REMEDIAL INVESTIGATION REPORT

FORMER CLOVE AND MAPLE MANUFACTURED GAS PLANT SITE,
120 MAPLE AVENUE
HAVERSTRAW, NY

NYSDEC Site Number 3-44-049

Prepared for:

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EXECUTIVE SUMMARY

CMX, Inc. (CMX) has prepared this Remedial Investigation Report (RIR) on behalf of Orange and Rockland Utilities (O&R). The remedial investigation (RI) activities were performed in accordance with the Administrative Order on Consent (AOC), dated September 1998, Index #D3-0001-98-03, between O&R and the New York State Department of Environmental Conservation (NYSDEC) and the NYSDEC approved Supplemental Remedial Investigation Work Plan (SRIWP). This RIR presents the results of the RI activities performed at the Former Clove and Maple Manufactured Gas Plant (MGP) Study Area between April 2008 and June 2008 as well as findings from previous environmental investigations.

The Clove and Maple Former MGP Site is identified by NYSDEC as site number 3-44-049 and is located at 120 Maple Avenue, Haverstraw, Rockland County, New York. The current and previous environmental investigations identified soil and groundwater contamination at the Former MGP Site and nearby properties that included benzene, toluene, ethylbenzene and xylenes (BTEX) and polycyclic aromatic hydrocarbon (PAH) compounds and non-aqueous phase liquids (NAPL).

The Former MGP Site is located on a 250' by 200' (approximately 1.15 acre) rectangular parcel referred to on the tax map as Block 1, Lot 9 (Plate 1). It is bordered to the north by Maple Avenue, to the east by the Head Start of Rockland pre-school facility, and to the south by Clove Avenue and to the west by two residential properties. The area of the site is zoned residential, residential townhouse, and planned industrial district. Single family residential, multifamily residential and light industrial land uses are found nearby.

The RI included subsurface soil, soil gas and groundwater sampling and analysis, and investigation using the Tar-specific Green Optical Screening Tool® (TarGOST®) screening technology. The RI Study Area included the Former MGP Site, the Apartment Complex (north of the Former MGP Site) on the opposite side of Maple Avenue from the Former MGP Site, the West Street Properties generally located to the north of the Apartment Complex, the Head Start Property located east side of the Former MGP Site and a portion of an Alleyway located between the Apartment Complex and Tor Avenue.

The RI also included a contaminant fate and transport evaluation and potential exposure assessment for the Study Area. The fate and transport evaluation incorporated information developed during previous environmental investigations in addition to information including

the groundwater hydrology, geology, history of the Study Area, the nature of the chemical compounds encountered during the sampling programs, and apparent trends in the distribution of these materials in the Study Area. The evaluation provided a discussion of the physical and chemical characteristics of the contaminants identified in the analytical data, the potential sources, migration pathways and receptors in the Study Area. The environmental media that may potentially serve as pathways for contaminant migration are surface soil, subsurface soil, groundwater, Hudson River sediments, and storm water runoff. An exposure assessment to evaluate the need for remedial actions was completed based on available data.

The following is a summary of the exposure assessment:

- There are no complete exposure pathways at the 146 Maple Avenue Head Start parcel except for a potential fugitive dust pathway from surface soil from the Former MGP Site.
- There are complete exposure pathways posed to utility workers, construction workers, and, potentially, residents at the Apartment Complex and West Street Properties. Exposure is only a concern if subsurface soils are excavated and impacted soils and groundwater are encountered.
- There are complete exposure pathways posed to O&R maintenance workers, utility workers, trespassers, adjacent community members and possibly to future construction workers at the Former MGP Site. These exposures are generally mitigated because O&R controls access to and activities on the Former MGP Site.
- If the Former MGP Site were to be redeveloped for future unrestricted uses, complete exposure pathways would exist for potential recreational users or residents.
- The sediments of an embayment to the Hudson River are an exposure pathway because of the presence of PAHs. However, many sources for these constituents exist around the embayment, so detected concentrations cannot be solely attributed to the site. The distribution of constituents in the embayment suggests that other sources play a predominant role.

The RI activities determined that, in general, horizontal and vertical delineation of contamination in the Study Area has been achieved. During this RI, sufficient data were obtained to develop and select remedial alternatives for the Study Area. As noted in the RIR, several minor data gaps remain that can be addressed as part of the Feasibility Study to support the final remedy.

SECTION 1 INTRODUCTION

This Remedial Investigation Report (RIR) presents the results of remedial investigation (RI) activities performed at the Former Clove and Maple Manufactured Gas Plant (MGP) Study Area between April 2008 and June 2008.

The Clove and Maple Former MGP Site is identified by the New York State Department of Environmental Conservation (NYSDEC) as site number 3-44-049 and is located at 120 Maple Avenue, Haverstraw, Rockland County, New York. This RIR also includes a summary of the findings of previous remedial investigation (RI) activities for this site along with the conceptual model that has been developed based upon all available data.

The following designations are used in this report to identify the various properties within the Study Area investigated as part of this project.

- **Former MGP Site:** The Former MGP Site property is owned by Orange and Rockland Utilities (O&R) and was operated as a gas regulator station until 2007 when the regulator station was retired. The Former MGP Site is located on a 250' by 200' (approximately 1.15 acre) rectangular parcel referred to as Block 1, Lot 9 on the tax map (Plate 1). The site is bounded by Maple Avenue to the north, the Head Start Facility (146 Maple Avenue) to the east, Clove Avenue to the south, and a drainage swale to the west beyond which is the property known as 104 Maple Avenue.
- **Apartment Complex:** Parcels located north of Maple Avenue and including the structures identified as 111 through 143 Maple Avenue (with surrounding landscaped and paved parking lot areas), 130 West Street (Block 2, Lot 17.1) and the Village of Haverstraw Property identified as Block 2, Lot 16. These properties are bordered by the single family residential properties that front on 96 through 116 West Street to the north, West Street to the east, Maple Avenue to the south and the single family residential property at 103 Maple Avenue on the west. 111 – 117 Maple Avenue are individually owned properties. With the exception of the Village of Haverstraw property, the remainder of the apartment buildings property is owned by a single third party owner.

- **West Street Properties:** The 6 single family residential parcels located at 96 through 116 West Street, bordered to the north by West Street, to the east by West Street, to the south by the asphalt paved parking lot on the northern portion of the Apartment Complex and to the west by the single family residence located at 90 West Street.
- **Head Start Property:** This is the property owned by Head Start of Rockland (the site of the former Doig Nail Corporation) at 146 Maple Avenue (Block 1, Lot 10). This property is bordered to the north by Maple Avenue beyond which are the Apartment Complex, to the east by Block 1, Lot 11, to the south by Clove Avenue beyond which are single family residences and to the west by the Former MGP Site. The property is used as a pre-school education facility that began operation in September 2000.
- **Alleyway:** This is the area bordered by the rear of the properties at 86, 88 and 90 West Street to the north, Apartment Complex asphalt paved parking area to the east and the rear of the property at 103 Maple Avenue to the south. The Alleyway connects Tor Avenue to the parking area on the apartment buildings property. For several of the residential properties located on West Street, the alleyway provides access to the driveways in rear of their respective properties. The Alleyway is approximately 20' wide and the RI included the eastern-most (approximately 70') section located adjacent to the Apartment Complex parking area.

The Study Area location is shown on Plate 1.

Background

CMX, Inc. (CMX) has prepared this RIR on behalf of O&R. The RI was performed in accordance with the Administrative Order on Consent (AOC) dated September 1998, Index #D3-0001-98-03, between O&R and the NYSDEC; and the RI work plan dated February 2008, which was approved by NYSDEC on March 14, 2008.

The Study Area is zoned residential, residential townhouse, and planned industrial district. Single family residential, multifamily residential and light industrial land uses are found nearby.

The Clove and Maple Avenues site is distinguished from another Haverstraw MGP site (referred to as the 93B Maple Avenue MGP site), located northwest of the Clove and Maple Avenues site on the opposite side of Maple Avenue which was the subject of a previously

completed NYSDEC-approved remedial action. Plate 1 presents a detailed site location plan which distinguishes the 93B Maple Avenue MGP site and associated properties from the properties addressed by the RI described herein.

Remedial Investigation Objectives

The overall objectives of the RI were to:

- Determine the nature and extent of MGP residuals that may be present at the site;
- Delineate the horizontal and vertical extent of Former MGP Site related soil and groundwater impacts;
- Determine whether constituents identified by the RI constitute a threat to human health or the environment;
- Obtain data to provide the basis for a feasibility study of remedial actions for the Study Area;
- Evaluate potential migration pathways including vapor intrusion on properties not previously investigated;
- Characterize geologic and hydrogeologic conditions in the Study Area.

These objectives are consistent with those of the NYSDEC's comprehensive remedial investigation (RI) process and those included in the SRI Work Plan (SRIWP) approved by NYSDEC on March 14, 2008.

Report Organization

Executive Summary

Section 1 – presents the introduction to this report.

Section 2 – presents the background and history of the Former MGP Site and a description of land use in the Study Area.

Section 3 – presents the physical setting for the site.

Section 4 – presents a summary of previous investigations performed at the site.

Section 5 – presents the scope of the 2008 RI.

Section 6 – presents the results 2008 RI.

Section 7 – presents a summary of the fate and transport evaluation.

Section 8 – presents a conceptual site summary.

Section 9 – presents the exposure assessment.

Section 10 – presents summary and conclusions.

Section 11 – presents recommendations.

Section 12 – presents the references used for this RIR.

Section 13 – presents the acronyms and abbreviations used in this RIR.

SECTION 2 BACKGROUND

Former MGP Site History

The Clove and Maple Former MGP Site operated from approximately 1887 until 1935, when natural gas was introduced into the area and the MGP was closed. The general configuration of the MGP did not change substantially during the operating period. Figure 2 is a site location map superimposed on an aerial photograph and Figure 3 depicts the gas works at its known greatest extent based on review of Sanborn Fire Insurance (Sanborn) maps and facility maps provided by O&R.

The following is a chronological history of the Clove and Maple Avenues Former MGP Site based on review of the Sanborn maps for 1890 through 1946, a historical photograph, plant drawings and reported gas company operating statistics from Brown's Directory of American Gas Companies (Brown's Directory).

- The earliest listing for the Former MGP Site (identified as the Haverstraw Gas Works) is in the 1887 edition of Brown's Directory citing gas production utilizing an oil gas method.

- An 1890 Sanborn map shows a gas plant at the site with a 50,000 cubic foot (cf) gas holder, a 30,000 gallon oil tank, and a coke house.

- A historical photograph dated 1890, shows the MGP and the surrounding area. The gas holder and the oil tank are visible in this photograph.

- In 1893, Brown's Directory lists the gas manufacturing process as Hanlon, and then in 1899, the process is listed as Boecklin. The Boecklin process existed at the site for at least 35 years.

- The 1909 Brown's Directory identifies the gas holder capacity as 60,000 cubic feet, which does not change through the early 1930s.

- A 1921 plant utility drawing (Peck, 1921) shows a horizontal high pressure gas storage vessel located near Clove Avenue. Review also indicates that the coke

storage house was removed that year and that a tar well was located between the 60,000-cf gas holder and the oil tank.

- A 1931 Sanborn map shows that a coal shed was added to the northeast end of the plant building.

- According to Brown's Directory, natural gas was distributed as of July 1, 1935 in place of manufactured gas.

- According to O&R's records, the gas plant structures were demolished in the 1960s.

- The existing regulator station was decommissioned in 2007 (historical information reviewed was unclear as to an installation date).

The approximate locations of the former MGP structures are presented on Plate 2 and Figure 3. CMX adjusted the location of some of these features to reflect a reexamination of a 1921 plant utility drawing (Peck). The most significant change to the historical structure locations on Plate 2 and Figure 3 is the iron oil tank, whose location was adjusted closer to the northeast corner of the site based on the 1921 drawing.

Former Pond Area

Figure 4 is a recent aerial photograph of the Study Area and vicinity with the locations of historical streets, the former pond and waterways superimposed. The historical locations are based on:

- 1876 Combination Atlas Map of Rockland County, New York by F.A. Davis & Company
- 1887 Sanborn Fire Insurance Map
- 1891 Beers Atlas Map
- 1890 and 1903 Sanborn Fire Insurance Maps

The historical mapping indicates that a stream previously flowed roughly parallel to the north side of Maple Avenue. The stream flowed from the northwest to the southeast discharging to the Hudson River Embayment.

The stream appeared to have been dammed near the intersection of West Street and Maple Avenue forming a pond that covered a portion of the Study Area bounded to the north by the properties fronting on West Street, to the east by West Street, to the south by Maple Avenue

and to the west by the 103 Maple Avenue property. The portion of the stream downstream of the dam appears to have been channelized between 1876 and 1891.

The stream and pond are no longer present, however a large storm sewer (pipe/culvert) currently runs beneath the alleyway and discharges to the Hudson River embayment. The stream was channeled by this storm sewer at some undetermined point in the past. The former stream channel from 93 B Maple Avenue to 103 Maple Avenue was remediated in conjunction with the 93B Maple Avenue remediation.

A photograph of the area taken circa 1890 (Figure 5) shows the pond and the surrounding properties. The photograph illustrates which properties or portions of properties were occupied by the pond.

Current Study Area Description and Land Use

2.1.1 Former MGP Site

The Former MGP Site is currently owned by O&R and a retired gas regulator station exists on the property. The site is currently unoccupied and consists mainly of grassed areas with a hedgerow of trees located along Maple Avenue. The regulator station piping remains on site in a small fenced enclosure. There are also several retired gas valve boxes and numerous abandoned gas pipelines located below grade on the site. Additionally, the concrete and brick pad for the former gas holder is present in the northwest corner of the site. The Former MGP Site is fenced with two locked gates located on the Clove Avenue side. A landscape contractor maintains the grassed areas.

2.1.2 Apartment Complex Properties

The Apartment Complex Properties are located on the north side of Maple Avenue across the street from the Former MGP site and include the four (4) two-story and three-story attached single family structures (identified as 111 through 117 Maple Avenue) and five (5) two-story apartment buildings (identified as 119 to 143 Maple Avenue; 130 West Street) with surrounding landscaped and paved parking lot areas and the Village of Haverstraw Property identified as Block 2, Lot 16.

2.1.3 West Street Properties

The West Street Properties are six single family residential parcels located at 96 through 116 West Street. Each of these homes appears to have been built using slab on grade construction and they include bi-level, raised-ranch and two-story style homes. None of

these homes have basements. Several of the properties access driveways in the rear of their property from the Apartment Complex parking lot.

Historically, houses at 100, 102, and 106 West Street were present in the aforementioned 1890 photograph. The area of 96 West Street was vacant, characterized by a steep slope that led to part of the pond.

2.1.4 Head Start Property

This property, 146 Maple Avenue (Block 1, Lot 10), contains a one story building owned by Head Start of Rockland and is the location of the former Doig Nail Corporation. The property is used as a pre-school education facility that began operation in September 2000.

2.1.5 Alleyway

This is an unpaved single lane that connects Tor Avenue with the parking area behind the Apartment Complex. As noted above, several of the West Street property owners access their driveways via the alleyway. In addition, the storm drain that runs from Tor Avenue to the Hudson River, runs beneath the alleyway.

2.1.6 Other Areas in Proximity to the Former MGP Site

Two residential properties (Block 1, Lots 8 and 44) are located to the west of the Former MGP Site on the west side of the drainage swale. One of these two properties, 104 Maple, was remediated during the implementation of the 93B Maple Avenue site IRM in 2005. MGP impacts on this property were attributed to the Clove & Maple Avenue Former MGP Site but remediation was conducted in conjunction with the 93B Maple Avenue remediation to address the possible sale of this property by the owner. A geotextile barrier was installed at the edge of the remediation area to prevent recontamination of this property.

Clove Avenue borders the Former MGP Site to the south beyond which are located residential properties (Block 1, Lots 27 to 32). These properties are topographically up gradient relative to the Former MGP Site.

SECTION 3 PHYSICAL SETTING

This Section discusses the physical characteristics of the Study Area and is based upon information presented in earlier reports prepared for O&R by GEI and Remediation Technologies, Inc. (RETEC).

Climate

Data on climate for the Study Area was obtained by Northern Ecological Associates, Inc. (NEA) from West Point, New York, the nearest weather station. The data were presented in the Fish and Wildlife Impact Assessment (NEA, 2000).

The Study Area is located in the Triassic Lowlands Ecozone. The climate is temperate, with January mean temperatures between 25 degrees Fahrenheit (°F) and 30°F and July mean temperatures between 70°F and 75°F. The growing season typically ranges from 180 to 200 days in the Triassic Lowlands. The average annual snowfall ranges from 40 to 60 inches.

Land Use in the Study Area Vicinity

The current land use in the vicinity of the Study Area and surrounding the Former MGP Site is generally commercial and residential. The eastern edge of the Study Area is approximately 600 feet from the Hudson River, which is a tidal estuary in this area. Undeveloped forest land is located to the south of the Study Area and includes portions of High Tor State Park, located approximately 1,800 feet southwest of the site.

Local Zoning

Zoning in the area of the site is residential, residential townhouse, and planned industrial district. Single family residential, multifamily residential and light industrial land uses are found nearby.

Local Groundwater Use

Public water in the area is supplied by United Water of New York of West Nyack, New York (UWNY). The Rockland County Department of Health (RCDOH), Spring Valley, New York and UWNY were contacted to investigate the potential presence of private water supply wells in the vicinity.

RCDOH reported the approximate locations of seven potential wells, all either cross gradient or up gradient of the Study Area, within 1 mile. One of these wells belongs to UWNY. RCDOH was not confident about the actual presence or locations of the other wells. According to current

information on the UWNY website, UWNY does not use any water from wells in Haverstraw or the surrounding towns.

Surface Water Hydrology

Based upon topography, overland flow is from the south (highest elevation in the Study Area) to the north, flowing from southern portions of the Former MGP Site to a level area at the central portion of the Former MGP Site, near monitoring wells MW-02 and MW-03. There is some runoff from the slope of the northern portion of the Former MGP Site towards Maple Avenue. Generally, overland surface water flows toward Maple Avenue and/or the drainage swale located along the western property line of the Former MGP Site. Runoff ultimately is discharged via the storm drain system to the Hudson River.

At the Apartment Complex, surface water generally flows from west to east, following the topography towards the parking lot behind these buildings. There are series of storm drains located in the parking lot. Runoff to these storm drains flows east towards the embayment of the Hudson River.

At the West Street Properties, surface water generally flows north to south, following the topography towards the parking lot at the rear (northern portion) of the Apartment Complex, to the aforementioned storm drains.

Local Surface Water

There are no surface water bodies located on the Former MGP Site. A detailed discussion of the area surface water bodies, their intended uses, and their water quality designations is found in *Fish and Wildlife Impact Assessment – Former Manufactured Gas Plants Haverstraw, New York*, prepared by NEA and submitted to NYSDEC in February 2000 (NEA, 2000).

According to NEA, 2000, three water bodies are located within 0.5 mile of the site: the Hudson River (Class SB), which is 600 feet to the east; an unnamed tidal creek (not classified), which lies 2,300 feet to the southeast; and an unnamed settling pond (not classified), which lies 2,700 feet to the southeast.

Regional Geology and Site Stratigraphy

The Clove and Maple site is located at the base of South Mountain, a steep northeast facing ridge. Maple Avenue, located adjacent to the southern portion of the site, runs along the base of this ridge. The site is characterized by moderate relief (approximately 20 feet) with the ground surface sloping to the east/northeast.

Site Specific Geology

Site geology, as determined through direct logging of soil borings, is discussed in this subsection. Data collected during subsurface sampling were used to generate twelve geologic cross sections. The locations of the cross section lines are presented on Plate 3. The cross-sections are presented on Plate 4A, 4B, and 4C. Complete details are presented in the boring logs in Appendix A.

3.1.1 Fill

A layer of fill (Unit 1) material consisting of miscellaneous soil and demolition debris forms the uppermost stratigraphic unit at the Study Area. The fill at the Study Area is primarily made up of loamy soil with some cobbles, gravel, brick fragments, cinders, coal, and glass shards. Thickness of the fill unit ranges from approximately 15 feet near Clove Avenue (at SB/MW 10) to a range of 1 to 5 feet depending on the location along Maple Avenue (at SG-9 through SG 14 and SB/MW 04 through SB/MW 07) and along the north side of the Apartment Complex where thicknesses vary from 3 feet at SB-134 to 13 feet at SB-131.

3.1.2 Alluvium

Alluvium (Unit 2) underlies the fill at most boring locations across the Study Area. The alluvium is a heterogeneous mixture of unconsolidated sediments characterized by discontinuous layers of coarse-grained sands, gravel, fine-grained sands, silts, and clays. As previously described by GEI and confirmed by CMX, thickness and composition of the alluvial deposits vary widely throughout the Former MGP Site, but can be generalized into four subunits:

- The first subunit is a coarse grained sand and gravel with some fine grained material and cobbles. In general, it is poorly sorted, although coarser sediments predominate. At SB/MW-10 (located in the southeast portion of the Former MGP Site near the former meter room), this subunit is approximately 20 feet thick and is overlain by fill and underlain by till. At SB-16 (located in the center portion of the Former MGP Site), the subunit is approximately 7.5 feet thick and is overlain and underlain by fine sands and silts. This subunit either thins to the east or grades into fine grained sand, silt, and clay. The sand and gravel unit was also found in SB/MW-04 and SB/MW-05 (located in the northern portion of the Former MGP Site along Maple Avenue), where it is approximately 7 feet thick and underlain by till.

- The second subunit is composed of fine sand, found primarily at the former MGP property, at soil boring locations SB-16, SB-17 and SB-17A. The thickness of this unit

ranges from less than one foot to approximately 25 feet. A small pocket of fine sand is also present at the northeast end of cross-section B – B'.

- The third subunit is silt and fine to coarse-grained sand. This subunit is found primarily on the north side of the Apartment Complex. As such, based on its location and limits, its presence may be due to relatively ancient depositional processes in the Hudson River. The thickness of this unit does not exceed about 4 feet.

- The fourth subunit is a clay and fine sand/silt mixture. It is the only soil unit that is present throughout the Study Area, appearing on both sides of Maple Avenue. Its thickness ranges from less than 0.5 feet (at MW-28S) to approximately 15 feet (at MW-11).

Another subunit which was found at most locations between the first and second units, at the Apartment Complex and the West Street Properties was a layer of organic clay/silt and peat. The material appeared to be friable to slightly cohesive, and appeared to be deposited at the former pond bottom.

3.1.3 Glacial Lacustrine Clay

The third unit (Unit 3) is comprised of gray and brown clay. The clay can be massive or can contain thin lenses of fine grained sand. The clay is thickest near Maple Avenue and thins to the southwest and west. The thickness varies from 2 feet at SB-16 (located in the center portion of the Former MGP Site) to approximately 18 feet in the vicinity of SB/MW-18 (located to the north of the former holder pad on the Former MGP Site). The clay is observed at the Apartment Complex at MW-21 (located in front of 127 Maple Avenue) and MW-28D (located in the parking lot behind 117 Maple Avenue) at thicknesses ranging from 16 to 12 feet respectively and at thickness of 6 to 2 feet at wells MW-20D (located in front of 119 Maple Avenue) and MW-29D (located in the parking lot behind 131 Maple Avenue) respectively. Clay is not present at any observed depth in the southern part of the Former MGP Site along Clove Avenue. Where present, the clay is typically underlain by coarse grained sand and gravel or interbedded with fine sand/silt and clay

Clay was encountered at a depth of 4 feet below ground surface at SB-134, located in the alleyway.

3.1.4 Till

Till (consisting of dense silty clay to dense sandy clay) is the fourth unit. The till behaves as a confining unit for dense non aqueous phase liquid (DNAPL). Refusal depths during advancement of the TarGOST® borings were used to establish the till depth at the Apartment Complex and the West Street Properties. The depth to the till below the ground surface (bgs) varies throughout the Study Area. Table 3-1 lists the depths to till and elevation of the till above mean sea level (msl) for each location measured during this RI.

Plate 10 presents a contour map of the till surface elevation.

Regional Hydrogeology

Groundwater flow in shallow unconfined/semiconfined aquifer flow systems in the region is largely controlled by the Hudson River. Groundwater is expected to discharge to surface water bodies such as ponds, streams, and rivers in the Hudson River watershed. All these regional watershed features eventually discharge to the Hudson River.

Site Specific Hydrogeology

The depth to groundwater varies throughout the Study Area. The first water-bearing zone in the study area is a shallow, semi-confined aquifer system, present within the alluvium. The shallow aquifer at the northern portion of the Study Area is effectively confined by clay resulting in artesian conditions being observed at several locations. The aquifer in the southern portion of the Former MGP Site, where clay was not identified, is unconfined. Groundwater elevation data are presented on Table 5-4. A shallow ground water potentiometric surface map is presented as Plate 8.

Ground water flow in the shallow aquifer in the Study Area appears to be controlled by topography and following the former pond. At the Former MGP Site, it appears that flow direction is in agreement with the topography, flowing from southwest to northeast.

At the Apartment Complex, CMX observed a “mounded” groundwater elevation at MW-21S which yielded an anomaly in the groundwater flow pattern with respect to the measured elevations at the other monitoring wells. However, the groundwater flow direction appears to follow the topography (since the Apartment Complex is at a higher elevation than the center of the former pond), and along the former pond from west to east towards the Hudson River embayment.

At the West Street Properties, groundwater appears to follow the topography, since the West Street Properties are at a higher elevation than the center of the former pond. Available data imply that the West Street Properties are side gradient to, and possibly upgradient of contaminants within the center of the former pond area.

Two rounds of low- and high-tide water level measurements were collected on March 26, 1999 and December 17-18, 2001 to determine if groundwater is influenced by tidal fluctuations that are apparent in the Hudson River. No significant changes in water levels were observed between the low tide and high tide measurement rounds.

In-situ hydraulic conductivity tests (slug tests) were performed in MW 01 and MW 03 during RETEC's 1997 Preliminary Site Assessment (PSA). The hydraulic conductivity (k) values were 1.2×10^{-2} centimeters per second (cm/sec) [34 feet/day (ft/d)] at MW 01 and 1.5×10^{-4} cm/sec (0.43 ft/d) at MW 03. Estimates of the average horizontal linear flow velocity of groundwater were calculated using the PSA slug test data and the newly derived gradient information from the RI. The equation $V = ki/n$ was used, where k is the hydraulic conductivity of the formation, i is the hydraulic gradient, and n is the effective porosity of the deposits. Using an average gradient of 0.02 (northeastern flow direction), assuming a value of 0.25 for effective porosity, and the range of measured conductivities, the average horizontal groundwater flow velocity ranges from 12.6 feet/year (ft/yr) to 993 ft/yr in the northeastern direction.

SECTION 4 SUMMARY OF PREVIOUS INVESTIGATIONS

O&R has conducted extensive investigations within the Study Area since 1996 including the following:

- Initial Hazard Assessment (RETEC, 1996),
- Preliminary Site Assessment (RETEC, 1997),
- Surface Soil Investigation and Risk Assessment (RETEC, 1998), and
- Remedial Investigation (RI) activities performed by GEI Consultants, Inc. (GEI) from 1998 to 2006.

The following sections summarize these previously completed investigations. The analytical results from these investigations are presented in the various tables that are included in Attachment 1 of this RIR.

Initial Hazard Assessment – RETEC 1996

At the request of O&R, RETEC performed an assessment of the Clove and Maple Former MGP Site to determine whether existing conditions could be considered an immediate threat to human health, using the ASTM Risk Based Corrective Action (RBCA) classification scheme. RETEC performed the assessment and concluded the following.

- Explosive vapors are not an issue on the Former MGP Site because there are no buildings present; they are unlikely to travel to off site buildings due to the distance of those buildings from the Former MGP Site.

- Explosive vapors in subsurface utilities are unlikely because no odors were noted in adjacent sewers.

- Minor amounts of tar were noted at the ground surface, but no impact was observed in the storm sewer or drainage swale. Contact with surface contamination is possible. Because exposed tar is weathered, acute risks due to exposure are minimal. However, health risks posed by this tar would occur from chronic, long term direct contact.

- No water supply wells are within 1 mile of the Former MGP Site, so impacts to drinking water are not an issue. As indicated in Section 3.0 above, RCDOH reported the approximate locations of seven potential wells, all either cross gradient or up gradient of the Study Area and within 1 mile. One of these wells belongs to UWNY. According to

current information on the UWNY website, UWNY does not use any water from wells in Haverstraw or the surrounding towns.

Preliminary Site Assessment – RETEC 1997

The objectives of the PSA were to identify the nature and extent of constituents of interest, to determine if the constituents pose a significant threat to human health or the environment, and to determine whether IRMs were appropriate at the Former MGP Site. The PSA included:

- surface soil (nine samples) sampling and analysis (Attachment 1, Table 3),
- soil gas field screening,
- laboratory analysis of eight soil gas samples,
- eight direct push soil borings in and around historic MGP structures,
- field and laboratory testing of subsurface soil samples (Attachment 1, Table 5),
- monitoring well installation (three total),
- groundwater sampling (Attachment 1, Table 6),
- hydraulic conductivity testing (two wells), and
- a survey of the Former MGP Site.

4.1.1 Surface Soils

Surface soil samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), polycyclic aromatic hydrocarbon (PAH) compounds, Target Analyte List (TAL) metals and total cyanide (Attachment 1, Table 3). The analytical results indicated that no BTEX compounds were detected in any surface soil samples. Concentrations of individual PAH compounds exceeding the NYSDEC Recommended Soil Cleanup Objectives (RSCOs) from the *Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM 4046), January 4, 1994*, were identified at each of the nine PSA surface soil locations. Metals were detected at concentrations greater than the NYSDEC RSCOs in all but two samples. Total cyanide was detected in seven of nine surface soil samples with no concentrations exceeding NYSDEC RSCOs.

4.1.2 Soil Gas

A soil gas sample was obtained from each of nine soil boring locations (samples SG-1 through SG-9). The results of the field screening indicated that the greatest concentrations of soil gas were detected within the footprint of the former gas holder.

4.1.3 Former MGP Site Structures

Four (4) areas of the Former MGP Site were identified as containing buildings or subsurface structures associated with the former MGP.

- Remnants of the gas holder foundation are still present at the Former MGP Site (Plate 2). The holder foundation is a 60-foot diameter concrete slab on grade, with a brick perimeter that exists in the northern portion of the Former MGP Site. One boring (SG-2) advanced through the slab indicated the absence of a subsurface tank. Tar contamination was reported by RETEC to be present beneath the slab in thin sand lenses extending from 6' to 13' bgs. Water table elevations within the footprint of the holder were reported to be consistent with areas outside the holder, indicating continuity that the holder foundation was not affecting groundwater recharge.

- Three direct push soil borings (SG-3, SG-7 and SG-8) were advanced near the footprint of the former tar well. No below-grade structures were encountered and the area was reported to be underlain by 7 feet of fill. Some hydrocarbon staining was observed and tar-like nodules were detected, however, no significant source material was encountered.

- One soil boring (SG-4) was installed in the area of what was previously believed to be the location of the former 30,000-gallon oil tank. Please note that upon review of additional facility drawings made available to CMX, the location of this structure was revised during the 2008 RI. During the installation of monitoring well (MW-02) just south of this former tank location, strong hydrocarbon odors and visible hydrocarbon product were reported to have been identified in soil samples. No subsurface structures were found at either SG-4 or MW-02. According to boring logs, the field geologist characterized these two locations as having strong hydrocarbon odors, hydrocarbon product in sand lenses and sand "saturated" with hydrocarbon product. A 2-foot thick layer of dense nonaqueous phase liquid (DNAPL) was detected in MW-02 during initial sampling.

- During the installation of two direct push soil borings (SG-5 and SG-6) in the vicinity of the former generator and purifier buildings, RETEC reported accumulations of a tar-like material on the ground surface in a small area adjacent to the existing regulator station. The material was described as being black, highly viscous, and exhibited a strong hydrocarbon odor.

4.1.4 Subsurface Soil Samples

Three subsurface-soil samples were collected and analyzed from the monitoring well borings SB1/MW-01, SB2/MW-02 and SB3/MW-03 (Attachment 1, Table 5). BTEX compounds were detected at concentrations greater than the NYSDEC RSCOs (TAGM 4046) in samples collected at SB2 and SB3. PAH compounds were detected at all three sample locations. In samples collected from borings SB2 (12'-14') and SB3 (10'-12'), 14 of the 16 PAH compounds were detected in concentrations greater than the NYSDEC RSCOs (TAGM 4046). Only benzo(a)anthracene and benzo(a)pyrene were found to be above cleanup standards at up gradient sample location SB1 (20'-22'). Cyanide was not detected in any of the three subsurface soil samples.

4.1.5 Initial Groundwater Investigation

Three monitoring wells (MW-01, MW-02 and MW-03) were installed by RETEC. The south area of the site along Clove Avenue was characterized by SB/MW-01. Only one individual PAH compound exceeded the NYSDEC RSCO (TAGM 4046) at a depth of 21.0' bgs in SB/MW 01. No BTEX was detected in SB/MW-01. The soil boring log prepared by the RETEC field geologist for SB/MW-02, south of what was believed to be the location of the former iron oil tank, identified a "0.3 foot lens of sand, fine, brown saturated with hydrocarbon product" at 13.1' bgs and that the sample was collected from the 12' to 14' bgs depth interval. Field screening of the sample reported a PID reading of 487 ppm. The highest total PAH concentration (1,499.0 mg/kg) on the Former MGP Site was found in this soil sample. This sample also contained total BTEX at a concentration of 94.0 mg/kg.

Groundwater samples collected at MW-01 reported non detectable concentrations of volatile organic compounds (VOCs) and PAHs (Attachment 1, Table 6). Levels of aluminum, iron, mercury and sodium were detected in concentrations exceeding the NYSDEC Ambient Groundwater Limits (GA). Groundwater samples collected from monitoring wells MW-02 and MW-03 contained VOCs and PAHs at concentrations greater than the NYSDEC Ambient Groundwater Limits (GA). Levels of iron, magnesium, manganese, mercury and sodium were detected at concentrations exceeding the NYSDEC Ambient Groundwater Limits (GA). Total cyanide was detected in one down gradient well (MW-02) at a concentration above its NYSDEC Ambient Groundwater Limit (GA).

A non aqueous phase liquid (NAPL) collected near the location of the former oil tank (MW-02) was analyzed for physical properties and finger print to obtain information regarding its

potential mobility. The results confirmed field observations that the sample was a carbureted water gas tar.

Surface Soil Investigation and Risk Assessment

The PSA recommended the completion of supplemental surface soil sampling. In July 1997 sixty-two surface samples were collected and analyzed for PAHs and target analyte list (TAL) metals (Attachment 1, Table 3). In an attempt to characterize the site the supplemental surface soil sample locations were selected using a grid pattern covering the Former MGP Site. In response to the results of the sampling done during the PSA, BTEX compounds and cyanide were not included as analytical parameters for the supplemental sampling program.

In addition to the sixty-two on site sample locations, six surface-soil samples were collected from background locations and analyzed for TAL metals (Attachment 1, Table 3). Metals were detected at concentrations that exceed the NYSDEC RSCOs (TAGM 4046) for beryllium, chromium, copper, iron, mercury, nickel, and zinc in the background samples.

A risk assessment (RETEC, 1997) was performed using the surface soil results from the PSA and the results of the July 1997 supplemental sampling program. This risk assessment concluded that cancer risks for utility workers, groundskeepers, and local residents were at levels generally considered acceptable by the United States Environmental Protection Agency (EPA) (below 10^{-6}). For recreational users, the cancer risks were within a range (10^{-6} to 10^{-4}) that is often considered acceptable by the EPA.

4.1.6 Interim Remedial Measures

In response to the identification of tar-impacted surface soil near the former gas generator building and elevated lead concentrations at several areas, O&R implemented interim remedial measures (IRMs) at the Former MGP Site. These IRMs included placement of gravel over the tar-impacted areas and soil pathways on the Former MGP Site. Additionally, a fence was installed around the property to restrict access. No other IRMs were recommended.

Remedial Investigation Activities – GEI 1998 through 2006

RI activities were performed by GEI to determine the extent of impacts from the former MGP operations. The RI included surface soil, subsurface soil, sediment, groundwater, storm water and storm sewer sediment sampling and analysis (Attachment 1, Tables 3, 4, 5, 6, 7, 8). The RI activities targeted the potential source areas on the Former MGP Site (i.e., the tar well, the previously believed location of the iron oil tank, and the gas holder foundation) since visibly

impacted soil, groundwater, and/or DNAPL were observed in these areas during the PSA. Other locations on the Former MGP Site were also investigated (i.e., former garage, high pressure holder, the down gradient property line, and the southern property line). RI activities also included sample collection points on the Apartment Complex property, the Head Start property, in the storm sewer system beneath Maple Avenue and the parking lot at the Apartment Complex, and in sediments in the Hudson River Embayment (Attachment 1, Tables, 3, 4, 5, 6, 7, 8, 9). The RI field work of the Former MGP Site included background surface soil sampling (Attachment 1, Table 3). The RI field activities were conducted according to NYSDEC-approved work plans including:

- *Remedial Investigation Work Plan, Clove and Maple Avenues Former MGP Site, Haverstraw, New York (1998).*
- *Addendum to Remedial Investigation Work Plan (1998).*
- *Supplemental Remedial Investigation Work Plan, 93B Maple Avenue Former MGP Site and Clove and Maple Avenues Former MGP Site, Haverstraw, New York (2001).*

4.1.7 Air, Soil Vapor, Indoor Air Sampling

GEI collected soil vapor samples from the Head Start Property in 2001. Samples were collected at representative locations around the perimeter of the building footprint. The results of this investigation indicated that VOCs were not present at concentrations that could adversely affect indoor air quality and that migration of soil vapor toward the Head Start building from the Former MGP Site was not a concern (Attachment 2). GEI submitted a report of their results to NYSDEC and copied the New York State Department of Health (NYSDOH) on March 19, 2001. NYSDOH and NYSDEC concurred with GEI's conclusions that soil vapor migration toward the Head Start Building was not a concern in correspondence dated April 16, 2001 and May 1, 2001, respectively.

RETEC conducted two rounds (summer 2004 and February/March 2005) of outdoor (ambient) air, soil gas, and indoor air sampling at and within the apartment buildings on the Apartment Complex Properties. The samples were analyzed for VOCs by EPA Method TO-15, with additional compounds to aid in identifying potential MGP-related impacts. RETEC concluded that there was no evidence indicating intrusion of MGP-related vapors into the interiors of the apartment complex residences.

4.1.8 Background Surface Soil Samples

Six background surface-soil samples (HA BSS01-1 through HA-BSS01-6) were collected in December 2001 as part of the 2001 GEI Supplemental Remedial Investigation Work Plan (GEI

SRIWP). The samples were collected from locations within the Village of Haverstraw as far away as Bowline Point Park, 4,000 feet north of the Former MGP Site, and analyzed for BTEX, PAHs, and total cyanide (Attachment 1, Table 3).

No BTEX compounds were detected in the background samples. Several PAHs were detected in the background samples with concentrations ranging from 31.6 parts per million (ppm) total PAHs (HA-BSS01-5, 70 Hudson Avenue) to 10.9 ppm total PAHs (HA-BSS01-6, Bowline Point Park). Concentrations of benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, and dibenzo[a,h]anthracene were detected in all samples and exceeded the NYSDEC RSCOs at four sample locations. Total cyanide was not detected in any of the background samples.

4.1.9 Former MGP Site – Supplemental Groundwater Investigation

In response to the results of the initial groundwater investigation GEI coordinated the installation of a series of monitoring wells at locations along the north and east property boundaries to evaluate the potential for offsite migration of MGP related contaminants from the Former MGP Site (Plate 2). MW-04, MW-05, MW-06 and MW-07 were installed along the northern property boundary of the Former MGP Site adjacent to Maple Avenue. MW-08, MW-09 and MW-10 were installed adjacent to the eastern property boundary near the Former MGP Site/Head Start common property line. Intervals of impact were noted at all well locations with the exception of MW-08 and MW-10. Soil sampling conducted in conjunction with the well installations targeted depth intervals where indications of impact were noted (Attachment 1, Table 5). Limited PAH impact at concentrations above the NYSDEC RSCO's (TAGM 4046) was identified in shallow samples collected at MW-08 and MW-09. Benzene was identified at a concentration in excess of its NYSDEC RSCO's (TAGM 4046) in a shallow (5.25' bgs) sample collected at MW-06. Vertical delineation samples did not identify any parameters at concentrations in excess of their respective NYSDEC RSCO's (TAGM 4046). MW-08 and MW-09 were completed as water table monitoring wells. Review of the boring log for MW-08 indicated no NAPL, tar, visual impacts or odor in the 0' bgs to 22.0' bgs soil column above the till at MW-08 with the exception of moderate petroleum-like odor and a PID reading of 16.0 ppm in the 10.0' bgs to 12.0' bgs depth interval. No NAPL, tar, visual impacts or odor were detected at the till interface of 22.0' bgs or into the till layer to a completion depth of 28.5' bgs. MW-10 was screened below the water table to monitor water quality in the overburden above the till confining layer and was competed to a depth of 36.5' bgs. No NAPL, tar, visual impacts or odor were detected in the 0' bgs to 36.2' bgs soil column above the till or at the till interface of 36.2' bgs or into the till layer to a boring completion depth of 38.0' bgs in MW-10. BTEX and PAH concentrations were not detected in soil samples collected at SB/MW-10.

4.1.10 Former Tar Well

The area of the former tar well was found to be impacted with MGP residuals during the PSA. The following RI activities were conducted to further define the extent of the impacts:

- Test Pits: One test pit (TP-01) was excavated within the footprint of the former tar well to a depth of 8.0' bgs to further investigate the presence of subsurface structures and determine the extent of hydrocarbon product identified in subsurface soil. TP-01 was described as having naphthalene-like odors between the 6.5' bgs to 8.0' bgs depth interval and photo ionization detector (PID) readings of 137.0 ppm but no subsurface structures were identified.

- Soil Borings: Two direct push soil borings (SG-09 and SG-10) were advanced adjacent to Maple Avenue to determine the extent of MGP residuals, associated with the tar well, at the site property line. A light sheen and MGP-like odors were identified in the SG-09 boring log. A slight to moderate MGP-like odor and PID readings up to 115.0 ppm were reported in the SG-10 boring log.

- Deep Soil Boring: One deep soil boring (SB-16) was completed between the former tar well and the former gas holder foundation to determine the extent of MGP residuals at the till surface. Field observations ranged from slight/light tar-like odors to moderate tar-like odors with heavy sheens, tar streaks, blebs and globules present primarily in the 18.0' bgs to 24.0' bgs depth interval. PID readings of up to 842 ppm were reported in the impacted interval of this boring. No NAPL, tar, visual impacts or odor were detected and PID readings were 0.0 ppm at the till interface of 31.0' bgs.

- Monitoring Well Installation: One shallow (water table) monitoring well (MW-05) was installed to determine if impacted groundwater was present at the Maple Avenue property line downgradient of the former tar well location. A slight to moderate MGP-like odor, spots of sheen, trace to little coal tar product along with PID readings up to 17.2 ppm were reported in the MW-05 boring log. No NAPL, tar, visual impacts or odor were detected and PID readings were 0.0 ppm at the till interface of 21.0' bgs.

4.1.11 Iron Oil Tank

GEI conducted supplemental sampling in the area of what was believed to be the location of the former iron oil tank. During the 1997 PSA, this area was found to be impacted with DNAPL tar. Investigation activities included the following:

- Test Pits: Test pit TP-02 was excavated to a depth of 8.0' bgs near what was formerly believed to be the location of the former iron oil tank to further investigate the presence of subsurface structures and to determine the extent of DNAPL that was previously identified at this location. Test pit TP-03 was excavated to a depth of 5.0' bgs to further delineate DNAPL found at SB-2/MW-02 during the PSA. Clay pipes containing tar, water and silt were found in both TP-02 and TP-03 at depths ranging from 4.0' bgs to 6.0' bgs. The area where TP-02 was located was described as having strong naphthalene-like odors with PID readings of over 700 ppm. Black ash and coal materials were noted at TP-03 along with PID readings of 247 ppm.

- Soil Borings: Two direct push soil borings (SG-11 and SG-12) were completed down gradient of the former tank to determine if DNAPL was present at the Former MGP Site property boundary along Maple Avenue. No NAPL, tar, visual impacts or odor were detected and PID readings were not detected throughout the soil column (0' to 16.0' bgs) in the SG-11 boring log. Faint MGP- and naphthalene-like odors and a light sheen were noted from 4.5' bgs to 16.0' bgs at SG-12. PID readings as high as 120.0 ppm were also identified at this location.

- Deep Soil Borings: One deep soil boring (SB-02D) was completed adjacent to well MW-02 to determine if the DNAPL observed in MW-02 extended into the underlying till. The boring log for SB-02D indicated no NAPL, tar, visual impacts or odor were detected at the till interface of 22.5' bgs or into the till to a final boring depth of 28.0' bgs. Slight naphthalene-like odors and residual tar lenses were noted in SB-02D between 10' bgs and 20.0' bgs. One deep soil boring (SB-07/MW-07) was completed down gradient of the iron oil tank to assess whether downward migration of DNAPL occurred near the down gradient property line. No NAPL, tar, visual impacts or odor were detected and PID readings were 0.0 ppm at the till interface of 20.0' bgs and into the till to a depth of 45.5' bgs at SB-07/MW-07. Two deep soil borings (SB-17 and SB-17A) were completed up gradient of the test pits to assess the extent of MGP residuals at the till surface. The boring log for SB-17 indicated no NAPL, tar, visual impacts or odor were detected at the till interface of 29.5' bgs or into the till to a final boring depth of 30.0' bgs. MGP-like odors were noted in the 4.0' bgs to 8.0' bgs depth interval and again in the 10.0' bgs to 14.0' bgs depth interval. A slight sheen was noted in the 4.0' bgs to 6.0' bgs depth interval. Elevated PID readings were also obtained in these intervals. The boring log for SB-17A indicated no NAPL, tar, visual impacts or odor were detected at the till interface of 30.0' bgs or into the till to a final boring depth of 32.0' bgs. No NAPL, tar, visual

impacts or odor were identified in the 0' bgs to 30.0' bgs soil column above the till in the boring log for SB-17A. BTEX and PAH concentrations exceeded the NYSDEC RSCOs (TAGM 4046) in the soil samples collected at the northern corner of the gas regulator station at depths ranging from 4.0' to 12.0' bgs (SB-17). The samples were collected at depths where odors, sheen or elevated PID readings were noted. The highest BTEX concentration was detected at 204 mg/kg at a depth of 12.0' bgs. The highest PAH concentration was detected at 636.5 mg/kg at a depth of 4.0' bgs. BTEX and PAH concentrations were above the NYSDEC RSCOs (TAGM 4046) in the sample SB-17 at depths of 4.0' to 12.0' bgs. BTEX did not exceed the SCOs and only a few individual PAH compounds exceeded the NYSDEC RSCOs (TAGM 4046) at a depth of 14.0' bgs. BTEX and PAH concentrations were not detected in SB-17A, located northwest of the gas regulator station at a depth of 28.0' bgs.

- Monitoring Well Installations: One shallow (water table) monitoring well (MW-06) and a deep monitoring well (MW-07) within till are located topographically down gradient of well MW-02 along Maple Avenue. No NAPL, tar, visual impacts or odors were detected at the till interface of 20.0' bgs and no NAPL, tar, visual impacts or odor were identified in the 0' bgs to 20.0' bgs soil column above the till. As described above in the boring log for SB-07/MW-07, no NAPL, tar, visual impacts or odor were detected at the till interface of 20.0' bgs and into the till to a depth of 45.5' bgs and PID readings were 0.0 ppm.

4.1.12 Gas Holder Foundation

Additional sampling was performed beneath and down gradient of the gas holder foundation to further define the extent of impacts identified at this location. The testing included the following:

- Soil Borings: Two direct push soil borings, SG-13 and SG-14 (Plate 5B) were completed topographically down gradient of the gas holder foundation to determine the condition of soil and groundwater at the northwestern property line. Observations noted in the SG-13 boring log indicated faint to moderate MGP-like odors were present from 5.6' bgs to the bottom of the boring at 10' bgs and PID readings of up to 278.0 ppm. The boring log for SG-14 identified strong MGP-like odors and trace coal tar product in the 6.0' bgs to 8.0' bgs depth interval with PID readings of up to 95.0 ppm. No NAPL, tar, visual impacts or odor were detected in the 8.0' bgs to 12.0' bgs depth interval which was the end of the boring.

- Deep Soil Borings: Two deep soil borings (SB-14 and SB-18) were completed through and adjacent to the gas holder foundation to evaluate a potential release from the holder on the northern side of the pad. SB-14 boring log observations (through the holder foundation) ranged from slight to strong tar-like odors with moderate sheens, tar streaks, trace blebs and tar coated sand lenses in the 4.0' bgs to 20.0' bgs depth interval. PID readings ranged up to 3,814 ppm. No NAPL, tar, visual impacts or odor were detected from 20.0' bgs to the till interface of 23.5' bgs. Boring log observations for SB-18 (at the northwest property line) ranged from slight MGP-like and tar-like odors to moderate tar-like odors with a tar stained sand seam and trace tar blebs present primarily in the 8.0' bgs to 14.0' bgs depth interval. PID readings of up to 1,223 ppm were reported in the impacted interval. No NAPL, tar, visual impacts or odor were detected and PID readings were 0.0 ppm from 14.0' bgs to the till interface of 30' bgs and into the till to a boring completion depth of 32.0' bgs.

- Monitoring Well Installation: The results of the soil borings were used to locate two shallow groundwater monitoring wells, MW-04 and MW-18, to determine if impacted groundwater is present at the Former MGP Site northern property line (MW-04) and at the northwest side of the gas holder foundation (MW-18). The boring log for MW-04 reported a light MGP-like odor, light sheen and trace coal tar product in the 5.0' bgs to 22.0' bgs depth interval with PID readings ranging to 15.9 ppm. No NAPL, tar, visual impacts, odor or elevated PID readings were detected at the till interface of 22.0' bgs or into the till to the MW-04 completion depth of 24.0' bgs. MW-18 was installed adjacent to SB-18 and the boring log observations for MW-18 ranged from slight MGP-like and tar-like odors to moderate tar-like odors with a tar stained sand seam and trace tar blebs present primarily in the 8.0' bgs to 14.0' bgs depth interval. MW-18 was completed to a depth of 16.0' bgs with no odors or visual impacts detected in the 14.0' bgs to 16.0' bgs depth interval.

4.1.13 Former Garage

One test pit, TP-04, was excavated to a depth of 7.0' bgs in the footprint of the former garage on the Former MGP Site to determine if any impacts to soil and groundwater were present. No physical evidence of MGP-related impacts and no elevated PID readings were identified in TP-04.

4.1.14 Former High Pressure Holder

One test pit, TP-05, was excavated to a depth of 6.0' bgs within the footprint of the high pressure holder (based on a concrete slab encountered during the excavation activity). Historical facility drawings indicate it was an aboveground holder. The test pit was excavated

to determine if releases from the holder have impacted soil or groundwater beneath the structure. No physical evidence of MGP-related impacts and no elevated PID readings were identified in TP-05.

4.1.15 Former MGP Site Groundwater

The highest concentration of total PAHs [15,996 micrograms per liter (µg/l)] detected was in the sample collected from MW-02 in 1999. This location is adjacent to what was previously believed to be the former iron oil tank. However, based on the high concentrations of heavier PAHs, it is likely that DNAPL was entrained in this sample and the concentrations are not truly reflective of dissolved-phase groundwater conditions. High concentrations of total PAHs were also detected in the samples from MW-03 and MW-04 adjacent to and down gradient of the holder pad. Naphthalene (generally more soluble and mobile than the other PAHs) was detected at concentrations in excess of the New York State Water Quality Standards (NYSWQS) in groundwater samples from seven wells, MW-02, MW-03, MW-04, MW-08, MW-09, MW-11 and MW-18. Other PAHs were also detected in excess of the NYSWQS in monitoring wells MW-02, MW-03, MW-04, MW-09 and MW-18 (Attachment 1, Table 6).

The highest concentration of total BTEX compounds (20,720 µg/l) detected was in the sample from MW-18 collected in 2001. This location is adjacent to the former holder pad. High concentrations of total BTEX compounds were also detected in the samples from MW-03 adjacent to the holder pad (8,500 µg/l in a sample collected in 1997) and MW-04 near Maple Avenue down gradient of the holder pad (1,005 µg/l in a sample collected in 1999). BTEX compound concentrations in monitoring wells MW-01 and MW-10, both of which are located in the southern portion of the Former MGP Site, have been non detect in all sampling events with the exception of MW-10 in 2001 which identified total BTEX compounds at 2.2 µg/l (Attachment 1, Table 6).

Numerous inorganic compounds, many of which are naturally present, were detected during both the PSA and the RI activities (i.e., iron, magnesium, manganese and sodium are naturally occurring elements commonly found in groundwater at elevated levels). The absence of dissolved phase exceedances where total inorganic exceedances were previously observed indicates that the exceedances were likely the result of suspended sediments in the water samples (Attachment 1, Table 6).

Cyanide was detected in wells MW-02 and MW-03 during the PSA, in wells MW-08, MW-09, and MW-11 during the 1999 RI sampling event and in wells MW-03, MW-08, MW-09, MW-

11, and MW-24 during the 2001 RI sampling event. Cyanide was detected during the 2004 event in wells MW-02, MW-03, MW-06, MW-08, MW-09 and MW-11. The highest concentration of cyanide detected during the PSA was in the sample from MW-2 (129 µg/l). During the RI activities, the highest concentration was detected in MW-09 (169 µg/l) in August 2004 (Attachment 1, Table 6).

4.1.16 Head Start Property

The Head Start Property was evaluated during the PSA and initial RI phase of the project to determine if MGP-related contaminants had migrated onto this property. The subsurface investigation of this parcel involved advancing six borings (SG-15/SB-12, SG-16/SB-13, SB-11/MW-11, SB-22, SB-23, and SB-24/MW-24) and the installation of two groundwater monitoring wells (MW-11 and MW-24). Surface soils were not considered a risk during the previous environmental investigations.

PAH compounds were detected above their NYSDEC RSCOs (TAGM 4046) in SG-16 at the 23.5' bgs to 24.0' bgs depth interval. There were no exceedances of the NYSDEC RSCOs (TAGM 4046) for PAH and BTEX compounds in the remaining samples. No NAPL, tar, visual impacts, odors or elevated PID readings were detected in the soil column at any of these locations.

Shallow hand-auger borings HA-1 through HA-5 (Plate 5B) were advanced behind the Head Start building in May 2000. Surface soil samples SS-1 through SS-5 were collected from these locations. These samples were collected prior to the construction of the play area behind the Head Start building and prior to occupation of the building. The findings of the investigation were transmitted to NYSDEC in a letter report from GEI dated August 2, 2000 (Attachment 3). Various PAHs and metals were detected at concentrations above their respective NYSDEC RSCOs (TAGM 4046) at each of the five sample locations. GEI's opinion was that the PAH concentrations detected were within ranges typically found in urban soil and did not present any other conclusions or recommendations.

In February 2001, soil gas samples were collected from around the Head Start building to assess whether unspecified odors and headaches reported by Head Start employees were related to the Former MGP Site. The findings from this investigation were reported to NYSDEC in a letter report from GEI on March 19, 2001 (Attachment 2). In a letter dated May 1, 2001, NYSDEC transmitted an April 16, 2001 letter from the NYSDOH to O&R. The NYSDEC and NYSDOH letters pertained to their review of the March 19, 2001 letter report. The NYSDOH

and NYSDEC concurred that it is unlikely that the soil gas would present a concern for effects on indoor air quality at 146 Maple Avenue.

4.1.17 Apartment Complex

The Apartment Complex properties were evaluated for the subsurface presence of MGP related residuals. The subsurface investigation of this parcel included twenty-three soil borings (SB/MW-20/MW-20D, SB-21S, MW-21, SB/MW-28S, MW-28D, MW-29S/D, SB/MW-30S, SB/MW-31S/D, SB/MW-32S/I, SB-45, SB-46, SB-48, SB-49, SB/MW-55, SB-56, SB-57, SB-58, SB-59, and SB/MW-60), twelve of which were subsequently finished as groundwater monitoring wells. Two soil samples were collected from each boring and submitted for laboratory analysis. One sample was collected from the water table and the second sample was collected from the most apparent visibly impacted interval. If no impact was apparent, the second sample was collected at depth, or from the interval immediately above the till unit.

BTEX or PAHs exceeded at least one NYSDEC RSCOs (TAGM 4046) at all sample locations with the exception of MW-29D, SB-48, SB-56 and SB-57 (Attachment 1, Table 5). The highest BTEX concentrations at the Apartment Complex were identified at SB-46 at a depth of 10.5' bgs. This location is directly across Maple Avenue from the former iron oil tank location on the Former MGP Site. The highest PAH concentrations were reported at SB-49, at 7.5' bgs, located directly behind the Apartment Complex (127-129 Maple Street).

The following is a summary of the observations from the subsurface investigation boring logs:

- SB/MW-20/MW-20D – Tar-like odors, tar-coated sand grains and trace of blebs in the 8.0' bgs to 10.0' bgs interval with faint MGP-like and fuel-like odors in the 10.0' bgs to 14.0' bgs interval. Elevated PID readings were recorded in these intervals. No NAPL, tar, visual impacts or odor were detected at the till interface or in the balance of the soil column above the till. Monitoring well MW-20D was originally identified as MW-20 when it was installed in 2001.
- SB-21S – The boring was advanced to 12.0' bgs. No NAPL, tar, visual impacts or odor were detected in the soil column.
- MW-21 – The monitoring well was completed to till at a depth of 24.0' bgs. Very slight MGP-like odors were identified in the 8.0' bgs to 10.0' bgs interval along with PID readings of 23.0 ppm. No NAPL, tar, visual impacts or odor were detected at the till interface or in the balance of the soil column above the till.

- SB/MW-28S – Trace naphthalene-like odors, petroleum-like odors and sand grains coated with NAPL were identified in the 7.5' bgs to 12.0' bgs interval along with PID readings of 637.0 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 16.0' bgs. Monitoring well MW-28S was completed to a depth of 12.0' bgs.
- MW-28D – The monitoring well was completed to till at a depth of 31.5' bgs. Very slight tar-like/MGP-like odors were identified in the 8.0' bgs to 12.0' bgs interval along with PID readings up to 33.0 ppm. No NAPL, tar, visual impacts or odor were detected at the till interface or in the balance of the soil column above the till. This monitoring well was originally identified as MW-28 when it was drilled in 2001.
- SB/MW-29S – A sheen and strong tar-like odors were identified in the 4.0' bgs to 9.8' bgs interval along with PID readings of 102.0 ppm. Lightly tar-coated sand grains, blebs, a heavy sheen and strong tar-like odors were identified in the 9.8' bgs to 10.7' bgs interval along with PID readings of 186.0 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 20.0' bgs. Monitoring well MW-29S was completed to a depth of 14.0' bgs.
- MW-29D – The monitoring well was completed to a depth of 30.0' bgs. Till was encountered at a depth of 29.0' bgs. No NAPL, tar, visual impacts, odor or elevated PID readings were detected at the till interface or in the soil column above the till. This monitoring well was originally identified as MW-29 when it was drilled in 2001.
- SB/MW-30S – Trace naphthalene-like odors, weathered tar-like odors and sheens were identified in the 4.0' bgs to 15.9' bgs interval along with PID readings up to 43.2 ppm. This boring was advanced to 16.0' bgs. This boring was not finished into a groundwater monitoring well.
- SB/MW-31S – Silt layers coated with NAPL and a moderate petroleum-like odor were identified in the 8.0' bgs to 8.8' bgs interval along with PID readings of 485.0 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 12.0' bgs. Monitoring well MW-31S was finished to a depth of 12.0' bgs.
- SB/MW-31D – Silt layers coated with NAPL and a moderate petroleum-like odor were identified in the 8.0' bgs to 8.8' bgs interval along with PID readings of 485.0 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 35.0' bgs. Till was encountered at 34.0' bgs. Monitoring well MW-31D was completed to a depth of 32.0' bgs.
- SB/MW-32S – Trace tar-like odors were identified in the 7.1' bgs to 8.0' bgs interval along with PID readings of 36.0 ppm. Lightly NAPL-coated sand grains and petroleum

odors were identified in the 8.0' bgs to 10.0' bgs interval. Heavily NAPL-coated sand grains and strong petroleum-like odors were identified in the 8.0' bgs to 12.0' bgs interval along with PID readings of 378.0 ppm. Monitoring well MW-32S was completed to a depth of 12.0' bgs.

- SB/MW-32I – Trace tar-like odors were identified in the 7.1' bgs to 8.0' bgs interval along with PID readings of 36.0 ppm. Lightly NAPL-coated sand grains and petroleum odors were identified in the 8.0' bgs to 10.0' bgs interval. Heavily NAPL-coated sand grains and strong petroleum-like odors were identified in the 8.0' bgs to 12.0' bgs interval along with PID readings of 378.0 ppm. Heavy sheen, trace blebs and strong petroleum-like odors were identified in the 12.0' bgs to 16.0' bgs interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to till at 36.0' bgs. Monitoring well MW-32I was completed to a depth of 22.0' bgs.
- SB-45 – Trace tar-like odors were identified in the 8.8' bgs to 9.3' bgs interval. Tar veins to tar saturated soil and strong tar-like odors along with PID readings of 518.0 ppm were found in the 9.3' bgs to 10.7' bgs interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 28.0' bgs. Till was encountered at 24.8' bgs.
- SB-46 – Trace petroleum-like odors, strong tar-like odors and tar-coated soils were encountered at various intervals in the overall 4.0' bgs to 12.0' bgs depth range along with PID readings up to 12.3 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 16.0' bgs (clay layer from 12.0' bgs to 16.0' bgs).
- SB-48 – Trace petroleum-like odors, trace sheen and PID readings of 59.0 ppm were identified in the 8.0' bgs to 12.0' bgs depth interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 16.0' bgs (clay layer from 12.0' bgs to 16.0' bgs).
- SB-49 – NAPL veins and petroleum-like odors along with PID readings of 155.0 ppm were found in the 6.8' bgs to 9.1' bgs interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 16.0' bgs (clay layer from 13.0' bgs to 16.0' bgs).
- SB/MW-55 – Trace sheen was identified in the 9.0' bgs to 9.1' bgs interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 16.0' bgs (clay layer from 12.0' bgs to 16.0' bgs). PID readings of 59.3 were obtained at 12.0' bgs. Monitoring well MW-55 was completed to a depth of 16.0' bgs.

- SB-56 – Tar-like odors, tar blebs and sheens were identified in the 10.0' bgs to 13.2' bgs interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 16.0' bgs (clay layer from 13.2' bgs to 16.0' bgs).
- SB-57 – No NAPL, tar, visual impacts or odor were detected in the soil column in this boring which was advanced to 12.0' bgs (clay layer from 10.3' bgs to 12.0' bgs).
- SB-58 – Tar-like odors, tar coated sand grains and patchy sheens were identified in the 8.0' bgs to 14.5' bgs interval along with PID readings of 757.0 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 20.0' bgs (clay layer from 16.7' bgs to 20.0' bgs).
- SB-59 – Strong tar-like odors, tar coated (heavily) sand grains and tar veins were identified in the 5.8' bgs to 12.0' bgs interval along with PID readings of 239.0 ppm. Moderate MGP-like odors and NAPL coated sand grains were identified in the 13.1' bgs to 16.8' bgs interval. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 20.0' bgs (clay layer from 16.8' bgs to 20.0' bgs).
- SB/MW-60 – Trace NAPL in veins, blebs of NAPL and tar/MGP-like odors were identified in the 8.0' bgs to 10.0' bgs interval along with PID readings of 28.8 ppm. No NAPL, tar, visual impacts or odor were detected in the balance of the soil column in this boring which was advanced to 18.0' bgs (clay layers from 13.4' bgs to 13.7' bgs and 17.5' bgs to 18.0' bgs). Monitoring well MW-60 was completed to a depth of 14.0' bgs.

In summary, the soil boring/monitoring well logs show that physical indicators of MGP-related impacts are contained, and vertically migration is restricted by the clay layers and/or till layer.

4.1.18 Storm Water and Catch Basin Sediment Sampling

Sediment and storm water samples were collected in 1999 and 2002 from the storm water drainage system near the Former MGP Site to evaluate its potential impact on sediment and storm water. Storm water sample results were compared to the New York State Ambient Groundwater Quality Criteria for regulatory compliance, which are more inclusive than the New York State Groundwater Effluent Limitations. Both sampling events were performed immediately following a rain event. Previous attempts to collect samples 48 hours after a rain event were unsuccessful because of insufficient flow. Storm water and sediment samples were collected up gradient of the Former MGP Site and at several catch basins down gradient of the Former MGP Site (Attachment 1, Tables 7 and 8). The sample locations are depicted on Plate 2.

GEI conducted a regulatory search prior to collection of the storm water and storm sewer sediment samples in January 2002 to determine if there were any potential generators of cyanide that could contribute to cyanide previously detected in the storm sewer sediment samples (SED-01 and duplicate SED-02). No large or small quantity generators, or any industrial/commercial process known to use cyanide, were identified during GEI's regulatory review.

One sediment sample (SED-03) was collected from a gulley to the south of Clove Avenue, approximately 250' up gradient of the Former MGP Site. A total of six storm sewer sediment samples and one duplicate sample [SED-01, SED-02 (SED-01 was "split" to generate the blind duplicate sample SED-02), SD013102-2, SD013102-3, SD013102-4 and SD013102-6] were collected from the storm sewer catch basins located down slope or down gradient of the Former MGP Site. Sediment samples SED-01, SED-02 and SED-03 were collected in 1999. Sediment samples SD013102-2, SD013102-3, SD013102-4 and SD013102-6 were collected in 2002.

Down gradient samples (SED-01, SD013102-3 and SD013102-4) reported detectable concentrations of VOCs. Numerous PAHs were detected at all up gradient and down gradient sample (SED-01, SED-03, SD013102-2, SD013102-3, and SD013102-4) locations, at concentrations ranging from less than 6 ppm total PAHs in up gradient sample SED-03 to approximately 53 ppm total PAHs in sample SD013102-3, located adjacent to the corner of the Former MGP Site. Three samples (SED-01, SD013102-2, and SD013102-4) reported detectable levels of total cyanide.

Sample SD013102-6 was collected at the catch basin connecting the Maple Avenue drainage system to the culverted stream and storm drain at the rear of the Apartment Complex and the West Street Properties. This catch basin receives storm water drainage from off site and up gradient of the Former MGP Site, the Apartment Complex Properties and West Street Properties. Sample SD013102-6 contained 80 µg/kg BTEX. This sample also contained 72 ppm total PAHs.

The sediments in the drainage system in the Study Area are impacted by VOCs, PAHs and cyanide (Attachment 1, Table 8); however, the impacts do not appear to be solely related to the site. The drainage system receives runoff from streets and other properties in the area. In addition, the drainage swale itself contains trash and other debris. Urban runoff may include petroleum products and residuals from automobile leaks and maintenance

activities. It is likely that organic compounds in runoff from Maple Avenue and the rear of the Apartment Complex have contributed to the concentrations detected in the storm sewer sediments.

In conjunction with the sediment sampling, storm water samples were collected from representative sample locations. One storm water sample (SW013102-1) was collected at a manhole located along Tor Avenue up gradient of the Former MGP Site. One storm water sample (SW-03) was collected from a gulley to the south of Clove Avenue, 250' up gradient of the Former MGP Site. Four storm water samples and two duplicates [SW-01, SW-02 (duplicate of SW-01), SW013102-5, SW013102-6 and SW013102-8 (duplicate of SW013102-06)] were collected from catch basins that potentially could be influenced by impacts at the Former MGP Site. A naphthalene-like odor was observed from the catch basin where SW013102-6 was collected. Additional storm water samples from the catch basins located on Maple Avenue were not obtained during two attempts due to the absence of flow. One storm water sample (SWOUT013002-1) was collected from the outfall of the local storm drainage system to the Hudson River embayment. A naphthalene-like odor was observed in the area of the outfall during sample collection.

Storm water samples SW-01, SW-02 and SW-03 were collected in 1999. Storm water samples SW013102-1 SW013102-5, SW013102-6, SW013102-8 and SWOUT013002-1 were collected in 2002. The analytical results from the various storm water sampling events are summarized in Attachment, Table 7).

No VOCs or PAHs were detected in up gradient storm water sample SW-03. Various VOCs and PAHs were detected in the up gradient storm water sample SW013102-1.

BTEX compounds were detected in down gradient samples SW013102-6 and SW013102-5. Benzene, ethylbenzene, and xylenes were detected in down gradient sample SWOUT013102-1 near the outfall to the Hudson River embayment. Only toluene was detected in the sample collected immediately downstream of the Former MGP Site (SW-01).

Various PAHs were detected in the down gradient samples.

Up gradient storm water sample SW013102-1 and down gradient storm water samples SW013102-1 and SW-01 contained detectable levels of total cyanide. Sample SW-01 also contained a detectable concentration of weak acid dissociable (WAD) cyanide.

Based on the shallow depth of the Maple Avenue storm sewer system, it is likely that groundwater impacted with BTEX compounds and PAHs originating from the Former MGP Site, flows under the Maple Avenue drainage system and intersects the storm water drainage system (culverted stream) to the rear of the Apartment Complex.

Although storm water is impacted with VOCs, PAHs, and cyanide, the impacts do not appear to be solely related to the Former MGP Site. The storm water sampled contains storm drainage that receives runoff from streets and other properties in the area. The drainage swale itself contains trash and other debris. Urban runoff may include petroleum products and residuals from automobile leaks and maintenance activities. Generally, organic compounds were detected in the water sample from the down gradient location at higher concentrations than at the up gradient location. However, the concentrations in all samples vary by only a few micrograms per liter (µg/l), and most detected VOCs are not solely associated with former MGP operations. Additionally, cyanide and carcinogenic PAHs were detected in an up gradient location. The hydrocarbon sheens in storm water entering the catch basin during sampling indicate that other sources contribute to the detected compounds.

4.1.19 Hudson River Sediments

GEI and their subcontractor, Ocean Surveys, Inc. conducted a sediment probing study and sample collection in the Hudson River, down gradient of the Former MGP Site. Twenty locations were probed using a steel rod mechanism that was inspected for physical evidence of impacts. Six sediment samples (VC-01, VC-02, VC-03, VC-04, VC-05 and VC-05A) were collected in the embayment of the Hudson River where the storm water drainage system discharges. The analytical results from the Hudson River sediment samples are summarized in Attachment 1, Table 9, and further described in Attachment 4.

VOCs were detected at one sample location (VC-04-3-5, 3.0'-5.0′ bgs). Acetone, a common laboratory contaminant, was detected in this sample at a concentration of 170.0 µg/l. Cyanides were not detected in any samples collected from the embayment.

PAHs were detected at each sample location. Total PAH concentrations ranged from 35.0 ppm (20 ppm non-carcinogenic and 15 ppm carcinogenic) in sample VC-05A (0'-2′ bgs) to 189 ppm (105 ppm non-carcinogenic and 84 ppm carcinogenic) in sample VC-04 (0'-2′ bgs). The majority of PAHs appear to be contained within the first few feet of sediments. One sample collected at sample location VC-04 from a depth of 3' to 5' bgs contained lower

concentrations of total PAHs than those detected in the sample collected from 0' to 2'bgs (48.7 ppm total PAHs versus 189 ppm total PAHs).

The sediments in the embayment of the Hudson River are impacted by PAHs; however, the impacts do not appear to be solely related to the site. Physical observations during the probing and sediment sampling activities showed no MGP-related impacts at any location except VC-01, immediately adjacent to the storm water outfall. The outfall from the local storm sewer drainage system is located at the head of the embayment. Surface water runoff from the surrounding area containing motor oils, asphalts, and other PAH source materials are discharged to the embayment both directly and through the storm sewer system. In addition, a boat marina is located within the embayment, a fuel terminal is located up river, and a former oil terminal operated on the southern side of the embayment. It is likely that numerous sources have contributed to the concentrations detected in the river sediments, as with the storm water and sewer sediment samples (section 4.1.18).

4.1.20 Fingerprint Analysis

One sample of DNAPL collected from MW-02 and one sediment sample (SED-17, 0-15 cm) collected proximate to the outfall location of the local drainage system were submitted to META Environmental, Inc. (META) for fingerprint analysis (Attachment 4). Sample SED-17 (0-15 cm) was selected for fingerprint analysis because, upon collection, it appeared to contain physical evidence of NAPL impacts to include trace brown NAPL nodules, a moderate sheen, and a very slight combined petroleum/MGP odor.

The report concluded that the DNAPL sample from MW-02 was relatively unweathered and that the ratio of PAHs contained in the DNAPL indicates that the sample represents tar from a carbureted water gas process. The sediment sample (SED-17, 0-15 centimeters) also displayed PAH ratios consistent with a carbureted water gas origin. The two samples show no significant differences that cannot be attributed to weathering; however, with only two data points the statistical differences between the two samples cannot be assessed.

4.1.21 NAPL and Evidence of Product – Study Area

MGP related NAPL contamination at the Former MGP Site was described as tar-like material, consisting of a low viscosity, black separate phase material or oil-like material, consisting of a black to brown more viscous fluid. In addition to tar-like and oil-like material, other impacts were observed at the Former MGP Site and at the Apartment Complex, including sheens, MGP-like odors, and petroleum odors (not otherwise described). All these impacts

were observed in and near former MGP structures, along the edge of the Former MGP Site at Maple Avenue and across Maple Avenue at the Apartment Complex Properties.

Observations of odors and soil staining alone are not considered to be evidence of the presence of NAPL tar, however, these observations were included in the RETEC and GEI boring logs.

Tar-like material was generally described by the field geologists as "tar-saturated" soil matrix, and was observed at the Former MGP Site (SG-3, SG-7, SB-14, SB-16, TP-01, TP-02 and TP-03) and in a limited area at the Apartment Complex (SB-58 and SB-59).

The greatest degree of tar-like material observed on the Former MGP Site is associated with the historic structures known to be areas of typical heavy tar handling – the tar well, the iron oil tank, and the gas holder. Significant, non-residual tar (flowable DNAPL or "tar-saturated" soil) was observed at four locations on the Former MGP Site, at SB/MW-02, SG-2, SG-3 and SB-14. During drilling of SB/MW-02, soils were observed containing hydrocarbon product (probable tar) from approximately 13.0' to 18.0' bgs. In March 1999, a 1.6-foot-thick layer of DNAPL was found in MW-02 during groundwater sampling. In December 2001, a 2.7-foot-thick layer of DNAPL was present in MW-02 during groundwater sampling. In 2005, 5.0 feet of tar was present in MW-02. Testing of the tar accumulated in MW-02 identified the tar as carbureted water gas tar. A sand lens encountered at 8.0' to 10.0' bgs in borings SG-2 and SB-14 contained tar. These borings were completed within the footprint of the former holder. The sand and gravel layer between 4.0' and 10.0' bgs in boring SG-3, which was completed in the former tar well location, was described by the field geologist as being "saturated with tar-like material, strong odor, low viscosity".

Clay pipes containing tar-like material, water, and silt were observed on the Former MGP Site in both test pits TP-02 and TP-03 at depths from 4.0' to 6.0' bgs.

Borings on the Former MGP Site that exhibited hydrocarbon-like, naphthalene-like or tar-like odors included: SG-1, SG-4, SG-5, SG-6, SG-8, SB/MW-09, SG-10, and SG-13.

A faint odor similar to purifier material (i.e., sulfur odor) was noted in soil from 7.0' to 12.3' bgs at MW-09 near the location of the former purifier room. This was the only indication of purifier material found at the Former MGP Site.

Petroleum odors, not otherwise described, were noted on the Former MGP Site in SB/MW-08 at 10.0' to 12.0' bgs and in SB/MW-09 at 20.0' to 21.0' bgs.

No visual or olfactory evidence of MGP impacts was observed at the Former MGP Site in the up gradient borings SB/MW-01 and SB/MW-10, or in test pits TP-04 and TP-05. Boring SB/MW-01 was completed in the sand and gravel layer at a depth of 28 feet bgs and SB/MW-10 was completed in the till at a depth of 38 feet bgs.

The greatest concentration of tar-like material at the Apartment Complex was reported beneath the asphalt parking lot on the north side of the buildings.

SECTION 5 2008 REMEDIAL INVESTIGATION

Pre Work Activities

5.1.1 Permit Acquisition

A drilling permit was obtained from RCDOH for all of the soil borings and the monitoring wells (RCDOH Permit #RE-0094). Work was inspected on April 22, 2008 and May 19, 2008 by RCDOH. At the conclusion of the drilling, monitoring well completion forms and boring logs for the monitoring wells were submitted to RCDOH in June 2008, by the driller, Advanced Drilling, Pittstown, New Jersey (RCDOH# RWC-0040; NYSDEC# NYRD 10842). Documentation of proper disposal of investigation derived waste was provided to RCDOH by CMX on July 25, 2008.

5.1.2 Utility Clearance

A utility mark out was called in by Advanced Drilling, and cleared for April 23, 2008. A supplemental utility markout was called in for borings within the alleyway between Tor Avenue and West Street, and cleared for May 12, 2008.

5.1.3 Geophysical Survey

A geophysical survey was performed by Envirophysics, Lawrenceville, New Jersey on April 21, 2008 at all proposed monitoring well and soil boring locations. A supplemental geophysical survey was performed by Envirophysics on May 12, 2008 within the Alleyway between Tor Avenue and West Street.

5.1.4 Manual Clearance

At several locations manual hand clearance using a post hole digger, was performed by the driller due to utility concerns.

Air Monitoring

Monitoring for organic vapors and dust in air was conducted during soil boring and monitoring well installation. Organic vapors and dust were monitored in accordance with the NYSDOH generic community air monitoring plan (CAMP). At the start of each work day, air-monitoring stations were established upwind of the work activities and at the downwind perimeter of the work zone. Wind direction was generally determined using a piece of survey flagging hung below the CAMP stations. The soil probe and TarGOST® work occurred at a rapid pace; as such, the CAMP systems were frequently relocated accordingly.

5.1.5 Organic Vapor Monitoring

The CAMP stations were setup to utilize MiniRAE 2000 (RAE Systems) PIDs. Each PID utilized a 10.6eV lamp and was set to record a 15-minute running average, as well as the maximum reading for the period. Monitoring at the upwind and downwind locations was performed continuously. The PIDs were set up to log data, which was downloaded daily. Organic vapors were measured in the work zone by the staff logging the soil borings and well installation work.

5.1.6 Dust Particulate Monitoring

The CAMP stations were setup to utilize a pDR-1000 personal data ram to measure particulate dust less than 10 micrometers in diameter (PM_{10}). Monitoring at the upwind and downwind location was performed continuously. The dust monitors were set to record a 15-minute running average, as well as the maximum reading for the period.

5.1.7 Additional Air Monitoring

A VRAE multigas meter (RAE Systems) was used to measure oxygen level, % Lower Explosive Level (%LEL), carbon monoxide (CO) level, and hydrogen sulfide (H_2S) in the work zone during intrusive activities.

TarGOST® Field Screening

A field screening investigation was performed using the TarGOST® technology. TarGOST®, developed and operated by Dakota Technologies, Inc. (Dakota) is a pneumatically-advanced sensor that is used to detect coal tars, creosotes, heavy crudes, and tank bottoms. The TarGOST® system sends excitation light through fiber optic cable strung within drill rods. The light exits through a window in the side of the probe. As the probe is advanced, the soil is exposed to the excitation light. If fluorescent compounds exist (tar based contaminants), light is emitted. The "signal" light is transmitted through a fiber, back up hole, to be analyzed. Responses are indicated in real-time on a graph of signal versus depth.

The TarGOST® probe was advanced using a 54DT track mounted Geoprobe™ direct push drill rig operated by Advanced Drilling (Pittstown, NJ). The actual TarGOST® system was operated and interpreted by staff from Dakota. The TarGOST® logs record the instrument's response (presented as %RE) to the PAHs in both oil-like material and tar-like material (Appendix B).

The SRIWP proposed advancing TarGOST® borings to a till layer that was anticipated to be encountered at depths ranging from 10 to 35 feet bgs. The work plan additionally noted that borings may be terminated if a confining layer is encountered within an overlying impacted

zone. At most locations, TarGOST® borings were advanced to boring refusal which was believed to correspond with top of the till layer.

The NYSDEC approved work plan proposed forty-seven (47) TarGOST® borings, with confirmatory borings drilled at 10% of these locations. Based on field observations, interpretation of the TarGOST® data, and conversations with NYSDEC representatives, ten (10) additional TarGOST® boring locations were added. Based on field conditions (i.e. shallow refusal), a total of nineteen (19) step outs were required. In all, seventy-six (76) TarGOST® borings were advanced as part of the investigation program. Confirmatory soil borings, continuously logged and field screened with a PID, were advanced at 40% of the TarGOST locations (22 locations). TarGOST® borings were advanced in the front and rear of the Apartment Complex, in the front and rear yards of the West Street Properties, and at two locations on the Former MGP Site. TarGOST® results are presented as depth specific logs (Appendix B). The TarGOST® results are discussed in sections 6.1.1, 6.1.7, and 6.1.11.

A TarGOST® summary is presented on Table 5-1. A TarGOST® response map, derived from the results of the screening provided by Dakota is presented as Plate 6B.

Soil Boring Investigation

5.1.8 Soil Boring Methodology

Soil borings to confirm TarGOST® screening results or investigating previous findings were advanced throughout in the Study Area. Soil samples were collected continuously using 2-inch diameter, 4-foot long macro-core samplers, lined with disposable acetate liners driven by a Geoprobe™ direct push rig, or using 2' long, 2-inch diameter split spoons, advanced by a hollow stem auger drill rig.

Upon opening the acetate liners or split spoons, the soil samples were screened with a PID. Organic vapor readings were recorded at 6-inch intervals across the recovered samples, at lithologic contacts and zones that exhibited visible evidence of contamination. The recovered soil was logged in accordance with the Unified Soil Classification System (USCS). Generally, borings were terminated at the gray clay layer (Unit 3) to prevent vertical migration of any observed contamination.

Soil samples were collected for laboratory analysis from the borings based on the following criteria:

- Unsaturated zone: one sample was collected from the zone reporting the highest PID readings or visual impacts. An additional sample was collected below the impacted zone to determine the vertical extent of impacts at that sample location. If no visual impacts or elevated PID readings were noted, one sample was collected from directly above the water table.
- Saturated zone: if contamination was observed in the saturated zone, one soil sample was collected from the most impacted interval and an additional sample was collected from a clean soil interval below the impacts. If no impacts were encountered in the saturated zone, one soil sample was collected from the bottom of the boring.
- Borings on the Former MGP Site were advanced to the till layer. Confirmatory borings in the balance of the Study Area were generally terminated at the gray clay layer to prevent potential introduction of contaminants to greater depths. The gray clay layer has been found to act as a confining layer to vertical contaminant migration based on a combination of field observations and analytical data.
- Pursuant to field discussions with O&R and NYSDEC personnel, additional samples were collected based on field observations, to ensure vertical delineation. Vertical delineation of NAPL (Oil-like and Tar-like Material) was based on the visual results from logged borings.
- Soil samples collected at the Former MGP Site were analyzed for VOC, PAH, and TAL Metals. Soil samples collected from the balance of the Study Area were analyzed for VOC and PAH. A sampling summary is provided on Table 5-2. Soil analytical results are provided in Table 5-3. All laboratory results are provided electronically at Appendix C.

Drilling cuttings were placed in DOT-approved 55-gallons drums and stored at the Former MGP Site prior to disposal. Direct push boreholes were sealed with neat cement and bentonite, and finished to ground surface using a hand pump or bucket. Hollow stem auger boreholes were sealed with neat cement and bentonite using a tremie grout pipe. Disposal documentation is provided in Appendix E.

Drilling equipment was decontaminated between each borehole. Samples for laboratory analysis were stored on ice until they were transported to the laboratory. TestAmerica Edison was the laboratory used for this project. Data validation was provided by Environmental Standards, Valley Forge, PA. Data usability reports are provided in Appendix F.

5.1.9 Former MGP Site

Drilling was performed at sixteen (16) locations on the Former MGP Site. Additionally, TarGOST® screening was performed at one (1) of these locations (SB-113) and at the location of a former boring, SB-2. A confirmatory sample was collected from SB-113 from the depth interval 13.0'-13.5' bgs which corresponded with the highest TarGOST® screening result. Soil sampling was performed at fifteen (15) locations using 2-inch diameter, 2-foot long split spoon samplers advanced by a hollow stem auger drill rig. In response to site constraints, soil sampling was performed at one (1) location using a truck mounted Geoprobe™ (SB-109).

5.1.10 Apartment Complex

Drilling was performed at fifty-four (54) locations on the Apartment Complex property with TarGOST® screening performed at each boring location. Confirmatory soil borings were advanced at eleven (11) of the fifty-four (54) locations using a Geoprobe™ direct push rig. Confirmatory soil borings at SB-61 and SB-85 were performed using 2-inch diameter, 2-foot long, split spoon samplers advanced by a hollow stem auger drill rig.

5.1.11 West Street Properties

Drilling was performed at twenty-six (26) locations at the West Street properties; TarGOST® screening was performed at twenty (20) of the twenty-six locations. Confirmatory soil borings were advanced at 16 of the twenty-six locations using a Geoprobe™ direct push rig.

Six (6) soil borings in this area, SB-124, SB-124A, SB-127, SB-127A, SB-127B, and SB-127C were terminated in response to equipment refusal, at depths less than 3 feet. No soil was recovered from these locations, and no TarGOST® data were collected.

5.1.12 Alleyway

Additional soil borings were advanced in the Alleyway in the vicinity of 103 Maple Avenue. This work was performed to investigate the potential for contamination beyond the sheet pile wall that had been installed during the remediation of that property in 2005. Seven (7) soil borings were advanced in this alleyway, SB-132, SB-133, SB-134, SB-135, SB-136, SB-137 and SB-138, using a Geoprobe™ direct push drill rig. Borings were advanced to the gray clay (Unit 3). TarGOST® screening was not conducted in the Alleyway.

Soil sampling was performed at four locations, SB-132, SB-133, SB-134 and SB-138. Three (3) of the borings, SB-135, SB-136, and SB-137, encountered shallow refusal at depths of less than 5 feet. No soil was recovered from these locations.

Groundwater Investigation

Five (5) shallow (water table) monitoring wells were installed in May 2008 by Advanced Drilling. The wells were installed using a hollow stem auger rig advancing 4.25" inner diameter hollow stem augers (8.25" outer diameter). Four of the wells were co-located with soil borings (MW-61, MW-63, MW-85 and MW-107); the fifth well, MW-83 was installed at a TarGOST® screening only location.

Each monitoring well was constructed with 2" diameter schedule-40 PVC riser and 0.020 slot well screen. #2 filter sand was emplaced into the hole to a height 1' above the top of the well screen. #00 filter sand was added, and the remaining annular space was filled with hydrated bentonite chips. All five wells were finished flush with a concrete pad, locking plug, and steel manhole. The concrete pad and manhole for monitoring well MW-85 was finished approximately 6" below ground surface, and covered with top soil at the request of the property owner.

Each monitoring well was developed by surging and pumping with a submersible pump until the purge water was less than 50 nephelometric turbidity units (NTUs) for three successive (5 minute) readings and until water quality indicators had stabilized. The criteria for stabilization were three successive readings within 10% for pH, temperature and specific conductivity. In each well, more than three well volumes were purged.

Development water and well installation soil cuttings were containerized in 55-gallon drums and stored on a drum storage pad on the Former MGP Site, prior to offsite transportation and disposal. Disposal documentation is provided in Appendix E. Appendix D contains the monitoring well construction forms and permit. Table 5-4 contains a summary of the construction information for the monitoring wells in the Study Area.

Monitoring Well Gauging

The monitoring wells were allowed to recover for at least seven days following development before they were gauged and sampled. Before initiating groundwater sampling, a complete round of synoptic water levels was obtained for the site. During the initial gauging activity on June 5, 2008, CMX determined that several wells (MW-4, MW-5, MW-6, MW-7, MW-20D, MW-21, MW-28, MW-29D, MW-31D, MW-32I) displayed artesian conditions with groundwater exiting the well casing. Groundwater flow at monitoring well locations MW-4, MW-5, MW-6, and MW-7 exceeded 1 gallon per minute.

To compensate for this condition a temporary casing extension was attached to the effected wells prior to the collection of water level measurements. Water levels and calculated elevations are presented on Table 5-4.

Monitoring Well Sampling

Groundwater samples were collected from site monitoring wells in accordance with the SRIWP.Four monitoring wells were sampled on April 24, 2008 (MW-8, MW-9, MW-11 and MW-24) as part of the Former MGP Site soil vapor investigation performed to evaluate potential soil vapor migration in the direction of the Head Start Property. The remainder of the wells were sampled between June 5 and June 14, 2008. Three wells (MW-02, MW-31S, and MW-32S) were not sampled due to the presence of measurable thicknesses of DNAPL during the gauging event. A single bleb of oil was observed on probe equipment in MW-04 when removed, however no actual product was measured. MW-61S exhibited naphthalene-like odors on groundwater during sampling.

As discussed in the previous section, ten wells exhibited artesian conditions (MW-04, MW-05, MW-06, MW-07, MW-20D, MW-21, MW-28D, MW-29D, MW-31D and MW-32I) during sampling. Wells were purged at 500 ml/min in an attempt to overcome the natural rate of flow from the wells. This was not possible at MW-31D, where water continually flowed from the well casing at a rate greater than 500 ml/min.

Groundwater samples were collected using a QED Sample Pro Bladder Pump with disposable polyethylene bladders, which were changed between monitoring wells. The bladder pump was powered using a 12 volt electric compressor. Groundwater quality parameters were monitored using a Horiba U-22 meter, equipped with a flow cell.

The sample pump was within the well's lower 1/3 of the screened section. Sampling depths are included on Table 5-5.

Minimum and maximum purge volumes were calculated using the formulas in the SRIWP. With the exception of MW-8, MW-9, MW-11, and MW-24, purging continued beyond the maximum purge volume stated in the SRIWP (1/4) of the well casing volume in attempt to achieve parameter stabilization, as specified in the 1996 USEPA document "Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Ground Water Samples From Monitoring Wells, Revision Number 2, U.S. EPA, July 30, 1996".

In most cases, parameter stabilization was achieved. Several wells did not reach turbidity stabilization, primarily because significant sediment had accumulated within the bottoms since the previous sampling event.

- MW-21S – turbidity remained high throughout but stabilized with high turbidity.
- MW-20D – initial sampling depth was proposed at 22' but field adjusted to 19.5 to attempt to reduce turbidity, and to reduce drawdown. Well appeared not be recharging due to clogged well screen.
- MW-85S – 13' sample; sample appeared to have fine turbidity; adjusted sampling depth to 10.5' to clear it; during development, this water was a cloudy black color due to sediment. The water had a sheen on the surface.
- MW-29D – Throughout the purging of this well the turbidity remained greater than 999 NTU and did not decrease.
- MW-29S – fine black sediment during initial purge, cleared – sulfur odors associated with the groundwater.
- MW-29D – well full of sediment at the bottom. Attempted to clear flow cell several times without success.

After sampling each well, all non-dedicated sampling and measuring equipment was disassembled and decontaminated using Alconox non-phosphate cleaner and distilled water solution, then rinsed with copious amounts of distilled water.

All purge water was contained in 55-gallon drums stored on the Former MGP Site.

Samples for laboratory analysis were stored on ice until they were transported to the laboratory. TestAmerica Edison was the laboratory used for this project. Groundwater samples from the monitoring wells were analyzed for VOCs, SVOCs, cyanide (total) and cyanide (available).

Temporary Well Point Sampling

In addition to the monitoring well sampling program, groundwater samples were collected from a series of narrow diameter temporary well points (TWPs), installed using a Geoprobe™ direct push rig, at the rear yards of the West Street Properties (96 West Street, 100 West Street, 104 West Street, 106 West Street, and 116 West Street). One-inch diameter PVC screens were installed with a Geoprobe™ direct push miniature drive point that extended beyond the base of the boring. The screens were advanced to targeted depths corresponding with the highest PID readings measured during the soil boring program or a

minimum of three feet below groundwater. Groundwater samples collected from SB-123 (100 West Street) and SB-124B (96 West Street) were analyzed at different depths than this requirement, since the groundwater level targeted in these borings was based upon the TarGOST® findings. Teflon tubing was inserted into the screen section and sampled through a peristaltic pump. Table 5-6 lists the ground water sampling depths and the rationale for the given sample depth.

The PVC screens were removed after sample collection and the TWPs were sealed with neat cement and bentonite, and finished to grade with soil where needed. Samples for laboratory analysis were stored on ice until they were transported to the laboratory. TestAmerica Edison was the laboratory used for this project. Groundwater samples from the TWPs were analyzed for VOCs.

Soil Vapor Investigation

5.1.13 Former MGP Site Property Line Adjacent to 146 Maple Avenue (Head Start)

On April 24, 2008 a soil vapor investigation was performed along the east property line of the Former MGP Site and the Head Start property at 146 Maple Avenue. Four soil vapor samples (SV-01, SV-02, SV-02 and SV-04 on Plate 2) were collected using stainless steel screens implanted below the ground surface using a Geoprobe™ direct push rig . One ambient air sample, AMB-01-4.5, was also collected at the fence line at a height of 4.5' above ground surface.

CMX utilized stainless steel sampling implants provided by Geoprobe™. Each implant consisted of a six-inch stainless screen with an expendable drive point, which was driven by a Geoprobe™ drill rig. A one foot sampling zone was created using #1 well sand. Soil vapor probes were sealed with a bentonite slurry from the sampling zone to ground surface. Each implant was fitted with Teflon tubing attached to a T-valve. Tubing connected to the other end of the T-valve was attached to a flow regulator on a 6-Liter Summa canister. The sampling zones were selected to be more than six inches above the observed water table.

After installation of the probes, and allowing the bentonite slurry to seal for 15 minutes, three implant volumes were purged using a MiniRAE 2000 PID through the T-Valve. The Summa canister was opened and allowed to fill over 60 minutes as specified by the work plan. The Summa canisters were analyzed by TestAmerica, Burlington, Vermont. Results of this investigation were submitted under separate cover to NYSDEC in July 2008 and are briefly summarized in section to 6.1.23.

5.1.14 Soil Vapor – Rear Yards of West Street Properties

CMX collected five soil vapor samples, SV-80, SV-92, SV-120, SV-123, and SV-124B (104, 116, 106, 100 and 96 West Street, respectively) from the backyards of properties that front on West Street to evaluate the potential subsurface vapor migration of VOCs and naphthalene. One ambient air sample, AMB-02-4.5 was also collected in this vicinity. The sampling was performed as described in Section 5.1.13 above. The Summa canisters were analyzed by TestAmerica, Burlington, Vermont.

Results of this investigation were submitted under separate cover to NYSDEC in July 2008 and are briefly summarized in section to 6.1.24.

SECTION 6 2008 REMEDIAL INVESTIGATION RESULTS

As outlined in Section 5, an RI was conducted by CMX to further evaluate MGP-related contamination at locations both on and off of the Former MGP Site that constitute the Study Area. The investigation included soil, groundwater and soil vapor sampling in conjunction with MGP-related NAPL screening using the TarGOST® field screening tool. The results of the investigation provided supplemental data which resolved the majority of the data gaps identified during previous investigations. Additionally, the investigation suggested that the TarGOST® system, while an effective screening tool, should not be utilized as a stand-alone determination of the presence or absence of MGP-related NAPL contamination. It was however effective when utilized in conjunction with visual observations and laboratory testing. This RIR has previously referenced TAGM RSCOs because they were the cleanup criteria that were in effect at the time the prior environmental investigations occurred. Pursuant to New York Environmental Conservation Law (ECL) 27-1415(6), NYSDEC developed the Chapter IV, Subchapter B, Part 375, Subpart 375-6: Remedial Program Soil Cleanup Objectives Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives and Table 375-6.8(b): Restricted Use Soil Cleanup Objectives, effective December 14, 2006. The analytical results generated during this RIR have been compared to Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives. Table 5-3 lists the SCOs from both 375-6.8(a) and 375-6.8(b) for reference purposes. The following is a summary for this sampling program.

Confirmatory Borings Compared to TarGOST®

Results from the TarGOST® screening were used to further delineate areas of known impact, to help focus the locations of soil borings and monitoring wells and to prepare a response map from TarGOST® logs. During the remedial investigation, the findings from the TarGOST® screening appeared to correspond well with the visual observations of MGP related NAPL.

According to documentation from Dakota, the TarGOST® device responds “almost exclusively to the NAPL found at former … MGPs”. The TarGOST® equipment must be normalized (calibrated) against a known fluorescence emitting reference (RE) material prior to each down-hole reading. The TarGOST® results are presented as a percent of the reference material (%RE). Other information by Dakota indicates it is important to note that oil-like material fluoresces more readily than tar-like material.

The fluorescence relationship was evident during the field screening in comparing the results from SB-67 (rear of 96 West Street property) and SB-94 (located in the Apartment Complex parking lot). The material within SB-94 consisted of what the field geologist characterized as a low viscosity "tar-saturated" matrix; the highest TarGOST® signal at this location was 630.6 %RE at a single point (average approximately 150 %RE). The material within SB-67 consisted of multiple thin layers of oil-like material; the highest TarGOST® signal was 1200 %RE at a single point (average approximately 300 %RE). Analytical samples from these locations reported a total PAH concentration in SB-67 (where the oil-like material was found) was 2,089 mg/kg, whereas the highest total PAH concentration in SB-94 was 28,350 mg/kg.

Therefore, the conclusions made based upon the use of this tool in the investigation were that the TarGOST® results should be considered along with the visual observations and analytical results, and should not be used alone to delineate impacts.

Former MGP Site

6.1.1 TarGOST® Findings

Two TarGOST® borings, SB-02 and SB-113, were advanced on the Former MGP Parcel. TarGOST® boring SB-02 was advanced at the location of former boring/current well MW-02 but refusal was encountered at approximately 6.34' bgs so the boring location was off-set and designated SB-02A. The TarGOST® log for SB-02A appears to show MGP-related NAPL from 8 to 12 feet bgs. This does not correspond well to the depths of product observed during the 1997 installation of MW-02 of 13' to 18'. This contrast is likely the result of operation error not noted at the time of the investigation.

TarGOST® boring SB-113 was advanced at the location of CMX boring SB-113. The TarGOST® log for SB-113 shows MGP-related NAPL from 8.0 to 8.5 feet, 9.5 to 10.0 feet, and 13 feet to 15 feet bgs. This corresponds with the visual observations of multiple thin layers of brown black tar like material from 6.5 to 14 feet bgs.

6.1.2 Analytical Results – VOCs

All soil samples collected on the Former MGP Site were analyzed for VOC's. Analytical results indicate that VOCs were not detected above NYSDEC Part 375 Soil Cleanup Objectives (SCOs) in samples collected from the south side in the vicinity of the former purifying room (SB-108 and SB-109), from the southeast side in the vicinity of the former coal house (SB-110 and SB-128), and from the center (SB-116 and SB-117) and west side (SB-118) of the Former MGP Site.

Analytical results indicate that VOCs, specifically BTEX compounds, were detected above NYSDEC Part 375 Soil Cleanup SCOs in samples collected from the southeast side in the vicinity of the former coal shed and former coke house (SB-111B and SB-112A/B), center (SB-113 and SB-114), west corner (SB-115), east edge of the holder (SB-119) and east corner near the former iron oil tank (SB-129) of the Former MGP Site. Vertical delineation of NAPL (Oil-like and Tar-like Material) is based on the visual results from logged borings. Vertical delineation was achieved at all of these locations with the exception of SB-112A/B; it is believed that the BTEX detected at this depth (32' bgs to 33.0' bgs) may be related to ground water contamination, as the soil boring log indicates no visual evidence of MGP-like contamination at this depth and the PAHs were below the NYSDEC Part 375 Soil SCOs.

Analytical soil results (for all compounds) for samples collected on the Former MGP Site are presented on Table 5-3, and on Plate 5A and 5B.

6.1.3 Analytical Results – PAHs

All soil samples collected on the Former MGP Site were analyzed for PAHs. PAHs were not detected above NYSDEC Part 375 SCOs across the majority of the Former MGP Site. No exceedances were noted in samples collected from in the vicinity of the former purifying room (SB-108 and SB-109), in the vicinity of the former coal house (SB-110), in the vicinity of the former coal shed (SB-112A/B), center (SB-113, SB-116 and SB-117), west corner (SB-115), and west side (SB-118) of the Former MGP Site.

Analytical results identified PAHs at concentrations above NYSDEC Part 375 SCOs in samples collected in the vicinity of the former coal shed and former coke house (SB-111B and SB-128), former tar well (SB-114), east edge of the holder (SB-119), and east corner near the former iron oil tank (SB-129) on the Former MGP Site. Vertical delineation was achieved at all of these locations based upon the analytical results for deeper samples.

6.1.4 Analytical Results – Metals

All soil samples collected on the Former MGP Site were analyzed for TAL Metals. Analytical results indicated that no metals were detected above NYSDEC Part 375 SCOs in any samples, with the exception of nickel, which was identified in samples collected from the east edge of the holder (SB-119) and east corner near the former iron oil tank (SB-129) on the Former MGP Site. Nickel is not an MGP-related contaminant and these exceedances may be related to fill placed on the Former MGP Site. Vertical delineation was achieved at both of these locations based upon the analytical results for deeper samples.

6.1.5 Analytical Results - Cyanide

All soil samples collected on the Former MGP Site were analyzed for total cyanide. Analytical results indicate that cyanide was not detected above NYSDEC Part 375 SCOs at any sample location.

6.1.6 NAPL Observations

NAPL was observed in borings advanced in the vicinity of the former coal shed and former coke house (SB-111B), former tar well (SB-113 and SB-114), east edge of the holder (SB-119), and east corner near the former iron oil tank (SB-129) of the Former MGP Site. The nature of these NAPL observations is summarized on Table 7-2 and on Plate 6A. In general, NAPL appeared as thin layers of brown and black oil-like material and tar-like material that was encountered at 10.0' bgs (SB-111), 6.5' bgs (SB-113), 8.5' bgs (SB-114), 10.5' bgs (SB-119) and 13.5' bgs (SB-129). The greatest thickness of material was observed in SB-113 (9.5' thick), SB-114 (10.6' thick), and SB-119 (11.5' thick).

