010	0.74	N		ND	U	0.15	NA		- -	ND	U	0.73	NA		- -	18.9		- -
B-33	5-7	11/18/1998	3010/6010	0.39	BN		ND	U	0.11	NA		- -	ND	U	0.56	NA		- -	7.00		- -
B-34	0-2	11/18/1998	3010/6010	0.84	N		ND	U	0.16	NA		- -	ND	U	0.80	NA		- -	89.9		- -
B-34	5-7	11/18/1998	3010/6010	0.92	N		ND	U	0.18	NA		- -	ND	U	0.89	NA		- -	24.9		- -
R4-2	4-6	4/6/1999	3010/6010	ND	U	0.67	ND	U	0.34	NA		- -	ND	UN	1.20	NA		- -	13.3		- -
R4-5	4-6	4/6/1999	3010/6010	ND	U	0.71	ND	U	0.36	NA		- -	ND	UN	1.20	NA		- -	24.1		- -
R4-6	4-6	4/6/1999	3010/6010	ND	U	0.71	ND	U	0.36	NA		- -	1.40	BN	- -	NA		- -	8.00		- -
WWT FL	6-8	4/6/1999	3010/6010	ND	U	0.65	ND	U	0.33	NA		- -	ND	UN	1.10	NA		- -	22.2		- -
LP-1A	15-17	6/23/1999	3010/6010	ND	U	0.71	ND	U	0.36	NA		- -	ND	U	0.53	NA		- -	25.1		- -
LP-1B	20-22	6/23/1999	3010/6010	ND	U	0.81	ND	U	0.41	NA		- -	ND	U	0.61	NA		- -	16.0		- -
LP-1C	25-27	6/23/1999	3010/6010	0.77		- -	ND	U	0.30	NA		- -	1.50		- -	NA		- -	11.8		- -
LP-2A	15-17	6/23/1999	3010/6010	0.65	B	- -	ND	U	0.26	NA		- -	0.72	B	- -	NA		- -	11.1		- -
LP-2B	20-22	6/23/1999	3010/6010	0.95		- -	ND	U	0.32	NA		- -	ND	U	0.48	NA		- -	8.40		- -
LP-2C	25-27	6/23/1999	3010/6010	ND	U	0.90	ND	U	0.45	NA		- -	ND	U	0.67	NA		- -	18.9		- -
LP-5A	15-17	6/23/1999	3010/6010	ND	U	0.93	ND	U	0.46	NA		- -	1.60	B	- -	NA		- -	21.1		- -
LP-5B	20-22	6/23/1999	3010/6010	ND	U	0.85	ND	U	0.43	NA		- -	1.20	B	- -	NA		- -	19.2		- -
LP-5C	25-27	6/23/1999	3010/6010	ND	U	0.86	ND	U	0.43	NA		- -	ND	U	0.65	NA		- -	20.7		- -

Prepared by: PCS/EAF
Reviewed by: SWB
Revised: 7/19/2005

TABLE 3

SUMMARY OF SOIL ANALYTICAL DATA: TOTAL METALS

248 Wyandanch Avenue, Wyandanch, New York
(unit, parts per million [ppm], mg/kg)

Sample Location	Sample Depth (feet)	Sample Date	Analytical Method	Selenium	SQL	Silver	SQL	Sodium	SQL	Thallium	SQL	Vanadium	SQL	Zinc	SQL
L2(15,20)	0-4	12/1/2003	3050/6010	ND	5.18	ND	1.04	NA		NA	--	NA	--	7.57	0.52
L2(15,20)	8-12	12/1/2003	3050/6010	ND	5.32	ND	1.06	NA	--	NA	--	NA	--	12.3	0.53
L3(20,15)	4-8	12/2/2003	3050/6010	ND	5.46	ND	1.09	NA	--	NA	--	NA	--	7.86	0.55
L3(20,15)	8-12	12/2/2003	3050/6010	ND	5.18	ND	1.04	NA	--	NA	--	NA	--	57.50	0.52
L4(00,30)	0-4	12/2/2003	3050/6010	ND	5.38	ND	1.08	NA	--	NA	--	NA	--	198	0.54
L4(00,30)	8-12	12/2/2003	3050/6010	ND	5.63	ND	1.0	NA	--	NA	--	NA	--	4.47	0.56
L5(05,35)	4-8	12/3/2003	3050/6010	ND	5.62	ND	1.12	NA	--	NA	--	NA	--	28.0	0.56
L5(05,35)	8-12	12/3/2003	3050/6010	ND	5.27	ND	1.05	NA	--	NA	--	NA	--	6.07	0.53
L5(30,50)	4-8	12/3/2003	3050/6010	ND	5.58	ND	1.12	NA	--	NA	--	NA	--	45.10	0.56
L5(30,50)	8-12	12/3/2003	3050/6010	ND	5.44	ND	1.09	NA	--	NA	--	NA	--	5.03	0.54
L5(30,15)	0-4	12/2/2003	3050/6010	ND	5.46	ND	1.09	NA	--	NA	--	NA	--	3.52	0.55
L5(30,15)	8-12	12/2/2003	3050/6010	ND	5.26	ND	1.05	NA	--	NA	--	NA	--	6.84	0.53
O2(15,10)	0-4	12/1/2003	3050/6010	ND	5.15	ND	1.03	NA	--	NA	--	NA	--	8.57	0.51
O2(15,10)	8-12	12/1/2003	3050/6010	ND	7.39	ND	1.48	NA	--	NA	--	NA	--	4.29	0.74
O3(10,10)	4-8	12/2/2003	3050/6010	ND	5.50	ND	1.10	NA	--	NA	--	NA	--	7.24	0.55
O3(10,10)	8-12	12/2/2003	3050/6010	ND	5.44	ND	1.09	NA	--	NA	--	NA	--	2.29	0.54
O4(10,30)	4-8	12/3/2003	3050/6010	ND	5.38	ND	1.08	NA	--	NA	--	NA	--	10.20	0.54
O4(10,30)	8-12	12/3/2003	3050/6010	ND	5.36	ND	1.07	NA	--	NA	--	NA	--	3.69	0.54
O4(20,10)	4-8	12/3/2003	3050/6010	ND	5.18	ND	1.04	NA	--	NA	--	NA	--	4.97	0.52
O4(20,10)	8-12	12/3/2003	3050/6010	ND	5.58	ND	1.12	NA	--	NA	--	NA	--	7.19	0.56
O5(05,25)	0-4	12/3/2003	3050/6010	ND	5.33	ND	1.07	NA	--	NA	--	NA	--	8.66	0.53
O5(05,25)	8-12	12/3/2003	3050/6010	ND	5.29	ND	1.06	NA	--	NA	--	NA	--	3.32	0.53
O5(30,25)	4-8	12/3/2003	3050/6010	ND	5.19	ND	1.04	NA	--	NA	--	NA	--	4.81	0.52
O5(30,25)	8-12	12/3/2003	3050/6010	ND	5.49	ND	1.10	NA	--	NA	--	NA	--	2.92	0.55
Q2(15,05)	0-4	12/1/2003	3050/6010	ND	5.18	ND	1.04	NA	--	NA	--	NA	--	5.17	0.52
Q2(15,05)	8-12	12/1/2003	3050/6010	ND	5.73	ND	1.15	NA	--	NA	--	NA	--	5.35	0.57
Q3(20,10)	4-8	12/2/2003	3050/6010	ND	5.26	ND	1.05	NA	--	NA	--	NA	--	7.11	0.53
Q3(20,10)	8-12	12/2/2003	3050/6010	ND	6.28	ND	1.26	NA	--	NA	--	NA	--	2.94	0.63
Q4(20,10)	0-4	12/2/2003	3050/6010	ND	5.19	ND	1.04	NA	--	NA	--	NA	--	8.80	0.52
Q4(20,10)	4-8	12/3/2003	3050/6010	ND	6.51	ND	1.30	NA	--	NA	--	NA	--	11.40	0.65
Q4(20,10)	8-12	12/2/2003	3050/6010	ND	5.79	ND	1.16	NA	--	NA	--	NA	--	3.93	0.58
Q5(30,05)	4-8	12/3/2003	3050/6010	ND	5.34	ND	1.07	NA	--	NA	--	NA	--	6.92	0.53
Q5(30,05)	8-12	12/3/2003	3050/6010	ND	5.28	ND	1.06	NA	--	NA	--	NA	--	2.50	0.53
Recommended Clean-up Level to Protect Groundwater Quality				n/a		n/a		n/a		n/a		n/a		n/a	
Recommended Clean-up Objective				2 or SB		SB		SB		SB		150 or SB		20 or SB	

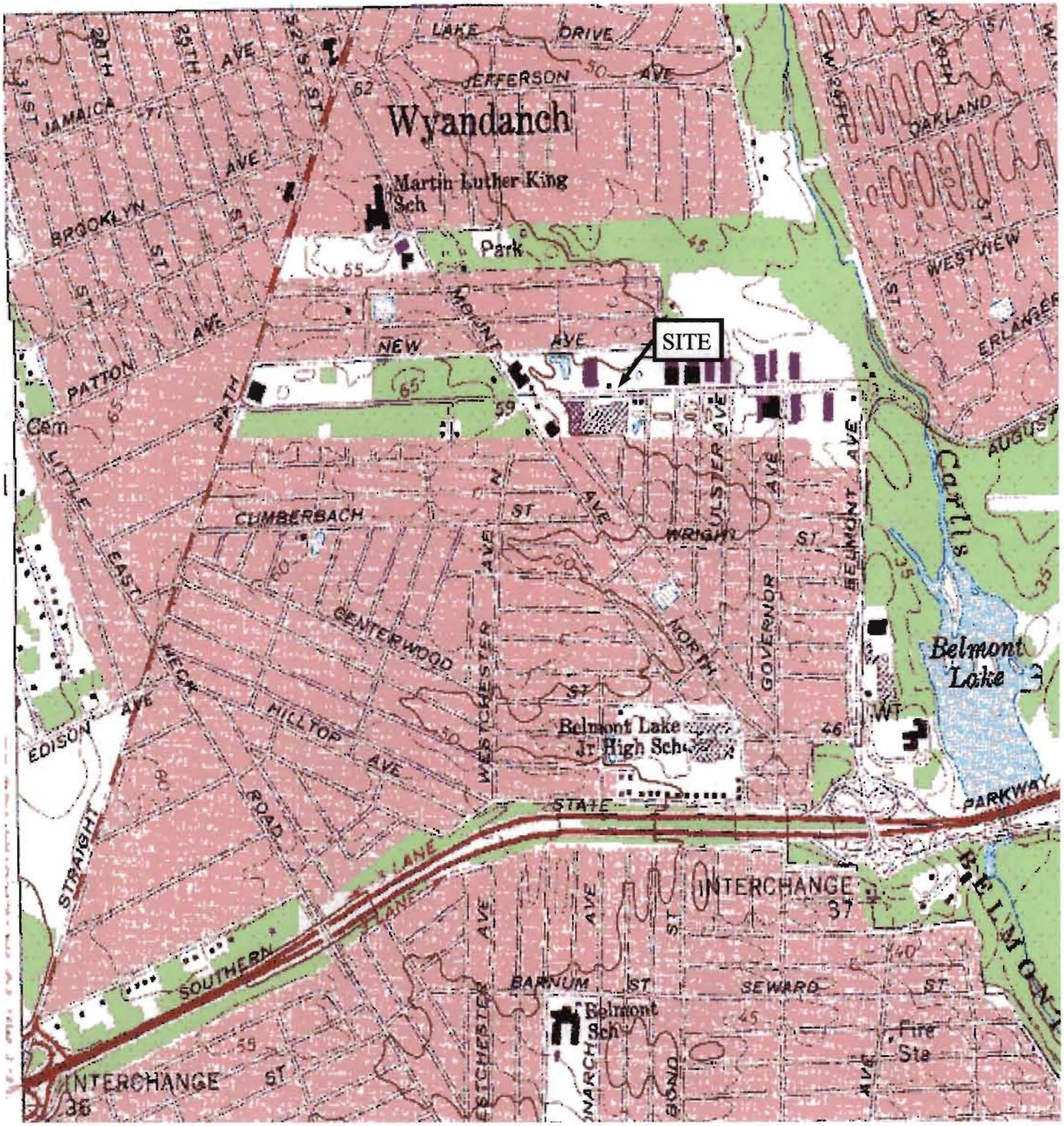
Notes:

NA= Not Analyzed
ND= Not Detected
NG= None Given
NV= Not Available
SQL= Sample Quantitation Limit
n/a= no recommended cleanup objective available
SB= Site Background
†= Sludge/sediment from bottom of storm drain
‡= Mecury analyzed via USEPA Method 7471
U= Analyte was not detected at the SQL
E= Estimated reported value due to interference.
3010/6010= USEPA Method 3010/6010

1) The laboratory did not provide the SQL for samples in which the constituent was detected. No sample quantitation limits are available for samples collected by other consultants in 1981 and 1991.
2) The analytical data for the field blank is grouped with the appropriate laboratory sample batch. Dates provided for field blanks represent the date of laboratory analysis.
B= Analytical result is betweeen the instrument detection limit and the contract required detection limit.
**= Sample analyzed by New York State Department of Environmental Control
*= Duplicate analysis not within control limit
N= Spiked sample recovery not within control limits.

Prepared by: PCS/EAF
Reviewed by: SWB
Revised: 7/19/2005

FIGURES



USGS 7.5 Minute Topographic

Bay Shore
NewYork, Quadrangle

GEC
Goldman Environmental Consultants, Inc.
60 Brooks Drive
Braintree, MA 02184
(781)356-9140 Fax: (781)356-9147
www.goldmanenvironmental.com

SITE LOCUS

248 Wyandanch Avenue
Wyandanch, New York

GEC Project #: 444-5010

Figure 1

Scale
1 : 25,000

N

For oversized Figures 2-5, see Project Manager.

Appendix A:
GEC's QA/QC & SOPs

Standard Operating Procedure
Field Sampling Protocols
Quality Assurance/Quality Control

The purpose of the GEC QA/QC program is to generate analytical data that is of known and defensible quality. These procedures apply to all projects in which sampling is involved. QA/QC from one project is not transferable to another.

Decontamination

1) Decontamination should be performed on all reusable field sampling equipment and protective gear. Sampling equipment should be decontaminated before the collection of a sample and after sampling has been completed. Protective gear should be decontaminated after the collection of a sample.