NAPL was not observed in borings in the vicinity of the former purifying room (SB-108 and SB-109), in the vicinity of the former coal house (SB-110), at the southeast side in the vicinity of the former coal shed (SB-112A/B), west corner (SB-115), center (SB-116 and SB-117), west side (SB-118) or the southeast side in the vicinity of the former coal house (SB-128) on the Former MGP Site.

Apartment Complex Properties

6.1.7 TarGOST® Findings

A total of forty-one TarGOST® borings were advanced around the Apartment Complex properties. Twelve borings were advanced during the 2008 RI (SB-61, SB-62, SB-63, SB-64, SB-68, SB-75, SB-78, SB-85, SB-86, SB-94, SB-100 and SB-107) to compare visual observations of the presence or absence of NAPL with the TarGOST® findings. MGP NAPL identified by TarGOST agrees with observations at each of the boring locations.

6.1.8 Analytical Results - VOCs

Analytical soil results (for all compounds) for samples collected on the Apartment Complex properties are presented on Table 5-3, and on Plate 5A and 5B. All soil samples collected at the Apartment Complex were analyzed for VOCs. VOCs were not detected above NYSDEC Part 375 SCOs in samples collected from the front of 111 Maple Avenue (SB-61), the rear of 111 Maple Avenue (SB-62), the area in front of 113 and 115 Maple Avenue (SB-64), and the Village of Haverstraw property adjacent to 143 Maple Avenue (SB-107).

VOCs were identified at concentrations above NYSDEC Part 375 SCOs in samples collected from the front of 117 Maple Avenue (SB-45A), the paved parking area to the rear of 111 Maple Avenue (SB-63), the paved parking area to the rear of 100 West Street (SB-75), the paved parking area to the rear of 127 Maple Avenue (SB-78) and the area in front of 131 and 133 Maple Avenue (SB-85). These exceedances were limited to BTEX compounds.

Confining units identified at sample locations 119 Maple Avenue (SB-68), to the rear of 131 and 133 Maple Avenue (SB-86), to the rear of 137 Maple Avenue (SB-94) and to the rear of the two-story brick structure on West Street (SB-100) are believed to prevent the vertical migration of contaminants and deep samples were not collected at either location. Where the clay units were not encountered deeper samples which did not exceed NYSDEC Part 375 SCOs for BTEX compounds were collected from the western end of the paved parking area (SB-63), the paved parking area to the rear of 100 West Street (SB-75), the paved parking area to the rear of 127 Maple Avenue (SB-78) and the area in front of 131 and 133 Maple Avenue (SB-85) (Table 7-1).

6.1.9 Analytical Results - PAHs

All soil samples collected at the Apartment Complex Properties were analyzed for PAHs. Analytical results indicate that PAHs were not detected above NYSDEC Part 375 SCOs in samples collected from the front of 111 Maple Avenue (SB-61), the front of 119 Maple Avenue (SB-68) and the Village of Haverstraw property adjacent to 143 Maple Avenue (SB-107).

Analytical results indicate that PAHs were detected above NYSDEC Part 375 SCOs in samples collected from SB-45A (front of 117 Maple Avenue), SB-62 (rear of 111 Maple Avenue), SB-63 (parking lot behind 111 Maple Avenue), SB-64 (front of 115 Maple Avenue), SB-75 (north side of parking lot), SB-78 (parking lot behind 127 Maple Avenue), SB-85 (front of 131 Maple Avenue), SB-86 (rear of 131 Maple Avenue), SB-94 (rear of 137 Maple Avenue) and SB-100 (parking lot behind 139 Maple Avenue).

Confining units identified at these sample locations is believed to prevent the vertical migration of contaminants and deep soil samples were not collected.

Figures 5A and 5B present a summary of the subsurface soil analytical results.

6.1.10 NAPL Observations

NAPL was observed in borings SB-45A, SB-64, SB-68, SB-75, SB-78, SB-85, SB-86, SB-94, and SB-100. The following is a tabular summary of the NAPL observations for borings advanced at the Apartment Complex.

Boring Number	Surface Elevation (ft. msl)	Top of NAPL (ft bgs)	Bottom of NAPL (ft bgs)	Thickness of NAPL (ft)	Total Depth Logged (ft bgs)	NAPL Description
SB-45A	18.8	9.2	9.3	0.1	16.0	Brown, black oil material, thin layer at 9.2', and from 9.6' to 9.7'
SB-64	18.1	10.0	10.9	0.9	14.0	Faint naphthalene odors 8.9' to 9.2'; sheen and blebs of oil material from 10.0' to 10.8'; brown oil material from 10.8' to 10.9'
SB-68	17.3	8.8	9.0	0.2	20.0	Thin layer of oil material observed at 8.8'
SB-75	11.6	8.0	17.5	9.5	20.0	Gasoline like sheen, staining from 1.5' to 3.0'; oil material from 8.0' to 8.8'; oil material 16.5' to 17.5'
SB-78	12.2	8.0	12.7	4.7	16.0	oil material at 5.5'; pinpoints of brown oil material from 8' to 9'; oil material staining from 12' to 12.7'
SB-85	13.8	13.0	13.7	0.7	18.0	brown oil / tar material from 13.0' to 13.7'
SB-86	11.8	8.0	16.5	>8.5	16.5	Heavy tar material from 8' to 8.6'; 8.6' to 9.7' oil; 12.0 to 13.5' oil material; 16.0' to 16.5' staining
SB-94	11.3	4.5	12.0	>7.5	12.0	Heavy black tar from 4.5' to end of the boring at 12'
SB-100	12.8	8.2	9.3	1.1	16.0	8.2' to 8.7' Black brown NAPL, naphthalene odors; 8.7' to 9.0' sand coated with tar and oil; 9.0' to 9.3' thin layer of oil / tar

NAPL was not observed at boring locations SB-61, SB-62, SB-63 or SB-107.

West Street Properties

6.1.11 TarGOST® Findings

A total of thirteen TarGOST® borings were advanced around the West Street Properties, terminating at either till or a confining layer. Thirteen borings were advanced here during the 2008 RI (SB-67, SB-71, SB-80, SB-84, SB-88, SB-92, SB-120, SB-121, SB-122, SB-123, SB-124B, SB-125, and SB-126) to compare visual observations of the presence or absence of NAPL with the TarGOST® findings. Six additional borings were drilled to further delineate the extent of impact (SB-130, SB-131, SB-139, SB-140, SB-141, and SB-142).

In all cases but one, the MGP NAPL identified by TarGOST® agrees with the visual observations in the 13 confirmatory borings. The single exception was SB-124B.

In SB-124B, TarGOST® indicated possible presence of MGP NAPL at a depth of 7.5 to 8.5 feet. In the confirmatory boring, fill material, consisting of buried asphalt roofing shingles were observed at this depth. When these findings were discussed with Dakota, they indicated it was very likely that these shingles and not NAPL were the likely cause of this signal response.

6.1.12 Analytical Results - VOCs

All soil samples collected at the West Street Properties were analyzed for VOCs. Analytical results indicate that VOCs were not detected above NYSDEC Part 375 SCOs in samples collected from SB-80 (104 West Street), SB-84 (106 West Street), SB-88 (106 West Street), SB-92 (116 West Street), SB-120 (106 West Street), SB-123 (100 West Street), SB-124 (96 West Street), SB-131 (100 West Street), or SB-142 (106 West Street).

Analytical results indicate that VOCs, specifically BTEX compounds, were detected above NYSDEC Part 375 SCOs in soil boring SB-67 (96 West Street, 13.5'–14.0', 16.5'-17.0'), SB-71 (100 West Street, 12.0'-12.5', 13.5'-14.0'), SB-121 (106 West Street, 13.0'-13.5'), SB-130 (96 West Street, 12.0'-13.0'), SB-139 (100 West Street, 13.0'-13.5'), SB-140 (104 West Street, 9.5'-10.0'), and SB-141 (104 West Street, 12.5'-13.0'). Vertical delineation was achieved at all of these locations based upon the analytical results for deeper samples.

6.1.13 Analytical Results - PAHs

All soil samples collected at the West Street Properties were analyzed for PAHs. Analytical results indicate that PAHs were not detected above NYSDEC Part 375 SCOs in samples collected from SB-92 (116 West Street), SB-120 (106 West Street), SB-123 (100 West Street), SB-124 (96 West Street), or SB-131 (100 West Street).

Analytical results indicate that PAHs were detected above NYSDEC Part 375 SCOs in samples collected from SB-67 (96 West Street, 13.5'-14.0', 16.5'-17.0'), SB-71 (100 West Street, 12.0'-12.5', 13.5'-14.0'), SB-80 (104 West Street, 12.0'-12.5'), SB-84 (106 West Street, 12.0'-12.5'), SB-88 (106 West Street, 5.5'-6.0'), SB-121 (106 West Street, 13.0'-13.5'), SB-130 (96 West Street, 12.0'-13.0', 14.0'-14.5'), SB-139 (100 West Street, 13.0'-13.5', 16.0'-16.5'), SB-140 (104 West Street, 9.5'-10.0'), SB-141 (104 West Street, 12.5'-13.0') and SB-142 (106 West Street, 8.2'-8.7'). Vertical delineation was achieved at all of these locations based upon the analytical results for deeper samples with the exception of SB-88 which was visually delineated by the clay layer.

6.1.14 NAPL Observations

The following table summarizes the NAPL observations.

West Street NAPL Observations

Boring Number	Surface Elevation (ft. msl)	Top NAPL (ft bgs)	Bottom of NAPL (ft bgs)	Thickness of NAPL (ft)	Total Depth Logged (ft bgs)	NAPL Description
SB-67	13.7	9.8	16.1	6.3	20.0	Oil material from 9.8' to 10.5'; 13' to 13.5'; 13.5' to 13.7'; 13.7' to 14.1'; 16.0' to 16.1'
SB-71	16.6	12.2	16.7	4.5	20.0	Multiple Thin Layers of oil material between 12.2' and 14.5'; blebs of oil material from 16.0' to 16.7'
SB-84 / 84A	13.1	12.0	12.3	0.3	16.0	Trace blebs oil from 12.0' to 12.3'
SB-88	11.3	4.8	5.8	1.0	24.0	Oil material from 4.8 to 5.9'
SB-121	11.8	12.3	13.5	1.2	20.0	Oil material blebs from 12.3' to 13.5'
SB-130	15.9	10.8	13.5	2.7	20.0	Trace sheen and blebs of oil material from 10.8' to 11.0', 12.0' to 12.2', 13.0' to 13.1', 13.4' to 13.5'
SB-139	18.0	12.3	13.3	1.0	20.0	Blebs at 12.3', 12.6', 13.0', 13.3' within the organic clay / peat
SB-140	15.6	9.5	10.3	0.8	20.0	Trace blebs of oil from 9.5' to 10.3' in the organic clay peat layer
SB-141	15.9	9.8	13.1	3.3	16.0	Trace blebs of oil material in the organic clay peat 9.8' to 10.2'; 12.0' to 13.1'
SB-142	12.4	8.2	8.7	0.5	16.0	Trace oil material blebs from 8.2' to 8.6'

NAPL was not observed in borings SB-80 (96 West Street), SB-92 (96 West Street), SB-120 (96 West Street), SB-123 (96 West Street), SB-124 (96 West Street) or SB-131 (96 West Street).

Alleyway

Oil-like material was observed within SB-132, SB-133 and SB-138. Given the locations of these borings, this area was likely impacted by the former 93B MGP site. It is not known to what extent NAPL impact extends to the north toward the rear of properties at 86, 88 or 90 West Street although based on the configuration of the former pond and local groundwater flow gradients, NAPL impact is not expected to extend much further than the investigation limits. NAPL was not identified in SB-134.

Groundwater Results

Groundwater data are summarized in Table 5-5 and on Plates 7A and 7B.

6.1.15 Presence of DNAPL

DNAPL was detected in monitoring well MW-02 on the Former MGP Site. In accordance with the SRIWP, this well was not sampled during the recent sampling event.

DNAPL was detected in monitoring wells MW-31S and MW-32S on the Apartment Complex. These wells were also not sampled.

At the conclusion of sampling MW-04, a bleb of black/brown tar material was observed on the exterior of the sampling pump. No measurable product was detected within the well casing, and no other DNAPL was detected on any other equipment leaving the well.

6.1.16 Apartment Complex Shallow Water Table Wells

Analytical results for groundwater samples collected from the shallow monitoring wells on the Apartment Complex are summarized (from Table 5-5) in the following table relative to the NYSDEC Ambient Water Quality Standards and Guidance Values and/or Groundwater Effluent Limitations.

Apartment Complex Shallow Water Table Wells

MW	Sampling Date	Individual BTEX	Total BTEX	Individual PAH	Total PAH
MW-20S	6/11/08	Exceeded	48.7 µg/l	Exceeded	214.6 µg/l
MW-21	6/10/08	ND	ND	ND	ND
MW-28S	6/9/08	Exceeded	393.4 µg/l	Exceeded	467.9 µg/l
MW-29S	6/9/08	Exceeded	335.8 µg/l	Exceeded	400.2 µg/l
MW-55	6/10/08	ND	ND	No Exceedances	1.3 µg/l
MW-60	6/10/08	ND	ND	No Exceedances	17.8 µg/l
MW-61S	6/11/08	Exceeded	898.0 µg/l	Exceeded	9,633.0 µg/l
MW-63S	6/5/08	Exceeded	33.9 µg/l	Exceeded	103.3 µg/l
MW-83S	6/9/08	ND	ND	ND	ND
MW-85	6/10/08	ND	ND	Exceeded	33.1 µg/l
MW-107	6/10/08	ND	ND	ND	ND
MW-31S	Contained DNAPL, not sampled				
MW-32S	Contained DNAPL, not sampled				

µg/l = micrograms per liter

ND = non detect

6.1.17 Apartment Complex Deep Water Table Wells

Analytical results for groundwater samples collected from the deep monitoring wells on the Apartment Complex are summarized (from Table 5-5) in the following table relative to the NYSDEC Ambient Water Quality Standards and Guidance Values and/or Groundwater Effluent Limitations.

Apartment Complex Deep Water Table Wells

MW	Sampling Date	Individual BTEX	Total BTEX	Individual PAH	Total PAH
MW-20D	6/11/08	ND	ND	ND	ND
MW-28D	6/9/08	ND	ND	No Exceedances	15.7 µg/l
MW-28*	6/9/08	No Exceedances	0.7 µg/l	No Exceedances	17.0 µg/l
MW-29D	6/9/08	ND	ND	ND	ND
MW-31D	6/6/08	ND	ND	ND	ND
MW-32I	6/6/08	Benzene 2.4 µg/l	2.4 µg/l	No Exceedances	115.5 µg/l

ND = non detect

µg/l = micrograms per liter

* = Duplicate sample

6.1.18 Former MGP Site and Head Start Property Shallow Water Table Wells

Analytical results for groundwater samples collected from the shallow monitoring wells on the Former MGP Site and Head Start Property are summarized (from Table 5-5) in the following table relative to the NYSDEC Ambient Water Quality Standards and Guidance Values and/or Groundwater Effluent Limitations.

Former MGP Site and Head Start Property Shallow Water Table Wells

MW	Sampling Date	Individual BTEX	Total BTEX	Individual PAH	Total PAH
MW-01	6/5/08	ND	ND	ND	ND
MW-02	Contained DNAPL, not sampled				
MW-03	6/5/08	Exceeded	6,100.0 µg/l	Exceeded	2,301.0 µg/l
MW-04	6/18/08	Exceeded	231.0 µg/l	Exceeded	2,537.3 µg/l
MW-05	6/18/08	ND	ND	No Exceedances	14.8 µg/l
MW-06	6/18/08	ND	ND	ND	ND
MW-07	6/18/08	ND	ND	ND	ND
MW-08	4/24/08	No Exceedances	0.5 µg/l	ND	ND
MW-09	4/24/08	Exceeded	57.0 µg/l	Exceeded	379.3 µg/l
MW-10	6/6/08	ND	ND	No Exceedances	0.5 µg/l
MW-11*	4/24/08	ND	ND	ND	ND
MW-18	6/5/08	No Exceedances	4.3 µg/l	No Exceedances	0.6 µg/l
MW-24*	4/24/08	ND	ND	No Exceedances	0.5 µg/l

ND = non detect
µg/l = micrograms per liter
* = Monitoring well located on Head Start Property

6.1.19 Former MGP Site Deep Water Table Well

MW-07 is the only deep water table well present on the Former MGP Site. Analytical results from MW-07 did not identify any compounds at concentrations in excess of their respective NYSDEC Ambient Water Quality Standards and Guidance Values or Groundwater Effluent Limitations.

6.1.20 Volatile Organic Compounds Groundwater Summary

As shown on Plate 9B, total VOC contamination within ground water is present at the highest concentrations in the eastern portion of the Former MGP Site and at the northern portion of the Apartment Complex.

The highest concentration of total BTEX (20,720 µg/l) was previously detected in the 2001 sample collected at MW-18, where NAPL was likely entrained in the sample because in the 2004 sample from this well, the BTEX concentration was reduced to 4.4 µg/l. During the 2008 sampling event, BTEX concentrations of 6,100.0 µg/l and 231.0 µg/l were reported at MW-03 and MW-04, respectively. All three of these wells are located on the Former MGP Site.

During the 2008 sampling event, the highest total BTEX concentration at the Apartment Complex, 898.0 µg/l, was detected in MW-61S located in the front yard at 111 Maple Avenue.

The horizontal extent of shallow VOC contamination in groundwater has been determined to the east at MW-83S, to the southeast at MW-60S, to the south by MW-85 and MW-06, and to the southwest by MW-01 and MW-10, based upon the non detectable levels of BTEX (Plate 9B). The horizontal extent of shallow VOC contamination in groundwater has not been determined to the north and northwest based upon the based upon the presence of individual BTEX compounds in excess of NYSDEC Ambient Water Quality Standards and Guidance Values and/or Groundwater Effluent Limitations in MW-28S, MW-63S and MW-61S (Plate 9B). However, based on the observed groundwater flow direction it is unlikely that impact extends beyond the project limits.

6.1.21 PAH Compounds Groundwater Summary

Total PAH contamination within the ground water is present at multiple locations as shown on Plates 7A and 7B, and Plate 9A. The discussion here is regarding total PAHs, in cases where only constituent PAH compounds exceeded individual PAH NYSDEC Ambient Water Quality Standards and Guidance Values or Groundwater Effluent Limitations.

- MGP Site – Near the Former Holder Pad, Eastern Site – During the 2008 sampling event, total PAHs were detected at a concentration of 2,304 µg/l in MW-03 and were detected at a concentration of 2,537 µg/l in MW-04. The concentration of total PAHs in MW-18 was 0.6 µg/l.

- MGP Site – Near the Former Coke House and Former Iron Oil Tank – MW-02 was not sampled during the 2008 sampling event, due to the presence of NAPL. During the

2004 sampling event, total PAHs were detected in MW-02 at a concentration of 11,593 µg/l.

- MGP Site – Near the Former Coal House – During the 2008 sampling event, total PAHs were detected at a concentration of 379.3 µg/l in MW-09. During this sampling event, no PAHs were detected in MW-08, the monitoring well down gradient of MW-09.

- Apartment Complex Property – During the 2008 sampling event, total PAHs were detected in seven monitoring wells (MW-20S, MW-28S, MW-29S, MW-31S, MW-61, MW-63S and MW-85) at the Apartment Complex, ranging in concentration from 21 µg/l (MW-31S) to 9,633 µg/l (MW-61). MW-61 is located at the southwest corner of the Apartment Complex Property, at 111 Maple Avenue. During this sampling event, there were no PAH exceedances in the corresponding deeper wells (MW-20D, MW-28D, MW-29D, MW-32D). There were no PAH exceedances in MW-21, MW-31D, MW-55, MW-60, MW-83, and MW-107.

- West Street Properties – Five temporary well points were installed and sampled on these properties (TWP-80, TWP-84, TWP-92, TWP-120, TWP-123, TWP-124). No PAHs were detected in any of these five samples.

6.1.22 Inorganic Analytes Ground Water Summary

Cyanide was not detected in any of the wells sampled during the RI.

Ground Water Flow Direction – Shallow Water Table Wells

A shallow ground water potentiometric surface map (Plate 8) was prepared using data from the shallow water table wells (MW-01, MW-02, MW-03, MW-08, MW-09, MW-10, MW-11, MW-18, MW-24, MW-20S, MW-21, MW-28S, MW-29S, MW-31S, MW-32S MW-55, MW-60, MW-61S, MW-63S, MW-83S, MW-85S, and MW-107S). Surveyed groundwater elevation data are also presented in table 5-4.

Monitoring wells along Maple Avenue (MW-04, MW-05, MW-06, and MW-07) and on the Apartment Complex (MW-20D, MW-21, MW-28D, and MW-29D) are screened within the sands and gravels below the clay unit. Groundwater elevations from these monitoring wells were not used in the preparation of the shallow ground water potentiometric surface map. During the June 2008 ground water level gauging event, temporary casing extensions were used to measure ground water elevations in these wells. The water levels indicate the

presence of a semi-confined portion of the aquifer beneath the clay unit. Groundwater was not observed seeping from the slope that parallels Maple Avenue, which supplies additional evidence of the confining nature of the clay unit.

There appear to be two components of ground water flow present in the shallow aquifer. It appears that flow direction at the Former MGP Site is in general agreement with the topography, flowing from southwest to northeast. At the Apartment Complex, the groundwater flow direction appears to follow the former pond/stream structure, from west to east. CMX observed a "mounded" groundwater elevation at MW-21S which yielded an anomaly in the groundwater flow pattern with respect to the measured elevations at the other monitoring wells. Overall, groundwater in this portion of the Study Area appears to follow the topography, as the West Street Properties and the Apartment Complex Properties are at a higher elevation than the center of the former pond which corresponds to the parking lot on the north side of the Apartment Complex.

Soil Vapor Results

6.1.23 Former MGP Site Property Line adjacent to 146 Maple Avenue (Head Start)

On April 24, 2008 a soil vapor investigation was performed along the east property line of the Former MGP Site and the Head Start property at 146 Maple Avenue. Four soil vapor samples were collected using stainless steel screens implanted below the ground surface using a Geoprobe™ direct push rig (SV-01, SV-02, SV-02 and SV-04 on Plate 2). One ambient air sample, AMB-01-4.5, was also collected at the fence line at a height of 4.5' above ground surface. Findings from this investigation indicate that migration of soil vapor from the Former MGP Site onto the Head Start property is not a concern (see also section 5.1.13).

Fifteen total VOC chemicals of concern (COCs) were detected in the four soil vapor samples and one ambient air sample collected at the Former MGP Site along the property line with 146 Maple Avenue. Of these COCs, ethylbenzene was detected above the NYSDOH Soil Vapor Intrusion Guidance Table C1 (Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes – Indoor Air) 75th percentile level and below the 90th percentile level in one sample. The various xylene isomers were detected above the Table C1 75th percentile and below the 90th percentile in two samples and above both 75th and 90th percentile in one sample. Naphthalene, a COC typically associated with former MGP operations, was not detected in any of the samples.

The absence of naphthalene and the fact that most of the other COCs are below the Table C-1 75th percentile indicate that migration of soil vapor toward the Head Start building is not a concern. This data is also supported by the absence of groundwater impacts in the monitoring wells on the Head Start property and at the Former MGP Site eastern property line. The full results from this investigation were submitted to NYSDEC via letter report dated July 2008.

GEI Consultants, Inc. conducted a soil vapor investigation at the 146 Maple Avenue property in 2001 (GEI Consultants, Inc. March 19, 2001 letter report to NYSDEC) in which similar compounds were detected at similar concentrations. NYSDOH and NYSDEC concurred with GEI's conclusions in letters dated April 16, 2001 and May 1, 2001, respectively. It should be noted that this study was conducted prior to the issuance of the NYSDOH Soil Vapor Intrusion Guidance document.

6.1.24 Soil Vapor – Rear Yards of West Street Properties

In May 2008, CMX collected soil vapor samples (SV-80, SV-92, SV-120, SV-123 and SV-124B, Plate 2) at the rear yards of five residences at West Street (104 West, 116 West, 106 West, 100 West and 96 West, respectively).

Twenty-four total VOC COCs plus naphthalene were detected in the five soil vapor samples. One ambient air sample, AMB-02-4.5 was also collected in this vicinity. Fourteen of these VOCs are COCs that may be associated with former MGP operations as well as other sources (i.e., gasoline service stations, dry cleaning operations, home heating oil discharges). Of these, benzene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene, were detected above the Table C1 75th percentile and below the 90th percentile in one sample, SV-92 (116 West Street). Ethylbenzene and the various xylene isomers were detected above both the Table C1 75th and 90th percentile levels in SV-92 (116 West Street). Sample SV-80 (104 West Street) identified n-hexane, cyclohexane, and n-heptane at concentrations above both the Table C1 75th and 90th percentile levels and n-octane above the Table C1 75th percentile but below the 90th percentile. Naphthalene was detected in three of the soil vapor samples at concentrations ranging from 2.6 micrograms per cubic meter (µg/m^3) to 17.0 µg/m^3. The NYSDOH Table C1 does not contain an entry for naphthalene. The compounds detected during this soil vapor investigation are summarized in the following table.

West Street Properties Samples Summary of Detections

Compound	Sample Number and Result (µg/m³)						NYSDOH Indoor Air Guidance (µg/m³)	
		104 West Street	116 West Street	106 West Street	100 West Street	96 West Street	75th Percentile	90th Percentile
	AMB-02-4.5	SV-80	SV-92	SV-120	SV-123	SV-124B		
Dichlorodifluoromethane	3.0	U	3.2	2.8	2.9	3.0	4.1	15.0
Chloromethane	1.4	U	U	U	U	U	1.8	3.3
1,3-Butadiene	U	U	U	U	U	U	NA	NA
Trichlorofluoromethane	1.5	1.6	1.3	1.5	2.0	2.4	5.4	17.0
Acetone	U	31.0	**55.0**	**55.0**	31.0	36.0	52.0	110.0
Methyl Ethyl Ketone	U	4.1	**7.4**	7.1	3.5	3.2	7.3	16.0
Benzene	U	1.1	**9.3**	U	U	U	5.9	15.0
Toluene	1.0	1.1	4.5	U	0.94	U	25.0	58.0
Tetrachloroethene	U	**1.9**	**7.5**	U	**16.0**	**5.9**	1.1	2.9
Ethylbenzene	U	1.1	**14.0**	U	U	U	2.8	7.3
Xylene (m,p)	U	3.0	**13.0**	U	U	U	4.6	12.0
Xylene (o)	U	1.0	**5.6**	U	U	U	3.1	7.6
Xylene (total)	U	4.0	18.0	U	U	U	NA	NA
4-Ethyltoluene	U	1.5	8.8	U	1.1	U	NA	NA
1,2,4-Trimethylbenzene	U	2.3	**5.9**	U	1.2	U	4.3	9.5
1,3,5-Trimethylbenzene	U	U	**2.9**	U	U	U	1.7	3.6
n-Hexane	U	**81.0**	U	U	U	U	5.9	18.0
Cyclohexane	U	**34.0**	U	U	U	U	2.6	8.1
Carbon Tetrachloride	U	**2.6**	U	U	U	U	0.6	0.8
2,2,4-Trimethylpentane	U	7.0	U	U	U	1.5	NA	NA
n-Heptane	U	**82.0**	U	U	0.86	U	7.6	19
Carbon Disulfide	U	U	7.5	U	3.4	3.1	NA	NA
Chloroform	U	U	**2.9**	**1.3**	**3.0**	**2.7**	0.5	1.4
Methyl Butyl Ketone	U	U	U	U	2.3	5.9	NA	NA
Naphthalene	U	U	17.0	U	3.3	2.6	NA	NA
n-Pentane	U	11.0	U	2.9	19.0	6.8	NA	NA
n-Octane	U	**3.1**	U	U	U	U	2.3	4.2
n-Decane	U	U	1.0	U	U	U	6.6	16.0
n-Dodecane	U	U	U	U	2.1	U	3.9	11.0
Indane	U	U	2.1	U	U	U	NA	NA

µg/m³ = micrograms per cubic meter

NA = Not available

U = Not detected

Bold = Exceedance of NYSDOH Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes – Indoor Air 75th Percentile

Bold and Shaded = Exceedance of NYSDOH Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes – Indoor Air 75th and 90th percentiles

CMX reviewed information prepared by RETEC summarizing a soil vapor investigation (soil gas and indoor air) they conducted in February 2005 in all of the Apartment Complex buildings. RETEC's soil vapor VOC results indicated similar, and in some cases higher, concentrations when compared to the recent CMX soil vapor data. RETEC's samples also detected additional VOCs (i.e., 2,3-dimethylpentane, 2-methylpentane) compared to those identified by CMX. Elevated levels of these COCs were not detected in the indoor air samples that were collected. Naphthalene was not detected in the RETEC samples.

CMX believes that the shallow groundwater elevation at SV92 collected at 116 West Street likely resulted in increased concentrations of naphthalene and 1,2,4-trimethylbenzene.

VOC concentrations detected in the soil vapor during the 2005 RETEC investigation did not result in elevated concentrations of these compounds in the indoor air in nearby buildings. Based on the concentrations detected in the soil vapor during the latest investigation by CMX (which are lower, in some cases, than those detected by RETEC in its 2005 work), soil vapor migration resulting in indoor air impacts is unlikely. However, because of the elevated VOC concentrations in samples SV-80, SV-92, SV-120, SV-123 and SV-124B, the potential for vapor intrusion into nearby structures at 102, 104 and 116 West Street cannot be eliminated. Therefore, the NYSDEC and NYSDOH recommended in August 2008 that O&R's consultants return to the residences during the upcoming heating season to complete the soil vapor intrusion investigation. In response to these findings, O&R advised the potentially impacted property owners in August 2008 that supplemental investigation including the collection of sub slab soil vapor and indoor air samples will be required.

6.1.25 Other Impacts – Former MGP Site

A faint odor similar to purifier material (i.e., sulfur odor) was noted at SB-128, though sheens were observed at this location as well.

SECTION 7 CONTAMINANT FATE AND TRANSPORT

The following contaminant fate and transport analysis has been developed using data presented in previous sections of this report in conjunction with the physical characteristics and surroundings of the Study Area, the groundwater hydrology, geology, Former MGP Site history, nature of the chemical compounds encountered during the sampling and analysis programs, any apparent trends in the distribution of these materials, migration pathways and receptors in the Study Area.

Through an understanding of the contaminants, sources, migration pathways, and potential receptors, the need for remedial actions to protect human health and the environment can be evaluated.

Contaminants

The contaminants identified within the Study Area include NAPL, VOCs (primarily BTEX compounds), PAHs and metals at concentrations exceeding the applicable standards.

7.1.1 NAPL

For the purpose of this evaluation, NAPL is defined as visually tar-saturated material (non-residual) or soil containing tar blebs or tar lenses (residual NAPL). NAPL was observed in several borings and monitoring wells in the Study Area. Plate 6A depicts the locations where NAPL was encountered. Based on the collected data and field observations, NAPL appears to be restricted to relatively shallow, higher permeability overburden soils. Vertical migration of NAPL is likely restricted by clay layers and by the underlying till unit within the Study Area. The primary contaminants associated with NAPL are BTEX and PAHs.

Table 7-2 presents a tabular summary of NAPL observations utilized for the development of Figure 6A which presents a graphical depiction of NAPL distribution within the Study Area. It appears that releases of NAPL on the Former MGP Site generally migrated vertically through the permeable fill and alluvium units. Downward migration continued until the lower permeability till units or a more permeable sand lens was encountered. These permeability contrasts allowed for the accumulation of NAPL on the top of the till layer or lower permeability units prior to horizontal migration through higher permeability soils. The top of the till unit dips to the north (Figure 6) from the Former MGP Site toward the Apartment Complex. NAPL appears to have migrated from the Former MGP Site north toward Maple Avenue.

One area of concentrated NAPL accumulation was identified at the eastern end of the Apartment Complex. Tar characterized by low-viscosity NAPL was identified at this location. The residual impacts behind the apartment structures are likely the result of migration of tar-like materials in the former stream channel from the 93B Maple Avenue MGP site settling into the former pond. The 93B site and former stream leading to the former pond behind the apartments have been remediated.

No NAPL has been observed in the storm sewer culvert or exiting the storm sewer culvert throughout the various investigations therefore, NAPL tar does not appear to be entering the storm sewer system.

The till unit (and in some locations the clay layers) has restricted vertical migration of NAPL into deeper soil zones. No evidence of NAPL or odors was detected in the till at any of the locations in which the till was encountered. The till unit is present throughout the Former MGP Site, dipping to the north and northeast as depicted on Plate 10. Tar as NAPL, released in the vicinity of the tar well, iron oil tank, or the former holder, migrated downward to the till surface and appeared to have moved northerly along the confining till surface.

The occurrence of DNAPL at the Former MGP Site is limited in quantity with the exception of MW-02 at the former iron oil tank location, SG-2 and SB-14 at the former holder location, and SG3 at the former tar well location. A fingerprint analysis has identified the tar in well MW-02 as carbureted water gas tar.

NAPL in the subsurface will continue to be a source of groundwater contamination throughout the Study Area. As groundwater flows through subsurface material containing NAPL, BTEX and lighter-end PAHs sorbed to the subsurface materials will dissolve into groundwater. The heavier-end PAHs will generally remain sorbed to the soil and typically do not dissolve into groundwater.

7.1.2 PAHs, Cyanide and Metals

The surface of the Former MGP Site is primarily covered by grass and vegetation and some areas are gravel-covered. PAHs, cyanide, and metals were identified in surface soil at the Former MGP Site with the highest concentrations in the vicinity of some of the Former MGP Site structures.

These contaminants could potentially migrate via fugitive dust emissions, and/or dissolution of contaminants into surface water. PAHs and inorganics (cyanide and metals) do not readily volatilize, therefore volatilization is not a likely pathway for their migration.

Contaminants sorbed to soil particles could be transported as fugitive dust if exposed to wind erosion. PAHs exhibit varying degrees of binding affinity to organic matter and soil particles; this affinity is partly dependent upon their individual molecular structures. In general, the higher molecular weight PAHs are strongly sorbed and lighter molecular weight PAHs are less strongly sorbed. Therefore, the higher molecular weight PAHs are expected to remain sorbed to soils and could be transported as fugitive dust. Inorganics also generally exhibit an affinity to soil particles. The less vegetated areas of the site may be prone to transport of surface soils via fugitive dust emissions.

Contaminants sorbed to soil may dissolve in storm water which then infiltrates into the ground or runs off the site. PAHs have a varying degree of solubility. The lighter-end PAHs are more soluble, while the heavier-end PAHs are less soluble and typically do not dissolve into water. Cyanide typically present at MGP sites is in the form of ferric ferrocyanide ("Prussian Blue"). Ferric ferrocyanide is relatively insoluble in normal to low pH conditions. Metals may remain sorbed to the subsurface soils depending on subsurface oxidation-reduction conditions and the availability of anions with which the metals could bind. Metals that do not remain sorbed to subsurface soils could dissolve and be available for transport through the groundwater system. Given the nature of the inorganic compounds in the surface soil, dissolution of these compounds in surface water is likely not a major migration pathway.

Cyanide was detected in only one sample (SB-111B, 8.5' to 9' bgs depth interval) of soil at the Former MGP Site. The concentration found (0.73 mg/Kg) was below the NYSDEC Part 375 SCO of 27.0 mg/kg.

7.1.3 BTEX

BTEX compounds are highly volatile and therefore may be transported from subsurface soils and groundwater to soil gas in the vadose zone and then into ambient air. While volatilization may be a pathway for BTEX migration from the Former MGP Site, soil gas testing conducted at the Head Start Property, Apartment Complex and West Street Properties has indicated that MGP-related BTEX constituents are not present in soil gas at concentrations that could potentially affect indoor air quality.

In general, BTEX compounds have low sorption potential, coupled with high water solubility and high volatility, which make sorption a relatively minor environmental fate process for BTEX compared to other mechanisms.

In subsurface soil, dissolution of these compounds from soil to groundwater is expected to be a principal migration pathway. It is possible for groundwater containing dissolved BTEX to discharge to the storm sewers and be transferred to the Hudson River surface water at the outfall location in the embayment. If such discharges to the surface water system were to occur, volatilization, biodegradation processes, and dilution will rapidly result in the degradation of BTEX concentrations, and no impact to Hudson River surface water is anticipated.

7.1.4 Contaminant Summary

The presence of NAPL in the Study Area will likely result in the persistent presence of BTEX in groundwater at, and down gradient of, the NAPL identified locations. With few exceptions, the PAHs at the site will be relatively persistent in the soil matrix and associated NAPL. This is primarily due to their generally low water solubility and high sorption to soils. Metals in soil are also anticipated to be relatively persistent.

7.1.5 Surface Soil

Migration of contaminants from the surface soil is possible at the Former MGP Site, but primarily through the transport of particulates. The nature of the contaminants is such that they are relatively persistent in soils and would likely remain attached to soil particles.

7.1.6 Subsurface Soil

Migration of contaminants from the subsurface soil is possible in the Study Area, but primarily through dissolution of BTEX and lighter molecular weight PAH compounds from soil to groundwater.

7.1.7 Groundwater

BTEX, PAHs and cyanide have been identified in groundwater. Other inorganics were detected in groundwater however, many of these occur naturally at elevated concentrations that are representative of background conditions.

Groundwater impacts are present within the immediate areas where NAPL was observed. In addition, dissolved phase groundwater contaminants (BTEX and light-end PAHs) appear to be migrating from areas where residual NAPL is present.

NAPL likely migrated north from structures on the Former MGP Site along the till surface through sand lenses within clay (above the till surface). This migration appears to have resulted in discontinuous band of NAPL that may act as a continuing source of groundwater contamination. Groundwater generally flows to the northeast. As the groundwater flows through the area of residual NAPL, it will continue to desorb BTEX and light-end PAH compounds, creating a groundwater plume that extends northeasterly in the direction of groundwater flow. The absence of dissolved-phase BTEX compounds in the monitoring wells on the Head Start Property to the east is further indication that the dissolved-phase groundwater contaminants are migrating in a northeasterly direction.

The dissolved-phase groundwater contaminant concentrations within the area of NAPL impacts are likely in a steady-state condition, where the rate of dilution from inflowing clean water equals the rate of dissolution of contaminants from the NAPL. This is based upon historical monitoring well results and the likely age of the release (on the order of 70 years). The potential exists that the storm sewer system beneath the parking area in the north section of the Apartment Complex, which channels a former stream and pond, could intercept the low concentration groundwater contaminants since its invert is at a depth below the surface of the water table, providing a preferential pathway and discharge to the Hudson River, where the impacts are expected to be immediately diluted to non-detectable concentrations in the river.

Since the groundwater sample from MW-107 at the east end of the Apartment Complex had non detectable concentrations of BTEX, PAH and cyanide during the 2008 RI it does not appear that a dissolved phase plume has reached the Hudson River; however, if it did, volatilization and dilution would minimize or eliminate any impacts.

7.1.8 Storm Water

Storm water may be a transport mechanism at the Former MGP Site because runoff from the site could carry particulates into the storm drainage system or infiltrating precipitation could leach chemicals from the soils and transport them to the groundwater. In addition, the storm sewer system invert is at a depth below the surface of the water table, leading to the potential to intercept, at least partially, dissolved phase groundwater constituents.

Sediments in the storm drainage system in the Study Area were impacted by VOCs, PAHs and cyanide based upon samples collected from up gradient and down gradient locations during previous investigations. The drainage system receives urban runoff and detected

contaminants may not be solely site-related. City workers periodically clean out the sediment in the catch basins, so any accumulations of contaminants would be removed, thus minimizing both the potential for build-up and migration of contaminants clinging to particulates. The presence of both MGP- and non-MGP related contaminants below the storm water outfall and the dissolved phase contaminants present in the storm sewer suggest that the storm sewer system is a transport pathway for both MGP and other non-MGP urban contaminants.

7.1.9 Hudson River Sediments

Sediments from the embayment of the Hudson River may potentially be a source for contaminant transport because contaminants in the sediment could dissolve in water at the sediment interface or be transported as particulate by the river. Sediment samples were collected from the embayment of the Hudson River. The sediments in the embayment of the Hudson River are impacted by PAHs; however, the impacts do not appear to be solely related to the Former MGP Site. Physical observations during the probing and sediment sampling activities showed no MGP-related impacts at any location except VC-01, immediately adjacent to the storm water outfall. The outfall from the local storm sewer drainage system is located at the head of the embayment. Surface water runoff from the surrounding area containing motor oils, asphalts, and other PAH source materials are discharged to the embayment both directly and through the storm sewer system. In addition, a boat marina is located within the embayment, a fuel terminal is located up river, and a former oil terminal operated on the southern side of the embayment. It is likely that numerous sources have contributed to the concentrations detected in the river sediments. Both MGP and non MGP-related contaminants have been detected in the sediments.

SECTION 8 CONCEPTUAL SITE MODEL

Sources of Contamination

The Clove and Maple Former MGP Site operated from approximately 1887 until 1935, at which time natural gas was introduced into the area and the MGP operation was terminated. Process residuals and wastes from the gas manufacturing operations at this location are the primary sources of contamination that resulted in impacts to surface soil, subsurface soil and groundwater which are secondary sources of contamination in the Study Area. In addition, during the completion of the investigation, areas of impact were identified that are likely associated with the O&R 93B site, a second former MGP facility, located near the Clove and Maple Former MGP Site, that was the location of an on site remedial action. Based on the distribution of contamination and geologic conditions it is likely that the contamination identified within the Study Area has resulted from both historic operations.

8.1.1 Nature and Extent of Contamination

Previous investigations identified the presence of NAPL, BTEX, PAHs, cyanide and TAL metals at the Former MGP Site. Soil contamination extended to the north beneath the drainage ditch adjacent to the Former MGP Site and to the northeast beyond Maple Avenue to the Apartment Complex property, following the top of a low permeability till surface that dips in a north/northeast direction from the Former MGP Site toward the Apartment Complex property. MGP-related soil contamination was not identified beyond the Former MGP Site boundaries to the southwest (Clove Avenue) or southeast (146 Maple Avenue property). Groundwater contamination was detected in a similar pattern however PAHs and cyanide were also detected in monitoring wells located on the property at 146 Maple Avenue. Storm water and sediments in the storm drainage system in the vicinity of the Former MGP Site have been impacted by VOCs, PAHs and cyanide. The drainage system receives urban runoff and the detected contaminants may not be solely related to the Former MGP Site. Sediment samples collected from the embayment of the Hudson River during previous investigations detected PAHs; however, the source of these contaminants is likely associated with the numerous operations and discharge locations within the embayment.

This RI confirmed the general soil and groundwater contamination patterns but determined that soil contamination extends horizontally to the north in the Alleyway behind 88 West Street and 90 West Street, to the northeast direction into the rear yards of the West Street properties (96 West Street, 100 West Street, 104 West Street, 106 West Street and 116

West Street) and to the east at the Apartment Complex at the front and rear of the building at 141 Maple Avenue. This RI also determined that the plume of dissolved phase VOC and PAH groundwater contamination extends horizontally to the northwest at least to the Apartment Complex property boundary (MW-61), to the north beneath the parking lot at the rear of the Apartment Complex property (MW-63, MW-28S) and to the east beneath the parking lot behind 139 Maple Avenue (MW-60).

8.1.2 Fate and Transport Characteristics of the Site

At the Former MGP Site, alluvial materials and fill materials overlie a dense till which is encountered at an elevation of about 0' msl (15.3' bgs at SB-81 to 60.58' bgs at SB-126). The till surface at the Former MGP Site generally dips to the north/northeast. The surficial topographic slope and predominant groundwater flow direction is to the east-northeast. The overburden aquifer at the Former MGP Site is semi-confined by a clay layer that extends along the northern portion of the Former MGP Site adjacent to and across Maple Avenue. This RI confirmed these conditions exist throughout the Study Area. The dissolved-phase groundwater contaminant concentrations within the area of NAPL impacts are likely in a steady-state condition, where the rate of dilution from inflowing clean water equals the rate of dissolution of contaminants from the MGP impacted materials. Changes in groundwater concentrations result from the chemical diffusion of contaminants sorbed to the soil into the dissolved groundwater phase in response to changes in equilibrium. This is based upon historical monitoring well results and the likely age of the release (on the order of 70 years).

In addition to groundwater flow conditions, the potential exists that the storm sewer system beneath the parking area in the north section of the Apartment Complex, which channels a former stream and pond, is intercepting the low concentration groundwater contaminants, providing a preferential pathway and discharge to downstream locations. However, MW-107 located at the east end of the Apartment Complex reported no concentrations of BTEX, PAH and cyanide during the 2008 RI.

8.1.3 Potential Exposure Pathways

Potential exposure pathways include incidental ingestion, dermal contact (soils/water), inhalation of volatilized compounds and fugitive dust, contact with storm water, contact with sediments in the storm drainage system and contact with shallow groundwater.

8.1.4 Potentially Impacted Receptors

Potentially impacted receptors at the Former MGP Site include O&R maintenance and utility workers, contractors, trespassers and nearby residents. Potentially impacted receptors in the balance of the Study Area include maintenance and utility workers, contractors, residents and nearby residents, visitors and persons traversing these properties. Other potential receptors would include persons in contact with the storm water and sediment in the drainage system in the Study Area.

SECTION 9 EXPOSURE ASSESSMENT

According to NYSDEC DER-10, an "exposure assessment involves specifying the population that might be exposed to the agent of concern, identifying the routes through which exposure can occur and estimating the magnitude, duration and timing of the exposure that people or biota might receive from the source". The assessment of potential exposure routes/pathways includes consideration of the following five elements:

1. Contaminant source
2. Contaminant release and transport mechanisms
3. Point of exposure
4. Route of exposure
5. Receptor population

An exposure pathway is complete when all five elements are documented. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future. This exposure assessment assumes that contaminant conditions have not or will not be mitigated. In this sense, a "baseline" of potential exposures is presented. For the purposes of this assessment, it is assumed that future land uses within the Study Area may include residential or industrial/commercial development or a public park and recreation area.

9.1.1 Contaminant Source

Results of the RI and previous investigations indicate the presence of soil and groundwater contamination consisting of:

- Free and residual product;
- VOCs, PAHs and nickel in the soil at concentrations above NYSDEC Part 375 SCOs;
- BTEX and PAHs in the groundwater at concentrations above NYSDEC Ambient Water Quality Standards and Guidance Values and/or Groundwater Effluent Limitations; and,
- Detectable organic vapors.

9.1.2 Contaminant Release and Transport Mechanisms

The presence of NAPL in the Study Area will likely result in the persistent presence of BTEX in groundwater at, and down gradient of, the locations where NAPL has been shown to exist. BTEX constituents in subsurface soils not associated with NAPL are typically mobile and not

particularly persistent in the surrounding environment due to their high volatility, low adsorption to soils, and high water solubility. With few exceptions, the PAHs at the site will be relatively persistent in the soil matrix and associated NAPL. This is primarily due to their generally low water solubility and high sorption to soils. Metals in soil are also anticipated to be relatively persistent.

Migration of contaminants from the surface soil is possible at the Former MGP Site, but primarily through the transport of particulates. The nature of the contaminants is such that they are relatively persistent in soils and would likely remain attached to soil particles.

Migration of contaminants from the subsurface soil is possible in the Study Area, but primarily through dissolution of BTEX and lighter molecular weight PAH compounds from soil to groundwater.

Groundwater impacts are present within the immediate areas where NAPL was observed. In addition, dissolved phase groundwater contaminants (BTEX and light-end PAHs) appear to be migrating from areas where residual NAPL is present.

NAPL likely migrated north from structures on the Former MGP Site along the till surface through sand lenses within clay (above the till surface). This migration appears to have resulted in a discontinuous band of NAPL that may act as a continuing source of groundwater contamination. Groundwater generally flows to the northeast. As the groundwater flows through the area of residual NAPL, it will continue to desorb BTEX and light-end PAH compounds, creating a groundwater plume that extends northeasterly in the direction of groundwater flow. The lack of dissolved-phase BTEX compounds in monitoring wells on the Head Start Property to the east is further indication that the dissolved-phase groundwater contaminants are migrating in a northeasterly direction.

The dissolved-phase groundwater contaminant concentrations within the area of NAPL impacts are likely in a steady-state condition, where the rate of dilution from inflowing clean water equals the rate of dissolution of contaminants from the NAPL.

Storm water may be a transport mechanism at the Former MGP Site because runoff from the site could carry particulates into the storm drainage system or infiltrating precipitation could leach chemicals from the soils and transport them to the groundwater. In addition, the storm sewer system invert is at a depth below the water table leading to the potential to

intercept, at least partially, dissolved phase groundwater constituents. Given the established vegetation and stone cap that has been placed at the site it is unlikely that this pathway would introduce significant concentrations of contamination.

Sediments in the storm drainage system in the Study Area were impacted by VOCs, PAHs and cyanide based upon samples collected from up gradient and down gradient locations during previous investigations. The drainage system receives urban runoff and detected contaminants may not be solely site-related. City workers periodically clean out the sediment in the catch basins, so any accumulations of contaminants would be removed, thus minimizing the potential for buildup and migration of contaminants clinging to particulates. The presence of both MGP- and non-MGP related contaminants below the storm water outfall and the dissolved phase contaminants present in the storm sewer suggest that the storm sewer system is a transport pathway for both MGP and other non-MGP urban contaminants.

Sediments from the embayment of the Hudson River may potentially be a transport mechanism at the site because contaminants in the sediment could dissolve in water at the sediment interface or be transported as particulate by the river. Sediment samples were collected from the embayment of the Hudson River. The sediments in the embayment of the Hudson River are impacted by PAHs; however, the impacts are likely related to a wide variety of runoff sources located within the Study Area. Physical observations during the probing and sediment sampling activities showed no MGP-related impacts at any location except VC-01, immediately adjacent to the storm water outfall. The outfall from the local storm sewer drainage system is located at the head of the embayment. Surface water runoff from the surrounding area containing motor oils, asphalts, and other PAH source materials are discharged to the embayment both directly and through the storm sewer system. In addition, a boat marina is located within the embayment, a fuel terminal is located up river, and a former oil terminal operated on the southern side of the embayment. It is likely that numerous sources have contributed to the concentrations detected in the river sediments. Because there are many potential sources of impacts in the embayment, but only one location where MGP-related contaminants were found, dissolution of MGP-related contaminants and migration to other locations in the embayment does not seem to be occurring and therefore is not a transport mechanism of concern in the study area.

9.1.3 Points of Exposure

Potential exposure points exist when one or more contaminants exceed the specified regulatory criteria in a media at a subject property. For the purposes of this RIR, the Study Area is the subject property. The following potential exposure points exist in the Study Area:

- Surface Soil
- Subsurface Soil
- Groundwater
- Storm Water
- Storm Sewer Sediments
- Hudson River Embayment Sediments

9.1.4 Route of Exposure

Exposure could occur via incidental ingestion, dermal contact (soils/water), inhalation of volatilized compounds and fugitive dust, contact with storm water, contact with sediments in the storm drainage system or the Hudson River embayment and contact with shallow groundwater.

9.1.5 Receptor Population

The following potential receptors were identified for the Former MGP Site:

- O&R maintenance workers, utility workers and contractors.
- Trespassers (the Former MGP Site is fenced and locked).
- Nearby residents and their visitors (potential fugitive dust exposure).
- Future site workers, users or residents in the event O&R sells the property.

The following potential receptors, who could be exposed via incidental ingestion, dermal contact, inhalation of volatilized compounds/fugitive dust or contact with shallow groundwater, were identified for the Apartment Complex:

- Maintenance workers, utility workers and contractors.
- Residents and their visitors.
- Nearby residents and persons traversing the Apartment Complex.

The following potential receptors, who could be exposed via incidental ingestion, dermal contact, inhalation of volatilized compounds/fugitive dust or contact with shallow groundwater, were identified for the West Street Properties:

- Maintenance workers, utility workers and contractors.
- Residents and their visitors.
- Nearby residents and persons traversing the West Street.

The following potential receptors, who could be exposed via incidental ingestion, dermal contact, or inhalation of volatilized compounds/fugitive dust, were identified for the Head Start Property:

- Maintenance workers, utility workers and contractors.
- School employees, children and their visitors.
- Nearby residents and persons traversing the Head Start Property.

Other potential receptors would include persons in contact with the storm water and sediment in the drainage system in the Study Area and in contact with the sediments in the Hudson River embayment.

Assessment of Exposure Pathways

9.1.6 Former MGP Site

Surface Soil

BTEX compounds and cyanide were not detected above NYSDEC Part 375 SCOs, therefore, no complete exposure pathways exist for these compounds in surface soil. A number of PAHs were detected in surface soils at this parcel, therefore complete exposure pathways to PAHs in surface soils exist for O&R maintenance and utility workers, contractors, trespassers, nearby residents and their visitors, and potential future construction workers, users or residents in the event O&R sells the property. The majority of the parcel is grass covered and an IRM was undertaken to cover an area of surface soil impacted by tar near the former gas generator building with gravel to prevent contact with persons who may visit or work at the Former MGP Site. Additionally, soil pathways onto the Former MGP Site were covered with gravel in response to the detection of elevated lead concentrations in surface soil samples and a fence was installed around the property to restrict access. No other IRM was recommended. These conditions limit the potential for fugitive dust to be inhaled by the potential receptors, however, unless the site is covered by an engineered barrier and no excavations occur, this pathway is still potentially complete. The O&R employees have been informed of the nature of the Former MGP Site and that appropriate PPE (such as gloves, protective coveralls, and/or respiratory protection as warranted) is required if soils must be disturbed on the site. The use of such precautions will mitigate any potential exposure to the PAHs and lead.

Work zone monitoring and the need for PPE for future construction workers would also be required by O&R to ensure that these receptors are not exposed to PAH and/or lead-containing surface soils. A comprehensive air monitoring plan and the application of fugitive dust suppression techniques would also mitigate exposures for the adjacent community to PAH and/or lead-containing surface soils in the event that construction activities at the site would result in significant disturbance of surface soils.

Subsurface Soil

A complete exposure pathway to BTEX and PAH compounds in subsurface soils exists for those receptors involved in potential excavation activities at the site; the O&R utility workers/contractors, future construction workers and future residents. Potentially complete exposure pathways include inhalation of volatile and fugitive dusts, dermal contact, and incidental ingestion for these receptors. Because O&R currently controls the Former MGP Site and the O&R workers are aware of the subsurface conditions, any excavation activities undertaken by O&R would be done using the proper health and safety precautions, thereby eliminating the potential for exposure. Future users of the Former MGP Site would only be exposed if the contaminant conditions were unchanged and if the land were redeveloped for an unrestricted use.

Since exposure to subsurface soils is only possible if the subsurface soils are disturbed, no complete pathway currently exists for the O&R maintenance worker (lawn mowing activities), a trespasser, adjacent community member, or for a future recreational user. Activities involving significant disturbance of subsurface soils would require a comprehensive community air monitoring plan and the application of fugitive dust suppression techniques to mitigate potential exposures for these receptors.

Groundwater

A complete exposure pathway to BTEX and PAH compounds in groundwater exists for the O&R utility workers, future construction workers, and future residents. These receptors may have complete exposure pathways to groundwater through inhalation, dermal contact, and incidental ingestion in the event that an excavation occurs at or below the water table (approximately 8 feet bgs). Absent any excavation activities or site disturbance below the water table, a complete exposure pathway does not exist. Because O&R currently controls the Former MGP Site and the O&R workers are aware of the subsurface conditions, any excavation or drilling activities undertaken by O&R would be done using the proper health

and safety precautions, thereby eliminating the potential for exposure. There are currently no buildings on the Former MGP Site therefore the potential for BTEX vapors to accumulate and cause an inhalation exposure is not likely.

9.1.7 Apartment Complex

Surface Soil

Surface soil samples have not been collected on these properties, therefore a complete exposure pathway cannot be determined. Most of the site is covered with buildings, sidewalks and pavement. The expected transport pathway of contaminants from the Former MGP Site toward the Apartment Complex is through subsurface soils and groundwater. Additionally, the Apartment Complex is separated from the Former MGP Site by Maple Avenue, and surface soils at the Head Start Facility adjacent to the Former MGP Site, which have been sampled, have not identified COCs. Therefore, based on the currently available data, a complete pathway does not seem likely.

Subsurface Soil

A complete exposure pathway to BTEX and PAH compounds in subsurface soils exists for utility workers, construction workers and residents. The shallowest evidence of tar impacts observed on the Apartment Complex was approximately 8' bgs. Exposure through inhalation, dermal contact, and incidental ingestion for these receptors is only possible if subsurface soils are disturbed. A community air monitoring plan and the application of dust suppression techniques should be undertaken to mitigate exposures during any significant excavations at these properties.

Groundwater

Groundwater containing BTEX and PAHs is present beneath the Apartment Building Properties. Therefore, the potential for a complete exposure pathway to COCs in groundwater exists for those receptors (utility worker, construction worker, resident) involved in shallow and deep excavation activities. Tar impacts in the soil borings for some of these wells further demonstrate that shallow groundwater is a potential exposure pathway at these properties. Exposure pathways for these receptors include incidental ingestion, dermal contact, and inhalation of volatiles.

The potential for MGP-related contaminants accumulating in indoor air at the residences on the Apartment Complex was evaluated by RETEC on behalf of O&R in two soil gas and indoor air sampling events (July 2004 and February 2005). These evaluations included both soil

gas and indoor air at nearby locations within seven buildings on these parcels. RETEC concluded that MGP-impacts do not appear to be affecting air quality.

9.1.8 West Street Properties

Surface Soil

Surface soil samples have not been collected on these properties, therefore a complete exposure pathway cannot be determined. However, the expected transport pathway of contaminants from the Former MGP Site toward the West Street Properties, if at all possible, is through subsurface soils and groundwater. Additionally, the West Street Properties are separated from the Former MGP Site by the Apartment Complex and Maple Avenue, and surface soils at the Head Start Facility adjacent to the Former MGP Site have been tested and are not considered an issue. Therefore, based on the currently available data, a complete pathway does not seem likely.

Subsurface Soil

A complete exposure pathway to BTEX and PAH compounds in subsurface soils exists for utility workers, construction workers and residents. Exposure through inhalation, dermal contact, and incidental ingestion for these receptors is only possible if subsurface soils are disturbed. A community air monitoring plan and the application of dust suppression techniques should be undertaken to mitigate exposures during any significant excavations at these properties.

Groundwater

Groundwater contamination has not been identified on these properties. Therefore, no complete exposure pathway exists. However, in August 2008 NYSDEC and NYSDOH recommended investigating the potential for MGP-related contaminants to be accumulating in indoor air at the residences at 102, 104 and 116 West Street based upon the elevated VOC concentrations detected in the samples collected during the May 2008 soil vapor investigation.

9.1.9 Head Start Property

Surface Soil

Surface soils at the Head Start Facility adjacent to the Former MGP Site are not considered an issue based upon previous environmental investigations. Therefore, based on the currently available data, a complete pathway does not seem likely.

Subsurface Soil

A complete exposure pathway to PAH compounds in deep (approximately 24' bgs at one location) subsurface soils exists for utility workers, construction workers and residents. Exposure through inhalation, dermal contact, and incidental ingestion for these receptors is only possible if subsurface soils are disturbed. A community air monitoring plan and the application of dust suppression techniques should be undertaken to mitigate exposures during any significant excavations at this property.

Groundwater

Groundwater sampling conducted during the RI found no elevated concentrations of constituents of concern. Therefore, no complete exposure pathway exists.

9.1.10 Storm Water and Sediments

Based on the PAH exceedances, complete exposure pathways exist for sewer maintenance workers and utility workers that access the storm sewer during excavation or maintenance activities. Complete exposure pathways are limited to incidental ingestion and dermal contact as no volatile compounds were detected in sediments.

9.1.11 Hudson River Embayment Sediments

Based on the PAH exceedances, complete exposure pathways exist for recreational users and construction workers coming into contact with sediments in the Hudson River embayment. Complete exposure pathways are limited to incidental ingestion and dermal contact as no volatile compounds were detected in sediments.

SECTION 10 SUMMARY AND CONCLUSIONS

Between April 2008 and June 2008 CMX conducted a RI of the Clove and Maple Former MGP Site in Haverstraw, New York. The RI included investigation and sampling of subsurface soil, groundwater and vapors in an attempt to evaluate the extent of impact associated with former MGP related operations on the subject site. The RI included the advancement of soil borings to further characterize subsurface geologic features and provide supplemental data regarding soil impact within the study area, utilization of field screening measures including TarGOST® to further evaluate the extent of NAPL impact within he study area, the installation of groundwater monitoring wells and collection of groundwater samples to evaluate the extent of NAPL and dissolved phase groundwater impact, and the collection of soil vapor samples to further evaluate the potential for vapor production and migration to onsite and offsite receptors.

Review of the results of the RI indicates that the horizontal and vertical extent of MGP related impacts have been largely defined. Sampling has largely confirmed the horizontal extent of soil, groundwater, and NAPL impact across the study area. The vertical extent of impact has been established through the identification of clean soils in comparison with NYSDEC criteria and the identification of clay layers and a compacted till layer across the subject site. The several borings that have been advanced into the compacted till layer have not identified MGP related impact and are believed to represent conditions that exist across the site. The following sections summarize the results of the aforementioned sampling program.

10.1.1 Free and Residual Product

NAPL was observed in borings on the Former MGP Site and at off site locations in the Study Area. In general, NAPL appeared as thin layers of brown and black oil-like material and tar-like material. In general the greatest concentration of NAPL was restricted to areas on the former MGP site adjacent to the former holder pad and tar well and in the eastern portion of the former stream/pond system located behind (northeast) the Maple Avenue Apartment Complex.

10.1.2 VOCs and PAHs in Soil

VOCs and PAHs were detected in samples throughout the Study Area at concentrations above the NYSDEC Part 375 SCOs.

The horizontal limits of VOC and PAH impacts on the Former MGP Site extend to the north to the property boundary along Maple Avenue and to the west property boundary at the drainage swale. VOC and PAH impact does not appear to extend beyond the MGP Site property boundary to east (Head Start) or south (Clove Avenue). The horizontal limits of soil impact extend across the Apartment Complex property to the north where impact has been identified extending onto the West Street Properties. Soil impact has been identified extending to the western boundary of the study area which includes the Alley area but is not expected to extend further west onto areas previously addressed during the 93B MGP Site remediation.

The vertical extent, as confirmed by the presence of clay and/or compacted till layer across the study area, of VOCs and PAHs was achieved at all locations on the Former MGP Site and Apartment Complex Properties. Laboratory confirmation (clean samples below impacted soils) of the extent of VOC and PAH impact was not achieved at several locations on the Apartment Complex property or in the rear of isolated West Street properties (SB-88 at the rear of 106 West Street), but as previously discussed discontinuous clay layers and a compacted till unit are present in the subsurface across the study area and are believed to act as confining layers.

10.1.3 Metals and Cyanide in Soil

Metals and cyanide analyses were only performed on soil samples collected on the former MGP Site. Testing results indicated that no metals with the exception of nickel at two sample locations were detected at concentrations above NYSDEC Part 375 SCOs. Nickel impact is not typically associated with MGP related operations and is most likely associated with fill material that was deposited onsite. Cyanide was reported at seven of nine sample locations on the MGP site, with concentrations significantly below NYSDEC Part 375 SCOs.

10.1.4 Groundwater Sampling

During the completion of groundwater sampling activities VOC and PAH impacted groundwater was identified at several locations across the study area. DNAPL was detected in monitoring well MW-02 on the former MGP Site and in off site monitoring wells MW-31S and MW-32S.

VOC and PAH impacted ground water appears to be most prevalent in the northeastern portion of the Former MGP Site and the central to western portions of the Apartment Complex property. Groundwater impact at these locations is likely the result of MGP related impacts from on the Clove and Maple property and the previously remediated 93B MGP site.

The highest concentrations of VOCs in the Study Area were detected in the shallow ground water at MW-04, MW-03, and MW-61S.

Based on the results of the sampling program, the majority of dissolved VOC and PAH impact appears to be located in western portions of the study area including the former MGP site and western portion of the Apartment Complex property. Low to non detect levels of VOC and PAH impact have been identified in the eastern portion of the Apartment Complex property. No dissolved VOC or PAH impact has been identified on the Head Start property.

Soil Vapor Investigation Results

10.1.5 Former MGP Site Property Line Adjacent to 146 Maple Avenue

A soil vapor investigation performed along the east property line of the Former MGP Site and the Head Start property at 146 Maple Avenue confirmed that no MGP related vapor impact has been identified extending onto the Head Start property. Naphthalene, a COC typically associated with former MGP operations, was not detected in any of the vapor samples. These data are also supported by the absence of groundwater impact in monitoring wells on the Head Start property and at the eastern MGP Site property line.

10.1.6 Soil Vapor – Rear Yards of West Street Properties

In conjunction with the 146 Maple Avenue soil vapor investigation, soil vapor samples were collected from locations in the rear yards of five residences located on West Street (104 West, 116 West, 106 West, 100 West and 96 West).

Elevated VOC concentrations were reported at five sample locations (SV-80, SV-92, SV-120, SV-123 and SV-124B), that have the potential to result in vapor intrusion into nearby structures at 102, 104 and 116 West Street. In response to these findings O&R advised the property owners in August 2008 that follow up sampling of sub slab soil vapor and indoor air sampling would be conducted during the winter heating season. Following the completion of this study, the results of this evaluation will be submitted to NYSDEC and NYDOH.

CONCLUSIONS

The overall objectives of the RI were to:

- Determine the nature and extent of MGP residuals that may be present at the site;

- Delineate the horizontal and vertical extent of Former MGP Site related soil and groundwater impacts;
- Determine whether constituents identified by the SRI constitute a threat to human health or the environment;
- Obtain data to provide the basis for a feasibility study of remedial actions for the Study Area;
- Evaluate potential migration pathways including vapor intrusion on properties not previously investigated;
- Characterize geologic and hydrogeologic conditions in the Study Area.

These objectives are consistent with those of the NYSDEC's comprehensive remedial investigation (RI) process and those included in the SRI Work Plan (SRIWP) approved by NYSDEC on March 14, 2008 and have been met.

Nature and Extent of MGP Residuals

NAPL was observed in borings on the Former MGP Site, the Apartment Complex property and the West Street properties. In general, NAPL appeared as thin layers of brown and black oil-like material and tar-like material. The TarGOST® NAPL screening information confirmed with visual observations made at the majority of the locations.

Soil and Groundwater Impacts Delineation

Results of the investigation identified soil contaminants, including VOCs and PAHs on the Former MGP Site. Vertical migration of contaminants is restricted by clay layers and a compacted till layer located at a depth of approximately 25 feet beneath the Former MGP Site.

VOC and PAH impact was detected at concentrations above the NYSDEC Part 375 SCOs on the Apartment Complex and West Street Properties. Vertical migration of contaminants was restricted by a clay layer and compacted till layer located at depths ranging from 5 to 20 feet beneath the Apartment Complex and West Street properties.

The results of groundwater sampling activities identified BTEX and PAHs above the NYSDEC Ambient Water Quality Standards and Guidance Values and/or Groundwater Effluent Limitations indicating that the former MGP activities have impacted groundwater quality beneath the Former MGP Site and across a portion of the study area. Groundwater samples collected from off site monitoring wells reported higher concentrations of total PAHs than the samples collected from on site wells and the PAH isopleth map depicts an increasing

concentration gradient north of the Former MGP Site. Although groundwater contamination beneath the Former MGP Site is likely contributing to the contamination off site, impacts associated with the former 93B MGP site are also a likely source of groundwater contamination in the rear of the Apartment Complex and West Street Properties.

Soil Gas Investigation

A soil vapor investigation was performed along the east property line of the Former MGP Site and the Head Start property at 146 Maple Avenue. Findings from this investigation indicate that migration of soil vapor toward the Head Start building is not a concern.

In conjunction with the evaluation of the Head Start property, CMX collected soil vapor samples at the rear yards of the residences located along West Street. Based upon the elevated VOC concentrations detected at the West Street sample locations the potential for vapor intrusion into nearby structures on West Street can not be ruled out. In response to these findings, O&R has advised the potentially impacted property owners that supplemental investigation including the collection of sub slab soil vapor and indoor air samples will be conducted.

Threats to Human Health and/or the Environment and Exposure Pathways

Section 9 of this report presented an exposure assessment based on the conditions observed during the SRI and previous environmental investigations. The following is a summary of Section 9:

- There are no complete exposure pathways at the 146 Maple Avenue Head Start parcel with the exception of the limited potential for a potential fugitive dust pathway from surface soil from the Former MGP Site.
- There are complete exposure pathways for utility workers, construction workers, and, potentially, residents at the Apartment Complex and West Street Properties. Exposure is only a concern if subsurface soils are excavated and impacted soils and groundwater are encountered.
- There are complete exposure pathways for O&R maintenance workers, utility workers, trespassers, adjacent community members and possibly to future construction workers at the Former MGP Site. These exposures are generally mitigated because O&R controls access to and activities on the Former MGP Site.

- Prior to redevelopment of the Former MGP Site, remedial measures will be required to eliminate exposure pathways.
- The sediments of an embayment to the Hudson River are an exposure pathway because of the presence of MGP and non MGP related PAHs. However, since other sources for these constituents may exist around the embayment, there is uncertainty regarding the source of the detected concentrations.

Supplemental Data Needs

Results of this RI generally delineated the horizontal and vertical extent of soil and groundwater contamination, including NAPL throughout the study area. The limited area where horizontal delineation is not complete (Section 6) can be evaluated during the Feasibility Study and/or the remedial design phase for the Former MGP Site. In addition, further delineation of the MGP contamination at the storm water outfall location in the embayment will need to be performed.

Site-Specific Geology and Hydrogeology

The results of this RI and previous environmental investigations have characterized site-specific geology and hydrogeology. As outlined above, the primary geologic components at the site include unconsolidated overburden deposits overlying a compacted till unit which has been demonstrated to mitigate the potential for vertical migration of contaminants at the site. Groundwater flow at the site is generally to the northeast with localized flow in the shallow groundwater system on the Apartment Complex property controlled by previous geomorphic (stream and pond) features that have prevented the northward migration of MGP related contaminants beyond the West Street properties.

11 RECOMMENDATIONS

During this RI, sufficient data were obtained to develop and select remedial alternatives for the site. As noted in Section 10.1.7 several minor data gaps remain. These data gaps should be addressed as part of the Feasibility Study to support the final remedy.

Horizontal delineation of shallow VOC and PAH contamination has been completed over much of the study area. As shown on Plate 9A, VOC contamination of groundwater appears to exist over the majority of the subject area. While several of the monitoring wells located adjacent to the north-northeast perimeter of the site have reported concentrations in excess of NYSDEC Standards, based on the prevailing groundwater flow direction that is likely controlled by former geomorphic features (pond and stream) it is unlikely that migration of dissolved VOC's and PAH's extends much beyond the limits of the current investigation. As such, no further investigation or horizontal delineation is proposed.

As indicated in several sections of this report, the subject area is underlain by discontinuous clay layers and a massive till layer which we believe acts as a vertical barrier to contaminant migration. Sampling results for several monitoring wells located on the Former MGP Site (MW-02, MW-03, MW-04, and MW-09) and on the Apartment Parcel (MW-61S, MW-63S, and MW-85S) have identified elevated concentrations of VOC's and PAH's. Monitoring well screen intervals for most of these monitoring locations terminate at the till layer. Based on the presence of the till layer throughout the study area it is unlikely that dissolved VOC and PAH impact has migrated beyond the top of the till layer. As such, no further investigation is proposed.

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13 LIST OF ACRONYMS AND ABBREVIATIONS

%LEL Lower Explosive Limit
AOC Administrative Order on Consent
bgs below the ground surface
BTEX Benzene, toluene, ethylbenzene and xylenes
CAMP Community Air Monitoring Plan
CMX CMX, Inc.
CO Carbon Monoxide
COC Compounds of Concern
DNAPL Dense non-aqueous phase liquid
DOT Department of Transportation
DUSR Data Usability Summary Report
FSP Field Sampling Plan
ft^2 Square feet
gpm Gallons per minute
H_2S Hydrogen Sulfide
HASP Health and Safety Plan
HSA Hollow-stem auger
ID Inside diameter
IDW Investigation Derived Waste
LNAPL Light non-aqueous phase liquid
MGP Manufactured gas plant
NAPL Non-aqueous phase liquid
NTU Nephelometric turbidity unit
NYSDEC New York State Department of Environmental Conservation
NYSDOH New York State Department of Health
O&R Orange and Rockland Utilities
PAH Polycyclic aromatic hydrocarbon
PCBs Polychlorinated biphenyls
PID Photo ionization detector
PM10 Airborne respirable particulates less than 10 micrometers
PSA Preliminary Site Assessment
PVC Polyvinyl chloride
QAPP Quality Assurance Project Plan
RCDOH Rockland County Department of Health
%RE TarGOST® signal percent of reference emitter
RI Remedial Investigation
RIR Remedial Investigation Report
RCRA Resource Conservation and Recovery Act
SRIWP Supplemental Remedial Investigation Work Plan
SRI Supplemental Remedial Investigation
SVOC Semi volatile organic compound
TAL Target Analyte List
TarGOST® Tar Specific Green Optical Screen Tool
TCL Target Compound List
TCLP Toxicity Characteristic Leaching Procedure
TPH Total Petroleum Hydrocarbons
USCS Unified Soil Classification System
USEPA United States Environmental Protection Agency
UST Underground storage tank
VOC Volatile organic compound
WAD Weak acid dissociable

ATTACHMENT 1

Previous Environmental Investigations Documentation

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Background Surface Soils BSS1 07/15/97	BSS2 07/15/97	BSS3 07/15/97	BSS4 07/15/97	BSS5 07/15/97	BSS6 07/15/97	HA-BSS01-1 12/03/01
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	NA	NA	0.005 U
Toluene	1.5	NA	NA	NA	NA	NA	NA	0.005 U
Xylene, Total	1.2	NA	NA	NA	NA	NA	NA	0.005 U
Total BTEX		NA	NA	NA	NA	NA	NA	ND
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	NA	NA	NA	NA	NA	NA	0.077 J
Acenaphthylene	41.0	NA	NA	NA	NA	NA	NA	0.19 J
Anthracene	50.0	NA	NA	NA	NA	NA	NA	0.4 J
Benzo[g,h,i]perylene	50.0	NA	NA	NA	NA	NA	NA	1.6
Fluoranthene	50.0	NA	NA	NA	NA	NA	NA	2.5
Fluorene	50.0	NA	NA	NA	NA	NA	NA	0.11 J
Methylnaphthalene,2-	36.4	NA	NA	NA	NA	NA	NA	0.048 J
Naphthalene	13.0	NA	NA	NA	NA	NA	NA	0.062 J
Phenanthrene	50.0	NA	NA	NA	NA	NA	NA	1.4
Pyrene	50.0	NA	NA	NA	NA	NA	NA	2.6
Total PAHs (Non-carc.)		NA	NA	NA	NA	NA	NA	9.0
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	NA	NA	NA	NA	NA	NA	**1.4**
Benzo[a]pyrene	0.061	NA	NA	NA	NA	NA	NA	**1.3**
Benzo[b]fluoranthene	1.1	NA	NA	NA	NA	NA	NA	1.1
Benzo[k]fluoranthene	1.1	NA	NA	NA	NA	NA	NA	1
Chrysene	0.4	NA	NA	NA	NA	NA	NA	**1.6**
Dibenz[a,h]anthracene	0.014	NA	NA	NA	NA	NA	NA	**0.44 J**
Indeno[1,2,3-cd]pyrene	3.2	NA	NA	NA	NA	NA	NA	1.4
otal PAHs (Carcinogenic)		NA	NA	NA	NA	NA	NA	8
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	0.72 U
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	0.72 U
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	0.72 U
Carbazole	NS	NA	NA	NA	NA	NA	NA	0.11 J
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	0.037 J
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	0.72 U
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	0.72 U
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Background Surface Soils BSS1 07/15/97	BSS2 07/15/97	BSS3 07/15/97	BSS4 07/15/97	BSS5 07/15/97	BSS6 07/15/97	HA-BSS01-1 12/03/01
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	8430	7810	8060	7110	9950	7640	NA
Antimony	NS	1.7 R	1.7 R	1.8 R	1.7 R	1.8 R	1.8 R	NA
Arsenic	7.5	4	5.5	5.4	2.9	4.2	2.3	NA
Barium	300	84.2	73.4	81.6	50	61.9	38.9 B	NA
Beryllium	0.16	**0.42 B**	**0.43 B**	**0.49 B**	**0.38 B**	**0.47 B**	**0.38 B**	NA
Cadmium	1	0.55 B	0.96 B	0.79 B	0.72 B	0.47 B	0.33 B	NA
Calcium	NS	1490	10900	2800	2500	2990	14600	NA
chromium	10	**12**	8.9	8.8	**12.2**	**12.1**	6.8	NA
Cobalt	30	5.4 B	6.4 B	6 B	6.3 B	8 B	6.1 B	NA
Copper	25	18.9	**47.3**	**48**	**32.9**	**27.6**	**25.2**	NA
Iron	2000	**15700**	**15900**	**16000**	**15900**	**18700**	**15700**	NA
Lead	500	145	163	187	219	38.2	11.8	NA
Magnesium	NS	2410	6360	1970	2650	3400	9340	NA
Manganese	NS	443	376	310	322	400	440	NA
Mercury	0.1	**0.11**	**0.16**	**0.14**	**0.19**	0.07 B	0.05 U	NA
Nickel	13	10.6	**14**	12.2	**14**	12.6	9.2	NA
Potassium	NS	699 B	698 B	673 B	1210	758 B	708 B	NA
Selenium	2	0.65 U	0.65 U	0.87 B	0.62 U	0.67 U	0.66 U	NA
Silver	NS	0.43 U	0.44 U	0.46 U	0.41 U	0.45 U	0.44 U	NA
Sodium	NS	109 U	110 U	725 B	336 B	401 B	116 B	NA
Thallium	NS	1.3 U	1.3 U	1.4 U	1.2 U	1.3 U	1.3 U	NA
Vanadium	150	18.6	26.2	24.2	22.8	20.2	13	NA
Zinc	20	**94.6 E**	**135 E**	**123 E**	**101 E**	**67.3 E**	**41 E**	NA
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	0.52 U
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected						
		Background Surface Soils					Clove and Maple Avenue	
		HA-BSS01-2 12/03/01	HA-BSS01-3 12/03/01	HA-BSS01-4 12/03/01	HA-BSS01-5 12/03/01	HA-BSS01-6 12/03/01	SS1 05/14/97	SS1A 07/14/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	0.005 U	0.005 U	0.005 U	0.006 U	0.006 U	0.012 U	NA
Toluene	1.5	0.005 U	0.005 U	0.005 U	0.006 U	0.006 U	0.012 U	NA
Xylene, Total	1.2	0.005 U	0.005 U	0.005 U	0.006 U	0.006 U	0.012 U	NA
Total BTEX		ND	ND	ND	ND	ND	ND	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.17 J	0.17 J	0.4 J	0.44 J	0.035 J	0.22 J	0.39 J
Acenaphthylene	41.0	0.19 J	0.07 J	0.075 J	0.11 J	0.17 J	1 J	0.12 J
Anthracene	50.0	0.58 J	0.46 J	0.5 J	1	0.34 J	0.68 J	0.74 J
Benzo[g,h,i]perylene	50.0	1.8	0.94	0.93	1.8	0.87	1.8 B	4.5
Fluoranthene	50.0	3.7	3.7	4.2	4.6	1.8	5.8	9.2
Fluorene	50.0	0.24 J	0.18 J	0.32 J	0.44 J	0.077 J	0.24 J	0.33 J
Methylnaphthalene,2-	36.4	0.059 J	0.043 J	0.32 J	0.11 J	0.089 J		
Naphthalene	13.0	0.07 J	0.058 J	0.38 J	0.13 J	0.038 J	1.1 J	1 U
Phenanthrene	50.0	2.4	2.4	2.9	4.1	0.96	3.3	5.1
Pyrene	50.0	3.6 J	3.6	4.2	5	1.5	5.8 B	9.5
Total PAHs (Non-carc.)		12.8	11.6	14.2	18	5.9	20	29.88
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**2.2**	**1.9**	**2.2**	**2.6**	**0.82**	**3.8**	**4**
Benzo[a]pyrene	0.061	**1.8**	**1.7**	**1.8**	**2.1**	**0.86**	**2.8 B**	**4.3**
Benzo[b]fluoranthene	1.1	**1.4**	**1.7**	**1.6**	**1.8**	0.7	**10**	**4**
Benzo[k]fluoranthene	1.1	**1.7**	**1.6 J**	**2.2 J**	**2.1 J**	0.72	**3.1**	**4**
Chrysene	0.4	**2.3**	**2.1**	**2.3**	**2.7**	**0.96**	**7.5**	**5**
Dibenz[a,h]anthracene	0.014	**0.64 J**	**0.35 J**	**0.4 J**	**0.57 J**	**0.28 J**	**1.4 J**	**1.5**
Indeno[1,2,3-cd]pyrene	3.2	2	1.2	1.3	1.7	1	**3.7 B**	**3.4**
otal PAHs (Carcinogenic)		12	10.6	11.8	13.6	5	32	26
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	0.73 U	0.71 U	0.039 J	0.04 J	0.026 J	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	0.73 U	0.71 U	1.1 U	0.71 U	0.59 U	NA	NA
Butyl benzyl phthalate	50.0	0.73 U	0.71 U	0.1 J	0.71 U	0.052 J	NA	NA
Carbazole	NS	0.23 J	0.23 J	0.28 J	0.54 J	0.11 J	NA	NA
Dibenzofuran	6.2	0.073 J	0.088 J	0.1 J	0.31 J	0.022 J	NA	NA
Di-n-butyl phthalate	8.1	0.73 U	0.018 J	0.018 J	0.02 J	0.02 J	NA	NA
Di-n-octyl phthalate	50.0	0.73 U	0.71 U	0.71 U	0.71 U	0.03 J	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected						
		Background Surface Soils					Clove and Maple Avenue	
		HA-BSS01-2 12/03/01	HA-BSS01-3 12/03/01	HA-BSS01-4 12/03/01	HA-BSS01-5 12/03/01	HA-BSS01-6 12/03/01	SS1 05/14/97	SS1A 07/14/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	NA	NA	NA	NA	NA	6130	8340
Antimony	NS	NA	NA	NA	NA	NA	4.8 B	1.7 R
Arsenic	7.5	NA	NA	NA	NA	NA	**21**	4.7
Barium	300	NA	NA	NA	NA	NA	72.6	55.1
Beryllium	0.16	NA	NA	NA	NA	NA	**0.25 B**	**0.49 B**
Cadmium	1	NA	NA	NA	NA	NA	0.16 U	0.49 B
Calcium	NS	NA	NA	NA	NA	NA	826 B	5300 *
chromium	10	NA	NA	NA	NA	NA	**14 ***	**10.3**
Cobalt	30	NA	NA	NA	NA	NA	10.6 B	7 B
Copper	25	NA	NA	NA	NA	NA	**153**	**30.6**
Iron	2000	NA	NA	NA	NA	NA	**72600 ***	**15300**
Lead	500	NA	NA	NA	NA	NA	281	53.2
Magnesium	NS	NA	NA	NA	NA	NA	1780	3530
Manganese	NS	NA	NA	NA	NA	NA	322 N*	356 N
Mercury	0.1	NA	NA	NA	NA	NA	**3.3 N***	**0.17**
Nickel	13	NA	NA	NA	NA	NA	**24.2**	**13.3**
Potassium	NS	NA	NA	NA	NA	NA	709 B	679 B
Selenium	2	NA	NA	NA	NA	NA	**4.5**	0.65 U
Silver	NS	NA	NA	NA	NA	NA	0.53 B	0.43 U
Sodium	NS	NA	NA	NA	NA	NA	171 B	109 U
Thallium	NS	NA	NA	NA	NA	NA	2.2 U	1.3 U
Vanadium	150	NA	NA	NA	NA	NA	46.6	21.7
Zinc	20	NA	NA	NA	NA	NA	**66.4**	**77.3 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	0.53 U	0.53 U	0.52 U	0.62 U	0.59 U	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS10 05/14/97	SS11 07/15/97	SS12 07/15/97	SS13 07/15/97	SS14 07/15/97	SS15 07/15/97	SS16 07/14/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	0.012 U	NA	NA	NA	NA	NA	NA
Toluene	1.5	0.001	NA	NA	NA	NA	NA	NA
Xylene, Total	1.2	0.012 U	NA	NA	NA	NA	NA	NA
Total BTEX		0.001	NA	NA	NA	NA	NA	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.18 J	0.34 U	0.27 J	0.19 J	0.34 U	0.054 J	0.35 U
Acenaphthylene	41.0	0.88 J	0.34 U	0.065 J	0.054 J	0.34 U	0.045 J	0.35 U
Anthracene	50.0	0.6 J	0.09 J	0.53	0.45	0.34 U	0.13 J	0.075 J
Benzo[g,h,i]perylene	50.0	1.9 B	0.71	2.1	4.7	0.17 J	1.3	0.81
Fluoranthene	50.0	4.7	1.9	7.1 D	11 D	0.6	2	1.1
Fluorene	50.0	0.2 J	0.078 J	0.4	0.39	0.34 U	0.08 J	0.041 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	1 J	0.34 U	0.32 J	0.046 J	0.34 U	0.035 J	0.35 U
Phenanthrene	50.0	2.4	1.1	4.3	4.9	0.25 J	1.3	0.67
Pyrene	50.0	5.3 B	2.2	7.2 D	12 D	0.58	2.1	1.6
Total PAHs (Non-carc.)		17	6.1	22.3	33.7	1.6	7	4.3
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**3.5**	**0.7**	**2.4**	**3.6**	0.22 J	**0.87**	**0.5**
Benzo[a]pyrene	0.061	**2.6 B**	**0.81**	**2.6**	**4.2**	**0.27 J**	**1**	**0.68**
Benzo[b]fluoranthene	1.1	**8.9**	0.78	**2.7**	**3.6**	0.31 J	0.86	0.72
Benzo[k]fluoranthene	1.1	**3.4**	0.85	**2.4**	**4.3**	0.27 J	**1.2**	0.66
Chrysene	0.4	**6.6**	**0.95**	**3.1**	**4.5**	**0.35**	**1.2**	**0.71**
Dibenz[a,h]anthracene	0.014	**1.2 J**	**0.16 J**	**0.77**	**1.4**	**0.34 U**	**0.38**	**0.24 J**
Indeno[1,2,3-cd]pyrene	3.2	**3.2 B**	0.62	1.9	**4**	0.17 J	1.1	0.67
otal PAHs (Carcinogenic)		29.4	4.9	15.9	26	1.93	7	4.2
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS10 05/14/97	SS11 07/15/97	SS12 07/15/97	SS13 07/15/97	SS14 07/15/97	SS15 07/15/97	SS16 07/14/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	7370	8040	9690	8370	7720	9390	9570
Antimony	NS	4.5 B	1.7 R	1.7 R	1.8 R	1.7 R	1.7 R	1.7 R
Arsenic	7.5	**19.2**	3.3	6.6	7.1	6.5	4.5	3.3
Barium	300	71.9	58.6	67	62.5	60.5	69	67.6
Beryllium	0.16	**0.28 B**	**0.41 B**	**0.5 B**	**0.43 B**	**0.42 B**	**0.63 B**	**0.55 B**
Cadmium	1	0.16 U	0.35 B	0.63 B	0.54 B	0.55 B	0.39 B	0.42 B
Calcium	NS	911 B	1100	1730	2080	4410	1240 *	1910 *
chromium	10	**14.1** *	**10.3**	**14.6**	9.9	9.7	9.9	**11.3**
Cobalt	30	10.3 B	6.3 B	6.7 B	6.1 B	5.8 B	5.6 B	6.7 B
Copper	25	**138**	15.4	24.7	**26.3**	**26.3**	18.2	17.2
Iron	2000	**68400** *	**13000**	**16300**	**16100**	**15000**	**15700**	**15300**
Lead	500	246	26	185	88.9	89.6	50.7	47.8
Magnesium	NS	2350	1940	2340	2380	3550	2160	2370
Manganese	NS	345 *	391	444	392	378	394 N	391 N
Mercury	0.1	**3.2** *	**0.1 B**	**0.39**	**0.49**	**0.21**	**1.3**	**0.21**
Nickel	13	**24**	11	**13**	11.8	10.8	11.4	**13.3**
Potassium	NS	1140 B	610 B	624 B	566 B	481 B	695 B	642 B
Selenium	2	**4.5**	0.64 U	0.63 U	1 B	0.64 U	0.65 U	0.64 U
Silver	NS	0.42 B	0.43 U	0.42 U	0.44 U	0.42 U	0.43 U	0.43 U
Sodium	NS	216 B	107 U	106 U	112 U	107 U	110 U	108 U
Thallium	NS	2.2 U	1.3 U	1.3 U	1.03 U	1.3 U	2.6 U	1.3 U
Vanadium	150	44.4	19	24.7	22.6	21.9	19.1	21.4
Zinc	20	**143**	**36.6 E**	**68.5 E**	**77.7 E**	**75.7 E**	**62.7 E**	**61.3 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS17 07/14/97	SS18 07/14/97	SS19 07/14/97	SS2 05/14/97	SS2A 07/14/97	SS20 07/14/97	SS22 07/14/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	0.001 J	NA	NA	NA
Toluene	1.5	NA	NA	NA	0.013 U	NA	NA	NA
Xylene, Total	1.2	NA	NA	NA	0.013 U	NA	NA	NA
Total BTEX		NA	NA	NA	0.001	NA	NA	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.047 J	0.16 J	0.36 U	0.054 J	0.073 J	0.97 J	0.34 U
Acenaphthylene	41.0	0.35 U	0.09 J	0.36 U	1.2	0.37 U	0.64 J	0.34 U
Anthracene	50.0	0.12 J	0.43 J	0.047 J	1.3	0.21 J	2.4 J	0.036 J
Benzo[g,h,i]perylene	50.0	2	5	0.57	9.3 DB	2.1	11	0.44
Fluoranthene	50.0	2.8	7.6	0.98	10 D	3.1	10	0.59
Fluorene	50.0	0.078 J	0.25 J	0.036 J	0.19 J	0.18 J	2.4 J	0.34 U
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.35 U	0.72 U	0.36 U	0.47	0.047 J	**150 D**	0.34 U
Phenanthrene	50.0	1.5	3.7	0.54	1.2	2.2	15	0.3 J
Pyrene	50.0	4.8	7.9	1	17 DB	3.6	22	0.98
Total PAHs (Non-carc.)		11	25	3	40.7	11.5	214	2.3
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**1.2**	**3.5**	**0.4**	**6.9 D**	**1.4**	**8.4**	**0.27 J**
Benzo[a]pyrene	0.061	**1.9**	**4.3**	**0.46**	**6.4 DB**	**1.5**	**5.6**	**0.49**
Benzo[b]fluoranthene	1.1	**1.5**	**3.2**	0.5	**9.8 D**	**1.2**	**9.8**	0.37
Benzo[k]fluoranthene	1.1	**1.6**	**4.6**	0.49	**3**	**1.5**	**11**	0.33 J
Chrysene	0.4	**2**	**4.9**	**0.54**	**7.5 D**	**2**	**16**	**0.49**
Dibenz[a,h]anthracene	0.014	**0.53**	**1.7**	**0.18 J**	**1.6**	**0.7**	**2.9 J**	**0.095 J**
Indeno[1,2,3-cd]pyrene	3.2	1.6	**4**	0.41	**7.7 DB**	1.7	**8.7**	0.32 J
otal PAHs (Carcinogenic)		10	26	3.0	43	10	62	2.37
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS17 07/14/97	SS18 07/14/97	SS19 07/14/97	SS2 05/14/97	SS2A 07/14/97	SS20 07/14/97	SS22 07/14/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	8630	8810	8950	6410	8390	5840	7750
Antimony	NS	1.7 R	1.7 R	1.8 R	1.2 U	1.8 R	4.1 BN	1.7 R
Arsenic	7.5	4.3	3.3	3.5	**8.1**	2.9	**18**	**58.7**
Barium	300	41.8 B	54.3	54.8	46 B	40.8 B	46.2	83.6
Beryllium	0.16	**0.41 B**	**0.49 B**	**0.51 B**	**0.52 B**	**0.4 B**	**0.35 B**	**0.55 B**
Cadmium	1	0.38 B	0.4 B	0.39 B	0.16 U	0.71 B	**1.4**	0.79 B
Calcium	NS	2440 *	2080 *	1200 *	2230	15500 *	1370 *	2540 *
chromium	10	8.3	**10.1**	**11.9**	7.3 *	8.4	**14.5**	**10.2**
Cobalt	30	7.7 B	7.2 B	6.1 B	7 B	8.5 B	10.8 B	5.8 B
Copper	25	**50.4**	**27.1**	17.7	**34.6**	**74.7**	**140**	**74.6**
Iron	2000	**16800**	**15300**	**15000**	**8930** *	**20700**	**95400**	**30100**
Lead	500	29.2	62	25.4	34.1	35.7	121	121
Magnesium	NS	2630	2340	2180	1920	8870	2200	2630
Manganese	NS	303 N	366 N	330 N	150 N*	291 N	333 N	288 N
Mercury	0.1	**0.41**	**0.08 B**	**0.12**	**0.1 N***	**0.11**	**1.8**	**17.6**
Nickel	13	11.6	**14.3**	12.9	**20**	**17.8**	**25.1**	12.1
Potassium	NS	657 B	551 B	660 B	771 B	713 B	850 B	1020 B
Selenium	2	0.64 U	0.66 U	0.66 U	1.3 B	0.67 U	0.66 U	0.63 U
Silver	NS	0.43 U	0.44 U	0.44 U	0.28 U	0.45 U	0.44 U	0.42 U
Sodium	NS	120 B	110 U	112 U	61.5 B	474 B	111 U	107 U
Thallium	NS	1.3 U	1.3 U	1.3 U	2.3 U	1.3 U	2.6 U	1.3 U
Vanadium	150	20.8	22.7	20.6	19.2	30	42.5	21.9
Zinc	20	**54.3 E**	**56.1 E**	**40.7 E**	**34.9**	**70 E**	**51.7 E**	**94.3 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS23 07/15/97	SS24 07/15/97	SS25 07/15/97	SS26 07/15/97	SS27 07/15/97	SS28 07/15/97	SS29 07/15/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	NA	NA	NA
Toluene	1.5	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1.2	NA	NA	NA	NA	NA	NA	NA
Total BTEX		NA	NA	NA	NA	NA	NA	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.34 U	0.34 U	0.35 U	0.069 J	0.089 J	0.26 J	0.35 U
Acenaphthylene	41.0	0.34 U	0.34 U	0.35 U	0.34 U	0.036 J	0.36 U	0.35 U
Anthracene	50.0	0.34 U	0.34 U	0.044 J	0.13 J	0.24 J	0.61	0.064 J
Benzo[g,h,i]perylene	50.0	0.27 J	0.36	0.42	0.89	2.1	0.99	0.57
Fluoranthene	50.0	0.71	1.2	1.5	2.8	4.2	3.2	1.5
Fluorene	50.0	0.34 U	0.34 U	0.35 U	0.096 J	0.19 J	0.32 J	0.062 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.34 U	0.34 U	0.069 J	0.083 J	0.036 J	0.36 U	0.039 J
Phenanthrene	50.0	0.36	0.44	0.6	1.4	2.6	2.8	0.84
Pyrene	50.0	0.62	1.1	1.4	2.9	4.6	3.5	1.5
Total PAHs (Non-carc.)		1.96	3.1	4.0	8.4	14.1	11.7	4.6
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**0.28 J**	**0.38**	**0.51**	**1**	**1.6**	**1.6**	**0.5**
Benzo[a]pyrene	0.061	**0.33 J**	**0.51**	**0.59**	**1.2**	**2.1**	**1.6**	**0.62**
Benzo[b]fluoranthene	1.1	0.36	0.54	0.66	**1.2**	**2**	**1.4**	0.68
Benzo[k]fluoranthene	1.1	0.32 J	0.6	0.7	**1.3**	**1.8**	**1.4**	0.45
Chrysene	0.4	0.38	**0.62**	**0.84**	**1.4**	**2.1**	**1.6**	**0.7**
Dibenz[a,h]anthracene	0.014	**0.035 J**	**0.067 J**	**0.12 J**	**0.32 J**	**0.65**	**0.46**	**0.19 J**
Indeno[1,2,3-cd]pyrene	3.2	0.2 J	0.32 J	0.42	0.78	1.7	0.94	0.46
otal PAHs (Carcinogenic)		1.9	3.0	3.8	7	12	9.0	3.6
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS23 07/15/97	SS24 07/15/97	SS25 07/15/97	SS26 07/15/97	SS27 07/15/97	SS28 07/15/97	SS29 07/15/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	9050	5670	6450	7070	7490	4660	8010
Antimony	NS	1.7 R	1.6 R	1.7 R	1.6 R	1.8 R	1.7 R	1.7 R
Arsenic	7.5	**10**	2.5	3.7	4	3.5	3.7	2.3
Barium	300	70.3	29.2 B	54.4	51.3	60.6	43.9	61.9
Beryllium	0.16	**0.46 B**	**0.3 B**	**0.36 B**	**0.39 B**	**0.36 B**	**0.24 B**	**0.44 B**
Cadmium	1	0.53 B	0.31 B	0.54 B	0.4 B	0.83 B	0.58 B	0.22 B
Calcium	NS	2090	859 B	1160	1160	3170	11400	1100
chromium	10	**11.2**	6.3	9	9.1	**10.4**	8	9.5
Cobalt	30	6.8 B	4 B	4.8 B	5.3 B	5.6 B	5.6 B	6.4 B
Copper	25	**34.9**	11.1	19.5	16.1	**29.5**	**37.8**	15
Iron	2000	**18300**	**11300**	**13600**	**13500**	**13000**	**13900**	**13400**
Lead	500	56.1	25	85.4	83.4	85.6	69.6	40.6
Magnesium	NS	2970	2060	1970	2170	2230	7310	2000
Manganese	NS	409	234	354	397	297	295	408
Mercury	0.1	**1**	0.05 U	**0.18**	**0.11**	**0.33**	0.06 B	**0.1 B**
Nickel	13	12.3	7.7 B	9.5	10.6	11.9	10	10.8
Potassium	NS	890 B	591 B	541 B	546 B	648 B	516 B	450 B
Selenium	2	0.92 B	0.61 U	0.63 U	0.61 U	0.66 U	0.65 UN	0.63 UN
Silver	NS	0.42 U	0.41 U	0.42 U	0.41 U	0.44 U	0.44 U	0.42 U
Sodium	NS	106 U	103 U	106 U	104 U	129 B	110 U	107 U
Thallium	NS	1.3 U	1.2 U	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U
Vanadium	150	18.4	12.6	15	16.6	17.5	12.3	18.4
Zinc	20	**71 E**	**34.6 E**	**59.2 E**	**57.6 E**	**96.6 E**	**214 E**	**45 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS3 05/14/97	SS3A 07/14/97	SS30 07/15/97	SS31 07/15/97	SS32 07/15/97	SS33 07/14/97	SS35A 07/14/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	0.012 U	NA	NA	NA	NA	NA	NA
Toluene	1.5	0.012 U	NA	NA	NA	NA	NA	NA
Xylene, Total	1.2	0.012 U	NA	NA	NA	NA	NA	NA
Total BTEX		ND	NA	NA	NA	NA	NA	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.81 J	0.056 J	0.35 U	0.34 U	0.35 U	0.34 U	2.1 J
Acenaphthylene	41.0	7.4	0.06 J	0.35 U	0.34 U	0.35 U	0.34 U	1.8 J
Anthracene	50.0	15	0.17 J	0.036 J	0.036 J	0.35 U	0.042 J	10
Benzo[g,h,i]perylene	50.0	24 B	3.2	0.45	0.48	0.43	0.59	22
Fluoranthene	50.0	**100 D**	3.4	1.3	1.2	0.94	1.1	**53**
Fluorene	50.0	4.7	0.086 J	0.35 U	0.035 J	0.35 U	0.34 U	3.1 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	1.4 J	0.35 U	0.35 U	0.34 U	0.35 U	0.34 U	8.6 U
Phenanthrene	50.0	**69 D**	1.5	0.61	0.66	0.46	0.52	28
Pyrene	50.0	**120 DB**	3.8	1.3	1.3	1.1	1.6	**58 J**
Total PAHs (Non-carc.)		342	12.3	3.7	3.7	3.3	3.9	178
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**46 D**	**1.8**	**0.38**	**0.38**	**0.33 J**	**0.44**	**27**
Benzo[a]pyrene	0.061	**43 DB**	**2.3**	**0.53**	**0.52**	**0.42**	**0.56**	**27**
Benzo[b]fluoranthene	1.1	**55 D**	**1.9**	0.49	0.54	0.46	0.62	**21**
Benzo[k]fluoranthene	1.1	**15**	**2.6**	0.52	0.56	0.43	0.63	**22**
Chrysene	0.4	**48 D**	**2.7**	**0.58**	**0.58**	**0.53**	**0.85**	**29**
Dibenz[a,h]anthracene	0.014	**7**	**0.94**	**0.13 J**	**0.12 J**	**0.1 J**	**0.16 J**	**4.8 J**
Indeno[1,2,3-cd]pyrene	3.2	**31 B**	2.5	0.37	0.39	0.34 J	0.5	**16**
otal PAHs (Carcinogenic)		245	14.7	3.00	2.77	2.6	3.8	147
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS3 05/14/97	SS3A 07/14/97	SS30 07/15/97	SS31 07/15/97	SS32 07/15/97	SS33 07/14/97	SS35A 07/14/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	11300	7410	10200	8040	8230	7830	8070
Antimony	NS	3.5 B	1.7 R	1.7 R	1.7 R	1.7 R	1.7 R	1.7 R
Arsenic	7.5	**18.8**	3.9	2.8	4.1	**15.4**	**31.2**	**19.6**
Barium	300	105	35.6 B	70.2	51.3	108	89.3	91.8
Beryllium	0.16	**0.41 B**	**0.45 B**	**0.58 B**	**0.44 B**	**0.5 B**	**0.47 B**	**0.5 B**
Cadmium	1	0.16 U	0.41 B	0.25 B	0.3 B	0.53 B	0.67 B	**1 B**
Calcium	NS	1850	4920 *	790 B	2360	2960	1960 *	4420 *
chromium	10	**23.4** *	8.8	9.3	9.1	**11.7**	9.9	**15.9**
Cobalt	30	8.1 B	6.6 B	5.9 B	5.3 B	9.6 B	5.6 B	6.9 B
Copper	25	**62.8**	**26.9**	12.8	15.7	**43.1**	**33**	**67.6**
Iron	2000	**36500** *	**15900**	**15000**	**14000**	**21100**	**23700**	**29100**
Lead	500	267	39.6	33.9	53.1	73.8	108	193
Magnesium	NS	3040	3480	2120	2810	3220	2320	3850
Manganese	NS	363 *	351 N	640	392	789	298 N	319 N
Mercury	0.1	**0.9** *	0.09 B	**0.11**	**0.13**	**0.33**	**1.7**	**6.3**
Nickel	13	**29.7**	**13.7**	11.9	**13.3**	**14.3**	12.4	**25.6**
Potassium	NS	1170 B	801 B	387 B	633 B	929 B	943 B	1040 B
Selenium	2	**2.9**	0.74 B	0.63 UN	0.64 UN	0.96 BN	**2.1**	1.8
Silver	NS	0.52 B	0.44 U	0.42 U	0.43 U	0.42 U	0.42 U	0.42 U
Sodium	NS	176 B	128 B	107 U	107 U	107 U	106 U	107 U
Thallium	NS	2.2 U	2.6 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U
Vanadium	150	40.1	14.3	17.5	19.3	20	21.2	27.5
Zinc	20	**180**	**57.1 E**	**47.3 E**	**61.3 E**	**87.5 E**	**95.2 E**	**206 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS35B 07/14/97	SS36 07/14/97	SS37 07/14/97	SS38 07/14/97	SS39 07/14/97	SS4 05/13/97	SS4A 07/14/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	NA	0.013 U	NA
Toluene	1.5	NA	NA	NA	NA	NA	0.013 U	NA
Xylene, Total	1.2	NA	NA	NA	NA	NA	0.013 U	NA
Total BTEX		NA	NA	NA	NA	NA	ND	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.73 U	0.75 U	0.71 U	0.71 U	0.36 U	0.42 U	0.094 J
Acenaphthylene	41.0	0.73 U	0.12 J	0.26 J	0.32 J	0.1 J	0.25 J	0.11 J
Anthracene	50.0	0.3 J	0.24 J	0.29 J	0.41 J	0.12 J	0.12 J	0.42 J
Benzo[g,h,i]perylene	50.0	2.7 J	4.5	9.4	5.3	1.8	1 B	3.1
Fluoranthene	50.0	3.3	2.8	3.4	3.9	1.6	0.92	5
Fluorene	50.0	0.15 J	0.75 U	0.13 J	0.12 J	0.062 J	0.048 J	0.19 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.73 U	0.75 U	0.25 J	0.14 J	0.095 J	0.12 J	0.095 J
Phenanthrene	50.0	2.6	1.5	2.1	2	0.91	0.59	2.5
Pyrene	50.0	6 J	6.1	8	7.5	2.7	1.3 B	5.7
Total PAHs (Non-carc.)		15.05	15.3	24	20	7.4	4	17
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**1.5 J**	**1.8**	**3**	**3**	**0.92**	**0.61**	**2.5**
Benzo[a]pyrene	0.061	**2 J**	**2.1**	**2.5**	**2.7**	**0.99**	**0.92 B**	**2.7**
Benzo[b]fluoranthene	1.1	**1.9 J**	**1.9**	**5.6**	**3**	**1.1**	**1.3**	**2.8**
Benzo[k]fluoranthene	1.1	**1.5 J**	**2.5**	**5.3**	**3.2**	**1.1**	0.46	**2.2**
Chrysene	0.4	**2.3 J**	**3.1**	**5.3**	**4.1**	**1.5**	**0.89**	**3**
Dibenz[a,h]anthracene	0.014	**0.76 J**	**1.1**	**2.4**	**1.4**	**0.49**	**0.24 J**	**1**
Indeno[1,2,3-cd]pyrene	3.2	1.9 J	**3.2**	**6.5**	**3.5**	1.3	0.96 B	2.5
otal PAHs (Carcinogenic)		12	15.7	31	21	7.4	5.4	17
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS35B 07/14/97	SS36 07/14/97	SS37 07/14/97	SS38 07/14/97	SS39 07/14/97	SS4 05/13/97	SS4A 07/14/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	7910	10800	6690	7690	8980	10500	6620
Antimony	NS	1.8 R	1.8 R	1.9 BN	1.7 R	1.7 R	2.1 B	1.7 R
Arsenic	7.5	**13.6**	**9.2**	**20.3 N**	**24.2 N**	**11.5 N**	**13.4**	2.3
Barium	300	67.5	88.5	130	97.2	73.3	92.5	46.9
Beryllium	0.16	**0.44 B**	**0.6 B**	**0.41 B**	**0.44 B**	**0.49 B**	**0.53 B**	**0.44 B**
Cadmium	1	**1 B**	0.86 B	**1.1 B**	**1.1**	0.84 B	0.16 U	0.29 B
Calcium	NS	5110 *	4240 *	2680 *	3600 *	2540 *	4070	3190 *
chromium	10	**12.2**	**17.1**	**22.5**	**13.9**	**12.8**	**22.7 ***	8.3
Cobalt	30	6.1 B	6.4 B	6.3 B	7.2 B	8 B	9.2 B	5.4 B
Copper	25	**52.1**	**37.6**	**86.1**	**97.5**	**49.7**	**49.4**	17.3
Iron	2000	**23800**	**24500**	**35300**	**28800**	**25400**	**30600 ***	**13100**
Lead	500	146	108	213	149	99.9	93.2	49.8
Magnesium	NS	4600	3630	2490 *	2820 *	2950 *	3910	2530
Manganese	NS	308 N	425 N	285 *	329 *	440 *	478 *	293 N
Mercury	0.1	**1.2**	**2.3**	**1.3 ***	**5.3 ***	**2.2 ***	0.9 *	**0.2**
Nickel	13	**16.7**	**27.9**	**33.6**	**21.9**	**16.3**	**19.8**	10.1
Potassium	NS	750 B	1080 B	934 B	859 B	956 B	1090 B	530 B
Selenium	2	0.67 U	0.68 U	1.6	0.65 U	0.65 U	1.9	0.64 U
Silver	NS	0.45 U	0.45 U	0.44 U	0.43 U	0.43 U	0.28 U	0.43 U
Sodium	NS	119 B	261 B	111 U	109 U	110 U	158 B	108 U
Thallium	NS	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	2.3 U	1.3 U
Vanadium	150	26.6	26.7	34.3	28.7	24.6	24.9	17.3
Zinc	20	**268 E**	**126 E**	**150 E**	**181 E**	**116 E**	**216**	**48 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS41 07/15/97	SS42 07/15/97	SS43 07/15/97	SS44 07/15/97	SS46 07/15/97	SS49 07/15/97	SS5 05/13/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	NA	NA	0.011 U
Toluene	1.5	NA	NA	NA	NA	NA	NA	0.011 U
Xylene, Total	1.2	NA	NA	NA	NA	NA	NA	0.011 U
Total BTEX		NA	NA	NA	NA	NA	NA	ND
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.039 J	1.7 U	0.04 J	0.077 J	0.34 U	8.8 U	35 J
Acenaphthylene	41.0	0.45	1.1 J	0.18 J	0.09 J	0.34 U	16	**77**
Anthracene	50.0	0.14 J	0.45 J	0.15 J	0.18 J	0.064 J	3.6 J	**520 D**
Benzo[g,h,i]perylene	50.0	3.3	5.3	1.8	1.4	0.34	**84**	**230 B**
Fluoranthene	50.0	2.5	8	3	4	0.99	34	**940 D**
Fluorene	50.0	0.11 J	0.34 J	0.12 J	0.14 J	0.05 J	8.8 U	**92**
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.16 J	0.25 J	0.071 J	0.074 J	0.34 U	3.6 J	**19 J**
Phenanthrene	50.0	1.2	4.1	1.9	2	0.64	12	**790 D**
Pyrene	50.0	4.4	14	4.4	3.1	1.1	**110**	**1200 DB**
Total PAHs (Non-carc.)		12.3	34	12	11	2.9	281	3903
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**1.4**	**4.8**	**1.5**	**1.5**	**0.5**	**44**	**520 D**
Benzo[a]pyrene	0.061	**3.4**	**5.9**	**2**	**1.5**	**0.49**	**87**	**460 DB**
Benzo[b]fluoranthene	1.1	**2.7**	**5.2**	**2.1**	**1.4**	0.45	**58**	**450 D**
Benzo[k]fluoranthene	1.1	**2.9**	**5.1**	**1.8**	**1.5**	0.51	**74**	**120**
Chrysene	0.4	**2.3**	**6.7**	**2.4**	**2.1**	**0.58**	**63**	**530 D**
Dibenz[a,h]anthracene	0.014	**1**	**1.6 J**	**0.57**	**0.42**	**0.14 J**	**24**	**58**
Indeno[1,2,3-cd]pyrene	3.2	2.6	**4.2**	1.5	1.2	0.3 J	**60**	**240 B**
otal PAHs (Carcinogenic)		16	33.5	12	9.6	3.0	410	2378
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS41 07/15/97	SS42 07/15/97	SS43 07/15/97	SS44 07/15/97	SS46 07/15/97	SS49 07/15/97	SS5 05/13/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	10400	5260	8380	7960	5640	7510	7270
Antimony	NS	1.8 R	1.7 R	1.7 R	1.6 R	1.6 R	1.7 R	3.6 B
Arsenic	7.5	5.5	6.3	4.8	5.7	2.7	**21.9**	**37.8**
Barium	300	90.7	92.9	68.9	99.5	45.3	114	134
Beryllium	0.16	**0.63 B**	**0.36 B**	**0.47 B**	**0.53 B**	**0.97 B**	**0.46 B**	**0.36 B**
Cadmium	1	0.67 B	0.58 B	0.4 B	0.53 B	0.49 B	0.77 B	0.42 B
Calcium	NS	2260	5450	1180	1380	5320	2090	3520
chromium	10	**15.6**	7.9	**12.5**	**11.2**	**16.5**	**15.3**	**19.9 ***
Cobalt	30	9 B	5.1 B	7 B	7.3 B	7.1 B	6.4 B	8.9 B
Copper	25	**27.6**	**34.1**	20.3	22.4	**53.6**	**29.5**	**118**
Iron	2000	**24200**	**16500**	**18000**	**14600**	**21900**	**26500**	**44100 ***
Lead	500	147	188	106	83.5	63.6	463	309
Magnesium	NS	3400	3740	2800	2090	4350	2570	3130
Manganese	NS	492	262	428	526	272	365	358 *
Mercury	0.1	**0.24**	**2.5**	**0.35**	**0.19**	0.06 B	**0.29**	**3.1 ***
Nickel	13	**19.5**	10.8	**14.4**	13.6	**21.8**	**15.5**	**34.6**
Potassium	NS	1050 B	590 B	700 B	457 B	647 B	809 B	1120 B
Selenium	2	0.67 UN	0.64 UN	0.65 UN	0.62 UN	0.62 UN	0.64 UN	**4.7**
Silver	NS	0.44 U	0.43 U	0.43 U	0.41 U	0.41 U	0.43 U	0.54 B
Sodium	NS	112 U	108 U	109 U	104 U	149 B	107 U	226 B
Thallium	NS	1.3 U	1.3 U	1.3 U	1.2 U	1.2 U	1.3 U	2 U
Vanadium	150	23.9	17.8	20.1	24.7	15	22.7	37.5
Zinc	20	**150 E**	**139 E**	**88.8 E**	**130 E**	**325 E**	**154 E**	**337**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS5A 07/15/97	SS50 07/15/97	SS51 07/14/97	SS52 07/14/97	SS53 07/14/97	SS54 07/14/97	SS55 07/14/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	NA	NA	NA
Toluene	1.5	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1.2	NA	NA	NA	NA	NA	NA	NA
Total BTEX		NA	NA	NA	NA	NA	NA	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.35 U	0.36 U	0.71 U	0.12 J	0.038 J	0.66 U	0.33 U
Acenaphthylene	41.0	0.35 U	0.05 J	1.9	0.19 J	0.2 J	0.23 J	0.13 J
Anthracene	50.0	0.35 U	0.038 J	0.44 J	0.27 J	0.2 J	0.23 J	0.15 J
Benzo[g,h,i]perylene	50.0	0.2 J	0.7	7.9 D	3.1	4.8	7.3	1.3
Fluoranthene	50.0	0.45	1.1	3.1	5.1	2.3	3.6	1.4
Fluorene	50.0	0.35 U	0.36 U	0.31 J	0.12 J	0.11 J	0.14 J	0.065 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.35 U	0.055 J	0.7 J	0.09 J	0.098 J	0.15 J	0.33 U
Phenanthrene	50.0	0.18 J	0.52	1.2	2	1.4	2.1	0.73
Pyrene	50.0	0.37	1.4	10	5.8	3.9	8.5	2.3
Total PAHs (Non-carc.)		1.2	3.9	26	17	13.0	22.3	6.1
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**0.14 J**	**0.41**	**3.8**	**2.3**	**1.9**	**2.9**	**0.84**
Benzo[a]pyrene	0.061	**0.17 J**	**0.63**	**9.9**	**3**	**1.6**	**2.3**	**0.91**
Benzo[b]fluoranthene	1.1	0.21 J	0.62	**7**	**2.8**	**1.6**	**4.2**	0.66
Benzo[k]fluoranthene	1.1	0.18 J	0.67	**7.5**	**3**	**2.8**	**4.6**	0.99
Chrysene	0.4	0.22 J	**0.63**	**5.3**	**3.3**	**3**	**5.1**	**1.1**
Dibenz[a,h]anthracene	0.014	**0.35 U**	**0.19 J**	**3.7**	**1.1**	**1.2**	**1.8**	**0.34**
Indeno[1,2,3-cd]pyrene	3.2	0.13 J	0.56	**10**	2.7	**3.2**	**4.8**	1
Total PAHs (Carcinogenic)		1.40	3.71	47	18	15	25.7	6
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS5A 07/15/97	SS50 07/15/97	SS51 07/14/97	SS52 07/14/97	SS53 07/14/97	SS54 07/14/97	SS55 07/14/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	7910	7740	8990	8430	7640	6480	8400
Antimony	NS	1.7 R	1.7 R	1.7 R	1.7 R	1.7 R	1.7 R	1.7 R
Arsenic	7.5	2.6	3.5	7.1	5 N	**10.3 N**	**18.1 N**	3.7 N
Barium	300	60.2	35.3 B	82.2	44.3	75.7	95.7	41.3 B
Beryllium	0.16	**0.41 B**	**0.39 B**	**0.54 B**	**0.43 B**	**0.44 B**	**0.39 B**	**0.4 B**
Cadmium	1	0.3 B	0.28 B	0.44 B	0.45 B	0.73 B	0.96 B	0.29 B
Calcium	NS	1070	1120	2610	1170 *	2630 *	2330 *	925 B*
chromium	10	9.9	**10.7**	**10.7**	**10.8**	**13**	**17.2**	**12.6**
Cobalt	30	6.2 B	7 B	6.7 B	7.2 B	5.8 B	7 B	6.6 B
Copper	25	14.2	17.9	24.3	**25.2**	37.3	**77.8**	17.2
Iron	2000	**12800**	**18000**	**18300**	**18400**	**22300**	**31200**	**17000**
Lead	500	15.9	31.3	119	50.3	85.6	171	23.4
Magnesium	NS	1980	2820	2920	2760 *	2990 *	2520 *	2590 *
Manganese	NS	382	417	467	471 *	800 *	292 *	394 *
Mercury	0.1	0.06 B	**0.1 B**	**0.19**	**0.21 ***	**0.76 ***	**0.74 ***	0.09 B*
Nickel	13	10.3	**14.8**	**14.5**	**14.3**	**22.3**	**24.9**	**13.4**
Potassium	NS	644 B	780 B	660 B	869 B	707 B	821 B	657 B
Selenium	2	0.63 U	0.65 UN	0.88 BN	0.62 U	0.63 U	0.85 B	0.62 U
Silver	NS	0.42 U	0.43 U	0.43 U	0.41 U	0.42 U	0.42 U	0.41 U
Sodium	NS	105 U	109 U	108 U	105 U	105 U	106 U	105 U
Thallium	NS	1.3 U	1.3 U	1.3 U	1.2 U	1.3 U	1.3 U	1.2 U
Vanadium	150	19	17	19.9	19.3	21.1	26.7	15.7
Zinc	20	**30.9 E**	**53.2 E**	**81.8 E**	**66.6 E**	**98.1 E**	**160 E**	**50.2 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS56 07/14/97	SS57 07/14/97	SS58 07/14/97	SS59 07/15/97	SS6 05/14/97	SS6A 07/15/97	SS60 07/15/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	0.011 U	NA	NA
Toluene	1.5	NA	NA	NA	NA	0.011 U	NA	NA
Xylene, Total	1.2	NA	NA	NA	NA	0.011 U	NA	NA
Total BTEX		NA	NA	NA	NA	ND	NA	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.34 U	0.057 J	0.34 U	0.35 U	0.58 J	0.6 J	0.27 J
Acenaphthylene	41.0	0.34 U	0.039 J	0.097 J	0.099 J	5.7	0.44 J	2.3
Anthracene	50.0	0.34 U	0.2 J	0.083 J	0.14 J	4	2.6	1.7 J
Benzo[g,h,i]perylene	50.0	0.29 J	0.92	0.96	1.1	8.5 B	17	9.8
Fluoranthene	50.0	1.2	2	1.1	1.7	46 D	33 D	20
Fluorene	50.0	0.34 U	0.064 J	0.038 J	0.084 J	2.8	1.7	1.6 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.34 U	0.35 U	0.34 U	0.089 J	0.51 J	0.22 J	0.29 J
Phenanthrene	50.0	0.4	0.94	0.52	1.4	**50 D**	20	22
Pyrene	50.0	1	2	1.3	3.4	**67 DB**	44 D	33 D
Total PAHs (Non-carc.)		3	6	3.6	8.0	185	120	91
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**0.34**	**0.96**	**0.56**	**1**	**23 D**	**14**	**12**
Benzo[a]pyrene	0.061	**0.4**	**1.1**	**0.77**	**1.2**	**24 DB**	**16**	**14**
Benzo[b]fluoranthene	1.1	0.49	0.81	0.61	0.99	**34 D**	**12**	**11**
Benzo[k]fluoranthene	1.1	0.35	1	0.81	**1.3**	**6.9**	**16**	**15**
Chrysene	0.4	**0.56**	**1.3**	**0.82**	**1.4**	**37 D**	**18**	**19**
Dibenz[a,h]anthracene	0.014	**0.34 U**	**0.32 J**	**0.27 J**	**0.35**	**4.3**	**5.8**	**3.3**
Indeno[1,2,3-cd]pyrene	3.2	0.24 J	0.86	0.74	0.9	**14 B**	**14**	**8.7**
otal PAHs (Carcinogenic)		2.7	6	4.58	7	143	96	83
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS56 07/14/97	SS57 07/14/97	SS58 07/14/97	SS59 07/15/97	SS6 05/14/97	SS6A 07/15/97	SS60 07/15/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	6970	6590	8280	7600	10800	6360	9530
Antimony	NS	1.7 R	1.7 R	1.7 R	1.7 R	1.3 B	1.7 R	1.8 R
Arsenic	7.5	3.3 N	2.5 N	2.9 N	3.8	6.6	7.3	**10.3**
Barium	300	33.3 B	39.5 B	51.7	48.4	73.9	37.5 B	242
Beryllium	0.16	**0.38 B**	**0.37 B**	**0.43 B**	**0.41 B**	**0.47 B**	**0.27 B**	**0.54 B**
Cadmium	1	0.31 B	**2**	0.51 B	0.33 B	0.15 U	0.56 B	0.56 B
Calcium	NS	1010 B*	2410 *	1120 *	1360	1060 B	18400	4180
chromium	10	**10.7**	8.2	9.9	**10.6**	**17 ***	7.3	**36**
Cobalt	30	6.3 B	5.6 B	5.9 B	6.4 B	7.9 B	8.4 B	6.5 B
Copper	25	15.5	18.6	16.1	18.2	21	**55**	21.8
Iron	2000	**16200**	**14500**	**15900**	**17900**	**19400 ***	**18700**	**18700**
Lead	500	23.8	53.4	32.3	51.1	174	94.5	**582**
Magnesium	NS	2430 *	3140 *	2200 *	2410	2940	11600	2640
Manganese	NS	469 *	364 *	416 *	466	548 *	195	561
Mercury	0.1	0.09 B*	**0.1 ***	**0.11 B***	0.09 B	**0.1 B**	**0.26**	**0.18**
Nickel	13	12.5	10.9	12	**13.4**	**14.9**	11.6	**14.4**
Potassium	NS	564 B	584 B	552 B	629 B	790 B	755 B	819 B
Selenium	2	0.63 U	0.63 U	0.64 U	0.64 UN	1.3	0.62 U	0.66 UN
Silver	NS	0.42 U	0.42 U	0.43 U	0.43 U	0.25 U	0.41 U	0.44 U
Sodium	NS	105 U	105 U	108 U	108 U	65.6 B	104 U	111 U
Thallium	NS	1.3 U	1.3 U	1.3 U	1.3 U	2 U	1.2 U	1.3 U
Vanadium	150	14.3	13.1	17.2	17.5	23.3	25.6	22.8
Zinc	20	**48.4 E**	**47.8 E**	**49.3 E**	**56 E**	**70.8**	**79.2 E**	**129 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS64 07/15/97	SS65 07/15/97	SS66 07/15/97	SS67 07/15/97	SS68 07/15/97	SS7 05/14/97	SS7A 07/15/97
BTEX by NYSASP Method 95-1 (mg/kg)								
Benzene	0.06	NA	NA	NA	NA	NA	0.013 U	NA
Toluene	1.5	NA	NA	NA	NA	NA	0.013 U	NA
Xylene, Total	1.2	NA	NA	NA	NA	NA	0.013 U	NA
Total BTEX		NA	NA	NA	NA	NA	ND	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Acenaphthene	50.0	0.33 U	0.29 J	0.15 J	0.092 J	0.13 J	0.13 J	0.31 J
Acenaphthylene	41.0	0.2 J	1.6	0.55	0.31 J	0.35 J	0.31 J	0.13 J
Anthracene	50.0	0.11 J	1.3	0.55	0.23 J	0.41	0.29 J	0.9
Benzo[g,h,i]perylene	50.0	2.4	7.6 D	6.5 D	3.4	4.3	1.4 B	6.6
Fluoranthene	50.0	2.8	16 D	9.7 D	4	4.9	2	16 D
Fluorene	50.0	0.11 J	0.99	0.43	0.29 J	0.22 J	0.19 J	0.57 J
Methylnaphthalene,2-	36.4							
Naphthalene	13.0	0.051 J	0.29 J	0.26 J	0.075 J	0.17 J	0.088 J	0.69 U
Phenanthrene	50.0	1.5	14 D	5.9 D	3.5	3.1	1.6	7.2
Pyrene	50.0	4.9 D	36 D	10 D	5.9 D	6.7 D	2.4 B	18 D
Total PAHs (Non-carc.)		12.4	78.1	34	18	20.3	8	50
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)								
Benz[a]anthracene	0.224	**2**	**10**	**4.4**	**2.4**	**3.3**	**1.2**	**5.7**
Benzo[a]pyrene	0.061	**2.4**	**11**	**5**	**2.6**	**3.9**	**1.4 B**	**6.4**
Benzo[b]fluoranthene	1.1	**2.3**	**11**	**5.2**	**2.5**	**3.7**	**1.9**	**4.7**
Benzo[k]fluoranthene	1.1	**2.1**	**10**	**5**	**3.2**	**3.5**	0.75	**7.2**
Chrysene	0.4	**2.9**	**15 D**	**6.8 D**	**4**	**4.4**	**1.4**	**6.9**
Dibenz[a,h]anthracene	0.014	**0.74**	**4.5**	**2.1**	**1**	**1.5**	**0.37 J**	**2.2**
Indeno[1,2,3-cd]pyrene	3.2	1.7	**11**	**5**	2.6	**3.5**	1.3 B	**5.6**
otal PAHs (Carcinogenic)		14	58	34	18	23.8	8.3	38.7
Other SVOCs by NYSASP Method 95-2 (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs								
PCBs	NS	NA	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue						
		SS64 07/15/97	SS65 07/15/97	SS66 07/15/97	SS67 07/15/97	SS68 07/15/97	SS7 05/14/97	SS7A 07/15/97
Pesticides by NYSASP Method Pesticides								
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)								
Aluminum	NS	8390	9790	9350	8220	7960	12800	9910
Antimony	NS	1.7 R	1.8 R	1.7 R	1.6 R	1.8 R	1.6 B	1.7 R
Arsenic	7.5	4.9	7	4.7	5.8	5.2	**10.8**	4.5
Barium	300	68.8	89.9	92.9	94.9	70.1	192	57.9
Beryllium	0.16	**0.51 B**	**0.5 B**	**0.48 B**	**0.28 B**	**0.44 B**	**1 B**	**0.44 B**
Cadmium	1	0.28 B	0.58 B	0.52 B	0.34 B	**1.3**	0.38 B	0.5 B
Calcium	NS	1680	2820	1180	436 B	5270	3650	2710
chromium	10	9.5	**21.4**	**18.7**	**23**	**10.3**	**16.9 ***	**10.6**
Cobalt	30	7.4 B	6.9 B	7.1 B	4.1 B	7.3 B	10.5 B	7.7 B
Copper	25	19.9	**28.9**	22	15.3	**36.5**	**59.6**	29.7
Iron	2000	**14600**	**21300**	**19500**	**22700**	**17400**	**16500 ***	**18000**
Lead	500	106	413	214	372	164	**726**	81.8
Magnesium	NS	2580	2440	2590	2240	3550	3000	3320
Manganese	NS	330	484	510	166	495	382 N*	485
Mercury	0.1	**0.17**	**0.2**	**0.15**	**0.13**	**0.26**	**0.15 N***	**0.16**
Nickel	13	10.9	**17**	**15.9**	9.6	**15.1**	**22.5**	**13.8**
Potassium	NS	655 B	564 B	726 B	701 B	804 B	1250 B	778 B
Selenium	2	0.62 UN	0.67 UN	0.63 UN	0.62 UN	0.71 BN	1.7	0.86 B
Silver	NS	0.41 U	0.44 U	0.42 U	0.41 U	0.44 U	0.33 B	0.43 U
Sodium	NS	123 B	112 U	107 U	104 U	111 U	464 B	132 B
Thallium	NS	1.2 U	1.3 U	1.3 U	1.2 U	1.3 U	2.4 U	1.3 U
Vanadium	150	14.8	32.4	25.4	29.2	24.4	42.4	23.9
Zinc	20	**114 E**	**117 E**	**85.7 E**	**60.3 E**	**147 E**	**272**	**78.1 E**
Cyanides by CLP Methods (mg/kg)								
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)								
Residue, Total	NS	NA	NA	NA	NA	NA	NA	NA