2) It is necessary to use the following decontamination solutions in the field:

- Non-phosphate detergent plus tap water wash.
- Distilled/ deionized water rinse.
- 10% Nitric Acid rinse.*
- Methanol rinse, when sampling volatiles only.
- Acetone then hexane rinse.**
- Second distilled/ deionized water rinse. **

* Only if sample is to be analyzed for metals.
** Only if sample is to be analyzed for semi-volatile organics, PCBs or pesticides.

3) Sample bottles and sampling equipment should not be stored near gasoline, solvents, or other potential sources of contamination. If storage near gasoline, etc. is unavoidable, bottles and equipment should be sealed in containers or plastic.

4) Heavy equipment, including hand tools, should be cleaned by steam cleaning or manual scrubbing prior and subsequent to use in hazardous waste investigations.

Measures or Quality Control/Quality Assurance

1) Trip Blanks

- Trip blanks are used in order to detect additional sources of contamination that might affect analytical results. The following are potential sources of additional contamination:

  a. Sample containers,
  b. Contamination during shipment to and from the site,
  c. Ambient air contact with analytical instrumentation at the laboratory during analysis, or
  d. Laboratory reagent used in analytical procedures.

- One trip blank is required for every set of samples sent to the lab regardless of job size. Generally, the trip blank should be for VOCs. If, however, VOCs are not a parameter of the sampling round, consult the laboratory as to which parameter should have an associated trip blank.

- Trip blanks are to be kept with containers used in the sampling round at all times. More specifically, they should accompany the site-specific sampling containers from the time the containers leave the laboratory until they are returned for analysis.

- Obtain containers and trip blanks prepared specifically for each job from the laboratory. Return unused containers to the laboratory upon completion of a project.

2) Field Blanks

- Field blanks are used to indicate potential contamination contracted from ambient air or from sampling equipment. It also serves as a QA/QC for decontamination procedures.

- Collect one set of field blanks for every 20 samples per project. It is not necessary to take a field blank for jobs in which less than 10 samples are collected.

- Procedure

  a. Collect two sets of sample containers to cover all sampling parameters. One set will be full of analyte free water (obtain extra analyte free water to fill two VOA vials). The other set is empty.
  b. Go to the most contaminated area and run the water from the full containers, through the decontaminated sampling equipment and into the associated empty containers.
  c. Send to the lab for analysis.

- Use containers and field blanks prepared specifically for job.

3) Duplicate Samples

- Duplicate samples are collected in order to serve as a laboratory check. Therefore, it is important that the lab does not know which samples are to serve for this purpose.

- Frequency

  a. Obtain one (1) duplicate sample for every 10 samples of each matrix. If less than ten samples are collected of a given matrix, a duplicate must be collected anyway.
  b. If a total of less than 10 samples are collected, collect one (1) duplicate of the majority medium.
  c. If a total of less than five (5) samples are collected, it is not necessary to collect a duplicate sample.

* Note that the frequency as outlined here pertains to the number of samples collected per project, not per location of a given project.

- Procedures

The idea behind the duplicate sample is to collect two samples as close to identical as possible.

a. For Water:

Alternately fill containers for the same parameter with equal amounts of liquid per bailer. Fill duplicate VOC vials from the same bailer of liquid.

b. For Soil:

- VOC samples must be taken from the discreet sampling locations.
- For all other samples, mix the applicable soil in a decontaminated stainless steel or polyethylene bowl or tray. Then fill sample containers with the soil mix.
- When confronted with the option of collecting a water sample or a soil sample, choose the water sample.

- Labeling for the laboratory

  a. Label the containers normally and give the duplicate samples different reference numbers.
  b. Indicate the quantity of duplicates in the "special instructions" or "remarks" portion of the chain of custody and laboratory services sheet, however, do not indicate the reference numbers of the duplicates.
  c. Upon receipt of analytical results, contact the laboratory and convey all data pertaining to the duplicates for their QA/QC.

4) Background samples

   - Background samples are taken only if it is required for comparison of site conditions to the surrounding environment. This is to be dictated by client needs on a site to site basis.

5) Performance Evaluation Samples

   - The project manger should consider the use of the following performance evaluation samples on a periodic basis. Typically, these will be reserved for larger jobs:

     a. Laboratory performance evaluation samples

     - Collect duplicate samples and send to two different laboratories for comparison. Avoid using soil samples for this procedure.
     - Send a sample of known quantity and quality to the laboratory in order to determine laboratory performance. Such samples can be prepared by any laboratory.

     b. Gas chromatograph (GC) performance evaluation samples

     - Acquire a sample of known quantity and quality from a laboratory. Analyze the sample with the gas chromatograph in order to determine the integrity of GC results.

Field Sampling QA/QC

1) When sampling a well, collect VOA samples first and samples for other analytes last.

2) Start sampling at the presumed least contaminated areas, proceeding to the more contaminated areas.

3) Preservatives

   - Consult the laboratory in order to determine which sampling parameters require preservatives. The laboratory will provide sampling containers specific for each job.
   - It is necessary to fill the sample container when using preserved bottles; preservative is added with this assumption
   - If samples are not collected correctly, they will not pass GEC QA/QC.

4) A chain-of-custody must accompany each set of samples from the job site to the laboratory. Be sure to identify the presence of trip blanks on the chain-of-custody sheets.

5) If possible, use the numbering system outlined on the attached sheet for identifying samples.

Ordering Sample Containers

1) Pre-plan sampling strategy to determine the sample parameters, the number of sample points including QA/QC samples, and the matrix of the given sample points.

2) Call laboratory and tell them:

   - Sample parameters,
   - Number of samples to be collected,
   - The number of container sets needed for trip blanks, field blanks, and duplicates, and
   - The matrix of each sample to be collected.

3) Sample containers should be ordered specifically for each job. Any sample containers unused at the end of the job should be sent back to the laboratory.

Conclusions

1) Pre-planning is crucial.

2) Keep open communication with the laboratory on all matters.

3) If you make a mistake in sampling collection, accept it, and retake the necessary samples.

Standard Operating Procedure
Thermo Environmental Instruments OVM
Model 580EZ

The Thermo Environmental Instruments, Inc. (TEI) 580EZ is a portable field instrument used to detect and approximate the concentrations of gaseous phase volatile compounds. The 580EZ operates by drawing the gas sample into an ionization chamber and exposing the gas to ultraviolet light, effecting photoionization.[1] The ions are collected on positive and negative electrodes, creating a current proportional to the concentration of ions.

I. Instrument Assembly and Battery Check

The condition of the internal battery is determined prior to each use of the 580EZ. A "low-battery" icon will appear on the display when the battery charge drops below a pre-set threshold. At this point the unit will have approximately one hour of normal operation remaining.

II. Calibration

As with all electronic instruments, the quality of measurements made with the 580EZ depends on the accuracy of the current calibration. The instrument should be calibrated at least once each day, preferably at the start of that day's operation. The 580EZ offers two types of calibration, a three-point calibration using a zero air and two span gases, or a two-point calibration using a zero air supply and a single span gas. See users manual for description of calibration methods. A brief description of the two-point calibration follows.

From the Main Menu select Calibrate Menu; from the Calibrate Menu select Calibrate. Once calibrate is selected the pump and UV lamp will automatically be activated if they are not already on. After the pump and lamp are on the Connect Zero Gas screen will appear. Connect the charcoal scrubber to the 580 EZ and press ready once the instrument is stabilized (counter at zero).

After completion of zero gas calibration the 580 EZ automatically prompts for the low concentration span gas. Connect the instrument to a known concentration span gas; press ready once the instrument has stabilized.

III. Operation

When power is first turned on, the speaker will sound and the red LED above the display will flash as the instrument performs a series of self-diagnostics. The Main Menu will appear on the display.

The 580EZ is controlled using three buttons located just below the display. Since the function of each button changes depending on the operating state, the current function is indicated on the bottom line of the display, just above each button.

In order to light the lamp and begin measurement, press the center button, which is labeled "RUN". At this point the display will indicate that the lamp is lighting, and you will notice that the pump turns on. Once the lamp is lit and stabilized, the "LIGHTING LAMP" message will clear and the normal run screen will appear. The run screen displays the current concentration reading in large numbers at the center of the display. Additional information, such as maximum ppm reading may also be displayed. For more information see Model 580EZ Instruction Manual.

GEC has two lamps, the 11.8 and 10.6. Document which lamp you are using in your logbook during each use. The 11.8 lamp should be used for chlorinated volatile organics, and the 10.6 for non-chlorinated volatile organics.

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[1]Claff, Roger E. (1991). "An Evaluation of Soil Gas and Geophysical Techniques for Detection of Hydrocarbons", *Health and Environmental Sciences API Publication Number 4509*. American Petroleum Institute, Washington D.C.

IV. Notes

Interferences: The sensitivity of photoionization processes is reduced by the presence of gases not ionized by the lamp. Water vapor or methane gas are two frequently encountered examples of such a gas. The 580EZ operator should be aware of and document the possible presence of such gases when interpreting data generated during photoionization screening.

Turn off the lamp from the setup menu selection under the main menu before turning instrument off. Scroll down to lamp setting and select off.

Standard Operating Procedure
Boring/Well Installation

This protocol is designed to insure that proper techniques are used, safety is considered, and quality assurance maintained during soil boring and well installation.

- DIGSAFE, municipalities and the owner are contacted prior to any soil boring or well installation to minimize chances of damaging underground utilities (DIGSAFE contacts utility companies to mark the location of utilities to the site). The Geologist or Inspector surveys the site visually for markings delineating the location of underground utilities. If warranted, the inspector modifies the drilling program to compensate for field conditions.

- The Geologist or Inspector continuously monitors all drilling activities and is responsible for maintaining independent field notes, well logs and ensuring that proper procedures are followed.

- Drilling equipment is steam cleaned prior to use in any boring and between borings (if necessary), to minimize potential cross contamination. At a minimum the following pieces of equipment are steam cleaned: augers, cutting heads, samplers, drill rods, and forks. The working end of the drill rig is also cleaned and inspected for evidence of hydraulic fluid or diesel fuel leaks.

- Subsurface soil samples are collected at a minimum of five foot intervals in accordance with standard ASTM methods for split spoon sampling. After logging soil characteristics, samples are collected. Two samples are placed in clean jars with an aluminum bladder below the lid for head space screening. Soil sample screening is performed in accordance with the GEC Jar Headspace Screening procedure. Samples with elevated readings (< 10 ppm) soil are quickly transferred into two clean VOA vials with Teflon liners. The vial is half filled and soil particles are removed from the lip of the vial to assure a proper seal with the lid. All samples are labeled in accordance with the GEC standard labeling identification system and handled/stored in compliance with USEPA protocols.

- The split spoon sampler is decontaminated in accordance with GEC's Decontamination Protocol after sample retieval and it is steam cleaned between borings. The Geologist may increase the frequency of steam cleaning as necessary.

- All cuttings from drilling remain on the subject property. If cuttings are designated as uncontaminated fill, via headspace screening, and the boring is not completed as a monitoring well the cuttings are used as backfill.

- Monitoring well screens are set to depths adequate for the required sampling. Monitoring wells are typically constructed with a silica sand filter surrounding and extending a few feet above the screen. The screen extends at least one to two feet above groundwater. The riser extends from the top of the screen to ground level, has a bentonite pellet seal above the screened interval, a cement seal and protective cover at the surface. No glues or solvents are employed in the well construction.

- Soil Logs are to be maintained by the Geologist and should contain the following:
  - Date and Location of boring/well
  - Drilling contractor
  - Job number
  - Depth of sampling
  - Boring number
  - Depth to well point.
  - Soil description includes; soil colors, grain size from greatest percentage to lowest, rock fragments, obvious fill constituents, staining, and odor if obvious.
  - Changes in soil strata and elevation of the water table are also noted.

Standard Operating Procedure
Observation Well Development

Subsequent to well installation, and prior to sampling or surveying, an observation well must be thoroughly developed. Well development is critical to the success and integrity of later sampling activities and to the life span of the well. Primarily, two techniques are appropriate for the needs of site investigation and groundwater monitoring. Both methods involve reversals, or surges, in flow to prevent clogging of the filter pack which is common where flow is continuous in one direction. Either a decontaminated pump or bailer or both may be used to surge the well and to remove water which may have been in contact with the drilling apparatus. If a pump is used, a source of clean water is necessary to pump down the well. Water should be alternately pumped out of and into the well until water removed is essentially clear, or of constant minimal turbidity. If the well is to be developed with a bailer the following steps will be performed.

1) Gauge the depth to water/product and the depth to the bottom of the well

2) Based on these measurements calculate the volume of water equal to one well volume.

3) Using a precleaned bailer and clean string, repeatedly plunge the filled bailer up and down within the well and periodically remove the water from the well. Water removed from the well should be discarded in a manner consistent with environmentally sound practices.

4) Periodically (approximately once every five bails) dispense the contents of the bailer into a clean one-liter glass container. Using the electronic TLC probe, determine the temperature and conductivity of the water being removed from the well. Once the temperature and conductivity have been determined discard the contents of the jar appropriately.

5) Steps 3 and 4 should be repeated until the following three conditions have been met: 1) three well volumes of water have been removed from the well; 2) temperature and conductivity levels do not vary more than approximately 10% between measurements, and 3) groundwater being removed from the well has a consistent minimal turbidity.

Standard Operating Procedure
Survey of Observation Wells and
Significant Features

The primary purpose of surveying is to provide a permanent record of the location of significant features and to develop plans, including those of the groundwater surface. All observation wells and water table elevations must be surveyed in the field. Surveying includes the measurement of both location and elevation of groundwater and other important features. Accurate measurements are important in all cases, but are paramount in areas where wells may be difficult to locate in the future, or where the groundwater gradient may be particularly shallow. It is recognized that the survey of observation wells by GEC personnel will not, and should neither be represented or construed to be, as accurate as a survey, which would be prepared by a Registered Land Surveyor.

NOTE: A field book, denoting the approximate locations of major features, is important for the purpose of detailing the survey measurements made in the field. In the absence of sophisticated surveying equipment, the horizontal location of wells and other major features is most effectively accomplished through either taping the distance from wells to major features of known location, or by using stadia.

Surveying should be accomplished through the following steps.

1) Choose a benchmark, which is, and will remain, stationary for a reasonable period of time (years) and mark the spot with paint. Do not use road or gate boxes as a benchmark. Concrete transformer pads or street light bases generally make good benchmarks.

2) Set up the leveling instrument and the tripod at a location higher than the benchmark and with a direct line of sight to the benchmark, as well as several of the features to be surveyed. Ideally the leveling instrument should be set up in an area where the chance of the instrument being disturbed by pedestrian or vehicular traffic is minimal. Once set-up, the leveling instrument should not be left unattended.