Source: GEI Consultants, Inc. 2006

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS70 07/14/97	SS71 07/14/97	SS8 05/14/97	SS8A 07/15/97	SS9 05/14/97	SS9A 07/15/97
BTEX by NYSASP Method 95-1 (mg/kg)							
Benzene	0.06	NA	NA	0.011 U	NA	0.011 U	NA
Toluene	1.5	NA	NA	0.011 U	NA	0.011 U	NA
Xylene, Total	1.2	NA	NA	0.011 U	NA	0.011 U	NA
Total BTEX		NA	NA	ND	NA	ND	NA
Other VOCs by NYSASP Method 95-1 (mg/kg)							
Acetone	0.2	NA	NA	NA	NA	NA	NA
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)							
Acenaphthene	50.0	0.061 J	0.037 J	0.07 J	0.65 J	0.71 U	0.45 J
Acenaphthylene	41.0	0.065 J	0.2 J	0.12 J	0.33 J	1.3	0.16 J
Anthracene	50.0	0.2 J	0.21 J	0.23 J	1.8	0.35 J	1.8
Benzo[g,h,i]perylene	50.0	3.2	2.7	0.63 B	16	3.2 B	12
Fluoranthene	50.0	1.2	2.3	2.3	36 D	0.99	33 D
Fluorene	50.0	0.049 J	0.097 J	0.16 J	1.4 J	0.11 J	1.9
Methylnaphthalene,2-	36.4						
Naphthalene	13.0	0.08 J	0.087 J	0.066 J	1.8 U	0.2 J	0.21 J
Phenanthrene	50.0	0.82	1.4	1.5	20	0.31 J	22 D
Pyrene	50.0	1.9	4.2	2.7 B	39 D	2.2 B	34 D
Total PAHs (Non-carc.)		7.6	0.1	7.8	115	8.7	106
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)							
Benz[a]anthracene	0.224	**1.2**	**1.6**	**1.2**	**13**	**1.3**	**10**
Benzo[a]pyrene	0.061	**2.1**	**1.8**	**1.4 B**	**15**	**2 B**	**11**
Benzo[b]fluoranthene	1.1	**1.5**	**1.2**	**2.1**	**15**	**3.9**	**9.7**
Benzo[k]fluoranthene	1.1	**1.5**	**2**	0.79	**11**	**1.7**	**9.6**
Chrysene	0.4	**1.6**	**2.2**	**1.5**	**17**	**1.8**	**12**
Dibenz[a,h]anthracene	0.014	**1**	**0.68**	**0.33 J**	**4.9**	**0.87**	**3.5**
Indeno[1,2,3-cd]pyrene	3.2	2.4	1.8	1.3 B	**13**	3.1 B	**10**
otal PAHs (Carcinogenic)		11	11	6.5	89	15	66
Other SVOCs by NYSASP Method 95-2 (mg/kg)							
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50.0	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA
Dibenzofuran	6.2	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8.1	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50.0	NA	NA	NA	NA	NA	NA
PCBs by NYSASP Method PCBs							
PCBs	NS	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected Clove and Maple Avenue SS70 07/14/97	SS71 07/14/97	SS8 05/14/97	SS8A 07/15/97	SS9 05/14/97	SS9A 07/15/97
Pesticides by NYSASP Method Pesticides							
DDT,4,4'-	NS	NA	NA	NA	NA	NA	NA
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)							
Aluminum	NS	5090	7420	9330	8600	9980	7140
Antimony	NS	1.7 R	1.7 R	1.2 B	1.7 R	1.1 B	1.8 R
Arsenic	7.5	**13.7 N**	4 N	4.1	4.3	4	2.6
Barium	300	65.3	63.1	78.1	60.2	39.1 B	54.5
Beryllium	0.16	**0.55 B**	**0.5 B**	**0.35 B**	**0.45 B**	**0.36 B**	**0.38 B**
Cadmium	1	0.51 B	0.49 B	0.3 B	0.62 B	0.14 U	0.63 B
Calcium	NS	2360 *	1600 *	1890	2480	859 B	3220
chromium	10	6.5	9.2	**12.2** *	9.5	**11.9** *	9.6
Cobalt	30	6.9 B	5.4 B	6.3 B	6.1 B	7.3 B	5.5 B
Copper	25	34.1	21.5	**29.9**	**26.3**	19.1	24.5
Iron	2000	**11200**	**14300**	**15500** *	**15800**	**19100** *	**13100**
Lead	500	171	73.7	75.8	109	23.5	92.4
Magnesium	NS	3960 *	1800 *	2950	3010	3120	2170
Manganese	NS	331 *	370 *	526 N*	268	443 N*	282
Mercury	0.1	**0.17** *	**0.15** *	**0.2 N***	**0.14**	0.036 B	0.43
Nickel	13	**23.6**	**13.3**	**14.3**	**13.3**	**15.6**	12.7
Potassium	NS	469 B	435 B	1060 B	683 B	1110	779 B
Selenium	2	0.64 U	0.64 U	0.87 B	0.64 U	1 B	0.69 U
Silver	NS	0.42 U	0.43 U	0.25 U	0.43 U	0.24 U	0.46 U
Sodium	NS	107 U	108 U	103 B	146 B	80.4 B	116 U
Thallium	NS	1.3 U	1.3 U	2 U	1.3 U	1.9 U	1.4 U
Vanadium	150	15.2	18.1	19.5	18.7	17.9	17.7
Zinc	20	**138 E**	**68.7 E**	**133**	**103 E**	**52.3**	**123 E**
Cyanides by CLP Methods (mg/kg)							
Cyanide, Total	1600 (a)	NA	NA	NA	NA	NA	NA
Geochemical Analyses by Various Methods (mg/kg)							
Residue, Total	NS	NA	NA	NA	NA	NA	NA

Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected 146 Maple Avenue CM146SS1 5/18/2000	CM146SS2 5/18/2000	CM146SS3 5/18/2000	CM146SS4 5/18/2000	CM146SS5 5/18/2000
BTEX by NYSASP Method 95-1 (mg/kg)						
Benzene	0.06	0.013 U	0.016 U	0.016 U	0.012 U	0.013 U
Toluene	1.5	0.013 U	0.016 U	0.016 U	0.012 U	0.013 U
Xylene, Total	1.2	0.013 U	0.016 U	0.016 U	0.012 U	0.013 U
Total BTEX		ND	ND	ND	ND	ND
Other VOCs by NYSASP Method 95-1 (mg/kg)						
Acetone	0.2	0.004 J	0.006 J	0.008 J	0.003 J	0.012 J
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)						
Acenaphthene	50.0	0.06 J	0.052 J	0.55 U	0.41 U	0.047 J
Acenaphthylene	41.0	0.44 U	0.52 U	0.55 U	0.41 U	0.44 U
Anthracene	50.0	0.14 J	0.11 J	0.12 J	0.067 J	0.09 J
Benzo[g,h,i]perylene	50.0	0.49	0.39 J	0.38 J	0.21 J	0.3 J
Fluoranthene	50.0	1.9	1.9	2.2	1.3	1.7
Fluorene	50.0	0.073 J	0.082 J	0.086 J	0.051 J	0.07 J
Methylnaphthalene,2-	36.4	0.44 U	0.074 J	0.55 U	0.41 U	0.44 U
Naphthalene	13.0	0.059 J	0.4 J	0.55 U	0.41 U	0.44 U
Phenanthrene	50.0	0.93	1.1	1.2	0.75	0.97
Pyrene	50.0	1.9	1.8	1.9	1.2	1.8
Total PAHs (Non-carc.)		5.6	5.9	5.9	3.6	5.0
PAHS (Carcinogenic) by NYSASP Method 95-2 (mg/kg)						
Benz[a]anthracene	0.224	**0.94**	**0.71**	**0.73**	**0.44**	**0.62**
Benzo[a]pyrene	0.061	**1.10**	**0.87**	**0.90**	**0.54**	**0.72**
Benzo[b]fluoranthene	1.1	**1.30**	**1.20**	**1.30**	0.72	1.20
Benzo[k]fluoranthene	1.1	0.50	0.37 J	0.4 J	0.32 J	0.39 J
Chrysene	0.4	**1.00**	**0.86**	**0.88**	**0.53**	**0.75**
Dibenz[a,h]anthracene	0.014	**0.14 J**	**0.1 J**	**0.11 J**	**0.062 J**	**0.085 J**
Indeno[1,2,3-cd]pyrene	3.2	0.44	0.4 J	0.4 J	0.23 J	0.31 J
otal PAHs (Carcinogenic)		5.42	4.5	4.7	2.84	4.08
Other SVOCs by NYSASP Method 95-2 (mg/kg)						
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50.0	0.24 J	0.41 J	0.45 J	0.25 J	0.59
Butyl benzyl phthalate	50.0	0.44 U	0.52 U	0.55 U	0.41 U	0.066 J
Carbazole	NS	0.11 J	0.13 J	0.15 J	0.089 J	0.11 J
Dibenzofuran	6.2	0.44 U	0.52 U	0.55 U	0.41 U	0.44 U
Di-n-butyl phthalate	8.1	0.44 U	0.52 U	0.55 U	0.41 U	0.44 U
Di-n-octyl phthalate	50.0	0.44 U	0.52 U	0.55 U	0.41 U	0.44 U
PCBs by NYSASP Method PCBs						
PCBs	NS	ND	ND	ND	ND	ND

Source: GEI Consultants, Inc. 2006

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Table 3
Surface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Soil Cleanup Objectives	Sample ID / Date Collected 146 Maple Avenue CM146SS1 5/18/2000	CM146SS2 5/18/2000	CM146SS3 5/18/2000	CM146SS4 5/18/2000	CM146SS5 5/18/2000
Pesticides by NYSASP Method Pesticides						
DDT,4,4'-	NS	0.004 J	0.0052 U	0.0055 U	0.0041 U	0.0044 U
Metals Analysis by NYSASP Methods 6010/7471/7740 (mg/kg)						
Aluminum	NS	7980	4270	6400	7270	5910
Antimony	NS	0.91 UN	1.1 UN	1.1 UN	0.83 UN	0.9 UN
Arsenic	7.5	4	2.1 B	3.7	3.7	2.8
Barium	300	50 B	47.9 B	59.1 B	31.7 B	58.1
Beryllium	0.16	**0.43 B**	**0.22 B**	**0.31 B**	**0.31 B**	**0.27 B**
Cadmium	1	0.9 B	0.55 B	0.49 B	0.31 B	0.44 B
Calcium	NS	2830 *	3360 *	2960 *	775 B*	4010 *
chromium	10	**10.7**	6.8	**10.3**	9.9	**10.9**
Cobalt	30	7.5 B	4.9 B	6.5 B	4.7 B	5.3 B
Copper	25	**25.9**	22.5	24.4	15	21.8
Iron	2000	**14600**	**8630**	**13200**	**11500**	**10000**
Lead	500	54.6	62.8	65.6	47	61.5
Magnesium	NS	3200 *	1780 *	2460 *	2120 *	1990 *
Manganese	NS	459	463	489	246	469
Mercury	0.1	**0.18**	**0.37**	**0.37**	**0.14**	**0.54**
Nickel	13	**18.9**	**16.1**	**19.7**	10.8	**17.7**
Potassium	NS	1020 B	877 B	1190 B	539 B	591 B
Selenium	2	1 U	0.5 UW	0.53 UW	0.39 UW	0.42 UW
Silver	NS	1.2 BN	0.5 UN	0.71 BN	0.39 UN	0.42 UN
Sodium	NS	106 B	106 B	118 B	66 B	86.6 B
Thallium	NS	1.2 B	1.8 B	0.76 U	0.56 U	0.61 U
Vanadium	150	23.3	18.7	31.7	23.9	24.8
Zinc	20	**104**	**68.4**	**74.4**	**38.9**	**74.2**
Cyanides by CLP Methods (mg/kg)						
Cyanide, Total	1600 (a)	1.3 U	1.6 U	1.6 U	1.2 U	1.3 U
Geochemical Analyses by Various Methods (mg/kg)						
Residue, Total	NS	74.9	63.8	60.8	82.2	75.9

Notes:

(a) - EPA Region III RBC criteria for residential exposures
U - Analyte not detected
B - Analyte detected in associated blank
* - Duplicate analysis outside control limits
W - Post digest spike recovery furnace outside 85-115% control limit, while sample absorbance less than 50% of spike absorb
E - Exceeds calibration range
J - Estimated value
D - Dilution result
NA - Not available
NS - No standard
ND - Not Detected

Table 4
Sample Location Rationale
Clove and Maple Former MGP Site
Haverstraw, New York

Sample Type and Designation	Sample Analysis	Sample Depth	Rationale
Former Tar Well Location			
Soil Borings			
SG9	Field Characterization	0 to 12 feet bgs	To further delineate hydrocarbon product of former tar well location.
SG10	Field Characterization	0 to 12 feet bgs	To further delineate hydrocarbon product of former tar well location.
SB5/MW5	MGP Indicators	18 to 20 feet bgs	Shallow soil boring for monitoring well installation of former tar well.
Test Pit			
TP1	Field Characterization	0 to 12 feet bgs	To further delineate MGP residuals and to further investigate the location, if any, of subsurface structures.
Monitoring Well			
MW5	MGP Indicators	Water Table Groundwater Sample	To test groundwater downgradient of former tar well location.
Iron Oil Tank			
Soil Borings			
SG11	Field Characterization	0 to 12 feet bgs	To further delineate MGP residuals found in soil and groundwater downgradient of Iron Oil tank location.
SG12	Field Characterization	0 to 12 feet bgs	To further delineate MGP residuals found in soil and groundwater downgradient of iron oil tank location.
SB6/MW6	MGP Indicators	5 to 5.5 feet bgs 16.5 to 17 feet bgs	Shallow soil boring to further delineate MGP residuals downgradient of iron oil tank location.
SB7/MW7	Field Characterization		Deep boring for monitoring well installation, to document groundwater quality within till.
Test Pit			
TP2	MGP Indicators	12 to 13 feet bgs	To evaluate potential impacts near the former oil tank.
TP3	Field Characterization	0 to 12 feet bgs	To evaluate potential impacts near the former oil tank.
Monitoring Wells			
MW6	MGP Indicators	Water Table Groundwater Sample	To sample groundwater quality downgradient of the iron oil tank location.
MW7	MGP Indicators	Deep Aquifer Groundwater Sample	To determine the depths of groundwater impacts downgradient of the iron oil tank.
Former Gas Holder Location			
Soil Borings			
SG13	Field Characterization	0 to 12 feet bgs	To investigate soil and groundwater quality downgradient of the gas holder foundation

Source: GEI Consultants, Inc. 2006

Table 4
Sample Location Rationale
Clove and Maple Former MGP Site
Haverstraw, New York

Sample Type and Designation	Sample Analysis	Sample Depth	Rationale
			requested by NYSDEC [NYSDEC Comments, 1997c, pg.4]
SG14	Field Characterization	0 to 12 feet bgs	To investigate soil and groundwater quality downgradient of the gas holder foundation requested by NYSDEC [NYSDEC Comments, 1997c, pg.4]
SB4/MW4	MGP Indicators	16 to 18 feet bgs	Soil boring for monitoring well installation to further investigate impacts downgradient of MW3.
SB14	MGP Indicators	8 to 10 feet bgs and 22 to 24 feet bgs	To evaluate potential release from holder. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
SB16	MGP Indicators	18 feet bgs and 30 feet bgs	To define extent of MGP residue between the holder and the tar well along the till surface. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
SB18	MGP Indicators	11.5 feet bgs and 31 feet bgs	To determine if MGP residue are present at the northern corner of the holder. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
Monitoring Well			
MW4	MGP Indicators - Groundwater	Water Table Groundwater Sample	To determine if MGP residuals have impacted downgradient groundwater in the vicinity of the former gas holder requested by NYSDEC [NYSDEC, 1997c, pg.3]
MW18	MGP Indicators	Water Table Groundwater Sample	To determine if MGP residuals have impacted groundwater at northern corner of the holder. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
Regulator Station			
SB17	MGP Indicators	4 feet bgs, 12 feet bgs, and 14 feet bgs	To further delineate MGP residuals adjacent to the regulator station. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
SB17A	MGP Indicators	28 feet bgs	To further delineate MGP residuals adjacent to the regulator station. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
Monitoring Wells - South Property Boundary			
SB8/MW8	MGP Indicators - Soil and Groundwater	Water Table Groundwater Sample; Soil	To determine if impacted groundwater is present at site property boundary. Scope of work added by O&R.

Source: GEI Consultants, Inc. 2006

Table 4
Sample Location Rationale
Clove and Maple Former MGP Site
Haverstraw, New York

Sample Type and Designation	Sample Analysis	Sample Depth	Rationale
		Samples - 10 to 12 feet bgs and 14 to 16 feet bgs	
SB9/MW9	MGP Indicators - Soil and Groundwater	Water Table Groundwater Sample; Soil Samples - 8 to 10 feet bgs and 12 to 14 feet bgs	To determine if impacted groundwater is present at site property boundary. Scope of work added by O&R.
SB10/MW10	MGP Indicators - Soil and Groundwater	Water Table Groundwater Sample; Soil Samples 22 to 24 feet bgs and 36 to 36 feet bgs	To determine if impacted groundwater is present at site property boundary. Scope of work added by O&R.
Boring and Monitoring Wells - Adjacent Property (Head Start Parcel)			
SB11/MW11	MGP Indicators - Soil and Groundwater	Water Table Groundwater Sample; Soil Samples - 12 to 14 feet bgs and 20 to 22 feet bgs	To determine if MGP residues are present in adjacent property requested by NYSDEC, 1998, p. 2. Comments on the Remedial Investigation Work Plan for Suffern, Middletown (Fulton and Canal Streets) and Haverstraw MGP Sites.
SB12	MGP Indicators - Soil	Water Table and Most Impacted Soil Sample	To determine if MGP residues are present in adjacent property requested by NYSDEC, 1998, p. 2. Comments on the Remedial Investigation Work Plan for Suffern, Middletown (Fulton and Canal Streets) and Haverstraw MGP Sites.
SB13	MGP Indicators - Soil	Water Table and Most Impacted Soil Sample	To determine if MGP residues are present in adjacent property requested by NYSDEC, 1998, p. 2. Comments on the Remedial Investigation Work Plan for Suffern, Middletown (Fulton and Canal Streets) and Haverstraw MGP Sites.
SB22	MGP Indicators	12 feet bgs and 20 feet bgs	To determine the extent of MGP residues across the southern property line. Comments on the Supplemental Remedial Investigation Work Plan, April 5, 2001.
SB23	MGP Indicators	22 feet bgs	To determine the extent of MGP residues across the southern property line. Comments on the Supplemental Remedial Investigation Work Plan, April 5, 2001.

Table 4
Sample Location Rationale
Clove and Maple Former MGP Site
Haverstraw, New York

Sample Type and Designation	Sample Analysis	Sample Depth	Rationale
SB/MW24	MGP Indicators	18 feet bgs	Refine groundwater flow direction relative to Head Start Building, determine if MGP residuals exist atop hill. Comments on the Supplemental Remedial Investigation Work Plan, April 5, 2001.
Boring and Monitoring Well – Adjacent Property (Apartments Parcel)			
MW20	MGP Indicators	10 feet bgs and 25.5 feet bgs	Evaluate downgradient and down-till slope extent of MGP residuals across Maple Avenue. Comments on the Supplemental Remedial Investigation Work Plan, April 5, 2001.
MW21	MGP Indicators	8 to 10 feet bgs and 20 to 22 feet bgs	Evaluate downgradient and down-till slope extent of MGP residuals across Maple Avenue. Comments on the Supplemental Remedial Investigation Work Plan, April 5, 2001.
MW28	MGP Indicators	8 to 10 feet bgs and 30 feet bgs	Borings to evaluate potential historic MGP residuals to former pond, advance to till interface, aid in evaluation of groundwater flow direction, and groundwater quality downgradient. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
MW29	MGP Indicators	29 feet bgs	Borings to evaluate potential historic MGP residuals to former pond, advance to till interface, aid in evaluation of groundwater flow direction, and groundwater quality downgradient. Comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
SB-45	MGP Indicators	10 to 11 feet bgs 11 to 12 feet bgs 24 to 25 feet bgs 27 to 28 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB-46	MGP Indicators e	10 to 11 feet bgs 14 to 15 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB-48	MGP Indicators	14 to 15 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB-49	MGP Indicators	7 to 8 feet bgs 13.5 to 14.5 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-20S/D	MGP Indicators	11.5 to 12 feet bgs 13 to 15 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-21 and	MGP Indicators	8 to 9 feet bgs	To delineate MGP-related impacts extending

Source: GEI Consultants, Inc. 2006

Table 4
Sample Location Rationale
Clove and Maple Former MGP Site
Haverstraw, New York

Sample Type and Designation	Sample Analysis	Sample Depth	Rationale
21S			from the Clove and Maple site
SB/MW-28S/D	MGP Indicators	ND	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-29S/D	MGP Indicators	10 to 11 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-30S	MGP Indicators	6.5 to 7 feet bgs 15 to 16 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-31S/D	MGP Indicators	8 to 10 feet bgs 33 to 34 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-32S/I	MGP Indicators	10 to 11 feet bgs 34 to 36 feet bgs	To delineate MGP-related impacts extending from the Clove and Maple site
SB/MW-55	MGP Indicators	10 to 12 feet bgs	To further delineate MGP-related impacts at the apartment complex.
SB-56	MGP Indicators	14 to 16 feet bgs	To further delineate MGP-related impacts at the apartment complex.
SB-57	MGP Indicators	7 to 8 feet bgs	To further delineate MGP-related impacts at the apartment complex.
SB-58	MGP Indicators	8 to 9 feet bgs 16 to 18 feet bgs	To further delineate MGP-related impacts at the apartment complex.
SB-59	MGP Indicators	15.5 to 16 feet bgs 18 to 19 feet bgs	To further delineate MGP-related impacts at the apartment complex.
SB/MW-60	MGP Indicators	8 to 9 feet bgs 13 to 14 feet bgs	To further delineate MGP-related impacts at the apartment complex.
Existing Monitoring Wells			
MW1 to MW3	MGP Indicators	Water Table Groundwater Samples	Resample existing monitoring wells for MGP indicators to confirm PSA results.
Stormwater/Sediment Samples			
SED-03/SW-03 SW013102-1	MGP Indicators	NA	Sediment and surface water samples collected upgradient of the site within storm sewer system - requested by NYSDEC [NYSDEC, 1997, pg. 3] and comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.
SED-01/SW-01 SED-02/SW-02 SD013102-2 SD013102-3 SD013102-4 SW013102-5	MGP Indicators	NA	Sediment and stormwater samples and duplicates collected downgradient of the site within storm sewer system - requested by NYSDEC [NYSDEC, 1997, pg. 3] and comments on Supplemental Remedial Investigation Work Plan, April 5, 2001.

Table 4
Sample Location Rationale
Clove and Maple Former MGP Site
Haverstraw, New York

Sample Type and Designation	Sample Analysis	Sample Depth	Rationale
SD013102-6 SW013102-6 SW0UT01300-1			
Garage			
TP4	Field Characterization	0 to 12 feet bgs	Test pit excavation to investigate environmental condition in vicinity of the former garage. Scope of work added by O&R.
High Pressure Holder			
TP5	Field Characterization	0 to 12 feet bgs	Test pit excavation to investigate environmental condition in vicinity of the former aboveground high pressure holder. Scope of work added by O&R.

Notes:

MGP Indicators include: VOCs by 95-1, PAHs by 95-2, total cyanide by CLP-M, TAL metals by CLP-M and weak acid dissociable cyanide by 4500 CNI.

Field Characterization includes: visual characterization- Unified Soil Classification System, visual and olfactory observations regarding the presence of MGP impacts and jar headspace screening with a photoionization detector.

BTEX-Benzene, Toluene, Ethylbenzene, and Xylene by NYSASP CLP Method 95-1.
PAHs-Polycyclic Aromatic Hydrocarbons by NYSASP CLP Method 95-2.
bgs-below grade surface
ND-no data

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW01	MW02	MW03	MW04	MW05	MW06	MW06	MW08	MW08	MW09
Depth Interval in feet:		20 - 22	12 - 14	10 - 12	16 - 18	18 - 20	5 - 5.5	16.5 - 17	10 - 12	14 - 16	8 - 10
Sample ID:	NYS	SB1 (20-22)	SB2 (12-14)	SB3 (10-12)	CMSB04(16-18)	CMSB05(18-20)	CMSB06A	CMSB06B	CMSB08A	CMSB08B	CMSB09A
Date Collected:	RSCO	5/14/1997	5/15/1997	5/15/1997	12/15/1998	12/15/1998	3/2/1999	3/2/1999	12/11/1998	12/11/1998	12/10/1998
BTEX (mg/kg)											
Benzene	0.06	0.011 U	4.7	62 D	0.056	0.054 U	0.85 D	0.011 U	NA	0.021	0.055 U
Toluene	1.5	0.011 U	1.7	140 D	0.081	0.054 U	0.016	0.011 U	NA	0.013 UJ	0.006 J
Ethylbenzene	5.5	0.011 U	26	65 D	0.093	0.054 U	0.056	0.011 U	NA	0.013 UJ	0.21
Xylene, Total	1.2	0.011 U	62	360 D	0.58	0.054 U	0.11	0.011 U	NA	0.013 UJ	0.28
Total BTEX	NS	ND	94.4	627	0.81	ND	1.032	ND	NA	0.021	0.496
Other VOCs (mg/kg)											
Acetone	0.2	NA	NA	NA	0.035 J	0.032 J	0.013 U	0.011 U	NA	0.013 U	0.055 U
Bromodichloromethane	NS	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 U	0.055 U
Bromoform	NS	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 U	0.055 U
Chlorobenzene	1.7	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 UJ	0.055 U
Chloroform	0.3	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 U	0.055 U
Dichloroethane,1,2-	0.1	NA	NA	NA	0.056 U	0.054 U	0.016	0.011 U	NA	0.013 U	0.055 U
Methylene chloride	0.1	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 U	0.055 U
Styrene	NS	NA	NA	NA	0.2	0.054 U	0.013 U	0.011 U	NA	0.013 UJ	0.055 U
Tetrachloroethene	1.4	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 UJ	0.055 U
Trichloroethene	0.7	NA	NA	NA	0.056 U	0.054 U	0.013 U	0.011 U	NA	0.013 U	0.055 U
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)											
Acenaphthene	50	0.35 U	55	12	0.37 U	0.37 U	0.44 U	0.38 U	0.55	0.42 U	29 DB
Acenaphthylene	41	0.35 U	38	23	0.044 J	0.081 J	0.44 U	0.38 U	0.35 J	0.42 U	1.4
Anthracene	50	0.35 U	66	58 J D	0.37 U	0.05 J	0.44 U	0.38 U	1.7	0.42 U	16 D
Benzo[g,h,i]perylene	50	0.35 U	12 B	8.2 B	0.37 U	0.37 U	0.44 U	0.38 U	0.49	0.42 U	0.97
Fluoranthene	50	0.11 J	66	88 J D	0.042 J	0.098 J	0.44 U	0.38 U	2.8	0.42 U	19 DB
Fluorene	50	0.35 U	84	83 J D	0.045 J	0.055 J	0.44 U	0.38 U	2.5	0.42 U	23 D
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	NA	NA	NA	0.062 J	0.097 J	0.44 U	0.38 U	19 D	0.42 U	36 DB
Naphthalene	13	0.35 U	560 D	580 D	0.31 J	0.13 J	0.26 J	0.38 U	30 EJ	0.42 U	24 JBE
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	0.042 J	330 D	220 D	0.15 J	0.23 J	0.44 U	0.38 U	6.5 EJ	0.42 U	58 DB
Pyrene	50	0.13 J B	140 DB	120 DB	0.067 J	0.16 J	0.44 U	0.38 U	3.7 EJ	0.42 U	29 DB
Carcinogenic PAHs (mg/kg)											
Benz[a]anthracene	0.224	0.051 J	37	30	0.37 U	0.045 J	0.44 U	0.38 U	1.4	0.42 U	8 DJ
Benzo[a]pyrene	0.061	0.07 J B	30 B	28 B	0.37 U	0.043 J	0.44 U	0.38 U	1.3	0.42 U	5.5 DJ
Benzo[b]fluoranthene	1.1	0.12 J	22	22	0.37 U	0.039 J	0.44 U	0.38 U	0.99	0.42 U	4.3 DJ
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	0.048 J	9.3 J	7.6	0.37 U	0.37 U	0.44 U	0.38 U	0.25 J	0.42 U	1.1
Chrysene	0.4	0.08 J	34	28	0.37 U	0.044 J	0.44 U	0.38 U	1.4	0.42 U	6.9 DJ

Source: GEI Consultants, Inc. 2006

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW01	MW02	MW03	MW04	MW05	MW06	MW06	MW08	MW08	MW09
Depth Interval in feet:		20 - 22	12 - 14	10 - 12	16 - 18	18 - 20	5 - 5.5	16.5 - 17	10 - 12	14 - 16	8 - 10
Sample ID:	NYS	SB1 (20-22)	SB2 (12-14)	SB3 (10-12)	CMSB04(16-18)	CMSB05(18-20)	CMSB06A	CMSB06B	CMSB08A	CMSB08B	CMSB09A
Date Collected:	RSCO	5/14/1997	5/15/1997	5/15/1997	12/15/1998	12/15/1998	3/2/1999	3/2/1999	12/11/1998	12/11/1998	12/10/1998
Dibenz[a,h]anthracene	0.014	0.35 U	3.7 J	3.9 J	0.37 U	0.37 U	0.44 U	0.38 U	0.14 J	0.42 U	0.36 J
Indeno[1,2,3-cd]pyrene	3.2	0.066 J B	12 B	14 B	0.37 U	0.37 U	0.44 U	0.38 U	0.5	0.42 U	1.1
Total PAHs (mg/kg)											
Total PAHs	NS	0.717	1499	1325.7	0.72	1.072	0.26	ND	73.57	ND	263.63
Other SVOCs (mg/kg)											
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	NA	NA	NA	0.37 U	0.37 U	NA	NA	0.43 U	0.42 U	0.37 U
Carbazole	NS	NA	NA	NA	0.37 U	0.37 U	NA	NA	0.16 J	0.42 U	0.37 U
Dibenzofuran	6.2	NA	NA	NA	0.37 U	0.37 U	NA	NA	0.6	0.42 U	1.8
Metals (mg/Kg)											
Aluminum	NS	NA	NA	NA	3620	4440	13100	6660	18100 EJ	13700 EJ	7580 EJ
Antimony	NS	NA	NA	NA	0.6 UBN	0.5 UN	0.6 U	0.6 UB	0.8 U	1.4 B	0.4 U
Arsenic	7.5	NA	NA	NA	1.9 UB	2.1 UB	6.3 UJ	4.9 U	9.2	6	3.5
Barium	300	NA	NA	NA	41 B	59.9	89.8	69.4	145 EJ	107 EJ	84 EJ
Beryllium	0.16	NA	NA	NA	0.2 B	0.2 B	0.8 B	0.3 B	0.8 B	0.7 B	0.4 B
Cadmium	1	NA	NA	NA	0.2 B	0.3 B	0.9 BJ	0.5 UB	0.9 B	0.7 B	0.6 B
Calcium	NS	NA	NA	NA	990 B*	11300 *	20700	14600	8220 EJ	14600 EJ	1160 EJ
Chromium	10	NA	NA	NA	4.8	5.9	19.9	13.3	27.2 EJ	19.1 EJ	9.6 EJ
Cobalt	30	NA	NA	NA	3.8 JBE	4.1 JBE	13.2	7.3 B	17 JBE	12.8 JBE	5.9 JBE
Copper	25	NA	NA	NA	7.9	9.4	29	15	33.2 EJ	25.3 EJ	15.8 EJ
Iron	2000	NA	NA	NA	8380	10100	27000	14900	34800 EJ	26800 EJ	15800 EJ
Lead	500	NA	NA	NA	2.4	3.8	13.6 J	6.9	14.4	11.4	4.6
Magnesium	NS	NA	NA	NA	1860	3320	10300	4890	8970 EJ	9140 EJ	2830 EJ
Manganese	NS	NA	NA	NA	173	218	588	344	759 EJ	485 EJ	170 EJ
Mercury	0.1	NA	NA	NA	0.11 UN	0.1 UN	0.1 U	0.1 U	0.1 UN	0.1 U	0.1 U
Nickel	13	NA	NA	NA	6 B	7.8 B	24.8 B	13.2	32.2 EJ	25.3 EJ	11.1 EJ
Potassium	NS	NA	NA	NA	847 JBE	1290 J	2070	1150	3460	3060	1710 *
Selenium	2	NA	NA	NA	0.74 U	0.72 U	2.1 UJW	0.4 UJW	0.8 U	0.8 UJW	0.7 U
Silver	NS	NA	NA	NA	0.4 UB	0.5 UBJ	1.1 UB	0.7 UB	1.9 UB	1.4 UB	0.9 UB
Sodium	NS	NA	NA	NA	485 B	514 B	682 UB	606 UB	630 B	690 B	416 B
Thallium	NS	NA	NA	NA	1.2 B	0.2 U	0.3 U	2.1 UB	0.8 U	0.8 U	0.3 U
Vanadium	150	NA	NA	NA	7.1 B	9 B	21.8	12.9	30.5 EJ	22.2 JBE	14.1 EJ
Zinc	20	NA	NA	NA	24.6	26.1	69.3 EJ	37.9 EJ	93.5 EJ	66.4 EJ	71.3 EJ
Total Cyanide (mg/Kg)											
Cyanide, Total	1600 (a)	0.27 U	0.32 U	0.31 U	1.1 U	1.1 U	1.3 UJN	1.1 UJN	1.3 U	1.3 U	1.1 U

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW09	MW10	MW10	MW11	MW11	SB14	SB14	SB14 (DUP)
Depth Interval in feet:		12 - 14	22 - 24	36 - 38	12 - 14	20 - 22	10 - 10	22 - 22	22 - 22
Sample ID:	NYS	CMSB09B	CMSB10(22-24)	CMSB10(36-38)	CMSB11(12-14)	CMSB11(20-22)	HA-SB14-10	HA-SB14-22	HA-SB44-22
Date Collected:	RSCO	12/10/1998	12/16/1998	12/17/1998	12/17/1998	12/18/1998	6/19/2001	6/19/2001	6/19/2001
BTEX (mg/kg)									
Benzene	0.06	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	**15**	0.011 U	**0.016**
Toluene	1.5	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	**47**	0.011 U	**0.011 J**
Ethylbenzene	5.5	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	**12**	0.011 U	**0.002 J**
Xylene, Total	1.2	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	**67**	0.011 U	**0.011 J**
Total BTEX	NS	ND	ND	ND	ND	ND	**141**	ND	**0.04**
Other VOCs (mg/kg)									
Acetone	0.2	0.011 U	**0.004 J**	**0.002 J**	**0.004 J**	**0.006 J**	2.3 UJ	0.011 U	0.012 U
Bromodichloromethane	NS	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	0.012 U
Bromoform	NS	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	0.012 U
Chlorobenzene	1.7	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	0.012 U
Chloroform	0.3	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	0.012 U
Dichloroethane,1,2-	0.1	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	0.012 U
Methylene chloride	0.1	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	0.02 U
Styrene	NS	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	**10**	0.011 U	0.012 U
Tetrachloroethene	1.4	0.011 U	**0.002 J**	**0.001 J**	0.013 U	0.011 U	2.3 U	0.011 U	0.012 U
Trichloroethene	0.7	0.011 U	0.011 U	0.012 U	0.013 U	0.011 U	2.3 U	0.011 U	**0.003 J**
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)									
Acenaphthene	50	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	**3.7 J**	0.36 U	0.4 U
Acenaphthylene	41	**0.071 J**	0.37 U	0.39 U	0.44 U	0.38 U	**20 J**	**0.016 J**	**0.008 J**
Anthracene	50	**0.094 J**	0.37 U	0.39 U	0.44 U	0.38 U	**18 J**	**0.028 J**	**0.025 J**
Benzo[g,h,i]perylene	50	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	**4.8 J**	**0.014 J**	**0.012 J**
Fluoranthene	50	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	**22 J**	**0.051 J**	**0.036 J**
Fluorene	50	**0.12 J**	0.37 U	0.39 U	0.44 U	0.38 U	**20 J**	**0.016 J**	**0.009 J**
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	**68**	**0.02 J**	**0.01 J**
Naphthalene	13	0.37 U	**0.037 J**	0.39 U	**0.054 J**	**0.041 J**	**190**	**0.042 J**	**0.022 J**
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	0.44 U	0.37 U	0.39 U	**0.064 J**	0.38 U	**70**	**0.1 J**	**0.072 J**
Pyrene	50	0.37 U	0.37 U	0.39 U	**0.051 J**	0.38 U	**30 J**	**0.067 J**	**0.065 J**
Carcinogenic PAHs (mg/kg)									
Benz[a]anthracene	0.224	**0.069 J**	0.37 U	0.39 U	0.44 U	0.38 U	**9.8 J**	**0.023 J**	**0.019 J**
Benzo[a]pyrene	0.061	**0.058 J**	0.37 U	0.39 U	0.44 U	0.38 U	**8 J**	**0.02 J**	**0.015 J**
Benzo[b]fluoranthene	1.1	**0.039 J**	0.37 U	0.39 U	0.44 U	0.38 U	**3.7 J**	**0.01 J**	**0.008 J**
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	**6.5 J**	**0.013 J**	**0.011 J**
Chrysene	0.4	**0.06 J**	0.37 U	0.39 U	0.44 U	0.38 U	**9.6 J**	**0.023 J**	**0.019 J**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW09	MW10	MW10	MW11	MW11	SB14	SB14	SB14 (DUP)
Depth Interval in feet:		12 - 14	22 - 24	36 - 38	12 - 14	20 - 22	10 - 10	22 - 22	22 - 22
Sample ID:	NYS	CMSB09B	CMSB10(22-24)	CMSB10(36-38)	CMSB11(12-14)	CMSB11(20-22)	HA-SB14-10	HA-SB14-22	HA-SB44-22
Date Collected:	RSCO	12/10/1998	12/16/1998	12/17/1998	12/17/1998	12/18/1998	6/19/2001	6/19/2001	6/19/2001
Dibenz[a,h]anthracene	0.014	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	1.4 J	0.36 U	0.4 U
Indeno[1,2,3-cd]pyrene	3.2	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	3.7 J	0.01 J	0.008 J
Total PAHs (mg/kg)									
Total PAHs	NS	0.511	0.037	ND	0.169	0.041	489.2	0.453	0.339
Other SVOCs (mg/kg)									
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	43 U	0.36 U	0.4 U
Carbazole	NS	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	43 U	0.36 U	0.4 U
Dibenzofuran	6.2	0.37 U	0.37 U	0.39 U	0.44 U	0.38 U	2.9 J	0.36 U	0.4 U
Metals (mg/Kg)									
Aluminum	NS	5540 EJ	4810	4390	16900	5810	16200	4980	4680
Antimony	NS	0.4 U	0.4 UN	0.4 UN	0.9 UN	0.9 UBN	1.0 UJ	0.89 UJ	0.99 UJ
Arsenic	7.5	3.3	2.2 UB	1 UB	8.9	1.3 UB	6.2	2.4	2.3
Barium	300	53.7 EJ	71.9	61.2	136	79.2	160.	75.8	86.4
Beryllium	0.16	0.3 B	0.2 B	0.3 B	0.8 B	0.4 B	0.97	0.10 U	0.11 U
Cadmium	1	0.4 B	0.3 B	0.2 B	0.9 B	0.2 B	0.68 J	0.18 U	0.20 U
Calcium	NS	1250 EJ	1220 *	18800 *	11700 *	37500 *	2520	1690	2160
Chromium	10	7 EJ	6.8	4.8	23.5	6.8	21.6	7.4	9.7
Cobalt	30	6.4 JBE	4.5 JBE	4.2 JBE	17.4 JBE	4.9 JBE	13.0	4.1	4.9
Copper	25	11.8 EJ	10.3	4.5 B	32	6.6	30.9	11.0	13.2
Iron	2000	11200 EJ	11700	5610	32900	7470	33100	12700	12400
Lead	500	3.7	4.2	3.6	15.4	5.1	14.7	2.8	2.8
Magnesium	NS	2680 EJ	2220	3360	8890	6940	7140	2930	2830
Manganese	NS	283 EJ	270	252	780	369	691.	206.	238.
Mercury	0.1	0.1 U	0.11 UN	0.11 UN	0.12 UN	0.11 UN	0.0061	0.0029	0.0037
Nickel	13	13 EJ	8.1 B	9 B	31.7	11.6	30.9	8.7	11.1
Potassium	NS	1200	1380 EJ	1560 EJ	3590 EJ	2430 EJ	3070	1220	1110
Selenium	2	0.7 U	0.74 U	0.78 UJW	0.88 UJW	0.75 UJW	1.1 U	0.99 U	1.1 U
Silver	NS	0.8 UB	0.6 UBJ	0.6 UBJ	1.2 UBJ	1.1 UBJ	0.23 U	0.20 U	0.22 U
Sodium	NS	390 B	444 B	711 B	624 B	775 B	4.5 UJ	4.0 U	4.4 U
Thallium	NS	1.3 UB	0.3 U	0.4 UB	0.8 U	0.3 U	2.1 UJ	1.8 U	2.0 U
Vanadium	150	10.6 JBE	11.4	8.1 B	27	11.2 B	25.3	12.7	13.0
Zinc	20	71 EJ	33.7	24.8	81.3	27.4	74.1	32.7	27.5
Total Cyanide (mg/Kg)									
Cyanide, Total	1600 (a)	1.1 U	1.1 U	1.2 U	1.3 U	1.1 U	.6 U	.56 U	.64 U

Source: GEI Consultants, Inc. 2006

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SG15	SG15	SG16	SG16	SB16	SB16	SB16	SB17
Depth Interval in feet:		8 - 8.5	19 - 20	12 - 13	23.5 - 24	18 - 18	30 - 30	36 - 36	4 - 4
Sample ID:	NYS	CMSG15(8-8.5)	CMSG15(19-20)	CMSG16(12-13)	CMSG16(23.5-24)	HA-SB16-18	HA-SB16-30	HA-SB16-36	HA-SB17-4
Date Collected:	RSCO	10/21/1998	10/21/1998	10/21/1998	10/21/1998	6/20/2001	6/20/2001	6/20/2001	6/18/2001
BTEX (mg/kg)									
Benzene	0.06	0.011 U	0.011 U	0.011 U	0.011 U	**5.5 J**	0.038 U	0.009 U	**1.3 J**
Toluene	1.5	0.011 U	0.011 U	0.011 U	0.011 U	**59**	**0.051**	0.009 U	**3**
Ethylbenzene	5.5	0.011 U	0.011 U	0.011 U	0.011 U	**15**	**0.014 J**	0.009 U	**29**
Xylene, Total	1.2	0.011 U	0.011 U	0.011 U	0.011 U	**110**	**0.1**	0.009 U	**35**
Total BTEX	NS	ND	ND	ND	ND	**189.5**	**0.165**	ND	**68.3**
Other VOCs (mg/kg)									
Acetone	0.2	0.011 UJ	0.011 U	0.011 U	0.011 UJ	5.7 UJ	**0.045 J**	**0.008 J**	2.2 UJ
Bromodichloromethane	NS	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	**0.087 J**
Bromoform	NS	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	**0.1 J**
Chlorobenzene	1.7	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	**0.16 J**
Chloroform	0.3	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	2.2 U
Dichloroethane,1,2-	0.1	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	2.2 U
Methylene chloride	0.1	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.043 U	0.022 U	2.2 U
Styrene	NS	0.011 U	0.011 U	0.011 U	0.011 U	**38**	**0.045**	0.009 U	**0.71 J**
Tetrachloroethene	1.4	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	2.2 U
Trichloroethene	0.7	0.011 U	0.011 U	0.011 U	0.011 U	6 U	0.038 U	0.009 U	2.2 U
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)									
Acenaphthene	50	0.38 U	0.37 U	0.38 U	0.37 U	**1.6 J**	**0.61 J**	0.36 UJ	**47**
Acenaphthylene	41	0.38 U	0.37 U	0.38 U	**0.055 J**	**11**	**3.9**	0.36 UJ	**16 J**
Anthracene	50	0.38 U	0.37 U	0.38 U	**0.047 J**	**8.2**	**2.9**	0.36 UJ	**24 J**
Benzo[g,h,i]perylene	50	0.38 U	0.37 U	0.38 U	**0.1 J**	**12 J**	**1.5 J**	0.36 UJ	**15 J**
Fluoranthene	50	0.38 U	0.37 U	0.38 U	**0.63**	**13**	**4.1**	0.36 UJ	**42**
Fluorene	50	0.38 U	0.37 U	0.38 U	0.37 U	**6.5 J**	**2.7**	0.36 UJ	**27 J**
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	**0.043 J**	0.37 U	0.38 U	**0.1 J**	**27**	**7.4**	0.36 UJ	**110**
Naphthalene	13	0.38 U	0.37 U	0.38 U	0.37 U	**53**	**9.4**	0.36 UJ	**210**
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	**0.06 J**	0.37 U	0.38 U	**0.66**	**25**	**9.9**	0.36 UJ	**81**
Pyrene	50	**0.043 J**	0.37 U	0.38 U	**1.6**	**21**	**6.6**	0.36 UJ	**64**
Carcinogenic PAHs (mg/kg)									
Benz[a]anthracene	0.224	0.38 U	0.37 U	0.38 U	**0.37**	**10**	**2.4**	0.36 UJ	**21 J**
Benzo[a]pyrene	0.061	0.38 U	0.37 U	0.38 U	**0.093 J**	**12**	**2**	0.36 UJ	**23 J**
Benzo[b]fluoranthene	1.1	0.38 U	0.37 U	0.38 U	**0.29 J**	**5.8 J**	**0.9 J**	0.36 UJ	**11 J**
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	0.38 U	0.37 U	0.38 U	**0.084 J**	**8.6**	**1.3 J**	0.36 UJ	**18 J**
Chrysene	0.4	0.38 U	0.37 U	0.38 U	**0.47**	**11**	**2.3**	0.36 UJ	**23 J**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SG15	SG15	SG16	SG16	SB16	SB16	SB16	SB17
Depth Interval in feet:		8 - 8.5	19 - 20	12 - 13	23.5 - 24	18 - 18	30 - 30	36 - 36	4 - 4
Sample ID:	NYS	CMSG15(8-8.5)	CMSG15(19-20)	CMSG16(12-13)	CMSG16(23.5-24)	HA-SB16-18	HA-SB16-30	HA-SB16-36	HA-SB17-4
Date Collected:	RSCO	10/21/1998	10/21/1998	10/21/1998	10/21/1998	6/20/2001	6/20/2001	6/20/2001	6/18/2001
Dibenz[a,h]anthracene	0.014	0.38 U	0.37 U	0.38 U	0.37 U	2 J	0.28 J	0.36 UJ	3.5 J
Indeno[1,2,3-cd]pyrene	3.2	0.38 U	0.37 U	0.38 U	0.1 J	7.9 J	1 J	0.36 UJ	11 J
Total PAHs (mg/kg)									
Total PAHs	NS	0.146	ND	ND	4.599	235.6	59.19	ND	746.5
Other SVOCs (mg/kg)									
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	NA	NA	NA	NA	7.6 U	3.8 U	0.36 UJ	38 U
Carbazole	NS	NA	NA	NA	NA	0.26 J	0.11 J	0.36 UJ	0.63 J
Dibenzofuran	6.2	NA	NA	NA	NA	1 J	0.4 J	0.36 UJ	3.7 J
Metals (mg/Kg)									
Aluminum	NS	8040 J	4930 J	5740 J	5470 J	3990	3720	4420	12200
Antimony	NS	R	R	R	R	0.96 UJ	0.86 UJ	0.74 UJ	0.98 UJ
Arsenic	7.5	4.9	1.6 UB	2.7	1.1 UB	1.3 J	0.98 J	0.90 J	7.6
Barium	300	55.9 EJ	88.6 EJ	67.9 EJ	119 EJ	40.2	59.2	47.9	93.2
Beryllium	0.16	0.4 UB	0.4 UB	0.3 UB	0.3 UB	0.11 U	0.098 U	0.084 U	0.70
Cadmium	1	0.6 B	0.4 B	0.5 B	0.3 B	0.20 U	0.18 U	0.18 J	0.54 J
Calcium	NS	1310 EJ*	20800 EJ*	1190 EJ*	19000 EJ	6500	3900	17300	1380
Chromium	10	10.1	7.3	7.3	6.2	6.6	5.2	7.2	15.7
Cobalt	30	6.1 JBE	6.2 JBE	6.2 JBE	4.5 JBE	3.3	3.9	3.9	8.5
Copper	25	17.6	6.9	13.1	5 B	7.3	9.1	4.7	21.2
Iron	2000	15600 EJ	7210 EJ	12700 EJ	6830 EJ	9270	9620	9710	23000
Lead	500	6.8	4.4	4.9	4	3.4	2.9	4.9	39.9
Magnesium	NS	3730 EJ	3650 EJ	2880 EJ	4380 EJ	2750	2410	3250	4000
Manganese	NS	256 EJ	352 EJ	358 EJ	292 EJ	232.	188.	339.	257.
Mercury	0.1	0.11 U	0.11 U	0.11 U	0.11 U	0.0039	0.0037	0.0034 U	0.20
Nickel	13	14.5 EJ	11.7 EJ	11 EJ	10.2 EJ	7.8	7.6	10.1	17.7
Potassium	NS	1210	1700	1030 B	1780	854.	881.	1400	1630
Selenium	2	0.75 UJW	0.74 UJW	0.75 UJW	0.74 UJW	1.1 U	0.96 U	0.82 U	1.1 U
Silver	NS	0.6 UB	0.6 UB	0.7 UB	0.6 UB	0.22 U	0.20 U	0.17 U	0.22 U
Sodium	NS	544 B	579 B	480 B	696 B	4.3 U	3.9 U	3.3 U	4.4 UJ
Thallium	NS	1.4 UB	1.3 UB	0.9 UB	0.6 UB	2.0 U	1.8 U	1.5 U	2.0 UJ
Vanadium	150	14.1	14.1	11 B	10.2 B	7.9	8.4	10.6	21.6
Zinc	20	57	24.7	41.1	25.1	21.7	20.4	21.6	140.
Total Cyanide (mg/Kg)									
Cyanide, Total	1600 (a)	1.1 U	1.1 U	1.1 U	1.1 U	.61 U	.55 U	.52 U	.59 U

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MPG Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB17	SB17	SB17A	SB18	SB18	SB/MW-20S	SB/MW-20S	MW-20D
Depth Interval in feet:		12 - 12	14 - 14	28 - 28	11.5 - 11.5	31 - 31	11.5 - 12	13 - 15	10 - 10
Sample ID:	NYS	HA-SB17-12	HA-SB17-14	HA-SB17A-28	HA-SB18-11.5	HA-SB18-31	SB/MW-20S(11.5-12)	SB/MW-20S(13-15)	MW-20-10
Date Collected:	RSCO	6/18/2001	6/18/2001	6/22/2001	6/19/2001	6/19/2001	7/2/2004	7/2/2004	11/28/2001
BTEX (mg/kg)									
Benzene	0.06	**1.2 J**	0.011 U	0.009 U	**3.4**	**0.026**	0.11 U	**0.15 J**	14 U
Toluene	1.5	**24**	0.011 U	0.009 U	**44**	**0.019 B**	0.11 U	**0.012 J**	14 U
Ethylbenzene	5.5	**39**	**0.001 J**	0.009 U	**9.9**	**0.002 J**	**0.53**	**0.025 J**	**22**
Xylene, Total	1.2	**140**	**0.002 J**	0.009 U	**80**	**0.022**	**0.27**	**0.045 J**	**15**
Total BTEX	NS	**204.2**	**0.003**	ND	**137.3**	**0.069**	**0.8**	**0.232**	**37**
Other VOCs (mg/kg)									
Acetone	0.2	5.7 UJ	**0.023 J**	0.009 U	2 UJ	0.011 U	NA	NA	14 U
Bromodichloromethane	NS	5.7 U	0.011 U	0.009 U	2 U	0.011 U	NA	NA	14 U
Bromoform	NS	5.7 U	0.011 U	0.009 U	2 U	0.011 U	NA	NA	14 U
Chlorobenzene	1.7	5.7 U	0.011 U	0.009 U	2 U	0.011 U	NA	NA	14 U
Chloroform	0.3	5.7 U	0.011 U	0.009 U	2 U	0.011 U	NA	NA	14 U
Dichloroethane,1,2-	0.1	5.7 U	0.011 U	0.009 U	2 U	0.011 U	NA	NA	14 U
Methylene chloride	0.1	5.7 U	0.018 U	0.035 U	2 U	0.036 U	NA	NA	14 U
Styrene	NS	**46**	0.011 U	0.009 U	**7.3**	**0.002 J**	NA	NA	14 U
Tetrachloroethene	1.4	5.7 U	0.011 U	0.009 U	2 U	0.011 U	NA	NA	14 U
Trichloroethene	0.7	5.7 U	**0.002 J**	**0.001 J**	2 U	0.011 U	NA	NA	14 U
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)									
Acenaphthene	50	**9.9 J**	**0.28 J**	0.39 U	**1.7 J**	0.38 U	**57**	**0.42 J**	**40**
Acenaphthylene	41	**26 J**	**0.23 J**	0.39 U	**1.6 J**	**0.012 J**	**6.5 J**	**0.084 J**	**2.4 J**
Anthracene	50	**12 J**	**0.37 J**	0.39 U	**6.3 J**	**0.043 J**	**26**	**0.18 J**	**12 J**
Benzo[g,h,i]perylene	50	**2.6 J**	**0.13 J**	0.39 UJ	**1.9 J**	**0.049 J**	**6.4 J**	0.52 UJ	20 U
Fluoranthene	50	**14 J**	**0.49**	0.39 U	**10**	**0.1 J**	**40**	**0.26 J**	**9 J**
Fluorene	50	**16 J**	**0.29 J**	0.39 U	**8.4**	**0.031 J**	**31**	**0.22 J**	**23**
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	**91**	**0.87**	0.39 U	**29**	**0.057 J**	**53**	**0.38 J**	**84**
Naphthalene	13	**150**	**0.88**	0.39 U	**52**	**0.097 J**	**49**	**0.39 J**	**130**
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	**51**	**1.4**	0.39 U	**28**	**0.2 J**	**110**	**0.65 J**	**36**
Pyrene	50	**22 J**	**0.95**	0.39 U	**15**	**0.16 J**	**59**	**0.38 J**	**16 J**
Carcinogenic PAHs (mg/kg)									
Benz[a]anthracene	0.224	**6.9 J**	**0.26 J**	0.39 U	**5 J**	**0.059 J**	**17**	**0.11 J**	**6.2 J**
Benzo[a]pyrene	0.061	**5 J**	**0.21 J**	0.39 U	**4.5 J**	**0.067 J**	**17**	**0.084 J**	**3.4 J**
Benzo[b]fluoranthene	1.1	**2.2 J**	**0.1 J**	0.39 U	**1.9 J**	**0.038 J**	**17**	**0.1 J**	**1.8 J**
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	**3.6 J**	**0.14 J**	0.39 U	**2.9 J**	**0.051 J**	14 U	0.52 UJ	**2.3 J**
Chrysene	0.4	**7.1 J**	**0.26 J**	0.39 U	**4.8 J**	**0.064 J**	**17**	**0.11 J**	**6.2 J**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MPG Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB17	SB17	SB17A	SB18	SB18	SB/MW-20S	SB/MW-20S	MW-20D
Depth Interval in feet:		12 - 12	14 - 14	28 - 28	11.5 - 11.5	31 - 31	11.5 - 12	13 - 15	10 - 10
Sample ID:	NYS	HA-SB17-12	HA-SB17-14	HA-SB17A-28	HA-SB18-11.5	HA-SB18-31	SB/MW-20S(11.5-12)	SB/MW-20S(13-15)	MW-20-10
Date Collected:	RSCO	6/18/2001	6/18/2001	6/22/2001	6/19/2001	6/19/2001	7/2/2004	7/2/2004	11/28/2001
Dibenz[a,h]anthracene	0.014	**1.2 J**	**0.035 J**	0.39 UJ	**0.44 J**	0.38 UJ	14 U	0.52 UJ	20 U
Indeno[1,2,3-cd]pyrene	3.2	**2.2 J**	**0.098 J**	0.39 UJ	**1.4 J**	**0.036 J**	**5.8 J**	0.52 UJ	**1 J**
Total PAHs (mg/kg)									
Total PAHs	NS	**422.7**	**6.993**	ND	**174.84**	**1.064**	**511.7**	**3.368**	**373.3**
Other SVOCs (mg/kg)									
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA	**7.5 J**
Bis(2-ethylhexyl)phthalate	50	38 U	0.38 U	1 U	6.9 U	0.57 U	14 U	0.52 UJ	20 U
Carbazole	NS	38 U	**0.012 J**	0.39 U	**0.2 J**	0.38 U	14 U	0.52 UJ	20 U
Dibenzofuran	6.2	**2.8 J**	**0.044 J**	0.39 U	**1 J**	0.38 U	**3.2 J**	0.52 UJ	20 U
Metals (mg/Kg)									
Aluminum	NS	**6180**	**3720**	**4260**	**6490**	**3950**	NA	NA	**15800**
Antimony	NS	0.84 UJ	0.82 UJ	0.96 UJ	0.90 UJ	0.86 UJ	NA	NA	0.98 UJ
Arsenic	7.5	**1.2 J**	**1.2 J**	**1.4 J**	**3.4**	**1.7**	NA	NA	**3.0**
Barium	300	**58.2**	**43.0**	**60.5**	**62.5**	**48.1**	NA	NA	**84.1**
Beryllium	0.16	0.095 U	0.093 U	0.11 U	0.10 U	0.098 U	NA	NA	0.11 U
Cadmium	1	**0.24 J**	0.17 U	0.20 U	0.18 U	0.18 U	NA	NA	0.17 UJ
Calcium	NS	**1420**	**1270**	**11100**	**1780**	**3110**	NA	NA	**879.**
Chromium	10	**11.2**	**6.1**	**8.1**	**9.0**	**5.8**	NA	NA	**15.2**
Cobalt	30	**4.3**	**3.2**	**3.6**	**5.8**	**4.3**	NA	NA	**6.6**
Copper	25	**11.1**	**7.1**	**9.5**	**15.8**	**9.0**	NA	NA	**11.2**
Iron	2000	**14600**	**9510**	**11500**	**15100**	**10600**	NA	NA	**23200**
Lead	500	**3.5**	**2.5**	**2.6**	**7.2**	**3.0**	NA	NA	**8.3 J**
Magnesium	NS	**2560**	**1860**	**3850**	**2640**	**2130**	NA	NA	**3960**
Manganese	NS	**380.**	**243.**	**207.**	**284.**	**152.**	NA	NA	**185. J**
Mercury	0.1	**0.0051**	0.0025 U	0.0022 U	**0.0039**	**0.0062**	NA	NA	**0.010**
Nickel	13	**9.2**	**7.2**	**8.2**	**13.2**	**7.7**	NA	NA	**16.4**
Potassium	NS	**1280**	**661.**	**935.**	**1260**	**798.**	NA	NA	**1300 J**
Selenium	2	0.93 U	0.91 U	1.1 U	1.0 U	0.96 U	NA	NA	1.0 U
Silver	NS	0.19 U	0.18 U	0.22 U	0.20 U	0.20 U	NA	NA	0.21 U
Sodium	NS	3.8 U	3.7 U	4.3 U	4.0 U	3.9 U	NA	NA	**150.**
Thallium	NS	1.7 U	1.7 U	2.0 U	1.9 U	1.8 U	NA	NA	2.1 UJ
Vanadium	150	**12.0**	**7.7**	**9.9**	**13.9**	**9.9**	NA	NA	**21.0**
Zinc	20	**30.9**	**20.6**	**24.6**	**38.2**	**21.8**	NA	NA	**50.0**
Total Cyanide (mg/Kg)									
Cyanide, Total	1600 (a)	.6 U	.53 U	.58 U	.52 UJ	.55 UJ	0.55 U	0.79 U	.58 U

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW-20D	MW-21	MW-21	SB-21S	SB22	SB22	SB23	MW-24	MW-28D
Depth Interval in feet:		25.5 - 25.5	8 - 10	20 - 22	8 - 9	12 - 12	20 - 20	22 - 22	18 - 18	8 - 10
Sample ID:	NYS	MW-20-25.5	MW-21-8-10	MW-21-20-22	SB-21S(8-9)	HA-SB22-12	HA-SB22-20	HA-SB23-22	HA-MW24-18	MW-28-8-10
Date Collected:	RSCO	11/28/2001	11/28/2001	11/28/2001	7/12/2004	6/18/2001	6/18/2001	6/21/2001	6/22/2001	11/29/2001
BTEX (mg/kg)										
Benzene	0.06	**0.001 J**	**0.005 J**	0.011 U	0.013 U	**0.034**	0.011 U	0.011 U	0.012 U	**4.3 J**
Toluene	1.5	0.012 U	**0.003 J**	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	**13 J**
Ethylbenzene	5.5	0.012 U	**0.065**	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	**94**
Xylene, Total	1.2	**0.004 J**	**0.046**	0.011 U	0.013 U	**0.002 J**	0.011 U	0.011 U	0.012 U	**160**
Total BTEX	NS	**0.005**	**0.119**	ND	ND	**0.036**	ND	ND	ND	**271.3**
Other VOCs (mg/kg)										
Acetone	0.2	0.012 UJ	0.014 UJ	0.011 UJ	**0.011 JB**	**0.045 J**	**0.039 J**	0.011 U	0.012 U	**44**
Bromodichloromethane	NS	0.012 U	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	37 U
Bromoform	NS	0.012 U	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	37 U
Chlorobenzene	1.7	0.012 U	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	37 U
Chloroform	0.3	0.012 U	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	**0.002 J**	37 U
Dichloroethane,1,2-	0.1	0.012 U	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	37 U
Methylene chloride	0.1	0.012 UJ	0.014 UJ	0.011 UJ	**0.004 JB**	0.022 U	0.028 U	0.035 U	0.031 U	**12 J**
Styrene	NS	**0.0008 J**	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	37 U
Tetrachloroethene	1.4	0.012 U	0.014 U	0.011 U	0.013 U	0.011 U	0.011 U	0.011 U	0.012 U	37 U
Trichloroethene	0.7	0.012 U	0.014 U	0.011 U	0.013 U	**0.002 J**	**0.006 J**	0.011 U	0.012 U	37 U
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)										
Acenaphthene	50	0.36 U	**0.052 J**	0.37 U	**0.25 J**	**0.016 J**	0.39 U	0.34 U	0.39 U	**390**
Acenaphthylene	41	0.36 U	**0.062 J**	0.37 U	**0.29 J**	**0.006 J**	0.39 U	0.34 U	0.39 U	**50 J**
Anthracene	50	0.36 U	**0.2 J**	0.37 U	**0.26 J**	**0.008 J**	0.39 U	0.34 U	**0.008 J**	**340**
Benzo[g,h,i]perylene	50	**0.021 J**	**0.1 J**	0.37 U	**0.13 J**	**0.089 J**	0.39 U	0.34 UJ	0.39 UJ	**71 J**
Fluoranthene	50	0.36 U	**0.29 J**	0.37 U	**0.8**	**0.016 J**	0.39 U	0.34 U	**0.021 J**	**370**
Fluorene	50	0.36 U	**0.095 J**	0.37 U	**0.49**	0.37 U	0.39 U	0.34 U	0.39 U	**360**
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	0.36 U	**0.058 J**	0.37 U	**0.062 J**	0.37 U	0.39 U	0.34 U	**0.016 J**	**820 J**
Naphthalene	13	**0.041 J**	**0.94**	**0.013 J**	**0.083 J**	**0.006 J**	0.39 U	0.34 U	**0.023 J**	**1200 J**
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	**0.013 J**	**0.63**	0.37 U	**0.52**	**0.032 J**	0.39 U	0.34 U	**0.038 J**	**940 J**
Pyrene	50	0.36 U	**0.49**	0.37 U	**1.8**	**0.037 J**	0.39 U	0.34 U	**0.02 J**	**590 J**
Carcinogenic PAHs (mg/kg)										
Benz[a]anthracene	0.224	0.36 U	**0.24 J**	0.37 U	**0.51**	0.008 J	0.39 U	0.34 U	0.39 U	**250**
Benzo[a]pyrene	0.061	0.36 U	**0.097 J**	0.37 U	**0.36 J**	**0.041 J**	0.39 U	0.34 U	0.39 U	**180 J**
Benzo[b]fluoranthene	1.1	0.36 U	**0.052 J**	0.37 U	**0.38 JM**	**0.008 J**	0.39 U	0.34 U	0.39 U	**88 J**
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	0.36 U	**0.071 J**	0.37 U	0.43 U	**0.01 J**	0.39 U	0.34 U	0.39 U	**140 J**
Chrysene	0.4	0.36 U	**0.25 J**	0.37 U	**0.61**	**0.011 J**	0.39 U	0.34 U	0.39 U	**220**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW-20D	MW-21	MW-21	SB-21S	SB22	SB22	SB23	MW-24	MW-28D
Depth Interval in feet:		.25.5 - 25.5	8 - 10	20 - 22	8 - 9	12 - 12	20 - 20	22 - 22	18 - 18	8 - 10
Sample ID:	NYS	MW-20-25.5	MW-21-8-10	MW-21-20-22	SB-21S(8-9)	HA-SB22-12	HA-SB22-20	HA-SB23-22	HA-MW24-18	MW-28-8-10
Date Collected:	RSCO	11/28/2001	11/28/2001	11/28/2001	7/12/2004	6/18/2001	6/18/2001	6/21/2001	6/22/2001	11/29/2001
Dibenz[a,h]anthracene	0.014	0.36 U	0.48 U	0.37 U	0.43 U	0.37 U	0.39 U	0.34 UJ	0.39 UJ	**34 J**
Indeno[1,2,3-cd]pyrene	3.2	0.36 U	0.48 U	0.37 U	**0.11 JH**	**0.029 J**	0.39 U	0.34 UJ	0.39 UJ	**68 J**
Total PAHs (mg/kg)										
Total PAHs	NS	**0.075**	**3.627**	**0.013**	**6.655**	**0.317**	ND	ND	**0.126**	**6111**
Other SVOCs (mg/kg)										
Biphenyl,1,1-	NS	0.36 U	**0.035 J**	0.37 U	NA	NA	NA	NA	NA	**150 J**
Bis(2-ethylhexyl)phthalate	50	0.36 U	0.48 U	0.37 U	0.43 UB	0.37 U	0.39 U	0.34 U	0.39 U	200 U
Carbazole	NS	0.36 U	0.48 U	0.37 U	0.43 U	0.37 U	0.39 U	0.34 U	0.39 U	**44 J**
Dibenzofuran	6.2	0.36 U	0.48 U	0.37 U	0.43 U	0.37 U	0.39 U	0.34 U	**0.007 J**	**110 J**
Metals (mg/Kg)										
Aluminum	NS	**5850**	**19200**	**8370**	NA	**6060**	**4090**	**4650**	**6170**	**19900 J**
Antimony	NS	1.0 UJ	0.99 UJ	0.82 UJ	NA	0.95 UJ	0.90 UJ	0.94 UJ	1.0 UJ	1.3 UJ
Arsenic	7.5	**2.3**	**10.3**	**2.8**	NA	**2.3**	**1.7 J**	**3.1**	**1.9 J**	**6.6**
Barium	300	**64.2**	**150.**	**56.9**	NA	**43.9**	**48.6**	**80.8**	**66.2**	**213. J**
Beryllium	0.16	0.11 U	0.11 U	0.089 U	NA	0.11 U	0.10 U	0.11 U	0.11 U	0.14 U
Cadmium	1	0.17 UJ	0.17 UJ	0.14 UJ	NA	**0.24 J**	0.18 U	0.19 U	**0.21 J**	0.23 UJ
Calcium	NS	**16100**	**17400**	**18000**	NA	**10200**	**12900**	**14300**	**12100**	**4800**
Chromium	10	**8.8**	**24.6**	**12.1**	NA	**9.5**	**8.2**	**7.2**	**12.3**	**24.0**
Cobalt	30	**4.7**	**13.5**	**6.1**	NA	**4.8**	**4.5**	**4.3**	**4.7**	**9.7**
Copper	25	**11.2**	**33.6**	**16.6**	NA	**11.2**	**9.6**	**9.5**	**10.7**	**30.1**
Iron	2000	**14200**	**34900**	**18000**	NA	**14500**	**10300**	**11300**	**13700**	**28400**
Lead	500	**5.0 J**	**15.1 J**	**6.4 J**	NA	**4.7**	**2.9**	**4.2**	**4.4**	**173. J**
Magnesium	NS	**5180**	**11000**	**6050**	NA	**3630**	**3110**	**3770**	**4030**	**6400**
Manganese	NS	**251. J**	**627. J**	**344. J**	NA	**226.**	**196.**	**250.**	**294.**	**416. J**
Mercury	0.1	0.0022 U	**0.028**	**0.0072**	NA	**0.0045**	**0.0023**	**0.0059**	0.0021 U	**0.44 J**
Nickel	13	**11.1**	**30.9**	**14.7**	NA	**9.4**	**7.7**	**9.7**	**11.5**	**23.4**
Potassium	NS	**1520 J**	**5430 J**	**2350 J**	NA	**1490**	**948.**	**1020**	**1390**	**2840 J**
Selenium	2	1.1 U	1.0 U	0.88 U	NA	1.1 U	1.0 U	1.0 U	1.1 U	**2.0 J**
Silver	NS	0.22 U	0.21 U	0.18 U	NA	0.22 U	0.20 U	0.21 U	0.23 U	0.29 U
Sodium	NS	**122.**	**207.**	**133.**	NA	4.3 U	4.1 U	4.2 U	4.5 U	**169.**
Thallium	NS	2.2 U	2.1 UJ	1.8 UJ	NA	2.0 U	1.9 U	1.9 U	2.1 U	2.9 UJ
Vanadium	150	**13.2**	**28.6**	**17.9**	NA	**13.1**	**10.0**	**11.7**	**14.6**	**31.5**
Zinc	20	**29.1**	**82.9**	**48.3**	NA	**32.6**	**22.3**	**25.5**	**30.7**	**130.**
Total Cyanide (mg/Kg)										
Cyanide, Total	1600 (a)	.59 U	.64 U	.55 U	0.63 U	.55 U	.59 U	.57 U	.61 U	.77 U

Source: GEI Consultants, Inc. 2006

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW-28D (DUP)	MW-28D	MW-29D	SB/MW-29S	SB/MW-30S	SB/MW-30S	SB/MW-31
Depth Interval in feet:		8 - 10	30 - 30	29 - 29	10 - 11	6.5 - 7	15 - 16	8 - 10
Sample ID:	NYS	MW-38-18-20	MW-28-30	MW-29-29	SB/MW-29S(10-11)	SB/MW-30S(6.5-7)	SB/MW-30S(15-16)	SB/MW-31 8-10
Date Collected:	RSCO	11/29/2001	11/29/2001	11/29/2001	7/1/2004	7/1/2004	7/1/2004	7/1/2004
BTEX (mg/kg)								
Benzene	0.06	34 U	**0.0009 J**	**0.001 J**	**1.3 J**	**0.002 J**	0.012 U	**0.79 J**
Toluene	1.5	**6.7 J**	0.012 U	0.012 U	**0.35 J**	**0.002 J**	0.012 U	**2.3 J**
Ethylbenzene	5.5	**64**	0.012 U	0.012 U	**19**	**0.16**	**0.003 J**	**39**
Xylene, Total	1.2	**100**	0.012 U	0.012 U	**11**	**0.2**	**0.011 J**	**60**
Total BTEX	NS	**170.7**	**0.0009**	**0.001**	**31.65**	**0.364**	**0.014**	**102.09**
Other VOCs (mg/kg)								
Acetone	0.2	34 U	0.012 UJ	0.012 UJ	NA	NA	NA	NA
Bromodichloromethane	NS	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Bromoform	NS	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Chlorobenzene	1.7	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Chloroform	0.3	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Dichloroethane,1,2-	0.1	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Methylene chloride	0.1	34 U	0.012 UJ	0.012 UJ	NA	NA	NA	NA
Styrene	NS	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Tetrachloroethene	1.4	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Trichloroethene	0.7	34 U	0.012 U	0.012 U	NA	NA	NA	NA
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)								
Acenaphthene	50	**240**	0.38 U	0.4 U	**170**	**62 J**	**0.21 J**	**97**
Acenaphthylene	41	**30 J**	0.38 U	0.4 U	**16 J**	**4.5 J**	**0.14 J**	**14 J**
Anthracene	50	**190**	**0.016 J**	0.4 U	**100**	**35**	**0.068 J**	**78**
Benzo[g,h,i]perylene	50	**37 J**	0.38 U	**0.04 J**	**23 J**	**8.2 J**	0.38 U	**16 J**
Fluoranthene	50	**280**	**0.034 J**	0.4 U	**120**	**53**	**0.1 J**	**64**
Fluorene	50	**220**	0.38 U	0.4 U	**88**	**31**	**0.2 J**	**64**
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	**430 J**	0.38 U	**0.017 J**	**140**	**37**	**0.33 J**	**220**
Naphthalene	13	**710 J**	**0.013 J**	**0.034 J**	**260**	**5 J**	**0.65**	**160**
Perylene	NS	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	**520 J**	**0.052 J**	**0.015 J**	**310**	**130**	**0.31 J**	**230**
Pyrene	50	**310 J**	**0.04 J**	**0.014 J**	**170**	**82 J**	**0.13 J**	**160**
Carcinogenic PAHs (mg/kg)								
Benz[a]anthracene	0.224	**160**	**0.018 J**	0.4 U	**47 J**	**25**	**0.048 J**	**52**
Benzo[a]pyrene	0.061	**100**	0.38 U	0.4 U	**40 J**	**20**	0.38 U	**37 J**
Benzo[b]fluoranthene	1.1	**61 J**	0.38 U	0.4 U	**47 J**	**22**	0.38 U	**30 J**
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	**110 J**	0.38 U	0.4 U	75 U	17 U	0.38 U	50 U
Chrysene	0.4	**140**	**0.019 J**	0.4 U	**55 J**	**25**	**0.056 J**	**48 J**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		MW-28D (DUP)	MW-28D	MW-29D	SB/MW-29S	SB/MW-30S	SB/MW-30S	SB/MW-31
Depth Interval in feet:		8 - 10	30 - 30	29 - 29	10 - 11	6.5 - 7	15 - 16	8 - 10
Sample ID:	NYS	MW-38-18-20	MW-28-30	MW-29-29	SB/MW-29S(10-11)	SB/MW-30S(6.5-7)	SB/MW-30S(15-16)	SB/MW-31 8-10
Date Collected:	RSCO	11/29/2001	11/29/2001	11/29/2001	7/1/2004	7/1/2004	7/1/2004	7/1/2004
Dibenz[a,h]anthracene	0.014	**14 J**	0.38 U	0.4 U	75 U	17 U	0.38 U	50 U
Indeno[1,2,3-cd]pyrene	3.2	**42 J**	0.38 U	0.4 U	**18 J**	**6.8 J**	0.38 U	**10 J**
Total PAHs (mg/kg)								
Total PAHs	NS	**3594**	**0.192**	**0.12**	**1604**	**546.5**	**2.242**	**1280**
Other SVOCs (mg/kg)								
Biphenyl,1,1-	NS	**68 J**	0.38 U	0.4 U	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	95 U	0.38 U	0.4 U	75 U	17 U	0.38 U	50 U
Carbazole	NS	**46 J**	0.38 U	0.4 U	75 U	17 U	0.38 U	50 U
Dibenzofuran	6.2	**120**	0.38 U	0.4 U	**9.6 J**	**2.5 J**	0.38 U	50 U
Metals (mg/Kg)								
Aluminum	NS	**11700 J**	**6400**	**3850**	NA	NA	NA	NA
Antimony	NS	1.1 UJ	0.84 UJ	0.92 UJ	NA	NA	NA	NA
Arsenic	7.5	**5.2**	**1.9**	**1.6 J**	NA	NA	NA	NA
Barium	300	**124. J**	**50.7**	**27.3**	NA	NA	NA	NA
Beryllium	0.16	0.12 U	0.092 U	0.10 U	NA	NA	NA	NA
Cadmium	1	0.18 UJ	0.15 UJ	0.16 UJ	NA	NA	NA	NA
Calcium	NS	**4280**	**15100**	**18600**	NA	NA	NA	NA
Chromium	10	**15.0**	**9.4**	**7.3**	NA	NA	NA	NA
Cobalt	30	**5.9**	**5.1**	**3.5**	NA	NA	NA	NA
Copper	25	**21.2**	**7.8**	**7.8**	NA	NA	NA	NA
Iron	2000	**19400**	**14300**	**10900**	NA	NA	NA	NA
Lead	500	**152. J**	**5.8 J**	**3.8 J**	NA	NA	NA	NA
Magnesium	NS	**4320**	**4870**	**4110**	NA	NA	NA	NA
Manganese	NS	**278. J**	**286. J**	**202. J**	NA	NA	NA	NA
Mercury	0.1	**0.92 J**	**0.25**	0.0034 U	NA	NA	NA	NA
Nickel	13	**14.8**	**12.6**	**7.4**	NA	NA	NA	NA
Potassium	NS	**1740 J**	**2080 J**	**995. J**	NA	NA	NA	NA
Selenium	2	**1.7 J**	0.90 U	0.98 U	NA	NA	NA	NA
Silver	NS	0.23 U	0.18 U	0.20 U	NA	NA	NA	NA
Sodium	NS	**128.**	**128.**	**115.**	NA	NA	NA	NA
Thallium	NS	2.3 UJ	1.8 U	1.8 U	NA	NA	NA	NA
Vanadium	150	**20.4**	**15.2**	**12.2**	NA	NA	NA	NA
Zinc	20	**89.8**	**30.2**	**21.7**	NA	NA	NA	NA
Total Cyanide (mg/Kg)								
Cyanide, Total	1600 (a)	.7 U	.57 U	.6 U	0.56 U	0.62 U	0.56 U	0.76 U

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB/MW-31	SB/MW-32	SB/MW-32	SB-45	SB-45	SB-45	SB-45	SB-45
Depth Interval in feet:		33 - 34	10 - 11	34 - 36	10 - 11	10 - 11	11 - 12	24 - 25	24 - 25
Sample ID:	NYS	SB/MW-31 33-34	SB/MW-32 10-11	SB/MW-32 34-36	SB-45(10-11)	SB-XX(8-9)	SB-45(11-12)	SB-45(24-25)	SB-XX(18-20)
Date Collected:	RSCO	7/1/2004	7/1/2004	7/1/2004	7/2/2004	7/2/2004	7/2/2004	7/15/2004	7/15/2004
BTEX (mg/kg)									
Benzene	0.06	0.012 U	**0.2 J**	0.012 U	**0.6 J**	**0.2 J**	**0.003 J**	0.012 U	0.012 U
Toluene	1.5	0.012 U	**0.71 J**	0.012 U	1.4 U	1.5 U	0.015 U	0.012 U	0.012 U
Ethylbenzene	5.5	0.012 U	**22**	0.012 U	**3.6 J**	**7.4 J**	**0.004 J**	0.012 U	0.012 U
Xylene, Total	1.2	0.012 U	**24**	0.012 U	**1.6 J**	**4.3 J**	**0.001 J**	0.012 U	0.012 U
Total BTEX	NS	ND	**46.91**	ND	**5.8**	**11.9**	**0.008**	ND	ND
Other VOCs (mg/kg)									
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NS	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NS	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	1.7	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	0.3	NA	NA	NA	NA	NA	NA	NA	NA
Dichloroethane,1,2-	0.1	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	0.1	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1.4	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	0.7	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)									
Acenaphthene	50	0.39 U	**110**	R	**150 J**	**66 J**	**0.36 J**	**0.16 J**	**0.17 J**
Acenaphthylene	41	0.39 U	**18 J**	R	**12 J**	**5.6 J**	**0.055 J**	**1.1**	**1.1**
Anthracene	50	0.39 U	**92**	R	**48**	**21**	**0.19 J**	**2.8**	**3**
Benzo[g,h,i]perylene	50	0.39 U	**27 J**	R	**9.9 J**	**4.3 J**	0.48 U	**0.55 J**	**0.93**
Fluoranthene	50	0.39 U	**85**	R	**70 J**	**33 J**	**0.48 J**	**2.8**	**2.5**
Fluorene	50	0.39 U	**78**	R	**58**	**28**	**0.25 J**	**0.85**	**0.87**
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	0.39 U	**190**	R	**220 J**	**89 J**	**0.24 J**	**0.25 J**	**0.2 J**
Naphthalene	13	**0.073 J**	**170**	R	**310 J**	**98 J**	**0.21 J**	0.75 U	0.75 U
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	0.39 U	**280**	**0.13 J**	**170 J**	**82 J**	**0.99**	**4**	**3.5**
Pyrene	50	0.39 U	**210**	R	**100 J**	**47 J**	**0.55**	**4.8**	**4.2**
Carcinogenic PAHs (mg/kg)									
Benz[a]anthracene	0.224	0.39 U	**64**	R	**30 J**	**13 J**	**0.12 J**	**1.8**	**1.6**
Benzo[a]pyrene	0.061	0.39 U	**55 J**	R	**30 J**	**12 J**	**0.11 J**	**1.8**	**1.6**
Benzo[b]fluoranthene	1.1	0.39 U	**44 J**	R	**31 J**	**14 J**	**0.076 J**	**1.9 J**	**1.7 J**
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	0.39 U	61 U	R	38 U	16 U	**0.073 J**	0.75 UJ	0.75 UJ
Chrysene	0.4	0.39 U	**63**	R	**33 J**	**15 J**	**0.13 J**	**1.9**	**1.6**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB/MW-31	SB/MW-32	SB/MW-32	SB-45	SB-45	SB-45	SB-45	SB-45
Depth Interval in feet:		33 - 34	10 - 11	34 - 36	10 - 11	10 - 11	11 - 12	24 - 25	24 - 25
Sample ID:	NYS	SB/MW-31 33-34	SB/MW-32 10-11	SB/MW-32 34-36	SB-45(10-11)	SB-XX(8-9)	SB-45(11-12)	SB-45(24-25)	SB-XX(18-20)
Date Collected:	RSCO	7/1/2004	7/1/2004	7/1/2004	7/2/2004	7/2/2004	7/2/2004	7/15/2004	7/15/2004
Dibenz[a,h]anthracene	0.014	0.39 U	61 U	R	38 U	16 U	0.48 U	0.75 U	**0.21 J**
Indeno[1,2,3-cd]pyrene	3.2	0.39 U	**17 J**	R	**8.9 J**	**3.9 J**	0.48 U	**0.66 J**	**0.6 J**
Total PAHs (mg/kg)									
Total PAHs	NS	**0.073**	**1503**	**0.13**	**1280.8**	**531.8**	**3.834**	**25.37**	**23.78**
Other SVOCs (mg/kg)									
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	0.39 U	61 U	R	38 U	16 U	**0.83**	0.75 U	0.75 U
Carbazole	NS	0.39 U	61 U	R	38 U	16 U	0.48 U	0.75 U	0.75 U
Dibenzofuran	6.2	0.39 U	61 U	R	**7.2 J**	**3.2 J**	0.48 U	**0.095 J**	**0.1 J**
Metals (mg/Kg)									
Aluminum	NS	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NS	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7.5	NA	NA	NA	NA	NA	NA	NA	NA
Barium	300	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	1	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	10	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	30	NA	NA	NA	NA	NA	NA	NA	NA
Copper	25	NA	NA	NA	NA	NA	NA	NA	NA
Iron	2000	NA	NA	NA	NA	NA	NA	NA	NA
Lead	500	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NS	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.1	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	13	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	2	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NS	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	150	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	20	NA	NA	NA	NA	NA	NA	NA	NA
Total Cyanide (mg/Kg)									
Cyanide, Total	1600 (a)	0.59 U	0.56 U	0.61 U	0.57 U	0.61 U	0.73 U	0.55 U	0.57 U

Source: GEI Consultants, Inc. 2006

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB-45	SB-46	SB-46	SB-48	SB-49	SB-49	SB/MW-55	SB-56	SB-57
Depth Interval in feet:		27 - 28	10 - 11	14 - 15	14 - 15	7 - 8	13.5 - 14.5	10 - 12	14 - 16	7 - 8
Sample ID:	NYS	SB-45(27-28)	SB-46 10-11	SB-46 14-15	SB-48 14-15	SB-49 7-8	SB-49 13.5-14.5	SB/MW-55(10-12)	SB-56(14-16)	SB-57(7-8)
Date Collected:	RSCO	7/15/2004	7/2/2004	7/2/2004	7/1/2004	7/1/2004	7/1/2004	7/12/2004	7/12/2004	7/12/2004
BTEX (mg/kg)										
Benzene	0.06	0.012 U	**21**	0.021 UJ	0.013 UJ	**19**	**0.049 J**	**0.003 J**	0.014 U	0.012 U
Toluene	1.5	0.012 U	**6.7 J**	R	R	**8.6**	R	**0.002 J**	0.014 U	0.012 U
Ethylbenzene	5.5	0.012 U	**250**	R	R	**47**	R	**0.001 J**	0.014 U	0.012 U
Xylene, Total	1.2	0.012 U	**180**	R	R	**41**	R	**0.006 J**	0.014 U	0.012 U
Total BTEX	NS	ND	**457.7**	ND	ND	**115.6**	**0.049**	**0.012**	ND	ND
Other VOCs (mg/kg)										
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloroethane,1,2-	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	0.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylbenzene,1,2,4-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)										
Acenaphthene	50	0.37 U	**2700**	**0.36 J**	**0.046 J**	**4400**	**0.51**	**1.1 J**	0.45 U	0.39 U
Acenaphthylene	41	**0.15 J**	**210 J**	0.67 U	0.43 U	**830 J**	**0.061 J**	**1.2 J**	0.45 UM	0.39 U
Anthracene	50	**0.22 J**	**1400**	**0.18 J**	**0.067 J**	**3000**	**0.48**	**3.6**	0.45 U	0.39 U
Benzo[g,h,i]perylene	50	**0.075 J**	**400 J**	0.67 U	0.43 U	**420 J**	**2.1**	**2.5 J**	0.45 U	0.39 U
Fluoranthene	50	**0.36 J**	**3100**	**0.18 J**	**0.082 J**	**3000**	**0.76**	**17**	0.45 U	**0.066 J**
Fluorene	50	**0.13 J**	**1300**	**0.17 J**	0.43 U	**2400**	**0.36 J**	**1.9 J**	0.45 UM	0.39 U
Methylnaphthalene,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	**0.07 J**	**810 J**	**0.27 J**	**0.045 J**	**4700**	**0.62**	**0.34 J**	0.45 U	0.39 U
Naphthalene	13	0.37 U	**1700**	**0.52 J**	**0.054 J**	**8100**	**0.45 J**	**0.54 JM**	0.45 U	**0.046 J**
Perylene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	**0.67**	**5600**	**0.68**	**0.22 J**	**8500**	**1.7**	**6.6**	**0.058 J**	**0.048 J**
Pyrene	50	**0.57**	**3900**	**0.27 J**	**0.17 J**	**4400**	**2.2**	**20**	**0.05 J**	**0.11 J**
Carcinogenic PAHs (mg/kg)										
Benz[a]anthracene	0.224	**0.2 J**	**1200**	0.67 U	**0.055 J**	**1400 J**	**0.5**	**10**	0.45 U	0.39 U
Benzo[a]pyrene	0.061	**0.18 J**	**1000**	0.67 U	0.43 U	**1100 J**	**1.1**	**8.1**	0.45 U	0.39 U
Benzo[b]fluoranthene	1.1	**0.21 J**	**1100**	0.67 U	0.43 U	**480 J**	**0.4 J**	**12 M**	0.45 U	0.39 U
Benzo[e]pyrene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	0.37 UJ	960 U	0.67 U	0.43 U	**610 J**	0.46 U	3.3 U	0.45 U	0.39 U
Chrysene	0.4	**0.19 J**	**1100**	**0.072 J**	**0.062 J**	**1300 J**	**0.46**	**9.9**	0.45 U	**0.068 J**

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
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Sample Location:		SB-45	SB-46	SB-46	SB-48	SB-49	SB-49	SB/MW-55	SB-56	SB-57
Depth Interval in feet:		27 - 28	10 - 11	14 - 15	14 - 15	7 - 8	13.5 - 14.5	10 - 12	14 - 16	7 - 8
Sample ID:	NYS	SB-45(27-28)	SB-46 10-11	SB-46 14-15	SB-48 14-15	SB-49 7-8	SB-49 13.5-14.5	SB/MW-55(10-12)	SB-56(14-16)	SB-57(7-8)
Date Collected:	RSCO	7/15/2004	7/2/2004	7/2/2004	7/1/2004	7/1/2004	7/1/2004	7/12/2004	7/12/2004	7/12/2004
Dibenz[a,h]anthracene	0.014	0.37 U	960 U	0.67 U	0.43 U	2000 U	0.46 U	**1.6 J**	0.45 U	0.39 U
Indeno[1,2,3-cd]pyrene	3.2	**0.066 J**	**330 J**	0.67 U	0.43 U	**300 J**	**0.24 J**	**3.4 H**	0.45 U	0.39 U
Total PAHs (mg/kg)										
Total PAHs	NS	**3.091**	**25850**	**2.702**	**0.801**	**44940**	**11.941**	**99.78**	**0.180**	**0.338**
Other SVOCs (mg/kg)										
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	0.37 U	960 U	0.67 U	**0.18 J**	2000 U	**0.24 J**	3.3 UB	0.45 UB	0.39 U
Carbazole	NS	0.37 U	960 U	0.67 U	0.43 U	2000 U	0.46 U	3.3 U	0.45 U	0.39 U
Dibenzofuran	6.2	0.37 U	**130 J**	0.67 U	0.43 U	**260 J**	0.46 U	**0.47 J**	0.45 UM	0.39 U
Metals (mg/Kg)										
Aluminum	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	30	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	25	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	13	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	150	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Cyanide (mg/Kg)										
Cyanide, Total	1600 (a)	0.56 U	0.71 U	1.0 UJ	0.64 U	**0.32 J**	0.66 U	0.64 U	0.65 U	0.57 U

Source: GEI Consultants, Inc. 2006

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Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB-58	SB-58	SB-59	SB-59	SB/MW-60	SB/MW-60	TP05
Depth Interval in feet:		8 - 9	16 - 18	15.5 - 16	18 - 19	8 - 9	13 - 14	12 - 13
Sample ID:	NYS	SB-58(8-9)	SB-58(16-18)	SB-59(15.5-16)	SB-59(18-19)	SB/MW-60(8-9)	SB/MW-60(13-14)	C&MTP-05(12-13)
Date Collected:	RSCO	7/12/2004	7/12/2004	7/12/2004	7/12/2004	7/13/2004	7/13/2004	10/18/1998
BTEX (mg/kg)								
Benzene	0.06	**11 J**	**0.8**	2.13 UB	0.013 UJ	2.1 U	0.013 UJ	1.5 U
Toluene	1.5	**1.9 J**	0.07 U	2.13 UB	R	**0.27 J**	R	1.5 U
Ethylbenzene	5.5	**130**	**0.25**	**17.9**	R	**0.82 J**	R	**4.7**
Xylene, Total	1.2	**110**	**0.17**	**17.2**	R	**1.3 J**	R	**9.8**
Total BTEX	NS	**252.9**	**1.22**	**35.1**	ND	**2.39**	ND	**14.5**
Other VOCs (mg/kg)								
Acetone	0.2	NA	NA	NA	NA	NA	NA	1.5 UJ
Bromodichloromethane	NS	NA	NA	NA	NA	NA	NA	1.5 U
Bromoform	NS	NA	NA	NA	NA	NA	NA	1.5 U
Chlorobenzene	1.7	NA	NA	NA	NA	NA	NA	1.5 U
Chloroform	0.3	NA	NA	NA	NA	NA	NA	1.5 U
Dichloroethane,1,2-	0.1	NA	NA	NA	NA	NA	NA	1.5 U
Methylene chloride	0.1	NA	NA	NA	NA	NA	NA	**2**
Styrene	NS	NA	NA	**5.1**	NA	NA	NA	1.5 U
Tetrachloroethene	1.4	NA	NA	NA	NA	NA	NA	1.5 U
Trichloroethene	0.7	NA	NA	NA	NA	NA	NA	1.5 U
Trimethylbenzene,1,2,4-	NS	NA	NA	**24.0**	NA	NA	NA	NA
Noncarcinogenic PAHs (mg/kg)								
Acenaphthene	50	**1200**	**0.25 J**	**521.0**	0.43 U	**560**	0.43 UJ	NA
Acenaphthylene	41	**87 J**	0.46 U	**73.6**	0.43 U	**94 J**	0.43 UJ	NA
Anthracene	50	**570**	**0.099 J**	**227.0**	0.43 U	**500**	0.43 UJ	NA
Benzo[g,h,i]perylene	50	400 U	0.46 U	**78.4 B**	0.43 U	460 U	0.43 UJ	NA
Fluoranthene	50	**690**	**0.14 J**	**455.0**	**0.061 J**	**910**	0.43 UJ	NA
Fluorene	50	**550**	**0.14 J**	**320.0**	0.43 U	**370 J**	0.43 UJ	NA
Methylnaphthalene,1-	NS	NA	NA	**367.0**	NA	NA	NA	NA
Methylnaphthalene,2-	36.4	**1200**	**0.29 J**	**532.0**	0.43 U	**510**	0.43 UJ	NA
Naphthalene	13	**3000**	**3.1**	**760.0**	**0.046 J**	**450 J**	0.43 UJ	NA
Perylene	NS	NA	NA	**26.1**	NA	NA	NA	NA
Phenanthrene	50	**1900**	**0.36 J**	**1040.0**	**0.13 J**	**1900**	0.43 UJ	NA
Pyrene	50	**920**	**0.16 J**	**609.0**	**0.092 J**	**1300**	**0.045 J**	NA
Carcinogenic PAHs (mg/kg)								
Benz[a]anthracene	0.224	**260 J**	**0.065 J**	**203.0**	0.43 U	**460**	0.43 UJ	NA
Benzo[a]pyrene	0.061	**180 J**	0.46 U	**178.0**	0.43 U	**310 J**	0.43 UJ	NA
Benzo[b]fluoranthene	1.1	**91 J**	0.46 U	**128.0**	0.43 U	**180 J**	0.43 UJ	NA
Benzo[e]pyrene	NS	NA	NA	**92.1**	NA	NA	NA	NA
Benzo[k]fluoranthene	1.1	**130 J**	0.46 U	**50.5**	0.43 U	**230 J**	0.43 UJ	NA
Chrysene	0.4	**280 J**	**0.063 J**	**182.0**	0.43 U	**560**	0.43 UJ	NA

Table 5
Subsurface Soil Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Sample Location:		SB-58	SB-58	SB-59	SB-59	SB/MW-60	SB/MW-60	TP05
Depth Interval in feet:		8 - 9	16 - 18	15.5 - 16	18 - 19	8 - 9	13 - 14	12 - 13
Sample ID:	NYS	SB-58(8-9)	SB-58(16-18)	SB-59(15.5-16)	SB-59(18-19)	SB/MW-60(8-9)	SB/MW-60(13-14)	C&MTP-05(12-13)
Date Collected:	RSCO	7/12/2004	7/12/2004	7/12/2004	7/12/2004	7/13/2004	7/13/2004	10/18/1998
Dibenz[a,h]anthracene	0.014	400 U	0.46 U	**18.9**	0.43 U	460 U	0.43 UJ	NA
Indeno[1,2,3-cd]pyrene	3.2	**60 J**	0.46 U	**67.5**	0.43 U	**130 J**	0.43 UJ	NA
Total PAHs (mg/kg)								
Total PAHs	NS	**11118**	**0.128**	**5930**	**0.329**	**8464**	**0.045**	NA
Other SVOCs (mg/kg)								
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50	400 U	**0.15 J**	NA	0.87 U	460 UB	0.43 UJ	NA
Carbazole	NS	400 U	0.46 U	NA	0.43 U	460 U	0.43 UJ	NA
Dibenzofuran	6.2	**54 J**	0.46 U	**31.5**	0.43 U	460 U	0.43 UJ	NA
Metals (mg/Kg)								
Aluminum	NS	NA	NA	NA	NA	NA	NA	**16200**
Antimony	NS	NA	NA	NA	NA	NA	NA	R
Arsenic	7.5	NA	NA	NA	NA	NA	NA	**9 J**
Barium	300	NA	NA	NA	NA	NA	NA	**136**
Beryllium	0.16	NA	NA	NA	NA	NA	NA	**0.8 BJ**
Cadmium	1	NA	NA	NA	NA	NA	NA	**1.1 BJ**
Calcium	NS	NA	NA	NA	NA	NA	NA	**30900 J***
Chromium	10	NA	NA	NA	NA	NA	NA	**25.3**
Cobalt	30	NA	NA	NA	NA	NA	NA	**15.3 BJ**
Copper	25	NA	NA	NA	NA	NA	NA	**31.1**
Iron	2000	NA	NA	NA	NA	NA	NA	**31700 EJ**
Lead	500	NA	NA	NA	NA	NA	NA	**14.4 J**
Magnesium	NS	NA	NA	NA	NA	NA	NA	**7950**
Manganese	NS	NA	NA	NA	NA	NA	NA	**598 EJ**
Mercury	0.1	NA	NA	NA	NA	NA	NA	0.09 U
Nickel	13	NA	NA	NA	NA	NA	NA	**29.7**
Potassium	NS	NA	NA	NA	NA	NA	NA	**3290**
Selenium	2	NA	NA	NA	NA	NA	NA	0.82 UJN
Silver	NS	NA	NA	NA	NA	NA	NA	**1.19 BJ**
Sodium	NS	NA	NA	NA	NA	NA	NA	**484 B**
Thallium	NS	NA	NA	NA	NA	NA	NA	0.7 U
Vanadium	150	NA	NA	NA	NA	NA	NA	**29.1**
Zinc	20	NA	NA	NA	NA	NA	NA	**77.7**
Total Cyanide (mg/Kg)								
Cyanide, Total	1600 (a)	0.62 U	0.67 U	NA	0.66 U	**0.073 B**	0.63 U	1.2 U

Notes:

(a) - EPA Region III RBC for residential exposures

NYS RSCO - New York State Recommended Soil Cleanup Objective from TAGM 4046; the standards against which soil data are compared

Bold value indicates a detected result

Gray shading indicates that the detected result exceeds the NYS RSCO

U - Analyte not detected at or above the reporting limit shown

UJ - Analyte not detected at or above the reporting limit shown; the reporting limit shown is estimated

B - Analyte detected in associated blank

* - Duplicate analysis outside control limits

W - Post digest spike recovery furnace outside 85-115% control limit, while sample absorbance less than 50% of spike absorbance

E - Exceeds calibration range

J - Estimated value

D - Dilution result

NA - Not analyzed

NS - No standard

ND - Not Detected; calculated sum of compounds is listed as ND because no individual compounds were detected in the group

Sample SB-59(15.5-16) is the only sample that was anlyzed by META Environmental using a modified method; therefore certain analytres were tested for in this sample that were not analyzed in any other samples.

"DUP" in the sample location or "XX" in the sample ID indicate that the sample is a field duplicate of the sample preceding it.

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:	NY	146 MAPLE	146 MAPLE	146 MAPLE	146 MAPLE	146 MAPLE	APTS	APTS
Sample Location:	Ambient	MW11	MW11	MW11	MW-24	MW-24	MW-20D	MW-20D
Sample ID:	GW	CMMW11-01	MW-11	MW-11	MW-24	MW-24	MW-20	MW-20D
Date Collected:	Limits	2/2/1999	12/19/2001	8/2/2004	12/18/2001	8/2/2004	12/17/2001	8/4/2004
BTEX (ug/l)								
Benzene	1.0	10 U	10 U	10 U	10 U	10 U	**15**	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U	10 U	**11**	10 U
Toluene	5	10 U	10 U	10 U	10 U	10 U	**10**	10 U
Xylene, Total	5	10 U	10 U	10 U	10 U	10 U	**22**	10 U
Total BTEX	NS	ND	ND	ND	ND	ND	**58**	ND
Other VOCs (ug/l)								
Acetone	NS	10 U	10 UB	NA	10 UB	NA	10 UJ	NA
Butanone,2- (MEK)	NS	10 U	10 UJ	NA	10 UJ	NA	10 U	NA
Chloroform	7	10 U	10 U	NA	10 U	NA	**0.5 J**	NA
Dichloropropene, trans-1,3	5	10 U	10 U	NA	10 U	NA	10 U	NA
Methyl-2-pentanone,4-	NS	10 U	10 UJ	NA	10 UJ	NA	10 UJ	NA
Methylene chloride	5	10 U	10 U	NA	10 U	NA	10 U	NA
Styrene	5	10 U	10 U	NA	10 U	NA	**3 J**	NA
Tetrachloroethane,1,1,2,2-	5	10 U	10 U	NA	10 U	NA	10 U	NA
Trichloroethane,1,1,1-	5	10 U	10 U	NA	10 U	NA	10 U	NA
Trichloroethane,1,1,2-	1	10 U	10 U	NA	10 U	NA	10 U	NA
Noncarcinogenic PAHs (ug/l)								
Acenaphthene	20	10 U	10 U	11 U	10 U	10 U	**18 J**	10 U
Acenaphthylene	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Anthracene	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Benzo[g,h,i]perylene	NS	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Fluoranthene	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Fluorene	50	10 U	10 U	11 U	10 U	10 U	**4 J**	10 U
Methylnaphthalene,2-	NS	**1 J**	10 U	11 U	10 U	10 U	**16 J**	10 U
Naphthalene	10	**16**	10 U	11 U	10 U	10 U	**92**	10 U
Phenanthrene	50	10 U	10 U	11 U	10 U	10 U	**3 J**	10 U
Pyrene	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Carcinogenic PAHs (ug/l)								
Benz[a]anthracene	0.002	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Benzo[a]pyrene	0.002	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Benzo[b]fluoranthene	0.002	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Benzo[k]fluoranthene	0.002	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Chrysene	0.002	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Dibenz[a,h]anthracene	NS	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Total PAHs (ug/L)								
Total PAHs	NS	**17**	ND	ND	**10**	ND	**213**	**10**
Other SVOCs (ug/L)								
Benzaldehyde	NS	NA	10 U	NA	10 U	NA	20 U	NA
Biphenyl,1,1-	NS	NA	10 U	NA	10 U	NA	20 U	NA
Bis(2-ethylhexyl)phthalate	5	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Carbazole	NS	10 UJ	10 U	11 U	10 U	10 U	20 U	10 U
Dibenzofuran	NS	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Diethyl phthalate	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Dimethylphenol, 2,4-	1	10 U	10 UJ	11 UJ	10 UJ	10 UJ	20 U	10 U
Di-n-butyl phthalate	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Methylphenol, 4-	1	10 U	10 UJ	11 U	10 UJ	10 U	20 U	10 U
N-Nitrosodiphenylamine	50	10 U	10 U	11 U	10 U	10 U	20 U	10 U
Phenol	1	10 U	10 U	11 U	10 U	10 U	20 U	10 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:	NY	146 MAPLE	146 MAPLE	146 MAPLE	146 MAPLE	146 MAPLE	APTS	APTS
Sample Location:	Ambient	MW11	MW11	MW11	MW-24	MW-24	MW-20D	MW-20D
Sample ID:	GW	CMMW11-01	MW-11	MW-11	MW-24	MW-24	MW-20	MW-20D
Date Collected:	Limits	2/2/1999	12/19/2001	8/2/2004	12/18/2001	8/2/2004	12/17/2001	8/4/2004
Dissolved Metals (ug/l)								
Aluminum	100	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)								
Aluminum	100	**110 BJ**	NA	NA	NA	NA	NA	NA
Arsenic	25	1.2 U	NA	NA	NA	NA	NA	NA
Barium	1000	**68 B**	NA	NA	NA	NA	NA	NA
Beryllium	3	0.1 U	NA	NA	NA	NA	NA	NA
Calcium	NS	**116000**	NA	NA	NA	NA	NA	NA
Chromium	50	0.6 U	NA	NA	NA	NA	NA	NA
Cobalt	5	**1.4 B**	NA	NA	NA	NA	NA	NA
Copper	200	2.7 UB	NA	NA	NA	NA	NA	NA
Iron	300	**197**	NA	NA	NA	NA	NA	NA
Lead	25	2.8 UBJ	NA	NA	NA	NA	NA	NA
Magnesium	35000	**31400**	NA	NA	NA	NA	NA	NA
Manganese	300	**566**	NA	NA	NA	NA	NA	NA
Mercury	0.7	0.2 U	NA	NA	NA	NA	NA	NA
Nickel	100	1.1 UB	NA	NA	NA	NA	NA	NA
Potassium	NS	**4120 JBE**	NA	NA	NA	NA	NA	NA
Selenium	10	1.6 U	NA	NA	NA	NA	NA	NA
Sodium	20000	**22700 EJ**	NA	NA	NA	NA	NA	NA
Thallium	0.5	1.1 U	NA	NA	NA	NA	NA	NA
Vanadium	14	1.2 U	NA	NA	NA	NA	NA	NA
Zinc	2000	7.7 UBJ	NA	NA	NA	NA	NA	NA
Cyanides (ug/L)								
Cyanide, Total	200	NA	**11.6**	**19.4**	**58.5**	**54.8**	3 U	10 U
Cyanide, Weak Acid Dissociable	NS	NA	**3.2 J**	NA	**5.5 J**	NA	3 UJ	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigaiton
Haverstraw, New York

Site Location:	NY	APTS	APTS	APTS	APTS	APTS	APTS	APTS	APTS
Sample Location:	Ambient	MW-20S	MW-21	MW-21	MW-28D	MW-28D	MW-28S	MW-29D	MW-29D
Sample ID:	GW	MW-20S	MW-21	MW-21	MW-28	MW-28D	MW-28S	MW-29	MW-29D
Date Collected:	Limits	8/4/2004	12/17/2001	8/4/2004	12/18/2001	8/5/2004	8/5/2004	12/18/2001	8/5/2004
BTEX (ug/l)									
Benzene	1.0	**64**	10 U	10 U	**0.4 J**	10 U	**51**	10 U	10 U
Ethylbenzene	5	**140**	10 U	10 U	**0.5 J**	10 U	**65**	10 U	10 U
Toluene	5	**1 J**	10 U	10 U	**0.2 J**	10 U	**3 J**	10 U	10 U
Xylene, Total	5	**50**	10 U	10 U	**0.4 J**	10 U	**94**	10 U	10 U
Total BTEX	NS	**255**	ND	ND	**1.5**	ND	**213**	ND	ND
Other VOCs (ug/l)									
Acetone	NS	NA	10 U	NA	10 UJ	NA	NA	10 U	NA
Butanone,2- (MEK)	NS	NA	10 U	NA	10 U	NA	NA	10 U	NA
Chloroform	7	NA	10 U	NA	10 U	NA	NA	**0.3 J**	NA
Dichloropropene, trans-1,3	5	NA	10 U	NA	10 U	NA	NA	10 U	NA
Methyl-2-pentanone,4-	NS	NA	10 UJ	NA	10 UJ	NA	NA	10 UJ	NA
Methylene chloride	5	NA	10 U	NA	10 U	NA	NA	10 U	NA
Styrene	5	NA	10 U	NA	10 U	NA	NA	10 U	NA
Tetrachloroethane,1,1,2,2-	5	NA	10 U	NA	10 U	NA	NA	10 U	NA
Trichloroethane,1,1,1-	5	NA	10 U	NA	10 U	NA	NA	10 U	NA
Trichloroethane,1,1,2-	1	NA	10 U	NA	10 U	NA	NA	10 U	NA
Noncarcinogenic PAHs (ug/l)									
Acenaphthene	20	**330 J**	10 U	10 U	**8 J**	**2 J**	**65**	10 U	11 U
Acenaphthylene	50	520 U	10 U	10 U	**37**	**21**	40 U	10 U	11 U
Anthracene	50	520 U	10 U	10 U	10 U	10 U	**6 J**	10 U	11 U
Benzo[g,h,i]perylene	NS	520 U	10 UJ	10 U	10 UJ	10 U	40 U	10 UJ	11 U
Fluoranthene	50	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Fluorene	50	**110 J**	10 U	10 U	**1 J**	10 U	**38 J**	10 U	11 U
Methylnaphthalene,2-	NS	**590**	10 U	10 U	**3 J**	10 U	**130**	10 U	11 U
Naphthalene	10	**2700**	10 U	10 U	**21**	10 U	**280**	10 U	11 U
Phenanthrene	50	**110 J**	10 U	10 U	**7 J**	10 U	**32 J**	10 U	11 U
Pyrene	50	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Carcinogenic PAHs (ug/l)									
Benz[a]anthracene	0.002	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Benzo[a]pyrene	0.002	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Benzo[b]fluoranthene	0.002	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Benzo[k]fluoranthene	0.002	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Chrysene	0.002	520 U	10 UJ	10 U	10 UJ	10 U	40 U	10 UJ	11 U
Dibenz[a,h]anthracene	NS	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Indeno[1,2,3-cd]pyrene	0.002	520 U	10 UJ	10 U	10 UJ	10 U	40 U	10 UJ	11 U
Total PAHs (ug/L)									
Total PAHs	NS	**3840**	**10**	ND	**107**	**23**	**551**	**60**	ND
Other SVOCs (ug/L)									
Benzaldehyde	NS	NA	10 U	NA	10 U	NA	NA	10 U	NA
Biphenyl,1,1-	NS	NA	10 U	NA	**10**	NA	NA	10 U	NA
Bis(2-ethylhexyl)phthalate	5	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Carbazole	NS	520 U	10 U	10 U	**1 J**	10 U	**34 J**	10 U	11 U
Dibenzofuran	NS	520 U	10 U	10 U	**2 J**	10 U	**33 J**	10 U	11 U
Diethyl phthalate	50	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Dimethylphenol, 2,4-	1	520 U	10 U	10 U	10 U	10 UJ	40 UJ	10 U	11 UJ
Di-n-butyl phthalate	50	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Methylphenol, 4-	1	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
N-Nitrosodiphenylamine	50	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U
Phenol	1	520 U	10 U	10 U	10 U	10 U	40 U	10 U	11 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigaiton
Haverstraw, New York

Site Location:	NY	APTS	APTS	APTS	APTS	APTS	APTS	APTS	APTS
Sample Location:	Ambient	MW-20S	MW-21	MW-21	MW-28D	MW-28D	MW-28S	MW-29D	MW-29D
Sample ID:	GW	MW-20S	MW-21	MW-21	MW-28	MW-28D	MW-28S	MW-29	MW-29D
Date Collected:	Limits	8/4/2004	12/17/2001	8/4/2004	12/18/2001	8/5/2004	8/5/2004	12/18/2001	8/5/2004
Dissolved Metals (ug/l)									
Aluminum	100	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)									
Aluminum	100	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA	NA
Cyanides (ug/L)									
Cyanide, Total	200	**2.4 J**	3 U	10 UJ	3 U	10 UJ	0.73 UJ	3 U	10 UJ
Cyanide, Weak Acid Dissociable	NS	NA	3 UJ	NA	3 UJ	NA	NA	3 UJ	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		APTS	APTS	APTS	APTS	APTS	APTS	APTS
Sample Location:	NY	MW-29S	MW-31D	MW-31D	MW-31S	MW-32I	MW-32S	MW-55
Sample ID:	Ambient	MW-29S	MW-31D	MW-XX	MW-31S	MW-32I	MW-32S	MW-55
Date Collected:	GW Limits	8/5/2004	8/5/2004	8/5/2004	8/4/2004	8/4/2004	8/4/2004	8/4/2004
BTEX (ug/l)								
Benzene	1.0	**240**	10 U	10 U	**0.9 J**	**4 J**	**20**	10 U
Ethylbenzene	5	**210**	10 U	10 U	**30**	**2 J**	**120**	10 U
Toluene	5	**4 J**	10 U	10 U	**4 J**	10 U	**6 J**	10 U
Xylene, Total	5	**160**	10 U	10 U	**47**	**4 J**	**110**	10 U
Total BTEX	NS	**614**	ND	ND	**81.9**	**10**	**256**	ND
Other VOCs (ug/l)								
Acetone	NS	NA	NA	NA	NA	NA	NA	NA
Butanone,2- (MEK)	NS	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	NA	NA	NA	NA	NA
Dichloropropene, trans-1,3	5	NA	NA	NA	NA	NA	NA	NA
Methyl-2-pentanone,4-	NS	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	5	NA	NA	NA	NA	NA	NA	NA
Styrene	5	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethane,1,1,2,2-	5	NA	NA	NA	NA	NA	NA	NA
Trichloroethane,1,1,1-	5	NA	NA	NA	NA	NA	NA	NA
Trichloroethane,1,1,2-	1	NA	NA	NA	NA	NA	NA	NA
Noncarcinogenic PAHs (ug/l)								
Acenaphthene	20	**250**	11 U	11 U	**2 J**	**31**	**60**	**2 J**
Acenaphthylene	50	220 U	11 U	11 U	11 UJ	**100**	**3 J**	10 U
Anthracene	50	220 U	11 U	11 U	11 UJ	20 U	**6 J**	10 U
Benzo[g,h,i]perylene	NS	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Fluoranthene	50	220 U	11 U	11 U	11 UJ	20 U	**5 J**	10 U
Fluorene	50	**64 J**	11 U	11 U	11 UJ	20 U	**35**	10 U
Methylnaphthalene,2-	NS	**210 J**	11 U	11 U	**8 J**	**3 J**	**13**	10 U
Naphthalene	10	**1300**	11 U	11 U	**17 J**	**19 J**	**27**	10 U
Phenanthrene	50	**74 J**	11 U	11 U	**2 J**	**19 J**	**35**	**1 J**
Pyrene	50	220 U	11 U	11 U	11 UJ	20 U	**9 J**	**1 J**
Carcinogenic PAHs (ug/l)								
Benz[a]anthracene	0.002	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Benzo[a]pyrene	0.002	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Benzo[b]fluoranthene	0.002	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Benzo[k]fluoranthene	0.002	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Chrysene	0.002	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Dibenz[a,h]anthracene	NS	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Total PAHs (ug/L)								
Total PAHs	NS	**1898**	ND	ND	**29**	**172**	**193**	**4**
Other SVOCs (ug/L)								
Benzaldehyde	NS	NA	NA	NA	NA	NA	NA	NA
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	5	220 U	11 U	**6 J**	**11 J**	20 U	10 U	10 U
Carbazole	NS	220 U	11 U	11 U	11 UJ	**3 J**	10 U	10 U
Dibenzofuran	NS	220 U	11 U	11 U	11 UJ	**4 J**	**4 J**	10 U
Diethyl phthalate	50	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Dimethylphenol, 2,4-	1	220 UJ	11 UJ	11 UJ	11 UJ	20 UJ	**1 J**	10 U
Di-n-butyl phthalate	50	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Methylphenol, 4-	1	220 U	11 U	11 U	**2 J**	20 U	10 U	10 U
N-Nitrosodiphenylamine	50	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U
Phenol	1	220 U	11 U	11 U	11 UJ	20 U	10 U	10 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		APTS	APTS	APTS	APTS	APTS	APTS	APTS
Sample Location:	NY	MW-29S	MW-31D	MW-31D	MW-31S	MW-32I	MW-32S	MW-55
Sample ID:	Ambient	MW-29S	MW-31D	MW-XX	MW-31S	MW-32I	MW-32S	MW-55
Date Collected:	GW Limits	8/5/2004	8/5/2004	8/5/2004	8/4/2004	8/4/2004	8/4/2004	8/4/2004
Dissolved Metals (ug/l)								
Aluminum	100	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)								
Aluminum	100	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
Cyanides (ug/L)								
Cyanide, Total	200	**5.7 J**	10 UJ	10 UJ	**1.5 J**	10 UJ	10 UJ	**2.3 J**
Cyanide, Weak Acid Dissociable	NS	NA	NA	NA	NA	NA	NA	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		APTS	C&M	C&M	C&M	C&M
Sample Location:	NY	MW-60	MW01	MW01	MW01	MW01
Sample ID:	Ambient	MW-60	MW1	MW1-F	CMMW01-01	MW-01-CM
Date Collected:	GW Limits	8/4/2004	6/3/1997	6/3/1997	2/1/1999	12/19/2001
BTEX (ug/l)						
Benzene	1.0	10 U	10 U	NA	10 U	10 U
Ethylbenzene	5	10 U	10 U	NA	10 U	10 U
Toluene	5	10 U	10 U	NA	10 U	10 U
Xylene, Total	5	10 U	10 U	NA	10 U	10 U
Total BTEX	NS	ND	ND	NA	ND	ND
Other VOCs (ug/l)						
Acetone	NS	NA	10 U	NA	10 U	10 UB
Butanone,2- (MEK)	NS	NA	10 U	NA	10 U	10 UJ
Chloroform	7	NA	10 U	NA	10 U	10 U
Dichloropropene, trans-1,3	5	NA	10 U	NA	10 U	10 U
Methyl-2-pentanone,4-	NS	NA	10 U	NA	10 U	10 UJ
Methylene chloride	5	NA	10 U	NA	10 U	10 U
Styrene	5	NA	10 U	NA	10 U	10 U
Tetrachloroethane,1,1,2,2-	5	NA	10 U	NA	10 U	10 U
Trichloroethane,1,1,1-	5	NA	10 U	NA	10 U	10 U
Trichloroethane,1,1,2-	1	NA	10 U	NA	10 U	10 U
Noncarcinogenic PAHs (ug/l)						
Acenaphthene	20	**10 J**	9 U	NA	10 U	10 U
Acenaphthylene	50	10 U	9 U	NA	10 U	10 U
Anthracene	50	**2 J**	9 U	NA	10 U	10 U
Benzo[g,h,i]perylene	NS	10 U	9 U	NA	10 U	10 U
Fluoranthene	50	**2 J**	9 U	NA	10 U	10 U
Fluorene	50	**5 J**	9 U	NA	10 U	10 U
Methylnaphthalene,2-	NS	**5 J**	NA	NA	10 U	10 U
Naphthalene	10	**6 J**	9 U	NA	10 U	10 U
Phenanthrene	50	**12**	9 U	NA	10 U	10 U
Pyrene	50	**3 J**	9 U	NA	10 U	10 U
Carcinogenic PAHs (ug/l)						
Benz[a]anthracene	0.002	10 U	9 U	NA	10 U	10 U
Benzo[a]pyrene	0.002	10 U	9 U	NA	10 U	10 U
Benzo[b]fluoranthene	0.002	10 U	9 U	NA	10 U	10 U
Benzo[k]fluoranthene	0.002	10 U	9 U	NA	10 U	10 U
Chrysene	0.002	10 U	9 U	NA	10 U	10 U
Dibenz[a,h]anthracene	NS	10 U	9 U	NA	10 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	10 U	9 U	NA	10 U	10 U
Total PAHs (ug/L)						
Total PAHs	NS	**45**	ND	NA	ND	ND
Other SVOCs (ug/L)						
Benzaldehyde	NS	NA	NA	NA	NA	10 U
Biphenyl,1,1-	NS	NA	NA	NA	NA	10 U
Bis(2-ethylhexyl)phthalate	5	10 U	NA	NA	10 U	10 U
Carbazole	NS	10 U	NA	NA	10 UJ	10 U
Dibenzofuran	NS	10 U	NA	NA	10 U	10 U
Diethyl phthalate	50	10 U	NA	NA	10 U	10 U
Dimethylphenol, 2,4-	1	10 U	NA	NA	10 U	10 UJ
Di-n-butyl phthalate	50	10 U	NA	NA	10 U	10 U
Methylphenol, 4-	1	10 U	NA	NA	10 U	10 UJ
N-Nitrosodiphenylamine	50	10 U	NA	NA	10 U	10 U
Phenol	1	10 U	NA	NA	10 U	10 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		APTS	C&M	C&M	C&M	C&M
Sample Location:	NY	MW-60	MW01	MW01	MW01	MW01
Sample ID:	Ambient	MW-60	MW1	MW1-F	CMMW01-01	MW-01-CM
Date Collected:	GW Limits	8/4/2004	6/3/1997	6/3/1997	2/1/1999	12/19/2001
Dissolved Metals (ug/l)						
Aluminum	100	NA	NA	20.1 U	NA	NA
Arsenic	25	NA	NA	5.1 U	NA	NA
Barium	1000	NA	NA	**204**	NA	NA
Beryllium	3	NA	NA	0.98 U	NA	NA
Calcium	NS	NA	NA	**52600**	NA	NA
Chromium	50	NA	NA	1.1 U	NA	NA
Cobalt	5	NA	NA	1.3 U	NA	NA
Copper	200	NA	NA	1.8 U	NA	NA
Iron	300	NA	NA	25 U	NA	NA
Lead	25	NA	NA	2.1 U	NA	NA
Magnesium	35000	NA	NA	**15400**	NA	NA
Manganese	300	NA	NA	**18.4**	NA	NA
Mercury	0.7	NA	NA	**0.09 B**	NA	NA
Nickel	100	NA	NA	1.8 U	NA	NA
Potassium	NS	NA	NA	**3110 B**	NA	NA
Selenium	10	NA	NA	3.7 U	NA	NA
Sodium	20000	NA	NA	**82700**	NA	NA
Thallium	0.5	NA	NA	5.2 U	NA	NA
Vanadium	14	NA	NA	0.7 U	NA	NA
Zinc	2000	NA	NA	**4.2 B**	NA	NA
Total Metals (ug/l)						
Aluminum	100	NA	**1860**	NA	75.7 UB	NA
Arsenic	25	NA	5.1 U	NA	10.6 U	NA
Barium	1000	NA	**231**	NA	**145 B**	NA
Beryllium	3	NA	0.98 U	NA	1 UB	NA
Calcium	NS	NA	**52400**	NA	**48600**	NA
Chromium	50	NA	**2.3 B**	NA	0.6 U	NA
Cobalt	5	NA	**2 B**	NA	1.2 UB	NA
Copper	200	NA	**4.3 B**	NA	4 UB	NA
Iron	300	NA	3080 N *	NA	78.9 UB	NA
Lead	25	NA	**3.2**	NA	**1.6 JB**	NA
Magnesium	35000	NA	**15900**	NA	**12400**	NA
Manganese	300	NA	**152**	NA	**5 B**	NA
Mercury	0.7	NA	**0.083 B**	NA	0.2 U	NA
Nickel	100	NA	**3.6 B**	NA	2.4 UB	NA
Potassium	NS	NA	**3610 B**	NA	**2530 JBE**	NA
Selenium	10	NA	3.7 U	NA	8 UW	NA
Sodium	20000	NA	**83500**	NA	**45500**	NA
Thallium	0.5	NA	5.2 U	NA	1.1 UJ	NA
Vanadium	14	NA	**5 B**	NA	**1.5 B**	NA
Zinc	2000	NA	**10.9 B**	NA	18 UB	NA
Cyanides (ug/L)						
Cyanide, Total	200	10 UJ	NA	NA	NA	3 U
Cyanide, Weak Acid Dissociable	NS	NA	NA	NA	NA	3 UJ

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW01	MW02	MW02	MW02	MW02	MW03
Sample ID:	Ambient	MW-01	MW2	MW2-F	CMMW02-01	MW-02	MW3
Date Collected:	GW Limits	8/3/2004	6/3/1997	6/3/1997	2/1/1999	8/4/2004	6/3/1997
BTEX (ug/l)							
Benzene	1.0	10 U	**5700 D**	NA	**18**	**650**	**2200 D**
Ethylbenzene	5	10 U	**680**	NA	**34**	**140**	**700**
Toluene	5	10 U	**490**	NA	**18**	**120**	**2800 D**
Xylene, Total	5	10 U	**1000**	NA	**59**	**430**	**2800 D**
Total BTEX	NS	ND	**7870**	NA	**129**	**1340**	**8500**
Other VOCs (ug/l)							
Acetone	NS	NA	100 U	NA	**18**	NA	**200**
Butanone,2- (MEK)	NS	NA	100 U	NA	10 U	NA	**22 J**
Chloroform	7	NA	100 U	NA	10 U	NA	40 U
Dichloropropene, trans-1,3	5	NA	100 U	NA	10 U	NA	40 U
Methyl-2-pentanone,4-	NS	NA	100 U	NA	10 U	NA	**84**
Methylene chloride	5	NA	100 U	NA	10 U	NA	40 U
Styrene	5	NA	100 U	NA	10 U	NA	**1000 D**
Tetrachloroethane,1,1,2,2-	5	NA	100 U	NA	10 U	NA	40 U
Trichloroethane,1,1,1-	5	NA	100 U	NA	10 U	NA	40 U
Trichloroethane,1,1,2-	1	NA	100 U	NA	10 U	NA	40 U
Noncarcinogenic PAHs (ug/l)							
Acenaphthene	20	10 U	**39**	NA	**320 DJ**	**1100**	590 U
Acenaphthylene	50	10 U	**290 J D**	NA	**1200 D**	**420 J**	**320 J**
Anthracene	50	10 U	**13**	NA	**920 D**	**540 J**	590 U
Benzo[g,h,i]perylene	NS	10 U	12 U	NA	**24**	**63 J**	590 U
Fluoranthene	50	10 U	**7 J**	NA	**1100 D**	**570 J**	590 U
Fluorene	50	10 U	**52**	NA	**1100 D**	**890**	**65 J**
Methylnaphthalene,2-	NS	10 U	NA	NA	**1600 D**	**2600**	NA
Naphthalene	10	10 U	**3400 D**	NA	**3300 D**	**4400**	**10000 D**
Phenanthrene	50	10 U	**60**	NA	**3400 D**	**2000**	**71 J**
Pyrene	50	10 U	**9 J**	NA	**1600 D**	**800**	590 U
Carcinogenic PAHs (ug/l)							
Benz[a]anthracene	0.002	10 U	**2 J**	NA	**430 DJ**	**240 J**	590 U
Benzo[a]pyrene	0.002	10 U	**2 J**	NA	**320 DJ**	**170 J**	590 U
Benzo[b]fluoranthene	0.002	10 U	**1 J**	NA	**240 DJ**	**190 J**	590 U
Benzo[k]fluoranthene	0.002	10 U	12 U	NA	**24**	580 U	590 U
Chrysene	0.002	10 U	**2 J**	NA	**380 DJ**	**210 J**	590 U
Dibenz[a,h]anthracene	NS	10 U	12 U	NA	**9 J**	580 U	590 U
Indeno[1,2,3-cd]pyrene	0.002	10 U	12 U	NA	**29**	580 U	590 U
Total PAHs (ug/L)							
Total PAHs	NS	ND	**3877**	NA	**15996**	**14193**	**10456**
Other SVOCs (ug/L)							
Benzaldehyde	NS	NA	NA	NA	NA	NA	NA
Biphenyl,1,1-	NS	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	5	10 U	NA	NA	**28**	580 U	NA
Carbazole	NS	10 U	NA	NA	10 UJ	580 U	NA
Dibenzofuran	NS	10 U	NA	NA	**45**	**120 J**	NA
Diethyl phthalate	50	10 U	NA	NA	10 U	580 U	NA
Dimethylphenol, 2,4-	1	10 U	NA	NA	10 U	580 UJ	NA
Di-n-butyl phthalate	50	10 U	NA	NA	10 U	580 U	NA
Methylphenol, 4-	1	10 U	NA	NA	10 U	580 U	NA
N-Nitrosodiphenylamine	50	10 U	NA	NA	10 U	580 U	NA
Phenol	1	10 U	NA	NA	10 U	**120 J**	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW01	MW02	MW02	MW02	MW02	MW03
Sample ID:	Ambient	MW-01	MW2	MW2-F	CMMW02-01	MW-02	MW3
Date Collected:	GW Limits	8/3/2004	6/3/1997	6/3/1997	2/1/1999	8/4/2004	6/3/1997
Dissolved Metals (ug/l)							
Aluminum	100	NA	NA	**869**	NA	NA	NA
Arsenic	25	NA	NA	5.1 U	NA	NA	NA
Barium	1000	NA	NA	**197 B**	NA	NA	NA
Beryllium	3	NA	NA	0.98 U	NA	NA	NA
Calcium	NS	NA	NA	**135000**	NA	NA	NA
Chromium	50	NA	NA	1.1 U	NA	NA	NA
Cobalt	5	NA	NA	**2.7 B**	NA	NA	NA
Copper	200	NA	NA	**1.9 B**	NA	NA	NA
Iron	300	NA	NA	1250 N *	NA	NA	NA
Lead	25	NA	NA	2.1 U	NA	NA	NA
Magnesium	35000	NA	NA	**42500**	NA	NA	NA
Manganese	300	NA	NA	**2940**	NA	NA	NA
Mercury	0.7	NA	NA	**0.065 B**	NA	NA	NA
Nickel	100	NA	NA	**3.9 B**	NA	NA	NA
Potassium	NS	NA	NA	**2570 B**	NA	NA	NA
Selenium	10	NA	NA	3.7 U	NA	NA	NA
Sodium	20000	NA	NA	**13200**	NA	NA	NA
Thallium	0.5	NA	NA	5.2 U	NA	NA	NA
Vanadium	14	NA	NA	**2.3 B**	NA	NA	NA
Zinc	2000	NA	NA	**7.7 B**	NA	NA	NA
Total Metals (ug/l)							
Aluminum	100	NA	**3150**	NA	**23600**	NA	**1180**
Arsenic	25	NA	5.1 U	NA	15 U	NA	5.1 U
Barium	1000	NA	**216**	NA	**213**	NA	**91.1 B**
Beryllium	3	NA	0.98 U	NA	1 UB	NA	0.98 U
Calcium	NS	NA	**133000**	NA	**22700 J**	NA	**40100**
Chromium	50	NA	**4 B**	NA	**30.4**	NA	**1.9 B**
Cobalt	5	NA	**4.6 B**	NA	**15.6 B**	NA	**3.6 B**
Copper	200	NA	**5.9 B**	NA	59.7 U	NA	**4.4 B**
Iron	300	NA	4680 N *	NA	**30800**	NA	2290 N *
Lead	25	NA	**3.9**	NA	**64.6**	NA	2.1 U
Magnesium	35000	NA	**42600**	NA	**12400**	NA	**10000**
Manganese	300	NA	**2900**	NA	**731**	NA	**4310**
Mercury	0.7	NA	**0.081 B**	NA	0.2 U	NA	**0.09 B**
Nickel	100	NA	**7.6 B**	NA	**37 B**	NA	**3.4 B**
Potassium	NS	NA	**3170 B**	NA	**4950 JBE**	NA	**2150 B**
Selenium	10	NA	3.7 U	NA	8 UW	NA	3.7 U
Sodium	20000	NA	**12800**	NA	**14300 J**	NA	**17100**
Thallium	0.5	NA	5.2 U	NA	1.1 UJ	NA	5.2 U
Vanadium	14	NA	**5.9 B**	NA	**38.5 B**	NA	**2.2 B**
Zinc	2000	NA	**14.8 B**	NA	**259**	NA	**7.7 B**
Cyanides (ug/L)							
Cyanide, Total	200	10 U	NA	NA	NA	**40.8 J**	NA
Cyanide, Weak Acid Dissociable	NS	NA	NA	NA	NA	NA	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW03	MW03	MW03	MW03	MW04	MW04
Sample ID:	Ambient	MW3-F	CMMW03-01	MW-03-CM	MW-03	CMMW04-01	MW-04
Date Collected:	GW Limits	6/3/1997	2/2/1999	12/19/2001	8/3/2004	2/3/1999	12/19/2001
BTEX (ug/l)							
Benzene	1.0	NA	**1300 D**	**1800**	**1300**	**320 D**	**120**
Ethylbenzene	5	NA	**360 D**	**780 J**	**540**	**65**	**37**
Toluene	5	NA	**930 D**	**1600**	**1300**	**190**	**76**
Xylene, Total	5	NA	**1500 D**	**2200 J**	**1500**	**430**	**300**
Total BTEX	NS	NA	**4090**	**6380**	**4640**	**1005**	**533**
Other VOCs (ug/l)							
Acetone	NS	NA	**9 J**	100 U	NA	10 U	10 UB
Butanone,2- (MEK)	NS	NA	10 U	100 U	NA	10 U	10 UJ
Chloroform	7	NA	10 U	100 U	NA	10 U	10 U
Dichloropropene, trans-1,3	5	NA	10 U	**31 J**	NA	10 U	10 U
Methyl-2-pentanone,4-	NS	NA	10 U	100 U	NA	10 U	10 UJ
Methylene chloride	5	NA	**2 J**	100 U	NA	10 U	10 U
Styrene	5	NA	**520 D**	**730 J**	NA	**160**	**65**
Tetrachloroethane,1,1,2,2-	5	NA	10 U	100 U	NA	10 U	10 U
Trichloroethane,1,1,1-	5	NA	10 U	100 U	NA	10 U	10 U
Trichloroethane,1,1,2-	1	NA	10 U	**38 J**	NA	10 U	10 U
Noncarcinogenic PAHs (ug/l)							
Acenaphthene	20	NA	**8 J**	2000 U	1000 U	**21**	400 U
Acenaphthylene	50	NA	**71**	**270 J**	**150 J**	**290 DJ**	400 U
Anthracene	50	NA	**4 J**	2000 U	1000 U	**16**	400 U
Benzo[g,h,i]perylene	NS	NA	10 U	2000 U	1000 U	10 U	400 U
Fluoranthene	50	NA	**1 J**	2000 U	1000 U	**6 J**	400 U
Fluorene	50	NA	**19**	2000 U	1000 U	**69**	400 U
Methylnaphthalene,2-	NS	NA	**210 DJ**	**930 J**	**590 J**	**360 DJ**	**62 J**
Naphthalene	10	NA	**2500 D**	**9100**	**5100**	**3100 D**	**2200 J**
Phenanthrene	50	NA	**22**	2000 U	1000 U	**85 DJ**	400 U
Pyrene	50	NA	**1 J**	2000 U	1000 U	**7 J**	400 U
Carcinogenic PAHs (ug/l)							
Benz[a]anthracene	0.002	NA	10 U	2000 U	1000 U	10 U	400 U
Benzo[a]pyrene	0.002	NA	10 U	2000 U	1000 U	10 U	400 U
Benzo[b]fluoranthene	0.002	NA	10 U	2000 U	1000 U	10 U	400 U
Benzo[k]fluoranthene	0.002	NA	10 U	2000 U	1000 U	10 U	400 U
Chrysene	0.002	NA	10 U	2000 U	1000 U	10 U	400 U
Dibenz[a,h]anthracene	NS	NA	10 U	2000 U	1000 U	10 U	400 U
Indeno[1,2,3-cd]pyrene	0.002	NA	10 U	2000 U	1000 U	10 U	400 U
Total PAHs (ug/L)							
Total PAHs	NS	NA	**2836**	**12300**	**5840**	**3954**	**2262**
Other SVOCs (ug/L)							
Benzaldehyde	NS	NA	NA	2000 U	NA	NA	400 U
Biphenyl,1,1-	NS	NA	NA	2000 U	NA	NA	400 U
Bis(2-ethylhexyl)phthalate	5	NA	10 U	2000 U	1000 U	**6 J**	400 U
Carbazole	NS	NA	**21 J**	2000 U	1000 U	**28 J**	400 U
Dibenzofuran	NS	NA	**3 J**	2000 U	1000 U	**11**	400 U
Diethyl phthalate	50	NA	10 U	2000 U	1000 U	10 U	400 U
Dimethylphenol, 2,4-	1	NA	10 U	2000 UJ	1000 UJ	10 U	400 UJ
Di-n-butyl phthalate	50	NA	10 U	2000 U	1000 U	**1 J**	400 U
Methylphenol, 4-	1	NA	10 U	2000 UJ	1000 U	10 U	400 UJ
N-Nitrosodiphenylamine	50	NA	10 U	2000 U	1000 U	10 U	400 U
Phenol	1	NA	10 U	2000 U	1000 U	10 U	**110 J**

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW03	MW03	MW03	MW03	MW04	MW04
Sample ID:	Ambient	MW3-F	CMMW03-01	MW-03-CM	MW-03	CMMW04-01	MW-04
Date Collected:	GW Limits	6/3/1997	2/2/1999	12/19/2001	8/3/2004	2/3/1999	12/19/2001
Dissolved Metals (ug/l)							
Aluminum	100	20.1 U	NA	NA	NA	NA	NA
Arsenic	25	5.1 U	NA	NA	NA	NA	NA
Barium	1000	**81 B**	NA	NA	NA	NA	NA
Beryllium	3	0.98 U	NA	NA	NA	NA	NA
Calcium	NS	**39700**	NA	NA	NA	NA	NA
Chromium	50	1.1 U	NA	NA	NA	NA	NA
Cobalt	5	**3.1 B**	NA	NA	NA	NA	NA
Copper	200	1.8 U	NA	NA	NA	NA	NA
Iron	300	513 N *	NA	NA	NA	NA	NA
Lead	25	**2.4 B**	NA	NA	NA	NA	NA
Magnesium	35000	**9640**	NA	NA	NA	NA	NA
Manganese	300	**4450**	NA	NA	NA	NA	NA
Mercury	0.7	**0.069 B**	NA	NA	NA	NA	NA
Nickel	100	**1.9 B**	NA	NA	NA	NA	NA
Potassium	NS	**1840 B**	NA	NA	NA	NA	NA
Selenium	10	3.7 U	NA	NA	NA	NA	NA
Sodium	20000	**17200**	NA	NA	NA	NA	NA
Thallium	0.5	5.2 U	NA	NA	NA	NA	NA
Vanadium	14	0.7 U	NA	NA	NA	NA	NA
Zinc	2000	**5.5 B**	NA	NA	NA	NA	NA
Total Metals (ug/l)							
Aluminum	100	NA	**497**	NA	NA	11.8 UB	NA
Arsenic	25	NA	5 UB	NA	NA	1.8 UB	NA
Barium	1000	NA	**97.2 B**	NA	NA	**104 B**	NA
Beryllium	3	NA	0.42 UB	NA	NA	0.1 U	NA
Calcium	NS	NA	**46400**	NA	NA	**41900**	NA
Chromium	50	NA	0.6 U	NA	NA	0.6 U	NA
Cobalt	5	NA	**2.6 B**	NA	NA	**0.88 B**	NA
Copper	200	NA	**4.6 B**	NA	NA	2.7 UB	NA
Iron	300	NA	**872**	NA	NA	**384**	NA
Lead	25	NA	3.1 UJ	NA	NA	1.1 UJ	NA
Magnesium	35000	NA	**18400**	NA	NA	**8290**	NA
Manganese	300	NA	**1340**	NA	NA	**1390**	NA
Mercury	0.7	NA	0.2 U	NA	NA	0.2 UN	NA
Nickel	100	NA	3 UB	NA	NA	1.1 UB	NA
Potassium	NS	NA	**6050 EJ**	NA	NA	**1500 B**	NA
Selenium	10	NA	1.6 U	NA	NA	**2.4 BJW**	NA
Sodium	20000	NA	**23500 EJ**	NA	NA	**46700**	NA
Thallium	0.5	NA	1.1 U	NA	NA	1.1 U	NA
Vanadium	14	NA	1.2 U	NA	NA	1.2 U	NA
Zinc	2000	NA	13.9 UBJ	NA	NA	17 UB	NA
Cyanides (ug/L)							
Cyanide, Total	200	NA	NA	**5 J**	**5.7 J**	NA	3 U
Cyanide, Weak Acid Dissociable	NS	NA	NA	3 UJ	NA	NA	3 UJ

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW04	MW04	MW05	MW05	MW05	MW05
Sample ID:	Ambient	MW-44	MW-04	CMMW05-01	CMMW05-01F	MW-05	MW-05
Date Collected:	GW Limits	12/19/2001	8/2/2004	2/3/1999	2/3/1999	12/19/2001	8/2/2004
BTEX (ug/l)							
Benzene	1.0	**120**	**30**	**1 J**	NA	10 U	10 U
Ethylbenzene	5	**35**	**19**	10 U	NA	10 U	10 U
Toluene	5	**73 H**	**26**	10 U	NA	10 U	10 U
Xylene, Total	5	**310**	**110**	10 U	NA	10 U	10 U
Total BTEX	NS	538	185	**1**	NA	ND	ND
Other VOCs (ug/l)							
Acetone	NS	10 UB	NA	10 U	NA	10 UB	NA
Butanone,2- (MEK)	NS	10 UJ	NA	10 U	NA	10 UJ	NA
Chloroform	7	10 U	NA	10 U	NA	**0.2 J**	NA
Dichloropropene, trans-1,3	5	10 U	NA	10 U	NA	10 U	NA
Methyl-2-pentanone,4-	NS	10 UJ	NA	10 U	NA	10 UJ	NA
Methylene chloride	5	10 U	NA	10 U	NA	10 U	NA
Styrene	5	**68**	NA	10 U	NA	10 U	NA
Tetrachloroethane,1,1,2,2-	5	10 U	NA	10 U	NA	10 U	NA
Trichloroethane,1,1,1-	5	10 U	NA	10 U	NA	10 U	NA
Trichloroethane,1,1,2-	1	10 U	NA	10 U	NA	10 U	NA
Noncarcinogenic PAHs (ug/l)							
Acenaphthene	20	500 U	500 U	**3 J**	NA	10 U	10 U
Acenaphthylene	50	**310 J**	**310 J**	**20**	NA	**6 J**	**31**
Anthracene	50	500 U	500 U	10 U	NA	10 U	10 U
Benzo[g,h,i]perylene	NS	500 U	500 U	10 U	NA	10 U	10 U
Fluoranthene	50	500 U	500 U	10 U	NA	10 U	10 U
Fluorene	50	**53 J**	500 U	10 U	NA	10 U	10 U
Methylnaphthalene,2-	NS	**290 J**	**310**	**1 J**	NA	10 U	10 U
Naphthalene	10	**3100 J**	**3000**	**5 J**	NA	10 U	10 UJ
Phenanthrene	50	**110 J**	**110 J**	**3 J**	NA	10 U	**1 J**
Pyrene	50	500 U	500 U	10 U	NA	10 U	10 U
Carcinogenic PAHs (ug/l)							
Benz[a]anthracene	0.002	500 U	500 U	10 U	NA	10 U	10 U
Benzo[a]pyrene	0.002	500 U	500 U	10 U	NA	10 U	10 U
Benzo[b]fluoranthene	0.002	500 U	500 U	10 U	NA	10 U	10 U
Benzo[k]fluoranthene	0.002	500 U	500 U	10 U	NA	10 U	10 U
Chrysene	0.002	500 U	500 U	10 U	NA	10 U	10 U
Dibenz[a,h]anthracene	NS	500 U	500 U	10 U	NA	10 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	500 U	500 U	10 U	NA	10 U	10 U
Total PAHs (ug/L)							
Total PAHs	NS	**4863**	**3730**	**32**	NA	**36**	**52**
Other SVOCs (ug/L)							
Benzaldehyde	NS	500 U	NA	NA	NA	10 U	NA
Biphenyl,1,1-	NS	**65 J**	NA	NA	NA	**1 J**	NA
Bis(2-ethylhexyl)phthalate	5	500 U	500 U	10 U	NA	10 U	**3 J**
Carbazole	NS	500 U	500 U	10 UJ	NA	10 U	10 U
Dibenzofuran	NS	500 U	500 U	10 U	NA	10 U	10 U
Diethyl phthalate	50	500 U	500 U	10 U	NA	10 U	10 U
Dimethylphenol, 2,4-	1	500 UJ	500 UJ	10 U	NA	10 UJ	10 UJ
Di-n-butyl phthalate	50	500 U	500 U	**2 J**	NA	10 U	10 U
Methylphenol, 4-	1	500 UJ	500 U	10 U	NA	10 UJ	10 U
N-Nitrosodiphenylamine	50	500 U	500 U	10 U	NA	10 U	10 U
Phenol	1	500 U	500 U	10 U	NA	10 U	10 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW04	MW04	MW05	MW05	MW05	MW05
Sample ID:	Ambient	MW-44	MW-04	CMMW05-01	CMMW05-01F	MW-05	MW-05
Date Collected:	GW Limits	12/19/2001	8/2/2004	2/3/1999	2/3/1999	12/19/2001	8/2/2004
Dissolved Metals (ug/l)							
Aluminum	100	NA	NA	NA	25.7 UB	NA	NA
Arsenic	25	NA	NA	NA	1.2 U	NA	NA
Barium	1000	NA	NA	NA	**140 B**	NA	NA
Beryllium	3	NA	NA	NA	0.1 U	NA	NA
Calcium	NS	NA	NA	NA	**85000**	NA	NA
Chromium	50	NA	NA	NA	0.6 U	NA	NA
Cobalt	5	NA	NA	NA	0.6 U	NA	NA
Copper	200	NA	NA	NA	3.2 UB	NA	NA
Iron	300	NA	NA	NA	**22.3 B**	NA	NA
Lead	25	NA	NA	NA	1.9 UBJ	NA	NA
Magnesium	35000	NA	NA	NA	**17100**	NA	NA
Manganese	300	NA	NA	NA	**521**	NA	NA
Mercury	0.7	NA	NA	NA	0.2 UN	NA	NA
Nickel	100	NA	NA	NA	0.6 U	NA	NA
Potassium	NS	NA	NA	NA	**1880 B**	NA	NA
Selenium	10	NA	NA	NA	1.6 UJW	NA	NA
Sodium	20000	NA	NA	NA	**44200**	NA	NA
Thallium	0.5	NA	NA	NA	1.1 U	NA	NA
Vanadium	14	NA	NA	NA	1.2 U	NA	NA
Zinc	2000	NA	NA	NA	30.1 U	NA	NA
Total Metals (ug/l)							
Aluminum	100	NA	NA	54.3 UB	NA	NA	NA
Arsenic	25	NA	NA	1.2 U	NA	NA	NA
Barium	1000	NA	NA	**142 B**	NA	NA	NA
Beryllium	3	NA	NA	0.1 U	NA	NA	NA
Calcium	NS	NA	NA	**84000**	NA	NA	NA
Chromium	50	NA	NA	0.6 U	NA	NA	NA
Cobalt	5	NA	NA	0.6 U	NA	NA	NA
Copper	200	NA	NA	3 UB	NA	NA	NA
Iron	300	NA	NA	**42.6 B**	NA	NA	NA
Lead	25	NA	NA	2.8 UBJ	NA	NA	NA
Magnesium	35000	NA	NA	**17000**	NA	NA	NA
Manganese	300	NA	NA	**522**	NA	NA	NA
Mercury	0.7	NA	NA	0.2 UN	NA	NA	NA
Nickel	100	NA	NA	0.6 U	NA	NA	NA
Potassium	NS	NA	NA	**1970 B**	NA	NA	NA
Selenium	10	NA	NA	1.6 UJW	NA	NA	NA
Sodium	20000	NA	NA	**44000**	NA	NA	NA
Thallium	0.5	NA	NA	1.1 U	NA	NA	NA
Vanadium	14	NA	NA	1.2 U	NA	NA	NA
Zinc	2000	NA	NA	14.8 UB	NA	NA	NA
Cyanides (ug/L)							
Cyanide, Total	200	3 U	0.52 U	NA	NA	3 U	0.75 U
Cyanide, Weak Acid Dissociable	NS	3 UJ	NA	NA	NA	3 UJ	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
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Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW06	MW06	MW06	MW07	MW07	MW07
Sample ID:	Ambient	CMMW06-01	MW-06	MW-06	CMMW07-01	MW-07	MW-07
Date Collected:	GW Limits	3/26/1999	12/19/2001	8/2/2004	3/26/1999	12/19/2001	8/2/2004
BTEX (ug/l)							
Benzene	1.0	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	5	10 U	10 U	10 U	10 U	10 U	10 U
Xylene, Total	5	10 U	10 U	10 U	10 U	10 U	10 U
Total BTEX	NS	ND	ND	ND	ND	ND	ND
Other VOCs (ug/l)							
Acetone	NS	10 U	10 UB	NA	10 U	10 UB	NA
Butanone,2- (MEK)	NS	10 U	10 UJ	NA	10 U	10 UJ	NA
Chloroform	7	10 U	10 U	NA	10 U	10 U	NA
Dichloropropene, trans-1,3	5	10 U	10 U	NA	10 U	10 U	NA
Methyl-2-pentanone,4-	NS	10 U	10 UJ	NA	10 U	10 UJ	NA
Methylene chloride	5	10 U	10 U	NA	10 U	10 U	NA
Styrene	5	10 U	10 U	NA	10 U	10 U	NA
Tetrachloroethane,1,1,2,2-	5	10 U	10 U	NA	10 U	10 U	NA
Trichloroethane,1,1,1-	5	10 U	10 U	NA	10 U	10 U	NA
Trichloroethane,1,1,2-	1	10 U	10 U	NA	10 U	10 U	NA
Noncarcinogenic PAHs (ug/l)							
Acenaphthene	20	10 UJ	10 U	11 U	10 UJ	10 U	10 U
Acenaphthylene	50	10 U	10 U	11 U	10 U	10 U	10 U
Anthracene	50	10 U	10 U	11 U	10 U	10 U	10 U
Benzo[g,h,i]perylene	NS	10 U	10 U	11 U	10 U	10 U	10 U
Fluoranthene	50	**2 J**	10 U	11 U	10 U	10 U	10 U
Fluorene	50	10 U	10 U	11 U	10 U	10 U	10 U
Methylnaphthalene,2-	NS	10 U	10 U	11 U	10 U	10 U	10 U
Naphthalene	10	10 U	10 U	11 U	10 U	10 U	10 U
Phenanthrene	50	10 U	10 U	11 U	10 U	10 U	10 U
Pyrene	50	**6 J**	10 U	11 U	10 U	10 U	10 U
Carcinogenic PAHs (ug/l)							
Benz[a]anthracene	0.002	10 U	10 U	11 U	10 U	10 U	10 U
Benzo[a]pyrene	0.002	10 U	10 U	11 U	10 U	10 U	10 U
Benzo[b]fluoranthene	0.002	10 U	10 U	11 U	10 U	10 U	10 U
Benzo[k]fluoranthene	0.002	10 U	10 U	11 U	10 U	10 U	10 U
Chrysene	0.002	10 U	10 U	11 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	NS	10 U	10 U	11 U	10 U	10 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	10 U	10 U	11 U	10 U	10 U	10 U
Total PAHs (ug/L)							
Total PAHs	NS	**8**	ND	ND	ND	ND	ND
Other SVOCs (ug/L)							
Benzaldehyde	NS	NA	10 U	NA	NA	10 U	NA
Biphenyl,1,1-	NS	NA	10 U	NA	NA	10 U	NA
Bis(2-ethylhexyl)phthalate	5	**3500 DB**	10 U	11 U	10 U	10 U	10 U
Carbazole	NS	10 U	10 U	11 U	10 U	10 U	10 U
Dibenzofuran	NS	10 U	10 U	11 U	10 U	10 U	10 U
Diethyl phthalate	50	**4 J**	10 U	11 U	10 U	10 U	10 U
Dimethylphenol, 2,4-	1	10 U	10 UJ	11 UJ	10 U	10 UJ	10 UJ
Di-n-butyl phthalate	50	**81**	10 U	11 U	**3 J**	10 U	10 U
Methylphenol, 4-	1	10 U	10 UJ	11 U	10 U	10 UJ	10 U
N-Nitrosodiphenylamine	50	**5 J**	10 U	11 U	10 U	10 U	10 U
Phenol	1	10 U	10 U	11 U	10 U	10 U	10 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW06	MW06	MW06	MW07	MW07	MW07
Sample ID:	Ambient	CMMW06-01	MW-06	MW-06	CMMW07-01	MW-07	MW-07
Date Collected:	GW Limits	3/26/1999	12/19/2001	8/2/2004	3/26/1999	12/19/2001	8/2/2004
Dissolved Metals (ug/l)							
Aluminum	100	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)							
Aluminum	100	**3500**	NA	NA	**578**	NA	NA
Arsenic	25	**1.6 BJ**	NA	NA	**3.8 BJ**	NA	NA
Barium	1000	**143**	NA	NA	**82.6 B**	NA	NA
Beryllium	3	**0.16 B**	NA	NA	**0.47 B**	NA	NA
Calcium	NS	**91800**	NA	NA	**58400**	NA	NA
Chromium	50	**2.9 B**	NA	NA	0.6 U	NA	NA
Cobalt	5	**3.0 B**	NA	NA	0.6 U	NA	NA
Copper	200	**7.3 B**	NA	NA	**3.1 B**	NA	NA
Iron	300	**5450**	NA	NA	**395**	NA	NA
Lead	25	5.5 U	NA	NA	2.9 UB	NA	NA
Magnesium	35000	**24400**	NA	NA	**23900**	NA	NA
Manganese	300	**388**	NA	NA	**11.3 B**	NA	NA
Mercury	0.7	0.2 U	NA	NA	0.2 U	NA	NA
Nickel	100	**5.6 B**	NA	NA	**1.0 B**	NA	NA
Potassium	NS	**3240**	NA	NA	**1210**	NA	NA
Selenium	10	8.0 UJW	NA	NA	8.0 UJW	NA	NA
Sodium	20000	**36300**	NA	NA	**14700**	NA	NA
Thallium	0.5	1.1 UJ	NA	NA	1.1 UJ	NA	NA
Vanadium	14	**6.4 B**	NA	NA	**49.2 B**	NA	NA
Zinc	2000	22.2 U	NA	NA	6.4 U	NA	NA
Cyanides (ug/L)							
Cyanide, Total	200	NA	3 U	**5.5 J**	NA	3 U	10 U
Cyanide, Weak Acid Dissociable	NS	NA	3 UJ	NA	NA	3 UJ	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW07	MW08	MW08	MW08	MW09
Sample ID:	Ambient	MW-XX	CMMW08-01	MW-08	MW-08	CMMW09-01
Date Collected:	GW Limits	8/2/2004	2/1/1999	12/19/2001	8/3/2004	2/1/1999
BTEX (ug/l)						
Benzene	1.0	10 U	**29 J**	**1 J**	**180**	**1 J**
Ethylbenzene	5	10 U	10 U	10 U	**14**	**33**
Toluene	5	10 U	10 U	10 U	**3 J**	**2 J**
Xylene, Total	5	10 U	**3 J**	10 U	**14**	**31**
Total BTEX	NS	ND	**32**	**1**	**211**	67
Other VOCs (ug/l)						
Acetone	NS	NA	**15**	10 UB	NA	**8 J**
Butanone,2- (MEK)	NS	NA	10 U	10 UJ	NA	**7 J**
Chloroform	7	NA	10 U	10 U	NA	10 U
Dichloropropene, trans-1,3	5	NA	10 U	10 U	NA	10 U
Methyl-2-pentanone,4-	NS	NA	10 U	10 UJ	NA	10 U
Methylene chloride	5	NA	10 U	10 U	NA	10 U
Styrene	5	NA	10 U	10 U	NA	10 U
Tetrachloroethane,1,1,2,2-	5	NA	10 U	10 U	NA	10 U
Trichloroethane,1,1,1-	5	NA	10 U	10 U	NA	10 U
Trichloroethane,1,1,2-	1	NA	10 U	10 U	NA	10 U
Noncarcinogenic PAHs (ug/l)						
Acenaphthene	20	11 U	**11**	10 U	11 U	**70**
Acenaphthylene	50	11 U	**3 J**	10 U	11 U	**5 J**
Anthracene	50	11 U	10 U	10 U	11 U	**9 J**
Benzo[g,h,i]perylene	NS	11 U	10 U	10 U	11 U	10 U
Fluoranthene	50	11 U	10 U	10 U	11 U	**6 J**
Fluorene	50	11 U	10 U	10 U	11 U	**31**
Methylnaphthalene,2-	NS	11 U	**1 J**	10 U	11 U	**16**
Naphthalene	10	11 U	**17**	10 U	11 U	**60**
Phenanthrene	50	11 U	**2 J**	10 U	11 U	**16**
Pyrene	50	11 U	10 U	10 U	11 U	**7 J**
Carcinogenic PAHs (ug/l)						
Benz[a]anthracene	0.002	11 U	10 U	10 U	11 U	10 U
Benzo[a]pyrene	0.002	11 U	10 U	10 U	11 U	10 U
Benzo[b]fluoranthene	0.002	11 U	10 U	10 U	11 U	10 U
Benzo[k]fluoranthene	0.002	11 U	10 U	10 U	11 U	10 U
Chrysene	0.002	11 U	10 U	10 U	11 U	10 U
Dibenz[a,h]anthracene	NS	11 U	10 U	10 U	11 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	11 U	10 U	10 U	11 U	10 U
Total PAHs (ug/L)						
Total PAHs	NS	ND	**34**	ND	ND	**220**
Other SVOCs (ug/L)						
Benzaldehyde	NS	NA	NA	10 U	NA	NA
Biphenyl,1,1-	NS	NA	NA	10 U	NA	NA
Bis(2-ethylhexyl)phthalate	5	11 U	**1 J**	10 U	11 U	10 U
Carbazole	NS	11 U	**2 J**	10 U	11 U	**4 J**
Dibenzofuran	NS	11 U	10 U	10 U	11 U	**5 J**
Diethyl phthalate	50	11 U	10 U	10 U	11 U	10 U
Dimethylphenol, 2,4-	1	11 UJ	10 U	10 UJ	11 UJ	**2 J**
Di-n-butyl phthalate	50	11 U	10 U	10 U	11 U	**1 J**
Methylphenol, 4-	1	11 U	10 U	10 UJ	11 U	10 U
N-Nitrosodiphenylamine	50	11 U	10 U	10 U	11 U	10 U
Phenol	1	11 U	**1 J**	10 U	11 U	**2 J**

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:		C&M	C&M	C&M	C&M	C&M
Sample Location:	NY	MW07	MW08	MW08	MW08	MW09
Sample ID:	Ambient	MW-XX	CMMW08-01	MW-08	MW-08	CMMW09-01
Date Collected:	GW Limits	8/2/2004	2/1/1999	12/19/2001	8/3/2004	2/1/1999
Dissolved Metals (ug/l)						
Aluminum	100	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA
Total Metals (ug/l)						
Aluminum	100	NA	**2400**	NA	NA	**842**
Arsenic	25	NA	4.3 UB	NA	NA	1.2 U
Barium	1000	NA	**219**	NA	NA	**141**
Beryllium	3	NA	0.1 U	NA	NA	0.1 U
Calcium	NS	NA	**80700**	NA	NA	**83900**
Chromium	50	NA	**1.5 B**	NA	NA	0.6 U
Cobalt	5	NA	2.3 UB	NA	NA	**5.2 B**
Copper	200	NA	7.8 UB	NA	NA	3.6 UB
Iron	300	NA	**3670**	NA	NA	**5750**
Lead	25	NA	**4.8 J**	NA	NA	**2.1 JB**
Magnesium	35000	NA	**26400**	NA	NA	**44100**
Manganese	300	NA	**665**	NA	NA	**7850**
Mercury	0.7	NA	0.2 U	NA	NA	0.2 U
Nickel	100	NA	**43.8**	NA	NA	**8.4 B**
Potassium	NS	NA	**4150 JBE**	NA	NA	**3520 JBE**
Selenium	10	NA	8 U	NA	NA	8 UW
Sodium	20000	NA	**23300**	NA	NA	**16800**
Thallium	0.5	NA	1.1 UJ	NA	NA	**8.1 JB**
Vanadium	14	NA	**4.5 B**	NA	NA	**1.5 B**
Zinc	2000	NA	**134**	NA	NA	28 U
Cyanides (ug/L)						
Cyanide, Total	200	10 U	NA	**3.8 J**	**5.8 J**	NA
Cyanide, Weak Acid Dissociable	NS	NA	NA	3 UJ	NA	NA

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:	NY	C&M	C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	Ambient	MW09	MW09	MW10	MW10	MW10	MW-18	MW-18
Sample ID:	GW	MW-09	MW-09	CMMW10-01	MW-10	MW-10	MW-18	MW-18
Date Collected:	Limits	12/19/2001	8/3/2004	2/1/1999	12/19/2001	8/3/2004	12/20/2001	8/3/2004
BTEX (ug/l)								
Benzene	1.0	**2 J**	**4 J**	10 U	**0.7 J**	10 U	**16000**	10 U
Ethylbenzene	5	**19**	**41**	10 U	10 U	10 U	**370 J**	**0.4 J**
Toluene	5	**1 J**	**1 J**	10 U	**0.9 J**	10 U	**950 J**	10 U
Xylene, Total	5	**19**	**27**	10 U	**0.6 J**	10 U	**3400**	**4 J**
Total BTEX	NS	**41**	**73**	ND	**2.2**	ND	**20720**	**4.4**
Other VOCs (ug/l)								
Acetone	NS	10 U	NA	10 U	10 U	NA	20 U	NA
Butanone,2- (MEK)	NS	10 U	NA	10 U	10 U	NA	20 U	NA
Chloroform	7	10 U	NA	**2 J**	10 U	NA	20 U	NA
Dichloropropene, trans-1,3	5	10 U	NA	10 U	10 U	NA	20 U	NA
Methyl-2-pentanone,4-	NS	10 U	NA	10 U	10 U	NA	20 U	NA
Methylene chloride	5	10 U	NA	10 U	10 U	NA	20 U	NA
Styrene	5	10 U	NA	10 U	10 U	NA	20 U	NA
Tetrachloroethane,1,1,2,2-	5	10 U	NA	10 U	10 U	NA	**0.3 J**	NA
Trichloroethane,1,1,1-	5	10 U	NA	10 U	10 U	NA	**0.5 J**	NA
Trichloroethane,1,1,2-	1	10 U	NA	10 U	10 U	NA	20 U	NA
Noncarcinogenic PAHs (ug/l)								
Acenaphthene	20	**180**	**250**	10 U	10 U	10 U	270 U	10 U
Acenaphthylene	50	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Anthracene	50	**14 J**	**18 J**	10 U	10 U	10 U	270 U	10 U
Benzo[g,h,i]perylene	NS	40 U	44 U	10 U	10 UJ	10 U	270 U	10 U
Fluoranthene	50	40 U	**5 J**	10 U	10 U	10 U	270 U	10 U
Fluorene	50	**59**	**87**	10 U	10 U	10 U	270 U	10 U
Methylnaphthalene,2-	NS	40 U	44 U	10 U	10 U	10 U	**68 J**	10 U
Naphthalene	10	**12 J**	44 U	10 U	10 U	10 U	**2200**	10 U
Phenanthrene	50	**65**	**73**	10 U	10 U	10 U	270 U	10 U
Pyrene	50	**7 J**	**6 J**	10 U	10 U	10 U	270 U	10 U
Carcinogenic PAHs (ug/l)								
Benz[a]anthracene	0.002	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Benzo[a]pyrene	0.002	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Benzo[b]fluoranthene	0.002	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Benzo[k]fluoranthene	0.002	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Chrysene	0.002	40 U	44 U	10 U	10 UJ	10 U	270 U	10 U
Dibenz[a,h]anthracene	NS	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	40 U	44 U	10 U	10 UJ	10 U	270 U	10 U
Total PAHs (ug/L)								
Total PAHs	NS	**377**	**483**	ND	ND	ND	**2268**	ND
Other SVOCs (ug/L)								
Benzaldehyde	NS	**9 J**	NA	NA	10 U	NA	270 U	NA
Biphenyl,1,1-	NS	**41**	NA	NA	10 U	NA	270 U	NA
Bis(2-ethylhexyl)phthalate	5	40 U	44 U	10 U	10 U	**12**	270 U	10 U
Carbazole	NS	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Dibenzofuran	NS	**12 J**	**14 J**	10 U	10 U	10 U	270 U	10 U
Diethyl phthalate	50	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Dimethylphenol, 2,4-	1	40 U	44 U	10 U	10 U	10 U	270 U	10 UJ
Di-n-butyl phthalate	50	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Methylphenol, 4-	1	40 U	44 U	10 U	10 U	10 U	270 U	10 U
N-Nitrosodiphenylamine	50	40 U	44 U	10 U	10 U	10 U	270 U	10 U
Phenol	1	40 U	44 U	10 U	10 U	10 U	**120 J**	10 U

Table 6
Groundwater Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Site Location:	NY	C&M	C&M	C&M	C&M	C&M	C&M	C&M
Sample Location:	Ambient	MW09	MW09	MW10	MW10	MW10	MW-18	MW-18
Sample ID:	GW	MW-09	MW-09	CMMW10-01	MW-10	MW-10	MW-18	MW-18
Date Collected:	Limits	12/19/2001	8/3/2004	2/1/1999	12/19/2001	8/3/2004	12/20/2001	8/3/2004
Dissolved Metals (ug/l)								
Aluminum	100	NA	NA	NA	NA	NA	NA	NA
Arsenic	25	NA	NA	NA	NA	NA	NA	NA
Barium	1000	NA	NA	NA	NA	NA	NA	NA
Beryllium	3	NA	NA	NA	NA	NA	NA	NA
Calcium	NS	NA	NA	NA	NA	NA	NA	NA
Chromium	50	NA	NA	NA	NA	NA	NA	NA
Cobalt	5	NA	NA	NA	NA	NA	NA	NA
Copper	200	NA	NA	NA	NA	NA	NA	NA
Iron	300	NA	NA	NA	NA	NA	NA	NA
Lead	25	NA	NA	NA	NA	NA	NA	NA
Magnesium	35000	NA	NA	NA	NA	NA	NA	NA
Manganese	300	NA	NA	NA	NA	NA	NA	NA
Mercury	0.7	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Potassium	NS	NA	NA	NA	NA	NA	NA	NA
Selenium	10	NA	NA	NA	NA	NA	NA	NA
Sodium	20000	NA	NA	NA	NA	NA	NA	NA
Thallium	0.5	NA	NA	NA	NA	NA	NA	NA
Vanadium	14	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)								
Aluminum	100	NA	NA	**1440**	NA	NA	NA	NA
Arsenic	25	NA	NA	2.1 UB	NA	NA	NA	NA
Barium	1000	NA	NA	**134 B**	NA	NA	NA	NA
Beryllium	3	NA	NA	0.1 U	NA	NA	NA	NA
Calcium	NS	NA	NA	**71200**	NA	NA	NA	NA
Chromium	50	NA	NA	**0.7 B**	NA	NA	NA	NA
Cobalt	5	NA	NA	1.2 UB	NA	NA	NA	NA
Copper	200	NA	NA	4.1 UB	NA	NA	NA	NA
Iron	300	NA	NA	**2160**	NA	NA	NA	NA
Lead	25	NA	NA	1.1 UJ	NA	NA	NA	NA
Magnesium	35000	NA	NA	**18600**	NA	NA	NA	NA
Manganese	300	NA	NA	**249**	NA	NA	NA	NA
Mercury	0.7	NA	NA	0.2 U	NA	NA	NA	NA
Nickel	100	NA	NA	2 UB	NA	NA	NA	NA
Potassium	NS	NA	NA	**3070 JBE**	NA	NA	NA	NA
Selenium	10	NA	NA	8 UW	NA	NA	NA	NA
Sodium	20000	NA	NA	**46300**	NA	NA	NA	NA
Thallium	0.5	NA	NA	1.1 U	NA	NA	NA	NA
Vanadium	14	NA	NA	**3 B**	NA	NA	NA	NA
Zinc	2000	NA	NA	22.9 U	NA	NA	NA	NA
Cyanides (ug/L)								
Cyanide, Total	200	**102**	**169**	NA	3 U	10 U	3 U	10 U
Cyanide, Weak Acid Dissociable	NS	**3**	NA	NA	3 U	NA	3 U	NA

Notes:
NS - no standard established
NA - not analyzed
ND - None detected in group for which a total was calculated
J - estimated value
U - indicates not detected at or above the reporting limit shown
UJ - not detected at or above the reporting limit shown, and the reporting limit shown is estimated
B - (organics) compound was detected in laboratory blank sample
B - (inorganics) analyte was detected between the method detection limit and the reporting limit
N - matrix spike recovery outside control limits
* - laboratory duplicate outside of control limits
D - result is from a reanalysis at a different dilution factor
Bold indicates constituent is a detected value
Shade and bold indicates that detected result value exceeds established New York Ambient Groundwater Limits
ug/L - micrograms per liter or parts per billion (ppb)
BTEX - benzene, toluene, ethylbenzene, and xylene (a subset of VOCs)
VOCs - Volatile Organic Compounds
PAHS - polycyclic aromatic hydrocarbons (A subset of SVOCs)
SVOCs - Semivolatile Organic Compounds

Table 7
Stormwater Analytical Results
Clove and Maple Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	NYSDEC Ambient Groundwater Limits (GA)	Sample ID / Date Collected / Sample Type						
		6 TOR	Clove and Maple		Apartments			Hudson
		SW013102-1 1/31/2002 Primary	CMSW-01 3/4/1999 Primary	CMSW03 3/4/1999 Primary	SW013102-5 1/31/2002 Primary	SW013102-6 1/31/2002 Primary	SW013102-8 1/31/2002 Duplicate	SWOUT013002-1 1/30/2002
BTEX by NYSASP Method 95-1 (ug/L)								
Benzene	1.0	10 U	10 U	NA	0.5 J	5 J	5 J	4 J
Toluene	5	2 J	4 J	NA	10 U	10 UJ	10 UJ	10 UJ
Ethylbenzene	5	10 U	10 U	NA	1 J	3 J	3 J	2J
Xylene, Total	5	10 U	10 U	NA	0.7 J	2 J	2 J	1J
Total BTEX		2	4	ND	2	10	10	7
Other VOCs by NYSASP Method 95-1 (ug/L)								
Butanone,2- (MEK)	NS	9 J	10 U	NA	10 U	10 UJ	10 UJ	10 UJ
Chloroform	7	0.5 J	10 U	NA	10 U	10 UJ	10 UJ	10 UJ
Dichloroethene,1,2- (Total)	5	0.5 J	10 U	NA	10 U	10 UJ	10 UJ	10 UJ
Methyl-2-pentanone,4-	NS	6 J	10 U	NA	1 J	10 UJ	10 UJ	10 UJ
Methylene chloride	5	10 U	1 J	NA	10 U	10 UJ	10 UJ	10 UJ
Tetrachloroethene	5	0.6 J	10 U	NA	10 U	10 UJ	10 UJ	10 UJ
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (ug/L)								
Acenaphthene	20	10 U	10 U	10 U	4 J	11 J	9 J	9 J
Anthracene	50	10 U	10 U	10 U	10 U	1 J	11 U	10 U
Fluoranthene	50	2 J	1 J	10 U	10 U	2 J	1 J	10 U
Fluorene	50	10 U	10 U	10 U	1 J	4 J	3 J	3 J
Methylnaphthalene,2-	NS	10 U	10 U	10 U	1 J	12 U	11 U	2 J
Naphthalene	10	10 U	10 U	10 U	4 J	12 U	11 U	5 J
Phenanthrene	50	1 J	10 U	10 U	1 J	6 J	4 J	2 J
Pyrene	50	2 J	2 J	10 U	10 U	2 J	2 J	10 U
Total PAHs (Non-carc.)		5	3	ND	11	26	19	21
PAHs (Carcinogenic) by NYSASP Method 95-2 (ug/L)								
Chrysene	0.002	1 J	10 U	10 U	10 U	12 U	11 U	10 U
Dibenz[a,h]anthracene	NS	10 U	10 U	10 U	10 U	12 U	11 U	10 U
Indeno[1,2,3-cd]pyrene	0.002	1 J	10 U	10 U	10 U	12 U	11 U	10 U
Total PAHs (Carc.)		2	ND	ND	ND	ND	ND	ND
Other SVOCs by NYSASP Method 95-2 (ug/L)								
Benzaldehyde	NS	1 J	10 U	10 U	10 UJ	12 UJ	11 UJ	10 UJ
Butyl benzyl phthalate	50	2 J	10 U	10 U	10 U	12 U	11 U	10 U
Diethyl phthalate	50	1 J	25 U	25 U	10 U	12 U	11 U	10 U
Dinitrotoluene,2,6-	5	10 U	10 U	10 U	10 U	12 U	11 U	10
Methylphenol,2-	1	1 J	25 U	25 U	10 UJ	12 UJ	11 UJ	10 UJ
Nitrophenol,4-	1	3 J	10 U	10 U	25 U	29 U	28 U	25 U
Phenol	1	4 J	25 U	25 U	10 U	12 U	11 U	10 U
Trichlorophenol,2,4,6-	1	10 U			10 U	12 U	11 U	10 U
Metals by 200.7 (ug/L)								
Aluminum	100	NA	1510 EJ	953 EJ	NA	NA	NA	NA
Antimony	3	NA	8.0 UB	2.3 U	NA	NA	NA	NA
Arsenic	25	NA	6.9 UB	1.2 U	NA	NA	NA	NA
Barium	1000	NA	57.8 B	23.4 B	NA	NA	NA	NA
Beryllium	3	NA	0.6 B	0.10 U	NA	NA	NA	NA
Cadmium	5	NA	0.2 UJ	0.2 UJ	NA	NA	NA	NA
Calcium	NS	NA	79500	15400	NA	NA	NA	NA
chromium	50	NA	16.2	1.1 UB	NA	NA	NA	NA
Cobalt	5	NA	2.6 B	0.6 U	NA	NA	NA	NA
Copper	200	NA	31.8 EJ	14.2 JBE	NA	NA	NA	NA
Iron	300	NA	2530	1050	NA	NA	NA	NA
Lead	25	NA	37.9	9	NA	NA	NA	NA
Magnesium	35000	NA	21100	3840 B	NA	NA	NA	NA
Manganese	300	NA	54.5	33.4	NA	NA	NA	NA
Mercury	0.7	NA	0.2 U	0.2 U	NA	NA	NA	NA
Nickel	100	NA	6.7 B	3.3 UB	NA	NA	NA	NA
Potassium	NS	NA	7270 EJ	3130 JBE	NA	NA	NA	NA
Selenium	10	NA	8.0 U	1.6 U	NA	NA	NA	NA
Silver	50	NA	1.2 U	1.2 U	NA	NA	NA	NA
Sodium	20000	NA	15000	81900	NA	NA	NA	NA
Thallium	0.5	NA	1.1 UJ	1.1 UJ	NA	NA	NA	NA
Vanadium	14	NA	6.4 B	2.0 B	NA	NA	NA	NA
Zinc	2000	NA	78.1 EJ	43.3 EJ	NA	NA	NA	NA
Cyanides by CLP Methods (4500CN and ILM04.0) (ug/L)								
Cyanide, Weak Acid Dissociable	NS	3 U	135 J	10.0 U	4.7 U	3 U	3 U	3 U
Cyanide, Total	200	29.4	23.8 J*	10.0 U*	3 U	3 U	3 U	3 U
Geochemical Analyses by Various Methods								
pH	NS	7.31	NA	NA	7.47	7.37	7.41	7.38 J
Hardness	NS	206	NA	NA	332	346	336	346

Notes:

U - Analyte not detected
B - Analyte detected in associated blank
* - Duplicate analysis outside control limits
W - Post digest spike recovery furnace outside 85-115% control limit, while sample absorbance less than 50% of spike absorbance
E - Exceeds calibration range
E - Exceeds calibration range
J - Estimated value
D - Dilution result
NA - Not available
NS - No standard
ND - Not Detected