3) The leveling instrument should be accurately leveled by first extending and firmly tightening the stand's legs. The legs should then be maneuvered such that the leveling instrument is roughly level.

4) Once roughly leveled, precise leveling should be accomplished using the leveling features on the survey instrument itself. Accuracy of the leveling instrument should be confirmed by viewing the "leveling bubble" as the survey instrument is rotated in several different azimuth directions.

5) The leveling instrument cross hairs should be focused such that they form thin and well defined lines when observed through the viewfinder.

6) Using the rod tripod or a rodman, place the base of the stadia rod on the benchmark and extend the rod vertically. It is often helpful to use a pocket transit (Brunton Compass) and assistance from a distant observer (the person manning the leveling instrument) to ensure that the stadia is vertical.

7) Sight with the instrument to the rod and record the height of the instrument (Height), i.e. footage as viewed at the cross hairs to the nearest 0.01-foot. Note: some leveling instruments are equipped with distance measuring cross hairs. These usually appear as smaller cross hairs equidistant above and below the primary cross hairs. If these secondary cross hairs are present on the instrument being used, the height, as viewed through these secondary cross hairs should also be determined as a means of double checking or confirming primary measurements i.e. the primary measurement should be the mean of the two secondary measurements. Also, record the azimuth of the instrument.

8) At each well location, choose **and** mark a point on the well, preferably a point on the PVC riser, to place the stadia rod. If the stadia rod will not fit in the road box, choose **and** mark a point on the road box to place the rod. The point that is marked for the elevation survey MUST also be sued for well gauging. Place the base of the rod on the designated point and extend the rod vertically.

9) Sight with the instrument to the rod and record the footage in the same manner as listed in Step 7.

10) Repeat Steps 8 and 9 for all of the wells and significant features, which can be viewed from one fixed location. Note: for larger sites it may be necessary to "link" several sightings in series in order to collect information for all features.

11) If the true elevation of the benchmark is not known, the benchmark should be assigned an arbitrary elevation of 100.00 feet. All other elevations should be calculated relative to the 100.00-foot benchmark elevation.

12) If several locations are linked the survey should be completed such that several points are measured from multiple locations. The results of the survey should then be calculated and elevation measurements from duplicate sampling points compared. If comparison of duplicate measuring points indicates measurement error the site should be resurveyed.

Standard Operating Procedure
Soil Sampling via Test Boring

Soil samples collected during the performance of test borings will, in most cases, either involve collection of "grab" samples directly from the auger flights, or "undisturbed" samples with an appropriate sampler. Clearly, soil samples can be most easily recovered directly from the auger flights as the soil cuttings are brought to the surface, however, it should be understood that this technique does not provide an undisturbed sample and the actual depth from which the sample is collected is not known. The preferable method of sample collection for most purposes utilizes a split barrel core (or split spoon) sampler, which can be used to obtain samples of unconsolidated material from discrete depths with reasonable accuracy.

Note: The top few inches of the split spoon sample may include displaced cuttings, which managed to get inside the hollow auger. Field personnel should be aware of this and exclude this portion of the spoon contents from the collected sample.

Auger Samples:

1. Samples are collected off the auger flight using the actual sample container or a clean instrument such as a spoon or spatula. Care must be taken when collecting the sample from the augers to avoid material, which is obviously not from the sampling horizon of interest (i.e. pavement in soil zones which are definitely not fill). Standard Operating Procedures which may be specific to the sample containers and the intended purpose of the sample (i.e. chemical analyses, PID screening) should be followed. Collect at least one sample in a clean 8 oz. glass jar (half filled) for PID screening and should be sealed and treated in an appropriate manner. Collect a second sample off the auger insuring that both samples are as close to identical in content samples as possible. This second sample should be used in describing the sediment characteristics.

2. Make a note of the appropriate depth of the augers in order to approximate depth of sample. With a sharp writing instrument, or permanent marker record the project number, boring number, sample number, estimated depth of sample and sample method (e.g. AUG for auger samples) on the top of the jar first jar. This jar should then be stored in a safe container (cooler or cardboard box) for later transport or set aside for PID screening.

3. Carefully examine the contents of the second jar to determine the lithology, i.e. the mineralogy, texture, sorting, moisture and color characteristics of the sediment sample. A complete and accurate description of the sediment sample should be recorded on the Test Boring Report, including the sediment characteristics, depth from which sample was recovered, collection method, and any notable features associated with the sample. Include the results of PID screening on the Test Boring Report.

4. Once a complete and accurate record of the sediment characteristics has been recorded on the Test Boring Report, the second soil sample may be discarded and the glass jar rinsed with water and dried. This glass jar may be reused to contain subsequent samples for sample characterization. Glass jars used for any purpose other than sediment description should not be reused.

Split-Spoon Samples:

1. Upon retrieving the split spoon, examine the tip of the sampler; ensuring that any material collected in the tip of the sampler is not discarded. Examine the spoon to determine if any well cuttings were inadvertently collected in the sampler and remove these cuttings if possible. Using a clean spoon or spatula, prepare a head-space sample by half filling a clean 8 oz. glass jar with three to five sub-samples which represent the spoon contents. Quickly cover the top of the jar with one or two sheets of clean aluminum foil and subsequently apply the screw cap to tightly seal the jar.

2. After opening the sampler and prepareing a head-space sample, examine the spoon contents for visually notable features (i.e. lithology, mineralogy, texture, sorting, packing, stratigraphic horizons, color changes, staining). Make note of visually notable features in field notes along with the boring number and sample depth.

2. With a sharp writing instrument, or permanent marker record the project number, boring number, sample number, estimated depth of sample, estimated recovery, and sample method (e.g. SS for split spoon) on the top of the jar first jar. This same information, as well as the depth of penetration, sample recovery and blow counts per six inches, should be recorded on the Test Boring Report. Collect a second sample from the sampler insuring that both samples are as close to identical samples as possible. This second sample should be used in classifying the sediment characteristics of the sample. In the event that two or stratigraphic horizons are observed, it may be desirable to collect additional samples from each of these horizons. The sampler should be thoroughly examined and rinsed to ensure that potential contaminants do not remain on the spoon prior to being reassembled and returned to the driller.

3. Carefully examine the contents of the second jar to determine the lithology, mineralogy, texture, sorting, and packing (if possible) characteristics of the sediment sample. A complete and accurate description of the sediment sample should be recorded on the Test Boring Report, including the sediment characteristics, depth from which sample was recovered, collection method, and any notable features associated with the sample.

4. Once a complete and accurate record of the sediment characteristics has been recorded on the Test Boring Report, the second soil may be discarded and the glass jar rinsed with water and dried. This glass jar may be reused to contain subsequent samples for sample characterization. Glass jars used for any purpose other than sediment description should not be reused.

Upon completion of test boring, samples should be packed in a cooler or cardboard box, or other appropriate container, for transport. Prior to transportation, care should be taken to insure that the glass jars are tightly sealed, to prevent spillage of contents, and that the jars will not be broken during the transportation. The box should be labeled on either of the end with the project number, location, date, boring numbers, and the name of the inspector. .

Standard Operating Procedure
Observation Well Sampling
Using a Low Flow Sampler

This protocol is designed to ensure that proper techniques are used, safety is considered, and quality assurance maintained during the performance of observation well sampling using low-flow techniques. A GEC representative is assigned to oversee and/or perform all observation well sampling for the project. The duties of the representative are to ensure that the scope of work is followed.

Sampling of groundwater observation wells using low-flow techniques is the primary means by which the chemical characteristics of groundwater can be determined in an accurate, representative, and repeatable manner. Therefore, it is imperative that care be taken in the development and subsequent sampling of observation wells. Low-flow sampling is considered an improvement over other techniques (e.g., bailers) that may unnecessarily agitate the sediment, enhance colloidal transport, and otherwise misrepresent contaminant levels.

Procedures for performance of groundwater observation well evacuation and sampling using low-flow techniques are outlined in the following paragraphs:

Well Evacuation and Sampling:

1) Prior to initiating any work the Health and Safety Plan, developed for the specific site activities, should be reviewed by all field personnel. The indicated measures on the Plan should be enacted prior to initiation of the sampling activities. Any concerns not addressed in the Plan are to be brought immediately to the attention of the Health and Safety Officer. Personnel participating in the sampling will dress with protective equipment appropriate for the anticipated conditions.

2) Decontaminate all equipment to be used in the performance of the activities in accordance with the protocol for decontamination. Decontamination should at least be performed by alternately rinsing all equipment with methanol and distilled water and vigorously scrubbing the equipment with a clean brush.

3) To the extent that contamination may be known at a given site, observation wells should be sampled in an order from "least contaminated" to "most contaminated".

4) Screen the well headspace with a photoionization detector (PID) or other appropriate instrumentation to confirm that concentrations of potential contaminants are within acceptable limits.

5) Test the well for accumulation of non-aqueous phase product (NAPL) using a pre-cleaned interface probe or transparent disposable bailer. If present, collect a sample of the NAPL and place in an appropriate sample container. This sample should be kept away from other samples.

6) Measure and record the depth to NAPL(if present) and depth to water. If NAPL is present, sampling for dissolved-phase contaminants should generally not be performed. In addition, if sampling is to be performed, appropriate measures should be taken to assure that any water removed from a contaminated well is disposed appropriately.

7) Historic measurements should be utilized to determine the total depths of wells. If a historic measurement is not available, total depth of the well should be gauged to determine the appropriate placement of the variable-speed low-flow sampling pump (pump). Gently lower the pump into the well to a point approximately half way between the top of the measured water elevation and the bottom of the well. If the water level in the well is situated above the top of the screened interval then the pump should be located half way between the top and the bottom of the screened interval. Tie the pump off at the appropriate depth to eliminate further disturbance of the water column.

8) Begin pumping the well at a rate no greater than 0.5 liters per minute (roughly 0.13 gallons or approximately two cups per minute). Provided there is ample room to measure depth to water after placement of the pump down the well, water levels should be monitored on a continuous basis. Drawdown of the water column should

not exceed 0.1 meters. The pumping rate should be adjusted accordingly, based on water column drawdown. If the water level drops more than 0.1 meters, the pumping rate should be decreased.

9) Continuously monitor groundwater parameters including pH, temperature, specific conductance and dissolved oxygen (DO). In some situations it may also be appropriate to monitor turbidity. Record geochemical parameters at the onset of purging, five minutes into purging, and at roughly one-minute intervals thereafter. In some cases longer intervals may be appropriate.

10) Purging should continue until geochemical parameters have stabilized. Stabilization shall be considered to have occurred when three consecutive measurements do not vary more than approximately 20% and visual and olfactory characteristics of the purged water do not change appreciably.

11) Record final geochemical parameters.

<u>Well Sampling</u>:

1) Samples at any given well will be collected in order of decreasing order of sensitivity to volatilization (i.e. VOC, total organic carbon, semi-volatile organics (BNA), ammonia, PCBs, pesticides, oil and grease, phenols, cyanide, sulfate and chloride, nitrate and ammonia, metals, and radionuclides)

2) Carefully fill sample containers directly from the pump discharge to the appropriately preserved, pre-labeled containers. Check that the sample containers seal properly and that the cap is sealed tightly. Record applicable information in the field logbook and complete all chain-of-custody documents.

<u>Following Well Sampling</u>

1) Gauge depth to bottom of well.

2) Decontaminate all equipment utilized during well purging and sampling, prior to gauging/sampling next well.

Standard Operating Procedure
Sample Preservation and Chain of Custody

This protocol is designed to ensure that proper techniques are employed in the preservation and chain-of custody of samples collected for laboratory analyses or for screening. This Protocol is intended to be consistent with Massachusetts Publication #WSC-310-91 (Standard References for Monitoring Wells), and 40 CFR 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

The results of screening and/or laboratory analysis of solid, liquid or gaseous media constitute the basis of evaluation of the majority of the disposal sites under investigation. It is therefore imperative that the preservation of the samples be appropriate to the media being analyzed as well as the analysis which is being performed. In addition, the integrity of the sample is dependent upon the premise that a clear chain of responsibility for the sample integrity has been maintained. Without this "Chain-of-Custody", the integrity of the laboratory results may inevitably come into question.

The preservation and Chain-of-Custody (COC) protocols outlined in the following paragraphs are not intended to be all inclusive, and this protocol is written with the understanding that the sampling of certain media or analyses may require specific sample preservation. This protocol is, however, intended to cover the majority of the media and analyses performed as well as the COC procedures employed at the majority of waste disposal sites.

A COC program must be followed during sampling and handling activities from the field through laboratory operations. This program is designed to assure that each sample is accounted for at all times. Field data sheets, COC records, and sample labels must also be completed by the appropriate sampling and laboratory personnel for each sample. The objective of the sample custody identification and control system is to assure, to the extent practical, that:

- all samples are uniquely identified;
- the correct samples are analyzed for the correct parameters and are traceable through their records;
- important sample characteristics are preserved;
- samples are protected from damage or loss;
- any processing of samples (e.g., filtration, preservation) is documented; and
- client confidentially is maintained.

A sample is considered under a COC if it meets all of the following criteria:

- the sample is in your custody,
- the sample is in your view, after being in your possession,
- the sample is in your possession and then you locked it up to prevent tampering, and
- the sample is in a designated, secured area.

The following paragraphs outline GEC's preservation and COC protocol.

1) Prior to initiating any work, the Health and Safety Plan developed for the specific site activities, should be reviewed by all field personnel. The indicated measures on the Plan should be enacted prior to initiation of any sampling activities. Any concerns not addressed in the Plan are to be brought immediately to the attention of the Health and Safety Officer. Personnel participating in the excavations will dress with protective equipment appropriate for the anticipated conditions.

2) Sample integrity is assured by use of containers appropriate to both the matrix to be sampled and the analytes of interest. Sample containers must be prepared in the laboratory in a manner consistent with USEPA protocols. Unless the proper sample bottle preparation and sample preservation measures are taken in the field, sample composition can be altered by contamination, degradation, biological transformation, chemical interaction, and other factors during the time between sample collection and analysis. Prior to sampling GEC personnel will ensure that the sample containers obtained from either a laboratory or a commercial supplier have been prepared in accordance with DEP and EPA protocols.

Sample containers are to be used once and discarded. Under no circumstance should a soil, water or gaseous media which has been collected for analysis be placed in a previously used sample container unless that container has been recleaned and preserved by a certified laboratory.