Table 8
Storm Sewer Sediments Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	RSCO or Risk-Based Criteria	Sample ID/ Date Collected					
		Clove and Maple Avenue				*146 Maple Avenue*	*Apartments*
		CMSED01 3/4/1999	CMSED03 3/4/1999	SD013102-2 1/31/2002	SD013102-3 1/31/2002	SD013102-4 1/31/2002	SD013102-6 1/31/2002
BTEX by NYSASP Method 95-1 (mg/kg)							
Benzene	12 (a)	0.014 U	0.013 U	0.012 U	0.013 U	0.011 U	0.008 J
Toluene	6300 (a)	0.014 U	0.013 U	0.012 U	0.0009 J	0.0006 J	0.001 J
Ethylbenzene	7800 (a)	0.014 U	0.013 U	0.012 U	0.013 U	0.011 U	0.043
Xylene, Total	16000 (a)	0.014 U	0.013 U	0.012 U	0.013 U	0.011 U	0.027
Total BTEX		ND	ND	ND	0.0009	0.0006	0.08
Other VOCs by NYSASP Method 95-1 and 91-1 (mg/kg)							
Butanone,2- (MEK)	47000 (a)	0.006 J	0.013 U	0.012 U	0.013 U	0.011 U	0.014 U
Methyl-2-pentanone,4-	NA	0.008 J	0.013 U	0.012 U	0.013 U	0.011 U	0.014 U
Tetrachloroethene	1.2 (a)	0.014 U	0.013 U	0.012 U	0.013 U	0.011 J	0.014 U
PAHs (Non-carcinogenic) by NYSASP Methods 91-2 and 95-2 (mg/kg)							
Acenaphthene	50 (b)	0.079 J	0.42 U	0.072 J	1.6 U	0.37 U	14
Acenaphthylene	41 (b)	0.47 U	0.048 J	0.19 J	1.1 J	0.18 J	4.4 U
Anthracene	50 (b)	0.47 U	0.11 J	0.24 J	1.2 J	0.32 J	3.6 J
Benzo[g,h,i]perylene	50 (b)	0.25 J	0.18 J	0.49	6.5	0.58	0.46 J
Fluoranthene	50 (b)	1.1	1	1.6	7.1	1.7	3.9 J
Fluorene	50 (b)	0.47 U	0.057 J	0.058 J	0.28 J	0.37 U	5.7
Methylnaphthalene,2-	50 (b)	0.47 U	0.42 U	0.039 J	1.6 U	0.37 U	6.4
Naphthalene	50 (b)	0.47 U	0.42 U	0.38 U	1.6 U	0.37 U	6.9
Phenanthrene	50 (b)	0.44 J	0.6	0.79	3.9	0.65	24
Pyrene	50 (b)	1.1	0.92	1.5	7.8	1.2	6.7
Total PAHs (Non-carcinogenic)	**500**	3.0	3	5.0	27.9	4.63	72
PAHs (Carcinogenic) by NYSASP Methods 91-2 and 95-2 (mg/kg)							
Benz[a]anthracene	0.224 (b)	**0.5**	**0.42 J**	**1.3**	**3.4**	**0.85**	**0.51 J**
Benzo[a]pyrene	0.061 (b)	**0.56**	**0.44**	**1.2**	**4**	**1**	4.4 U
Benzo[b]fluoranthene	0.87 (b)	0.86	0.69	**1.1**	**2.8**	0.86	4.4 U
Benzo[k]fluoranthene	8.7 (b)	0.3 J	0.18 J	1	3.7	0.8	4.4 U
Chrysene	50 (b)	0.63	0.48	1.4	4.5	1	0.5 J
Dibenz[a,h]anthracene	0.014 (b)	0.069 J	0.058 J	0.21 J	1.4 J	0.18 J	4.4 U
Indeno[1,2,3-cd]pyrene	0.87 (a)	0.25 J	0.22 J	0.56	**4.7**	0.61	4.4 U
Total PAHs (Carcinogenic)	**500**	3.2	2.49	7	25	5.3	1.0
Other SVOCs by NYSASP Methods 91-2 and 95-2 (mg/kg)							
Biphenyl,1,1-	3900 (a)	NA	NA	0.38 U	1.6 U	0.37 U	1.5 J
Bis(2-ethylhexyl)phthalate	50 (b)	0.37 U	0.37 U	0.8	1.6 U	1.1	4.4 U
Butyl benzyl phthalate	50 (b)	0.37 U	0.37 U	0.046 J	1.6 U	0.31 J	4.4 U
Carbazole	NA	0.37 U	0.37 U	0.041 J	0.37 J	0.37 U	4.4 U
Dibenzofuran	6.2 (b)	0.37 U	0.37 U	0.38 U	1.6 U	0.37 U	0.69 J
TAL Metals by CLP Method 6010 (mg/kg)							
Aluminum	NA	6200	5750	NA	NA	NA	NA
Arsenic	0.43 (a)	**3.6 J**	**4.5**	NA	NA	NA	NA
Barium	16000 (a)	39.5 B	38.8 B	NA	NA	NA	NA
Beryllium	160 (a)	0.3 B	0.2 B	NA	NA	NA	NA
Chromium	230 (a)	30.2 *	7.1 *	NA	NA	NA	NA
Cobalt	NA	8.2 B	8.6 B	NA	NA	NA	NA
Copper	3100 (a)	88	42.9	NA	NA	NA	NA
Iron	23000 (a)	**37100 J***	14100 J*	NA	NA	NA	NA
Lead	NA	195 J	52.6 J	NA	NA	NA	NA
Manganese	1600 (a)	137	382	NA	NA	NA	NA
Nickel	1600 (a)	16 EJ	11.5 EJ	NA	NA	NA	NA
Vanadium	78 (a)	28.7	15.4	NA	NA	NA	NA
Zinc	23000 (a)	406	208	NA	NA	NA	NA
CLP Methods (ILM04.0 and 4500CNI) (mg/kg)							
Cyanide, Total	1600 (a)	1.9 J	1.3 UJ	1.54	0.555 U	2.74	0.19 U
Cyanide, Weak Acid Dissociable	1600 (a)	1.4 U	1.3 U	0.111 U	0.123 U	NA	0.132 U
Inorganic Analyses by CLP Methods (various units)							
Hardness (mg/kg)		NA	NA	32700	35500	8	7.13
pH (pH units)		NA	NA	8.12	8.24	42900	5170
TOC Average Quads (mg/kg)		NA	NA	7290	46900	109000	70700

Notes:

(a) EPA Region III Risk-Based Concentration Table

(b) NYSDEC TAGM 4046 RSCO, limit of 50 mg/kg for individual semi-VOC used for RCSO that is not risk-based (e.g, naphthalene, 2-methylnaphthalene, chrysene)

U - Analyte Not detected

J - Estimated value

NS - No standard

ND - Not Detected

NA - Not Analyzed

Table 9
Hudson River Sediment Analytical Results
Clove and Maple Avenue Former MGP Site - Remedial Investigation
Haverstraw, New York

Analyte	RSCO or Risk-Based Criteria	Sample ID/ Date Collected/ Depth to Sample (ft bgs)							
		VC-01 7/24/2001 (0-2)	VC-21 (Dup) 7/24/2001 (0-2)	VC-02 7/24/2001 (0-2)	VC-03 7/24/2001 (0-2)	VC-04 7/24/2001 (0-2)	VC-04 7/24/2001 (3-5)	VC-05 7/24/2001 (0-2)	VC-05A 7/24/2001 (0-2)
BTEX by NYSASP Method 95-1 (mg/kg)									
Total BTEX		ND	ND	ND	ND	ND	ND	ND	ND
Other VOCs by NYSASP Method 95-1 (mg/kg)									
Acetone	70000 (a)	0.014 U	0.015 U	0.021 U	0.021 U	0.16 B	0.17 J	0.029 U	0.068 UJ
PAHs (Non-carcinogenic) by NYSASP Method 95-2 (mg/kg)									
Acenaphthene	50 (b)	0.42 J	0.7 J	1.4 J	0.83	1 J	0.68 J	0.27 J	0.27 J
Acenaphthylene	41 (b)	0.35 J	0.52 J	0.43 J	0.25 J	1.3 J	1.1 J	0.48 J	0.33 J
Anthracene	50 (b)	0.88	2.6 J	1.7	0.93	3.2 J	1.4	2 J	0.76 J
Benzo[g,h,i]perylene	50 (b)	2.6 J	5.5 J	5.5 J	2.2 J	13 J	3.7 J	1.2 J	2 J
Fluoranthene	50 (b)	5.8 J	19 J	12	5.6	36 J	6.1	5.8 J	5.4 J
Fluorene	50 (b)	0.5 J	1.8 J	1.2 J	0.38 J	1.8 J	0.49 J	0.38 J	0.21 J
Methylnaphthalene,2-	50 (b)	0.78 U	3.6 U	1.5 U	0.15 J	6 UJ	0.26 J	0.11 J	0.048 J
Naphthalene	50 (b)	0.083 J	3.6 UJ	0.19 J	0.079 J	6 UJ	0.3 J	0.1 J	0.059 J
Phenanthrene	50 (b)	4 J	15 J	8.7	3.5	17 J	3.4	3.1 J	2.4 J
Pyrene	50 (b)	5.5 J	18 J	12	5.4 J	32 J	8.3	6.1 J	5.6 J
Total PAHs (Non-carc.)	**500**	20	63	43	19.3	105	25.7	20	17
PAHs (Carcinogenic) by NYSASP Method 95-2 (mg/kg)									
Benz[a]anthracene	0.224 (b)	**2.6 J**	**8 J**	**5.5**	**2.9**	**14 J**	**4.1**	**3.5 J**	**3 J**
Benzo[a]pyrene	0.061 (b)	**2.3 J**	**7.1 J**	**5**	**2.3**	**13 J**	**4**	**2.8 J**	**3.1 J**
Benzo[b]fluoranthene	0.87 (b)	**2 J**	**6 J**	**3.6**	**2**	**13 J**	**2.7**	**2.2 J**	**2.8 J**
Benzo[k]fluoranthene	8.7 (b)	1.6 J	5.9 J	3.6	1.5	**11 J**	2.5	2.3 J	2.1 J
Chrysene	50 (b)	2.9 J	8 J	5.8	3.1	16 J	5.2	3.8 J	3.4 J
Dibenz[a,h]anthracene	0.014 (b)	**0.84 J**	**1.8 J**	**1.5**	**0.88**	**3.8 J**	**1.2 J**	**0.77 J**	**0.74 J**
Indeno[1,2,3-cd]pyrene	0.87 (a)	**2.7 J**	**5.6 J**	**4.9**	**2.5**	**13 J**	**3.6**	**2.2 J**	**2.5 J**
Total PAHs (Carcinogenic)	**500**	15	42	30	15	84	23	17.6	18
Other SVOCs by NYSASP Method 95-2 (mg/kg)									
Acetophenone	7800 (a)	0.78 U	3.6 U	1.5 U	0.77 U	6 UJ	1.3 U	0.079 J	0.058 J
Biphenyl,1,1-	3900 (a)	0.78 U	3.6 U	1.5 U	0.77 U	6 UJ	1.3 U	0.057 J	0.034 J
Bis(2-ethylhexyl)phthalate	50 (b)	0.78 U	3.6 U	1.5 U	1.1 U	6.8 UJ	1.3 U	2.6 UJ	2.2 J
Butyl benzyl phthalate	50 (b)	0.78 U	0.74 J	1.5 U	0.52 J	6 UJ	1.3 U	0.33 J	0.31 J
Carbazole	NA	0.34 J	0.95 J	0.64 J	0.26 J	1.7 J	0.18 J	0.49 J	0.24 J
Dibenzofuran	6.2 (b)	0.17 J	0.65 J	0.39 J	0.11 J	6 UJ	0.16 J	0.14 J	0.067 J
Di-n-butyl phthalate	7800 (a)	0.78 U	3.6 U	1.5 U	0.079 J	6 UJ	1.3 U	0.061 J	0.04 J
TAL Metals by CLP Method ILMO 4.1 (mg/kg)									
Aluminum	NA	6680	7910	8290	7760	19100 J	17400	13300	19500 J
Arsenic	0.43 (a)	**2.9**	**3.8**	**2.3**	**3**	**9.6 J**	**12.7**	**9.3**	**7.7 J**
Barium	16000 (a)	27.8	45.8	35.5	33.6	94.2 J	93.9	90.6	77.6 J
Beryllium	160 (a)	0.21	0.24	0.26	0.24	0.87 J	0.75	0.49	0.72 J
Cadmium	78 (a)	0.44 J	0.48 J	0.40 J	0.32 J	2.3 J	1.6 J	3.9 J	1.7 J
Chromium	230 (a)	9.9 J	11.6 J	10.7 J	10.0 J	81.4 J	71.4 J	51.0 J	66.5 J
Cobalt	NA	5.7 J	7.3 J	6.6	6.2	14.6 J	13	11	14.5 J
Copper	3100 (a)	71.4	83.4	54.6	55.1	128 J	104	85.3	103 J
Iron	23000 (a)	20400	**28100**	22000	21100	**38300 J**	**44000**	**30500**	**37300 J**
Lead	NA	132 J	108 J	96.5 J	242 J	278 J	197 J	150 J	133 J
Manganese	1600 (a)	204	228	197	185	542 J	483	335	564 J
Mercury	7.8 (a)	0.058 J	0.081 J	0.034 J	0.056 J	0.91 J	1.0 J	0.42 J	0.91 J
Nickel	1600 (a)	16	15.9	15.7	15.3	38.2 J	31.6	28.7	36.3 J
Selenium	390 (a)	0.93 U	1.1 J	1.0 U	0.87 U	1.6 J	1.8 U	1.7 J	2.2 UJ
Silver	390 (a)	0.19 U	0.18 U	0.21 U	0.18 U	1.8 J	1.2	0.86	1.4 J
Vanadium	78 (a)	28.5	28.2	24.9	28.2	46.1 J	35.4	30.5	38.2 J
Zinc	23000 (a)	158	141	135	131	281 J	283	219	299 J
Cyanides by CLP Methods (mg/kg)									
Cyanide, Total	1600 (a)	ND	ND	ND	ND	ND	ND	ND	ND
Inorganic Analyses by CLP Methods									
Hardness (mg/kg)		79000	69600	52200	52000	104000 J	51800	37700	54600 J
pH (Standard Units)		7.19	7.73	8.83	8.22	7.4 J	7.24	7.56	7.71 J
Total Organic Carbon (mg/kg)		28500 J	5140 J	14500 J	13600	37800 J	36000	34000	35000 J

Notes:

(a) EPA Region III Risk-Based Concentration Table for residential exposures

(b) NYSDEC TAGM 4046 RSCO, limit of 50 mg/kg for individual semi-VOC used for RCSO that is not risk-based (e.g, naphthalene, 2-methylnaphthalene, chrysene)

U - Not Detected

J - Estimated Value

B - Analyte Detected in Association with Method Blank

D - Dilution Result

E - Exceeds Calibration Range

Table 5-1. TarGOST Data Summary
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-93R	04/22/08 03:21 PM	2.177	137.5363	0.025
SB-68	04/22/08 09:16 AM	26.264	131.3792	0.726
SB-72	04/22/08 11:07 AM	18.252	139.7147	11.346
SB-81	04/22/08 12:34 PM	15.311	57.95388	9.244
SB-85	04/22/08 01:16 PM	19.683	379.0631	14.797
SB-89	04/22/08 02:40 PM	22.076	111.2033	9.861
SB-93	04/22/08 03:13 PM	2.662	39.64945	0
	TOTAL DEPTH =	**106.425**		

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-96	04/23/08 03:38 PM	25.938	72.21547	5.536
SB-62	04/23/08 07:31 AM	25.854	63.87706	7.334
SB-65	04/23/08 08:03 AM	20.738	166.6553	8.441
SB-69	04/23/08 08:34 AM	22.732	64.88575	8.913
SB-73	04/23/08 09:11 AM	21.752	81.96234	9.421
SB-78	04/23/08 09:48 AM	19.34	85.42065	12.136
SB-82	04/23/08 10:15 AM	6.739	19.33467	0.619
SB-82R	04/23/08 10:45 AM	17.965	69.24123	6.787
SB-86	04/23/08 12:32 PM	25.88	736.2982	17.056
SB-107	04/23/08 01:05 PM	25.91	28.28872	0.002
SB-106	04/23/08 02:10 PM	15.785	38.25959	2.068
SB-104	04/23/08 02:33 PM	25.836	41.02096	0.136
SB-100	04/23/08 03:08 PM	25.887	122.4479	8.517
	TOTAL DEPTH =	**280.356**		

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-91	04/24/08 02:51 PM	19.811	13.42773	5.874
SB-63	04/24/08 10:18 AM	17.923	19.38867	0.64
SB-66	04/24/08 10:38 AM	5.634	26.13354	0.715
SB-66R	04/24/08 10:51 AM	20.132	100.5671	9.766
SB-70	04/24/08 12:24 PM	17.913	156.3665	10.059
SB-75	04/24/08 12:51 PM	24.002	123.1951	10.839
SB-74	04/24/08 01:24 PM	17.822	69.81263	13.906
SB-79	04/24/08 01:50 PM	21.951	95.57571	10.328
SB-83	04/24/08 02:28 PM	21.431	55.41552	0.139
	TOTAL DEPTH =	**166.619**		

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-103B / SB-103C	04/25/08 01:12 PM	27.576	612.6185	10.91399976
SB-88	04/25/08 07:29 AM	25.244	53.03647	0.059
SB-88	04/25/08 08:23 AM	0.023	54.02226	0.01
SB-92	04/25/08 08:52 AM	21.986	56.87547	0.13
SB-84	04/25/08 09:18 AM	9.757	84.67054	4.789
SB-120	04/25/08 09:40 AM	25.903	62.4856	0.732
SB-121	04/25/08 10:10 AM	25.893	43.21213	13.893
SB-122	04/25/08 10:40 AM	33.811	66.31263	0.256
SB-87	04/25/08 12:00 PM	10.647	21.0504	0.203
SB-90	04/25/08 12:28 PM	22.228	177.1557	15.099
SB-103	04/25/08 01:04 PM	5.429	16.86428	4.284
SB-103B	04/25/08 01:12 PM	9.88	16.14631	0.548
SB-103C	04/25/08 01:28 PM	17.678	612.6185	1.016
	TOTAL DEPTH =	**236.055**		

Table 5-1. TarGOST Data Summary
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-98A	04/28/08 02:51 PM	19.052	175.0334	0.003
SB-105	04/28/08 08:05 AM	33.806	19.85658	0.258
SB-101	04/28/08 08:56 AM	12.257	11.44434	0.402
SB-101A	04/28/08 09:11 AM	12.147	40.88489	0
SB-97	04/28/08 10:02 AM	45.412	10.53673	4.18
SB-95	04/28/08 10:54 AM	33.969	40.71144	9.709
SB-94	04/28/08 12:34 PM	27.644	634.8876	9.537
SB-99	04/28/08 01:05 PM	28.591	273.4525	8.965
SB-102	04/28/08 01:47 PM	3.815	104.3344	0
SB-102A	04/28/08 01:57 PM	2.929	68.95105	0
SB_102B	04/28/08 02:09 PM	1.67	72.36816	0.505
SB_102C	04/28/08 02:17 PM	16.628	14.5765	0.126
SB-98	04/28/08 02:40 PM	2.182	21.2576	0.033
	TOTAL DEPTH =	**240.102**		

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-61	04/29/08 08:32 AM	5.181	23.53274	3.381
SB-125	04/29/08 03:39 PM	45.788	13.74107	3.052
SB-80	04/29/08 02:48 PM	41.483	88.47456	12.479
SB_124B	04/29/08 02:05 PM	33.977	80.17213	7.706
SB-124A	04/29/08 01:54 PM	3.541	25.89514	0.048
SB-124	04/29/08 01:47 PM	4.165	8.202727	1.18
SB-67	04/29/08 01:15 PM	27.107	1243.02	11.882
SB-123	04/29/08 12:43 PM	29.947	39.47816	2.815
SB-71	04/29/08 11:58 AM	38.51	893.1307	13.797
SB-77	04/29/08 10:32 AM	25.373	133.0304	8.054
SB-93C	04/29/08 09:54 AM	18.524	270.2016	11.774
SB-64	04/29/08 08:57 AM	23.519	122.3842	10.897
SB-61A	04/29/08 08:46 AM	3.067	14.05328	1.007
	TOTAL DEPTH =	**300.182**		

File	Date/Time	Final Depth	Max Signal	Max Signal Depth
SB-126	04/30/08 07:21 AM	60.514	10.78659	3.262
SB_02A	04/30/08 10:26 AM	20.603	234.282	7.957
SB_02	04/30/08 10:15 AM	6.338	11.52407	4.999
SB_113	04/30/08 09:34 AM	25.107	555.1105	14.76
SB-127C	04/30/08 08:40 AM	3.16	7.676667	1.506
SB-127B	04/30/08 08:37 AM	1.913	11.98527	1.482
SB-127A	04/30/08 08:26 AM	1.754	7.021807	0.735
SB-127	04/30/08 08:19 AM	2.234	7.23723	2.103
	TOTAL DEPTH =	**121.623**		

Total Footage for entire TarGOST project= **1451.362**

Table 5-2. Supplemental Remedial Investigation 2008 - Summary of Sampling Program
Former Clove and Maple MGP
Haverstraw, NY

Location	Sample Depth (feet bgs)			Ref. Elev.	Sample Elevation			Field Sample Identification	Laboratory Identification	SDG	Lab	Sample Date	Property	Matrix	Sample Type	Parameters Analyzed
Soil Investigation																
SB-68	8.5	-	9.5	17.29	7.8	to	8.8	SB-68(8.5-9.5)	914985	T581	TA	4/22/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-85	13.0	-	13.5	13.82	0.3	to	0.8	SB-85(13.0-13.5)	914986	T581	TA	4/22/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-88	5.5	-	6.0	11.30	5.3	to	5.8	SB-88(5.5-6)	917109	T953	TA	4/25/08	West Street	Soil	Soil Grab	VOC, PAH
SB-88	4.5	-	5.0	11.30	6.3	to	6.8	SB-88(4.5-5)	917110	T953	TA	4/25/08	West Street	Soil	Soil Grab	VOC, PAH
SB-94	9.0	-	9.5	11.30	1.8	to	2.3	SB-94(9-9.5)	917111	T953	TA	4/30/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-107	5.5	-	6.0	12.39	6.4	to	6.9	SB-107(5.5-6)	917112	T953	TA	4/30/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-120	4.5	-	5.0	15.54	10.5	to	11.0	SB-120(4.5-5)	917113	T953	TA	5/1/08	West Street	Soil	Soil Grab	VOC, PAH
SB-92	5.0	-	5.5	11.08	5.6	to	6.1	SB-92(5-5.5)	917114	T953	TA	5/1/08	West Street	Soil	Soil Grab	VOC, PAH
SB-84	4.5	-	5.0	13.12	8.1	to	8.6	SB-84(4.5-5)	917115	T953	TA	5/1/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-100	8.25	-	8.75	12.84	4.1	to	4.6	SB-100(8.25-8.75)	917116	T953	TA	4/30/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-67	13.5	-	14.0	13.75	-0.3	to	0.2	SB-67(13.5-14)	917117	T953	TA	5/1/08	West Street	Soil	Soil Grab	VOC, PAH
SB-75	19.0	-	19.5	11.59	-7.9	to	-7.4	SB-75(19-19.5)	917118	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-75	16.5	-	17.0	11.59	-5.4	to	-4.9	SB-75(16.5-17)	917119	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-75	2.5	-	3.0	11.59	8.6	to	9.1	SB-75(2.5-3)	917120	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-75	8.0	-	8.5	11.59	3.1	to	3.6	SB-75(8-8.5)	917121	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-124	5.0	-	5.5	16.47	11.0	to	11.5	SB-124(5-5.5)	917122	T953	TA	5/1/08	West Street	Soil	Soil Grab	VOC, PAH
SB-80	12.0	-	12.5	16.78	4.3	to	4.8	SB-80(12-12.5)	917123	T953	TA	5/2/08	West Street	Soil	Soil Grab	VOC, PAH
SB-80	17.0	-	17.5	16.78	-0.7	to	-0.2	SB-80(17-17.5)	917124	T953	TA	5/2/08	West Street	Soil	Soil Grab	VOC, PAH
SB-62	9.0	-	9.5	12.77	3.3	to	3.8	SB-62(9-9.5)	917125	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-123	8.5	-	9.0	18.99	10.0	to	10.5	SB-123(8.5-9)	917126	T953	TA	5/1/08	West Street	Soil	Soil Grab	VOC, PAH
SB-86	13.0	-	13.5	11.78	-1.7	to	-1.2	SB-86(13-13.5)	917134	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-78	12.0	-	12.5	12.19	-0.3	to	0.2	SB-78(12-12.5)	917136	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-78	15.0	-	15.5	12.19	-3.3	to	-2.8	SB-78(15-15.5)	917137	T953	TA	5/2/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-118	14.2	-	14.7	28.95	14.2	to	14.7	SB-118(14.2-14.7)	918381	U162	TA	5/6/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-118	18.0	-	18.5	28.95	10.4	to	10.9	SB-118(18-18.5)	918382	U162	TA	5/6/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-118	28.0	-	28.5	28.95	0.4	to	0.9	SB-118(28-28.5)	918383	U162	TA	5/6/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-117	14.2	-	14.7	28.93	14.2	to	14.7	SB-117(14.2-14.7)	918384	U162	TA	5/6/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-117	28.5	-	29.0	28.93	-0.1	to	0.4	SB-117(28.5-29)	918385	U162	TA	5/6/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-113	13.0	-	13.5	28.68	15.2	to	15.7	SB-113(13-13.5)	918386	U162	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-113	22.0	-	22.5	28.68	6.2	to	6.7	SB-113(22-22.5)	918387	U162	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-113	31.5	-	32.0	28.68	-3.3	to	-2.8	SB-113(31.5-32)	918388	U162	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-114	6.5	-	7.0	28.18	21.2	to	21.7	SB-114(6.5-7)	918391	U162	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-114	16.5	-	17.5	28.18	10.7	to	11.7	SB-114(16.5-17.5)	918392	U162	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-114	16.5	-	17.5	28.18	10.7	to	11.7	SB-114(16.5-17.5)Dup	918393	U162	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-114	19.0	-	19.5	28.18	8.7	to	9.2	SB-114(19-19.5)	918840	U237	TA	5/7/09	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-114	29.5	-	30.0	28.18	-1.8	to	-1.3	SB-114(29.5-30)	918841	U237	TA	5/7/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-116	8.0	-	9.0	30.10	21.1	to	22.1	SB-116(8-9)	918842	U237	TA	5/8/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-116	30.0	-	30.5	30.10	-0.4	to	0.1	SB-116(30-30.5)	918843	U237	TA	5/8/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-115	17.0	-	18.0	39.51	21.5	to	22.5	SB-115(17-18)	918844	U237	TA	5/8/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-115	26.0	-	26.5	39.51	13.0	to	13.5	SB-115(26-26.5)	918845	U237	TA	5/9/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-112A	18.0	-	19.0	28.06	9.1	to	10.1	SB-112A(18-19)	918848	U237	TA	5/9/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN

Table 5-2. Supplemental Remedial Investigation 2008 - Summary of Sampling Program
Former Clove and Maple MGP
Haverstraw, NY

Location	Sample Depth (feet bgs)	Ref. Elev.	Sample Elevation	Field Sample Identification	Laboratory Identification	SDG	Lab	Sample Date	Property	Matrix	Sample Type	Parameters Analyzed
SB-112B	22.0 - 23.0	28.06	5.1 to 6.1	SB-112B(22-23)	920230	U470	TA	5/12/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-112B	32.0 - 33.0	28.06	-4.9 to -3.9	SB-112B(32-33)	920231	U470	TA	5/12/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-111B	8.5 - 9.0	28.91	19.9 to 20.4	SB-111B(8.5-9)	920232	U470	TA	5/12/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-111B	22.2 - 22.7	28.91	6.2 to 6.7	SB-111B(22.2-22.7)	920233	U470	TA	5/13/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-111B	32.5 - 33.0	28.91	-4.1 to -3.6	SB-111B(32.5-33)	920234	U470	TA	5/13/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-110	10.5 - 11.0	31.34	20.3 to 20.8	SB-110(10.5-11)	920235	U470	TA	5/13/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-110	28.0 - 28.5	31.34	2.8 to 3.3	SB-110(28-28.5)	920236	U470	TA	5/13/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-119	12.0 - 13.0	27.26	14.3 to 15.3	SB-119(12-13)	920665	U561	TA	5/14/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-119	18.0 - 19.0	27.26	8.3 to 9.3	SB-119(18-19)	920666	U561	TA	5/14/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-119	21.2 - 21.7	27.26	5.6 to 6.1	SB-119(21.2-21.7)	920667	U561	TA	5/14/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-119	23.0 - 24.0	27.26	3.3 to 4.3	SB-119(23-24)	920668	U561	TA	5/14/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-119	37.2 - 37.7	27.26	-10.4 to -9.9	SB-119(37.2-37.7)	920669	U561	TA	5/14/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-128	10.5 - 11.0	30.79	19.8 to 20.3	SB-128(10.5-11)	920670	U561	TA	5/14/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN, MTBE, TBA
SB-128	14.0 - 14.5	30.79	16.3 to 16.8	SB-128(14-14.5)	920671	U561	TA	5/15/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN, MTBE, TBA
SB-128	28.1 - 28.6	30.79	2.2 to 2.7	SB-128(28.1-28.6)	920672	U561	TA	5/15/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN, MTBE, TBA
SB-108	13.0 - 14.0	34.81	20.8 to 21.8	SB-108(13-14)	920673	U561	TA	5/15/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-108	33.0 - 34.0	34.81	0.8 to 1.8	SB-108(33-34)	920676	U561	TA	5/16/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-129	10.8 - 11.3	24.94	13.6 to 14.1	SB-129(10.8-11.3)	921939	U775	TA	5/16/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-129	13.3 - 13.8	24.94	11.2 to 11.7	SB-129(13.25-13.75)	921940	U775	TA	5/16/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-129	15.0 - 15.5	24.94	9.4 to 9.9	SB-129(15-15.5)	921941	U775	TA	5/19/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-129	26.1 - 26.6	24.94	-1.7 to -1.2	SB-129(26.1-26.6)	921942	U775	TA	5/19/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-109	14.5 - 15.0	35.66	20.7 to 21.2	SB-109(14.5-15)	921944	U775	TA	5/20/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-109	29.5 - 30.0	35.66	5.7 to 6.2	SB-109(29.5-30)	921945	U775	TA	5/20/08	Main Site	Soil	Soil Grab	VOC, PAH, Metals, CN
SB-63	9.0 - 9.5	12.41	2.9 to 3.4	SB-63(9-9.5)	921946	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-63	10.5 - 11.0	12.41	1.4 to 1.9	SB-63(10.5-11)	921947	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-63	13.5 - 14.0	12.41	-1.6 to -1.1	SB-63(13.5-14)	921948	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-61	9.0 - 9.5	18.12	8.6 to 9.1	SB-61(9-9.5)	921949	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-61	11.0 - 12.0	18.12	6.1 to 7.1	SB-61(11-12)	921950	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-132	9.0 - 9.5	12.74	3.2 to 3.7	SB-132(9-9.5)	921951	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-132	11.5 - 12.0	12.74	0.7 to 1.2	SB-132(11.5-12)	921952	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-133	8.4 - 8.9	12.85	4.0 to 4.5	SB-133(8.4-8.9)	921953	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-133	10.5 - 11.0	12.85	1.9 to 2.4	SB-133(10.5-11)	921954	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-133	14.0 - 14.5	12.85	-1.6 to -1.1	SB-133(14-14.5)	921955	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-134	8.5 - 9.0	16.01	7.0 to 7.5	SB-134(8.5-9)	921956	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-134	12.0 - 12.5	16.01	3.5 to 4.0	SB-134(12-12.5)	921957	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-138	9.0 - 9.5	13.45	3.9 to 4.4	SB-138(9-9.5)	921958	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-138	14.0 - 14.5	13.45	-1.1 to -0.6	SB-138(14-14.5)	921959	U775	TA	5/20/08	Alleyway	Soil	Soil Grab	VOC, PAH
SB-85	13.0 - 13.5	13.82	0.3 to 0.8	SB-85(13-13.5)	921960	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH, Treatability
SB-85	16.0 - 16.5	13.82	-2.7 to -2.2	SB-85(16-16.5)	921961	U775	TA	5/20/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-140	9.5 - 10.0	15.64	5.6 to 6.1	SB-140(9.5-10)	923388	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-140	12.0 - 12.5	15.64	3.1 to 3.6	SB-140(12-12.5)	923389	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-140	17.0 - 17.5	15.64	-1.9 to -1.4	SB-140(17-17.5)	923390	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH

Table 5-2. Supplemental Remedial Investigation 2008 - Summary of Sampling Program
Former Clove and Maple MGP
Haverstraw, NY

Location	Sample Depth (feet bgs)	Ref. Elev.	Sample Elevation	Field Sample Identification	Laboratory Identification	SDG	Lab	Sample Date	Property	Matrix	Sample Type	Parameters Analyzed
SB-141	12.5 - 13.0	15.91	2.9 to 3.4	SB-141(12.5-13)	923391	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-141	14.8 - 15.3	15.91	0.6 to 1.1	SB-141(14.8-15.3)	923392	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-121	13.0 - 13.5	11.75	-1.7 to -1.2	SB-121(13-13.5)	923393	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-121	17.0 - 17.5	11.75	-5.7 to -5.2	SB-121(17-17.5)	923394	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-142	8.2 - 8.7	12.36	3.7 to 4.2	SB-142(8.2-8.7)	923395	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-142	12.5 - 13.0	12.36	-0.6 to -0.1	SB-142(12.5-13)	923396	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-84A	12.0 - 12.5	13.12	0.6 to 1.1	SB-84A(12-12.5)	923397	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-84A	13.5 - 14.5	13.12	-1.4 to -0.4	SB-84A(13.5-14.5)	923398	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-84A	13.5 - 14.5	13.12	-1.4 to -0.4	SB-84A(13.5-14.5)Dup	923399	V026	TA	5/29/08	West Street	Soil	Soil Grab	VOC, PAH
SB-45A	9.2 - 9.7	18.80	9.1 to 9.6	SB-45A(9.2-9.7)	923400	V026	TA	5/29/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-45A	15.0 - 15.5	18.80	3.3 to 3.8	SB-45A(15-15.5)	923401	V026	TA	5/29/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-64	10.4 - 10.9	18.11	7.2 to 7.7	SB-64(10.4-10.9)	923402	V026	TA	5/29/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-64	13.5 - 14.0	18.11	4.1 to 4.6	SB-64(13.5-14)	923409	V026	TA	5/29/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-130	12.0 - 13.0	15.87	2.9 to 3.9	SB-130(12-13)	923403	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH, Treatability
SB-130	14.0 - 14.5	15.87	1.4 to 1.9	SB-130(14-14.5)	923404	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH, Partial Treatability
SB-130	16.5 - 17.0	15.87	-1.1 to -0.6	SB-130(16.5-17)	923405	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-131	13.5 - 14.0	17.44	3.4 to 3.9	SB-131(13.5-14)	923406	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-67	16.5 - 17.0	13.75	-3.3 to -2.8	SB-67(16.5-17)	923407	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-67	17.5 - 18.0	13.75	-4.3 to -3.8	SB-67(17.5-18)	923408	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-139	13.0 - 13.5	18.00	4.5 to 5.0	SB-139(13-13.5)	923410	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-139	16.0 - 16.5	18.00	1.5 to 2.0	SB-139(16-16.5)	923411	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-139	17.0 - 17.5	18.00	0.5 to 1.0	SB-139(17-17.5)	923412	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH
SB-94	9.0 - 10.0	11.30	1.3 to 2.3	SB-94(9-10)	923413	V026	TA	5/28/08	West Street	Soil	Soil Grab	VOC, PAH, Treatability
SB-71	12.0 - 12.5	16.58	4.1 to 4.6	SB-71(12-12.5)	923414	V026	TA	5/28/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-71	13.5 - 14.0	16.58	2.6 to 3.1	SB-71(13.5-14)	923415	V026	TA	5/28/08	Apartments	Soil	Soil Grab	VOC, PAH
SB-71	18.0 - 18.5	16.58	-1.9 to -1.4	SB-71(18-18.5)	923416	V026	TA	5/28/08	Apartments	Soil	Soil Grab	VOC, PAH

Table 5-2. Supplemental Remedial Investigation 2008 - Summary of Sampling Program
Former Clove and Maple MGP
Haverstraw, NY

Location	Sample Depth (feet bgs)	Ref. Elev.	Sample Elevation	Laboratory Identification	SDG	Lab	Sample Date	Property	Matrix	Sample Type	Parameters Analyzed
Groundwater Investigation											
MW-24	19.0	27.45	8.5	915171	T601	TA	4/24/08	Head Start	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-11	20.0	28.43	8.4	915172	T601	TA	4/24/08	Head Start	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-8	18.0	26.90	8.9	915173	T601	TA	4/24/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-9	19.0	30.31	11.3	915174	T601	TA	4/24/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
TWP-80	5.0	16.78	11.8	917129	T953	TA	5/1/08	West Street	Aq	Groundwater Grab	VOC
TWP-84	3.0	13.12	10.1	917132	T953	TA	5/1/08	West Street	Aq	Groundwater Grab	VOC
TWP-92	2.0	11.08	9.1	917130	T953	TA	5/1/08	West Street	Aq	Groundwater Grab	VOC
TWP-120	5.0	15.54	10.5	917128	T953	TA	5/1/08	West Street	Aq	Groundwater Grab	VOC
TWP-123	8.0	18.99	11.0	917133	T953	TA	5/1/08	West Street	Aq	Groundwater Grab	VOC
TWP-124B	5.0	16.47	11.5	917127	T953	TA	5/1/08	West Street	Aq	Groundwater Grab	VOC
MW-63S	9.5	12.4	2.9	925566	V423	TA	6/5/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-1	27.0	42.29	15.3	925567	V423	TA	6/5/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-18	12.0	28.26	16.3	925568	V423	TA	6/5/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-3	13.0	28.47	15.5	925569	V423	TA	6/5/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-31D	29.0	12.52	-16.5	925570	V423	TA	6/6/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-32I	19.0	13.44	-5.6	925571	V423	TA	6/6/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-10	33.5	39.85	6.4	925572	V423	TA	6/6/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-83S	10.0	11.40	1.4	926561	V612	TA	6/9/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-29S	11.5	12.82	1.3	926562	V612	TA	6/9/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-29D	25.5	12.63	-12.9	926563	V612	TA	6/9/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-28S	9.0	13.50	4.5	926564	V612	TA	6/9/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-28D	28.0	13.62	-14.4	926565	V612	TA	6/9/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-28D-Dup	28.0	13.62	-14.4	926566	V612	TA	6/9/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-60	11.0	13.63	2.6	926567	V612	TA	6/10/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-107S	10.5	12.60	2.1	926568	V612	TA	6/10/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-55	13.0	14.22	1.2	926569	V612	TA	6/10/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-21	19.0	16.27	-2.7	926570	V612	TA	6/10/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-85S	10.5	13.90	3.4	926571	V612	TA	6/10/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-20S	13.0	18.42	5.4	926572	V612	TA	6/11/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-20D	19.5	18.27	-1.2	926573	V612	TA	6/11/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-61S	10.0	18.10	8.1	926574	V612	TA	6/11/08	Apartments	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-04	18.0	18.78	0.8	928328	V908	TA	6/18/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-05	18.0	18.33	0.3	928329	V908	TA	6/18/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-06	16.0	17.22	1.2	928330	V908	TA	6/18/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A
MW-07	41.0	17.92	-23.1	928331	V908	TA	6/18/08	Main Site	Aq	Groundwater Grab	VOC, SVOC, CN, CN-A

Table 5-2. Sampling Summary
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Field Sample Identification	Laboratory Identification	SDG	Lab	Sample Date	Matrix	Sample Type	Parameters Analyzed
TB	914987	T581	TA	4/18/08	Aq	QC-Trip Blank	VOC
FB	914988	T581	TA	4/22/08	Aq	QC-Field Blank	VOC, PAH
Trip Blank	915169	T601	TA		Aq	QC-Trip Blank	VOC
Field Blank	915170	T601	TA	4/24/08	Aq	QC-Field Blank	VOC, SVOC, CN-TA
TB	917131	T953	TA	4/28/08	Aq	QC-Trip Blank	VOC
FB-050208	917135	T953	TA	5/2/08	Aq	QC-Field Blank	VOC, PAH
Trip Blank	918389	U162	TA	5/2/08	Aq	QC-Trip Blank	VOC
FB-050708	918390	U162	TA	5/7/08	Aq	QC-Field Blank	VOC, PAH, Metals, CN
TB	918846	U237	TA	5/7/08	Aq	QC-Trip Blank	VOC
FB-05-09-08	918847	U237	TA	5/9/08	Aq	QC-Field Blank	VOC, PAH, Metals, CN
TB-5-14-08	920674	U561	TA	5/14/08	Aq	QC-Trip Blank	VOC
FB-5-16-08	920675	U561	TA	5/16/08	Aq	QC-Field Blank	VOC, PAH, Metals, CN
TB	921938	U775	TA	5/16/08	Aq	QC-Trip Blank	VOC
FB-05-19-08	921943	U775	TA	5/19/08	Aq	QC-Field Blank	VOC, PAH, Metals, CN
TB	923384	V026	TA	5/27/08	Aq	QC-Trip Blank	VOC
FB052908	923387	V026	TA	5/29/08	Aq	QC-Field Blank	VOC, PAH
Trip Blank	925573	V423	TA	6/4/08	Aq	QC-Trip Blank	VOC
FB-06-06-08	925574	V423	TA	6/6/08	Aq	QC-Field Blank	VOC, SVOC, CN-TA
FB-06-11-08	FB-06-11-08	V612	TA	6/11/08	Aq	QC-Field Blank	VOC, SVOC, CN-TA
TB	TB	V612	TA	-	Aq	QC-Trip Blank	VOC
FB-06-18-08	928332	V908	TA	6/11/08	Aq	QC-Field Blank	VOC, SVOC, CN-TA
TB	928333	V908	TA		Aq	QC-Trip Blank	VOC

Table 5-2. Supplemental Remedial Investigation 2008 - Summary of Sampling Program
Former Clove and Maple MGP
Haverstraw, NY

Notes	
bgs	below ground surface
Ref. Elev.	In feet mean sea level
SDG	Laboratory sample delivery group
Lab	Laboratory
TA	Test America
VOC	Volatile Organic Compounds
SVOC	Semivolatile Organic Compounds
PAH	Polycyclic Aromatic Hydrocarbons
Mtl	Metals
CN	Cyanide

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-45A_9.2-9.7			SB-45A_15.0-15.5			SB-61(9.0-9.5)			SB-61(11.0-12.0)			SB-62 (9.0-9.5)			SB-63(9.0-9.5)		
Lab Sample Number										923400			923401			921949			921950			917125			921946		
Sampling Depth (feet bgs)										9.2 to 9.7			15.0 to 15.5			9.0 to 9.5			11.0 to 12.0			9.0 to 9.5			9.0 to 9.5		
Sampling Date										05/29/08			05/29/08			05/20/08			05/20/08			05/02/08			05/20/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Bromomethane	74-83-9	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Chloroethane	75-00-3	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	3.4	0.0065		0.0041	**0.053**		0.0036	0.016		0.0039	0.0049		0.0037		U	0.30
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	5.7	**0.064**	B	0.0068	**0.13**		0.0061	**0.059**		0.0064	**0.06**		0.0062		U	0.50
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	5.7	0.0009	J	0.0068	0.0005	J	0.0061		U	0.0064	0.0043	J	0.0062		U	0.50
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	2.3		U	0.0027		U	0.0024		U	0.0026	0.009		0.0025		U	0.20
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Chloroform	67-66-3	0.37		10		49		350			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	2.3		U	0.0027		U	0.0024		U	0.0026		U	0.0025		U	0.20
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	5.7		U	0.0068	0.0066		0.0061		U	0.0064	0.0088		0.0062		U	0.50
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062	0.04	J	0.50
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	2.3		U	0.0027		U	0.0024		U	0.0026		U	0.0025		U	0.20
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	1.1		U	0.0014		U	0.0012		U	0.0013		U	0.0012		U	0.10
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	1.1		U	0.0014		U	0.0012		U	0.0013		U	0.0012		U	0.10
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Trichloroethene	79-01-6	0.47		10		21		200			U	1.1		U	0.0014		U	0.0012		U	0.0013		U	0.0012		U	0.10
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	3.4		U	0.0041		U	0.0036		U	0.0039		U	0.0037		U	0.30
Benzene	71-43-2	0.06		2.9		4.8		44			U	1.1	**0.094**		0.0014	0.011		0.0012	0.0025		0.0013	0.024		0.0012	**0.06**	J	0.10
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Bromoform	75-25-2	NS		NS		NS		NS			U	4.6		U	0.0054		U	0.0049		U	0.0052		U	0.0049		U	0.40
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
2-Hexanone	591-78-6	NS		NS		NS		NS			U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	1.1		U	0.0014		U	0.0012		U	0.0013		U	0.0012	0.084	J	0.10
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	1.1		U	0.0014		U	0.0012		U	0.0013		U	0.0012		U	0.10
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	5.7	0.01		0.0068	0.0004	J	0.0061		U	0.0064	0.026		0.0062	0.14	J	0.50
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	5.7		U	0.0068		U	0.0061		U	0.0064		U	0.0062		U	0.50
Ethylbenzene	100-41-4	1		30		41		390		0.73	J	4.6	0.0043	J	0.0054	0.052		0.0049	0.0044	J	0.0052	0.15		0.0049	**7**		0.40
Styrene	100-42-5	NS		NS		NS		NS			U	5.7	0.0007	J	0.0068		U	0.0061		U	0.0064	0.002	J	0.0062		U	0.50
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	**0.68**	J	5.7	0.0068		0.0068	0.038		0.0061		U	0.0064	0.32		0.0062	**8.3**		0.50
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										1.41			0.1872			0.2915			0.0819			0.609			15.624		
Total BTEX										1.41			0.1051			0.101			0.0069			0.494			15.36		
Total Confident Conc. VOAs										0			0.1			0.3			0.1			0.6			15		
Total Estimated Conc. VOA TICs										756			0			1.9			0.1			7.3			446		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-45A_9.2-9.7			SB-45A_15.0-15.5			SB-61(9.0-9.5)			SB-61(11.0-12.0)			SB-62 (9.0-9.5)			SB-63(9.0-9.5)		
Lab Sample Number										923400			923401			921949			921950			917125			921946		
Sampling Depth (feet bgs)										9.2 to 9.7			15.0 to 15.5			9.0 to 9.5			11.0 to 12.0			9.0 to 9.5			9.0 to 9.5		
Sampling Date										05/29/08			05/29/08			05/20/08			05/20/08			05/02/08			05/20/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	**51**		4	0.54		0.46	0.78		0.41	3.6		0.44	**14**		4.3	5		1.9
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	1.9	J	4	0.049	J	0.46	0.11	J	0.41		U	0.44	2.1	J	4.3	1.4	J	1.9
Acenaphthene	83-32-9	20		100	a	100	a	500	k	19		4	0.034	J	0.46	1.4		0.41	0.012	J	0.44	18		4.3	12		1.9
Fluorene	86-73-7	30		100	a	100	a	500	k	9.9		4	0.02	J	0.46	0.19	J	0.41		U	0.44	18		4.3	7.3		1.9
Phenanthrene	85-01-8	100		100	a	100	a	500	k	26		4	0.064	J	0.46	0.19	J	0.41		U	0.44	51		4.3	30		1.9
Anthracene	120-12-7	100	a	100	a	100	a	500	k	7.8		4	0.016	J	0.46	0.11	J	0.41		U	0.44	17		4.3	9.5		1.9
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	9.2		4	0.027	J	0.46	0.44		0.41		U	0.44	29		4.3	12		1.9
Pyrene	129-00-0	100		100	a	100	a	500	k	12		4	0.034	J	0.46	0.63		0.41		U	0.44	31		4.3	21		1.9
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		**3.9**		0.4	0.011	J	0.046	0.22		0.041		U	0.044	**12**		0.43	**7.5**		0.19
Chrysene	218-01-9	1	c	1	o	3.9		56		**3.8**	J	4	0.012	J	0.46	0.22	J	0.41		U	0.44	**11**		4.3	**6.8**		1.9
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		**1.7**		0.4		U	0.046	0.098		0.041		U	0.044	**5.6**		0.43	**2.7**		0.19
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		**2.4**		0.4		U	0.046	0.14		0.041		U	0.044	**11**		0.43	**4.7**		0.19
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	**3.6**		0.4		U	0.046	0.23		0.041		U	0.044	**9.7**		0.43	**6.9**		0.19
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		**1.2**		0.4		U	0.046	0.099		0.041		U	0.044	**3**		0.43	**2.3**		0.19
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56		0.3	J	0.4		U	0.046	0.042		0.041		U	0.044	**1.9**		0.43	**1.1**		0.19
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	1.5	J	4		U	0.46	0.14	J	0.41		U	0.44	2.8	J	4.3	3		1.9
Total PAHs										155.2			0.807			5.039			3.612			237.1			133.2		
Total Confident Conc. PAHs										147			0.5			4			3.6			232			131		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			63 (J)			12		

Table 5-3. Soil Analytical Results
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Former Clove and Maple MGP
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-45A_9.2-9.7			SB-45A_15.0-15.5			SB-61(9.0-9.5)			SB-61(11.0-12.0)			SB-62 (9.0-9.5)			SB-63(9.0-9.5)		
Lab Sample Number										923400			923401			921949			921950			917125			921946		
Sampling Depth (feet bgs)										9.2 to 9.7			15.0 to 15.5			9.0 to 9.5			11.0 to 12.0			9.0 to 9.5			9.0 to 9.5		
Sampling Date										05/29/08			05/29/08			05/20/08			05/20/08			05/02/08			05/20/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			NR			NR		
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			NR			NR		
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			NR			NR		
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR			NR			NR		
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			NR			NR		
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			NR			NR		
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			NR			NR		
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR			NR			NR		
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			NR			NR		
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR			NR			NR		
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			NR			NR		
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR			NR			NR		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-63(10.5-11.0)			SB-63(13.5-14.0)			SB-64_10.4-10.9			SB-64 (13.5-14.0)			SB-67 (13.5-14.0)			SB-67_16.5-17.0		
Lab Sample Number										921947			921948			923402			923409			917117			923407		
Sampling Depth (feet bgs)										10.5 to 11.0			13.5 to 14.0			10.4 to 10.9			13.5 to 14.0			13.5 to 14			16.5 to 17,0		
Sampling Date										05/20/08			05/20/08			05/29/08			05/28/08			05/01/08			05/28/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
MethyleneChloride	75-09-2	0.05		51		100	a	500	k	0.036		0.0033	0.0027	J	0.0040		U	6.8	0.0073		0.0039		U	2.2		U	0.47
Acetone	67-64-1	0.05		100	a	100	k	500	k	**0.17**		0.0055	0.035		0.0067		U	11	**0.11**	B	0.0064		U	3.6		U	0.78
CarbonDisulfide	75-15-0	NS		NS		NS		NS		0.0009	J	0.0055		U	0.0067		U	11	0.0015	J	0.0064		U	3.6		U	0.78
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0022		U	0.0027		U	4.5		U	0.0026		U	1.4		U	0.31
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Chloroform	67-66-3	0.37		10		49		350			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0022		U	0.0027		U	4.5		U	0.0026		U	1.4		U	0.31
2-Butanone	78-93-3	0.12		100	a	100	a	500	k	0.0024	J	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0022		U	0.0027		U	4.5		U	0.0026		U	1.4		U	0.31
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0011		U	0.0013		U	2.3		U	0.0013		U	0.73		U	0.16
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0011		U	0.0013		U	2.3		U	0.0013		U	0.73		U	0.16
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0011		U	0.0013		U	2.3		U	0.0013		U	0.73		U	0.16
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0033		U	0.0040		U	6.8		U	0.0039		U	2.2		U	0.47
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0011		U	0.0013		U	2.3	0.011		0.0013	**3.5**		0.73	**0.46**		0.16
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0044		U	0.0054		U	9.1		U	0.0051		U	2.9		U	0.62
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0011		U	0.0013		U	2.3		U	0.0013		U	0.73		U	0.16
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0011		U	0.0013		U	2.3		U	0.0013		U	0.73		U	0.16
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0055		U	0.0067		U	11	0.0047	J	0.0064	**6.1**		3.6	0.073	J	0.78
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Ethylbenzene	100-41-4	1		30		41		390			U	0.0044		U	0.0054		U	9.1	0.011		0.0051	**130**		2.9	**3.4**		0.62
Styrene	100-42-5	NS		NS		NS		NS			U	0.0055		U	0.0067		U	11		U	0.0064		U	3.6		U	0.78
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0055		U	0.0067		U	11	0.0046	J	0.0064	**140**		3.6	**3.4**		0.78
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.2093			0.0377			0			0.1501			279.6			7.333		
Total BTEX										0			0			0			0.0266			273.5			7.26		
Total Confident Conc. VOAs										0.2			0.0			0			0			279			7.2		
Total Estimated Conc. VOA TICs										0.1			0.0			230			0			1372			29		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-63(10.5-11.0)			SB-63(13.5-14.0)			SB-64_10.4-10.9			SB-64 (13.5-14.0)			SB-67 (13.5-14.0)			SB-67_16.5-17.0		
Lab Sample Number										921947			921948			923402			923409			917117			923407		
Sampling Depth (feet bgs)										10.5 to 11.0			13.5 to 14.0			10.4 to 10.9			13.5 to 14.0			13.5 to 14			16.5 to 17,0		
Sampling Date										05/20/08			05/20/08			05/29/08			05/28/08			05/01/08			05/28/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	0.029	J	0.39		U	0.45	**57**		3.8	16		0.86	**560**		25	**17**		1.0
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	0.035	J	0.39		U	0.45	4.6		3.8		U	0.86	22	J	25	0.13	J	1.0
Acenaphthene	83-32-9	20		100	a	100	a	500	k	0.085	J	0.39		U	0.45	**39**		3.8	0.066	J	0.86	**140**		25	2.2		1.0
Fluorene	86-73-7	30		100	a	100	a	500	k	0.026	J	0.39		U	0.45	21		3.8	0.029	J	0.86	**88**		25	1.6		1.0
Phenanthrene	85-01-8	100		100	a	100	a	500	k	0.07	J	0.39		U	0.45	58		3.8	0.079	J	0.86	**440**		25	2.3		1.0
Anthracene	120-12-7	100	a	100	a	100	a	500	k	0.036	J	0.39		U	0.45	16		3.8	0.018	J	0.86	**120**		25	0.73	J	1.0
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	0.081	J	0.39		U	0.45	22		3.8	0.027	J	0.86	**110**		25	2.1		1.0
Pyrene	129-00-0	100		100	a	100	a	500	k	0.12	J	0.39		U	0.45	29		3.8	0.041	J	0.86	**280**		25	1.8		1.0
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		0.079		0.039		U	0.045	**9**		0.38		U	0.086	**81**		2.5	**1.3**		0.10
Chrysene	218-01-9	1	c	1	o	3.9		56		0.074	J	0.39		U	0.45	**8.9**		3.8		U	0.86	**76**		25	**1.3**		1.0
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		0.021	J	0.039		U	0.045	**4**		0.38		U	0.086	**26**		2.5	0.96		0.10
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		0.034	J	0.039		U	0.045	**6.1**		0.38		U	0.086	**38**		2.5	**1.2**		0.10
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	0.035	J	0.039		U	0.045	**9.4**		0.38		U	0.086	**70**		2.5	**1.3**		0.10
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		0.014	J	0.039		U	0.045	**3.3**		0.38		U	0.086	**14**		2.5	0.54		0.10
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.039		U	0.045	**0.93**		0.38		U	0.086		U	2.5	0.27		0.10
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	0.016	J	0.39		U	0.45	3.9		3.8		U	0.86	24	J	25	0.47	J	1.0
Total PAHs										0.755			0			292.13			16.26			2089			35.2		
Total Confident Conc. PAHs										0.1			0			292			16			2043			33		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										background			background			122.4			background			428.7			background		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-63(10.5-11.0)			SB-63(13.5-14.0)			SB-64_10.4-10.9			SB-64 (13.5-14.0)			SB-67 (13.5-14.0)			SB-67_16.5-17.0		
Lab Sample Number										921947			921948			923402			923409			917117			923407		
Sampling Depth (feet bgs)										10.5 to 11.0			13.5 to 14.0			10.4 to 10.9			13.5 to 14.0			13.5 to 14			16.5 to 17,0		
Sampling Date										05/20/08			05/20/08			05/29/08			05/28/08			05/01/08			05/28/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			NR			NR		
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			NR			NR		
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			NR			NR		
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR			NR			NR		
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			NR			NR		
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			NR			NR		
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			NR			NR		
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR			NR			NR		
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			NR			NR		
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR			NR			NR		
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			NR			NR		
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR			NR			NR		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-67_17.5-18.0			SB-68 (8.5-9.5)			SB-71_12.0-12.5			SB-71_13.5-14.0			SB-71_18.0-18.5			SB-75 (2.5-3.0)		
Lab Sample Number										923408			914985			923414			923415			923416			917120		
Sampling Depth (feet bgs)										17.5 to 18.0			8.5 to 9.5			12.0 to 12.5			13.5 to 14.0			18.0 to 18.5			2.5 to 3.0		
Sampling Date										05/28/08			04/22/08			05/28/08			05/28/08			05/28/08			05/02/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070	0.0042	J	0.0053
MethyleneChloride	75-09-2	0.05		51		100	a	500	k	0.017		0.0040		U	0.40		U	2.0		U	7.8	0.0022	J	0.0042	0.0096		0.0032
Acetone	67-64-1	0.05		100	a	100	k	500	k	**0.12**	B	0.0067		U	0.66		U	3.4		U	13	0.07	B	0.0070	0.081		0.0053
CarbonDisulfide	75-15-0	NS		NS		NS		NS		0.003	J	0.0067		U	0.66		U	3.4		U	13	0.0012	J	0.0070	0.002	J	0.0053
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0027		U	0.26		U	1.4		U	5.2		U	0.0028		U	0.0021
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Chloroform	67-66-3	0.37		10		49		350			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0027		U	0.26		U	1.4		U	5.2		U	0.0028		U	0.0021
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0067		U	0.66		U	3.4		U	13		U	0.0070	0.0063		0.0053
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0027		U	0.26		U	1.4		U	5.2		U	0.0028		U	0.0021
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0013		U	0.13		U	0.68		U	2.6		U	0.0014		U	0.0011
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0013		U	0.13		U	0.68		U	2.6		U	0.0014		U	0.0011
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0013		U	0.13		U	0.68		U	2.6		U	0.0014		U	0.0011
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0040		U	0.40		U	2.0		U	7.8		U	0.0042		U	0.0032
Benzene	71-43-2	0.06		2.9		4.8		44		0.008		0.0013	**0.5**		0.13	**0.58**	J	0.68	**1.7**	J	2.6		U	0.0014	0.0007	J	0.0011
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0053		U	0.53		U	2.7		U	10		U	0.0056		U	0.0042
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0013		U	0.13		U	0.68		U	2.6		U	0.0014		U	0.0011
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0013		U	0.13		U	0.68		U	2.6		U	0.0014		U	0.0011
Toluene	108-88-3	0.7		100	a	100	a	500	k	0.0025	J	0.0067		U	0.66	0.88	J	3.4	**5.3**	J	13		U	0.0070		U	0.0053
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Ethylbenzene	100-41-4	1		30		41		390		0.022		0.0053	0.78		0.53	**8.9**		2.7	**84**		10		U	0.0056		U	0.0042
Styrene	100-42-5	NS		NS		NS		NS			U	0.0067		U	0.66		U	3.4		U	13		U	0.0070		U	0.0053
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	0.03		0.0067	0.54	J	0.66	**8.4**		3.4	**100**		13		U	0.0070		U	0.0053
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.2025			1.82			18.76			191			0.0734			0.1038		
Total BTEX										0.06			1.82			17.88			185.7			0			0.0007		
Total Confident Conc. VOAs										0.1			1.2			17			184			0			0.1		
Total Estimated Conc. VOA TICs										0.1			11			210			894			0			0.9		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-67_17.5-18.0			SB-68 (8.5-9.5)			SB-71_12.0-12.5			SB-71_13.5-14.0			SB-71_18.0-18.5			SB-75 (2.5-3.0)		
Lab Sample Number										923408			914985			923414			923415			923416			917120		
Sampling Depth (feet bgs)										17.5 to 18.0			8.5 to 9.5			12.0 to 12.5			13.5 to 14.0			18.0 to 18.5			2.5 to 3.0		
Sampling Date										05/28/08			04/22/08			05/28/08			05/28/08			05/28/08			05/02/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	4.1		0.46	1.8		0.45	**74**		4.7	**750**		45	0.076	J	0.47		U	0.37
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	0.026	J	0.46	0.44	J	0.45	5.6		4.7	**42**	J	45		U	0.47	0.021	J	0.37
Acenaphthene	83-32-9	20		100	a	100	a	500	k	0.19	J	0.46	0.5		0.45	**42**		4.7	**250**		45	0.018	J	0.47	0.048	J	0.37
Fluorene	86-73-7	30		100	a	100	a	500	k	0.064	J	0.46	0.13	J	0.45	24		4.7	**140**		45		U	0.47	0.054	J	0.37
Phenanthrene	85-01-8	100		100	a	100	a	500	k	0.092	J	0.46	0.52		0.45	**100**		4.7	**620**		45	0.056	J	0.47		U	0.37
Anthracene	120-12-7	100	a	100	a	100	a	500	k	0.039	J	0.46	0.19	J	0.45	36		4.7	**210**		45	0.018	J	0.47		U	0.37
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	0.047	J	0.46	0.59		0.45	34		4.7	**170**		45	0.017	J	0.47	0.076	J	0.37
Pyrene	129-00-0	100		100	a	100	a	500	k	0.04	J	0.46	1.1		0.45	78		4.7	**410**		45	0.037	J	0.47	0.58		0.37
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		0.026	J	0.046	0.32		0.045	**32**		0.47	**160**		4.5	0.012	J	0.047		U	0.037
Chrysene	218-01-9	1	c	1	o	3.9		56		0.026	J	0.46	0.45	J	0.45	**30**		4.7	**150**		45	0.011	J	0.47	0.28	J	0.37
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		0.011	J	0.046	0.59		0.045	**12**		0.47	**46**		4.5		U	0.047		U	0.037
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		0.017	J	0.046	0.33		0.045	**17**		0.47	**83**		4.5		U	0.047		U	0.037
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	0.015	J	0.046	0.42		0.045	**27**		0.47	**130**		4.5		U	0.047		U	0.037
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.046	0.21		0.045	**5.9**		0.47	**33**		4.5		U	0.047		U	0.037
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.046	0.058		0.045	**2.3**		0.47	**12**		4.5		U	0.047		U	0.037
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.46	0.27	J	0.45	7.5		4.7	46		45		U	0.47		U	0.37
Total PAHs										4.693			7.918			527.3			3252			0.245			1.059		
Total Confident Conc. PAHs										4.1			6.4			527			3210			0			0.6		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										background			54.2			100 (J)			389.8			background			10 (J)		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-67_17.5-18.0			SB-68 (8.5-9.5)			SB-71_12.0-12.5			SB-71_13.5-14.0			SB-71_18.0-18.5			SB-75 (2.5-3.0)		
Lab Sample Number										923408			914985			923414			923415			923416			917120		
Sampling Depth (feet bgs)										17.5 to 18.0			8.5 to 9.5			12.0 to 12.5			13.5 to 14.0			18.0 to 18.5			2.5 to 3.0		
Sampling Date										05/28/08			04/22/08			05/28/08			05/28/08			05/28/08			05/02/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			NR			NR		
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			NR			NR		
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			NR			NR		
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR			NR			NR		
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			NR			NR		
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			NR			NR		
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			NR			NR		
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR			NR			NR		
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			NR			NR		
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR			NR			NR		
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			NR			NR		
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR			NR			NR		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
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Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-75 (8.0-8.5)			SB-75 (16.5-17.0)			SB-75 (19.0-19.5)			SB-78 (12.0-12.5)			SB-78 (15.0-15.5)			SB-80 (12.0-12.5)		
Lab Sample Number										917121			917119			917118			917136			917137			917123		
Sampling Depth (feet bgs)										8.0 to 8.5			16.5 to 17.0			19.0 to 19.5			12.0 to 12.5			15.0 to 15.5			12.0 to 12.5		
Sampling Date										05/02/08			05/02/08			05/02/08			05/02/08			05/02/08			05/02/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
MethyleneChloride	75-09-2	0.05		51		100	a	500	k	0.0091		0.0039		U	0.36	0.024		0.0043	0.0031	J	0.0045		U	0.0038	0.019		0.0043
Acetone	67-64-1	0.05		100	a	100	k	500	k	**0.053**		0.0066		U	0.60	**0.16**		0.0071	**0.21**		0.0075	0.018		0.0063	**0.082**		0.0071
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063	0.0072		0.0071
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k	0.011		0.0026		U	0.24		U	0.0028	0.011		0.0030	0.019		0.0025	0.01		0.0028
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Chloroform	67-66-3	0.37		10		49		350			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0026		U	0.24		U	0.0028		U	0.0030		U	0.0025		U	0.0028
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0066		U	0.60	0.014		0.0071	0.032		0.0075		U	0.0063		U	0.0071
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0026		U	0.24		U	0.0028		U	0.0030		U	0.0025		U	0.0028
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0013		U	0.12		U	0.0014		U	0.0015		U	0.0013		U	0.0014
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0013		U	0.12		U	0.0014		U	0.0015		U	0.0013		U	0.0014
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0013		U	0.12		U	0.0014		U	0.0015		U	0.0013		U	0.0014
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0039		U	0.36		U	0.0043		U	0.0045		U	0.0038		U	0.0043
Benzene	71-43-2	0.06		2.9		4.8		44		0.0029		0.0013		U	0.12		U	0.0014	0.038		0.0015		U	0.0013		U	0.0014
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0052		U	0.48		U	0.0057		U	0.0060		U	0.0051		U	0.0057
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0013		U	0.12		U	0.0014		U	0.0015		U	0.0013		U	0.0014
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0013		U	0.12		U	0.0014		U	0.0015		U	0.0013		U	0.0014
Toluene	108-88-3	0.7		100	a	100	a	500	k	0.0016	J	0.0066	0.097	J	0.60		U	0.0071	0.018		0.0075		U	0.0063		U	0.0071
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Ethylbenzene	100-41-4	1		30		41		390		0.043		0.0052	**3.9**		0.48		U	0.0057	0.17		0.0060		U	0.0051		U	0.0057
Styrene	100-42-5	NS		NS		NS		NS			U	0.0066		U	0.60		U	0.0071		U	0.0075		U	0.0063		U	0.0071
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	0.062		0.0066	**4.2**		0.60		U	0.0071	**0.32**		0.0075		U	0.0063		U	0.0071
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.1826			8.197			0.198			0.8021			0.037			0.1182		
Total BTEX										0.1079			8.1			0			0.528			0			0		
Total Confident Conc. VOAs										0.2			8.1			0.2			0.8			0			0.1		
Total Estimated Conc. VOA TICs										1.1			78			0.035			3.9			0			0.4		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-75 (8.0-8.5)			SB-75 (16.5-17.0)			SB-75 (19.0-19.5)			SB-78 (12.0-12.5)			SB-78 (15.0-15.5)			SB-80 (12.0-12.5)		
Lab Sample Number										917121			917119			917118			917136			917137			917123		
Sampling Depth (feet bgs)										8.0 to 8.5			16.5 to 17.0			19.0 to 19.5			12.0 to 12.5			15.0 to 15.5			12.0 to 12.5		
Sampling Date										05/02/08			05/02/08			05/02/08			05/02/08			05/02/08			05/02/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	3		0.45	**32**		4.1	0.16	J	0.49	6.9		0.52		U	0.44		U	0.48
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	0.16	J	0.45	2.8	J	4.1		U	0.49	0.15	J	0.52		U	0.44	0.39	J	0.48
Acenaphthene	83-32-9	20		100	a	100	a	500	k	1		0.45	19		4.1	0.11	J	0.49	2.9		0.52		U	0.44	0.16	J	0.48
Fluorene	86-73-7	30		100	a	100	a	500	k	0.6		0.45	9.6		4.1	0.078	J	0.49	2.8		0.52		U	0.44	0.17	J	0.48
Phenanthrene	85-01-8	100		100	a	100	a	500	k	2.4		0.45	41		4.1	0.26	J	0.49	4.7		0.52		U	0.44	0.59		0.48
Anthracene	120-12-7	100	a	100	a	100	a	500	k	0.61		0.45	12		4.1	0.08	J	0.49	1.3		0.52		U	0.44	0.34	J	0.48
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	1.2		0.45	10		4.1	0.076	J	0.49	1.5		0.52		U	0.44	2.4		0.48
Pyrene	129-00-0	100		100	a	100	a	500	k	1.9		0.45	22		4.1	0.18	J	0.49	1.9		0.52		U	0.44	8.2		0.48
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		0.52		0.045	**7.4**		0.41	0.066		0.049	0.85		0.052		U	0.044	**2.2**		0.048
Chrysene	218-01-9	1	c	1	o	3.9		56		0.69		0.45	**6.7**		4.1	0.066	J	0.49	0.84		0.52		U	0.44	**3.1**		0.48
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		0.35		0.045	**2.6**		0.41		U	0.049	0.56		0.052		U	0.044	**1.5**		0.048
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		0.47		0.045	**3.9**		0.41		U	0.049	**1.1**		0.052		U	0.044	**2.3**		0.048
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	0.53		0.045	**6.4**		0.41		U	0.049	0.89		0.052		U	0.044	**2.1**		0.048
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		0.12		0.045		U	0.41		U	0.049		U	0.052		U	0.044		U	0.048
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.045		U	0.41		U	0.049		U	0.052		U	0.044		U	0.048
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	0.14	J	0.45		U	4.1		U	0.49		U	0.52		U	0.44		U	0.48
Total PAHs										13.69			175.4			1.076			26.39			0			23.45		
Total Confident Conc. PAHs										13			172			0.1			26			0			22		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										10 (J)			background			background			15 (J)			background			25 (J)		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-75 (8.0-8.5)			SB-75 (16.5-17.0)			SB-75 (19.0-19.5)			SB-78 (12.0-12.5)			SB-78 (15.0-15.5)			SB-80 (12.0-12.5)		
Lab Sample Number										917121			917119			917118			917136			917137			917123		
Sampling Depth (feet bgs)										8.0 to 8.5			16.5 to 17.0			19.0 to 19.5			12.0 to 12.5			15.0 to 15.5			12.0 to 12.5		
Sampling Date										05/02/08			05/02/08			05/02/08			05/02/08			05/02/08			05/02/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			NR			NR		
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			NR			NR		
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			NR			NR		
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR			NR			NR		
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			NR			NR		
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			NR			NR		
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			NR			NR		
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR			NR			NR		
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			NR			NR		
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR			NR			NR		
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			NR			NR		
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR			NR			NR		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-80 (17.0-17.5)			SB-84 (4.5-5.0)			SB-84A_12.0-12.5			SB-84A_13.5-14.5			SB-84A(13.5-14.5)DUP			SB-85 (13.0-13.5)		
Lab Sample Number										917124			917115			923397			923398			923399			914986		
Sampling Depth (feet bgs)										17.0 to 17.5			4.5 to 5.0			12.0 to 12.5			13.5 to 14.5			13.5 to 14.5			13.0 to 13.5		
Sampling Date										05/02/08			05/01/08			05/29/08			05/29/08			05/29/08			04/22/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0042	0.013		0.0067	0.008		0.0052	0.004	J	0.0044	0.02		0.0041		U	0.51
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.0069	**0.05**		0.011	**0.079**	B	0.0087	0.028	B	0.0073	0.036	B	0.0069		U	0.85
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0069		U	0.011	0.0016	J	0.0087		U	0.0073	0.002	J	0.0069	0.2	J	0.85
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0028		U	0.0045		U	0.0035		U	0.0029		U	0.0028		U	0.34
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Chloroform	67-66-3	0.37		10		49		350			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0028		U	0.0045		U	0.0035		U	0.0029		U	0.0028		U	0.34
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0028		U	0.0045		U	0.0035		U	0.0029		U	0.0028		U	0.34
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0014		U	0.0022		U	0.0017		U	0.0015		U	0.0014		U	0.17
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0014		U	0.0022		U	0.0017		U	0.0015		U	0.0014		U	0.17
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0014		U	0.0022		U	0.0017		U	0.0015		U	0.0014		U	0.17
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0042		U	0.0067		U	0.0052		U	0.0044		U	0.0041		U	0.51
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0014	0.0018	J	0.0022	0.0007	J	0.0017		U	0.0015		U	0.0014	**0.7**		0.17
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0055		U	0.0089		U	0.0069		U	0.0059		U	0.0055		U	0.68
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0014		U	0.0022		U	0.0017		U	0.0015		U	0.0014		U	0.17
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0014		U	0.0022		U	0.0017		U	0.0015		U	0.0014		U	0.17
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0069		U	0.011	0.0026	J	0.0087		U	0.0073		U	0.0069	0.091	J	0.85
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Ethylbenzene	100-41-4	1		30		41		390			U	0.0055		U	0.0089	0.014		0.0069		U	0.0059		U	0.0055	**14**		0.68
Styrene	100-42-5	NS		NS		NS		NS			U	0.0069		U	0.011		U	0.0087		U	0.0073		U	0.0069		U	0.85
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0069		U	0.011	0.056		0.0087		U	0.0073		U	0.0069	**2.4**		0.85
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0			0.0648			0.1619			0.032			0.058			17.391		
Total BTEX										0			0.0018			0.0707			0			0			17.1		
Total Confident Conc. VOAs										0			0.1			0.1			0			0			17		
Total Estimated Conc. VOA TICs										0			0			1.6			0			0			150		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-80 (17.0-17.5)			SB-84 (4.5-5.0)			SB-84A_12.0-12.5			SB-84A_13.5-14.5			SB-84A(13.5-14.5)DUP			SB-85 (13.0-13.5)		
Lab Sample Number										917124			917115			923397			923398			923399			914986		
Sampling Depth (feet bgs)										17.0 to 17.5			4.5 to 5.0			12.0 to 12.5			13.5 to 14.5			13.5 to 14.5			13.0 to 13.5		
Sampling Date										05/02/08			05/01/08			05/29/08			05/29/08			05/29/08			04/22/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k		U	0.48		U	0.78	6		1.2	0.18	J	0.49	0.082	J	0.46	**360**		58
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.48	0.19	J	0.78	0.67	J	1.2	0.092	J	0.49	0.031	J	0.46	36	J	58
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.48		U	0.78	2.9		1.2	0.021	J	0.49	0.084	J	0.46	**520**		58
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.48		U	0.78	2.7		1.2	0.032	J	0.49	0.16	J	0.46	**230**		58
Phenanthrene	85-01-8	100		100	a	100	a	500	k		U	0.48	0.14	J	0.78	14		1.2	0.026	J	0.49	0.43	J	0.46	**820**		58
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.48	0.05	J	0.78	4.9		1.2		U	0.49	0.2	J	0.46	**180**		58
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k		U	0.48	0.66	J	0.78	12		1.2	0.01	J	0.49	0.25	J	0.46	**270**		58
Pyrene	129-00-0	100		100	a	100	a	500	k		U	0.48	0.87		0.78	15		1.2	0.021	J	0.49	0.19	J	0.46	**430**		58
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.048	0.49		0.078	**6.2**		0.12		U	0.049	0.13		0.046	**100**		5.8
Chrysene	218-01-9	1	c	1	o	3.9		56			U	0.48	0.65	J	0.78	**6.6**		1.2		U	0.49	0.12	J	0.46	**100**		58
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.048	0.41		0.078	**4**		0.12		U	0.049	0.043	J	0.046	**71**		5.8
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.048	0.76		0.078	**4.6**		0.12		U	0.049	0.084		0.046	**55**		5.8
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.048	0.53		0.078	**5.6**		0.12		U	0.049	0.074		0.046	**89**		5.8
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.048		U	0.078	**1.9**		0.12		U	0.049	0.028	J	0.046	**33**		5.8
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.048		U	0.078	**0.83**		0.12		U	0.049	0.017	J	0.046	**10**		5.8
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.48		U	0.78	1.8		1.2		U	0.49	0.024	J	0.46	**44**	J	58
Total PAHs										0			4.75			89.7			0.382			1.947			**3348**		
Total Confident Conc. PAHs										0			3			89			0			0.3			**3268**		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										background			15 (J)			no data			no data			no data			200 (J)		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-80 (17.0-17.5)			SB-84 (4.5-5.0)			SB-84A_12.0-12.5			SB-84A_13.5-14.5			SB-84A(13.5-14.5)DUP			SB-85 (13.0-13.5)		
Lab Sample Number										917124			917115			923397			923398			923399			914986		
Sampling Depth (feet bgs)										17.0 to 17.5			4.5 to 5.0			12.0 to 12.5			13.5 to 14.5			13.5 to 14.5			13.0 to 13.5		
Sampling Date										05/02/08			05/01/08			05/29/08			05/29/08			05/29/08			04/22/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			NR			NR		
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			NR			NR		
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			NR			NR		
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR			NR			NR		
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			NR			NR		
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			NR			NR		
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			NR			NR		
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR			NR			NR		
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			NR			NR		
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR			NR			NR		
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			NR			NR		
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR			NR			NR		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-85(13.0-13.5)			SB-85 (16.0-17.0)			SB-86 (13.0-13.5)			SB-88 (5.5-6.0)			SB-88 (4.5-5.0)			SB-92 (5.0-5.5)		
Lab Sample Number										921960			921961			917134			917109			917110			917114		
Sampling Depth (feet bgs)										13.0 to 13.5			16.0 to 17.0			13.0 to 13.5			5.5 to 6.0			4.5 to 5.0			5.0 to 5.5		
Sampling Date										05/20/08			05/20/08			05/02/08			04/25/08			04/25/08			05/01/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.48		U	0.0032		U	3.9		U	0.0066		U	0.0049		U	0.0050
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.80		U	0.0054		U	6.5	**0.18**		0.011	0.048		0.0082	**0.073**		0.0084
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.32		U	0.0022		U	2.6		U	0.0044	0.013		0.0033		U	0.0033
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Chloroform	67-66-3	0.37		10		49		350			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.32		U	0.0022		U	2.6		U	0.0044		U	0.0033		U	0.0033
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.80		U	0.0054		U	6.5	0.024		0.011		U	0.0082		U	0.0084
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.32		U	0.0022		U	2.6		U	0.0044		U	0.0033		U	0.0033
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.16		U	0.0011		U	1.3		U	0.0022		U	0.0016		U	0.0017
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.16		U	0.0011		U	1.3		U	0.0022		U	0.0016		U	0.0017
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Trichloroethene	79-01-6	0.47		10		21		200			U	0.16		U	0.0011		U	1.3		U	0.0022		U	0.0016		U	0.0017
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.48		U	0.0032		U	3.9		U	0.0066		U	0.0049		U	0.0050
Benzene	71-43-2	0.06		2.9		4.8		44		**0.17**		0.16		U	0.0011	**27**		1.3		U	0.0022		U	0.0016		U	0.0017
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Bromoform	75-25-2	NS		NS		NS		NS			U	0.64		U	0.0043		U	5.2		U	0.0089		U	0.0066		U	0.0067
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.16		U	0.0011		U	1.3		U	0.0022		U	0.0016		U	0.0017
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.16		U	0.0011		U	1.3		U	0.0022		U	0.0016		U	0.0017
Toluene	108-88-3	0.7		100	a	100	a	500	k	0.12	J	0.80		U	0.0054	**1.7**	J	6.5		U	0.011		U	0.0082		U	0.0084
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Ethylbenzene	100-41-4	1		30		41		390		**2.5**		0.64		U	0.0043	**120**		5.2		U	0.0089		U	0.0066		U	0.0067
Styrene	100-42-5	NS		NS		NS		NS			U	0.80		U	0.0054		U	6.5		U	0.011		U	0.0082		U	0.0084
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	**0.58**	J	0.80		U	0.0054	**96**		6.5	0.0093	J	0.011		U	0.0082		U	0.0084
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										3.37			0			244.7			0.2133			0.061			0.073		
Total BTEX										3.25			0			243			0.0093			0			0		
Total Confident Conc. VOAs										2.6			0			243			0.2			0.1			0.1		
Total Estimated Conc. VOA TICs										156			0			690			2.1			0			0		

Table 5-3. Soil Analytical Results
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Sample ID		NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-85(13.0-13.5)			SB-85 (16.0-17.0)			SB-86 (13.0-13.5)			SB-88 (5.5-6.0)			SB-88 (4.5-5.0)			SB-92 (5.0-5.5)		
Lab Sample Number	CASRN									921960			921961			917134			917109			917110			917114		
Sampling Depth (feet bgs)										13.0 to 13.5			16.0 to 17.0			13.0 to 13.5			5.5 to 6.0			4.5 to 5.0			5.0 to 5.5		
Sampling Date										05/20/08			05/20/08			05/02/08			04/25/08			04/25/08			05/01/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	9	J	14	0.31	J	0.37	**970**		44	2.3	J	7.6		U	1.1		U	0.57
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	7.4	J	14	0.043	J	0.37	30	J	44	4.6	J	7.6		U	1.1	0.22	J	0.57
Acenaphthene	83-32-9	20		100	a	100	a	500	k	**82**		14	0.49		0.37	**390**		44	3.8	J	7.6	0.05	J	1.1	0.025	J	0.57
Fluorene	86-73-7	30		100	a	100	a	500	k	**47**		14	0.24	J	0.37	**200**		44	5	J	7.6		U	1.1		U	0.57
Phenanthrene	85-01-8	100		100	a	100	a	500	k	**190**		14	1		0.37	**800**		44	29		7.6	0.52	J	1.1	0.15	J	0.57
Anthracene	120-12-7	100	a	100	a	100	a	500	k	45		14	0.22	J	0.37	**430**		44	8.8		7.6	0.18	J	1.1	0.077	J	0.57
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	57		14	0.26	J	0.37	**230**		44	33		7.6	0.73	J	1.1	0.37	J	0.57
Pyrene	129-00-0	100		100	a	100	a	500	k	84		14	0.42		0.37	**300**		44	56		7.6	0.9	J	1.1	0.45	J	0.57
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		**24**		1.4	0.13		0.037	**86**		4.4	**14**		0.76	0.53		0.11	0.21		0.057
Chrysene	218-01-9	1	c	1	o	3.9		56		**22**		14	0.12	J	0.37	**120**		44	**24**		7.6	0.78	J	1.1	0.38	J	0.57
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		**11**		1.4	0.049		0.037	**25**		4.4	**9.5**		0.76	0.3		0.11	0.52		0.057
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		**13**		1.4	0.07		0.037	**55**		4.4	**15**		0.76	0.42		0.11	0.56		0.057
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	**26**		1.4	0.098		0.037	**75**		4.4	**16**		0.76	0.41		0.11	0.51		0.057
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		**9.7**		1.4	0.023	J	0.037	**26**		4.4	**3.7**		0.76	0.18		0.11		U	0.057
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56		**2.8**		1.4		U	0.037		U	4.4		U	0.76		U	0.11		U	0.057
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	14		14	0.03	J	0.37	35	J	44		U	7.6		U	1.1		U	0.57
Total PAHs										643.9			3.503			3772			224.7			5			3.472		
Total Confident Conc. PAHs										627			2.2			3707			209			1.8			1.8		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										200 (J)			background			500 (J)			20 (J)			background			background		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-85(13.0-13.5)			SB-85 (16.0-17.0)			SB-86 (13.0-13.5)			SB-88 (5.5-6.0)			SB-88 (4.5-5.0)			SB-92 (5.0-5.5)		
Lab Sample Number										921960			921961			917134			917109			917110			917114		
Sampling Depth (feet bgs)										13.0 to 13.5			16.0 to 17.0			13.0 to 13.5			5.5 to 6.0			4.5 to 5.0			5.0 to 5.5		
Sampling Date										05/20/08			05/20/08			05/02/08			04/25/08			04/25/08			05/01/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			NR			NR		
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			NR			NR		
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			NR			NR		
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR			NR			NR		
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			NR			NR		
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			NR			NR		
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			NR			NR		
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR			NR			NR		
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			NR			NR		
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR			NR			NR		
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR			NR			NR		
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			NR			NR		
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			NR			NR		
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR			NR			NR		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-94 (9.0-9.5)			SB-94_9.0-10.0			SB-100 (8.25-8.75)			SB-107 (5.5-6.0)			SB-108 (13.0-14.0)			SB-108 (33.0-34.0)		
Lab Sample Number										917111			923413			917116			917112			920673			920676		
Sampling Depth (feet bgs)										9.0 to 9.5			9.0 to 10.0			8.25 to 8.7			5.5 to 6.0			13.0 to 14.0			33.0 to 34.0		
Sampling Date										04/30/08			05/28/08			04/30/08			04/30/08			05/15/08			05/16/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Bromomethane	74-83-9	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Chloroethane	75-00-3	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	9.5		U	23		U	0.57	0.015		0.0033		U	0.0028		U	0.0032
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	6.4		U	15		U	0.38		U	0.0022		U	0.0019		U	0.0022
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Chloroform	67-66-3	0.37		10		49		350			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	6.4		U	15		U	0.38		U	0.0022		U	0.0019		U	0.0022
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	6.4		U	15		U	0.38		U	0.0022		U	0.0019		U	0.0022
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	3.2		U	7.6		U	0.19		U	0.0011		U	0.0009		U	0.0011
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	3.2		U	7.6		U	0.19		U	0.0011		U	0.0009		U	0.0011
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Trichloroethene	79-01-6	0.47		10		21		200			U	3.2		U	7.6		U	0.19		U	0.0011		U	0.0009		U	0.0011
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	9.5		U	23		U	0.57		U	0.0033		U	0.0028		U	0.0032
Benzene	71-43-2	0.06		2.9		4.8		44		**170**		3.2	**110**		7.6		U	0.19		U	0.0011		U	0.0009		U	0.0011
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Bromoform	75-25-2	NS		NS		NS		NS			U	13		U	30		U	0.77		U	0.0044		U	0.0037		U	0.0043
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
2-Hexanone	591-78-6	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	3.2		U	7.6		U	0.19		U	0.0011		U	0.0009		U	0.0011
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	3.2		U	7.6		U	0.19		U	0.0011		U	0.0009		U	0.0011
Toluene	108-88-3	0.7		100	a	100	a	500	k	**29**		16	**3**	J	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Ethylbenzene	100-41-4	1		30		41		390		**520**		13	**200**		30	**1.1**		0.77		U	0.0044		U	0.0037		U	0.0043
Styrene	100-42-5	NS		NS		NS		NS			U	16		U	38		U	0.96		U	0.0055		U	0.0047		U	0.0054
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	**410**		16	**170**		38	**1.5**		0.96		U	0.0055		U	0.0047		U	0.0054
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										1129			483			2.6			0.015			0			0		
Total BTEX										1100			480			2.6			0			0			0		
Total Confident Conc. VOAs										1129			480			2.6			0			0			0		
Total Estimated Conc. VOA TICs										1763			1889			69			0			0			0		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-94 (9.0-9.5)			SB-94_9.0-10.0			SB-100 (8.25-8.75)			SB-107 (5.5-6.0)			SB-108 (13.0-14.0)			SB-108 (33.0-34.0)		
Lab Sample Number										917111			923413			917116			917112			920673			920676		
Sampling Depth (feet bgs)										9.0 to 9.5			9.0 to 10.0			8.25 to 8.7			5.5 to 6.0			13.0 to 14.0			33.0 to 34.0		
Sampling Date										04/30/08			05/28/08			04/30/08			04/30/08			05/15/08			05/16/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	**7000**		540	**5000**		320	**110**		33		U	0.39		U	0.36		U	0.37
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	**280**	J	540	**190**	J	320	12	J	33		U	0.39		U	0.36		U	0.37
Acenaphthene	83-32-9	20		100	a	100	a	500	k	**3200**		540	**2100**		320	**82**		33		U	0.39		U	0.36		U	0.37
Fluorene	86-73-7	30		100	a	100	a	500	k	**1300**		540	**910**		320	**64**		33		U	0.39		U	0.36		U	0.37
Phenanthrene	85-01-8	100		100	a	100	a	500	k	**5600**		540	**3500**		320	**380**		33		U	0.39	0.009	J	0.36		U	0.37
Anthracene	120-12-7	100	a	100	a	100	a	500	k	**3000**		540	**2000**		320	99		33		U	0.39		U	0.36		U	0.37
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	**1900**		540	**1200**		320	**160**		33		U	0.39	0.014	J	0.36		U	0.37
Pyrene	129-00-0	100		100	a	100	a	500	k	**2500**		540	**1800**		320	**270**		33		U	0.39	0.033	J	0.36		U	0.37
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		**760**		54	**560**		32	**89**		3.3		U	0.039	0.016	J	0.036		U	0.037
Chrysene	218-01-9	1	c	1	o	3.9		56		**930**		540	**630**		320	**110**		33		U	0.39	0.02	J	0.36		U	0.37
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		**220**		54	**190**		32	**30**		3.3		U	0.039		U	0.036		U	0.037
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		**540**		54	**340**		32	**56**		3.3		U	0.039		U	0.036		U	0.037
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	**660**		54	**460**		32	**81**		3.3		U	0.039		U	0.036		U	0.037
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		**190**		54	**130**		32	**25**		3.3		U	0.039		U	0.036		U	0.037
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	54	**45**		32		U	3.3		U	0.039		U	0.036		U	0.037
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	**270**	J	540	**150**	J	320	34		33		U	0.39		U	0.36		U	0.37
Total PAHs										28350			19205			1602			0			0.092			0		
Total Confident Conc. PAHs										27800			18865			1590			0			0			0		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										630.6			630.6			53.5			background			no data			no data		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-94 (9.0-9.5)			SB-94_9.0-10.0			SB-100 (8.25-8.75)			SB-107 (5.5-6.0)			SB-108 (13.0-14.0)			SB-108 (33.0-34.0)		
Lab Sample Number										917111			923413			917116			917112			920673			920676		
Sampling Depth (feet bgs)										9.0 to 9.5			9.0 to 10.0			8.25 to 8.7			5.5 to 6.0			13.0 to 14.0			33.0 to 34.0		
Sampling Date										04/30/08			05/28/08			04/30/08			04/30/08			05/15/08			05/16/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		NR			NR			NR			NR			9350		13.4	8090		12.8
Antimony	7440-36-0	NS		NS		NS		NS		NR			NR			NR			NR				U	1.2		U	1.2
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	NR			NR			NR			NR			0.84	B	0.68		U	0.65
Barium	7440-39-3	350	c	350	o	400		400		NR			NR			NR			NR			58.3		0.36	98.2		0.35
Beryllium	7440-41-7	7.2		14		72		590		NR			NR			NR			NR			0.47		0.064	0.46		0.061
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		NR			NR			NR			NR				U	0.086		U	0.082
Calcium	7440-70-2	NS		NS		NS		NS		NR			NR			NR			NR			1710		9.1	20300		8.7
Chromium	7440-47-3	30	c	36		180		1500		NR			NR			NR			NR			15.2		0.34	11.7		0.33
Cobalt	7440-48-4	NS		NS		NS		NS		NR			NR			NR			NR			6.3	B	0.36	5.7	B	0.35
Copper	7440-50-8	50		270		270		270		NR			NR			NR			NR			13.7		0.79	6.7		0.76
Iron	7439-89-6	NS		NS		NS		NS		NR			NR			NR			NR			19600		8.4	14400		8.0
Lead	7439-92-1	63	c	400		400		1000		NR			NR			NR			NR			4.1		0.58	6.6		0.55
Magnesium	7439-95-4	NS		NS		NS		NS		NR			NR			NR			NR			4040		8.9	4320		8.5
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	NR			NR			NR			NR			288		0.26	354		0.24
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	NR			NR			NR			NR				U	0.018		U	0.019
Nickel	7440-02-0	30		140		310		310		NR			NR			NR			NR			13.3		0.51	12.6		0.49
Potassium	7440-09-7	NS		NS		NS		NS		NR			NR			NR			NR			1840		67.5	2020		64.4
Selenium	7782-49-2	3.9	c	36		180		1500		NR			NR			NR			NR				U	0.90		U	0.86
Silver	7440-22-4	2		36		180		1500		NR			NR			NR			NR				U	0.30		U	0.29
Sodium	7440-23-5	NS		NS		NS		NS		NR			NR			NR			NR			100	B	84.6		U	80.7
Thallium	7440-28-0	NS		NS		NS		NS		NR			NR			NR			NR				U	1.0		U	0.96
Vanadium	7440-62-2	NS		NS		NS		NS		NR			NR			NR			NR			19.3		1.0	17.2		0.96
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	NR			NR			NR			NR			42.9		1.2	28.1		1.2
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		NR			NR			NR			NR				U	0.5		U	0.5

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-109(14.5-15.0)			SB-109(29.5-30.0)			SB-110 (10.5-11.0)			SB-110 (28.0-28.5)			SB-111B (8.5-9.0)			SB-111B (22.2-22.7)		
Lab Sample Number										921944			921945			920235			920236			920232			920233		
Sampling Depth (feet bgs)										14.5 to 15.0			29.5 to 30.0			10.5 to 11.0			28.0 to 28.5			8.5 to 9.00			22.2 to 22.7		
Sampling Date										05/20/08			05/20/08			05/13/08			05/13/08			05/12/08			05/13/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
MethyleneChloride	75-09-2	0.05		51		100	a	500	k	0.003	J	0.0031	0.0094		0.0038	0.004		0.0030	0.0029	J	0.0033		U	1.4	0.0084		0.0036
Acetone	67-64-1	0.05		100	a	100	k	500	k	0.036		0.0052	0.06		0.0062	0.029		0.0050	0.027		0.0055		U	2.4	0.044		0.0060
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0021		U	0.0025		U	0.0020		U	0.0022		U	0.94		U	0.0024
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Chloroform	67-66-3	0.37		10		49		350			U	0.0052		U	0.0062	0.0023	J	0.0050		U	0.0055		U	2.4		U	0.0060
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0021		U	0.0025		U	0.0020		U	0.0022		U	0.94		U	0.0024
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0021		U	0.0025		U	0.0020		U	0.0022		U	0.94		U	0.0024
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0010		U	0.0012		U	0.0010		U	0.0011		U	0.47		U	0.0012
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0010		U	0.0012		U	0.0010		U	0.0011		U	0.47		U	0.0012
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0010		U	0.0012		U	0.0010		U	0.0011		U	0.47		U	0.0012
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0031		U	0.0038		U	0.0030		U	0.0033		U	1.4		U	0.0036
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0010		U	0.0012		U	0.0010		U	0.0011	**0.43**	J	0.47		U	0.0012
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0041		U	0.0050		U	0.0040		U	0.0044		U	1.9		U	0.0048
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0010		U	0.0012		U	0.0010		U	0.0011		U	0.47		U	0.0012
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0010		U	0.0012		U	0.0010		U	0.0011		U	0.47		U	0.0012
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055	0.52	J	2.4		U	0.0060
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Ethylbenzene	100-41-4	1		30		41		390			U	0.0041		U	0.0050		U	0.0040		U	0.0044	**9.3**		1.9		U	0.0048
Styrene	100-42-5	NS		NS		NS		NS			U	0.0052		U	0.0062		U	0.0050		U	0.0055		U	2.4		U	0.0060
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0052		U	0.0062		U	0.0050		U	0.0055	**21**		2.4		U	0.0060
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.039			0.0694			0.0353			0.0299			31.25			0.0524		
Total BTEX										0			0			0			0			30.73			0		
Total Confident Conc. VOAs										0			0.1			0			0			30			0.1		
Total Estimated Conc. VOA TICs										0			0			0			0			265			0.1		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-109(14.5-15.0)			SB-109(29.5-30.0)			SB-110 (10.5-11.0)			SB-110 (28.0-28.5)			SB-111B (8.5-9.0)			SB-111B (22.2-22.7)		
Lab Sample Number										921944			921945			920235			920236			920232			920233		
Sampling Depth (feet bgs)										14.5 to 15.0			29.5 to 30.0			10.5 to 11.0			28.0 to 28.5			8.5 to 9.00			22.2 to 22.7		
Sampling Date										05/20/08			05/20/08			05/13/08			05/13/08			05/12/08			05/13/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	**520**		40	0.028	J	0.41
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	31	J	40		U	0.41
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	**99**		40		U	0.41
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	**140**		40		U	0.41
Phenanthrene	85-01-8	100		100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	**440**		40	0.025	J	0.41
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	93		40		U	0.41
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	**120**		40	0.0086	J	0.41
Pyrene	129-00-0	100		100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	**170**		40	0.013	J	0.41
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.036		U	0.043		U	0.038		U	0.039	**45**		4		U	0.041
Chrysene	218-01-9	1	c	1	o	3.9		56			U	0.36		U	0.43		U	0.38		U	0.39	**42**		40		U	0.41
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.036		U	0.043		U	0.038		U	0.039	**14**		4		U	0.041
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.036		U	0.043		U	0.038		U	0.039	**23**		4		U	0.041
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.036		U	0.043		U	0.038		U	0.039	**30**		4		U	0.041
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.036		U	0.043		U	0.038		U	0.039	**10**		4		U	0.041
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.036		U	0.043		U	0.038		U	0.039	**3.1**	J	4		U	0.041
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.36		U	0.43		U	0.38		U	0.39	14	J	40		U	0.41
Total PAHs										0			0			0			0			1794.1			0.0746		
Total Confident Conc. PAHs										0			0			0			0			1746			0		
Total Estimated Conc. BNA TIC										NA			NA														
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

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Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-109(14.5-15.0)			SB-109(29.5-30.0)			SB-110 (10.5-11.0)			SB-110 (28.0-28.5)			SB-111B (8.5-9.0)			SB-111B (22.2-22.7)		
Lab Sample Number										921944			921945			920235			920236			920232			920233		
Sampling Depth (feet bgs)										14.5 to 15.0			29.5 to 30.0			10.5 to 11.0			28.0 to 28.5			8.5 to 9.00			22.2 to 22.7		
Sampling Date										05/20/08			05/20/08			05/13/08			05/13/08			05/12/08			05/13/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		7450		16.6	5360		20.0	8220		14.2	8110		14.7	19000		15.0	7460		15.3
Antimony	7440-36-0	NS		NS		NS		NS			U	1.0		U	1.3		U	1.3		U	1.4		U	1.4		U	1.4
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	2.2		0.96	1.4		1.2	1.5		0.73	0.77	B	0.75	3		0.77	1.2		0.78
Barium	7440-39-3	350	c	350	o	400		400		39.1	B	0.28	63.1		0.34	70.5		0.39	69.4		0.40	158		0.41	72.6		0.42
Beryllium	7440-41-7	7.2		14		72		590		0.3	B	0.021	0.27	B	0.026	0.42	B	0.068	0.48		0.070	0.94		0.072	0.33	B	0.073
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.11		U	0.13		U	0.091		U	0.094		U	0.096		U	0.098
Calcium	7440-70-2	NS		NS		NS		NS		1010	B	15.9	9800		19.3	1830		9.7	23400		10.0	2420		10.2	16400		10.4
Chromium	7440-47-3	30	c	36		180		1500		8.4		0.60	6.3		0.72	10.8		0.36	11.4		0.38	25.7		0.38	12.2		0.39
Cobalt	7440-48-4	NS		NS		NS		NS		5.2	B	0.75	4.4	B	0.91	6.1	B	0.39	5.9	B	0.40	9.6	B	0.41	5.9	B	0.42
Copper	7440-50-8	50		270		270		270		15.5		0.66	8.5		0.80	13.1		0.84	6.7		0.87	24.6		0.89	12.3		0.90
Iron	7439-89-6	NS		NS		NS		NS		16500		8.5	12800		10.3	17900		8.9	14400		9.2	29200		9.4	16500		9.6
Lead	7439-92-1	63	c	400		400		1000		6.4		0.47	4.3		0.57	4.6		0.61	6.1		0.63	9.4		0.65	4.4		0.66
Magnesium	7439-95-4	NS		NS		NS		NS		3280		15.0	3170		18.1	3010		9.5	6210		9.8	5450		10.0	5000		10.2
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	349		0.62	282		0.75	565		0.27	361		0.28	465		0.29	298		0.29
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.018		U	0.022		U	0.016		U	0.020		U	0.020		U	0.017
Nickel	7440-02-0	30		140		310		310		11.1		0.83	7.9	B	1.0	10.5		0.55	12.5		0.56	26.3		0.58	12.1		0.59
Potassium	7440-09-7	NS		NS		NS		NS		1160		27.8	1010	B	33.6	1720		71.8	2340		74.0	2870		75.7	1380		77.1
Selenium	7782-49-2	3.9	c	36		180		1500			U	1.0		U	1.2		U	0.96		U	0.98		U	1.0		U	1.0
Silver	7440-22-4	2		36		180		1500			U	0.26		U	0.31		U	0.32		U	0.33		U	0.34		U	0.34
Sodium	7440-23-5	NS		NS		NS		NS		92.2	B	77.2	147	B	93.4		U	90.0		U	92.7		U	95.0		U	96.7
Thallium	7440-28-0	NS		NS		NS		NS			U	1.0		U	1.2		U	1.1		U	1.1		U	1.1		U	1.1
Vanadium	7440-62-2	NS		NS		NS		NS		14.2		0.32	13.3		0.39	16.6		1.1	17.9		1.1	31.9		1.1	16.3		1.1
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	29.5		1.2	22		1.5	33.9		1.3	29.3		1.4	64.1		1.4	31.3		1.4
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5		U	0.5		U	0.5	0.73		0.5		U	0.5