As part of the COC protocol, sample containers should have prepared labels for each sample. The label should include sample identification, date and time of collection, sample parameters to be analyzed, any preservatives used, and the name of the sample collector.

Upon collection of the sample(s), documentation of chain of custody (i.e. COC form) should be initiated and should include at least the following:

- date and time of sampling;
- sampling locations;
- sample bottle identification;
- and specific sample acquisition measures.

The COC and sample description requires:

- a unique identification of each sample;
- the name(s), address(es) and telephone number(s) of the sampler(s) and the person(s) shipping the samples and all subsequent transfers of custody;
- the type and method of analyses requested;
- the date and time of sample collection and transfer of custody; and the name(s) of those responsible for receiving the samples at the laboratory.

3) In some cases, field filtration of samples may be required. Information regarding the method of filtration should be determined in advance and communicated to the laboratory. Filtering of any sample collected for organic analysis should be avoided. Decanting of a liquid media is a preferred method for the removal of particulate matter. When field filtering is required, an appropriate filter medium must be selected to avoid potential sample contamination during the filtering process.

4) Sample holding times are specified for the initiation of chemical analyses, usually beginning at the time of sample collection but occasionally beginning at the time of sample receipt at the laboratory. This determination must be made prior to sampling to allow proper logistical planning for sample shipments. Holding times also vary with the regulatory basis under sampling take place in order to properly schedule work.

5) Sample containers are most often packed in plastic, insulated "coolers" for shipment. Bottles are to be packed tightly so that only minimal motion of the sample containers is possible. Materials which are considered to be highly hazardous may require special handling and packing for shipment. Ice, or a similar heat transfer fluid, should be placed over the top of the sample containers and should be placed within a water tight plastic bag to assure that the samples are kept as dry as possible. In addition, all applicable paper work should also be enclosed within a second water-tight bag and included in the cooler. The sample cooler should then be taped shut.

6) Upon receipt of the samples at the laboratory, any laboratory identification numbers should also be included on the COC form. Finally, those responsible for receipt of the samples should be indicated on the COC form as well as the date and time of the sample drop-off.

Appendix B:
Health and Safety Plan

HEALTH AND SAFETY PLAN
GOLDMAN ENVIRONMENTAL CONSULTANTS

SITE DESCRIPTION

Date: 7/18/2005 Project Number: 444-5010

Site Name: Jameco Industries, Inc.
Site Address: 248 Wyandanch, Ave
Wyandanch, NY

Site Conditions: Industrial facility with unpaved and paved areas

Entry Objectives: Site remediation and groundwater monitoring, also soil boring Installation and soil sampling. Soil excavation, stockpiling and off-site disposal, injection well installation and chemical injections.

Sketches Attached: Yes ____ No X

Is this a disposal site as defined under the Massachusetts MCP or an uncontrolled hazardous waste site under Superfund, Yes/No? Yes

Listed as a controlled waste site by NYSDEC

EMERGENCY INFORMATION

Nearest Phone & Location: Inside building - 516-643-3500

Nearest two-way radio: None Available

	Number	Location
Fire:	643-5300	Wyandanch Vol. F.D.
Police:	854-8100	1st Precinct, Babylon
Ambulance:	911	Wyandanch, F.D.
Hospital:	631-376-3000	1000 Montauk Highway

Does hospital have chemical trauma capability? Yes X No ____

Directions to Hospital: left from site onto Wyandanch Ave. At end take left onto ______ Street and go south to South State Parkway. Follow SS Parkway to exit 40 (south) and onto Robert Moses Causeway (south). Follow to Exit 27A West and take right off exit onto Montauk Highway. Follow through three traffic lights and hospital is on the left.

SEE MAP ATTACHED

Additional Important Phone Numbers:

Goldman Environmental	(781) 356-9140
Other State Agency:	______________
Chemtrec	(800) 424-9300
National Response Center	(800) 424-8802
ATSDR	DAY: (404) 329-2888
AT & F (Explosive Information)	(800) 424-9555
Pesticide Information Service	(800) 845 7633
CMA Chemical Referral Center	(800) 262-8200
National Poison Control Center	(800) 942-5969
U. S. DOT	DAY: (202) 366-0656

LEPC Contact
Name: __________ Title: ____________
Phone Number: ____________

SPECIAL LOCAL EMERGENCY PLANNING COMMITTEE REQUIREMENTS (if any)

NA

DIGSAFE INFORMATION (if warranted)
DIGSAFE No. Agencies Contacted________________________
Date / Time________________

PERSONAL PROTECTIVE EQUIPMENT

The following level of protection will be used:

	Task to be Performed	Level of Protection	Coverall	Glove In/Out	Air Purification Cartridge
1)	Sample Collection, All tasks	D	Cotton	Latex/Nitrile	None
2)	Upgrade for all tasks	C	Tyvek	Latex/Nitrile	Organic
3)					

Additional Equipment:		Anticipated Monitoring:	
Hard Hat	X	Radiation Meter (A.3)	
Face Shield		Gas Chromatograph (A.4)	
Safety Glasses	X	TIP/HNU HW-101	X
Ear Protection			
Rubber Boots		Oxygen Meter	
Other			

HAZARD DESCRIPTION

Physical Hazards

Heat (A.8) __X___ Cold (A.9) __X___ Noise (A.10) __X__ Underground Utilities _X____ Overhead Utilities __X_____ Heavy Equipment X_____ Confined Spaces ____ Pressurized Airlines ____ Explosive (A.11) ____ Ladders or Scaffolds ____ Unguarded floor/ground openings __X__ Liquids in open containers, ponds, or lagoons ____ Radiation (A.12) ____ Physical Hazards (A.13) ____ Oxygen Deficiency (A.14) ____.
Traffic ____
Other ______________________________

HAZARD EVALUATION

Suspected Sources of Contamination:

Groundwater has been shown to contain volatile and metals compounds typical of foundry use. Liquid-phase contaminants are not present onsite.

Respiratory Hazards:

The chemical contaminants detected on-site can represent an exposure hazard in concentrated form. Inhalation of petroleum vapors emitted from soils or ground water is the primary respiratory hazard. During soil boring and well installation air in the breathing zone will be monitored using a PID calibrated to a benzene equivalent. Readings consistently above 5 ppm TIC threshold limit in the breathing zone will require an upgrade to level C protection. Soil Samples collected during soil boring will also be screened with the PID for TICs. During sample collection, the PID will be used to monitor the breathing zone for TICs. Readings consistently above the 5 ppm TIC threshold limit will require an upgrade to level C. If such a situation exists, personnel who have not been fit tested for work at level C will remain upwind of the area, where TIC threshold cannot be exceeded. Transient exceedences above the 5 ppm TICs in the breathing zone will require Level D work stoppage until levels return to sub-threshold levels, after which work in level D may resume.

Dermal Hazards:

Contact to skin during sample collection will be minimized as protective clothing will be worn by workers. Latex and nitrile gloves should provide sufficient protection from the dermal hazards. Good personal hygiene practices will be practiced.

Ingestion Hazards:

Ingestion of contaminated water is considered unlikely as hand to mouth contact will be avoided and face shields will be worn during water sampling. Personal hygiene should be sufficient to prevent ingestion of contaminants.