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-111B (32.5-33.0)			SB-112A (18.0-19.0)			SB-112B (22.0-23.0)			SB-112B (32.0-33.0)			SB-113 (13.0-13.5)			SB-113 (22.0-22.5)		
Lab Sample Number										920234			918848			920230			920231			918386			918387		
Sampling Depth (feet bgs)										32.5 to 33.0			18.0 to 19.0			22.0 to 23.0			32.0 to 33.0			13.0 to 13.5			22.0 to 22.5		
Sampling Date										05/13/08			05/09/08			05/12/08			05/12/08			05/07/08			05/07/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
MethyleneChloride	75-09-2	0.05		51		100	a	500	k	0.0018	J	0.0032		U	0.35	0.017		0.0040		U	3.6		U	0.33		U	0.0036
Acetone	67-64-1	0.05		100	a	100	k	500	k	0.022		0.0053		U	0.58	0.015		0.0067		U	6.0		U	0.56		U	0.0059
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0021		U	0.23		U	0.0027		U	2.4		U	0.22		U	0.0024
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Chloroform	67-66-3	0.37		10		49		350			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0021		U	0.23		U	0.0027		U	2.4		U	0.22		U	0.0024
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0021		U	0.23		U	0.0027		U	2.4		U	0.22		U	0.0024
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0010		U	0.12		U	0.0013		U	1.2		U	0.11		U	0.0012
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0010		U	0.12		U	0.0013		U	1.2		U	0.11		U	0.0012
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0010		U	0.12		U	0.0013		U	1.2		U	0.11		U	0.0012
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0032		U	0.35		U	0.0040		U	3.6		U	0.33		U	0.0036
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0010		U	0.12	0.0063		0.0013	**0.56**	J	1.2	**1.6**		0.11	0.0006	J	0.0012
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0042		U	0.47		U	0.0054		U	4.8		U	0.45		U	0.0048
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0010		U	0.12		U	0.0013		U	1.2		U	0.11		U	0.0012
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0010		U	0.12		U	0.0013		U	1.2		U	0.11		U	0.0012
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0053		U	0.58		U	0.0067	**0.76**	J	6.0	0.39	J	0.56		U	0.0059
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Ethylbenzene	100-41-4	1		30		41		390		0.0008	J	0.0042	0.49		0.47	0.0023	J	0.0054	**11**		4.8	**1.1**		0.45		U	0.0048
Styrene	100-42-5	NS		NS		NS		NS			U	0.0053		U	0.58		U	0.0067		U	6.0		U	0.56		U	0.0059
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	0.0006	J	0.0053	0.4	J	0.58	0.0014	J	0.0067	**25**		6.0	**2.2**		0.56		U	0.0059
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.0252			0.89			0.042			37.32			5.29			0.0006		
Total BTEX										0.0014			0.89			0.01			36.56			4.9			0.0006		
Total Confident Conc. VOAs										0			0.5			0			36			4.9			0		
Total Estimated Conc. VOA TICs										0.1			11			0			261			36			0.045		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-111B (32.5-33.0)			SB-112A (18.0-19.0)			SB-112B (22.0-23.0)			SB-112B (32.0-33.0)			SB-113 (13.0-13.5)			SB-113 (22.0-22.5)		
Lab Sample Number										920234			918848			920230			920231			918386			918387		
Sampling Depth (feet bgs)										32.5 to 33.0			18.0 to 19.0			22.0 to 23.0			32.0 to 33.0			13.0 to 13.5			22.0 to 22.5		
Sampling Date										05/13/08			05/09/08			05/12/08			05/12/08			05/07/08			05/07/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	0.05	J	0.37	4.3		0.41	0.076	J	0.46	0.0097	J	0.42	9.6		0.78	1.5		0.40
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.37	0.94		0.41	0.01	J	0.46		U	0.42	1.8		0.78	0.6		0.40
Acenaphthene	83-32-9	20		100	a	100	a	500	k	0.0096	J	0.37	0.49		0.41		U	0.46		U	0.42	0.4	J	0.78	0.15	J	0.40
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.37	0.71		0.41		U	0.46		U	0.42	1.5		0.78	0.33	J	0.40
Phenanthrene	85-01-8	100		100	a	100	a	500	k	0.043	J	0.37	3.8		0.41	0.042	J	0.46	0.018	J	0.42	4.3		0.78	1		0.40
Anthracene	120-12-7	100	a	100	a	100	a	500	k	0.01	J	0.37	0.92		0.41	0.011	J	0.46		U	0.42	0.93		0.78	0.3	J	0.40
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	0.014	J	0.37	1.1		0.41	0.017	J	0.46	0.0097	J	0.42	1.1		0.78	0.49		0.40
Pyrene	129-00-0	100		100	a	100	a	500	k	0.026	J	0.37	1.8		0.41	0.02	J	0.46	0.013	J	0.42	1.7		0.78	0.79		0.40
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		0.0079	J	0.037	0.52		0.041		U	0.046		U	0.042	0.5		0.078	0.3		0.040
Chrysene	218-01-9	1	c	1	o	3.9		56		0.0079	J	0.37	0.52		0.41		U	0.46		U	0.42	0.48	J	0.78	0.35	J	0.400
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.037	0.24		0.041		U	0.046		U	0.042	0.13		0.078	0.24		0.040
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.037	0.39		0.041		U	0.046		U	0.042	0.24		0.078	0.46		0.040
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.037	0.42		0.041		U	0.046		U	0.042	0.35		0.078	0.34		0.040
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.037	0.16		0.041		U	0.046		U	0.042	0.12		0.078		U	0.040
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.037	0.06		0.041		U	0.046		U	0.042	0.059	J	0.078	0.046		0.040
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.37	0.17	J	0.41		U	0.46		U	0.42	0.15	J	0.78	0.34	J	0.400
Total PAHs										0.1684			16.54			0.176			0.0504			23.359			7.236		
Total Confident Conc. PAHs										0			16			0			0			22			5.7		
Total Estimated Conc. BNA TIC																						NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			background (J)			background		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-111B (32.5-33.0)			SB-112A (18.0-19.0)			SB-112B (22.0-23.0)			SB-112B (32.0-33.0)			SB-113 (13.0-13.5)			SB-113 (22.0-22.5)		
Lab Sample Number										920234			918848			920230			920231			918386			918387		
Sampling Depth (feet bgs)										32.5 to 33.0			18.0 to 19.0			22.0 to 23.0			32.0 to 33.0			13.0 to 13.5			22.0 to 22.5		
Sampling Date										05/13/08			05/09/08			05/12/08			05/12/08			05/07/08			05/07/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		11200		13.9	5880		15.3	6030		17.3	12200		15.6	13000		14.6	5750		14.9
Antimony	7440-36-0	NS		NS		NS		NS			U	1.3		U	1.4		U	1.6		U	1.4		U	1.3		U	1.4
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	0.8	B	0.71	1.5		0.78		U	0.88		U	0.80	3.6		0.74		U	0.76
Barium	7440-39-3	350	c	350	o	400		400		100		0.38	60.8		0.42	51.9	B	0.47	153		0.42	104		0.40	57.3		0.41
Beryllium	7440-41-7	7.2		14		72		590		0.72		0.067	0.37	B	0.073	0.24	B	0.083	0.65		0.075	0.65		0.070	0.32	B	0.072
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.089		U	0.098		U	0.11		U	0.100		U	0.093		U	0.095
Calcium	7440-70-2	NS		NS		NS		NS		12800		9.4	11600		10.4	12100		11.7	19600		10.6	6950		9.9	6280		10.1
Chromium	7440-47-3	30	c	36		180		1500		16.1		0.36	8.8		0.39	9.8		0.44	18.6		0.40	16.7		0.37	8.7		0.38
Cobalt	7440-48-4	NS		NS		NS		NS		7.6	B	0.38	4.7	B	0.42	4.4	B	0.47	11.2	B	0.42	8.7	B	0.40	4.5	B	0.41
Copper	7440-50-8	50		270		270		270		7.1		0.82	9.4		0.91	8.4		1.0	6.9		0.92	21.4		0.86	8.9		0.88
Iron	7439-89-6	NS		NS		NS		NS		19900		8.7	12600		9.6	12300		10.8	20300		9.8	24200		9.1	12400		9.4
Lead	7439-92-1	63	c	400		400		1000		9.1		0.60	6.1		0.66	3.6		0.74	9.7		0.67	9.8		0.63	3.3		0.64
Magnesium	7439-95-4	NS		NS		NS		NS		5480		9.2	3730		10.2	3860		11.5	5670		10.4	5850		9.7	3080		9.9
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	290		0.27	247		0.29	257		0.33	461		0.30	362		0.28	267		0.29
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.019		U	0.020		U	0.020		U	0.021		U	0.019		U	0.020
Nickel	7440-02-0	30		140		310		310		19		0.53	9.8		0.59	10.2	B	0.66	20.8		0.60	18.5		0.56	8.9	B	0.57
Potassium	7440-09-7	NS		NS		NS		NS		3260		70.1	1200		77.2	1220	B	87.0	3330		78.8	2790		73.3	1200		75.3
Selenium	7782-49-2	3.9	c	36		180		1500			U	0.93		U	1.0		U	1.2		U	1.0		U	0.98		U	1.0
Silver	7440-22-4	2		36		180		1500			U	0.31		U	0.34		U	0.39		U	0.35		U	0.33		U	0.33
Sodium	7440-23-5	NS		NS		NS		NS			U	87.9	110	B	96.8		U	109		U	98.8	145	B	92.0	115	B	94.4
Thallium	7440-28-0	NS		NS		NS		NS			U	1.0		U	1.2		U	1.3		U	1.2		U	1.1		U	1.1
Vanadium	7440-62-2	NS		NS		NS		NS		18.7		1.0	12.2		1.2	11.7	B	1.3	33.8		1.2	27.2		1.1	12.5		1.1
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	40		1.3	30.1		1.4	25.6		1.6	41.2		1.4	52.6		1.3	27.9		1.4
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-113 (31.5-32.0)			SB-114 (6.5-7.0)			SB-114 (16.5-17.5)			B-114 (16.5-17.5)DU			SB-114 (19.0-19.5)			SB-114 (29.5-30.0)		
Lab Sample Number										918388			918391			918392			918393			918840			918841		
Sampling Depth (feet bgs)										31.5 to 32.0			6.5 to 7.0			16.5 to 17.5			16.5 to 17.5			19.0 to 19.5			29.5 to 30.0		
Sampling Date										05/07/08			05/07/08			05/07/08			05/07/08			05/07/08			05/07/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0031		U	0.71		U	3.5		U	0.64		U	0.38		U	0.0032
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0021		U	0.47		U	2.3		U	0.42		U	0.26		U	0.0021
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Chloroform	67-66-3	0.37		10		49		350			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0021		U	0.47		U	2.3		U	0.42		U	0.26		U	0.0021
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0021		U	0.47		U	2.3		U	0.42		U	0.26		U	0.0021
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0010		U	0.24		U	1.2		U	0.21		U	0.13		U	0.0011
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0010		U	0.24		U	1.2		U	0.21		U	0.13		U	0.0011
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0010		U	0.24		U	1.2		U	0.21		U	0.13		U	0.0011
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0031		U	0.71		U	3.5		U	0.64		U	0.38		U	0.0032
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0010	**12**		0.24	**5.3**		1.2		U	0.21	**0.24**		0.13		U	0.0011
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0042		U	0.95		U	4.7		U	0.85		U	0.51		U	0.0043
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0010		U	0.24		U	1.2		U	0.21		U	0.13		U	0.0011
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0010		U	0.24		U	1.2		U	0.21		U	0.13		U	0.0011
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0052	**35**		1.2	**30**		5.8		U	1.1	0.04	J	0.64		U	0.0054
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0052		U	1.2		U	5.8		U	1.1		U	0.64		U	0.0054
Ethylbenzene	100-41-4	1		30		41		390			U	0.0042	**7.1**		0.95	**7.7**		4.7	**1**		0.85		U	0.51		U	0.0043
Styrene	100-42-5	NS		NS		NS		NS			U	0.0052	10		1.2	10		5.8		U	1.1		U	0.64		U	0.0054
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0052	**43**		1.2	**45**		5.8	**2**		1.1		U	0.64		U	0.0054
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0			107.1			98			3			0.28			0		
Total BTEX										0			62.1			58			3			0.24			0		
Total Confident Conc. VOAs										0			107			98			3			0.2			0		
Total Estimated Conc. VOA TICs										0			507			619			100			0			0		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID		NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-113 (31.5-32.0)			SB-114 (6.5-7.0)			SB-114 (16.5-17.5)			B-114 (16.5-17.5)DU			SB-114 (19.0-19.5)			SB-114 (29.5-30.0)		
Lab Sample Number	CASRN									918388			918391			918392			918393			918840			918841		
Sampling Depth (feet bgs)										31.5 to 32.0			6.5 to 7.0			16.5 to 17.5			16.5 to 17.5			19.0 to 19.5			29.5 to 30.0		
Sampling Date										05/07/08			05/07/08			05/07/08			05/07/08			05/07/08			05/07/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k		U	0.37	**270**		20	**49**		4.1	**350**		19	2		0.43	0.0087	J	0.37
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.37	12	J	20	3	J	4.1	30		19	0.2	J	0.43	0.022	J	0.37
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.37	5.8	J	20	0.59	J	4.1	**100**		19	0.12	J	0.43		U	0.37
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.37	**34**		20	2.3	J	4.1	49		19	0.46		0.43		U	0.37
Phenanthrene	85-01-8	100		100	a	100	a	500	k		U	0.37	**110**		20	6.5		4.1	**140**		19	2.4		0.43	0.023	J	0.37
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.37	22		20	1.5	J	4.1	41		19	0.48		0.43		U	0.37
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k		U	0.37	33		20	2.3	J	4.1	50		19	0.72		0.43	0.016	J	0.37
Pyrene	129-00-0	100		100	a	100	a	500	k		U	0.37	49		20	3.4	J	4.1	74		19	1		0.43	0.039	J	0.37
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.037	**15**		2.0	**1.1**		0.41	**25**		1.9	0.3		0.043	0.0089	J	0.037
Chrysene	218-01-9	1	c	1	o	3.9		56			U	0.37	**14**	J	20	**1**	J	4.1	**24**		19	0.3	J	0.43	0.012	J	0.37
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.037	**4.3**		2.0	0.34	J	0.41	**7.5**		1.9	0.12		0.043		U	0.037
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.037	**8.6**		2.0	0.59		0.41	**15**		1.9	0.14		0.043	0.01	J	0.037
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.037	**12**		2.0	0.85		0.41	**21**		1.9	**0.22**		0.043	0.012	J	0.037
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.037	**4.2**		2.0	0.29	J	0.41	**7.9**		1.9	0.06		0.043		U	0.037
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.037		U	2.0		U	0.41	**2**		1.9	**0.021**	J	0.043		U	0.037
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.37	5.4	J	20	0.37	J	4.1	10	J	19	0.075	J	0.43		U	0.37
Total PAHs										0			599.3			73.13			946.4			8.616			0.1516		
Total Confident Conc. PAHs										0			562			58			936			7.9			0		
Total Estimated Conc. BNA TIC										NA			NA			NA			NA								
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
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Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-113 (31.5-32.0)			SB-114 (6.5-7.0)			SB-114 (16.5-17.5)			B-114 (16.5-17.5)DU			SB-114 (19.0-19.5)			SB-114 (29.5-30.0)		
Lab Sample Number										918388			918391			918392			918393			918840			918841		
Sampling Depth (feet bgs)										31.5 to 32.0			6.5 to 7.0			16.5 to 17.5			16.5 to 17.5			19.0 to 19.5			29.5 to 30.0		
Sampling Date										05/07/08			05/07/08			05/07/08			05/07/08			05/07/08			05/07/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		7440		13.8	17100		15.4	15100		15.4	13400		14.1	14300		16.2	6970		14.1
Antimony	7440-36-0	NS		NS		NS		NS			U	1.3		U	1.4		U	1.4		U	1.3		U	1.5		U	1.3
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	1.2		0.70	2.9		0.79	4.7		0.79	3.1		0.72	4.0		0.83	1.1		0.72
Barium	7440-39-3	350	c	350	o	400		400		99		0.37	136		0.42	115		0.42	77.1		0.38	136		0.44	69.6		0.38
Beryllium	7440-41-7	7.2		14		72		590		0.43	B	0.066	0.88		0.074	0.77		0.074	0.55		0.068	0.78		0.078	0.44		0.067
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.088		U	0.098		U	0.098		U	0.090		U	0.10		U	0.090
Calcium	7440-70-2	NS		NS		NS		NS		16100		9.4	15400		10.4	23900		10.4	1530		9.6	17600		11.0	20700		9.6
Chromium	7440-47-3	30	c	36		180		1500		9.8		0.35	23.1		0.39	20.6		0.39	16.5		0.36	19.6		0.42	11.3		0.36
Cobalt	7440-48-4	NS		NS		NS		NS		5.4	B	0.37	12.3		0.42	10.4	B	0.42	8.7	B	0.38	10.8	B	0.44	6.0	B	0.38
Copper	7440-50-8	50		270		270		270		8.1		0.81	26.5		0.91	21.8		0.91	20.3		0.83	22.4		0.96	9.2		0.83
Iron	7439-89-6	NS		NS		NS		NS		14800		8.6	29000		9.6	26100		9.6	22400		8.8	26200		10.2	14400		8.8
Lead	7439-92-1	63	c	400		400		1000		5.3		0.59	11.7		0.66	9.9		0.66	7.8		0.61	11.3		0.70	5.4		0.61
Magnesium	7439-95-4	NS		NS		NS		NS		4360		9.2	9250		10.2	11800		10.2	4330		9.4	7370		10.8	6740		9.3
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	298		0.26	557		0.29	537		0.29	260		0.27	725		0.31	325		0.27
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.018		U	0.020		U	0.020		U	0.019		U	0.019		U	0.019
Nickel	7440-02-0	30		140		310		310		11.7		0.53	26.2		0.59	22.5		0.59	18.1		0.54	23.3		0.62	14.8		0.54
Potassium	7440-09-7	NS		NS		NS		NS		1850		69.5	3540		77.5	3190		77.4	2140		71.0	2700		81.8	1640		70.9
Selenium	7782-49-2	3.9	c	36		180		1500			U	0.93		U	1.0		U	1.0		U	0.95		U	1.1		U	0.94
Silver	7440-22-4	2		36		180		1500			U	0.31		U	0.34		U	0.34		U	0.32		U	0.36		U	0.31
Sodium	7440-23-5	NS		NS		NS		NS		131	B	87.1	178	B	97.2	176	B	97.1	129	B	89.1	149	B	103	182	B	88.9
Thallium	7440-28-0	NS		NS		NS		NS			U	1.0		U	1.2		U	1.2		U	1.1		U	1.2		U	1.1
Vanadium	7440-62-2	NS		NS		NS		NS		16.3		1.0	29.1		1.2	25.6		1.2	24.2		1.1	24.9		1.2	15.6		1.1
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	29.3		1.3	62.4		1.4	57.5		1.4	46.9		1.3	55.4		1.5	37.5		1.3
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-115 (17.0-18.0)			SB-115 (26.0-26.5)			SB-116 (8.0-9.0)			SB-116 (30.0-30.5)			SB-117 (14.2-14.7)			SB-117 (28.5-29.0)		
Lab Sample Number										918844			918845			918842			918843			918384			918385		
Sampling Depth (feet bgs)										17.0 to 18.0			26.0 to 26.5			8.0 to 9.0			30.0 to 30.5			14.2 to 14.7			28.5 to 29.0		
Sampling Date										05/08/08			05/09/08			05/08/08			05/08/08			05/06/08			05/06/08		
VOLATILE COMPOUNDS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0035		U	0.0035		U	0.0032	0.002	J	0.0034		U	0.0033		U	0.0032
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0023		U	0.0023		U	0.0021		U	0.0022		U	0.0022		U	0.0022
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Chloroform	67-66-3	0.37		10		49		350			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0023		U	0.0023		U	0.0021		U	0.0022		U	0.0022		U	0.0022
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0023		U	0.0023		U	0.0021		U	0.0022		U	0.0022		U	0.0022
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0012		U	0.0012		U	0.0011		U	0.0011		U	0.0011		U	0.0011
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0012		U	0.0012		U	0.0011		U	0.0011		U	0.0011		U	0.0011
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0012		U	0.0012		U	0.0011		U	0.0011		U	0.0011		U	0.0011
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0035		U	0.0035		U	0.0032		U	0.0034		U	0.0033		U	0.0032
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0012		U	0.0012		U	0.0011		U	0.0011		U	0.0011		U	0.0011
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0046		U	0.0046		U	0.0042		U	0.0045		U	0.0044		U	0.0043
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0012		U	0.0012		U	0.0011		U	0.0011		U	0.0011		U	0.0011
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0012		U	0.0012		U	0.0011		U	0.0011		U	0.0011		U	0.0011
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Ethylbenzene	100-41-4	1		30		41		390			U	0.0046		U	0.0046		U	0.0042		U	0.0045		U	0.0044		U	0.0043
Styrene	100-42-5	NS		NS		NS		NS			U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0058		U	0.0058		U	0.0053		U	0.0056		U	0.0055		U	0.0054
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0			0			0			0.002			0			0		
Total BTEX										0			0			0			0			0			0		
Total Confident Conc. VOAs										0			0			0			0			0			0		
Total Estimated Conc. VOA TICs										0			0			0			0			0.1			0		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-115 (17.0-18.0)			SB-115 (26.0-26.5)			SB-116 (8.0-9.0)			SB-116 (30.0-30.5)			SB-117 (14.2-14.7)			SB-117 (28.5-29.0)		
Lab Sample Number										918844			918845			918842			918843			918384			918385		
Sampling Depth (feet bgs)										17.0 to 18.0			26.0 to 26.5			8.0 to 9.0			30.0 to 30.5			14.2 to 14.7			28.5 to 29.0		
Sampling Date										05/08/08			05/09/08			05/08/08			05/08/08			05/06/08			05/06/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k		U	0.40		U	0.40		U	0.37		U	0.38	0.036	J	0.38		U	0.37
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.40		U	0.40		U	0.37		U	0.38	0.28	J	0.38		U	0.37
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.40		U	0.40		U	0.37		U	0.38	0.016	J	0.38		U	0.37
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.40		U	0.40		U	0.37		U	0.38	0.013	J	0.38		U	0.37
Phenanthrene	85-01-8	100		100	a	100	a	500	k		U	0.40		U	0.40	0.016	J	0.37		U	0.38	0.37	J	0.38		U	0.37
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.40		U	0.40		U	0.37		U	0.38	0.09	J	0.38		U	0.37
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k		U	0.40		U	0.40	0.011	J	0.37		U	0.38	0.84		0.38		U	0.37
Pyrene	129-00-0	100		100	a	100	a	500	k		U	0.40		U	0.40	0.016	J	0.37		U	0.38	0.97		0.38		U	0.37
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.040		U	0.040		U	0.037		U	0.038	0.37		0.038		U	0.037
Chrysene	218-01-9	1	c	1	o	3.9		56			U	0.40		U	0.40		U	0.37		U	0.38	0.5		0.38		U	0.37
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.040		U	0.040		U	0.037		U	0.038	0.41		0.038		U	0.037
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.040		U	0.040		U	0.037		U	0.038	0.58		0.038		U	0.037
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.040		U	0.040		U	0.037		U	0.038	0.55		0.038		U	0.037
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.040		U	0.040		U	0.037		U	0.038	0.26		0.038		U	0.037
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.040		U	0.040		U	0.037		U	0.038	0.085		0.038		U	0.037
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.40		U	0.40		U	0.37		U	0.38	0.28	J	0.38		U	0.37
Total PAHs										0			0			0.043			0			5.65			0		
Total Confident Conc. PAHs										0			0			0			0			4.5			0		
Total Estimated Conc. BNA TIC																						NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-115 (17.0-18.0)			SB-115 (26.0-26.5)			SB-116 (8.0-9.0)			SB-116 (30.0-30.5)			SB-117 (14.2-14.7)			SB-117 (28.5-29.0)		
Lab Sample Number										918844			918845			918842			918843			918384			918385		
Sampling Depth (feet bgs)										17.0 to 18.0			26.0 to 26.5			8.0 to 9.0			30.0 to 30.5			14.2 to 14.7			28.5 to 29.0		
Sampling Date										05/08/08			05/09/08			05/08/08			05/08/08			05/06/08			05/06/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		7110		15.0	5300		15.2	8380		14.0	6070		12.9	9080		13.0	7610		14.0
Antimony	7440-36-0	NS		NS		NS		NS			U	1.4		U	1.4		U	1.3		U	1.2		U	1.2		U	1.3
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	1.7		0.77	0.84	B	0.78	1.2		0.72		U	0.66	9.2		0.67		U	0.72
Barium	7440-39-3	350	c	350	o	400		400		50.2		0.41	60.4		0.41	65.4		0.38	78.2		0.35	171		0.35	102		0.38
Beryllium	7440-41-7	7.2		14		72		590		0.42	B	0.072	0.35	B	0.073	0.39	B	0.067	0.50		0.062	0.47		0.062	0.46		0.067
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.096		U	0.097		U	0.089		U	0.082		U	0.083		U	0.090
Calcium	7440-70-2	NS		NS		NS		NS		1400		10.2	10900		10.3	1830		9.5	16800		8.7	2530		8.8	16700		9.5
Chromium	7440-47-3	30	c	36		180		1500		10.6		0.38	18.8		0.39	11.5		0.36	9.0		0.33	14.1		0.33	10.2		0.36
Cobalt	7440-48-4	NS		NS		NS		NS		5.8	B	0.41	4.0	B	0.41	6.6	B	0.38	4.7	B	0.35	7.3	B	0.35	5.8	B	0.38
Copper	7440-50-8	50		270		270		270		12.6		0.89	5.3	B	0.9	22.7		0.83	5.5		0.76	19.8		0.77	7.6		0.83
Iron	7439-89-6	NS		NS		NS		NS		16500		9.4	12900		9.5	18500		8.8	12300		8.1	23100		8.2	13600		8.8
Lead	7439-92-1	63	c	400		400		1000		4.1		0.65	4.2		0.66	4.7		0.6	5.8		0.55	29.3		0.56	5.8		0.60
Magnesium	7439-95-4	NS		NS		NS		NS		2890		10.0	2840		10.1	3720		9.3	3880		8.5	3390		8.7	4130		9.3
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	255		0.29	290		0.29	281		0.27	303		0.25	335		0.25	298		0.27
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.020		U	0.017	0.02	B	0.019		U	0.019		U	0.019		U	0.019
Nickel	7440-02-0	30		140		310		310		10.9		0.58	9.5		0.58	11.6		0.54	10.8		0.49	14.9		0.50	11.3		0.54
Potassium	7440-09-7	NS		NS		NS		NS		1030	B	75.6	1270		76.6	1720		70.5	1500		64.8	1450		65.6	1950		70.6
Selenium	7782-49-2	3.9	c	36		180		1500			U	1.0		U	1.0		U	0.94		U	0.86		U	0.87		U	0.94
Silver	7440-22-4	2		36		180		1500			U	0.34		U	0.34		U	0.31		U	0.29		U	0.29		U	0.31
Sodium	7440-23-5	NS		NS		NS		NS		158	B	94.8	111	B	96.0	165	B	88.4	128	B	81.3	136	B	82.3	149	B	88.6
Thallium	7440-28-0	NS		NS		NS		NS			U	1.1		U	1.1		U	1.1		U	0.97		U	0.98		U	1.1
Vanadium	7440-62-2	NS		NS		NS		NS		18.3		1.1	12.1		1.1	20.3		1.1	13.7		0.97	32.6		0.98	19.5		1.1
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	28.5		1.4	22.6		1.4	32.7		1.3	25.9		1.2	66.7		1.2	28.8		1.3
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-118 (14.2-14.7)			SB-118 (18.0-18.5)			SB-118 (28.0-28.5)			SB-119 (12.0-13.0)			SB-119 (18.0-19.0)			SB-119 (21.2-21.7)		
Lab Sample Number										918381			918382			918383			920665			920666			920667		
Sampling Depth (feet bgs)										14.2 to 14.7			18.0 to 18.5			28.0 to 28.5			12.0 to 13.0			18.0 to 19.0			21.2 to21.7		
Sampling Date										05/06/08			05/06/08			05/06/08			05/14/08			05/14/08			05/14/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0034		U	0.0032		U	0.0033		U	3.9		U	0.39		U	17
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0023		U	0.0022		U	0.0022		U	2.6		U	0.26		U	12
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Chloroform	67-66-3	0.37		10		49		350			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0023		U	0.0022		U	0.0022		U	2.6		U	0.26		U	12
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0023		U	0.0022		U	0.0022		U	2.6		U	0.26		U	12
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0011		U	0.0011		U	0.0011		U	1.3		U	0.13		U	5.8
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0011		U	0.0011		U	0.0011		U	1.3		U	0.13		U	5.8
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0011		U	0.0011		U	0.0011		U	1.3		U	0.13		U	5.8
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0034		U	0.0032		U	0.0033		U	3.9		U	0.39		U	17
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0011		U	0.0011		U	0.0011	**7.4**		1.3	**0.4**		0.13		U	5.8
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0046		U	0.0043		U	0.0044		U	5.2		U	0.53		U	23
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0011		U	0.0011		U	0.0011		U	1.3		U	0.13		U	5.8
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0011		U	0.0011		U	0.0011		U	1.3		U	0.13		U	5.8
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0057		U	0.0054		U	0.0055	**8.2**		6.4	0.11	J	0.66	**31**		29
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0057		U	0.0054		U	0.0055		U	6.4		U	0.66		U	29
Ethylbenzene	100-41-4	1		30		41		390			U	0.0046		U	0.0043		U	0.0044	**4.4**	J	5.2	0.19	J	0.53	**37**		23
Styrene	100-42-5	NS		NS		NS		NS			U	0.0057		U	0.0054		U	0.0055	5.1	J	6.4	0.066	J	0.66	12	J	29
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0057		U	0.0054		U	0.0055	**29**		6.4	**0.4**	J	0.66	**92**		29
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0			0			0			54.1			1.166			172		
Total BTEX										0			0			0			40.8			0.99			129		
Total Confident Conc. VOAs										0			0			0			44			0.4			160		
Total Estimated Conc. VOA TICs										0.7			0.1			0			209			1.7			548		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-118 (14.2-14.7)			SB-118 (18.0-18.5)			SB-118 (28.0-28.5)			SB-119 (12.0-13.0)			SB-119 (18.0-19.0)			SB-119 (21.2-21.7)		
Lab Sample Number										918381			918382			918383			920665			920666			920667		
Sampling Depth (feet bgs)										14.2 to 14.7			18.0 to 18.5			28.0 to 28.5			12.0 to 13.0			18.0 to 19.0			21.2 to21.7		
Sampling Date										05/06/08			05/06/08			05/06/08			05/14/08			05/14/08			05/14/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	0.025	J	0.40		U	0.37		U	0.38	**670**		44	0.46		0.45	**170**		9.8
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	0.91		0.40	0.2	J	0.37		U	0.38	39	J	44	0.096	J	0.45	33		9.8
Acenaphthene	83-32-9	20		100	a	100	a	500	k	0.27	J	0.40	0.025	J	0.37		U	0.38	16	J	44	0.014	J	0.45	4.4	J	9.8
Fluorene	86-73-7	30		100	a	100	a	500	k	0.44		0.40	0.05	J	0.37		U	0.38	**68**		44	0.088	J	0.45	25		9.8
Phenanthrene	85-01-8	100		100	a	100	a	500	k	1.5		0.40	0.28	J	0.37		U	0.38	**230**		44	0.39	J	0.45	58		9.8
Anthracene	120-12-7	100	a	100	a	100	a	500	k	1		0.40	0.14	J	0.37		U	0.38	**56**		44	0.073	J	0.45	17		9.8
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	2.4		0.40	0.61		0.37		U	0.38	**70**		44	0.14	J	0.45	19		9.8
Pyrene	129-00-0	100		100	a	100	a	500	k	3.8		0.40	1		0.37		U	0.38	**86**		44	0.18	J	0.45	24		9.8
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		**1.5**		0.040	0.42		0.037		U	0.038	**28**		4.4	0.067		0.045	**8.2**		0.98
Chrysene	218-01-9	1	c	1	o	3.9		56		**1.6**		0.40	0.38		0.37		U	0.38	**29**	J	44	0.077	J	0.45	**8.1**	J	9.8
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		0.81		0.040	0.2		0.037		U	0.038	**9.7**		4.4	0.03	J	0.045	**2.8**		0.98
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		1.3		0.040	0.34		0.037		U	0.038	**18**		4.4	0.043	J	0.045	**4.9**		0.98
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	**2.1**		0.040	0.49		0.037		U	0.038	**28**		4.4	0.063		0.045	**7.5**		0.98
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		0.58		0.040	0.2		0.037		U	0.038	**12**		4.4	0.022	J	0.045	**2**		0.98
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56		**0.15**		0.040	0.054		0.037		U	0.038	**2.8**	J	4.4		U	0.045	**0.63**	J	0.98
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	0.65		0.40	0.25	J	0.37		U	0.38	18	J	44	0.03	J	0.45	2.6	J	9.8
Total PAHs										19.035			4.639			0			1380.5			1.773			387.13		
Total Confident Conc. PAHs										18			3.6			0			1275			0.6			371		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
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Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-118 (14.2-14.7)			SB-118 (18.0-18.5)			SB-118 (28.0-28.5)			SB-119 (12.0-13.0)			SB-119 (18.0-19.0)			SB-119 (21.2-21.7)		
Lab Sample Number										918381			918382			918383			920665			920666			920667		
Sampling Depth (feet bgs)										14.2 to 14.7			18.0 to 18.5			28.0 to 28.5			12.0 to 13.0			18.0 to 19.0			21.2 to21.7		
Sampling Date										05/06/08			05/06/08			05/06/08			05/14/08			05/14/08			05/14/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		8820		14.9	7830		13.8	7130		14.4	18900		15.1	19300		16.8	6690		14.7
Antimony	7440-36-0	NS		NS		NS		NS			U	1.4		U	1.3		U	1.3		U	1.4		U	1.6		U	1.4
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	2.6		0.76	1.7		0.70		U	0.74	7.1		0.77	4.2		0.86		U	0.75
Barium	7440-39-3	350	c	350	o	400		400		98.8		0.40	73.2		0.37	81.5		0.39	138		0.41	161		0.46	67.3		0.40
Beryllium	7440-41-7	7.2		14		72		590		0.42	B	0.071	0.4	B	0.066	0.43	B	0.069	0.91		0.072	0.98		0.081	0.37	B	0.071
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.095		U	0.088		U	0.092		U	0.096		U	0.11		U	0.094
Calcium	7440-70-2	NS		NS		NS		NS		4840		10.1	18800		9.4	14500		9.8	13800		10.2	17700		11.4	1780		10.0
Chromium	7440-47-3	30	c	36		180		1500		16.1		0.38	11		0.35	9.7		0.37	26.9		0.38	27		0.43	10.5		0.38
Cobalt	7440-48-4	NS		NS		NS		NS		6.7	B	0.40	5.5	B	0.37	4.9	B	0.39	14.3		0.41	14.1		0.46	5.1	B	0.40
Copper	7440-50-8	50		270		270		270		16.2		0.88	11.9		0.81	6.4		0.85	27		0.89	28.3		0.99	12.5		0.87
Iron	7439-89-6	NS		NS		NS		NS		19700		9.3	16400		8.6	12200		9.0	32800		9.4	32900		10.5	15500		9.2
Lead	7439-92-1	63	c	400		400		1000		5.7		0.64	5.8		0.59	4.9		0.62	13		0.65	12.9		0.72	3.4		0.64
Magnesium	7439-95-4	NS		NS		NS		NS		3770		9.9	6320		9.2	3540		9.6	8940		10.0	9840		11.2	3060		9.8
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	353		0.29	344		0.26	273		0.28	715		0.29	648		0.32	179		0.28
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.020		U	0.018		U	0.019		U	0.022		U	0.019		U	0.020
Nickel	7440-02-0	30		140		310		310		13.7		0.57	12.9		0.53	10.8		0.55	29.6		0.58	**30.1**		0.64	11		0.57
Potassium	7440-09-7	NS		NS		NS		NS		1750		75.0	1690		69.4	1910		72.6	4060		75.9	4030		84.7	1250		74.3
Selenium	7782-49-2	3.9	c	36		180		1500			U	1.00		U	0.92		U	0.97		U	1.0		U	1.1		U	0.99
Silver	7440-22-4	2		36		180		1500			U	0.33		U	0.31		U	0.32		U	0.34		U	0.38		U	0.33
Sodium	7440-23-5	NS		NS		NS		NS		195	B	94.1	159	B	87.0	148	B	91.0	109	B	95.1		U	106		U	93.2
Thallium	7440-28-0	NS		NS		NS		NS			U	1.1		U	1.0		U	1.1		U	1.1		U	1.3		U	1.1
Vanadium	7440-62-2	NS		NS		NS		NS		24.7		1.1	14.6		1.0	14.3		1.1	33.6		1.1	33.8		1.3	13.7		1.1
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	35.7		1.4	34.7		1.3	24.6		1.3	73.5		1.4	73.4		1.6	31.2		1.4
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-119 (23.0-24.0)			SB-119 (37.2-37.7)			SB-120 (4.5-5.0)			SB-121_13.0-13.5			SB-121_17.0-17.5			SB-123 (8.5-9.0)		
Lab Sample Number										920668			920669			917113			923393			923394			917126		
Sampling Depth (feet bgs)										23.0 to 24.0			37.2 to 37.7			4.5 to 5.0			13.0 to 13.5			17.0 to 17.5			8.5 to 9.0		
Sampling Date										05/14/08			05/14/08			05/01/08			05/29/08			05/29/08			05/01/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0039	0.0019	J	0.0032	0.0096		0.0056		U	0.50	0.0036	J	0.0041	0.0062		0.0041
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.0065	0.012		0.0054	0.043		0.0094		U	0.83	0.032	B	0.0068		U	0.0068
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83	0.0007	J	0.0068		U	0.0068
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0026		U	0.0022		U	0.0038		U	0.33		U	0.0027	0.017		0.0027
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Chloroform	67-66-3	0.37		10		49		350			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0026		U	0.0022		U	0.0038		U	0.33		U	0.0027		U	0.0027
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0026		U	0.0022		U	0.0038		U	0.33		U	0.0027		U	0.0027
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0013		U	0.0011		U	0.0019		U	0.16		U	0.0014		U	0.0014
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0013		U	0.0011		U	0.0019		U	0.16		U	0.0014		U	0.0014
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0013		U	0.0011		U	0.0019		U	0.16		U	0.0014		U	0.0014
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0039		U	0.0032		U	0.0056		U	0.50		U	0.0041		U	0.0041
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0013	0.0026		0.0011		U	0.0019		U	0.16		U	0.0014		U	0.0014
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0052		U	0.0043		U	0.0075		U	0.66		U	0.0055		U	0.0054
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0013		U	0.0011		U	0.0019		U	0.16		U	0.0014		U	0.0014
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0013		U	0.0011		U	0.0019		U	0.16		U	0.0014		U	0.0014
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0065	0.0046	J	0.0054		U	0.0094	0.3	J	0.83		U	0.0068		U	0.0068
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0065		U	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Ethylbenzene	100-41-4	1		30		41		390			U	0.0052	0.0028	J	0.0043		U	0.0075	0.59	J	0.66		U	0.0055		U	0.0054
Styrene	100-42-5	NS		NS		NS		NS			U	0.0065	0.0016	J	0.0054		U	0.0094		U	0.83		U	0.0068		U	0.0068
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0065	0.013		0.0054		U	0.0094	**1.8**		0.83		U	0.0068		U	0.0068
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0			0.0385			0.0526			2.69			0.0363			0.0232		
Total BTEX										0			0.0184			0			2.39			0			0		
Total Confident Conc. VOAs										0			0.02			0.1			1.8			0			0		
Total Estimated Conc. VOA TICs										0.6			0.8			0			144			0			0.016		

Table 5-3. Soil Analytical Results
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Former Clove and Maple MGP
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-119 (23.0-24.0)			SB-119 (37.2-37.7)			SB-120 (4.5-5.0)			SB-121_13.0-13.5			SB-121_17.0-17.5			SB-123 (8.5-9.0)		
Lab Sample Number										920668			920669			917113			923393			923394			917126		
Sampling Depth (feet bgs)										23.0 to 24.0			37.2 to 37.7			4.5 to 5.0			13.0 to 13.5			17.0 to 17.5			8.5 to 9.0		
Sampling Date										05/14/08			05/14/08			05/01/08			05/29/08			05/29/08			05/01/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	0.086	J	0.44	0.1	J	0.38		U	0.63	10		5.6		U	0.48		U	0.46
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	0.2	J	0.44	0.27	J	0.38		U	0.63	2.4	J	5.6		U	0.48		U	0.46
Acenaphthene	83-32-9	20		100	a	100	a	500	k	0.036	J	0.44	0.034	J	0.38		U	0.63	10		5.6		U	0.48		U	0.46
Fluorene	86-73-7	30		100	a	100	a	500	k	0.096	J	0.44	0.24	J	0.38		U	0.63	12		5.6		U	0.48		U	0.46
Phenanthrene	85-01-8	100		100	a	100	a	500	k	0.88		0.44	0.79		0.38		U	0.63	**75**		5.6		U	0.48		U	0.46
Anthracene	120-12-7	100	a	100	a	100	a	500	k	0.2	J	0.44	0.21	J	0.38		U	0.63	22		5.6		U	0.48		U	0.46
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	0.45		0.44	0.36	J	0.38		U	0.63	34		5.6		U	0.48	0.04	J	0.46
Pyrene	129-00-0	100		100	a	100	a	500	k	0.55		0.44	0.45		0.38		U	0.63	**62**		5.6		U	0.48	0.051	J	0.46
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		0.19		0.044	0.16		0.038		U	0.063	**20**		0.56		U	0.048		U	0.046
Chrysene	218-01-9	1	c	1	o	3.9		56		0.2	J	0.44	0.15	J	0.38		U	0.63	**24**		5.6		U	0.48		U	0.46
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		0.063		0.044	0.068		0.038		U	0.063	**8.8**		0.56		U	0.048		U	0.046
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		0.12		0.044	0.11		0.038		U	0.063	**9.6**		0.56		U	0.048		U	0.046
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	0.17		0.044	0.16		0.038		U	0.063	**17**		0.56		U	0.048		U	0.046
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		0.048		0.044	0.053		0.038		U	0.063	**5.4**		0.56		U	0.048		U	0.046
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56		0.014	J	0.044	0.016	J	0.038		U	0.063	**2.6**		0.56		U	0.048		U	0.046
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	0.063	J	0.44	0.067	J	0.38		U	0.63	6.9		5.6		U	0.48		U	0.46
Total PAHs										3.366			3.238			0			321.7			0			0.091		
Total Confident Conc. PAHs										2.4			1.7			0			319			0			0		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			background			30 (J)			background			10 (J)		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
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Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-119 (23.0-24.0)			SB-119 (37.2-37.7)			SB-120 (4.5-5.0)			SB-121_13.0-13.5			SB-121_17.0-17.5			SB-123 (8.5-9.0)		
Lab Sample Number										920668			920669			917113			923393			923394			917126		
Sampling Depth (feet bgs)										23.0 to 24.0			37.2 to 37.7			4.5 to 5.0			13.0 to 13.5			17.0 to 17.5			8.5 to 9.0		
Sampling Date										05/14/08			05/14/08			05/01/08			05/29/08			05/29/08			05/01/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		6070		13.8	6670		12.9	--		--	--		--	--		--	--		--
Antimony	7440-36-0	NS		NS		NS		NS			U	1.3		U	1.2	--		--	--		--	--		--	--		--
Arsenic	7440-38-2	13	c	16	o	16	o	16	o		U	0.71		U	0.66	--		--	--		--	--		--	--		--
Barium	7440-39-3	350	c	350	o	400		400		66.3		0.38	62.5		0.35	--		--	--		--	--		--	--		--
Beryllium	7440-41-7	7.2		14		72		590		0.34	B	0.066	0.44		0.062	--		--	--		--	--		--	--		--
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.088		U	0.082	--		--	--		--	--		--	--		--
Calcium	7440-70-2	NS		NS		NS		NS		1560		9.4	26000		8.7	--		--	--		--	--		--	--		--
Chromium	7440-47-3	30	c	36		180		1500		9.2		0.35	9.2		0.33	--		--	--		--	--		--	--		--
Cobalt	7440-48-4	NS		NS		NS		NS		4.4	B	0.38	4.4	B	0.35	--		--	--		--	--		--	--		--
Copper	7440-50-8	50		270		270		270		9.7		0.82	4.3	B	0.76	--		--	--		--	--		--	--		--
Iron	7439-89-6	NS		NS		NS		NS		14500		8.7	11600		8.1	--		--	--		--	--		--	--		--
Lead	7439-92-1	63	c	400		400		1000		3.6		0.60	5.1		0.55	--		--	--		--	--		--	--		--
Magnesium	7439-95-4	NS		NS		NS		NS		2770		9.2	5750		8.5	--		--	--		--	--		--	--		--
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	232		0.27	274		0.25	--		--	--		--	--		--	--		--
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.022		U	0.016	--		--	--		--	--		--	--		--
Nickel	7440-02-0	30		140		310		310		9.2		0.53	9.6		0.49	--		--	--		--	--		--	--		--
Potassium	7440-09-7	NS		NS		NS		NS		1110		69.7	1880		64.8	--		--	--		--	--		--	--		--
Selenium	7782-49-2	3.9	c	36		180		1500			U	0.93		U	0.86	--		--	--		--	--		--	--		--
Silver	7440-22-4	2		36		180		1500			U	0.31		U	0.29	--		--	--		--	--		--	--		--
Sodium	7440-23-5	NS		NS		NS		NS			U	87.4		U	81.3	--		--	--		--	--		--	--		--
Thallium	7440-28-0	NS		NS		NS		NS			U	1.0		U	0.97	--		--	--		--	--		--	--		--
Vanadium	7440-62-2	NS		NS		NS		NS		13.4		1.0	14.9		0.97	--		--	--		--	--		--	--		--
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	29.7		1.3	22.4		1.2	--		--	--		--	--		--	--		--
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5	--		--	--		--	--		--	--		--

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-124 (5.0-5.5)			SB-128 (10.5-11.0)			SB-128 (14.0-14.5)			SB-128 (28.1-28.6)			SB-129(10.8-11.3)			SB-129(13.25-13.75)		
Lab Sample Number										917122			920670			920671			920672			921939			921940		
Sampling Depth (feet bgs)										5.0 to 5.5			10.5 to 11.0			14.0 to 14.5			28.1 to 28.6			10.8 to 11.3			13.25 to 13.75		
Sampling Date										05/01/08			05/14/08			05/14/08			05/15/08			05/16/08			05/16/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0047		U	0.36		U	0.0040	0.004		0.0033		U	0.49		U	0.43
Acetone	67-64-1	0.05		100	a	100	k	500	k	0.055		0.0078		U	0.60		U	0.0067	0.01		0.0055		U	0.82		U	0.72
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0031		U	0.24		U	0.0027		U	0.0022		U	0.33		U	0.29
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Chloroform	67-66-3	0.37		10		49		350			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0031		U	0.24		U	0.0027		U	0.0022		U	0.33		U	0.29
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0031		U	0.24		U	0.0027		U	0.0022		U	0.33		U	0.29
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0016		U	0.12		U	0.0013		U	0.0011		U	0.16		U	0.14
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0016		U	0.12		U	0.0013		U	0.0011		U	0.16		U	0.14
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0016		U	0.12		U	0.0013		U	0.0011		U	0.16		U	0.14
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0047		U	0.36		U	0.0040		U	0.0033		U	0.49		U	0.43
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0016		U	0.12		U	0.0013		U	0.0011		U	0.16	**1**		0.14
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0062		U	0.48		U	0.0053		U	0.0044		U	0.66		U	0.58
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0016		U	0.12		U	0.0013		U	0.0011		U	0.16		U	0.14
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0016		U	0.12		U	0.0013		U	0.0011		U	0.16		U	0.14
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82	0.06	J	0.72
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Ethylbenzene	100-41-4	1		30		41		390			U	0.0062		U	0.48		U	0.0053		U	0.0044	**3.4**		0.66	**13**		0.58
Styrene	100-42-5	NS		NS		NS		NS			U	0.0078		U	0.60		U	0.0067		U	0.0055		U	0.82		U	0.72
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0078		U	0.60		U	0.0067		U	0.0055	**2.8**		0.82	**12**		0.72
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--		U	12		U	0.13		U	0.11	--		--	--		--
TBA		NS		NS		NS		NS		--		--		U	0.60		U	0.0067		U	0.0055	--		--	--		--
Total VOC										0.055			0			0			0.014			6.2			26.06		
Total BTEX										0			0			0			0			6.2			26		
Total Confident Conc. VOAs										0.1			0			0			0			6.2			26		
Total Estimated Conc. VOA TICs										0			30			0			0			127			304		

Table 5-3. Soil Analytical Results
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Sample ID		NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-124 (5.0-5.5)			SB-128 (10.5-11.0)			SB-128 (14.0-14.5)			SB-128 (28.1-28.6)			SB-129(10.8-11.3)			SB-129(13.25-13.75)		
Lab Sample Number	CASRN									917122			920670			920671			920672			921939			921940		
Sampling Depth (feet bgs)										5.0 to 5.5			10.5 to 11.0			14.0 to 14.5			28.1 to 28.6			10.8 to 11.3			13.25 to 13.75		
Sampling Date										05/01/08			05/14/08			05/14/08			05/15/08			05/16/08			05/16/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k		U	0.54	0.04	J	0.84		U	0.45		U	0.38	**15**		1.1	**89**		4.8
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.54	2.2		0.84		U	0.45		U	0.38	2		1.1	3.3	J	4.8
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.54	6.4		0.84		U	0.45		U	0.38	2.2		1.1	7.5		4.8
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.54	3.9		0.84		U	0.45		U	0.38	3.3		1.1	8.9		4.8
Phenanthrene	85-01-8	100		100	a	100	a	500	k		U	0.54	19		0.84	0.017	J	0.45	0.012	J	0.38	12		1.1	30		4.8
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.54	5.9		0.84		U	0.45		U	0.38	2.7		1.1	7.8		4.8
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k		U	0.54	6.3		0.84		U	0.45		U	0.38	3.6		1.1	8.9		4.8
Pyrene	129-00-0	100		100	a	100	a	500	k		U	0.54	8.7		0.84	0.018	J	0.45		U	0.38	5.7		1.1	13		4.8
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.054	**2.7**		0.084		U	0.045		U	0.038	**1.7**		0.11	**3.7**		0.48
Chrysene	218-01-9	1	c	1	o	3.9		56			U	0.54	**2.6**		0.84		U	0.45		U	0.38	**1.7**		1.1	**3.7**	J	4.8
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.054	0.8		0.084		U	0.045		U	0.038	0.46		0.11	**1.1**		0.48
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.054	**1.4**		0.084		U	0.045		U	0.038	0.98		0.11	**2**		0.48
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.054	**2.1**		0.084		U	0.045		U	0.038	**1.4**		0.11	**3**		0.48
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.054	0.54		0.084		U	0.045		U	0.038	0.54		0.11	1.1		0.48
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.054	**0.19**		0.084		U	0.045		U	0.038	**0.15**		0.11	**0.33**	J	0.48
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.54	0.64	J	0.84		U	0.45		U	0.38	0.6	J	1.1	1.2	J	4.8
Total PAHs										0			63.41			0.035			0.012			54.03			184.53		
Total Confident Conc. PAHs										0			62			0			0			53			176		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										15 (J)			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-124 (5.0-5.5)			SB-128 (10.5-11.0)			SB-128 (14.0-14.5)			SB-128 (28.1-28.6)			SB-129(10.8-11.3)			SB-129(13.25-13.75)		
Lab Sample Number										917122			920670			920671			920672			921939			921940		
Sampling Depth (feet bgs)										5.0 to 5.5			10.5 to 11.0			14.0 to 14.5			28.1 to 28.6			10.8 to 11.3			13.25 to 13.75		
Sampling Date										05/01/08			05/14/08			05/14/08			05/15/08			05/16/08			05/16/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		--		--	9170		14.3	8490		16.9	7870		14.1	26400		25.7	30100		22.4
Antimony	7440-36-0	NS		NS		NS		NS		--		--		U	1.3		U	1.6		U	1.3		U	1.6		U	1.4
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	--		--	1.8		0.73		U	0.86		U	0.72	11.8		1.5	7.7		1.3
Barium	7440-39-3	350	c	350	o	400		400		--		--	70.4		0.39	70.6		0.46	68.6		0.38	192		0.43	289		0.38
Beryllium	7440-41-7	7.2		14		72		590		--		--	0.48		0.069	0.49	B	0.081	0.47		0.068	1.2		0.033	1.4		0.029
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		--		--		U	0.092		U	0.11		U	0.090		U	0.17	0.16	B	0.14
Calcium	7440-70-2	NS		NS		NS		NS		--		--	1410		9.7	2190		11.5	20100		9.6	4200		24.7	36300		21.6
Chromium	7440-47-3	30	c	36		180		1500		--		--	12.6		0.37	11.5		0.43	11.5		0.36	34.5		0.93	37.0		0.81
Cobalt	7440-48-4	NS		NS		NS		NS		--		--	6.3	B	0.39	6.7	B	0.46	5.4	B	0.38	18.2		1.2	16.8		1.0
Copper	7440-50-8	50		270		270		270		--		--	15.7		0.85	13.8		1.00	5.9		0.84	41.5		1.0	33.7		0.90
Iron	7439-89-6	NS		NS		NS		NS		--		--	17900		9.0	18600		10.6	14000		8.8	44600		13.2	40700		11.5
Lead	7439-92-1	63	c	400		400		1000		--		--	3.7		0.62	4.7		0.73	6.3		0.61	21.7		0.73	19.5		0.64
Magnesium	7439-95-4	NS		NS		NS		NS		--		--	3210		9.5	3410		11.2	4460		9.4	10200		23.2	9680		20.3
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	--		--	125		0.27	457		0.32	321		0.27	565		0.96	4600		1.7
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	--		--		U	0.021		U	0.019		U	0.019		U	0.028		U	0.024
Nickel	7440-02-0	30		140		310		310		--		--	12.0		0.55	11.3		0.65	12.4		0.54	**40.3**		1.3	**38.2**		1.1
Potassium	7440-09-7	NS		NS		NS		NS		--		--	1890		72.2	1850		85.1	2210		71.2	4860		43.1	7420		75.1
Selenium	7782-49-2	3.9	c	36		180		1500		--		--		U	0.96		U	1.1		U	0.95		U	1.6		U	1.4
Silver	7440-22-4	2		36		180		1500		--		--		U	0.32		U	0.38		U	0.32		U	0.40		U	0.35
Sodium	7440-23-5	NS		NS		NS		NS		--		--		U	90.6		U	107	90.0	B	89.3	187	B	120	153	B	104
Thallium	7440-28-0	NS		NS		NS		NS		--		--		U	1.1		U	1.3		U	1.1		U	1.6		U	1.4
Vanadium	7440-62-2	NS		NS		NS		NS		--		--	17.9		1.1	18.4		1.3	16.5		1.1	44.6		0.50	45.4		0.43
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	--		--	35.3		1.3	37.0		1.6	29.5		1.3	93.4		1.9	88.7		1.7
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		--		--		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-129(15-15.5)			SB-129(26.1-26.6)			SB-130_12.0-13.0			SB-130_14.0-14.5			SB-130_16.5-17.0			SB-131_13.5-14.0		
Lab Sample Number										921941			921942			923403			923404			923405			923406		
Sampling Depth (feet bgs)										15.0 to 15.5			26.1 to 26.6			12.0 to 13.0			14.0 to 14.5			16.5 to 17.0			13.5 to 14.0		
Sampling Date										05/19/08			05/19/08			05/29/08			05/28/08			05/28/08			05/28/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0041	0.0014	J	0.0034		U	4.8		U	0.41		U	0.41	0.003	J	0.0040
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.0068	0.014		0.0057		U	8.0		U	0.69		U	0.69	**0.064**	B	0.0066
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69	0.0012	J	0.0066
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0027		U	0.0023		U	3.2		U	0.27		U	0.28		U	0.0026
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Chloroform	67-66-3	0.37		10		49		350			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0027		U	0.0023		U	3.2		U	0.27		U	0.28		U	0.0026
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0027		U	0.0023		U	3.2		U	0.27		U	0.28		U	0.0026
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0014		U	0.0011		U	1.6		U	0.14		U	0.14		U	0.0013
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0014		U	0.0011		U	1.6		U	0.14		U	0.14		U	0.0013
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0014		U	0.0011		U	1.6		U	0.14		U	0.14		U	0.0013
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0041		U	0.0034		U	4.8		U	0.41		U	0.41		U	0.0040
Benzene	71-43-2	0.06		2.9		4.8		44		**0.22**		0.0014		U	0.0011		U	1.6		U	0.14		U	0.14		U	0.0013
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0054		U	0.0046		U	6.4		U	0.55		U	0.55		U	0.0053
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0014		U	0.0011		U	1.6		U	0.14		U	0.14		U	0.0013
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0014		U	0.0011		U	1.6		U	0.14		U	0.14		U	0.0013
Toluene	108-88-3	0.7		100	a	100	a	500	k	0.0006	J	0.0068		U	0.0057	**0.93**	J	8.0	0.036	J	0.69		U	0.69		U	0.0066
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Ethylbenzene	100-41-4	1		30		41		390		0.0094		0.0054		U	0.0046	**18**		6.4	0.067	J	0.55		U	0.55		U	0.0053
Styrene	100-42-5	NS		NS		NS		NS			U	0.0068		U	0.0057		U	8.0		U	0.69		U	0.69		U	0.0066
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	0.015		0.0068		U	0.0057	**24**		8.0	0.19	J	0.69		U	0.69		U	0.0066
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.245			0.0154			42.93			0.293			0			0.0682		
Total BTEX										0.2444			0			42			0.257			0			0		
Total Confident Conc. VOAs										0.2			0			42			0			0			0		
Total Estimated Conc. VOA TICs										0.5			0			641			50			16			0		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-129(15-15.5)			SB-129(26.1-26.6)			SB-130_12.0-13.0			SB-130_14.0-14.5			SB-130_16.5-17.0			SB-131_13.5-14.0		
Lab Sample Number										921941			921942			923403			923404			923405			923406		
Sampling Depth (feet bgs)										15.0 to 15.5			26.1 to 26.6			12.0 to 13.0			14.0 to 14.5			16.5 to 17.0			13.5 to 14.0		
Sampling Date										05/19/08			05/19/08			05/29/08			05/28/08			05/28/08			05/28/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	0.17	J	0.47	0.019	J	0.40	**190**		11	3.8		2.3		U	0.47	0.028	J	0.46
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	0.024	J	0.47		U	0.40	7.9	J	11	1.9	J	2.3		U	0.47		U	0.46
Acenaphthene	83-32-9	20		100	a	100	a	500	k	0.038	J	0.47		U	0.40	**80**		11	9.1		2.3		U	0.47		U	0.46
Fluorene	86-73-7	30		100	a	100	a	500	k	0.055	J	0.47		U	0.40	**50**		11	15		2.3		U	0.47		U	0.46
Phenanthrene	85-01-8	100		100	a	100	a	500	k	0.35	J	0.47	0.021	J	0.40	**220**		11	40		2.3	0.013	J	0.47		U	0.46
Anthracene	120-12-7	100	a	100	a	100	a	500	k	0.052	J	0.47		U	0.40	**73**		11	18		2.3		U	0.47		U	0.46
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	0.1	J	0.47	0.014	J	0.40	**73**		11	22		2.3		U	0.47		U	0.46
Pyrene	129-00-0	100		100	a	100	a	500	k	0.13	J	0.47	0.019	J	0.40	**150**		11	17		2.3		U	0.47		U	0.46
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		0.02	J	0.047	0.0082	J	0.040	**51**		1.1	**12**		0.23		U	0.047		U	0.046
Chrysene	218-01-9	1	c	1	o	3.9		56		0.026	J	0.47	0.0079	J	0.40	**52**		11	**10**		2.3		U	0.47		U	0.46
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.047		U	0.040	**22**		1.1	**5**		0.23		U	0.047		U	0.046
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		0.011	J	0.047		U	0.040	**29**		1.1	**7.8**		0.23		U	0.047		U	0.046
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	0.013	J	0.047		U	0.040	**52**		1.1	**7.6**		0.23		U	0.047		U	0.046
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.047		U	0.040	**13**		1.1	2		0.23		U	0.047		U	0.046
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.047		U	0.040	**9.2**		1.1	**0.95**		0.23		U	0.047		U	0.046
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	0.0092	J	0.47		U	0.40	17		11	1.5	J	2.3		U	0.47		U	0.46
Total PAHs										0.9982			0.0891			1089.1			173.65			0.013			0.028		
Total Confident Conc. PAHs										0			0			1081			170			0			0		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
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Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-129(15-15.5)			SB-129(26.1-26.6)			SB-130_12.0-13.0			SB-130_14.0-14.5			SB-130_16.5-17.0			SB-131_13.5-14.0		
Lab Sample Number										921941			921942			923403			923404			923405			923406		
Sampling Depth (feet bgs)										15.0 to 15.5			26.1 to 26.6			12.0 to 13.0			14.0 to 14.5			16.5 to 17.0			13.5 to 14.0		
Sampling Date										05/19/08			05/19/08			05/29/08			05/28/08			05/28/08			05/28/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		19400		21.9	11200		18.4	--		--	--		--	--		--	--		--
Antimony	7440-36-0	NS		NS		NS		NS			U	1.4		U	1.2	--		--	--		--	--		--	--		--
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	6.9		1.3	1.6		1.1	--		--	--		--	--		--	--		--
Barium	7440-39-3	350	c	350	o	400		400		136		0.37	92.2		0.31	--		--	--		--	--		--	--		--
Beryllium	7440-41-7	7.2		14		72		590		0.86		0.028	0.63		0.024	--		--	--		--	--		--	--		--
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3			U	0.14		U	0.12	--		--	--		--	--		--	--		--
Calcium	7440-70-2	NS		NS		NS		NS		19800		21.1	24800		17.7	--		--	--		--	--		--	--		--
Chromium	7440-47-3	30	c	36		180		1500		26.1		0.79	15.0		0.67	--		--	--		--	--		--	--		--
Cobalt	7440-48-4	NS		NS		NS		NS		13.7	B	0.99	6.3	B	0.83	--		--	--		--	--		--	--		--
Copper	7440-50-8	50		270		270		270		31.9		0.88	6.0		0.74	--		--	--		--	--		--	--		--
Iron	7439-89-6	NS		NS		NS		NS		33900		11.2	16200		9.4	--		--	--		--	--		--	--		--
Lead	7439-92-1	63	c	400		400		1000		17.7		0.62	10.1		0.52	--		--	--		--	--		--	--		--
Magnesium	7439-95-4	NS		NS		NS		NS		10100		19.8	6020		16.6	--		--	--		--	--		--	--		--
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	722		0.82	427		0.69	--		--	--		--	--		--	--		--
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q		U	0.024		U	0.020	--		--	--		--	--		--	--		--
Nickel	7440-02-0	30		140		310		310		28.6		1.1	14.5		0.93	--		--	--		--	--		--	--		--
Potassium	7440-09-7	NS		NS		NS		NS		4090		36.8	3440		30.8	--		--	--		--	--		--	--		--
Selenium	7782-49-2	3.9	c	36		180		1500			U	1.4		U	1.1	--		--	--		--	--		--	--		--
Silver	7440-22-4	2		36		180		1500			U	0.34		U	0.29	--		--	--		--	--		--	--		--
Sodium	7440-23-5	NS		NS		NS		NS		165	B	102	178	B	85.7	--		--	--		--	--		--	--		--
Thallium	7440-28-0	NS		NS		NS		NS			U	1.4		U	1.1	--		--	--		--	--		--	--		--
Vanadium	7440-62-2	NS		NS		NS		NS		34.1		0.42	23.7		0.36	--		--	--		--	--		--	--		--
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	74.8		1.6	32.8		1.4	--		--	--		--	--		--	--		--
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27			U	0.5		U	0.5	--		--	--		--	--		--	--		--

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID		NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-132(9.0-9.5)			SB-132(11.5-12.0)			SB-133(8.4-8.9)			SB-133(10.5-11.0)			SB-133(14.0-14.5)			SB-134(8.5-9.0)		
Lab Sample Number	CASRN									921951			921952			921953			921954			921955			921956		
Sampling Depth (feet bgs)										9.0 to 9.5			11.5 to 12.0			8.4 to 8.9			10.5 to 11.0			14.0 to 14.5			8.5 to 9.0		
Sampling Date										05/20/08			05/20/08			05/20/08			05/20/08			05/20/08			05/20/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.35	0.048		0.0040		U	0.43	0.029		0.0033	0.018		0.0038	0.028		0.0042
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.58	**0.14**		0.0067		U	0.72	0.032		0.0055	0.03		0.0064	0.016		0.0070
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.58	0.0014	J	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.23		U	0.0027		U	0.29		U	0.0022		U	0.0026		U	0.0028
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Chloroform	67-66-3	0.37		10		49		350			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.23		U	0.0027		U	0.29		U	0.0022		U	0.0026		U	0.0028
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.58	0.0028	J	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.23		U	0.0027		U	0.29		U	0.0022		U	0.0026		U	0.0028
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.12		U	0.0013		U	0.14		U	0.0011		U	0.0013		U	0.0014
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.12		U	0.0013		U	0.14		U	0.0011		U	0.0013		U	0.0014
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Trichloroethene	79-01-6	0.47		10		21		200			U	0.12		U	0.0013		U	0.14		U	0.0011		U	0.0013		U	0.0014
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.35		U	0.0040		U	0.43		U	0.0033		U	0.0038		U	0.0042
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.12		U	0.0013		U	0.14		U	0.0011		U	0.0013		U	0.0014
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Bromoform	75-25-2	NS		NS		NS		NS			U	0.46		U	0.0054		U	0.58		U	0.0044		U	0.0051		U	0.0056
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.12		U	0.0013		U	0.14		U	0.0011		U	0.0013		U	0.0014
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.12		U	0.0013		U	0.14		U	0.0011		U	0.0013		U	0.0014
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.58		U	0.0067	0.24	J	0.72		U	0.0055		U	0.0064		U	0.0070
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Ethylbenzene	100-41-4	1		30		41		390			U	0.46		U	0.0054	**9.4**		0.58		U	0.0044		U	0.0051		U	0.0056
Styrene	100-42-5	NS		NS		NS		NS			U	0.58		U	0.0067		U	0.72		U	0.0055		U	0.0064		U	0.0070
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.58		U	0.0067	**13**		0.72		U	0.0055		U	0.0064		U	0.0070
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0			0.1922			22.64			0.061			0.048			0.044		
Total BTEX										0			0			22.4			0			0			0		
Total Confident Conc. VOAs										0			0.2			22			0.1			0			0		
Total Estimated Conc. VOA TICs										14			0			557			0			0			0		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-132(9.0-9.5)			SB-132(11.5-12.0)			SB-133(8.4-8.9)			SB-133(10.5-11.0)			SB-133(14.0-14.5)			SB-134(8.5-9.0)		
Lab Sample Number										921951			921952			921953			921954			921955			921956		
Sampling Depth (feet bgs)										9.0 to 9.5			11.5 to 12.0			8.4 to 8.9			10.5 to 11.0			14.0 to 14.5			8.5 to 9.0		
Sampling Date										05/20/08			05/20/08			05/20/08			05/20/08			05/20/08			05/20/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	11		3.9	0.22	J	0.47	3.6	J	5.0	0.061	J	0.38		U	0.45		U	0.47
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	1.8	J	3.9	0.3	J	0.47	2.8	J	5.0	0.074	J	0.38		U	0.45		U	0.47
Acenaphthene	83-32-9	20		100	a	100	a	500	k	14		3.9	0.48		0.47	16		5.0	0.046	J	0.38		U	0.45		U	0.47
Fluorene	86-73-7	30		100	a	100	a	500	k	8.8		3.9	0.66		0.47	14		5.0	0.05	J	0.38		U	0.45		U	0.47
Phenanthrene	85-01-8	100		100	a	100	a	500	k	**50**		3.9	0.78		0.47	47		5.0	0.19	J	0.38	0.0096	J	0.45		U	0.47
Anthracene	120-12-7	100	a	100	a	100	a	500	k	15		3.9	1.3		0.47	15		5.0	0.24	J	0.38		U	0.45		U	0.47
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	16		3.9	4.7		0.47	39		5.0	1.7		0.38		U	0.45		U	0.47
Pyrene	129-00-0	100		100	a	100	a	500	k	39		3.9	4.5		0.47	**82**		5.0	1.3		0.38		U	0.45		U	0.47
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		**13**		0.39	**2.9**		0.047	**23**		0.50	0.72		0.038		U	0.045		U	0.047
Chrysene	218-01-9	1	c	1	o	3.9		56		**12**		3.9	**2.4**		0.47	**27**		5.0	0.58		0.38		U	0.45		U	0.47
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		**4.6**		0.39	0.88		0.047	**8.1**		0.50	0.27		0.038		U	0.045		U	0.047
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		**6**		0.39	**1.8**		0.047	**11**		0.50	0.37		0.038		U	0.045		U	0.047
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	**11**		0.39	**1.6**		0.047	**20**		0.50	0.39		0.038		U	0.045		U	0.047
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		**4.2**		0.39	0.36		0.047	**7.1**		0.50	0.15		0.038		U	0.045		U	0.047
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56		**1.7**		0.39	**0.22**		0.047	**3.9**		0.50	0.074		0.038		U	0.045		U	0.047
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	6.5		3.9	0.3	J	0.47	10		5.0	0.14	J	0.38		U	0.45		U	0.47
Total PAHs										214.6			23.4			329.5			6.355			0.0096			0		
Total Confident Conc. PAHs										212			22			323			5.5			0			0		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-132(9.0-9.5)			SB-132(11.5-12.0)			SB-133(8.4-8.9)			SB-133(10.5-11.0)			SB-133(14.0-14.5)			SB-134(8.5-9.0)		
Lab Sample Number										921951			921952			921953			921954			921955			921956		
Sampling Depth (feet bgs)										9.0 to 9.5			11.5 to 12.0			8.4 to 8.9			10.5 to 11.0			14.0 to 14.5			8.5 to 9.0		
Sampling Date										05/20/08			05/20/08			05/20/08			05/20/08			05/20/08			05/20/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Antimony	7440-36-0	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	--		--	--		--	--		--	--		--	--		--	--		--
Barium	7440-39-3	350	c	350	o	400		400		--		--	--		--	--		--	--		--	--		--	--		--
Beryllium	7440-41-7	7.2		14		72		590		--		--	--		--	--		--	--		--	--		--	--		--
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		--		--	--		--	--		--	--		--	--		--	--		--
Calcium	7440-70-2	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Chromium	7440-47-3	30	c	36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Cobalt	7440-48-4	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Copper	7440-50-8	50		270		270		270		--		--	--		--	--		--	--		--	--		--	--		--
Iron	7439-89-6	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Lead	7439-92-1	63	c	400		400		1000		--		--	--		--	--		--	--		--	--		--	--		--
Magnesium	7439-95-4	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	--		--	--		--	--		--	--		--	--		--	--		--
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	--		--	--		--	--		--	--		--	--		--	--		--
Nickel	7440-02-0	30		140		310		310		--		--	--		--	--		--	--		--	--		--	--		--
Potassium	7440-09-7	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Selenium	7782-49-2	3.9	c	36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Silver	7440-22-4	2		36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Sodium	7440-23-5	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Thallium	7440-28-0	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Vanadium	7440-62-2	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	--		--	--		--	--		--	--		--	--		--	--		--
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		--		--	--		--	--		--	--		--	--		--	--		--

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-134(12.0-12.5)			SB-138(9.0-9.5)			SB-138(14-14.5)			SB-139_13.0-13.5			SB-139_16.0-16.5			SB-139_17.0-17.5		
Lab Sample Number										921957			921958			921959			923410			923411			923412		
Sampling Depth (feet bgs)										12.0 to 12.5			9.0 to 9.5			14.0 to 14.5			13.0 to 13.5			16.0 to 16.5			17.0 to 17.5		
Sampling Date										05/20/08			05/20/08			05/20/08			05/28/08			05/28/08			05/28/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0042		U	0.33	0.018		0.0038		U	2.0	0.014		0.0043	0.02		0.0042
Acetone	67-64-1	0.05		100	a	100	k	500	k	0.018		0.0070		U	0.54	0.032		0.0064		U	3.3		U	0.0071		U	0.0069
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3	0.0013	J	0.0071	0.0017	J	0.0069
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0028		U	0.22		U	0.0026		U	1.3		U	0.0028		U	0.0028
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Chloroform	67-66-3	0.37		10		49		350			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0028		U	0.22		U	0.0026		U	1.3		U	0.0028		U	0.0028
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0028		U	0.22		U	0.0026		U	1.3		U	0.0028		U	0.0028
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0014		U	0.11		U	0.0013		U	0.66		U	0.0014		U	0.0014
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0014		U	0.11		U	0.0013		U	0.66		U	0.0014		U	0.0014
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0014		U	0.11		U	0.0013		U	0.66		U	0.0014		U	0.0014
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0042		U	0.33		U	0.0038		U	2.0		U	0.0043		U	0.0042
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0014		U	0.11	0.0044		0.0013		U	0.66		U	0.0014		U	0.0014
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0056		U	0.44		U	0.0051		U	2.6		U	0.0057		U	0.0055
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0014		U	0.11		U	0.0013		U	0.66		U	0.0014		U	0.0014
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0014		U	0.11		U	0.0013		U	0.66		U	0.0014		U	0.0014
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0070		U	0.54		U	0.0064	0.28	J	3.3		U	0.0071		U	0.0069
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Ethylbenzene	100-41-4	1		30		41		390			U	0.0056		U	0.44		U	0.0051	**1.5**	J	2.6		U	0.0057		U	0.0055
Styrene	100-42-5	NS		NS		NS		NS			U	0.0070		U	0.54		U	0.0064		U	3.3		U	0.0071		U	0.0069
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0070	0.075	J	0.54	0.0017	J	0.0064	**3.1**	J	3.3		U	0.0071		U	0.0069
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										0.018			0.075			0.0561			4.88			0.0153			0.0217		
Total BTEX										0			0.075			0.0061			4.6			0			0		
Total Confident Conc. VOAs										0			0			0.1			0			0			0		
Total Estimated Conc. VOA TICs										0			2.3			0			244			0			0		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-134(12.0-12.5)			SB-138(9.0-9.5)			SB-138(14-14.5)			SB-139_13.0-13.5			SB-139_16.0-16.5			SB-139_17.0-17.5		
Lab Sample Number										921957			921958			921959			923410			923411			923412		
Sampling Depth (feet bgs)										12.0 to 12.5			9.0 to 9.5			14.0 to 14.5			13.0 to 13.5			16.0 to 16.5			17.0 to 17.5		
Sampling Date										05/20/08			05/20/08			05/20/08			05/28/08			05/28/08			05/28/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k		U	0.48	10		1.9		U	0.44	**59**		27	0.076	J	0.48		U	0.47
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.48	1.3	J	1.9		U	0.44	15	J	27	0.012	J	0.48		U	0.47
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.48	7.3		1.9		U	0.44	**63**		27	0.047	J	0.48		U	0.47
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.48	6.8		1.9		U	0.44	**52**		27	0.037	J	0.48		U	0.47
Phenanthrene	85-01-8	100		100	a	100	a	500	k		U	0.48	28		1.9		U	0.44	**300**		27	0.1	J	0.48		U	0.47
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.48	8		1.9		U	0.44	**70**		27	0.041	J	0.48		U	0.47
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k		U	0.48	12		1.9		U	0.44	**110**		27	0.12	J	0.48		U	0.47
Pyrene	129-00-0	100		100	a	100	a	500	k		U	0.48	26		1.9		U	0.44	**250**		27	0.2	J	0.48		U	0.47
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.048	**8.4**		0.19		U	0.044	**89**		2.7	0.083		0.048		U	0.047
Chrysene	218-01-9	1	c	1	o	3.9		56			U	0.48	**8.6**		1.9		U	0.44	**97**		27	0.095	J	0.48		U	0.47
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.048	**2.9**		0.19		U	0.044	**48**		2.7	0.043	J	0.048		U	0.047
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.048	**4.3**		0.19		U	0.044	**50**		2.7	0.051		0.048		U	0.047
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.048	**7**		0.19		U	0.044	**92**		2.7	0.084		0.048		U	0.047
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.048	2.5		0.19		U	0.044	**26**		2.7	0.028	J	0.048		U	0.047
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.048	**1.6**		0.19		U	0.044	**20**		2.7	0.016	J	0.048		U	0.047
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.48	3.3		1.9		U	0.44	37		27	0.037	J	0.48		U	0.47
Total PAHs										0			138			0			1378			1.07			0		
Total Confident Conc. PAHs										0			136			0			1363			0.2			0		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-134(12.0-12.5)			SB-138(9.0-9.5)			SB-138(14-14.5)			SB-139_13.0-13.5			SB-139_16.0-16.5			SB-139_17.0-17.5		
Lab Sample Number										921957			921958			921959			923410			923411			923412		
Sampling Depth (feet bgs)										12.0 to 12.5			9.0 to 9.5			14.0 to 14.5			13.0 to 13.5			16.0 to 16.5			17.0 to 17.5		
Sampling Date										05/20/08			05/20/08			05/20/08			05/28/08			05/28/08			05/28/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Antimony	7440-36-0	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	--		--	--		--	--		--	--		--	--		--	--		--
Barium	7440-39-3	350	c	350	o	400		400		--		--	--		--	--		--	--		--	--		--	--		--
Beryllium	7440-41-7	7.2		14		72		590		--		--	--		--	--		--	--		--	--		--	--		--
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		--		--	--		--	--		--	--		--	--		--	--		--
Calcium	7440-70-2	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Chromium	7440-47-3	30	c	36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Cobalt	7440-48-4	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Copper	7440-50-8	50		270		270		270		--		--	--		--	--		--	--		--	--		--	--		--
Iron	7439-89-6	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Lead	7439-92-1	63	c	400		400		1000		--		--	--		--	--		--	--		--	--		--	--		--
Magnesium	7439-95-4	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	--		--	--		--	--		--	--		--	--		--	--		--
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	--		--	--		--	--		--	--		--	--		--	--		--
Nickel	7440-02-0	30		140		310		310		--		--	--		--	--		--	--		--	--		--	--		--
Potassium	7440-09-7	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Selenium	7782-49-2	3.9	c	36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Silver	7440-22-4	2		36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Sodium	7440-23-5	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Thallium	7440-28-0	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Vanadium	7440-62-2	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	--		--	--		--	--		--	--		--	--		--	--		--
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		--		--	--		--	--		--	--		--	--		--	--		--

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-140_9.5-10.0			SB-140_12.0-12.5			SB-140_17.0-17.5			SB-141_12.5-13.0			SB-141_14.8-15.3			SB-142_8.2-8.7		
Lab Sample Number										923388			923389			923390			923391			923392			923395		
Sampling Depth (feet bgs)										9.5 to 10.0			12.0 to 12.5			17.0 to 17.5			12.5 to 13.0			14.8 to 15.3			8.2 to 8.7		
Sampling Date										05/28/08			05/28/08			05/28/08			05/28/08			05/28/08			05/29/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.45	0.0037		0.0034	0.012		0.0039		U	0.47	0.028		0.0039	0.016		0.0049
Acetone	67-64-1	0.05		100	a	100	k	500	k		U	0.74		U	0.0057		U	0.0065		U	0.79	**0.08**	B	0.0065	0.02	B	0.0081
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79	0.0008	J	0.0065	0.0014	J	0.0081
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.30		U	0.0023		U	0.0026		U	0.32		U	0.0026		U	0.0032
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Chloroform	67-66-3	0.37		10		49		350			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.30		U	0.0023		U	0.0026		U	0.32		U	0.0026		U	0.0032
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.30		U	0.0023		U	0.0026		U	0.32		U	0.0026		U	0.0032
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.15		U	0.0011		U	0.0013		U	0.16		U	0.0013		U	0.0016
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.15		U	0.0011		U	0.0013		U	0.16		U	0.0013		U	0.0016
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Trichloroethene	79-01-6	0.47		10		21		200			U	0.15		U	0.0011		U	0.0013		U	0.16		U	0.0013		U	0.0016
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.45		U	0.0034		U	0.0039		U	0.47		U	0.0039		U	0.0049
Benzene	71-43-2	0.06		2.9		4.8		44		**0.1**	J	0.15		U	0.0011		U	0.0013		U	0.16		U	0.0013		U	0.0016
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Bromoform	75-25-2	NS		NS		NS		NS			U	0.59		U	0.0045		U	0.0052		U	0.63		U	0.0052		U	0.0065
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.15		U	0.0011		U	0.0013		U	0.16		U	0.0013		U	0.0016
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.15		U	0.0011		U	0.0013		U	0.16		U	0.0013		U	0.0016
Toluene	108-88-3	0.7		100	a	100	a	500	k	**1.3**		0.74		U	0.0057		U	0.0065	0.1	J	0.79		U	0.0065		U	0.0081
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Ethylbenzene	100-41-4	1		30		41		390		**2.4**		0.59		U	0.0045		U	0.0052	**1.5**		0.63		U	0.0052	0.0008	J	0.0065
Styrene	100-42-5	NS		NS		NS		NS			U	0.74		U	0.0057		U	0.0065		U	0.79		U	0.0065		U	0.0081
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k	**5**		0.74		U	0.0057		U	0.0065	**3.4**		0.79		U	0.0065	0.0026	J	0.0081
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--	--		--	--		--	--		--	--		--	--		--
TBA		NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Total VOC										8.8			0.0037			0.012			5			0.1088			0.0408		
Total BTEX										7.5			0			0			4.9			0			0.0034		
Total Confident Conc. VOAs										8.7			0			0			4.9			0			0		
Total Estimated Conc. VOA TICs										133			0			0			130			0			0.8		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-140_9.5-10.0			SB-140_12.0-12.5			SB-140_17.0-17.5			SB-141_12.5-13.0			SB-141_14.8-15.3			SB-142_8.2-8.7		
Lab Sample Number										923388			923389			923390			923391			923392			923395		
Sampling Depth (feet bgs)										9.5 to 10.0			12.0 to 12.5			17.0 to 17.5			12.5 to 13.0			14.8 to 15.3			8.2 to 8.7		
Sampling Date										05/28/08			05/28/08			05/28/08			05/28/08			05/28/08			05/29/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	**130**		100	0.036	J	0.38		U	0.44	**43**		11		U	0.44	2.1		1.1
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k	**52**	J	100		U	0.38		U	0.44	4	J	11		U	0.44	0.73	J	1.1
Acenaphthene	83-32-9	20		100	a	100	a	500	k	**300**		100	0.1	J	0.38		U	0.44	32		11		U	0.44	2.1		1.1
Fluorene	86-73-7	30		100	a	100	a	500	k	**240**		100	0.091	J	0.38		U	0.44	24		11		U	0.44	2.9		1.1
Phenanthrene	85-01-8	100		100	a	100	a	500	k	**1300**		100	0.091	J	0.38	0.012	J	0.44	**110**		11		U	0.44	12		1.1
Anthracene	120-12-7	100	a	100	a	100	a	500	k	**340**		100	0.021	J	0.38		U	0.44	42		11		U	0.44	4.4		1.1
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	**570**		100	0.046	J	0.38		U	0.44	**50**		11		U	0.44	12		1.1
Pyrene	129-00-0	100		100	a	100	a	500	k	**840**		100	0.057	J	0.38		U	0.44	**100**		11		U	0.44	20		1.1
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6		**270**		10	0.024	J	0.038		U	0.044	**36**		1.1		U	0.044	**7.8**		0.11
Chrysene	218-01-9	1	c	1	o	3.9		56		**310**		100	0.03	J	0.38		U	0.44	**37**		11		U	0.44	**9.1**		1.1
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6		**100**		10	0.01	J	0.038		U	0.044	**13**		1.1		U	0.044	**5.7**		0.11
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56		**170**		10	0.017	J	0.038		U	0.044	**17**		1.1		U	0.044	**7**		0.11
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o	**220**		10	0.018	J	0.038		U	0.044	**32**		1.1		U	0.044	**7.9**		0.11
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6		**84**		10		U	0.038		U	0.044	**10**		1.1		U	0.044	2.2		0.11
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56		**28**		10		U	0.038		U	0.044	**4.5**		1.1		U	0.044	**1.1**		0.11
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k	**100**	J	100		U	0.38		U	0.44	14		11		U	0.44	2.2		1.1
Total PAHs										5054			0.541			0.012			568.5			0			99.23		
Total Confident Conc. PAHs										4902			0			0			564			0			98		
Total Estimated Conc. BNA TICs										NA			NA			NA			NA			NA			NA		
TarGOST Signal at Depth										no data			no data			no data			no data			no data			no data		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-140_9.5-10.0			SB-140_12.0-12.5			SB-140_17.0-17.5			SB-141_12.5-13.0			SB-141_14.8-15.3			SB-142_8.2-8.7		
Lab Sample Number										923388			923389			923390			923391			923392			923395		
Sampling Depth (feet bgs)										9.5 to 10.0			12.0 to 12.5			17.0 to 17.5			12.5 to 13.0			14.8 to 15.3			8.2 to 8.7		
Sampling Date										05/28/08			05/28/08			05/28/08			05/28/08			05/28/08			05/29/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Antimony	7440-36-0	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	--		--	--		--	--		--	--		--	--		--	--		--
Barium	7440-39-3	350	c	350	o	400		400		--		--	--		--	--		--	--		--	--		--	--		--
Beryllium	7440-41-7	7.2		14		72		590		--		--	--		--	--		--	--		--	--		--	--		--
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		--		--	--		--	--		--	--		--	--		--	--		--
Calcium	7440-70-2	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Chromium	7440-47-3	30	c	36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Cobalt	7440-48-4	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Copper	7440-50-8	50		270		270		270		--		--	--		--	--		--	--		--	--		--	--		--
Iron	7439-89-6	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Lead	7439-92-1	63	c	400		400		1000		--		--	--		--	--		--	--		--	--		--	--		--
Magnesium	7439-95-4	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	--		--	--		--	--		--	--		--	--		--	--		--
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	--		--	--		--	--		--	--		--	--		--	--		--
Nickel	7440-02-0	30		140		310		310		--		--	--		--	--		--	--		--	--		--	--		--
Potassium	7440-09-7	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Selenium	7782-49-2	3.9	c	36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Silver	7440-22-4	2		36		180		1500		--		--	--		--	--		--	--		--	--		--	--		--
Sodium	7440-23-5	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Thallium	7440-28-0	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Vanadium	7440-62-2	NS		NS		NS		NS		--		--	--		--	--		--	--		--	--		--	--		--
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	--		--	--		--	--		--	--		--	--		--	--		--
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		--		--	--		--	--		--	--		--	--		--	--		--

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-142_12.5-13.0		
Lab Sample Number										923396		
Sampling Depth (feet bgs)										12.5 to 13.0		
Sampling Date										05/29/08		
VOLATILE COMPOUNDS (GC/MS)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL
Chloromethane	74-87-3	NS		NS		NS		NS			U	0.0067
Bromomethane	74-83-9	NS		NS		NS		NS			U	0.0067
VinylChloride	75-01-4	0.02		0.21		0.9		13			U	0.0067
Chloroethane	75-00-3	NS		NS		NS		NS			U	0.0067
MethyleneChloride	75-09-2	0.05		51		100	a	500	k		U	0.0040
Acetone	67-64-1	0.05		100	a	100	k	500	k	0.018	B	0.0067
CarbonDisulfide	75-15-0	NS		NS		NS		NS			U	0.0067
1,1-Dichloroethene	75-35-4	0.33		100	a	100	a	500	k		U	0.0027
1,1-Dichloroethane	75-34-3	0.27		19		26		240			U	0.0067
trans-1,2-Dichloroethene	156-60-5	0.19		100	a	100	a	500	k		U	0.0067
cis-1,2-Dichloroethene	156-59-2	0.25		59		100	a	500	k		U	0.0067
Chloroform	67-66-3	0.37		10		49		350			U	0.0067
1,2-Dichloroethane	107-06-2	0.02	c	2.3		3.1		30			U	0.0027
2-Butanone	78-93-3	0.12		100	a	100	a	500	k		U	0.0067
1,1,1-Trichloroethane	71-55-6	0.68		100	a	100	a	500	k		U	0.0067
CarbonTetrachloride	56-23-5	0.76		1.4		2.4		22			U	0.0027
Bromodichloromethane	75-27-4	NS		NS		NS		NS			U	0.0013
1,2-Dichloropropane	78-87-5	NS		NS		NS		NS			U	0.0013
cis-1,3-Dichloropropene	10061-01-5	NS		NS		NS		NS			U	0.0067
Trichloroethene	79-01-6	0.47		10		21		200			U	0.0013
Dibromochloromethane	124-48-1	NS		NS		NS		NS			U	0.0067
1,1,2-Trichloroethane	79-00-5	NS		NS		NS		NS			U	0.0040
Benzene	71-43-2	0.06		2.9		4.8		44			U	0.0013
trans-1,3-Dichloropropene	10061-02-6	NS		NS		NS		NS			U	0.0067
Bromoform	75-25-2	NS		NS		NS		NS			U	0.0054
4-Methyl-2-Pentanone	108-10-1	NS		NS		NS		NS			U	0.0067
2-Hexanone	591-78-6	NS		NS		NS		NS			U	0.0067
Tetrachloroethene	127-18-4	1.3		5.5		19		150			U	0.0013
1,1,2,2-Tetrachloroethane	79-34-5	NS		NS		NS		NS			U	0.0013
Toluene	108-88-3	0.7		100	a	100	a	500	k		U	0.0067
Chlorobenzene	108-90-7	1.1		100	a	100	a	500	k		U	0.0067
Ethylbenzene	100-41-4	1		30		41		390			U	0.0054
Styrene	100-42-5	NS		NS		NS		NS			U	0.0067
Xylene(Total)	1330-20-7	0.26		100	a	100	a	500	k		U	0.0067
MTBE	1634-04-4	0.93		62		100	a	500	k	--		--
TBA		NS		NS		NS		NS		--		--
Total VOC										0.018		
Total BTEX										0		
Total Confident Conc. VOAs										0		
Total Estimated Conc. VOA TICs										0		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-142_12.5-13.0		
Lab Sample Number										923396		
Sampling Depth (feet bgs)										12.5 to 13.0		
Sampling Date										05/29/08		
PAH (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL
Naphthalene	91-20-3	12		100	a	100	a	500	k	0.01	J	0.47
Acenaphthylene	208-96-8	100	a	100	a	100	a	500	k		U	0.47
Acenaphthene	83-32-9	20		100	a	100	a	500	k		U	0.47
Fluorene	86-73-7	30		100	a	100	a	500	k		U	0.47
Phenanthrene	85-01-8	100		100	a	100	a	500	k	0.037	J	0.47
Anthracene	120-12-7	100	a	100	a	100	a	500	k		U	0.47
Fluoranthene	206-44-0	100	a	100	a	100	a	500	k	0.018	J	0.47
Pyrene	129-00-0	100		100	a	100	a	500	k	0.038	J	0.47
Benzo(a)anthracene	56-55-3	1	c	1	o	1	o	5.6			U	0.047
Chrysene	218-01-9	1	c	1	o	3.9		56		0.013	J	0.47
Benzo(b)fluoranthene	205-99-2	1	c	1	o	1	o	5.6			U	0.047
Benzo(k)fluoranthene	207-08-9	0.8	c	1		3.9		56			U	0.047
Benzo(a)pyrene	50-32-8	1	c	1	o	1	o	1	o		U	0.047
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	c	0.5	o	0.5	o	5.6			U	0.047
Dibenz(a,h)anthracene	53-70-3	0.33	b	0.33	n	0.33	n	0.56			U	0.047
Benzo(g,h,i)perylene	191-24-2	100		100	a	100	a	500	k		U	0.47
Total PAHs										0.116		
Total Confident Conc. PAHs										0		
Total Estimated Conc. BNA TICs										NA		
TarGOST Signal at Depth										no data		

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	CASRN	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)								SB-142_12.5-13.0		
Lab Sample Number										923396		
Sampling Depth (feet bgs)										12.5 to 13.0		
Sampling Date										05/29/08		
METALS (mg/kg)		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL
Aluminum	7429-90-5	NS		NS		NS		NS		--		--
Antimony	7440-36-0	NS		NS		NS		NS		--		--
Arsenic	7440-38-2	13	c	16	o	16	o	16	o	--		--
Barium	7440-39-3	350	c	350	o	400		400		--		--
Beryllium	7440-41-7	7.2		14		72		590		--		--
Cadmium	7440-43-9	2.5	c	2.5	o	4.3		9.3		--		--
Calcium	7440-70-2	NS		NS		NS		NS		--		--
Chromium	7440-47-3	30	c	36		180		1500		--		--
Cobalt	7440-48-4	NS		NS		NS		NS		--		--
Copper	7440-50-8	50		270		270		270		--		--
Iron	7439-89-6	NS		NS		NS		NS		--		--
Lead	7439-92-1	63	c	400		400		1000		--		--
Magnesium	7439-95-4	NS		NS		NS		NS		--		--
Manganese	7439-96-5	1600	c	2000	o	2000	o	10000	m	--		--
Mercury	7439-97-6	0.18	c	0.81	q	0.81	q	2.8	q	--		--
Nickel	7440-02-0	30		140		310		310		--		--
Potassium	7440-09-7	NS		NS		NS		NS		--		--
Selenium	7782-49-2	3.9	c	36		180		1500		--		--
Silver	7440-22-4	2		36		180		1500		--		--
Sodium	7440-23-5	NS		NS		NS		NS		--		--
Thallium	7440-28-0	NS		NS		NS		NS		--		--
Vanadium	7440-62-2	NS		NS		NS		NS		--		--
Zinc	7440-66-6	109	c	2200		10000	m	10000	m	--		--
WET CHEMISTRY		UUSCO		RSCO		RRSCO		CSCO		Result	Q	MDL
TotalCyanide - mg/kg	57-12-5	27		27		27		27		--		--

Table 5-3. Soil Analytical Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Notes:

All values are presented in milligrams per kilogram, dry weight basis

Bold face, shaded values exceed Part 375 Unrestricted Use SCOs

NS:	No cleanup objective for this compound
NR:	No result; sample not analyzed for this compound
MDL:	Method detection limit
Q:	Data qualifier
U:	Not detected
J:	Estimated concentration below method detection limit
Part 375:	6 NYCRR Part 375 Remediation Program cleanup objectives
UUSCO:	Unrestricted Use Soil Cleanup Objectives Table 375-6.8(a)
RSCO:	Protection of Public Health Residential Restricted Use Soil Cleanup Objectives Table 375-6.8(b)
RRSCO:	Protection of Public Health Restricted Residential Restricted Use Soil Cleanup Objectives Table 375-6.8(b)
CSCO:	Protection of Public Health Commercial Restricted Use Soil Cleanup Objectives Table 375-6.8(b)
a:	The SCOs for unrestricted use, residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.
b:	For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.
c:	For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 1 SCO value for this use of the site.
d:	SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.
e:	The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.
f:	Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with "NS". Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.
k:	The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.
m:	The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.
n:	For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.
o:	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
p:	This SCO is derived from data on mixed isomers of BHC.
q:	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

Table 5-4. Monitoring Well Construction Details and Groundwater Elevations
Former Clove and Maple MGP
Haverstraw, NY

Monitoring Well	Total Depth (feet)	Inside Diameter (inches)	Surveyed Coordinates		Surveyed Elevations		Screen Interval[4]			Reference	Height of Add'l Casing [3]	Groundwater Elevation Measured 6/18/2008		
			Northing	Easting	Ground	TIC	Depth (from TIC)			Elevation [1,2]		DTW	PID	Elev.
MW-01	30	2	859799.38	639972.397	42.29	42.29	20		30	IC	-	21.00	0.0	21.29
MW-02	18	2	859862.69	640127.533	28.13	28.13	8		18	IC	-	7.43	89.0	20.70
MW-03	16	2	859937.23	640041.874	28.47	28.47	6		16	IC	-	7.20	16.3	21.27
MW-04	21	2	859975.46	640064.10	18.78	18.39	11		21	O	5.00	2.44	3.7	20.95
MW-05	21	2	859941.29	640096.36	18.33	17.83	11		21	O	5.00	1.84	2.3	20.99
MW-06	19	2	859889.73	640147.22	17.22	17.22	9		19	O	5.00	2.29	0.0	19.93
MW-07	44	2	859885.01	640151.88	17.92	17.92	34		44	O	5.00	0.46	0.0	22.46
MW-08	19	2	859830.58	640132.80	26.90	26.51	9		19	IC	-	6.46	0.0	20.05
MW-09	20	2	859790.04	640091.94	30.31	30.10	10		20	IC	-	8.87	6.0	21.23
MW-10	36.5	2	859774.68	640034.54	39.85	39.85	26.5		36.5	IC	-	18.36	0.0	21.49
MW-11	20	2	859785.67	640198.65	28.43	27.78	10		20	IC	-	5.89	n/a	21.89
MW-18	15	2	859987.56	640012.974	28.26	30.88	5		15	IC	-	11.70	0.0	19.18
MW-24	20	2	859755.59	640121.182	27.45	27.21	10		20	IC	-	6.04	n/a	21.17
MW-20S	16	2	859979.75	640148.272	18.42	17.68	6		16	IC	-	5.51	23.8	12.17
MW-20D	26	2	859972.52	640139.934	18.27	17.54	16		26	O	3.66	3.33	0.0	17.87
MW-21	22	2	859889.38	640216.106	16.27	15.61	12		22	O	3.66	2.78	0.0	16.49
MW-28S	12	2	860056.64	640211.757	13.50	13.04	2		12	IC	-	1.71	0.0	11.33
MW-28D	31	2	860062.09	640211.757	13.62	13.35	21		31	O	3.66	1.26	0.0	15.75
MW-29S	14	2	859919.17	640327.104	12.82	12.29	4		14	IC	-	4.44	12.3	7.85
MW-29D	30	2	859922.09	640330.480	12.63	12.40	20		30	O	3.66	2.76	0.0	13.30
MW-31S	12	2	860035.62	640293.269	12.56	12.15	2		12	IC	-	1.02	5.6	11.13
MW-31D	32	2	860038.70	640290.588	12.52	12.11	22		32	O	3.66	1.41	n/a	14.36

Table 5-4. Monitoring Well Construction Details and Groundwater Elevations
Former Clove and Maple MGP
Haverstraw, NY

Monitoring Well	Total Depth (feet)	Inside Diameter (inches)	Surveyed Coordinates		Surveyed Elevations		Screen Interval[4]			Reference	Height of Add'l Casing [3]	Groundwater Elevation Measured 6/18/2008		
			Northing	Easting	Ground	TIC	Depth (from TIC)			Elevation [1,2]		DTW	PID	Elev.
MW-32S	12	2	860086.61	640245.925	13.55	13.21	2		12	IC	-	1.70	25.4	11.51
MW-32I	22	2	860083.03	640249.786	13.44	12.67	12		22	O	3.66	1.99	9.9	14.34
MW-55	16	2	859685.47	640426.483	14.22	13.80	6		16	IC	-	6.22	0.0	7.58
MW-60	14	2	859836.45	640478.410	13.63	13.00	4		14	IC	-	5.77	0.0	7.23
MW-61S	12	2	860033.56	640092.43	18.10	17.51	2		12	IC	-	6.75	43.2	10.76
MW-63S	12	2	860127.06	640179.31	12.40	11.84	2		12	IC	-	1.86	1.2	9.98
MW-83S	13	2	859973.66	640345.21	11.40	11.15	3		13	IC	-	1.00	0.0	10.15
MW-85S	15	2	859819.93	640284.50	13.90	13.29	5		15	IC	-	5.80	3.9	7.49
MW-107S	13	2	859702.35	640520.30	12.60	11.58	3		13	IC	-	6.60	0.0	4.98

Notes:
All measurements in feet
[1]: Reference is top of inner casing (IC) or other (O), refering to supplemental casing used for those well exhibiting artesian conc
[2]: Relative to Mean Sea Level, National Geodetic Vertical Datum 1929
[3]: For certain wells, the water in the casing was artesian; a supplemental casing was used to
allow equalization; length shown is in feet.
Screen interval measured in feet below ground surface

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-1			MW-3			MW-04			MW-05			MW-06			MW-07		
Lab Sample Number		925567			925569			928328			928329			928330			928331		
Sampling Date		06/05/08			06/05/08			06/18/08			06/18/08			06/18/08			06/18/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		20' to 30'			6' to 16'			11' to 21'			11' to 21'			9' to19'			34' to 44'		
Sampling Depth (feet bgs)		27'			13'			18'			18'			16'			41'		
VOLATILE COMPOUNDS (ug/L)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	NS		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Bromomethane	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
VinylChloride	2 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Chloroethane	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
MethyleneChloride	5 (s)		U	3.0		U	30		U	60		U	3.0		U	3.0		U	3.0
Acetone	50 (gv)	**81**		5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
CarbonDisulfide	NS		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
1,1-Dichloroethene	0.7 (gv)		U	2.0		U	20		U	40		U	2.0		U	2.0		U	2.0
1,1-Dichloroethane	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
trans-1,2-Dichloroethene	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
cis-1,2-Dichloroethene	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Chloroform	7 (s)	0.5	J	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
1,2-Dichloroethane	0.6 (s)		U	2.0		U	20		U	40		U	2.0		U	2.0		U	2.0
2-Butanone	NS		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
1,1,1-Trichloroethane	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
CarbonTetrachloride	NS		U	2.0		U	20		U	40		U	2.0		U	2.0		U	2.0
Bromodichloromethane	50 (gv)		U	1.0		U	10		U	20		U	1.0		U	1.0		U	1.0
1,2-Dichloropropane	1 (s)		U	1.0		U	10		U	20		U	1.0		U	1.0		U	1.0
cis-1,3-Dichloropropene	0.4 (s*)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Trichloroethene	5 (s)		U	1.0		U	10		U	20		U	1.0		U	1.0		U	1.0
Dibromochloromethane	50 (gv)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
1,1,2-Trichloroethane	1 (s)		U	3.0		U	30		U	60		U	3.0		U	3.0		U	3.0
Benzene	1 (s)		U	1.0	**1100**		10	**34**		20		U	1.0		U	1.0		U	1.0
trans-1,3-Dichloropropene	0.4 (s*)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Bromoform	50 (gv)		U	4.0		U	40		U	80		U	4.0		U	4.0		U	4.0
4-Methyl-2-Pentanone	NS		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
2-Hexanone	50 (gv)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Tetrachloroethene	0.7 (gv)		U	1.0		U	10		U	20		U	1.0		U	1.0		U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)		U	1.0		U	10		U	20		U	1.0		U	1.0		U	1.0
Toluene	5 (s)		U	5.0	**1400**		50	**37**	J	100		U	5.0		U	5.0		U	5.0
Chlorobenzene	5 (s)		U	5.0		U	50		U	100		U	5.0		U	5.0		U	5.0
Ethylbenzene	5 (s)		U	4.0	**1300**		40	**30**	J	80		U	4.0		U	4.0		U	4.0
Styrene	5 (gv)		U	5.0	**65**		50	**21**	J	100		U	5.0		U	5.0		U	5.0
Xylene(Total)	5 (s)		U	5.0	**2300**		50	**130**		100		U	5.0		U	5.0		U	5.0
Total BTEX		0			**6100**			**231**			0			0			0		
Total Confident Conc. VOCs		81			6165			164			0			0			0		
Total Estimated Conc. VOC TICs (s)		10			5652			2050			0			0			0		