DECONTAMINATION

Step by Step Decontamination Procedures and Solutions:

Personal Protective Equipment (PPE): Tyvek suits will be disposed as solid waste. All other PPE will be rinsed with soapy water, DI water, and methanol and DI water. For gasoline/oil contaminated PPE/sampling equipment, acetone, then hexane should be substituted to remove stubborn petroleum residue.
Sampling Equipment: Scrubbed with soapy water, rinsed with DI water and methanol and DI water.

Other Equipment: See sampling equipment

Disposal of waste clothing, decontamination solution, etc.: Decon solutions will be allowed to evaporate, clothing discarded into the dumpster.

MSDS(s) for Methanol ______________________ is/are attached.

WORK LIMITATIONS OR PRECAUTIONS

Describe limitations due to time of day, weather, situations, if any: None

Sample Preservatives: Acids and caustics used as preservatives should be handled with gloves and safety glasses.

SIGNATURES

All site personnel have read the above plan and are familiar with its provisions:

Name	Signature

Written by: ______________________ Date: ____________

Approved by: ______________________ Date: ____________

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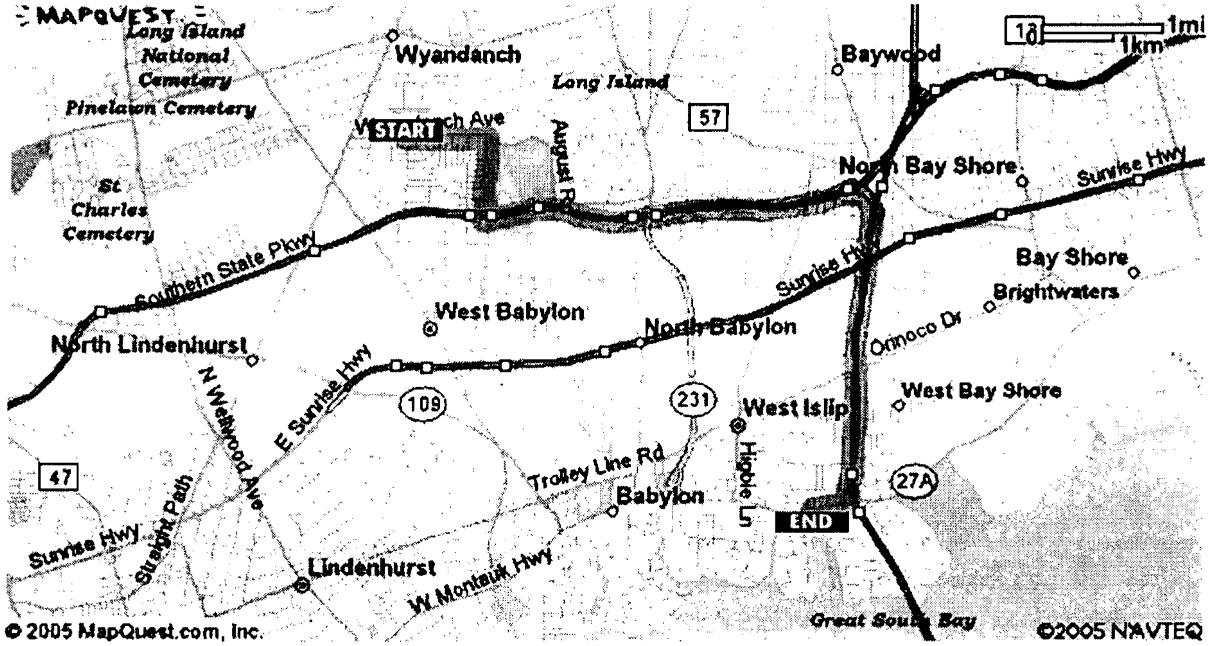
MAPQUEST

Start: **[117-199] Wyandanch Ave**
Wyandanch, NY 11798, US

End: **1000 Montauk Hwy**
West Islip, NY 11795-4927, US

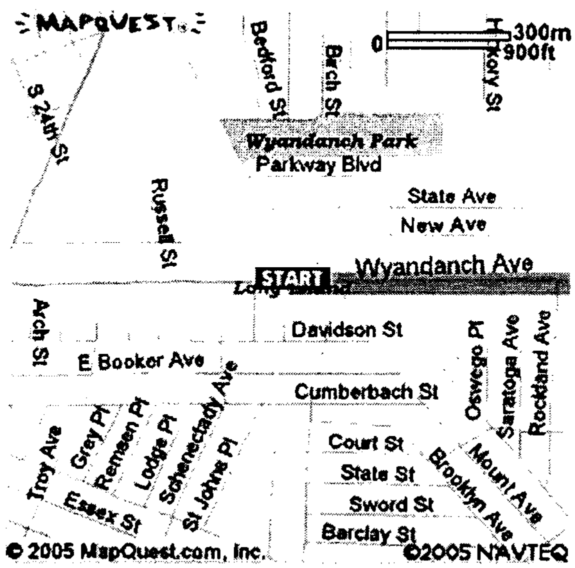
Directions	Distance
START 1: Start out going EAST on WYANDANCH AVE toward MOUNT AVE.	0.6 miles
2: Turn RIGHT onto BELMONT AVE.	0.6 miles
3: Merge onto SOUTHERN STATE PKWY / SOUTHERN PKWY E.	3.1 miles
40 EXIT 4: Take the ROBERT MOSES CAUSEWAY SOUTH exit- EXIT 40- toward OCEAN BEACHES.	0.2 miles
5: Merge onto ROBERT MOSES CSWY S.	2.2 miles
RM2W EXIT 6: Take the RT-27A W exit- EXIT RM2W- toward BABYLON.	0.2 miles
7: Turn RIGHT onto MONTAUK HWY / NY-27A.	0.2 miles
END 8: End at **1000 Montauk Hwy** West Islip, NY 11795-4927, US	

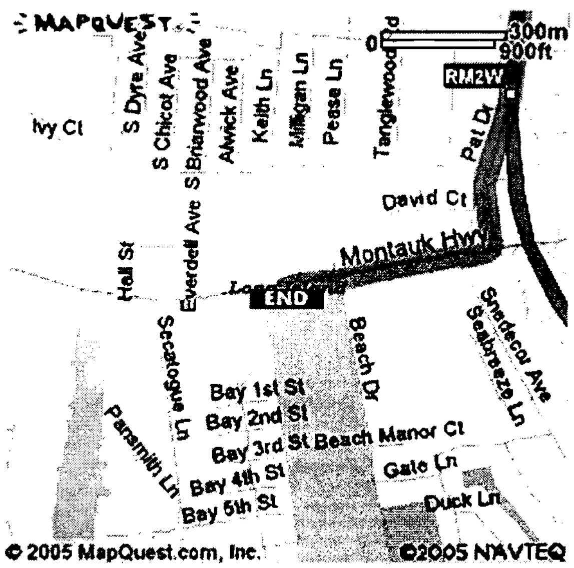
Total Est. Time: 11 minutes **Total Est. Distance: 7.56 miles**



Start:
[117-199] Wyandanch Ave
Wyandanch, NY 11798, US

End:
1000 Montauk Hwy
West Islip, NY 11795-4927, US





Notes:

NAVTEQ ON BOARD

These directions are informational only. No representation is made or warranty given as to their content, road conditions or route usability or expeditiousness. User assumes all risk of use. MapQuest and its suppliers assume no responsibility for any loss or delay resulting from such use.

Appendix C:
Construction Plans and Specifications
(To be finalized after the pilot tests)