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-1			MW-3			MW-04			MW-05			MW-06			MW-07		
Lab Sample Number		925567			925569			928328			928329			928330			928331		
Sampling Date		06/05/08			06/05/08			06/18/08			06/18/08			06/18/08			06/18/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		20' to 30'			6' to 16'			11' to 21'			11' to 21'			9' to19'			34' to 44'		
Sampling Depth (feet bgs)		27'			13'			18'			18'			16'			41'		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Phenol	1 (s)		U	12		U	130		U	100		U	11		U	10		U	10
2-Chlorophenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
2-Methylphenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
4-Methylphenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
2-Nitrophenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
2,4-Dimethylphenol	50 (gv)		U	12		U	130		U	100		U	11		U	10		U	10
2,4-Dichlorophenol	5 (gv)		U	12		U	130		U	100		U	11		U	10		U	10
4-Chloro-3-methylphenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
2,4,6-Trichlorophenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
2,4,5-Trichlorophenol	NS		U	12		U	130		U	100		U	11		U	10		U	10
2,4-Dinitrophenol	10 (gv)		U	38		U	390		U	300		U	33		U	32		U	32
4-Nitrophenol	NS		U	38		U	390		U	300		U	33		U	32		U	32
4,6-Dinitro-2-methylphenol	NS		U	38		U	390		U	300		U	33		U	32		U	32
Pentachlorophenol	1 (s)		U	38		U	390		U	300		U	33		U	32		U	32
bis(2-Chloroethyl)ether	1 (s)		U	1.2		U	13		U	10		U	1.1		U	1.0		U	1.0
1,3-Dichlorobenzene	3 (s)		U	12		U	130		U	100		U	11		U	10		U	10
1,4-Dichlorobenzene	3 (s)		U	12		U	130		U	100		U	11		U	10		U	10
1,2-Dichlorobenzene	3 (s)		U	12		U	130		U	100		U	11		U	10		U	10
bis(2-chloroisopropyl)ether	NS		U	12		U	130		U	100		U	11		U	10		U	10
N-Nitroso-di-n-propylamine	NS		U	1.2		U	13		U	10		U	1.1		U	1.0		U	1.0
Hexachloroethane	5 (s)		U	1.2		U	13		U	10		U	1.1		U	1.0		U	1.0
Nitrobenzene	0.4 (s)		U	1.2		U	13		U	10		U	1.1		U	1.0		U	1.0
Isophorone	50 (gv)		U	12		U	130		U	100		U	11		U	10		U	10
bis(2-Chloroethoxy)methane	5		U	12		U	130		U	100		U	11		U	10		U	10
1,2,4-Trichlorobenzene	5 (gv)		U	1.2		U	13		U	10		U	1.1		U	1.0		U	1.0
Naphthalene	10 (gv)		U	12	**2200**		130	**2200**		100		U	11		U	10		U	10
4-Chloroaniline	5 (s)		U	12		U	130		U	100		U	11		U	10		U	10
Hexachlorobutadiene	0.5 (s)		U	2.5		U	26		U	20		U	2.2		U	2.1		U	2.1
2-Methylnaphthalene	NS		U	12	260		130	200		100		U	11		U	10		U	10
Hexachlorocyclopentadiene	5 (**)		U	12		U	130		U	100		U	11		U	10		U	10
2-Chloronaphthalene	10 (s)		U	12		U	130		U	100		U	11		U	10		U	10
2-Nitroaniline	5 (s)		U	25		U	260		U	200		U	22		U	21		U	21
Dimethylphthalate	50 (gv)		U	12		U	130		U	100		U	11		U	10		U	10
Acenaphthylene	NS		U	12	42	J	130	200		100	13		11		U	10		U	10
2,6-Dinitrotoluene	5 (gv)		U	2.5		U	26		U	20		U	2.2		U	2.1		U	2.1
3-Nitroaniline	5 (gv)		U	25		U	260		U	200		U	22		U	21		U	21
Acenaphthene	20 (gv)		U	12	**20**	J	130	19	J	100	1.2	J	11		U	10		U	10
Dibenzofuran	NS		U	12	2.8	J	130	7.4	J	100		U	11		U	10		U	10
2,4-Dinitrotoluene	5 (gv)		U	2.5		U	26		U	20		U	2.2		U	2.1		U	2.1
Diethylphthalate	50 (gv)		U	12		U	130		U	100		U	11		U	10		U	10

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-1			MW-3			MW-04			MW-05			MW-06			MW-07		
Lab Sample Number		925567			925569			928328			928329			928330			928331		
Sampling Date		06/05/08			06/05/08			06/18/08			06/18/08			06/18/08			06/18/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		20' to 30'			6' to 16'			11' to 21'			11' to 21'			9' to19'			34' to 44'		
Sampling Depth (feet bgs)		27'			13'			18'			18'			16'			41'		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS	U		12	U		130	U		100	U		11	U		10	U		10
Fluorene	50 (s)	U		12	20	J	130	31	J	100	U		11	U		10	U		10
4-Nitroaniline	5 (s)	U		25	U		260	U		200	U		22	U		21	U		21
N-Nitrosodiphenylamine	50 (gv)	U		12	U		130	U		100	U		11	U		10	U		10
4-Bromophenyl-phenylether	NS	U		12	U		130	U		100	U		11	U		10	U		10
Hexachlorobenzene	0.04 (s)	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Phenanthrene	50 (gv)	U		12	19	J	130	**67**	J	100	0.6	J	11	U		10	U		10
Anthracene	50 (gv)	U		12	U		130	11	J	100	U		11	U		10	U		10
Carbazole	NS	U		12	U		130	4.7	J	100	U		11	U		10	U		10
Di-n-butylphthalate	NS	U		12	U		130	U		100	U		11	U		10	U		10
Fluoranthene	50 (s)	U		12	U		130	5	J	100	U		11	U		10	U		10
Pyrene	50 (gv)	U		12	U		130	4.3	J	100	U		11	U		10	U		10
Butylbenzylphthalate	50	U		12	U		130	U		100	U		11	U		10	U		10
3,3'-Dichlorobenzidine	5 (s)	U		25	U		260	U		200	U		22	U		21	U		21
Benzo(a)anthracene	0.002 (gv)	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Chrysene	0.002 (gv)	U		12	U		130	U		100	U		11	U		10	U		10
bis(2-Ethylhexyl)phthalate	5	U		12	U		130	U		100	U		11	U		10	U		10
Di-n-octylphthalate	NC	U		12	U		130	U		100	U		11	U		10	U		10
Benzo(b)fluoranthene	0.002 (gv)	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Benzo(k)fluoranthene	0.002 (gv)	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Benzo(a)pyrene	ND (no detection)***	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Indeno(1,2,3-cd)pyrene	0.002 (gv)	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Dibenz(a,h)anthracene	0.002 (gv)	U		1.2	U		13	U		10	U		1.1	U		1.0	U		1.0
Benzo(g,h,i)perylene	NS	U		12	U		130	U		100	U		11	U		10	U		10
Total PAHs		0			2301			2537.3			14.8			0			0		
Total Confident Conc. SVOCs		0			2460			2600			13			0			0		
Total Estimated Conc. SVOC TICs		0			7340			1335			0			0			0		
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l		U		10	U		10	U		10	U		10	U		10	U		10
TotalCyanide - ug/l	200	U		10	U		10	U		10	U		10	U		10	U		10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-8		MW-9		MW-10		MW-11		MW-18		MW-20S	
Lab Sample Number		915173		915174		925572		915172		925568		926572	
Sampling Date		04/24/08		04/24/08		06/06/08		04/24/08		06/05/08		06/11/08	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		9' to 19'		10' to 20'		26.5' to 36.5'		10' to 20'		5' to 15'		6' to 16'	
Sampling Depth (feet bgs)		18'		19'		33.5'		19'		12'		13'	
VOLATILE COMPOUNDS (ug/L)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Chloromethane	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromomethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
VinylChloride	2 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
MethyleneChloride	5 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Acetone	50 (gv)	7.2	5.0	U	5.0	40	5.0	U	5.0	17	5.0	U	5.0
CarbonDisulfide	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethene	0.7 (gv)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
1,1-Dichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroform	7 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloroethane	0.6 (s)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
2-Butanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,1-Trichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonTetrachloride	NS	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Bromodichloromethane	50 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,2-Dichloropropane	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
cis-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Trichloroethene	5 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Dibromochloromethane	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloroethane	1 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Benzene	1 (s)	0.5 J	1.0	**3**	1.0	U	1.0	U	1.0	0.7 J	1.0	**12**	1.0
trans-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromoform	50 (gv)	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
4-Methyl-2-Pentanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Hexanone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Tetrachloroethene	0.7 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Toluene	5 (s)	U	5.0	1 J	5.0	U	5.0	U	5.0	U	5.0	0.7 J	5.0
Chlorobenzene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Ethylbenzene	5 (s)	U	4.0	**32**	4.0	U	4.0	U	4.0	0.4 J	4.0	**25**	4.0
Styrene	5 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	0.2 J	5.0
Xylene(Total)	5 (s)	U	5.0	**21**	5.0	U	5.0	U	5.0	3.2 J	5.0	**11**	5.0
Total BTEX		0.5		57		0				4.3		48.7	
Total Confident Conc. VOCs		7.2		56		40		0		17		48	
Total Estimated Conc. VOC TICs (s)		0		445		5.4		0		11		569	

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-8		MW-9		MW-10		MW-11		MW-18		MW-20S	
Lab Sample Number		915173		915174		925572		915172		925568		926572	
Sampling Date		04/24/08		04/24/08		06/06/08		04/24/08		06/05/08		06/11/08	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		9' to 19'		10' to 20'		26.5' to 36.5'		10' to 20'		5' to 15'		6' to 16'	
Sampling Depth (feet bgs)		18'		19'		33.5'		19'		12'		13'	
SEMIVOLATILE COMPOUNDS (ug/l)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Phenol	1 (s)	U	14	U	13	U	10	U	13	U	12	U	10
2-Chlorophenol	NS	U	14	U	13	U	10	U	13	U	12	U	10
2-Methylphenol	NS	U	14	2.2 J	13	U	10	U	13	U	12	U	10
4-Methylphenol	NS	U	14	2.2 J	13	U	10	U	13	U	12	U	10
2-Nitrophenol	NS	U	14	U	13	U	10	U	13	U	12	U	10
2,4-Dimethylphenol	50 (gv)	U	14	0.8 J	13	U	10	U	13	U	12	U	10
2,4-Dichlorophenol	5 (gv)	U	14	U	13	U	10	U	13	U	12	U	10
4-Chloro-3-methylphenol	NS	U	14	U	13	U	10	U	13	U	12	U	10
2,4,6-Trichlorophenol	NS	U	14	U	13	U	10	U	13	U	12	U	10
2,4,5-Trichlorophenol	NS	U	14	U	13	U	10	U	13	U	12	U	10
2,4-Dinitrophenol	10 (gv)	U	43	U	40	U	31	U	40	U	35	U	31
4-Nitrophenol	NS	U	43	U	40	U	31	U	40	U	35	U	31
4,6-Dinitro-2-methylphenol	NS	U	43	U	40	U	31	U	40	U	35	U	31
Pentachlorophenol	1 (s)	U	43	U	40	U	31	U	40	U	35	U	31
bis(2-Chloroethyl)ether	1 (s)	U	1.4	U	1.3	U	1.0	U	1.3	U	1.2	U	1.0
1,3-Dichlorobenzene	3 (s)	U	14	U	13	U	10	U	13	U	12	U	10
1,4-Dichlorobenzene	3 (s)	U	14	U	13	U	10	U	13	U	12	U	10
1,2-Dichlorobenzene	3 (s)	U	14	U	13	U	10	U	13	U	12	U	10
bis(2-chloroisopropyl)ether	NS	U	14	U	13	U	10	U	13	U	12	U	10
N-Nitroso-di-n-propylamine	NS	U	1.4	U	1.3	U	1.0	U	1.3	U	1.2	U	1.0
Hexachloroethane	5 (s)	U	1.4	U	1.3	U	1.0	U	1.3	U	1.2	U	1.0
Nitrobenzene	0.4 (s)	U	1.4	U	1.3	U	1.0	U	1.3	U	1.2	U	1.0
Isophorone	50 (gv)	U	14	U	13	U	10	U	13	U	12	U	10
bis(2-Chloroethoxy)methane	5	U	14	U	13	U	10	U	13	U	12	U	10
1,2,4-Trichlorobenzene	5 (gv)	U	1.4	U	1.3	U	1.0	U	1.3	U	1.2	U	1.0
Naphthalene	10 (gv)	U	14	**16**	13	0.5 J	10	U	13	0.3 J	12	**120**	10
4-Chloroaniline	5 (s)	U	14	U	13	U	10	U	13	U	12	U	10
Hexachlorobutadiene	0.5 (s)	U	2.8	U	2.7	U	2.1	U	2.7	U	2.4	U	2.0
2-Methylnaphthalene	NS	U	14	U	13	U	10	U	13	U	12	17	10
Hexachlorocyclopentadiene	5 (**)	U	14	U	13	U	10	U	13	U	12	U	10
2-Chloronaphthalene	10 (s)	U	14	U	13	U	10	U	13	U	12	U	10
2-Nitroaniline	5 (s)	U	28	U	27	U	21	U	27	U	24	U	20
Dimethylphthalate	50 (gv)	U	14	U	13	U	10	U	13	U	12	U	10
Acenaphthylene	NS	U	14	7.5 J	13	U	10	U	13	0.3 J	12	2.8 J	10
2,6-Dinitrotoluene	5 (gv)	U	2.8	U	2.7	U	2.1	U	2.7	U	2.4	U	2.0
3-Nitroaniline	5 (gv)	U	28	U	27	U	21	U	27	U	24	U	20
Acenaphthene	20 (gv)	U	14	**200**	13	U	10	U	13	U	12	**44**	10
Dibenzofuran	NS	U	14	13 J	13	U	10	U	13	U	12	1.6 J	10
2,4-Dinitrotoluene	5 (gv)	U	2.8	U	2.7	U	2.1	U	2.7	U	2.4	U	2.0
Diethylphthalate	50 (gv)	U	14	U	13	U	10	U	13	U	12	U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-8			MW-9			MW-10			MW-11			MW-18			MW-20S		
Lab Sample Number		915173			915174			925572			915172			925568			926572		
Sampling Date		04/24/08			04/24/08			06/06/08			04/24/08			06/05/08			06/11/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		9' to 19'			10' to 20'			26.5' to 36.5'			10' to 20'			5' to 15'			6' to 16'		
Sampling Depth (feet bgs)		18'			19'			33.5'			19'			12'			13'		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS	U		14	U		13	U		10	U		13	U		12	U		10
Fluorene	50 (s)	U		14	**65**		13	U		10	U		13	U		12	13		10
4-Nitroaniline	5 (s)	U		28	U		27	U		21	U		27	U		24	U		20
N-Nitrosodiphenylamine	50 (gv)	U		14	U		13	U		10	U		13	U		12	U		10
4-Bromophenyl-phenylether	NS	U		14	U		13	U		10	U		13	U		12	U		10
Hexachlorobenzene	0.04 (s)	U		1.4	U		1.3	U		1.0	U		1.3	U		1.2	U		1.0
Phenanthrene	50 (gv)	U		14	**62**		13	U		10	U		13	U		12	24		10
Anthracene	50 (gv)	U		14	16		13	U		10	U		13	U		12	4.6	J	10
Carbazole	NS	U		14	3	J	13	U		10	U		13	U		12	0.9	J	10
Di-n-butylphthalate	NS	U		14	U		13	U		10	U		13	U		12	U		10
Fluoranthene	50 (s)	U		14	5.4	J	13	U		10	U		13	U		12	3.1	J	10
Pyrene	50 (gv)	U		14	6	J	13	U		10	U		13	U		12	3.1	J	10
Butylbenzylphthalate	50	U		14	U		13	U		10	U		13	U		12	U		10
3,3'-Dichlorobenzidine	5 (s)	U		28	U		27	U		21	U		27	U		24	U		20
Benzo(a)anthracene	0.002 (gv)	U		1.4	**0.6**	J	1.3	U		1.0	U		1.3	U		1.2	U		1.0
Chrysene	0.002 (gv)	U		14	**0.5**	J	13	U		10	U		13	U		12	U		10
bis(2-Ethylhexyl)phthalate	5	U		14	U		13	U		10	U		13	U		12	U		10
Di-n-octylphthalate	NC	U		14	U		13	U		10	U		13	U		12	U		10
Benzo(b)fluoranthene	0.002 (gv)	U		1.4	U		1.3	U		1.0	U		1.3	U		1.2	U		1.0
Benzo(k)fluoranthene	0.002 (gv)	U		1.4	U		1.3	U		1.0	U		1.3	U		1.2	U		1.0
Benzo(a)pyrene	ND (no detection)***	U		1.4	**0.3**	J	1.3	U		1.0	U		1.3	U		1.2	U		1.0
Indeno(1,2,3-cd)pyrene	0.002 (gv)	U		1.4	U		1.3	U		1.0	U		1.3	U		1.2	U		1.0
Dibenz(a,h)anthracene	0.002 (gv)	U		1.4	U		1.3	U		1.0	U		1.3	U		1.2	U		1.0
Benzo(g,h,i)perylene	NS	U		14	U		13	U		10	U		13	U		12	U		10
Total PAHs		0			379.3			0.5			0			0.6			214.6		
Total Confident Conc. SVOCs		0			359			0			0			0			218		
Total Estimated Conc. SVOC TICs		0			1458			0			0			0			221		
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l		U		10	39		10	U		10	U		10	U		10	U		10
TotalCyanide - ug/l	200	25		10	72		10	U		10	11		10	U		10	U		10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-20D		MW-21		MW-24		MW-28S		MW-28D		MW-28D-DUP	
Lab Sample Number		926573		926570		915171		926564		926565		926566	
Sampling Date		06/11/08		06/10/08		04/24/08		06/09/08		06/09/08		06/09/08	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		16' to 26'		12' to 22'		10' to 20'		2' to 12'		21' to 31'		21' to 31'	
Sampling Depth (feet bgs)		19.5'		19'		19'		9'		28'		28'	
VOLATILE COMPOUNDS (ug/L)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Chloromethane	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromomethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
VinylChloride	2 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
MethyleneChloride	5 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Acetone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonDisulfide	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethene	0.7 (gv)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
1,1-Dichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroform	7 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloroethane	0.6 (s)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
2-Butanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,1-Trichloroethane	5 (s)	U	5.0	0.5 J	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonTetrachloride	NS	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Bromodichloromethane	50 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,2-Dichloropropane	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
cis-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Trichloroethene	5 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Dibromochloromethane	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloroethane	1 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Benzene	1 (s)	U	1.0	U	1.0	U	1.0	**110**	1.0	U	1.0	0.2 J	1.0
trans-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromoform	50 (gv)	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
4-Methyl-2-Pentanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Hexanone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Tetrachloroethene	0.7 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Toluene	5 (s)	U	5.0	U	5.0	U	5.0	3.4 J	5.0	U	5.0	U	5.0
Chlorobenzene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Ethylbenzene	5 (s)	U	4.0	U	4.0	U	4.0	**120**	4.0	U	4.0	0.5 J	4.0
Styrene	5 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Xylene(Total)	5 (s)	U	5.0	U	5.0	U	5.0	**160**	5.0	U	5.0	U	5.0
Total BTEX		0		0		0		393.4		0		0.7	
Total Confident Conc. VOCs		0		0		0		390		0		0	
Total Estimated Conc. VOC TICs (s)		0		0		0		1469		0		0	

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-20D		MW-21		MW-24		MW-28S		MW-28D		MW-28D-DUP	
Lab Sample Number		926573		926570		915171		926564		926565		926566	
Sampling Date		06/11/08		06/10/08		04/24/08		06/09/08		06/09/08		06/09/08	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		16' to 26'		12' to 22'		10' to 20'		2' to 12'		21' to 31'		21' to 31'	
Sampling Depth (feet bgs)		19.5'		19'		19'		9'		28'		28'	
SEMIVOLATILE COMPOUNDS (ug/l)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Phenol	1 (s)	U	10	U	10	U	14	U	21	U	10	U	10
2-Chlorophenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
2-Methylphenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
4-Methylphenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
2-Nitrophenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
2,4-Dimethylphenol	50 (gv)	U	10	U	10	U	14	8.9 J	21	U	10	U	10
2,4-Dichlorophenol	5 (gv)	U	10	U	10	U	14	U	21	U	10	U	10
4-Chloro-3-methylphenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
2,4,6-Trichlorophenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
2,4,5-Trichlorophenol	NS	U	10	U	10	U	14	U	21	U	10	U	10
2,4-Dinitrophenol	10 (gv)	U	31	U	31	U	43	U	63	U	32	U	32
4-Nitrophenol	NS	U	31	U	31	U	43	U	63	U	32	U	32
4,6-Dinitro-2-methylphenol	NS	U	31	U	31	U	43	U	63	U	32	U	32
Pentachlorophenol	1 (s)	U	31	U	31	U	43	U	63	U	32	U	32
bis(2-Chloroethyl)ether	1 (s)	U	1.0	U	1.0	U	1.4	U	2.1	U	1.0	U	1.0
1,3-Dichlorobenzene	3 (s)	U	10	U	10	U	14	U	21	U	10	U	10
1,4-Dichlorobenzene	3 (s)	U	10	U	10	U	14	U	21	U	10	U	10
1,2-Dichlorobenzene	3 (s)	U	10	U	10	U	14	U	21	U	10	U	10
bis(2-chloroisopropyl)ether	NS	U	10	U	10	U	14	U	21	U	10	U	10
N-Nitroso-di-n-propylamine	NS	U	1.0	U	1.0	U	1.4	U	2.1	U	1.0	U	1.0
Hexachloroethane	5 (s)	U	1.0	U	1.0	U	1.4	U	2.1	U	1.0	U	1.0
Nitrobenzene	0.4 (s)	U	1.0	U	1.0	U	1.4	U	2.1	U	1.0	U	1.0
Isophorone	50 (gv)	U	10	U	10	U	14	U	21	U	10	U	10
bis(2-Chloroethoxy)methane	5	U	10	U	10	U	14	U	21	U	10	U	10
1,2,4-Trichlorobenzene	5 (gv)	U	1.0	U	1.0	U	1.4	U	2.1	U	1.0	U	1.0
Naphthalene	10 (gv)	U	10	U	10	U	14	**330**	21	U	10	U	10
4-Chloroaniline	5 (s)	U	10	U	10	U	14	U	21	U	10	U	10
Hexachlorobutadiene	0.5 (s)	U	2.0	U	2.0	U	2.8	U	4.2	U	2.1	U	2.1
2-Methylnaphthalene	NS	U	10	U	10	U	14	160	21	U	10	U	10
Hexachlorocyclopentadiene	5 (**)	U	10	U	10	U	14	U	21	U	10	U	10
2-Chloronaphthalene	10 (s)	U	10	U	10	U	14	U	21	U	10	U	10
2-Nitroaniline	5 (s)	U	20	U	20	U	28	U	42	U	21	U	21
Dimethylphthalate	50 (gv)	U	10	U	10	U	14	U	21	U	10	U	10
Acenaphthylene	NS	U	10	U	10	U	14	2.7 J	21	15	10	16	10
2,6-Dinitrotoluene	5 (gv)	U	2.0	U	2.0	U	2.8	U	4.2	U	2.1	U	2.1
3-Nitroaniline	5 (gv)	U	20	U	20	U	28	U	42	U	21	U	21
Acenaphthene	20 (gv)	U	10	U	10	U	14	**77**	21	0.7 J	10	0.7 J	10
Dibenzofuran	NS	U	10	U	10	U	14	19 J	21	0.8 J	10	0.8 J	10
2,4-Dinitrotoluene	5 (gv)	U	2.0	U	2.0	U	2.8	U	4.2	U	2.1	U	2.1
Diethylphthalate	50 (gv)	U	10	U	10	U	14	U	21	U	10	U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-20D			MW-21			MW-24			MW-28S			MW-28D			MW-28D-DUP		
Lab Sample Number		926573			926570			915171			926564			926565			926566		
Sampling Date		06/11/08			06/10/08			04/24/08			06/09/08			06/09/08			06/09/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		16' to 26'			12' to 22'			10' to 20'			2' to 12'			21' to 31'			21' to 31'		
Sampling Depth (feet bgs)		19.5'			19'			19'			9'			28'			28'		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS		U	10		U	10		U	14		U	21		U	10		U	10
Fluorene	50 (s)		U	10		U	10		U	14	25		21		U	10		U	10
4-Nitroaniline	5 (s)		U	20		U	20		U	28		U	42		U	21		U	21
N-Nitrosodiphenylamine	50 (gv)		U	10		U	10		U	14		U	21		U	10		U	10
4-Bromophenyl-phenylether	NS		U	10		U	10		U	14		U	21		U	10		U	10
Hexachlorobenzene	0.04 (s)		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Phenanthrene	50 (gv)		U	10		U	10		U	14	26		21		U	10	0.3	J	10
Anthracene	50 (gv)		U	10		U	10		U	14	4.7	J	21		U	10		U	10
Carbazole	NS		U	10		U	10		U	14	26		21		U	10		U	10
Di-n-butylphthalate	NS		U	10		U	10		U	14		U	21		U	10		U	10
Fluoranthene	50 (s)		U	10		U	10		U	14	1.7	J	21		U	10		U	10
Pyrene	50 (gv)		U	10		U	10		U	14	0.8	J	21		U	10		U	10
Butylbenzylphthalate	50		U	10		U	10		U	14		U	21		U	10		U	10
3,3'-Dichlorobenzidine	5 (s)		U	20		U	20		U	28		U	42		U	21		U	21
Benzo(a)anthracene	0.002 (gv)		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Chrysene	0.002 (gv)		U	10		U	10	0.5	J	14		U	21		U	10		U	10
bis(2-Ethylhexyl)phthalate	5		U	10		U	10		U	14		U	21		U	10		U	10
Di-n-octylphthalate	NC		U	10		U	10		U	14		U	21		U	10		U	10
Benzo(b)fluoranthene	0.002 (gv)		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Benzo(k)fluoranthene	0.002 (gv)		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Benzo(a)pyrene	ND (no detection)***		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Indeno(1,2,3-cd)pyrene	0.002 (gv)		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Dibenz(a,h)anthracene	0.002 (gv)		U	1.0		U	1.0		U	1.4		U	2.1		U	1.0		U	1.0
Benzo(g,h,i)perylene	NS		U	10		U	10		U	14		U	21		U	10		U	10
Total PAHs		0			0			0.5			467.9			15.7			17		
Total Confident Conc. SVOCs		0			0			0			644			15			16		
Total Estimated Conc. SVOC TICs		0			37			0			1204			0			0		
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l			U	10		U	10	62		10		U	10		U	10		U	10
TotalCyanide - ug/l	200		U	10		U	10	120		10		U	10		U	10		U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-29S		MW-29D		MW-31D		MW-32I		MW-55		MW-60	
Lab Sample Number		926562		926563		925570		925571		926569		926567	
Sampling Date		06/09/08		06/09/08		06/06/08		06/06/08		06/10/08		06/10/08	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		4' to 14'		20' to 30'		22' to 32'		12' to 22'		6' to 16'		4' to 14'	
Sampling Depth (feet bgs)		11.5'		25.5'		29'		19'		13'		11'	
VOLATILE COMPOUNDS (ug/L)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Chloromethane	NS	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromomethane	5 (s)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
VinylChloride	2 (s)	U	10	U	5.0	U	5.0	U	5.0	**7**	5.0	U	5.0
Chloroethane	5 (s)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
MethyleneChloride	5 (s)	U	6.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Acetone	50 (gv)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonDisulfide	NS	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethene	0.7 (gv)	U	4.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
1,1-Dichloroethane	5 (s)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,2-Dichloroethene	5 (s)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,2-Dichloroethene	5 (s)	U	10	U	5.0	U	5.0	U	5.0	2.2 J	5.0	U	5.0
Chloroform	7 (s)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloroethane	0.6 (s)	U	4.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
2-Butanone	NS	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,1-Trichloroethane	5 (s)	U	10	0.4 J	5.0	0.5 J	5.0	U	5.0	U	5.0	U	5.0
CarbonTetrachloride	NS	U	4.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Bromodichloromethane	50 (gv)	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,2-Dichloropropane	1 (s)	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
cis-1,3-Dichloropropene	0.4 (s*)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Trichloroethene	5 (s)	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Dibromochloromethane	50 (gv)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloroethane	1 (s)	U	6.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Benzene	1 (s)	**160**	2.0	U	1.0	U	1.0	**2.4**	1.0	U	1.0	U	1.0
trans-1,3-Dichloropropene	0.4 (s*)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromoform	50 (gv)	U	8.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
4-Methyl-2-Pentanone	NS	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Hexanone	50 (gv)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Tetrachloroethene	0.7 (gv)	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Toluene	5 (s)	1.8 J	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chlorobenzene	5 (s)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Ethylbenzene	5 (s)	**140**	8.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
Styrene	5 (gv)	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Xylene(Total)	5 (s)	**34**	10	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Total BTEX		335.8		0		0		2.4		0		0	
Total Confident Conc. VOCs		334		0		0		2.4		7		0	
Total Estimated Conc. VOC TICs (s)		796		0		0		19		0		5.3	

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-29S			MW-29D			MW-31D			MW-32I			MW-55			MW-60		
Lab Sample Number		926562			926563			925570			925571			926569			926567		
Sampling Date		06/09/08			06/09/08			06/06/08			06/06/08			06/10/08			06/10/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		4' to 14'			20' to 30'			22' to 32'			12' to 22'			6' to 16'			4' to 14'		
Sampling Depth (feet bgs)		11.5'			25.5'			29'			19'			13'			11'		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Phenol	1 (s)	**1.7**	J	10	U		10	U		12	U		11	U		10	U		10
2-Chlorophenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
2-Methylphenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
4-Methylphenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
2-Nitrophenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
2,4-Dimethylphenol	50 (gv)	U		10	U		10	U		12	U		11	U		10	U		10
2,4-Dichlorophenol	5 (gv)	U		10	U		10	U		12	U		11	U		10	U		10
4-Chloro-3-methylphenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
2,4,6-Trichlorophenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
2,4,5-Trichlorophenol	NS	U		10	U		10	U		12	U		11	U		10	U		10
2,4-Dinitrophenol	10 (gv)	U		32	U		32	U		38	U		33	U		31	U		32
4-Nitrophenol	NS	U		32	U		32	U		38	U		33	U		31	U		32
4,6-Dinitro-2-methylphenol	NS	U		32	U		32	U		38	U		33	U		31	U		32
Pentachlorophenol	1 (s)	U		32	U		32	U		38	U		33	U		31	U		32
bis(2-Chloroethyl)ether	1 (s)	U		1.0	U		1.0	U		1.2	U		1.1	U		1.0	U		1.0
1,3-Dichlorobenzene	3 (s)	U		10	U		10	U		12	U		11	U		10	U		10
1,4-Dichlorobenzene	3 (s)	U		10	U		10	U		12	U		11	U		10	U		10
1,2-Dichlorobenzene	3 (s)	U		10	U		10	U		12	U		11	U		10	U		10
bis(2-chloroisopropyl)ether	NS	U		10	U		10	U		12	U		11	U		10	U		10
N-Nitroso-di-n-propylamine	NS	U		1.0	U		1.0	U		1.2	U		1.1	U		1.0	U		1.0
Hexachloroethane	5 (s)	U		1.0	U		1.0	U		1.2	U		1.1	U		1.0	U		1.0
Nitrobenzene	0.4 (s)	U		1.0	U		1.0	U		1.2	U		1.1	U		1.0	U		1.0
Isophorone	50 (gv)	U		10	U		10	U		12	U		11	U		10	U		10
bis(2-Chloroethoxy)methane	5	U		10	U		10	U		12	U		11	U		10	U		10
1,2,4-Trichlorobenzene	5 (gv)	U		1.0	U		1.0	U		1.2	U		1.1	U		1.0	U		1.0
Naphthalene	10 (gv)	**200**		10	U		10	U		12	0.8	J	11	U		10	U		10
4-Chloroaniline	5 (s)	U		10	U		10	U		12	U		11	U		10	U		10
Hexachlorobutadiene	0.5 (s)	U		2.1	U		2.1	U		2.5	U		2.2	U		2.0	U		2.1
2-Methylnaphthalene	NS	38		10	U		10	U		12	U		11	U		10	1.1	J	10
Hexachlorocyclopentadiene	5 (**)	U		10	U		10	U		12	U		11	U		10	U		10
2-Chloronaphthalene	10 (s)	U		10	U		10	U		12	U		11	U		10	U		10
2-Nitroaniline	5 (s)	U		21	U		21	U		25	U		22	U		20	U		21
Dimethylphthalate	50 (gv)	U		10	U		10	U		12	U		11	U		10	U		10
Acenaphthylene	NS	1.2	J	10	U		10	U		12	88		11	U		10	U		10
2,6-Dinitrotoluene	5 (gv)	U		2.1	U		2.1	U		2.5	U		2.2	U		2.0	U		2.1
3-Nitroaniline	5 (gv)	U		21	U		21	U		25	U		22	U		20	U		21
Acenaphthene	20 (gv)	**150**		10	U		10	U		12	18		11	1	J	10	4.8	J	10
Dibenzofuran	NS	3.3	J	10	U		10	U		12	2.6	J	11	U		10	U		10
2,4-Dinitrotoluene	5 (gv)	U		2.1	U		2.1	U		2.5	U		2.2	U		2.0	U		2.1
Diethylphthalate	50 (gv)	U		10	U		10	U		12	U		11	U		10	U		10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-29S			MW-29D			MW-31D			MW-32I			MW-55			MW-60		
Lab Sample Number		926562			926563			925570			925571			926569			926567		
Sampling Date		06/09/08			06/09/08			06/06/08			06/06/08			06/10/08			06/10/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		4' to 14'			20' to 30'			22' to 32'			12' to 22'			6' to 16'			4' to 14'		
Sampling Depth (feet bgs)		11.5'			25.5'			29'			19'			13'			11'		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS		U	10		U	10		U	12		U	11		U	10		U	10
Fluorene	50 (s)	25		10		U	10		U	12	0.7	J	11		U	10	2.2	J	10
4-Nitroaniline	5 (s)		U	21		U	21		U	25		U	22		U	20		U	21
N-Nitrosodiphenylamine	50 (gv)		U	10		U	10		U	12		U	11		U	10		U	10
4-Bromophenyl-phenylether	NS		U	10		U	10		U	12		U	11		U	10		U	10
Hexachlorobenzene	0.04 (s)		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Phenanthrene	50 (gv)	16		10		U	10		U	12	7.4	J	11	0.3	J	10	7.1	J	10
Anthracene	50 (gv)	4.1	J	10		U	10		U	12	0.6	J	11		U	10	1	J	10
Carbazole	NS	8.5	J	10		U	10		U	12	2.3	J	11		U	10		U	10
Di-n-butylphthalate	NS		U	10		U	10		U	12		U	11		U	10		U	10
Fluoranthene	50 (s)	2	J	10		U	10		U	12		U	11		U	10	1.3	J	10
Pyrene	50 (gv)	1.9	J	10		U	10		U	12		U	11		U	10	1.4	J	10
Butylbenzylphthalate	50		U	10		U	10		U	12		U	11		U	10		U	10
3,3'-Dichlorobenzidine	5 (s)		U	21		U	21		U	25		U	22		U	20		U	21
Benzo(a)anthracene	0.002 (gv)		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Chrysene	0.002 (gv)		U	10		U	10		U	12		U	11		U	10		U	10
bis(2-Ethylhexyl)phthalate	5		U	10		U	10		U	12		U	11		U	10		U	10
Di-n-octylphthalate	NC		U	10		U	10		U	12		U	11		U	10		U	10
Benzo(b)fluoranthene	0.002 (gv)		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Benzo(k)fluoranthene	0.002 (gv)		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Benzo(a)pyrene	ND (no detection)***		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Indeno(1,2,3-cd)pyrene	0.002 (gv)		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Dibenz(a,h)anthracene	0.002 (gv)		U	1.0		U	1.0		U	1.2		U	1.1		U	1.0		U	1.0
Benzo(g,h,i)perylene	NS		U	10		U	10		U	12		U	11		U	10		U	10
Total PAHs		400.2			0			0			115.5			1.3			17.8		
Total Confident Conc. SVOCs		429			0			0			106			0			0		
Total Estimated Conc. SVOC TICs		680			0			0			119			0			0		
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l			U	10		U	10		U	10		U	10		U	10		U	10
TotalCyanide - ug/l	200		U	10		U	10		U	10		U	10		U	10		U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-61S			MW-63S			MW-83S			MW-85S			MW-107S			TWP-80		
Lab Sample Number		926574			925566			926561			926571			926568			917129		
Sampling Date		06/11/08			06/05/08			06/09/08			06/10/08			06/10/08			05/01/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		2' to 12'			2' to 12'			3' to 13'			5' to 15'			3' to 13'			5		
Sampling Depth (feet bgs)		10'			9.5'			10'			10.5'			10.5'			5		
VOLATILE COMPOUNDS (ug/L)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	NS		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Bromomethane	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
VinylChloride	2 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Chloroethane	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
MethyleneChloride	5 (s)		U	75		U	3.0		U	3.0		U	3.0		U	3.0		U	3.0
Acetone	50 (gv)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
CarbonDisulfide	NS		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
1,1-Dichloroethene	0.7 (gv)		U	50		U	2.0		U	2.0		U	2.0		U	2.0		U	2.0
1,1-Dichloroethane	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
trans-1,2-Dichloroethene	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
cis-1,2-Dichloroethene	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Chloroform	7 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
1,2-Dichloroethane	0.6 (s)		U	50		U	2.0		U	2.0		U	2.0		U	2.0		U	2.0
2-Butanone	NS		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
1,1,1-Trichloroethane	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
CarbonTetrachloride	NS		U	50		U	2.0		U	2.0		U	2.0		U	2.0		U	2.0
Bromodichloromethane	50 (gv)		U	25		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
1,2-Dichloropropane	1 (s)		U	25		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
cis-1,3-Dichloropropene	0.4 (s*)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Trichloroethene	5 (s)		U	25		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Dibromochloromethane	50 (gv)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
1,1,2-Trichloroethane	1 (s)		U	75		U	3.0		U	3.0		U	3.0		U	3.0		U	3.0
Benzene	1 (s)	**320**		25	**11**		1.0		U	1.0		U	1.0		U	1.0	0.4	J	1.0
trans-1,3-Dichloropropene	0.4 (s*)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Bromoform	50 (gv)		U	100		U	4.0		U	4.0		U	4.0		U	4.0		U	4.0
4-Methyl-2-Pentanone	NS		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
2-Hexanone	50 (gv)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Tetrachloroethene	0.7 (gv)		U	25		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)		U	25		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Toluene	5 (s)	**18**	J	120	0.5	J	5.0		U	5.0		U	5.0		U	5.0	0.5	J	5.0
Chlorobenzene	5 (s)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Ethylbenzene	5 (s)	**350**		100	**9.4**		4.0		U	4.0		U	4.0		U	4.0	0.7	J	4.0
Styrene	5 (gv)		U	120		U	5.0		U	5.0		U	5.0		U	5.0		U	5.0
Xylene(Total)	5 (s)	**210**		120	**13**		5.0		U	5.0		U	5.0		U	5.0	2.4	J	5.0
Total BTEX		898			33.9			0			0			0			4		
Total Confident Conc. VOCs		880			33			0			0			0			0		
Total Estimated Conc. VOC TICs (s)		8340			138			0			0			0			0		

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-61S			MW-63S			MW-83S			MW-85S			MW-107S			TWP-80		
Lab Sample Number		926574			925566			926561			926571			926568			917129		
Sampling Date		06/11/08			06/05/08			06/09/08			06/10/08			06/10/08			05/01/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		2' to 12'			2' to 12'			3' to 13'			5' to 15'			3' to 13'			5		
Sampling Depth (feet bgs)		10'			9.5'			10'			10.5'			10.5'			5		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Phenol	1 (s)		U	510		U	10		U	10		U	10		U	10		U	10
2-Chlorophenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
2-Methylphenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
4-Methylphenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
2-Nitrophenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	50 (gv)		U	510		U	10		U	10		U	10		U	10		U	10
2,4-Dichlorophenol	5 (gv)		U	510		U	10		U	10		U	10		U	10		U	10
4-Chloro-3-methylphenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
2,4,6-Trichlorophenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
2,4,5-Trichlorophenol	NS		U	510		U	10		U	10		U	10		U	10		U	10
2,4-Dinitrophenol	10 (gv)		U	1500		U	30		U	32		U	31		U	31		U	31
4-Nitrophenol	NS		U	1500		U	30		U	32		U	31		U	31		U	31
4,6-Dinitro-2-methylphenol	NS		U	1500		U	30		U	32		U	31		U	31		U	31
Pentachlorophenol	1 (s)		U	1500		U	30		U	32		U	31		U	31		U	31
bis(2-Chloroethyl)ether	1 (s)		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
1,3-Dichlorobenzene	3 (s)		U	510		U	10		U	10		U	10		U	10		U	10
1,4-Dichlorobenzene	3 (s)		U	510		U	10		U	10		U	10		U	10		U	10
1,2-Dichlorobenzene	3 (s)		U	510		U	10		U	10		U	10		U	10		U	10
bis(2-chloroisopropyl)ether	NS		U	510		U	10		U	10		U	10		U	10		U	10
N-Nitroso-di-n-propylamine	NS		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Hexachloroethane	5 (s)		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Nitrobenzene	0.4 (s)		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Isophorone	50 (gv)		U	510		U	10		U	10		U	10		U	10		U	10
bis(2-Chloroethoxy)methane	5		U	510		U	10		U	10		U	10		U	10		U	10
1,2,4-Trichlorobenzene	5 (gv)		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Naphthalene	10 (gv)	**9200**		510	5.2	J	10		U	10		U	10		U	10		U	10
4-Chloroaniline	5 (s)		U	510		U	10		U	10		U	10		U	10		U	10
Hexachlorobutadiene	0.5 (s)		U	100		U	2.0		U	2.1		U	2.0		U	2.0		U	2.0
2-Methylnaphthalene	NS	680		510	1.2	J	10		U	10		U	10		U	10		U	10
Hexachlorocyclopentadiene	5 (**)		U	510		U	10		U	10		U	10		U	10		U	10
2-Chloronaphthalene	10 (s)		U	510		U	10		U	10		U	10		U	10		U	10
2-Nitroaniline	5 (s)		U	1000		U	20		U	21		U	20		U	20		U	20
Dimethylphthalate	50 (gv)		U	510		U	10		U	10		U	10		U	10		U	10
Acenaphthylene	NS		U	510	7.6	J	10		U	10	1.3	J	10		U	10		U	10
2,6-Dinitrotoluene	5 (gv)		U	100		U	2.0		U	2.1		U	2.0		U	2.0		U	2.0
3-Nitroaniline	5 (gv)		U	1000		U	20		U	21		U	20		U	20		U	20
Acenaphthene	20 (gv)	**310**	J	510	**76**		10		U	10	7.3	J	10		U	10		U	10
Dibenzofuran	NS		U	510	2.7	J	10		U	10		U	10		U	10		U	10
2,4-Dinitrotoluene	5 (gv)		U	100		U	2.0		U	2.1		U	2.0		U	2.0		U	2.0
Diethylphthalate	50 (gv)		U	510		U	10		U	10		U	10		U	10		U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	MW-61S			MW-63S			MW-83S			MW-85S			MW-107S			TWP-80		
Lab Sample Number		926574			925566			926561			926571			926568			917129		
Sampling Date		06/11/08			06/05/08			06/09/08			06/10/08			06/10/08			05/01/08		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Screen Interval (feet bgs)		2' to 12'			2' to 12'			3' to 13'			5' to 15'			3' to 13'			5		
Sampling Depth (feet bgs)		10'			9.5'			10'			10.5'			10.5'			5		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS		U	510		U	10		U	10		U	10		U	10		U	10
Fluorene	50 (s)	**59**	J	510	9.8	J	10		U	10		U	10		U	10		U	10
4-Nitroaniline	5 (s)		U	1000		U	20		U	21		U	20		U	20		U	20
N-Nitrosodiphenylamine	50 (gv)		U	510		U	10		U	10		U	10		U	10		U	10
4-Bromophenyl-phenylether	NS		U	510		U	10		U	10		U	10		U	10		U	10
Hexachlorobenzene	0.04 (s)		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Phenanthrene	50 (gv)	**64**	J	510	0.7	J	10		U	10	0.9	J	10		U	10		U	10
Anthracene	50 (gv)		U	510	1.6	J	10		U	10	0.8	J	10		U	10		U	10
Carbazole	NS		U	510	2.8	J	10		U	10		U	10		U	10		U	10
Di-n-butylphthalate	NS		U	510		U	10		U	10		U	10		U	10		U	10
Fluoranthene	50 (s)		U	510	1.5	J	10		U	10	3.2	J	10		U	10		U	10
Pyrene	50 (gv)		U	510	0.9	J	10		U	10	9.2	J	10		U	10		U	10
Butylbenzylphthalate	50		U	510		U	10		U	10		U	10		U	10		U	10
3,3'-Dichlorobenzidine	5 (s)		U	1000		U	20		U	21		U	20		U	20		U	20
Benzo(a)anthracene	0.002 (gv)		U	51		U	1.0		U	1.0	**1.8**		1.0		U	1.0		U	1.0
Chrysene	0.002 (gv)		U	510		U	10		U	10	**2.1**	J	10		U	10		U	10
bis(2-Ethylhexyl)phthalate	5		U	510		U	10		U	10		U	10		U	10		U	10
Di-n-octylphthalate	NC		U	510		U	10		U	10		U	10		U	10		U	10
Benzo(b)fluoranthene	0.002 (gv)		U	51		U	1.0		U	1.0	**0.8**	J	1.0		U	1.0		U	1.0
Benzo(k)fluoranthene	0.002 (gv)		U	51		U	1.0		U	1.0	**1.5**		1.0		U	1.0		U	1.0
Benzo(a)pyrene	ND (no detection)***		U	51		U	1.0		U	1.0	**2.1**		1.0		U	1.0		U	1.0
Indeno(1,2,3-cd)pyrene	0.002 (gv)		U	51		U	1.0		U	1.0	**0.8**	J	1.0		U	1.0		U	1.0
Dibenz(a,h)anthracene	0.002 (gv)		U	51		U	1.0		U	1.0		U	1.0		U	1.0		U	1.0
Benzo(g,h,i)perylene	NS		U	510		U	10		U	10	1.3	J	10		U	10		U	10
Total PAHs		9633			103.3			0			33.1			0			0		
Total Confident Conc. SVOCs		9880			76			0			5.4			0			0		
Total Estimated Conc. SVOC TICs		4810			240			0			17			0			0		
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l		17		10		U	10		U	10		U	10		U	10		U	10
TotalCyanide - ug/l	200	17		10		U	10		U	10		U	10		U	10		U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	TWP-84		TWP-92		TWP-120		TWP-123		TWP-124	
Lab Sample Number		917132		917130		917128		917133		917127	
Sampling Date		05/01/08		05/01/08		05/01/08		05/01/08		05/01/08	
Matrix		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		3		2		5		8		5	
Sampling Depth (feet bgs)		3		2		5		8		5	
VOLATILE COMPOUNDS (ug/L)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Chloromethane	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromomethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
VinylChloride	2 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
MethyleneChloride	5 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Acetone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonDisulfide	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethene	0.7 (gv)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
1,1-Dichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroform	7 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloroethane	0.6 (s)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
2-Butanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,1-Trichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonTetrachloride	NS	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Bromodichloromethane	50 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,2-Dichloropropane	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
cis-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Trichloroethene	5 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Dibromochloromethane	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloroethane	1 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Benzene	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
trans-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromoform	50 (gv)	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
4-Methyl-2-Pentanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Hexanone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Tetrachloroethene	0.7 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Toluene	5 (s)	U	5.0	U	5.0	U	5.0	0.4 J	5.0	U	5.0
Chlorobenzene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Ethylbenzene	5 (s)	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
Styrene	5 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Xylene(Total)	5 (s)	U	5.0	0.2 J	5.0	U	5.0	U	5.0	U	5.0
Total BTEX		0		0.2		0		0.4		0	
Total Confident Conc. VOCs		0		0		0		0		0	
Total Estimated Conc. VOC TICs (s)		0		0		0		0		0	

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	TWP-84		TWP-92		TWP-120		TWP-123		TWP-124	
Lab Sample Number		917132		917130		917128		917133		917127	
Sampling Date		05/01/08		05/01/08		05/01/08		05/01/08		05/01/08	
Matrix		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		3		2		5		8		5	
Sampling Depth (feet bgs)		3		2		5		8		5	
SEMIVOLATILE COMPOUNDS (ug/l)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Phenol	1 (s)	U	10	U	10	U	10	U	10	U	10
2-Chlorophenol	NS	U	10	U	10	U	10	U	10	U	10
2-Methylphenol	NS	U	10	U	10	U	10	U	10	U	10
4-Methylphenol	NS	U	10	U	10	U	10	U	10	U	10
2-Nitrophenol	NS	U	10	U	10	U	10	U	10	U	10
2,4-Dimethylphenol	50 (gv)	U	10	U	10	U	10	U	10	U	10
2,4-Dichlorophenol	5 (gv)	U	10	U	10	U	10	U	10	U	10
4-Chloro-3-methylphenol	NS	U	10	U	10	U	10	U	10	U	10
2,4,6-Trichlorophenol	NS	U	10	U	10	U	10	U	10	U	10
2,4,5-Trichlorophenol	NS	U	10	U	10	U	10	U	10	U	10
2,4-Dinitrophenol	10 (gv)	U	31	U	31	U	31	U	31	U	31
4-Nitrophenol	NS	U	31	U	31	U	31	U	31	U	31
4,6-Dinitro-2-methylphenol	NS	U	31	U	31	U	31	U	31	U	31
Pentachlorophenol	1 (s)	U	31	U	31	U	31	U	31	U	31
bis(2-Chloroethyl)ether	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,3-Dichlorobenzene	3 (s)	U	10	U	10	U	10	U	10	U	10
1,4-Dichlorobenzene	3 (s)	U	10	U	10	U	10	U	10	U	10
1,2-Dichlorobenzene	3 (s)	U	10	U	10	U	10	U	10	U	10
bis(2-chloroisopropyl)ether	NS	U	10	U	10	U	10	U	10	U	10
N-Nitroso-di-n-propylamine	NS	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Hexachloroethane	5 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Nitrobenzene	0.4 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Isophorone	50 (gv)	U	10	U	10	U	10	U	10	U	10
bis(2-Chloroethoxy)methane	5	U	10	U	10	U	10	U	10	U	10
1,2,4-Trichlorobenzene	5 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Naphthalene	10 (gv)	U	10	U	10	U	10	U	10	U	10
4-Chloroaniline	5 (s)	U	10	U	10	U	10	U	10	U	10
Hexachlorobutadiene	0.5 (s)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
2-Methylnaphthalene	NS	U	10	U	10	U	10	U	10	U	10
Hexachlorocyclopentadiene	5 (**)	U	10	U	10	U	10	U	10	U	10
2-Chloronaphthalene	10 (s)	U	10	U	10	U	10	U	10	U	10
2-Nitroaniline	5 (s)	U	20	U	20	U	20	U	20	U	20
Dimethylphthalate	50 (gv)	U	10	U	10	U	10	U	10	U	10
Acenaphthylene	NS	U	10	U	10	U	10	U	10	U	10
2,6-Dinitrotoluene	5 (gv)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
3-Nitroaniline	5 (gv)	U	20	U	20	U	20	U	20	U	20
Acenaphthene	20 (gv)	U	10	U	10	U	10	U	10	U	10
Dibenzofuran	NS	U	10	U	10	U	10	U	10	U	10
2,4-Dinitrotoluene	5 (gv)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Diethylphthalate	50 (gv)	U	10	U	10	U	10	U	10	U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations	TWP-84		TWP-92		TWP-120		TWP-123		TWP-124	
Lab Sample Number		917132		917130		917128		917133		917127	
Sampling Date		05/01/08		05/01/08		05/01/08		05/01/08		05/01/08	
Matrix		WATER		WATER		WATER		WATER		WATER	
Screen Interval (feet bgs)		3		2		5		8		5	
Sampling Depth (feet bgs)		3		2		5		8		5	
SEMIVOLATILE COMPOUNDS (ug/l)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
4-Chlorophenyl-phenylether	NS	U	10	U	10	U	10	U	10	U	10
Fluorene	50 (s)	U	10	U	10	U	10	U	10	U	10
4-Nitroaniline	5 (s)	U	20	U	20	U	20	U	20	U	20
N-Nitrosodiphenylamine	50 (gv)	U	10	U	10	U	10	U	10	U	10
4-Bromophenyl-phenylether	NS	U	10	U	10	U	10	U	10	U	10
Hexachlorobenzene	0.04 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Phenanthrene	50 (gv)	U	10	U	10	U	10	U	10	U	10
Anthracene	50 (gv)	U	10	U	10	U	10	U	10	U	10
Carbazole	NS	U	10	U	10	U	10	U	10	U	10
Di-n-butylphthalate	NS	U	10	U	10	U	10	U	10	U	10
Fluoranthene	50 (s)	U	10	U	10	U	10	U	10	U	10
Pyrene	50 (gv)	U	10	U	10	U	10	U	10	U	10
Butylbenzylphthalate	50	U	10	U	10	U	10	U	10	U	10
3,3'-Dichlorobenzidine	5 (s)	U	20	U	20	U	20	U	20	U	20
Benzo(a)anthracene	0.002 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Chrysene	0.002 (gv)	U	10	U	10	U	10	U	10	U	10
bis(2-Ethylhexyl)phthalate	5	U	10	U	10	U	10	U	10	U	10
Di-n-octylphthalate	NC	U	10	U	10	U	10	U	10	U	10
Benzo(b)fluoranthene	0.002 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Benzo(k)fluoranthene	0.002 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Benzo(a)pyrene	ND (no detection)***	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Indeno(1,2,3-cd)pyrene	0.002 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Dibenz(a,h)anthracene	0.002 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Benzo(g,h,i)perylene	NS	U	10	U	10	U	10	U	10	U	10
Total PAHs		0		0		0		0		0	
Total Confident Conc. SVOCs		0		0		0		0		0	
Total Estimated Conc. SVOC TICs		0		0		0		0		0	
WET CHEMISTRY		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Cyanide-Amenable - ug/l		U	10	U	10	U	10	U	10	U	10
TotalCyanide - ug/l	200	U	10	U	10	U	10	U	10	U	10

Table 5-5 Groundwater Sample Results
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Sample ID	NYSDEC Ambient Water	TripBlank		FieldBlank		TB		FB-050208		TRIPBLANK	
Lab Sample Number	Quality Standards and	915169		915170		917131		917135		925573	
Sampling Date	Guidance Values and	04/24/08		04/24/08		04/28/08		05/02/08		06/04/08	
Matrix	Groundwater Effluent	WATER		WATER		WATER		WATER		WATER	
VOLATILE COMPOUNDS (ug/l)		Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL	Result Q	MDL
Chloromethane	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromomethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
VinylChloride	2 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
MethyleneChloride	5 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Acetone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonDisulfide	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1-Dichloroethene	0.7 (gv)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
1,1-Dichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
trans-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
cis-1,2-Dichloroethene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chloroform	7 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,2-Dichloroethane	0.6 (s)	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
2-Butanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,1-Trichloroethane	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
CarbonTetrachloride	NS	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Bromodichloromethane	50 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,2-Dichloropropane	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
cis-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Trichloroethene	5 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Dibromochloromethane	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
1,1,2-Trichloroethane	1 (s)	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0
Benzene	1 (s)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
trans-1,3-Dichloropropene	0.4 (s*)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Bromoform	50 (gv)	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
4-Methyl-2-Pentanone	NS	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
2-Hexanone	50 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Tetrachloroethene	0.7 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Toluene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Chlorobenzene	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Ethylbenzene	5 (s)	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0
Styrene	5 (gv)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Xylene(Total)	5 (s)	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Total Confident Conc. VOAs (s)		0		0		0		0		0	
Total Estimated Conc. VOA TICs (s)		0		0		0		0		0	

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water	TripBlank			FieldBlank			TB			FB-050208			TRIPBLANK		
Lab Sample Number	Quality Standards and	915169			915170			917131			917135			925573		
Sampling Date	Guidance Values and	04/24/08			04/24/08			04/28/08			05/02/08			06/04/08		
Matrix	Groundwater Effluent	WATER			WATER			WATER			WATER			WATER		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Phenol	1 (s)	NR			U		10	NR			NR			NR		
2-Chlorophenol	NS	NR			U		10	NR			NR			NR		
2-Methylphenol	NS	NR			U		10	NR			NR			NR		
4-Methylphenol	NS	NR			U		10	NR			NR			NR		
2-Nitrophenol	NS	NR			U		10	NR			NR			NR		
2,4-Dimethylphenol	50 (gv)	NR			U		10	NR			NR			NR		
2,4-Dichlorophenol	5 (gv)	NR			U		10	NR			NR			NR		
4-Chloro-3-methylphenol	NS	NR			U		10	NR			NR			NR		
2,4,6-Trichlorophenol	NS	NR			U		10	NR			NR			NR		
2,4,5-Trichlorophenol	NS	NR			U		10	NR			NR			NR		
2,4-Dinitrophenol	10 (gv)	NR			U		31	NR			NR			NR		
4-Nitrophenol	NS	NR			U		31	NR			NR			NR		
4,6-Dinitro-2-methylphenol	NS	NR			U		31	NR			NR			NR		
Pentachlorophenol	1 (s)	NR			U		31	NR			NR			NR		
bis(2-Chloroethyl)ether	1 (s)	NR			U		1.0	NR			NR			NR		
1,3-Dichlorobenzene	3 (s)	NR			U		10	NR			NR			NR		
1,4-Dichlorobenzene	3 (s)	NR			U		10	NR			NR			NR		
1,2-Dichlorobenzene	3 (s)	NR			U		10	NR			NR			NR		
bis(2-chloroisopropyl)ether	NS	NR			U		10	NR			NR			NR		
N-Nitroso-di-n-propylamine	NS	NR			U		1.0	NR			NR			NR		
Hexachloroethane	5 (s)	NR			U		1.0	NR			NR			NR		
Nitrobenzene	0.4 (s)	NR			U		1.0	NR			NR			NR		
Isophorone	50 (gv)	NR			U		10	NR			NR			NR		
bis(2-Chloroethoxy)methane	5	NR			U		10	NR			NR			NR		
1,2,4-Trichlorobenzene	5 (gv)	NR			U		1.0	NR			NR			NR		
Naphthalene	10 (gv)	NR			U		10	NR				U	0.2	NR		
4-Chloroaniline	5 (s)	NR			U		10	NR			NR			NR		
Hexachlorobutadiene	0.5 (s)	NR			U		2.0	NR			NR			NR		
2-Methylnaphthalene	NS	NR			U		10	NR			NR			NR		
Hexachlorocyclopentadiene	5 (**)	NR			U		10	NR			NR			NR		
2-Chloronaphthalene	10 (s)	NR			U		10	NR			NR			NR		
2-Nitroaniline	5 (s)	NR			U		20	NR			NR			NR		
Dimethylphthalate	50 (gv)	NR			U		10	NR			NR			NR		
Acenaphthylene	NS	NR			U		10	NR				U	0.1	NR		
2,6-Dinitrotoluene	5 (gv)	NR			U		2.0	NR			NR			NR		
3-Nitroaniline	5 (gv)	NR			U		20	NR			NR			NR		
Acenaphthene	20 (gv)	NR			U		10	NR				U	0.1	NR		
Dibenzofuran	NS	NR			U		10	NR			NR			NR		
2,4-Dinitrotoluene	5 (gv)	NR			U		2.0	NR			NR			NR		
Diethylphthalate	50 (gv)	NR			U		10	NR			NR			NR		

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water	TripBlank			FieldBlank			TB			FB-050208			TRIPBLANK		
Lab Sample Number	Quality Standards and	915169			915170			917131			917135			925573		
Sampling Date	Guidance Values and	04/24/08			04/24/08			04/28/08			05/02/08			06/04/08		
Matrix	Groundwater Effluent	WATER			WATER			WATER			WATER			WATER		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS	NR				U	10	NR			NR			NR		
Fluorene	50 (s)	NR				U	10	NR				U	0.2	NR		
4-Nitroaniline	5 (s)	NR				U	20	NR			NR			NR		
N-Nitrosodiphenylamine	50 (gv)	NR				U	10	NR			NR			NR		
4-Bromophenyl-phenylether	NS	NR				U	10	NR			NR			NR		
Hexachlorobenzene	0.04 (s)	NR				U	1.0	NR			NR			NR		
Phenanthrene	50 (gv)	NR				U	10	NR				U	0.081	NR		
Anthracene	50 (gv)	NR				U	10	NR				U	0.1	NR		
Carbazole	NS	NR				U	10	NR			NR			NR		
Di-n-butylphthalate	NS	NR				U	10	NR			NR			NR		
Fluoranthene	50 (s)	NR				U	10	NR				U	0.1	NR		
Pyrene	50 (gv)	NR				U	10	NR				U	0.1	NR		
Butylbenzylphthalate	50	NR				U	10	NR			NR			NR		
3,3'-Dichlorobenzidine	5 (s)	NR				U	20	NR			NR			NR		
Benzo(a)anthracene	0.002 (gv)	NR				U	1.0	NR				U	0.05	NR		
Chrysene	0.002 (gv)	NR				U	10	NR				U	0.2	NR		
bis(2-Ethylhexyl)phthalate	5	NR				U	10	NR			NR			NR		
Di-n-octylphthalate	NC	NR				U	10	NR				U	0.1	NR		
Benzo(b)fluoranthene	0.002 (gv)	NR				U	1.0	NR			NR			NR		
Benzo(k)fluoranthene	0.002 (gv)	NR				U	1.0	NR				U	0.091	NR		
Benzo(a)pyrene	ND (no detection)***	NR				U	1.0	NR				U	0.061	NR		
Indeno(1,2,3-cd)pyrene	0.002 (gv)	NR				U	1.0	NR				U	0.081	NR		
Dibenz(a,h)anthracene	0.002 (gv)	NR				U	1.0	NR				U	0.1	NR		
Benzo(g,h,i)perylene	NS	NR				U	10	NR				U	0.091	NR		
Total Confident Conc. SVOCs					0						0					
Total Estimated Conc. SVOC TICs (s)					0						NA					
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l		NR				U	0.01	NR			NR			NR		
TotalCyanide - ug/l	200	NR				U	0.01	NR			NR			NR		

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water	FB-06-06-08			FB-06-11-08			TB			FB-06-18-08			TB		
Lab Sample Number	Quality Standards and	925574			926575			926576			928332			928333		
Sampling Date	Guidance Values and	06/06/08			06/11/08			06/11/08			06/18/08			06/18/08		
Matrix	Groundwater Effluent	WATER			WATER			WATER			WATER			WATER		
VOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Chloromethane	NS	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Bromomethane	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
VinylChloride	2 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Chloroethane	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
MethyleneChloride	5 (s)	U		3.0	U		3.0	U		3.0	U		3.0	U		3.0
Acetone	50 (gv)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
CarbonDisulfide	NS	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
1,1-Dichloroethene	0.7 (gv)	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0
1,1-Dichloroethane	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
trans-1,2-Dichloroethene	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
cis-1,2-Dichloroethene	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Chloroform	7 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
1,2-Dichloroethane	0.6 (s)	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0
2-Butanone	NS	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
1,1,1-Trichloroethane	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
CarbonTetrachloride	NS	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0
Bromodichloromethane	50 (gv)	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0
1,2-Dichloropropane	1 (s)	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0
cis-1,3-Dichloropropene	0.4 (s*)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Trichloroethene	5 (s)	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0
Dibromochloromethane	50 (gv)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
1,1,2-Trichloroethane	1 (s)	U		3.0	U		3.0	U		3.0	U		3.0	U		3.0
Benzene	1 (s)	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0
trans-1,3-Dichloropropene	0.4 (s*)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Bromoform	50 (gv)	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0
4-Methyl-2-Pentanone	NS	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
2-Hexanone	50 (gv)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Tetrachloroethene	0.7 (gv)	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0
1,1,2,2-Tetrachloroethane	0.2 (gv)	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0
Toluene	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Chlorobenzene	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Ethylbenzene	5 (s)	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0
Styrene	5 (gv)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Xylene(Total)	5 (s)	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0
Total Confident Conc. VOAs (s)		0			0			0			0			0		
Total Estimated Conc. VOA TICs (s)		0			0			0			0			0		

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water	FB-06-06-08			FB-06-11-08			TB			FB-06-18-08			TB		
Lab Sample Number	Quality Standards and	925574			926575			926576			928332			928333		
Sampling Date	Guidance Values and	06/06/08			06/11/08			06/11/08			06/18/08			06/18/08		
Matrix	Groundwater Effluent	WATER			WATER			WATER			WATER			WATER		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Phenol	1 (s)		U	10		U	10	NR				U	10	NR		
2-Chlorophenol	NS		U	10		U	10	NR				U	10	NR		
2-Methylphenol	NS		U	10		U	10	NR				U	10	NR		
4-Methylphenol	NS		U	10		U	10	NR				U	10	NR		
2-Nitrophenol	NS		U	10		U	10	NR				U	10	NR		
2,4-Dimethylphenol	50 (gv)		U	10		U	10	NR				U	10	NR		
2,4-Dichlorophenol	5 (gv)		U	10		U	10	NR				U	10	NR		
4-Chloro-3-methylphenol	NS		U	10		U	10	NR				U	10	NR		
2,4,6-Trichlorophenol	NS		U	10		U	10	NR				U	10	NR		
2,4,5-Trichlorophenol	NS		U	10		U	10	NR				U	10	NR		
2,4-Dinitrophenol	10 (gv)		U	31		U	31	NR				U	30	NR		
4-Nitrophenol	NS		U	31		U	31	NR				U	30	NR		
4,6-Dinitro-2-methylphenol	NS		U	31		U	31	NR				U	30	NR		
Pentachlorophenol	1 (s)		U	31		U	31	NR				U	30	NR		
bis(2-Chloroethyl)ether	1 (s)		U	1.0		U	1.0	NR				U	1.0	NR		
1,3-Dichlorobenzene	3 (s)		U	10		U	10	NR				U	10	NR		
1,4-Dichlorobenzene	3 (s)		U	10		U	10	NR				U	10	NR		
1,2-Dichlorobenzene	3 (s)		U	10		U	10	NR				U	10	NR		
bis(2-chloroisopropyl)ether	NS		U	10		U	10	NR				U	10	NR		
N-Nitroso-di-n-propylamine	NS		U	1.0		U	1.0	NR				U	1.0	NR		
Hexachloroethane	5 (s)		U	1.0		U	1.0	NR				U	1.0	NR		
Nitrobenzene	0.4 (s)		U	1.0		U	1.0	NR				U	1.0	NR		
Isophorone	50 (gv)		U	10		U	10	NR				U	10	NR		
bis(2-Chloroethoxy)methane	5		U	10		U	10	NR				U	10	NR		
1,2,4-Trichlorobenzene	5 (gv)		U	1.0		U	1.0	NR				U	1.0	NR		
Naphthalene	10 (gv)		U	10	0.7	J	10	NR				U	10	NR		
4-Chloroaniline	5 (s)		U	10		U	10	NR				U	10	NR		
Hexachlorobutadiene	0.5 (s)		U	2.0		U	2.0	NR				U	2.0	NR		
2-Methylnaphthalene	NS		U	10		U	10	NR				U	10	NR		
Hexachlorocyclopentadiene	5 (**)		U	10		U	10	NR				U	10	NR		
2-Chloronaphthalene	10 (s)		U	10		U	10	NR				U	10	NR		
2-Nitroaniline	5 (s)		U	20		U	20	NR				U	20	NR		
Dimethylphthalate	50 (gv)		U	10		U	10	NR				U	10	NR		
Acenaphthylene	NS		U	10		U	10	NR				U	10	NR		
2,6-Dinitrotoluene	5 (gv)		U	2.0		U	2.0	NR				U	2.0	NR		
3-Nitroaniline	5 (gv)		U	20		U	20	NR				U	20	NR		
Acenaphthene	20 (gv)		U	10		U	10	NR				U	10	NR		
Dibenzofuran	NS		U	10		U	10	NR				U	10	NR		
2,4-Dinitrotoluene	5 (gv)		U	2.0		U	2.0	NR				U	2.0	NR		
Diethylphthalate	50 (gv)		U	10		U	10	NR				U	10	NR		

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Sample ID	NYSDEC Ambient Water	FB-06-06-08			FB-06-11-08			TB			FB-06-18-08			TB		
Lab Sample Number	Quality Standards and	925574			926575			926576			928332			928333		
Sampling Date	Guidance Values and	06/06/08			06/11/08			06/11/08			06/18/08			06/18/08		
Matrix	Groundwater Effluent	WATER			WATER			WATER			WATER			WATER		
SEMIVOLATILE COMPOUNDS (ug/l)		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
4-Chlorophenyl-phenylether	NS		U	10		U	10	NR				U	10	NR		
Fluorene	50 (s)		U	10		U	10	NR				U	10	NR		
4-Nitroaniline	5 (s)		U	20		U	20	NR				U	20	NR		
N-Nitrosodiphenylamine	50 (gv)		U	10		U	10	NR				U	10	NR		
4-Bromophenyl-phenylether	NS		U	10		U	10	NR				U	10	NR		
Hexachlorobenzene	0.04 (s)		U	1.0		U	1.0	NR				U	1.0	NR		
Phenanthrene	50 (gv)		U	10		U	10	NR				U	10	NR		
Anthracene	50 (gv)		U	10		U	10	NR				U	10	NR		
Carbazole	NS		U	10		U	10	NR				U	10	NR		
Di-n-butylphthalate	NS		U	10		U	10	NR				U	10	NR		
Fluoranthene	50 (s)		U	10		U	10	NR				U	10	NR		
Pyrene	50 (gv)		U	10		U	10	NR				U	10	NR		
Butylbenzylphthalate	50		U	10		U	10	NR				U	10	NR		
3,3'-Dichlorobenzidine	5 (s)		U	20		U	20	NR				U	20	NR		
Benzo(a)anthracene	0.002 (gv)		U	1.0		U	1.0	NR				U	1.0	NR		
Chrysene	0.002 (gv)		U	10		U	10	NR				U	10	NR		
bis(2-Ethylhexyl)phthalate	5		U	10		U	10	NR				U	10	NR		
Di-n-octylphthalate	NC		U	10		U	10	NR				U	10	NR		
Benzo(b)fluoranthene	0.002 (gv)		U	1.0		U	1.0	NR				U	1.0	NR		
Benzo(k)fluoranthene	0.002 (gv)		U	1.0		U	1.0	NR				U	1.0	NR		
Benzo(a)pyrene	ND (no detection)***		U	1.0		U	1.0	NR				U	1.0	NR		
Indeno(1,2,3-cd)pyrene	0.002 (gv)		U	1.0		U	1.0	NR				U	1.0	NR		
Dibenz(a,h)anthracene	0.002 (gv)		U	1.0		U	1.0	NR				U	1.0	NR		
Benzo(g,h,i)perylene	NS		U	10		U	10	NR				U	10	NR		
Total Confident Conc. SVOCs		0			0						0					
Total Estimated Conc. SVOC TICs (s)		0			0						0					
WET CHEMISTRY		Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
Cyanide-Amenable - ug/l			U	0.01		U	0.01	NR				U	0.01	NR		
TotalCyanide - ug/l	200		U	0.01		U	0.01	NR				U	0.01	NR		

Table 5-5 Groundwater Sample Results
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Notes
All results in micrograms per liter

Concentrations in bold and shaded exceed Division of Groundwater TOGS 1.1.1 ambient groundwater quality standards or NYSDEC Class GA Guidance Value.

*	The standard present is for the sum of the isomers of this compound
**	The principal organic standard for groundwater of 5 ug/L applies to this compound
***	The standard for this analyte is no detection
(gv)	NYSDEC Class GA Standards from Division of Water Technical and Operational Guidance Series (1.1.1) June 1998 with amendment to Table 1 dated April 2000
(s)	NYSDEC Ambient Groundwater Quality Standard
BTEX	Benzene, toluene, ethylbenzene and xylenes
MDL	Method Detection Limit
NS	No standard or guidance value
NR	No result; sample not analyzed for this compound
PAH	Polynuclear aromatic hydrocarbons
Q	Data Qualifier
SVOC	Semivolatile organic compounds
TICs	Tenatively Identified Compounds
VOC	Volatile organic compounds

Data Qualifiers

U	Not detected above the method detection limit
J	Estimated concentration below method detection limit

Table 5-6. Rationale for Temporary Well Point Sampling
Supplemental Remedial Investigation - 2008

Address	Boring	Total Depth Drilled with TarGOST	TarGOST Ended At	Maximum TarGOST Signal	Depth of Max TarGOST Signal	TarGOST Notes	GW	Observations in Confirmatory Boring	PID Readings	Groundwater Sampling Depth
116 West Street	**SB-92**	21.99	Refusal Depth	56.88	0.13	TarGOST indicated possible impact at 6.3 feet	2' bgs	no odors or visual evidence of MGP related contamination	No PID readings above background in this boring	5.5 to 6.5 feet
106 West Street	**SB-84**	9.76	10' - clay suspected, did not go through clay; step out planned	84.67	4.789	TarGOST indicated possible impact from 4.5 to 5.0	3' bgs	Fill consisting of brick, ash, coal fragments was observed to the top of clay at 12'; no odors or visual evidence of MGP related contamination	No PID readings above background in this boring	6.0 to 7.0 feet (workplan indicates sample to be collected 3 feet deeper than observed water table)
106 West Street	**SB-120**	25.90	26' - clay suspected	62.49	0.732	TarGOST results indicated no impact	5' bgs	no odors or visual evidence of MGP related contamination	No PID readings above background in this boring	8.0 to 9.0 feet (workplan indicates sample to be collected 3 feet deeper than observed water table)
104 West Street	**SB-80**	41.483	Refusal Depth	88.47	12.479	TarGOST results indicated a possible impact at 12 to 13 feet	5' feet bgs	Sheen observed on groundwater at the 12 to 13' interval; no odors noted; upon removing the hydropunch materials, oil material staining was observed on the hydropunch	2.8 ppm (1.7 background) at 12.0 feet	12 to 13 feet (sheen noted on groundwater sample)
100 West Street	**SB-123**	29.947	Refusal Depth	39.48	2.815	TarGOST results indicated no impact	8' feet bgs	no odors or visual evidence of MGP related contamination	No PID readings above background in this boring	8 to 9 feet (workplan indicates sample to be collected 3 feet deeper than observed - in this location, clay was present at 8.5, thus sample was collected 8 to 9)
96 West Street	**SB-124B**	33.977	Refusal Depth	80.17	7.706	TarGOST results indicated possible impact from 7.5 to 8.5	5' feet bgs	buried roofing shingles observed in the 4 to 5 foot interval; fill to a depth of 9.5 consisting of ash, glass, gravel, shell fragments; no odors or visual evidence of MGP contamination in this boring	No PID readings above background in this boring	8 to 9 feet (did not go the minimum 3 feet below wt, as we wanted to screen at the depth of TarGOST suggested impact)

Table 7-1 Summary of 2008 SRI Soil Detections Above SCOs
Remedial Investigation Report
Former Clove and Maple MGP

Boring Number	Surface Elevation	Site Portion Location	Total Depth Logged (ft bgs)	Sample Depths at which BTEX Compounds Exceeded SCOs (ft bgs)	Sample Depth at which BTEX Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths at which PAH Compounds exceeded SCOs (ft bgs)	Sample Depth at which PAH Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths were Total PAH Greater than 25 ppm (ft bgs)	Sample Depth at which Total PAH Did Not Exceed 25 ppm (ft bgs)	Sample Depth at which Total PAH were greater than 500 ppm (ft bgs)	Sample Depth at which Total PAH did not exceed 500 ppm (ft bgs)	Sample Depth at which Ni exceeded SCOs (ft bgs)	Sample Depth at which Ni did not exceed SCOs (ft bgs)
SB-45A	18.8	Apartments	16.0	9.2-9.7; 15.0-15.5	NA	9.2-9.7	15.0-15.5	9.2-9.7	15.0-15.5	NE	NE	NR	NR
SB-61	18.1	Apartments	13.0	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR
SB-62	12.8	Apartments	16.0	NE	NE	9.0-9.5	NA	9.0-9.5	NA	NE	NE	NR	NR
SB-63	12.4	Apartments	16.0	9.0-9.5	10.5-11.0	9.0-9.5	10.5-11.0	9.0-9.5	10.5-11.0	NE	NE	NR	NR
SB-64	18.1	Apartments	14.0	NE	NE	10.4-10.9	13.5-14.0	10.4-10.9	13.5-14.0	NE	NE	NR	NR
SB-67	13.7	West St.	20.0	13.5-14.0; 16.5-17.0	17.5-18.0	13.5-14.0; 16.5-17.0	17.5-18.0	13.5-14.0; 16.5-17.0	17.5-18.0	13.5-14.0	16.5-17.0	NR	NR
SB-68	17.3	Apartments	20.0	8.5-9.5	NA	NE	NE	NE	NE	NE	NE	NR	NR
SB-71	16.6	West St.	20.0	12.0-12.5; 13.5-14.0	18.0-18.5	12.0-12.5; 13.5-14.0	18.0-18.5	12.0-12.5; 13.5-14.0	18.0-18.5	12.0-12.5; 13.5-14.0	18.0-18.5	NR	NR
SB-75	11.6	Apartments	20.0	16.5-17.0	19.0-19.5	16.5-17.0	19.0-19.5	16.5-17.0	19.0-19.5	NE	NE	NR	NR
SB-78	12.2	Apartments	16.0	12.0-12.5	15.0-15.5	12.0-12.5	15.0-15.5	12.0-12.5	NA	NE	NE	NR	NR
SB-80	16.8	West St.	20.0	NE	NE	12.0-12.5	17.0-17.5	NE	NE	NE	NE	NR	NR
SB-84 / 84A	13.1	West St.	16.0	NE	NE	12.0-12.5	13.5-14.4	12.0-12.5	13.5-14.5	NE	NE	NR	NR
SB-85	13.8	Apartments	18.0	13.0-13.5	17.0	13.0-13.5	17.0	13.0-13.5	16.0-17.0	13.0-13.5	17.0	NR	NR
SB-86	11.8	Apartments	16.5	13.0-13.5	NA	13.0-13.5	NA	NE	NE	13.0-13.5	NA	NR	NR

Table 7-1 Summary of 2008 SRI Soil Detections Above SCOs
Remedial Investigation Report
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Boring Number	Surface Elevation	Site Portion Location	Total Depth Logged (ft bgs)	Sample Depths at which BTEX Compounds Exceeded SCOs (ft bgs)	Sample Depth at which BTEX Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths at which PAH Compounds exceeded SCOs (ft bgs)	Sample Depth at which PAH Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths were Total PAH Greater than 25 ppm (ft bgs)	Sample Depth at which Total PAH Did Not Exceed 25 ppm (ft bgs)	Sample Depth at which Total PAH were greater than 500 ppm (ft bgs)	Sample Depth at which Total PAH did not exceed 500 ppm (ft bgs)	Sample Depth at which Ni exceeded SCOs (ft bgs)	Sample Depth at which Ni did not exceed SCOs (ft bgs)
SB-88	11.3	West St.	24.0	NE	NE	5.5-6.0	NA	5.5-6.0	NA	NE	NE	NR	NR
SB-92	11.1	West St.	12.0	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR
SB-94	11.3	Apartments	12.0	9.0-9.5	NA	9.0-9.5	NA	9.0-10.0	NA	9.0-9.5	NA	NR	NR
SB-100	12.8	Apartments	16.0	8.25-8.75	NA	8.25-8.75	NA	NE	NE	8.25-8.75	NA	NR	NR
SB-109	35.7	Onsite	32.5	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-107	12.4	Apartments	16.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-108	34.8	Onsite	34.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-110	31.3	Onsite	30.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-111B	28.9	Onsite	34.0	8.5-9.0	22.2-22.7	8.5-9.0	22.2-22.7	8.5-9.0	22.2-22.7	8.5-9.0	22.2-22.7	NE	NE
SB-112A/B	28.1	Onsite	34.0	32.0-33.0	NA	NE	NE	NE	NE	NE	NE	NE	NE
SB-113	28.7	Onsite	32.0	13.0-13.5	22.0-22.5	NE	NE	NE	NE	NE	NE	NE	NE
SB-114	28.2	Onsite	31.0	6.5-7.0; 16.5-17.0	19.0-19.5	6.5-7.0; 16.5-17.0	19.0-19.5	6.5-7.0; 16.5-17.5	19.0-19.5	6.5-7.0; 16.5-17.0	19.0-19.5	NE	NE
SB-115	39.5	Onsite	28.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-116	30.1	Onsite	32.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Table 7-1 Summary of 2008 SRI Soil Detections Above SCOs
Remedial Investigation Report
Former Clove and Maple MGP

Boring Number	Surface Elevation	Site Portion Location	Total Depth Logged (ft bgs)	Sample Depths at which BTEX Compounds Exceeded SCOs (ft bgs)	Sample Depth at which BTEX Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths at which PAH Compounds exceeded SCOs (ft bgs)	Sample Depth at which PAH Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths were Total PAH Greater than 25 ppm (ft bgs)	Sample Depth at which Total PAH Did Not Exceed 25 ppm (ft bgs)	Sample Depth at which Total PAH were greater than 500 ppm (ft bgs)	Sample Depth at which Total PAH did not exceed 500 ppm (ft bgs)	Sample Depth at which Ni exceeded SCOs (ft bgs)	Sample Depth at which Ni did not exceed SCOs (ft bgs)
SB-117	28.9	Onsite	30.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-118	28.9	Onsite	32.0	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
SB-119	27.3	Onsite	38.0	12.0-13.0; 21.2-21.7	23.0-24.0	12.0-13.0; 21.2-21.7	23.0-24.0	12.0-13.0, 21.2-21.7	23.0-24.0	12.0-13.0	18.0-19.0	18.0-19.0	21.2-21.7
SB-120	15.5	West St.	12.0	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR
SB-121	11.8	West St.	20.0	13.0-13.5	17.0-17.5	13.0-13.5	17.0-17.5	13.0-13.5	17.0-17.5.	NE	NE	NR	NR
SB-123	19.0	West St.	12.0	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR
SB-124	16.5	West St.	16.0	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR
SB-128	30.8	Onsite	30.0	NE	NE	10.5-11.0	14.0-14.5	10.5-11.0	14.0-14.5	10.5-11.0	14.0-14.5	NE	NE
SB-129		Onsite	28.0	10.8-11.3; 13.25-13.75	15.0-15.5	10.8-11.3; 13.25-13.75	15.0-15.5	10.8-11.3; 13.25-13.75	15.0-15.5	NE	NE	10.8-11.3; 13.25-13.75	15.0-15.5
SB-130	15.9	West St.	20.0	12.0-13.0	14.0-14.5	12.0-13.0; 14.0-14.5	16.5-17.0	12.0-13.0; 14.0-14.5	16.5-17.0	12.0-13.0	14.0-14.5	NR	NR
SB-131	17.4	West St.	16.0	NE	NE	NE	NE	NE	NE	NE	NE	NR	NR
SB-132	12.7	Alley	16.0	NE	NE	9.0-9.5; 11.5-12.0	NA	9.0-9.5	11.5-12.0	NE	NE	NR	NR
SB-133	12.9	Alley	16.0	8.4-8.9	10.5-11.0	8.4-8.9	10.5-11.0	8.4-8.9	10.5-11.0	NE	NE	NR	NR
SB-134	16.0	Alley	NE	NE	NE	NE	NE	8.5-9.0; 12.0-12.5	NA	NE	NE	NR	NR

Table 7-1 Summary of 2008 SRI Soil Detections Above SCOs
Remedial Investigation Report
Former Clove and Maple MGP

Boring Number	Surface Elevation	Site Portion Location	Total Depth Logged (ft bgs)	Sample Depths at which BTEX Compounds Exceeded SCOs (ft bgs)	Sample Depth at which BTEX Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths at which PAH Compounds exceeded SCOs (ft bgs)	Sample Depth at which PAH Compounds Did Not Exceed SCOs (ft bgs)	Sample Depths were Total PAH Greater than 25 ppm (ft bgs)	Sample Depth at which Total PAH Did Not Exceed 25 ppm (ft bgs)	Sample Depth at which Total PAH were greater than 500 ppm (ft bgs)	Sample Depth at which Total PAH did not exceed 500 ppm (ft bgs)	Sample Depth at which Ni exceeded SCOs (ft bgs)	Sample Depth at which Ni did not exceed SCOs (ft bgs)
SB-138	13.4	Alley	16.0	NE	NE	9.0-9.5	14.0-14.5	9.0-9.5	14.0-14.5	NE	NE	NR	NR
SB-139	18.0	West St.	20.0	13.0-13.5	16.0-16.5	13.0-13.5	16.0-16.5	13.0-13.5	16.0-16.5	13.0-13.5	16.0-16.5	NR	NR
SB-140	15.6	West St.	20.0	9.5-10.0	12.0-12.5	9.5-10.0	12.0-12.5	9.5-10.0	12.0-12.5	9.5-10.0	12.0-12.5	NR	NR
SB-141	15.9	West St.	16.0	12.5-13.0	14.8-15.3	12.5-13.0	14.8-15.3	12.5-13.0	14.8-15.3	12.5-13.0	14.8-15.3	NR	NR
SB-142	12.4	West St.	16.0	NE	NE	8.2-8.7	12.5-13.0	8.2-8.7	12.5-13.0	NE	NE	NR	NR

Table 7-1 Summary of 2008 SRI Soil Detections Above SCOs
Remedial Investigation Report
Former Clove and Maple MGP

Notes:

Apartments:	Sample was collected offsite, in the vicinity of the Apartment Buildings
BTEX:	Total of benzene, toluene, ethylbenzene, and xylene
ft bgs:	Feet below ground surface
NA:	There was no vertical sample collected which satisfies the condition; in most cases, borings were terminated as not to penetrate confining layers
NE:	No exceedance
Ni:	Nickel
NR:	No result, sample was not analyzed for the listed compound
Onsite:	Sample was collected on the MGP Property
PAH:	Polycyclic Aromatic Hydrocarbons
ppm:	Parts per million
SCOs:	NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) and (b)
West St:	Sample was collected offsite, in the vicinity of the houses on West Street

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SB / MW-1	42.3	Onsite	NE	NE	NE	30.0	
SB / MW-2	28.1	Onsite	13.1	18.0	>4.9	18.0	Hydrocarbon product from 13.1' to 13.4'; Hydrocarbon product from 15' to 18'
SB-02D	28.5	Onsite	14.0	22.5	8.5	28.0	Residual tar in lenses from 14' to 17.1'; Minor sheen and slight odor from 19.1' to 22.5'
SB / MW-3	28.5	Onsite	NE	NE	NE	16.0	black hydrocarbon staining from 10.0' to 10.5'; strong hydrocarbon odor and staining from 12' to 13'
MW04	18.8	Onsite	14.7	22.0	7.3	24.0	Light MGP odor through 5.0' to 14.7'; Light sheen and trace coal tar product throughout 14.7' to 22.0'
MW05	18.3	Onsite	16.0	21.0	5.0	24.0	Light sheen on clay surfaces proximal to sand lenses from 4.5' to 8.0'; trace to little coal tar product adhering to clay clasts, spots of sheen 16.0' to 21.0'
MW06	17.2	Onsite	NE	NE	NE	20.0	
MW07	17.9	Onsite	Unknown	Unknown	Unknown	44.0	Boring not logged from 0' to 20'
SB / MW08	26.9	Onsite	NE	NE	NE	28.5	Moderate petroleum odor from 10.0' to 12.0'
MW09	30.3	Onsite	NE	NE	NE	22.0	Faint MGP odors 7' to 12.3' and 16' to 17'; faint petroleum odor at 20' to 21'
MW10	39.9	Onsite	NE	NE	NE	38.0	

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
MW11	28.4	Onsite	NE	NE	NE	24.0	
SB-14	28.7	Onsite	6.0	12.0	6.0	24.0	Tar streaks coating aperatures of fractured areas (6-8); "Tar in fine sand lenses" (8-9.7); "trace tar blebs 9.7-10; Tar coating in sand lenses" (10-12); tar-like odors 12.0 to 20.0'
SB-16	29.3	Onsite	11.0	21.3	10.3	40.0	Fine sand lense with black-stained sand 11' to 12'; Trace tar/NAPL on tip of spoon 13.9' to 14'; black stained pieces 14' to 14.5'; Tar streaks, blebs, and globules present throughout (18-20); "heavy sheen and few tar blebs to 21.3'; Heavy sheen throughout (22-24); "Moderate sheen" (24-25); Trace sheens (28-30); "Light sheen" (30-31)
SB-17	31.0	Onsite	10.5	13.0	2.5	30.0	Slight sheen (4' to 6'); NAPL microblebs, brown (trace, scattered) (10.5-12); "As above with NAPL streaks throughout at residual level" (12-13)
SB-17A	32.3	Onsite	NE	NE	NE	32.0	
SB / MW-18	28.2	Onsite	10.5	11.5	1.0	32.0	Slight MGP type Odors from 9.3' to 9.5; Trace sheens; seam with tar-stained fine to coarse sand and trace tar blebs from 11.4' to 11.5'; 12.0' to 14.0' MGP-Type Odor
MW-20S	18.4	Apartments	11.9	12.0	0.1	16.0	Tar Coated grains 11.9' to 12.0'; trace tar-like odor from 12.0' to 12.1'
MW-20D	18.4	Apartments	8.0	10.0	2.0	26.0	Moderate MGP-like and fuel-like odors, trace light brown NAPL blebs 8.0' to 10.0'; slight MGP-like and fuel-like odors, trace sheens 14.0' to 14.5'
SB / MW-21S	16.3	Apartments	NE	NE	NE	12.0	Very slight MGP odor from 8.2' to 10.0'
SB-22	27.5	Head Start	NE	NE	NE	22.0	
SB-23	28.7	Head Start	NE	NE	NE	26.0	

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Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
MW-24	27.5	Head Start	NE	NE	NE	20.0	
SB / MW-28	13.5	Apartments	9.3	12.0	2.7	16.0	Trace naphthalene odor 7.6' to 8.0'; Thin layers of fine sand coated with NAPL (yellow staining) from 9.3' to 12.3'
MW-28D	13.5	Apartments	8.0	10.0	2.0	31.5	Gray and brown clay with peat - Trace brown NAPL streaks in clay seams from 8' to 10', very slight tar-like odor
SB/MW-29S	12.8	Apartments	9.8	10.7	0.9	16.0	Trace tar-like odor 5.0' to 9.8'; Trace tar (lightly coated/blebs) and a heavy sheen 9.8' to 10.7'
MW-29D	12.8	Apartments	NE	NE	NE	30.0	
SB-30S	13.0	Apartments	NE	NE	NE	30.0	Trace petroleum odor 2.7' to 4.0'; trace sheen from 4.6' to 13.7'; moderate tar like odor 8.0' to 15.2'
MW-31S	12.6	Apartments	No Log	Not Logged	Not Logged	Not Logged	Not Logged
MW-31D	12.5	Apartments	8.0	8.8	0.8	35.0	Trace layers coated with NAPL (yellowish staining possibly LNAPL) 8.0' to 8.8'
MW-32S	13.6	Apartments	No Log	Not Logged	Not Logged	Not Logged	Not Logged
MW-32I	13.4	Apartments	8.0	20.0	12.0	36.0	8.0' to 10.5' NAPL coated grains; 10.5' to 11.0' heavily coated grains; 11.0' to 12.0' veins coated with NAPL; 12.0' to 20.0' heavy sheen, trace blebs, strong petroleum odor
SB-45A	18.8	Apartments	9.2	9.3	0.1	16.0	Brown, black oil material, thin layer at 9.2', and from 9.6' to 9.7'

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SB-45	18.8	Apartments	10.5	10.7	0.2	16.0	tar saturated...trace veins of tar throughout (runny, low viscosity) from 10.5' to 10.7'
SB-46	17.9	Apartments	9.7	10.5	0.8	16.0	tar coated 9.7' to 10.5'
SB-48	16.0	Apartments	NE	NE	NE	16.0	trace petroleum odor, trace sheen from 8' to 12'
SB-49	14.5	Apartments	7.4	8.0	0.6	12.0	thin veins of NAPL (stick tar-lik and yellowish staining) 7.4' to 8.0' with petroleum odor; petroleum odor and black staining 8.7' to 9.1'
MW-55	14.2	Apartments	NE	NE	NE	16.0	Trace sheen from 9.0' to 9.1
SB-56	14.2	Apartments	12.0	12.4	0.4	16.0	Tar blebs and sheen 11.0' to 12.0'; Tar in sandy layers, 12.0' to 12.4'; trace tar-like odor from 12.4' to 13.2'
SB-57	12.5	Apartments	NE	NE	NE	12.0	
SB-58	12.6	Apartments	10.5	11.3	0.8	20.0	Tar in seams from 10.5' to 11.3'; patchy sheen throughout, moderate tar like odor
SB-59	13.1	Apartments	10.4	11.6	1.2	20.0	Tar veins thoughout, heavy black staining and heavy tar coating from 10.4' to 11.6'; NAPL coated grains (yellow staining) from 15.1' to 16.0'
MW-60	13.6	Apartments	8.0	10.0	2.0	18.0	8.0' to 8.7' Trace NAPL in veins, tar / MGP-like odor; 8.7' to 9.0' blebs of NAPL (likely tar), tar / MGP-like odor; 9.0' to 10.0' trace tar like odor
SB-61	18.1	Apartments	NE	NE	NE	13.0	Black staining from 2.0' to 2.5'; faint NAPL odor 9.0' to 10.4'

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Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SB-62	12.8	Apartments	NE	NE	NE	16.0	Staining at 5.3'; Sheen and naphthalene odors from 9.0' to 9.5'
SB-63	12.4	Apartments	NE	NE	NE	16.0	Naphthalene odors, black sheen from 8.5' to 8.9'
SB-64	18.1	Apartments	10.0	10.9	0.9	14.0	Faint naphthalene odors 8.9' to 9.2'; sheen and blebs of oil material from 10.0' to 10.8'; brown oil material from 10.8' to 10.9'
SB-67	13.7	West St.	9.8	16.1	6.3	20.0	Oil material from 9.8' to 10.5'; 13' to 13.5'; 13.5' to 13.7'; 13.7' to 14.1'; 16.0' to 16.1'
SB-68	17.3	Apartments	8.8	8.9	0.1	20.0	Thin layer of brown oil material from 8.8' to 8.9'
SB-71	16.6	West St.	12.2	16.7	4.5	20.0	Multiple Thin Layers of oil material between 12.2' and 14.5'; blebs of oil material from 16.0' to 16.7'
SB-75	11.6	Apartments	8.0	17.5	9.5	20.0	Gasoline like sheen, staining from 1.5' to 3.0'; oil material from 8.0' to 8.8'; oil material 16.5' to 17.5'
SB-78	12.2	Apartments	8.0	12.7	4.7	16.0	oil material at 5.5'; pinpoints of brown oil material from 8' to 9'; oil material staining from 12' to 12.7'
SB-80	16.8	West St.	NE	NE	NE	20.0	sheen from 12.0' to 13.0'
SB-84 / 84A	13.1	West St.	12.0	12.3	0.3	16.0	Trace blebs oil from 12.0' to 12.3'
SB-85	13.8	Apartments	13.0	13.7	0.7	18.0	brown oil / tar material from 13.0' to 13.7'
SB-86	11.8	Apartments	8.0	16.5	>8.5	16.5	Heavy tar material from 8' to 8.6'; 8.6' to 9.7' oil; 12.0 to 13.5' oil material; 16.0' to 16.5' staining

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SB-88	11.3	West St.	4.8	5.8	1.0	24.0	Oil material from 4.8 to 5.9'
SB-92	11.1	West St.	NE	NE	NE	12.0	None
SB-94	11.3	Apartments	4.5	12.0	>7.5	12.0	Heavy black tar from 4.5' to end of the boring at 12'
SB-100	12.8	Apartments	8.2	9.3	1.1	16.0	8.2' to 8.7' Black brown NAPL, naphthalene odors; 8.7' to 9.0' sand coated with tar and oil; 9.0' to 9.3' thin layer of oil / tar
SB-109	35.7	Onsite	NE	NE	NE	32.5	None
SB-107	12.4	Apartments	NE	NE	NE	16.0	None
SB-108	34.8	Onsite	NE	NE	NE	34.0	Possible staining from 2 to 2.3
SB-110	31.3	Onsite	NE	NE	NE	30.0	None
SB-111B	28.9	Onsite	8.3	10.2	1.9	34.0	Thin lenses of oil material at 8.3', 8.8' to 8.9'; 10' to 10.2'; sheen 12.0' to 12.6'
SB-112A/B	28.1	Onsite	NE	NE	NE	34.0	Oil sheen 18.0' to 19.0'; oil Sheen, Staining from 21.5 to 21.75'
SB-113	28.7	Onsite	6.5	16.0	9.5	32.0	fine blebs of tar material from 6.5' to 8.0'; tar material from 12.5' to 14.0; 15.5' to 16.0'

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SB-114	28.2	Onsite	6.6	17.2	10.6	31.0	Oil material from 6.6' to 6.8'; tar material from 7.2' to 7.3'; oil material bleb at 8.5', 9.0'; lens of oil material at 10.1', 10.9', 11.0', 11.1', 11.4', 11.5', 11.6', 11.8'; tar and oil material 16', 16.5', 17.2'
SB-115	39.5	Onsite	NE	NE	NE	28.0	None
SB-116	30.1	Onsite	NE	NE	NE	32.0	None
SB-117	28.9	Onsite	NE	NE	NE	30.0	None
SB-118	28.9	Onsite	NE	NE	NE	32.0	None
SB-119	27.3	Onsite	10.5	22.0	11.5	38.0	staining from 10.5' to 10.7'; oil material in fine sand lenses at 12.0', 13.5', 13.8'; oil material from 21.2 to 22.0'
SB-120	15.5	West St.	NE	NE	NE	12.0	None
SB-121	11.8	West St.	12.3	13.5	1.2	20.0	oil material blebs from 12.3' to 13.5'
SB-123	19.0	West St.	NE	NE	NE	12.0	None
SB-124	16.5	West St.	NE	NE	NE	16.0	None
SB-128	30.8	Onsite	10.5	12.2	1.7	30.0	staining, purifier odors fro 10.5' to 11.4'

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

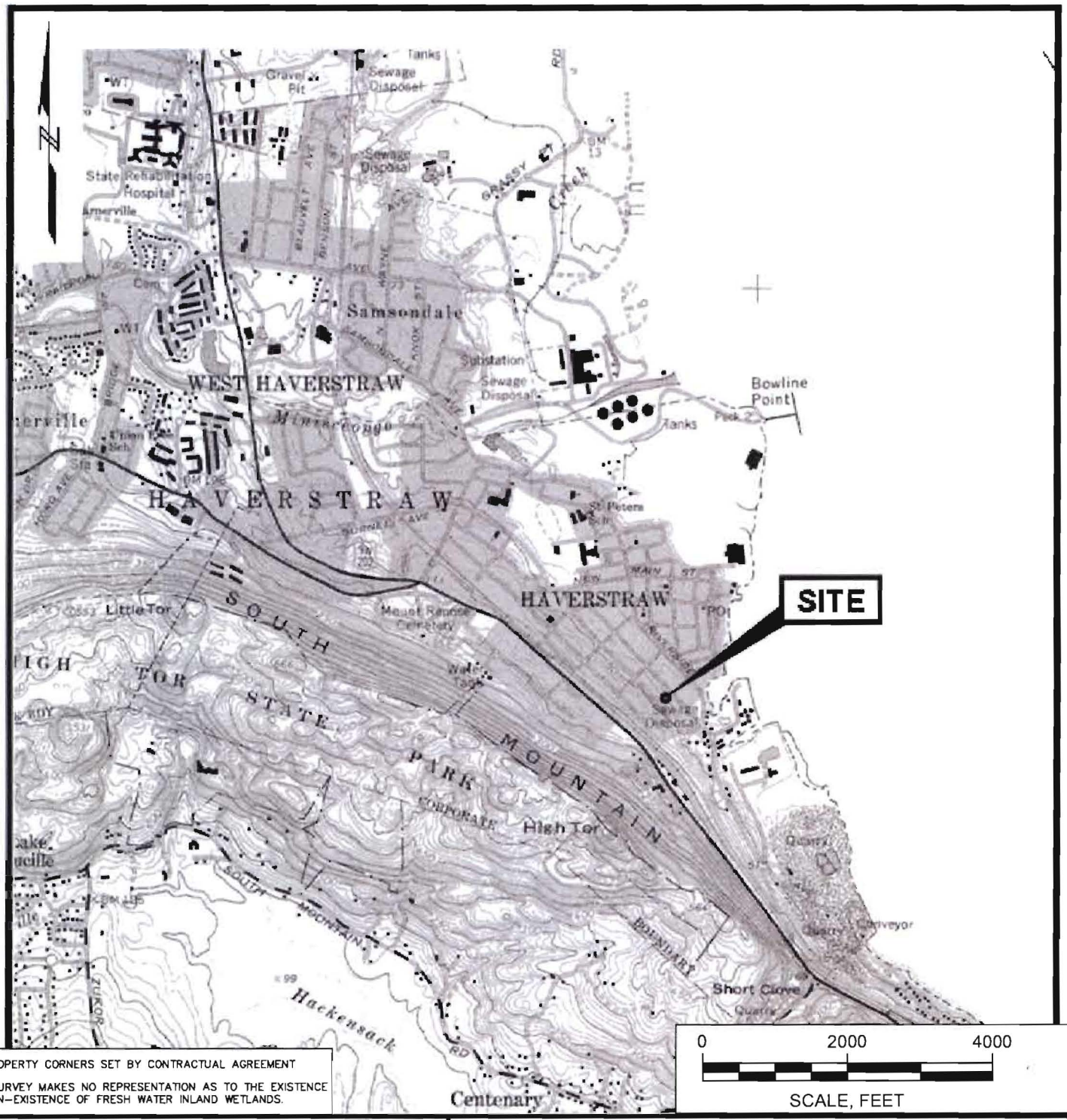
Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SB-129		Onsite	13.5	13.6	0.1	28.0	single bleb of oil material at 13.5'
SB-130	15.9	West St.	10.8	13.5	2.7	20.0	Trace sheen and blebs of oil material from 10.8' to 11.0', 12.0' to 12.2', 13.0' to 13.1', 13.4' to 13.5'
SB-131	17.4	West St.	NE	NE	NE	16.0	None
SB-132	12.7	Alley	8.9	9.5	0.6	16.0	sheen 5.5' to 5.7'; staining from 8.9' to 9.4'; Brown, black oil material blebs, from 9.4' to 9.5'
SB-133	12.9	Alley	8.4	8.8	0.4	16.0	Black brown oil material from 8.4' to 8.8' within the organic clay and peat
SB-134	16.0	Alley	NE	NE	NE	NE	None
SB-138	13.4	Alley	9.1	9.5	0.4	16.0	oil material from 9.1' to 9.5'
SB-139	18.0	West St.	12.3	13.3	1.0	20.0	Blebs at 12.3', 12.6', 13.0', 13.3' within the organic clay / peat
SB-140	15.6	West St.	9.5	10.3	0.8	20.0	Trace blebs of oil from 9.5' to 10.3' in the organic clay peat layer
SB-141	15.9	West St.	9.8	13.1	3.3	16.0	Trace blebs of oil material in the organic clay peat 9.8' to 10.2'; 12.0' to 13.1'
SB-142	12.4	West St.	8.2	8.7	0.5	16.0	Trace oil material blebs from 8.2' to 8.6'

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SG-1	29.0	Onsite	8.0	9.6	1.6	12.0	Light brown, dark brown staining in mottled pattern
SG-2	-	Onsite	6.0	13.0	7.0	15.0	Multiple Thin Layers between 6' and 13'
SG-3	-	Onsite	4.0	7.0	3.0	12.0	Gravel saturated with tar-like material, strong odor, low viscosity
SG-4	-	Onsite	NE	NE	NE	12.0	Hydrocarbon Odors from 8' to 10'
SG-5	-	Onsite	NE	NE	NE	16.0	Hydrocarbon Odors from 0' and 4'
SG6	-	Onsite	10.0	12.0	>2	12.0	Tar material shallow (0' to 0.4'); Visible hydrocarbon staining from 10' and 12'
SG7	-	Onsite	9.0	12.0	>3	12.0	Trace tar-like material in nodules
SG8	-	Onsite	1.0	2.0	1.0	12.0	Two thin layers of staining (1' to 2' Trace dark brown staining in nodules); (9' to 10' Trace hydrocarbon staining)
SG-09	17.9	Onsite	5.5	8.0	2.5	12.0	Light sheen and MGP odor
SG-10	18.0	Onsite	NE	NE	NE	12.0	MGP Odors 10' and 12'
SG-11	17.0	Onsite	NE	NE	NE	16.0	

Table 7-2. Summary of NAPL Delineation
Supplemental Remedial Investigation - 2008
Former Clove and Maple MGP
Haverstraw, NY

Boring Number	Surface Elevation (ft. msl)	Site Portion Location	Depth to top of OM/TM Zone (ft bgs)	Bottom of OM/TM Zone (ft bgs)	Thickness of OM/TM Zone (ft) (a)	Total Depth Logged (ft bgs)	Product Description
SG-12	17.2	Onsite	6.0	16.0	>10	16.0	Light sheen and smear of coal tar product at 6'; Light sheen and MGP odor present on sand 15' to 16'
SG-13	18.4	Onsite	NE	NE	NE	10.0	MGP Odors from 5.6' to 10'
SG-14	19.6	Onsite	6.0	8.0	2.0	12.0	Strong MGP odor and trace coal tar product found in sand
SG15	26.3	Onsite	NE	NE	NE	20.0	
SG-16	28.9	Head Start	NE	NE	NE	24.0	
TP-01	29.0	Onsite	1.5	3.0	1.5	8.0	Black stain ash
TP-02	30.0	Onsite	See Description			13.0	(at 5') "4" clay pipe: tar, water silt within"
TP-03	30.0	Onsite	See Description			5.0	(at 5') "4" clay pipe: tar, water silt within"
TP-04	32.0	Onsite	1.0	1.5	0.5	7.0	Black stain
TP-05	40.0	Onsite	NE	NE	NE	6.0	



NO PROPERTY CORNERS SET BY CONTRACTUAL AGREEMENT

THIS SURVEY MAKES NO REPRESENTATION AS TO THE EXISTENCE OR NON-EXISTENCE OF FRESH WATER INLAND WETLANDS.

FIGURE 1
REMEDIAL INVESTIGATION
HAVERSTRAW FORMER MGP SITES
HAVERSTRAW, ROCKLAND COUNTY, NEW YORK

SITE LOCATION MAP

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DATE	REVISIONS	ORDER NO.

SCALE	DATE	DRAWN BY	DES. BY	FILE NO.	CHECKED BY
1" = 2000'	10/02/2008	MVS	ERG	070748502	ERG

NOTE:

PROPERTY INFORMATION SHOWN AND METES AND BOUNDS DERIVED FROM ATZL, SCATASSA & ZIGLER P.C. SURVEYORS-PLANNERS, 234 NORTH MAIN STREET, NEW CITY NEW YORK 10956 & 156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3167, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.82-2-17.1, 17.2, 17.3, AND 17.4

NOTE:

AERIAL PHOTOS WERE OBTAINED FROM GIS ORTHO-IMAGERY PROVIDED BY THE FOLLOWING WEBSITE:
http://www.nysgis.state.ny.us/gateway/mg/

NOTE:

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LEGEND

VC-03	VIBRACORE SAMPLE LOCATION
SG-1	PRE-2008 SOIL GAS SAMPLE LOCATION
MW-20	PRE-2008 MONITORING WELL LOCATION
SB-17	PRE-2008 SOIL BORING LOCATION
SW-1	1998-2001 CLOVE & MAPLE AVE IN HAND AUGER BORING LOCATION
SB-03/MW-03	2008 SRI MONITORING WELL LOCATION
TP-2	1998-2001 CLOVE & MAPLE AVE IN TEST PIT LOCATION
SW013102-6	1998-2001 CLOVE & MAPLE AVE IN STORM SEWER WATER SAMPLE LOCATION
SD013102-2	1998-2001 CLOVE & MAPLE AVE IN STORM SEWER SEDIMENT SAMPLE LOCATION
SB-106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED - "SV" REPRESENTS CO-LOCATED SOIL VAPOR POINT; "TMP" REPRESENTS CO-LOCATED TEMPORARY WELL POINT
SV-01	2008 SOIL GAS SAMPLE ONLY
	STORM SEWER
	EXISTING STRUCTURE
	PROPERTY BOUNDARY
	APPROXIMATE LOT LINE
	HISTORICAL STRUCTURE
	RIVER SHORELINE
	WOOD FENCE
	CHAIN-LINK FENCE
GAS	GAS MAINS
OH/ELEC	OVERHEAD WIRE
UP	UTILITY POLE
WG	WATER GATE VALVE
FH	FIRE HYDRANT
SMH	SEWER MANHOLE
CB	CATCH BASIN
	INTERIM REMEDIAL ACTIONS COMPLETED 2003-2005

GEODETIC REFERENCES:
- NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.
- DATUM: NAVD 1927.

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FIGURE 2

SITE LOCATION MAP
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	070748502
SCALE	1" = 60'
DATE	1/12/2009
CHECKED BY	ERG
SHEET NO.	1 of 1

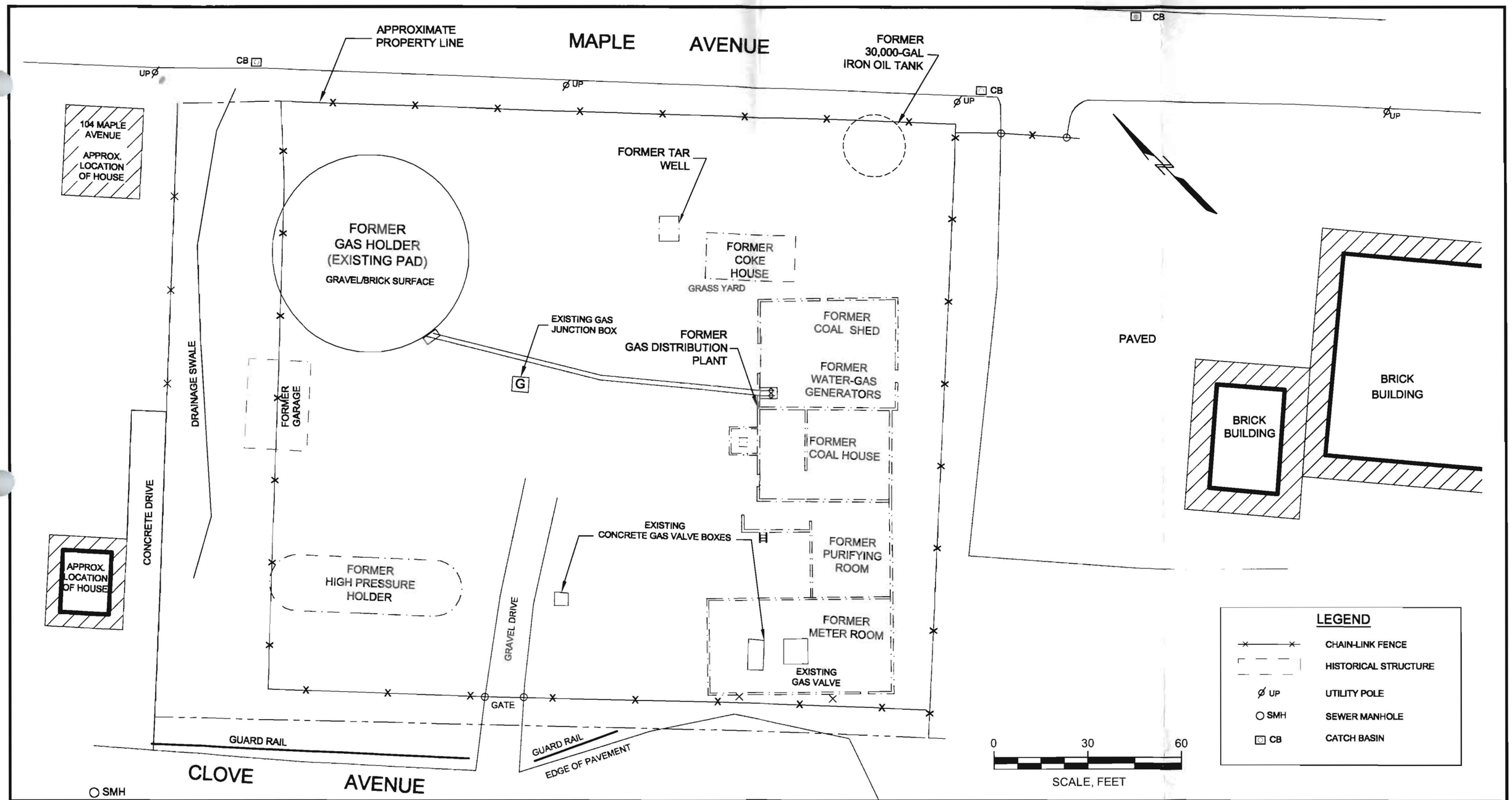

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FIGURE 3

HISTORICAL STRUCTURES

REMEDIAL INVESTIGATION HAVERSTRAW FORMER MGP SITE

HAVERSTRAW, ROCKLAND COUNTY, NEW YORK

PROJECT NO	070748502
SCALE	1" = 30'
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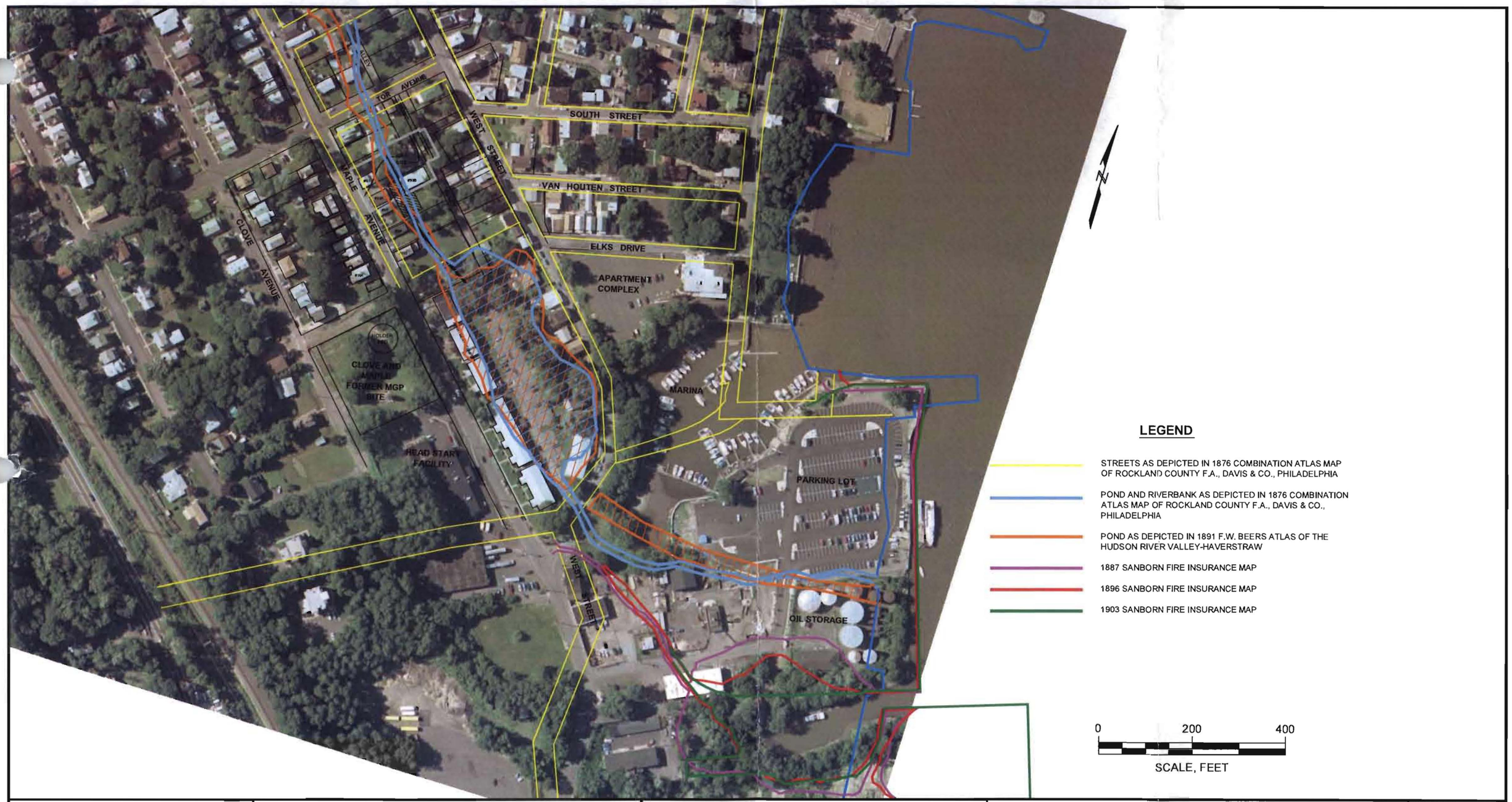

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FIGURE 4

HISTORICAL COMPOSITE STREETS AND WATERWAYS

REMEDIAL INVESTIGATION HAVERSTRAW FORMER MGP SITE

HAVERSTRAW, ROCKLAND COUNTY, NEW YORK

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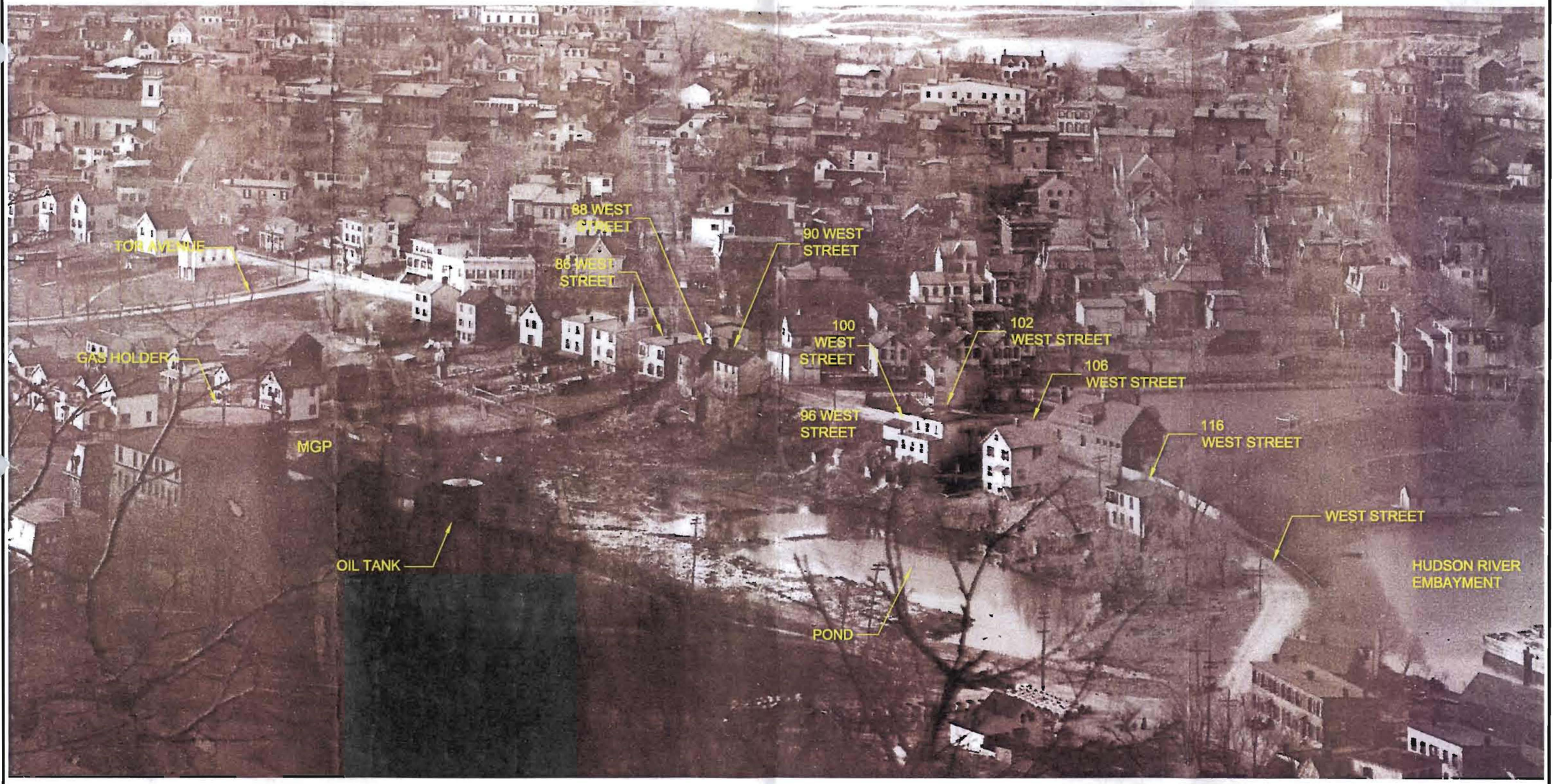

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FIGURE 5

FORMER CLOVE AND MAPLE MGP AND SURROUNDING AREA, CIRCA 1890

REMEDIAL INVESTIGATION HAVERSTRAW FORMER MGP SITE

HAVERSTRAW, ROCKLAND COUNTY, NEW YORK

PROJECT NO	070748502
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LEGEND

———	PROPERTY BOUNDARY
8	ASSESSOR'S LOT NUMBER
#104	STREET ADDRESS
(green dashed)	INTERIM REMEDIAL MEASURES COMPLETED BETWEEN 2003 AND 2005 (93B MAPLE AVENUE FORMER MGP SITE)
(black dashed)	2008 REMEDIAL INVESTIGATION AREAS

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PLATE 1
SITE LOCATION PLAN
CLOVE AND MAPLE
FORMER MGP SITE–REMEDIAL INVESTIGATION
HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	DATE
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156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY
PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF DRY WELLS, SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND

VC–03	VIBRACORE SAMPLE LOCATION		PROPERTY BOUNDARY, SURVEYED
SG–1	PRE–2008 SOIL GAS SAMPLE LOCATION		PROPERTY BOUNDARY APPROXIMATE
MW–20	PRE–2008 MONITORING WELL LOCATION		HISTORICAL STRUCTURE
SB–17	PRE–2008 SOIL BORING LOCATION		RIVER SHORELINE
HA–1	1998–2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION		WOOD FENCE
SB–83/MW–83	2008 SRI MONITORING WELL LOCATION		CHAIN–LINK FENCE
TP–2	1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION	G	GAS MAINS
SW013102–6	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION	OH/ELEC	OVERHEAD WIRE
SD013102–2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION	UP	UTILITY POLE
SB–106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT	WG	WATER GATE VALVE
SV–01	2008 SOIL GAS SAMPLE ONLY	HYD	FIRE HYDRANT
	STORM SEWER	SMH	SEWER MANHOLE
	EXISTING STRUCTURE	CB	CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

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PLATE 2–SITE LAYOUT
SUPPLEMENTAL REMEDIAL INVESTIGATION CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

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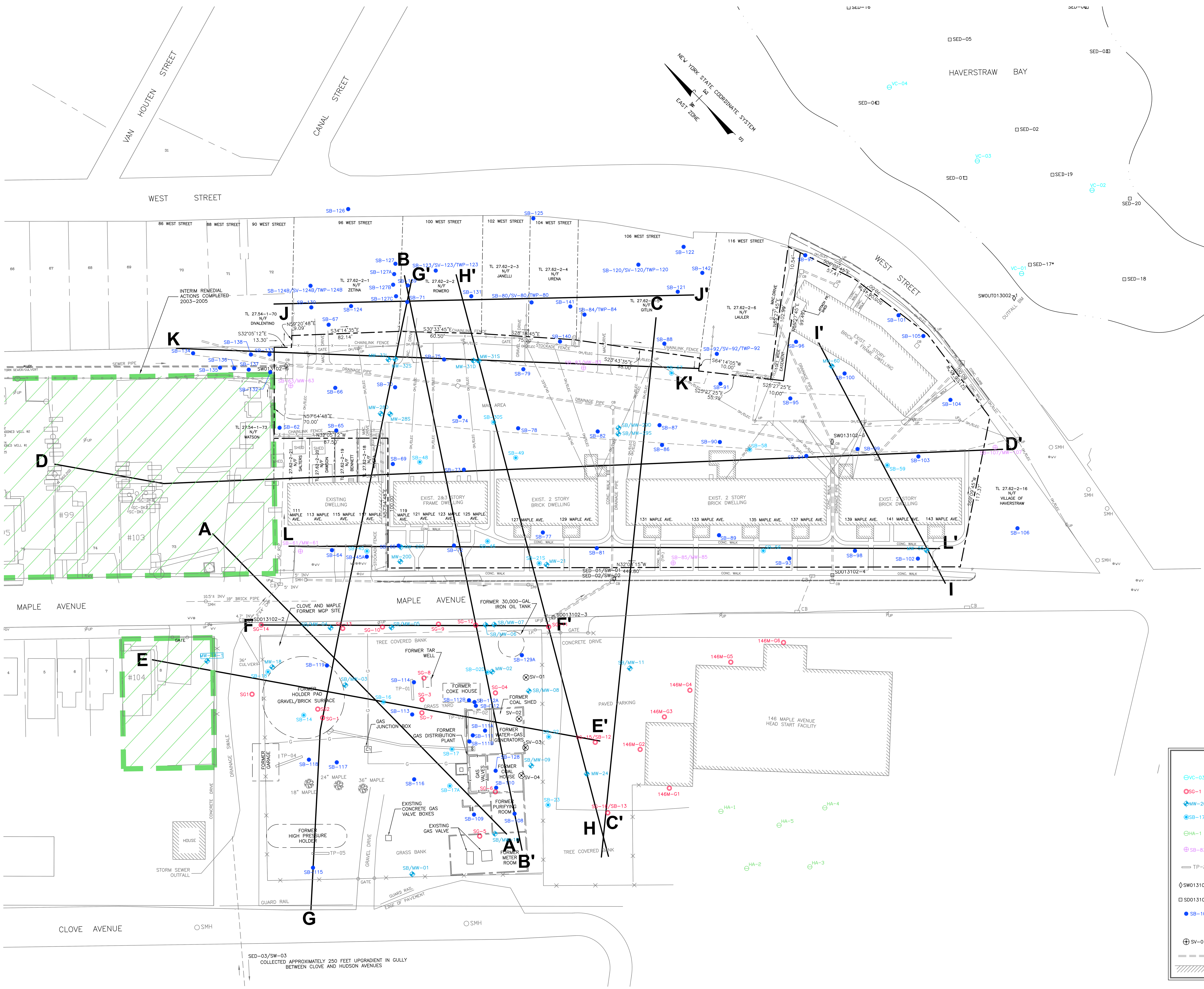

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DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

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LEGEND

Symbol	Description	Symbol	Description
VC–03	VIBRACORE SAMPLE LOCATION		PROPERTY BOUNDARY, SURVEYED
SG–1	PRE–2008 SOIL GAS SAMPLE LOCATION		PROPERTY BOUNDARY APPROXIMATE
MW–20	PRE–2008 MONITORING WELL LOCATION		HISTORICAL STRUCTURE
SB–17	PRE–2008 SOIL BORING LOCATION		RIVER SHORELINE
HA–1	1998–2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION		WOOD FENCE
SB–83/MW–83	2008 SRI MONITORING WELL LOCATION		CHAIN–LINK FENCE
TP–2	1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION	G G	GAS MAINS
SW013102–6	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION	OH/ELEC	OVERHEAD WIRE
SD013102–2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION	UP	UTILITY POLE
SB–106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT	WG	WATER GATE VALVE
SV–01	2008 SOIL GAS SAMPLE ONLY	HYD	FIRE HYDRANT
	STORM SEWER	SMH	SEWER MANHOLE
	EXISTING STRUCTURE	CB	CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)
		A A'	CROSS SECTION LOCATION

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PLATE 3–CROSS SECTION LOCATIONS
SUPPLEMENTAL REMEDIAL INVESTIGATION–2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	DATE
070748502	1/28/2009
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SCALE: 1"=30'	CHECKED BY: ERG
CMX	
SHEET NO. 1 of 1	

Cross Section A–A'

Soil Boring	MW-03
Sampling Date	5/15/1997
Sample Depth	10.0 to 12.0
NAPL	Staining
Total VOC	627
Total BTEX	**627**
Total PAHs	**1325.7**
Nickel	NR

Soil Boring	SB-119	SB-119	SB-119	SB-119	SB-119
Sampling Date	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08
Sample Depth	12.0 to 13.0	18.0 to 19.0	21.2 to 21.7	23.0-24.0	37.2-37.7
NAPL	oil	none	oil	none	none
TarGOST	no data	no data	no data	no data	no data
Total VOC	54.1	1.166	172	ND	0.0385
Total BTEX	**40.8**	**0.99**	**129**	ND	0.0184
Total PAHs	**1380.5**	**1.773**	**387.13**	**3.366**	**3.238**
Nickel	29.6	**30.1**	11	9.2	9.6

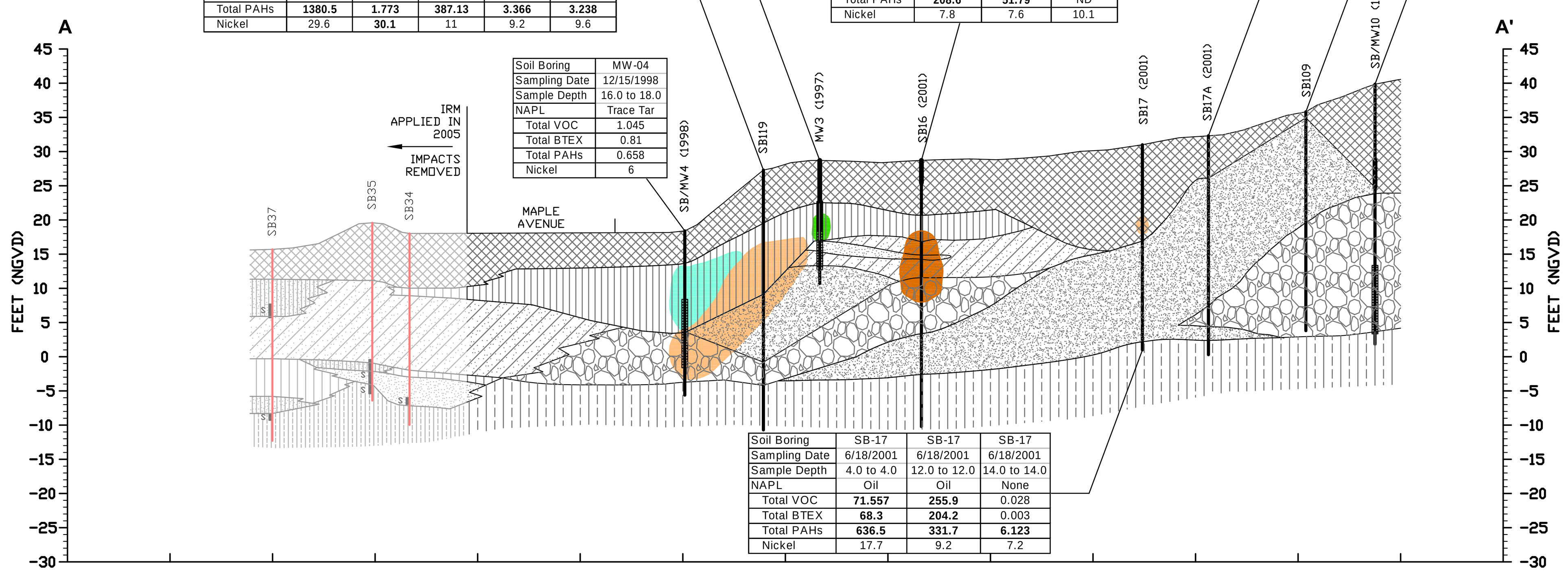
Soil Boring	SB-16	SB-16	SB-16
Sampling Date	6/20/2001	6/20/2001	6/20/2001
Sample Depth	18.0 to 18.0	30.0 to 30.0	36.0 to 36.0
NAPL	Tar	Sheen	None
Total VOC	**233.2**	0.255	0.008
Total BTEX	**189.5**	0.165	ND
Total PAHs	**208.6**	**51.79**	ND
Nickel	7.8	7.6	10.1

Soil Boring	SB-17A
Sampling Date	6/22/2001
Sample Depth	28.0 to 28.0
NAPL	None
Total VOC	0.001
Total BTEX	ND
Total PAHs	ND
Nickel	8.2

Soil Boring	SB-109	SB-109
Sampling Date	05/20/08	05/20/08
Sample Depth	14.5 to 15.0	29.5 to 30.0
NAPL	None	None
TarGOST	no data	no data
Total VOC	0.039	0.0694
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	11.1	7.9

Soil Boring	MW-10	MW-10
Sampling Date	12/16/1998	12/17/1998
Sample Depth	22.0 to 24.0	36.0 to 38.0
NAPL	None	None
Total VOC	0.006	0.003
Total BTEX	ND	ND
Total PAHs	0.037	ND
Nickel	8.1	9

Soil Boring	MW-04
Sampling Date	12/15/1998
Sample Depth	16.0 to 18.0
NAPL	Trace Tar
Total VOC	1.045
Total BTEX	0.81
Total PAHs	0.658
Nickel	6



Soil Boring	SB-17	SB-17	SB-17
Sampling Date	6/18/2001	6/18/2001	6/18/2001
Sample Depth	4.0 to 4.0	12.0 to 12.0	14.0 to 14.0
NAPL	Oil	Oil	None
Total VOC	**71.557**	**255.9**	0.028
Total BTEX	**68.3**	**204.2**	0.003
Total PAHs	**636.5**	**331.7**	**6.123**
Nickel	17.7	9.2	7.2

Cross Section B–B'

Soil Boring	SB-48
Sampling Date	7/1/2004
Sample Depth	14.0 to 15.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.756
Nickel	NR

Soil Boring	SB-71	SB-71	SB-71
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	12.0 to 12.5	13.5 to 14.0	18.0 to 18.5
NAPL	Oil	Oil	None
TarGOST	100 (J)	389.8	background
Total VOC	18.76	191	0.0734
Total BTEX	**17.88**	**185.7**	ND
Total PAHs	**527.3**	**3252**	0.245
Nickel	NR	NR	NR

Soil Boring	SB-30S	SB-30S
Sampling Date	7/1/2004	7/1/2004
Sample Depth	6.5 to 7.0	15.0 to 16.0
NAPL	Sheen	None
Total VOC	0.364	0.014
Total BTEX	0.364	0.014
Total PAHs	**509.5**	**1.912**
Nickel	NR	NR

Soil Boring	MW-20D	MW-20D
Sampling Date	11/28/2001	11/28/2001
Sample Depth	10.0 to 10.0	25.5 to 25.5
NAPL	Tar	None
Total VOC	**37**	0.0058
Total BTEX	**37**	0.005
Total PAHs	**289.3**	0.075
Nickel	16.4	11.1

Soil Boring	SB-112A	SB-112B	SB-112B
Sampling Date	05/09/08	05/12/08	05/12/08
Sample Depth	18.0 to 19.0	22.0 to 23.0	32.0 to 33.0
NAPL	None	None	None
TarGOST	no data	no data	no data
Total VOC	0.89	0.042	37.32
Total BTEX	0.89	0.01	**36.56**
Total PAHs	16.54	0.176	0.0504
Nickel	9.8	10.2	20.8

Soil Boring	MW-09	MW-09
Sampling Date	12/10/1998	12/10/1998
Sample Depth	8.0 to 10.0	12.0 to 14.0
NAPL	Odors	Odors
Total VOC	0.496	ND
Total BTEX	0.496	ND
Total PAHs	**227.63**	0.511
Nickel	11.1	13

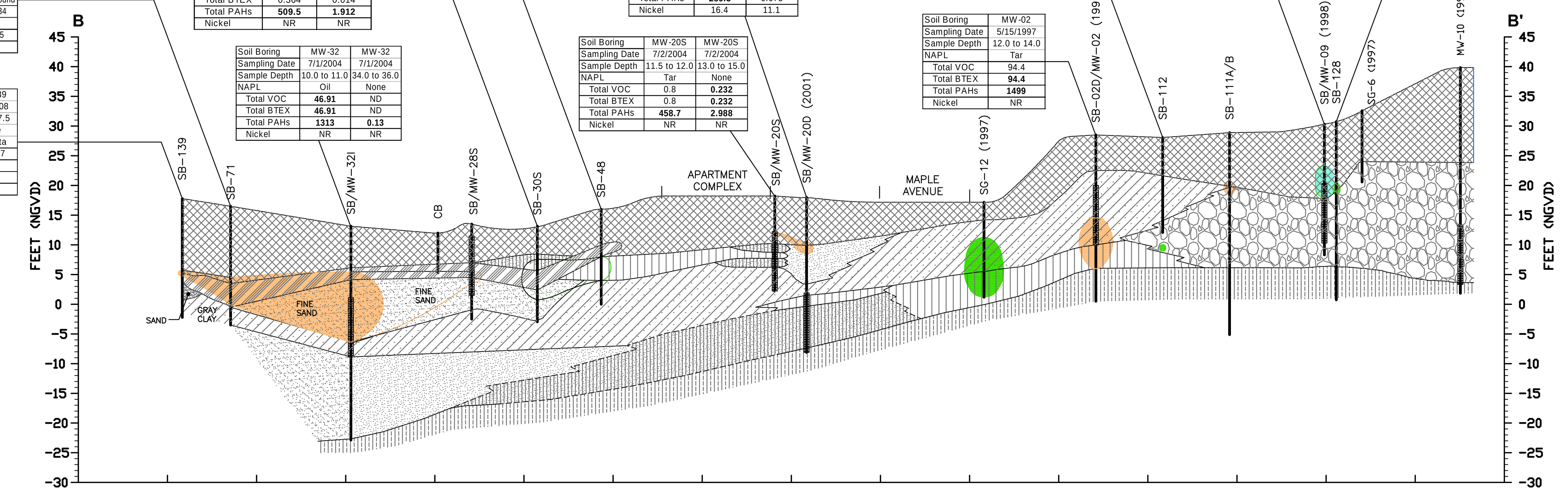
Soil Boring	SB-128	SB-128	SB-128
Sampling Date	05/14/08	05/14/08	05/15/08
Sample Depth	10.5 to 11.0	14.0-14.5	28.1-28.6
NAPL	staining	none	none
TarGOST	no data	no data	no data
Total VOC	ND	ND	0.014
Total BTEX	ND	ND	ND
Total PAHs	**63.41**	0.035	0.012
Nickel	12	11.3	12.4

Soil Boring	SB-139	SB-139	SB-139
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	13.0-13.5	16.0-16.5	17.0-17.5
NAPL	oil	oil	none
TarGOST	no data	no data	no data
Total VOC	4.88	0.0153	0.0217
Total BTEX	**4.6**	ND	ND
Total PAHs	**1378**	**1.07**	ND
Nickel	NR	NR	NR

Soil Boring	MW-32	MW-32
Sampling Date	7/1/2004	7/1/2004
Sample Depth	10.0 to 11.0	34.0 to 36.0
NAPL	Oil	None
Total VOC	**46.91**	ND
Total BTEX	**46.91**	ND
Total PAHs	**1313**	**0.13**
Nickel	NR	NR

Soil Boring	MW-20S	MW-20S
Sampling Date	7/2/2004	7/2/2004
Sample Depth	11.5 to 12.0	13.0 to 15.0
NAPL	Tar	None
Total VOC	0.8	**0.232**
Total BTEX	0.8	**0.232**
Total PAHs	**458.7**	**2.988**
Nickel	NR	NR

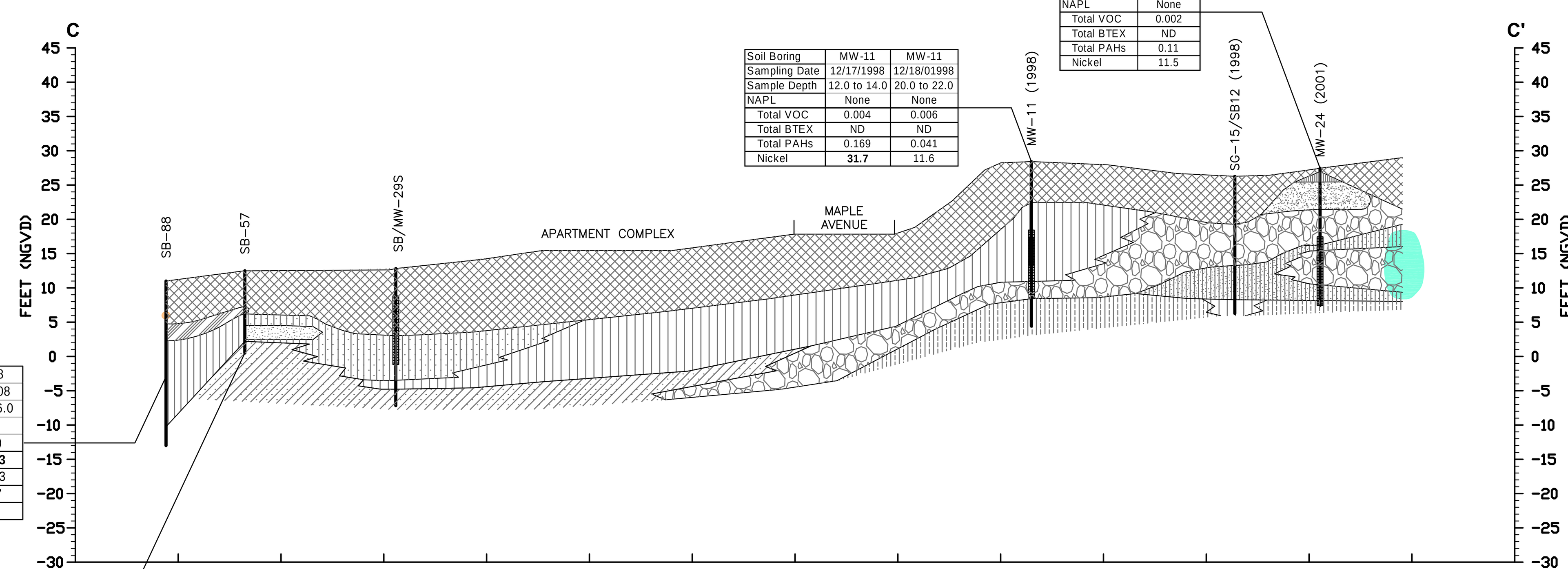
Soil Boring	MW-02
Sampling Date	5/15/1997
Sample Depth	12.0 to 14.0
NAPL	Tar
Total VOC	94.4
Total BTEX	**94.4**
Total PAHs	**1499**
Nickel	NR



Cross Section C–C'

Soil Boring	MW-24
Sampling Date	6/22/2001
Sample Depth	18.0 to 18.0
NAPL	None
Total VOC	0.002
Total BTEX	ND
Total PAHs	0.11
Nickel	11.5

Soil Boring	MW-11	MW-11
Sampling Date	12/17/1998	12/18/01998
Sample Depth	12.0 to 14.0	20.0 to 22.0
NAPL	None	None
Total VOC	0.004	0.006
Total BTEX	ND	ND
Total PAHs	0.169	0.041
Nickel	**31.7**	11.6



Soil Boring	SB-88	SB-88
Sampling Date	04/25/08	04/25/08
Sample Depth	4.5 to 5.0	5.5 to 6.0
NAPL	None	Oil
TarGOST	background	20 (J)
Total VOC	0.061	**0.2133**
Total BTEX	ND	0.0093
Total PAHs	5	**224.7**
Nickel	NR	NR

Soil Boring	SB-57
Sampling Date	7/12/2004
Sample Depth	7.0 to 8.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.338
Nickel	NR

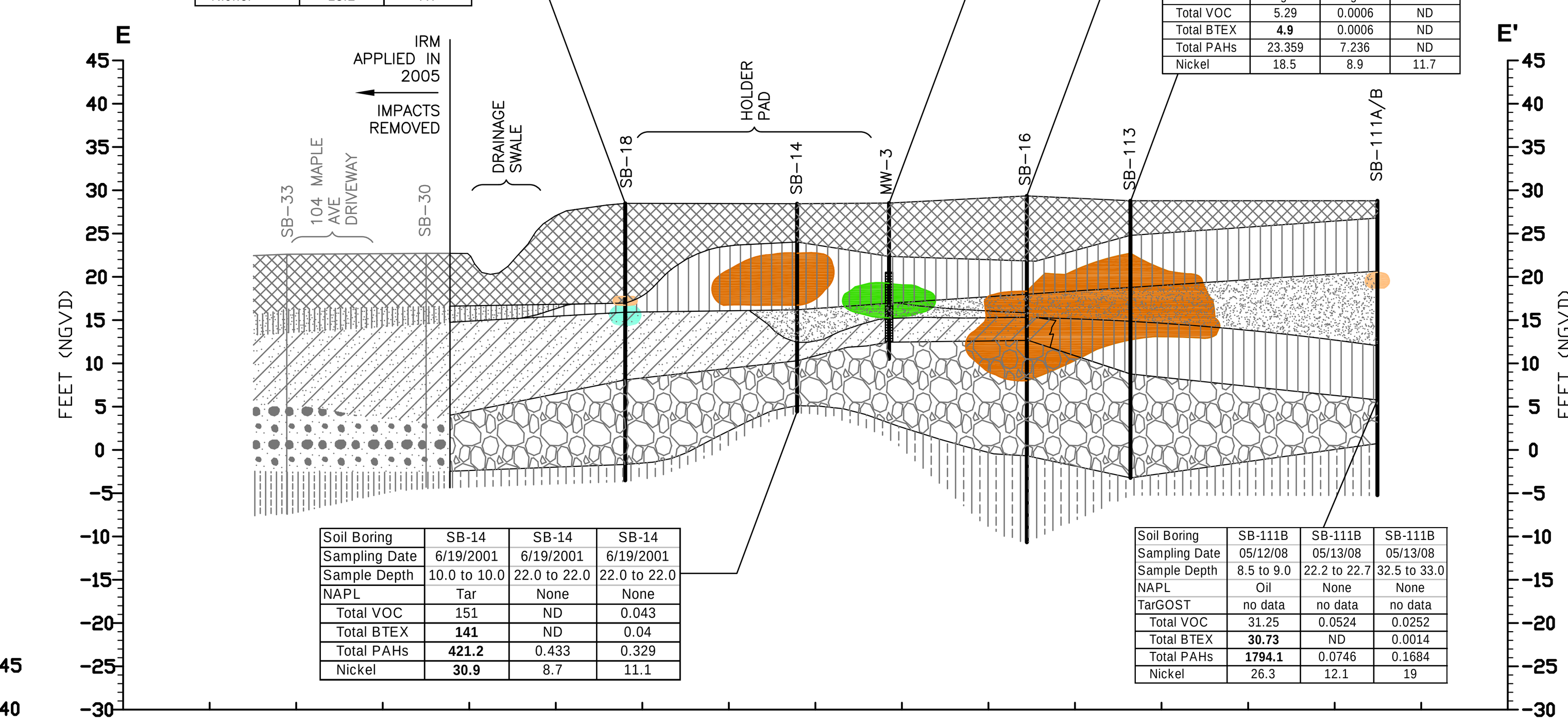
Cross Section E–E'

Soil Boring	MW-03
Sampling Date	5/15/1997
Sample Depth	10.0 to 12.0
NAPL	Staining
Total VOC	627
Total BTEX	**627**
Total PAHs	**1325.7**
Nickel	NR

Soil Boring	SB-16	SB-16	SB-16
Sampling Date	6/20/2001	6/20/2001	6/20/2001
Sample Depth	18.0 to 18.0	30.0 to 30.0	36.0 to 36.0
NAPL	Tar	Sheen	None
Total VOC	**233.2**	0.255	0.008
Total BTEX	**189.5**	0.165	ND
Total PAHs	**208.6**	**51.79**	ND
Nickel	7.8	7.6	10.1

Soil Boring	SB-18	SB-18
Sampling Date	6/19/2001	6/19/2001
Sample Depth	11.5 to 11.5	31.0 to 31.0
NAPL	Tar	None
Total VOC	**146.6**	0.071
Total BTEX	**137.3**	0.069
Total PAHs	**145.84**	**1.007**
Nickel	13.2	7.7

Soil Boring	SB-113	SB-113	SB-113
Sampling Date	05/07/08	05/07/08	05/07/08
Sample Depth	13.0 to 13.5	22.0 to 22.5	31.5 to 32.0
NAPL	Tar	None	None
TarGOST	background	background	no data
Total VOC	5.29	0.0006	ND
Total BTEX	**4.9**	0.0006	ND
Total PAHs	23.359	7.236	ND
Nickel	18.5	8.9	11.7



Soil Boring	SB-14	SB-14	SB-14
Sampling Date	6/19/2001	6/19/2001	6/19/2001
Sample Depth	10.0 to 10.0	22.0 to 22.0	22.0 to 22.0
NAPL	Tar	None	None
Total VOC	151	ND	0.043
Total BTEX	**141**	ND	0.04
Total PAHs	**421.2**	0.433	0.329
Nickel	**30.9**	8.7	11.1

Soil Boring	SB-111B	SB-111B	SB-111B
Sampling Date	05/12/08	05/13/08	05/13/08
Sample Depth	8.5 to 9.0	22.2 to 22.7	32.5 to 33.0
NAPL	Oil	None	None
TarGOST	no data	no data	no data
Total VOC	31.25	0.0524	0.0252
Total BTEX	**30.73**	ND	0.0014
Total PAHs	**1794.1**	0.0746	0.1684
Nickel	26.3	12.1	19

Cross Section D–D'

Soil Boring	SB-94	SB-94
Sampling Date	04/30/08	05/28/08
Sample Depth	9.0 to 9.5	9.0 to 10.0
NAPL	Tar	Tar
TarGOST	630.6	630.6
Total VOC	1129	483
Total BTEX	**1100**	**480**
Total PAHs	**28350**	**19205**
Nickel	NR	NR

Soil Boring	SB-107
Sampling Date	04/30/08
Sample Depth	5.5 to 6.0
NAPL	None
TarGOST	background
Total VOC	0.015
Total BTEX	ND
Total PAHs	ND
Nickel	NR

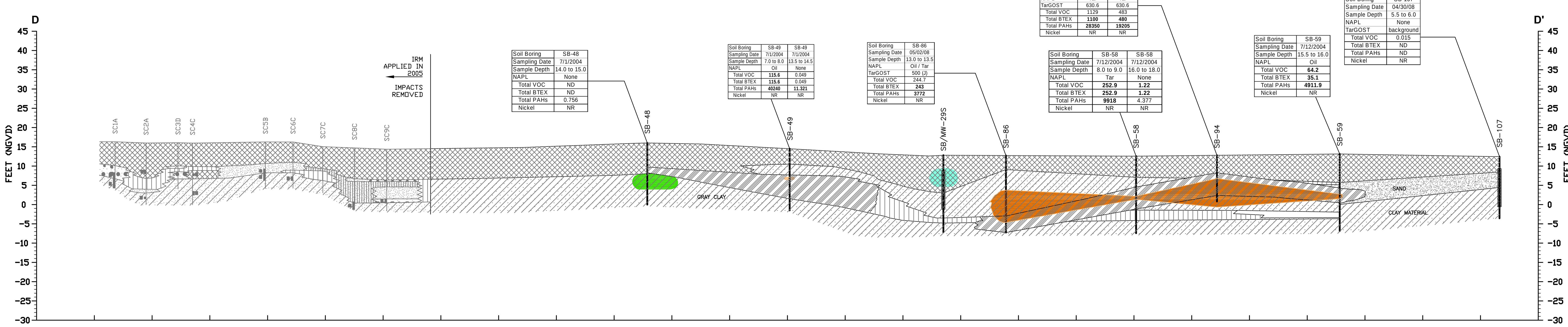
Soil Boring	SB-48
Sampling Date	7/1/2004
Sample Depth	14.0 to 15.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.756
Nickel	NR

Soil Boring	SB-49	SB-49
Sampling Date	7/1/2004	7/1/2004
Sample Depth	7.0 to 8.0	13.5 to 14.5
NAPL	Oil	None
Total VOC	**115.6**	0.049
Total BTEX	**115.6**	0.049
Total PAHs	**40240**	**11.321**
Nickel	NR	NR

Soil Boring	SB-86
Sampling Date	05/02/08
Sample Depth	13.0 to 13.5
NAPL	Oil / Tar
TarGOST	500 (J)
Total VOC	244.7
Total BTEX	**243**
Total PAHs	**3772**
Nickel	NR

Soil Boring	SB-58	SB-58
Sampling Date	7/12/2004	7/12/2004
Sample Depth	8.0 to 9.0	16.0 to 18.0
NAPL	Tar	None
Total VOC	**252.9**	**1.22**
Total BTEX	**252.9**	**1.22**
Total PAHs	**9918**	4.377
Nickel	NR	NR

Soil Boring	SB-59
Sampling Date	7/12/2004
Sample Depth	15.5 to 16.0
NAPL	Oil
Total VOC	**64.2**
Total BTEX	**35.1**
Total PAHs	**4911.9**
Nickel	NR

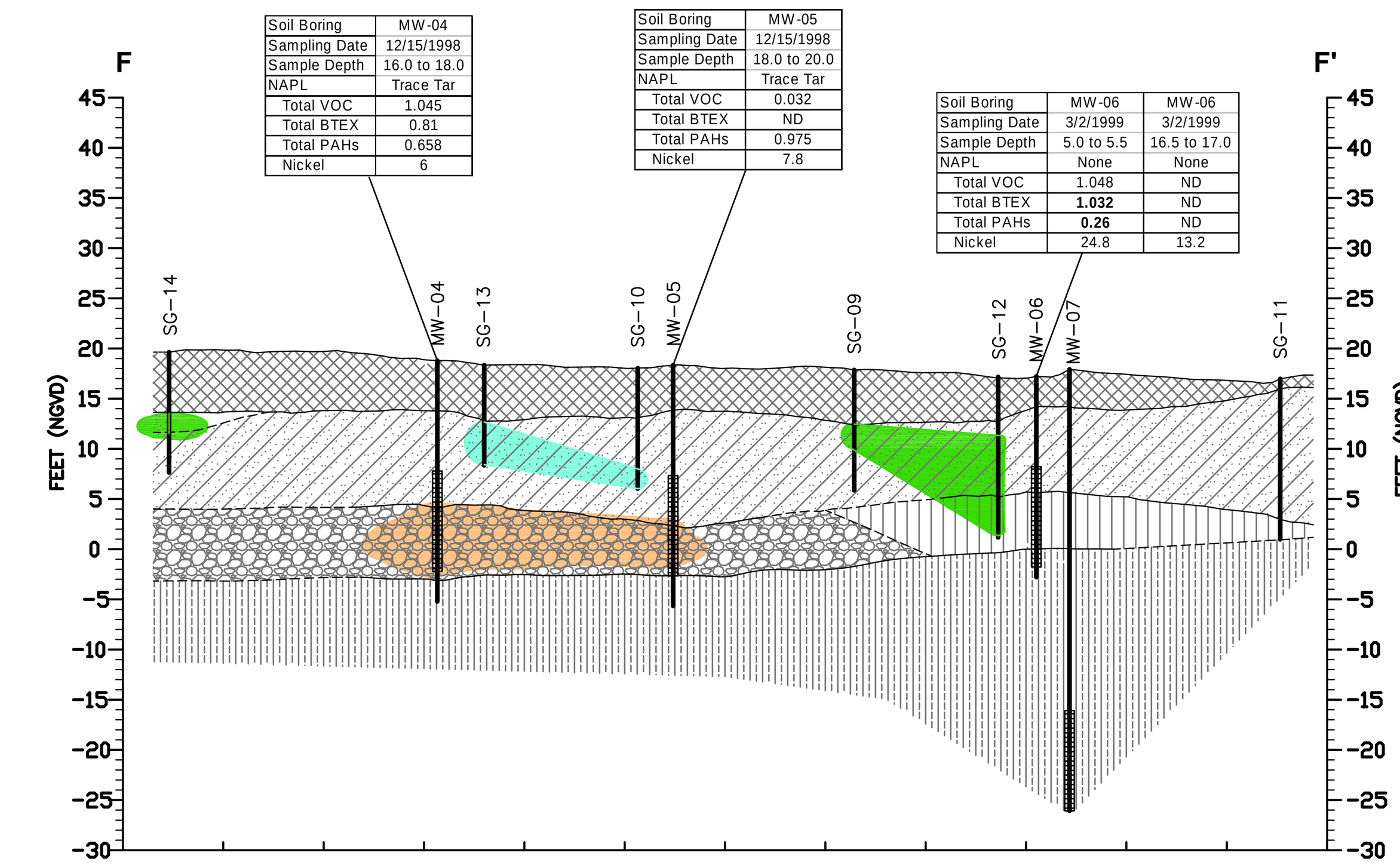


Cross Section F–F'

Soil Boring	MW-04
Sampling Date	12/15/1998
Sample Depth	16.0 to 18.0
NAPL	Trace Tar
Total VOC	1.045
Total BTEX	0.81
Total PAHs	0.658
Nickel	6

Soil Boring	MW-05
Sampling Date	12/15/1998
Sample Depth	18.0 to 20.0
NAPL	Trace Tar
Total VOC	0.032
Total BTEX	ND
Total PAHs	0.975
Nickel	7.8

Soil Boring	MW-06	MW-06
Sampling Date	3/2/1999	3/2/1999
Sample Depth	5.0 to 5.5	16.5 to 17.0
NAPL	None	None
Total VOC	1.048	ND
Total BTEX	**1.032**	ND
Total PAHs	**0.26**	ND
Nickel	24.8	13.2



Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consitutent compounds.
BTEX	The sum of benzene, toluene, ethylbenzene, and xylene concentrations
PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

LEGEND

- MW10 — SOIL BORING OR MONITORING WELL LOCATION
- SCREENED INTERVAL
- INFERRED CONTACT
- HYDROCARBON–LIKE ODORS
- MGP–LIKE ODORS
- SHEENS OR STAINING ONLY
- MGP OIL–LIKE BLEBS, LENSES
- MGP TAR–LIKE MATERIAL, CHARACTERIZED BY LOW VISCOSITY NAPL
- FILL MATERIAL — UNIT 1
- COARSE–GRAINED SANDS AND GRAVELS; CLAY AND FINE SAND/SILT MIXTURES; FINE SANDS; SILT AND FINE TO COARSE–GRAINED SAND; PEAT, ORGANIC CLAY — UNIT 2
- CLAY MATERIAL — UNIT 3
- TILL MATERIAL — UNIT 4

NOTE: GREYED–BACK AREAS DEPICT SECTIONS OF THE SITE WHICH WERE REMEDIATED IN 2005.

VERTICAL SCALE IN FEET (15, 7.5, 0, 15)
HORIZONTAL SCALE IN FEET (30, 15, 0, 30)
NOTE: VERTICAL EXAGGERATION = 2X

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GRAPHIC SCALE IN FEET (30, 0, 30, 60)
1" = 30'

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FAX (914)686–1222

PLATE 4A
GEOLOGIC CROSS SECTIONS AND SUMMARY OF SOIL ANALYTICAL RESULTS (ppm)

CLOVE AND MAPLE AVES FORMER MGP
HAVERSTRAW — ROCKLAND COUNTY — NEW YORK

PROJECT NO	DATE
070748502	1/28/2009
DRAWN BY: MVS	DESIGNED BY: ERG
SCALE: 1" = 30'	CHECKED BY: ERG
CMX	
SHEET NO. 1 of 1	

LEGEND

- CURRENT STRUCTURE
- PROPERTY BOUNDARY
- SITE BOUNDARY
- EXISTING CHAIN LINK FENCE
- RIVER SHORELINE
- GAS MAINS
- OVERHEAD WIRE
- #93B — STREET ADDRESS
- 79 — LOT NUMBER
- APPROXIMATE UNDERGROUND LOCATION OF FORMER GAS HOLDER
- MW-28S — 2004 MONITORING WELL LOCATION
- SG-09 — 1997-1998 GEOPROBE BORING LOCATION
- TP-2 — 1998 TEST PIT LOCATION
- SB-48 — 2004 SOIL BORING LOCATION
- SB-14 — 2001 SOIL BORING LOCATION
- SB/MW-02 — 1997-2001 SOIL BORING/ MONITORING WELL LOCATION
- INTERIM REMEDIAL ACTIONS COMPLETED 2003-2005
- HYDROCARBON-LIKE ODORS
- NAPHTHALENE OR COAL TAR-LIKE ODORS
- SHEENS
- TAR BLEBS OR TAR LENSES
- SCATTERED IMPACTS
- TAR SATURATED SOIL MATRIX

LEGEND

- UP — UTILITY POLE
- WG — WATER GATE VALVE
- HYD — FIRE HYDRANT
- SMH — SEWER MANHOLE
- CB — CATCH BASIN
- INVESTIGATION AREA

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30 0 30 60
GRAPHIC SCALE IN FEET
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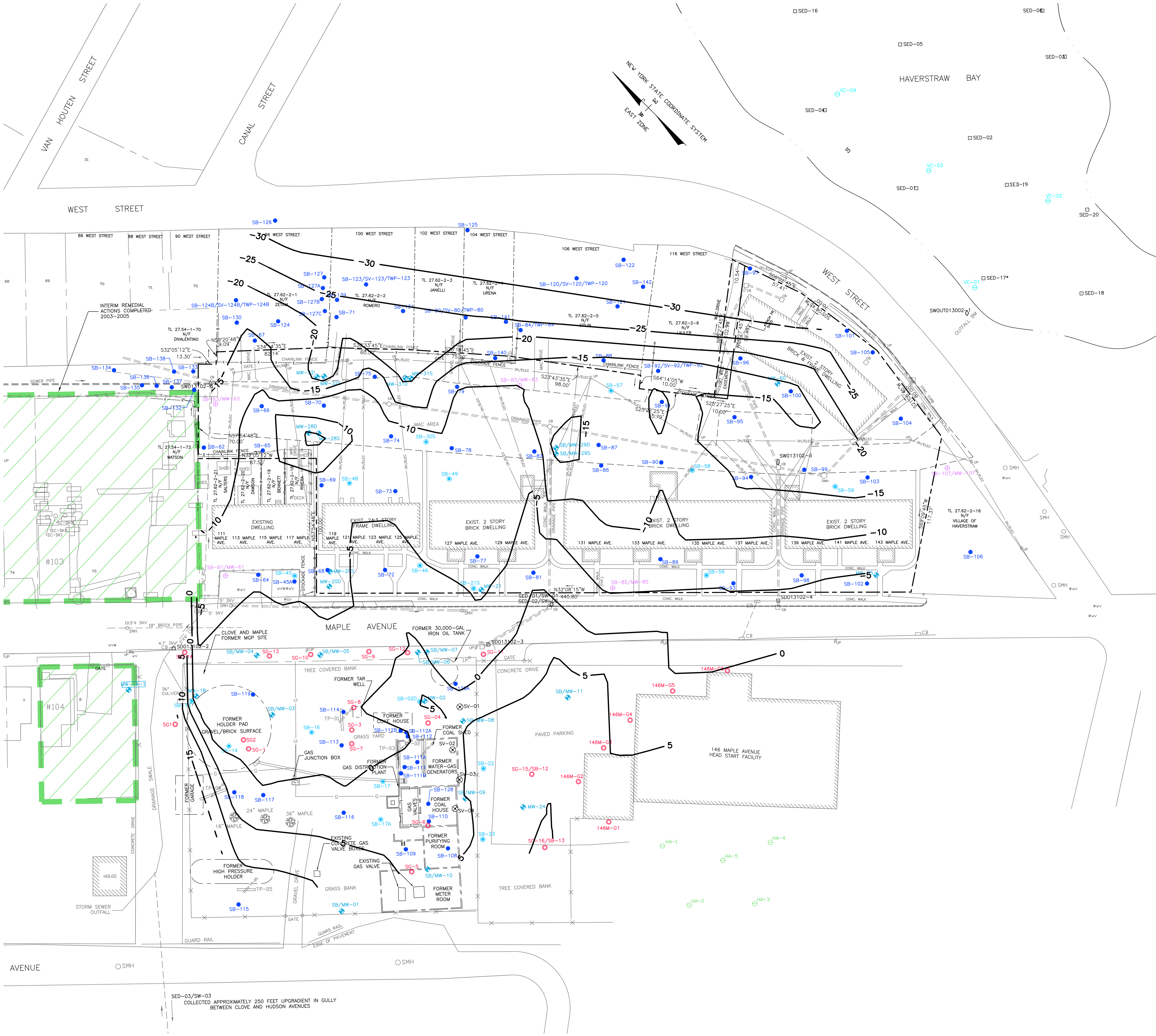
PLATE–10
LATERAL EXTENT OF PHYSICAL IMPACTS CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW — ROCKLAND COUNTY — NEW YORK

PROJECT NO	070748502
DATE	10/02/2008
DRAWN BY	MVS
DESIGNED BY	ERG
SCALE	1" = 30'
CHECKED BY	ERG
SHEET NO.	1 of 1



NOTE:

PROPERTY INFORMATION SHOWN AND METES AND BOUNDS DERIVED FROM ATZL, SCATASSA & ZIGLER P.C. SURVEYORS–PLANNERS.
234 NORTH MAIN STREET, NEW CITY NEW YORK 10956.
156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY
PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF DRY WELLS, SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND

Symbol	Description
VC–03	VIBRACORE SAMPLE LOCATION
SG–1	PRE–2008 SOIL GAS SAMPLE LOCATION
MW–20	PRE–2008 MONITORING WELL LOCATION
SB–17	PRE–2008 SOIL BORING LOCATION
HA–1	1998–2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION
SB–83/MW–83	2008 SRI MONITORING WELL LOCATION
TP–2	1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION
SW013102–6	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION
SD013102–2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION
SB–106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT
SV–01	2008 SOIL GAS SAMPLE ONLY
	STORM SEWER
	EXISTING STRUCTURE
	PROPERTY BOUNDARY, SURVEYED
	PROPERTY BOUNDARY APPROXIMATE
	HISTORICAL STRUCTURE
	RIVER SHORELINE
	WOOD FENCE
	CHAIN–LINK FENCE
G	GAS MAINS
OH/ELEC	OVERHEAD WIRE
UP	UTILITY POLE
WG	WATER GATE VALVE
HYD	FIRE HYDRANT
SMH	SEWER MANHOLE
CB	CATCH BASIN
	INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)
–10	TILL SURFACE CONTOUR ELEVATION (FEET ABOVE MEAN SEA LEVEL)

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

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REVISION NO.	DATE	REVISION

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GRAPHIC SCALE IN FEET
1" = 30'

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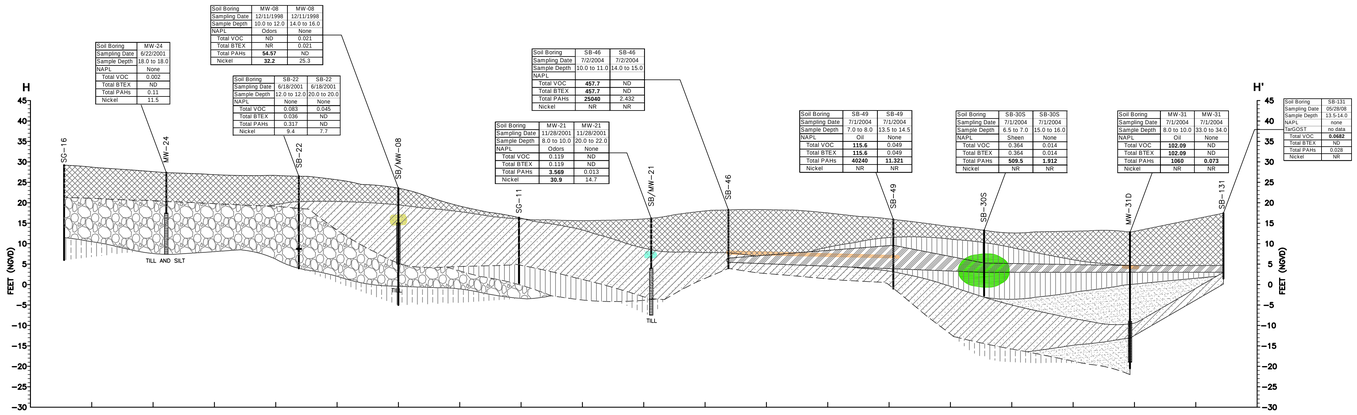
PLATE 10–TILL SURFACE CONTOUR
SUPPLEMENTAL REMEDIAL INVESTIGATION 2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO 070748502	DATE 1/28/2009
DRAWN BY MVS	DESIGNED BY ERG
SCALE 1" = 30'	CHECKED BY ERG
SHEET NO. 1 of 1	

User: jseybert
1/29/2009 1:51:17 PM
DWG: \\Sdfile01\M\p\0707485\F-Plate 10-Till Surface Contours.dwg Contours-Plate 10
R-Contour Layout
!r-borings 6-10-08
!r-borings 5-08-08
R-New Basemap



Soil Boring	MW-08	MW-08
Sampling Date	12/11/1998	12/11/1998
Sample Depth	10.0 to 12.0	14.0 to 16.0
NAPL	Odors	None
Total VOC	ND	0.021
Total BTEX	NR	0.021
Total PAHs	**54.57**	ND
Nickel	**32.2**	25.3

Soil Boring	MW-24
Sampling Date	6/22/2001
Sample Depth	18.0 to 18.0
NAPL	None
Total VOC	0.002
Total BTEX	ND
Total PAHs	0.11
Nickel	11.5

Soil Boring	SB-22	SB-22
Sampling Date	6/18/2001	6/18/2001
Sample Depth	12.0 to 12.0	20.0 to 20.0
NAPL	None	None
Total VOC	0.083	0.045
Total BTEX	0.036	ND
Total PAHs	0.317	ND
Nickel	9.4	7.7

Soil Boring	MW-21	MW-21
Sampling Date	11/28/2001	11/28/2001
Sample Depth	8.0 to 10.0	20.0 to 22.0
NAPL	Odors	None
Total VOC	0.119	ND
Total BTEX	0.119	ND
Total PAHs	**3.569**	0.013
Nickel	**30.9**	14.7

Soil Boring	SB-46	SB-46
Sampling Date	7/2/2004	7/2/2004
Sample Depth	10.0 to 11.0	14.0 to 15.0
NAPL		
Total VOC	**457.7**	ND
Total BTEX	**457.7**	ND
Total PAHs	**25040**	2.432
Nickel	NR	NR

Soil Boring	SB-49	SB-49
Sampling Date	7/1/2004	7/1/2004
Sample Depth	7.0 to 8.0	13.5 to 14.5
NAPL	Oil	None
Total VOC	**115.6**	0.049
Total BTEX	**115.6**	0.049
Total PAHs	**40240**	**11.321**
Nickel	NR	NR

Soil Boring	SB-30S	SB-30S
Sampling Date	7/1/2004	7/1/2004
Sample Depth	6.5 to 7.0	15.0 to 16.0
NAPL	Sheen	None
Total VOC	0.364	0.014
Total BTEX	0.364	0.014
Total PAHs	**509.5**	**1.912**
Nickel	NR	NR

Soil Boring	MW-31	MW-31
Sampling Date	7/1/2004	7/1/2004
Sample Depth	8.0 to 10.0	33.0 to 34.0
NAPL	Oil	None
Total VOC	**102.09**	ND
Total BTEX	**102.09**	ND
Total PAHs	**1060**	**0.073**
Nickel	NR	NR

Soil Boring	SB-131
Sampling Date	05/28/08
Sample Depth	13.5-14.0
NAPL	none
SeaOST	no data
Total VOC	**0.0682**
Total BTEX	ND
Total PAHs	0.028
Nickel	NR

Soil Boring	SB-115	SB-115
Sampling Date	05/08/08	05/09/08
Sample Depth	17.0 to 18.0	26.0 to 26.5
NAPL	None	None
TarGOST	no data	no data
Total VOC	ND	ND
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	10.9	9.5

Soil Boring	MW-03
Sampling Date	5/15/1997
Sample Depth	10.0 to 12.0
NAPL	Staining
Total VOC	627
Total BTEX	**627**
Total PAHs	**1325.7**
Nickel	NR

Soil Boring	SB-118	SB-118	SB-118
Sampling Date	05/08/08	05/06/08	05/06/08
Sample Depth	14.2-14.7	18.0-18.5	28.0-28.5
NAPL	oil	none	none
TarGOST	no data	no data	no data
Total VOC	ND	ND	ND
Total BTEX	ND	ND	ND
Total PAHs	**19.035**	**4.639**	ND
Nickel	13.7	12.9	10.8

Soil Boring	SB-45	SB-45	SB-45	SB-45	SB-45	SB-45
Sampling Date	7/2/2004	7/2/2004	7/2/2004	7/15/2004	7/15/2004	7/15/2004
Sample Depth	8.0 to 9.0	10.0 to 11.0	11.0 to 12.0	18.0 to 20.0	24.0 to 25.0	27.0 to 28.0
NAPL	Tar	Tar	Odor	None	Odors	Sheen
Total VOC	**11.9**	**5.8**	0.008	ND	ND	ND
Total BTEX	**11.9**	**5.8**	0.008	ND	ND	ND
Total PAHs	**442.8**	**1060.8**	**3.594**	**23.58**	**25.12**	**3.391**
Nickel	NR	NR	NR	NR	NR	NR

Soil Boring	MW-28D	MW-28D
Sampling Date	11/29/2001	11/29/2001
Sample Depth	8.0 to 10.0	30.0 to 30.0
NAPL	Oil	None
Total VOC	**327.3**	0.0009
Total BTEX	**271.3**	0.0009
Total PAHs	**5291**	0.192
Nickel	23.4	12.6

Soil Boring	MW-32I	MW-32I
Sampling Date	7/1/2004	7/1/2004
Sample Depth	10.0 to 11.0	34.0 to 36.0
NAPL	Oil	None
Total VOC	**46.91**	ND
Total BTEX	**46.91**	ND
Total PAHs	**1313**	**0.13**
Nickel	NR	NR

Soil Boring	SB-71	SB-71	SB-71
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	12.0 to 12.5	13.5 to 14.0	18.0 to 18.5
NAPL	Oil	Oil	None
TarGOST	100 (J)	389.8	background
Total VOC	18.76	191	0.0734
Total BTEX	**17.88**	**185.7**	ND
Total PAHs	**527.3**	**3252**	0.245
Nickel	NR	NR	NR

Soil Boring	SB-139	SB-139	SB-139
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	13.0-13.5	16.0-16.5	17.0-17.5
NAPL	oil	oil	none
TarGOST	no data	no data	no data
Total VOC	4.88	0.0153	0.0217
Total BTEX	**4.6**	ND	ND
Total PAHs	**1378**	**1.07**	ND
Nickel	NR	NR	NR

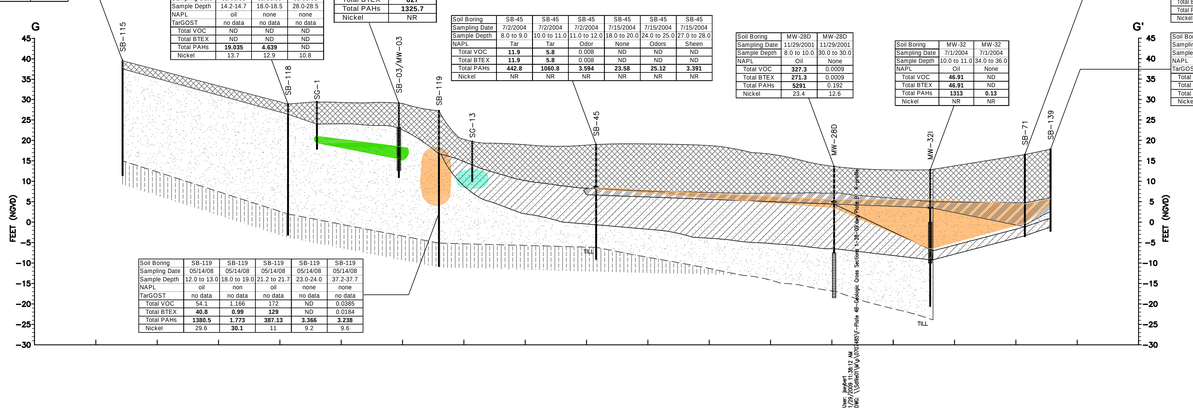
Soil Boring	SB-119	SB-119	SB-119	SB-119	SB-119
Sampling Date	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08
Sample Depth	12.0 to 13.0	18.0 to 19.0	21.2 to 21.7	23.0-24.0	37.2-37.7
NAPL	oil	non	oil	none	none
TarGOST	no data	no data	no data	no data	no data
Total VOC	54.1	1.166	172	ND	0.0385
Total BTEX	**40.0**	**0.99**	**129**	ND	0.0184
Total PAHs	**1380.5**	**1.773**	**387.13**	**3.366**	**3.238**
Nickel	29.6	**30.1**	11	9.2	9.6

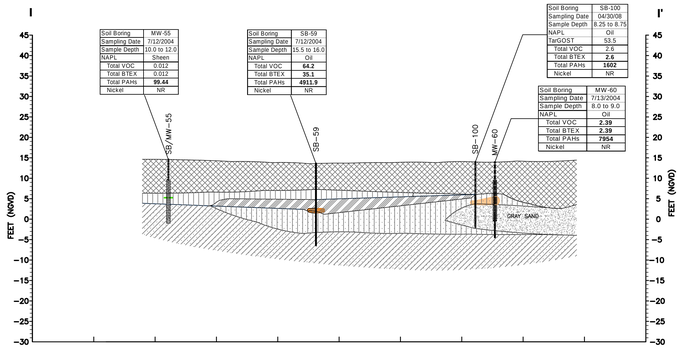
Soil Boring	SB-100
Sampling Date	04/30/08
Sample Depth	8.25 to 8.75
NAPL	Oil
TarGOST	53.5
Total VOC	2.6
Total BTEX	**2.6**
Total PAHs	**1602**
Nickel	NR

Soil Boring	MW-60
Sampling Date	7/13/2004
Sample Depth	8.0 to 9.0
NAPL	Oil
Total VOC	**2.39**
Total BTEX	**2.39**
Total PAHs	**7954**
Nickel	NR

Soil Boring	MW-55
Sampling Date	7/12/2004
Sample Depth	10.0 to 12.0
NAPL	Sheen
Total VOC	0.012
Total BTEX	0.012
Total PAHs	**99.44**
Nickel	NR

Soil Boring	SB-59
Sampling Date	7/12/2004
Sample Depth	15.5 to 16.0
NAPL	Oil
Total VOC	**64.2**
Total BTEX	**35.1**
Total PAHs	**4911.9**
Nickel	NR





Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consituent compounds.
BTEX	The sum of benzene, toluene, ethylbenzene, and xylene concentrations
PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

LEGEND

- MW10 — SOIL BORING OR MONITORING WELL LOCATION
- SCREENED INTERVAL
- INFERRED CONTACT
- HYDROCARBON–LIKE ODORS
- MGP–LIKE ODORS
- SHEENS OR STAINING ONLY
- MGP OIL–LIKE BLEBS, LENSES
- MGP TAR–LIKE MATERIAL, CHARACTERIZED BY LOW VISCOSITY NAPL
- FILL MATERIAL — UNIT 1
- COARSE–GRAINED SANDS AND GRAVELS; CLAY AND FINE SAND/SILT MIXTURES; FINE SANDS; SILT AND FINE TO COARSE–GRAINED SAND; PEAT, ORGANIC CLAY — UNIT 2
- CLAY MATERIAL — UNIT 3
- TILL MATERIAL — UNIT 4

NOTE:
GREYED–BACK AREAS DEPICT SECTIONS OF THE SITE WHICH WERE REMEDIATED IN 2005.

NOT FOR BID OR CONSTRUCTION

REVISION NO.	DATE	REVISION

30 0 30 60
GRAPHIC SCALE IN FEET
1"=30'

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PLATE 4B
GEOLOGIC CROSS SECTIONS AND SUMMARY OF SOIL ANALYTICAL RESULTS (ppm)

CLOVE AND MAPLE AVES FORMER MGP

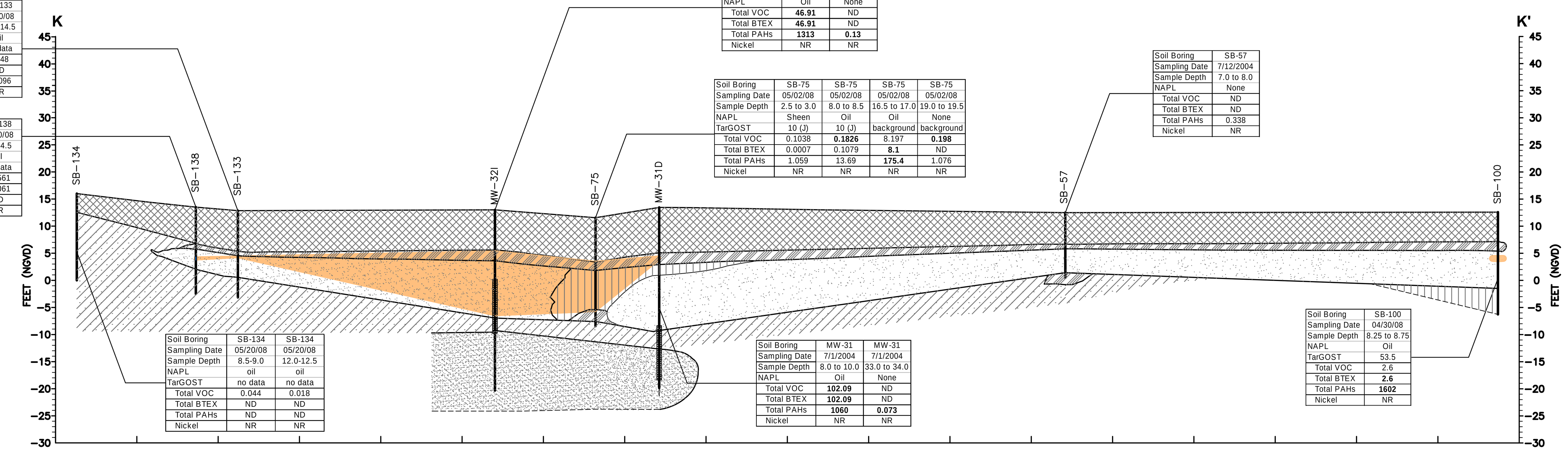
HAVERSTRAW — ROCKLAND COUNTY — NEW YORK

PROJECT NO	DATE
070748502	1/28/2009
DRAWN BY	DESIGNED BY
MVS	ERG
SCALE	CHECKED BY
1"=30'	ERG

CMX

SHEET NO. 1 of 1

Cross Section K–K'



Soil Boring	SB-133	SB-133	SB-133
Sampling Date	05/20/08	05/20/08	05/20/08
Sample Depth	8.4-8.9	10.5-11.0	14.0-14.5
NAPL	oil	oil	oil
TarGOST	no data	no data	no data
Total VOC	22.64	0.061	0.048
Total BTEX	**22.4**	ND	ND
Total PAHs	**329.5**	**6.355**	0.0096
Nickel	NR	NR	NR

Soil Boring	SB-138	SB-138
Sampling Date	05/20/08	05/20/08
Sample Depth	9.0-9.5	14-14.5
NAPL	oil	oil
TarGOST	no data	no data
Total VOC	0.075	0.0561
Total BTEX	0.075	0.0061
Total PAHs	**138**	ND
Nickel	NR	NR

Soil Boring	MW-32	MW-32
Sampling Date	7/1/2004	7/1/2004
Sample Depth	10.0 to 11.0	34.0 to 36.0
NAPL	Oil	None
Total VOC	**46.91**	ND
Total BTEX	**46.91**	ND
Total PAHs	**1313**	**0.13**
Nickel	NR	NR

Soil Boring	SB-75	SB-75	SB-75	SB-75
Sampling Date	05/02/08	05/02/08	05/02/08	05/02/08
Sample Depth	2.5 to 3.0	8.0 to 8.5	16.5 to 17.0	19.0 to 19.5
NAPL	Sheen	Oil	Oil	None
TarGOST	10 (J)	10 (J)	background	background
Total VOC	0.1038	**0.1826**	8.197	**0.198**
Total BTEX	0.0007	0.1079	**8.1**	ND
Total PAHs	1.059	13.69	**175.4**	1.076
Nickel	NR	NR	NR	NR

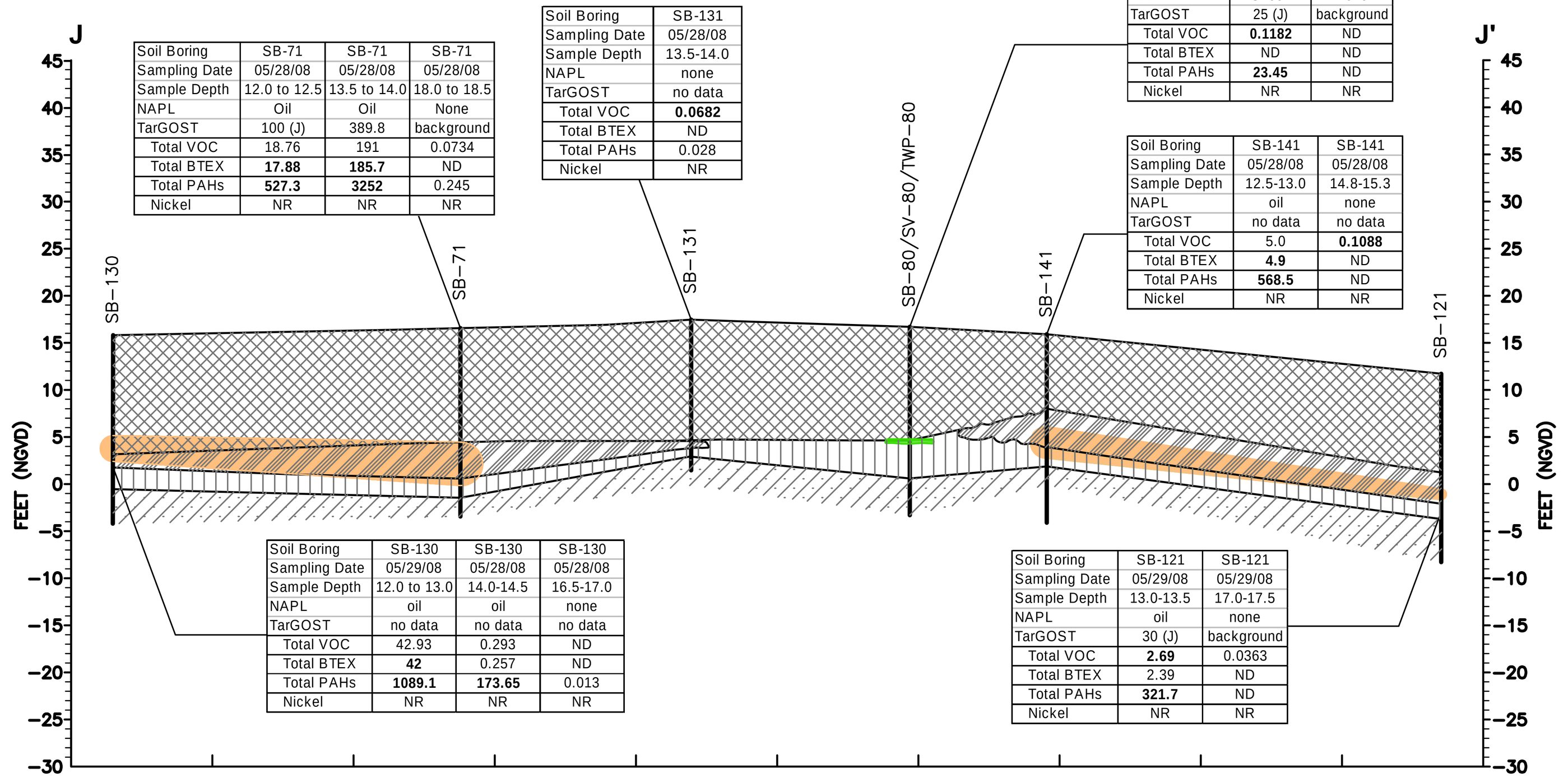
Soil Boring	SB-57
Sampling Date	7/12/2004
Sample Depth	7.0 to 8.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.338
Nickel	NR

Soil Boring	SB-134	SB-134
Sampling Date	05/20/08	05/20/08
Sample Depth	8.5-9.0	12.0-12.5
NAPL	oil	oil
TarGOST	no data	no data
Total VOC	0.044	0.018
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	NR	NR

Soil Boring	MW-31	MW-31
Sampling Date	7/1/2004	7/1/2004
Sample Depth	8.0 to 10.0	33.0 to 34.0
NAPL	Oil	None
Total VOC	**102.09**	ND
Total BTEX	**102.09**	ND
Total PAHs	**1060**	**0.073**
Nickel	NR	NR

Soil Boring	SB-100
Sampling Date	04/30/08
Sample Depth	8.25 to 8.75
NAPL	Oil
TarGOST	53.5
Total VOC	2.6
Total BTEX	**2.6**
Total PAHs	**1602**
Nickel	NR

Cross Section J–J'



Soil Boring	SB-71	SB-71	SB-71
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	12.0 to 12.5	13.5 to 14.0	18.0 to 18.5
NAPL	Oil	Oil	None
TarGOST	100 (J)	389.8	background
Total VOC	18.76	191	0.0734
Total BTEX	**17.88**	**185.7**	ND
Total PAHs	**527.3**	**3252**	0.245
Nickel	NR	NR	NR

Soil Boring	SB-131
Sampling Date	05/28/08
Sample Depth	13.5-14.0
NAPL	none
TarGOST	no data
Total VOC	**0.0682**
Total BTEX	ND
Total PAHs	0.028
Nickel	NR

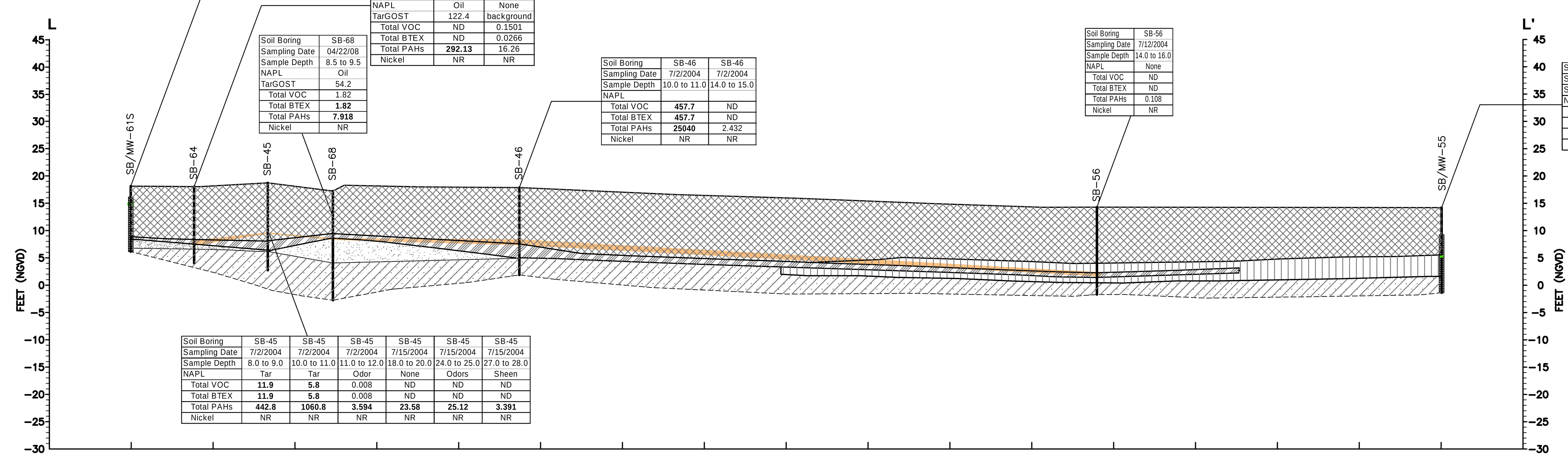
Soil Boring	SB-80	SB-80
Sampling Date	05/02/08	05/02/08
Sample Depth	12.0 to 12.5	17.0 to 17.5
NAPL	Sheen	None
TarGOST	25 (J)	background
Total VOC	**0.1182**	ND
Total BTEX	ND	ND
Total PAHs	**23.45**	ND
Nickel	NR	NR

Soil Boring	SB-141	SB-141
Sampling Date	05/28/08	05/28/08
Sample Depth	12.5-13.0	14.8-15.3
NAPL	oil	none
TarGOST	no data	no data
Total VOC	5.0	**0.1088**
Total BTEX	**4.9**	ND
Total PAHs	**568.5**	ND
Nickel	NR	NR

Soil Boring	SB-130	SB-130	SB-130
Sampling Date	05/29/08	05/28/08	05/28/08
Sample Depth	12.0 to 13.0	14.0-14.5	16.5-17.0
NAPL	oil	oil	none
TarGOST	no data	no data	no data
Total VOC	42.93	0.293	ND
Total BTEX	**42**	0.257	ND
Total PAHs	**1089.1**	**173.65**	0.013
Nickel	NR	NR	NR

Soil Boring	SB-121	SB-121
Sampling Date	05/29/08	05/29/08
Sample Depth	13.0-13.5	17.0-17.5
NAPL	oil	none
TarGOST	30 (J)	background
Total VOC	**2.69**	0.0363
Total BTEX	2.39	ND
Total PAHs	**321.7**	ND
Nickel	NR	NR

Cross Section L–L'



Soil Boring	SB-61	SB-61
Sampling Date	05/20/08	05/20/08
Sample Depth	9.0 to 9.5	11.0 to 12.0
NAPL	None	None
TarGOST	no data	no data
Total VOC	0.2915	0.0819
Total BTEX	0.101	0.0069
Total PAHs	5.039	3.612
Nickel	NR	NR

Soil Boring	SB-64	SB-64
Sampling Date	05/29/08	05/28/08
Sample Depth	10.4 to 10.9	13.5 to 14.0
NAPL	Oil	None
TarGOST	122.4	background
Total VOC	ND	0.1501
Total BTEX	ND	0.0266
Total PAHs	**292.13**	16.26
Nickel	NR	NR

Soil Boring	SB-68
Sampling Date	04/22/08
Sample Depth	8.5 to 9.5
NAPL	Oil
TarGOST	54.2
Total VOC	1.82
Total BTEX	**1.82**
Total PAHs	**7.918**
Nickel	NR

Soil Boring	SB-46	SB-46
Sampling Date	7/2/2004	7/2/2004
Sample Depth	10.0 to 11.0	14.0 to 15.0
NAPL		
Total VOC	**457.7**	ND
Total BTEX	**457.7**	ND
Total PAHs	**25040**	2.432
Nickel	NR	NR

Soil Boring	SB-56
Sampling Date	7/12/2004
Sample Depth	14.0 to 16.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.108
Nickel	NR

Soil Boring	MW-55
Sampling Date	7/12/2004
Sample Depth	10.0 to 12.0
NAPL	Sheen
Total VOC	0.012
Total BTEX	0.012
Total PAHs	**99.44**
Nickel	NR

Soil Boring	SB-45	SB-45	SB-45	SB-45	SB-45	SB-45
Sampling Date	7/2/2004	7/2/2004	7/2/2004	7/15/2004	7/15/2004	7/15/2004
Sample Depth	8.0 to 9.0	10.0 to 11.0	11.0 to 12.0	18.0 to 20.0	24.0 to 25.0	27.0 to 28.0
NAPL	Tar	Tar	Odor	None	Odors	Sheen
Total VOC	**11.9**	**5.8**	0.008	ND	ND	ND
Total BTEX	**11.9**	**5.8**	0.008	ND	ND	ND
Total PAHs	**442.8**	**1060.8**	**3.594**	**23.58**	**25.12**	**3.391**
Nickel	NR	NR	NR	NR	NR	NR

Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consitutent compounds.
BTEX	The sum of benzene, toluene, ethylbenzene, and xylene concentrations
PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

LEGEND

MW10 — SOIL BORING OR MONITORING WELL LOCATION

SCREENED INTERVAL

INFERRED CONTACT

HYDROCARBON–LIKE ODORS

MGP–LIKE ODORS

SHEENS OR STAINING ONLY

MGP OIL–LIKE BLEBS, LENSES

MGP TAR–LIKE MATERIAL, CHARACTERIZED BY LOW VISCOSITY NAPL

FILL MATERIAL — UNIT 1

COARSE–GRAINED SANDS AND GRAVELS; CLAY AND FINE SAND/ SILT MIXTURES; FINE SANDS; SILT AND FINE TO COARSE–GRAINED SAND; PEAT, ORGANIC CLAY — UNIT 2

CLAY MATERIAL — UNIT 3

TILL MATERIAL — UNIT 4

NOTE: GREYED–BACK AREAS DEPICT SECTIONS OF THE SITE WHICH WERE REMEDIATED IN 2005.

VERTICAL SCALE IN FEET: 15, 7.5, 0, 15

HORIZONTAL SCALE IN FEET: 30, 15, 0, 30

NOTE: VERTICAL EXAGGERATION = 2X

NOT FOR BID OR CONSTRUCTION

REVISION NO.	DATE	REVISION

GRAPHIC SCALE IN FEET 1" = 30' (30, 0, 30, 60)

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PLATE 4C
GEOLOGIC CROSS SECTIONS AND SUMMARY OF SOIL ANALYTICAL RESULTS (ppm)

CLOVE AND MAPLE AVES FORMER MGP

HAVERSTRAW — ROCKLAND COUNTY — NEW YORK

PROJECT NO	DATE
070748502	1/28/2009
DRAWN BY: MVS	DESIGNED BY: ERG
SCALE: 1" = 30'	CHECKED BY: ERG
CMX	
SHEET NO. 1 of 1	

Soil Boring	SB-130	SB-130	SB-130
Sampling Date	05/29/08	05/28/08	05/28/08
Sample Depth	12.0 to 13.0	14.0-14.5	16.5-17.0
NAPL	oil	oil	none
TarGOST	no data	no data	no data
Total VOC	42.93	0.293	ND
Total BTEX	**42**	0.257	ND
Total PAHs	**1089.1**	**173.65**	0.013
Nickel	NR	NR	NR

Soil Boring	SB-124
Sampling Date	05/01/08
Sample Depth	5.0 to 5.5
NAPL	none
TarGOST	15 (J)
Total VOC	0.055
Total BTEX	ND
Total PAHs	ND
Nickel	NR

Soil Boring	SB-67	SB-67	SB-67
Sampling Date	05/01/08	05/28/08	05/28/08
Sample Depth	13.5 to 14.0	16.5 to 17.0	17.5 to 18.0
NAPL	Oil	None	None
TarGOST	428.7	background	background
Total VOC	**279.6**	7.333	0.2025
Total BTEX	**273.5**	**7.26**	0.06
Total PAHs	**2089**	**35.2**	4.693
Nickel	NR	NR	NR

Soil Boring	SB-139	SB-139	SB-139
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	13.0-13.5	16.0-16.5	17.0-17.5
NAPL	oil	oil	none
TarGOST	no data	no data	no data
Total VOC	4.88	0.0153	0.0217
Total BTEX	**4.6**	ND	ND
Total PAHs	**1378**	**1.07**	ND
Nickel	NR	NR	NR

Soil Boring	SB-123
Sampling Date	05/01/08
Sample Depth	8.5-9.0
NAPL	none
TarGOST	10 (J)
Total VOC	0.0232
Total BTEX	ND
Total PAHs	0.091
Nickel	NR

Soil Boring	SB-75	SB-75	SB-75	SB-75
Sampling Date	05/02/08	05/02/08	05/02/08	05/02/08
Sample Depth	2.5 to 3.0	8.0 to 8.5	16.5 to 17.0	19.0 to 19.5
NAPL	Sheen	Oil	Oil	None
TarGOST	10 (J)	10 (J)	background	background
Total VOC	0.1038	0.1826	8.197	0.198
Total BTEX	0.0007	0.1079	**8.1**	ND
Total PAHs	1.059	13.69	**175.4**	1.076
Nickel	NR	NR	NR	NR

Soil Boring	SB-71	SB-71	SB-71
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	12.0 to 12.5	13.5 to 14.0	18.0 to 18.5
NAPL	Oil	Oil	None
TarGOST	100 (J)	389.8	background
Total VOC	18.76	191	0.0734
Total BTEX	**17.88**	**185.7**	ND
Total PAHs	**527.3**	**3252**	0.245
Nickel	NR	NR	NR

Soil Boring	SB-80	SB-80
Sampling Date	05/02/08	05/02/08
Sample Depth	12.0 to 12.5	17.0 to 17.5
NAPL	Sheen	None
TarGOST	25 (J)	background
Total VOC	0.1182	ND
Total BTEX	ND	ND
Total PAHs	**23.45**	ND
Nickel	NR	NR

Soil Boring	SB-131
Sampling Date	05/28/08
Sample Depth	13.5-14.0
NAPL	none
TarGOST	no data
Total VOC	0.0682
Total BTEX	ND
Total PAHs	0.028
Nickel	NR

Soil Boring	MW-31	MW-31
Sampling Date	7/1/2004	7/1/2004
Sample Depth	8.0 to 10.0	33.0 to 34.0
NAPL	Oil	None
Total VOC	**102.09**	ND
Total BTEX	**102.09**	ND
Total PAHs	**1060**	**0.073**
Nickel	NR	NR

Soil Boring	SB-30S	SB-30S
Sampling Date	7/1/2004	7/1/2004
Sample Depth	6.5 to 7.0	15.0 to 16.0
NAPL	Sheen	None
Total VOC	0.364	0.014
Total BTEX	0.364	0.014
Total PAHs	**509.5**	**1.912**
Nickel	NR	NR

Soil Boring	SB-140	SB-140	SB-140
Sampling Date	05/28/08	05/28/08	05/28/08
Sample Depth	9.5-10.0	12.0-12.5	17.0-17.5
NAPL	oil	none	none
TarGOST	no data	no data	no data
Total VOC	8.8	0.0037	0.012
Total BTEX	**7.5**	ND	ND
Total PAHs	**5054**	0.541	0.012
Nickel	NR	NR	NR

Soil Boring	SB-141	SB-141
Sampling Date	05/28/08	05/28/08
Sample Depth	12.5-13.0	14.8-15.3
NAPL	oil	none
TarGOST	no data	no data
Total VOC	5.0	0.1088
Total BTEX	**4.9**	ND
Total PAHs	**568.5**	ND
Nickel	NR	NR

Soil Boring	MW-32	MW-32
Sampling Date	7/1/2004	7/1/2004
Sample Depth	10.0 to 11.0	34.0 to 36.0
NAPL	Oil	None
Total VOC	**46.91**	ND
Total BTEX	**46.91**	ND
Total PAHs	**1313**	**0.13**
Nickel	NR	NR

Soil Boring	MW-28D	MW-28D
Sampling Date	11/29/2001	11/29/2001
Sample Depth	8.0 to 10.0	30.0 to 30.0
NAPL	Oil	None
Total VOC	**327.3**	0.0009
Total BTEX	**271.3**	0.0009
Total PAHs	**5291**	0.192
Nickel	23.4	12.6

Soil Boring	SB-63	SB-63	SB-63
Sampling Date	05/20/08	05/20/08	05/20/08
Sample Depth	9.0 to 9.5	10.5 to 11.0	13.5 to 14.0
NAPL	Sheen	None	None
TarGOST	12.0	background	background
Total VOC	15.624	0.2093	0.0377
Total BTEX	15.36	ND	ND
Total PAHs	**133.2**	0.755	ND
Nickel	NR	NR	NR

Soil Boring	SB-133	SB-133	SB-133
Sampling Date	05/20/08	05/20/08	05/20/08
Sample Depth	8.4-8.9	10.5-11.0	14.0-14.5
NAPL	oil	oil	oil
TarGOST	no data	no data	no data
Total VOC	22.64	0.061	0.048
Total BTEX	**22.4**	ND	ND
Total PAHs	**329.5**	**6.355**	0.0096
Nickel	NR	NR	NR

Soil Boring	SB-134	SB-134
Sampling Date	05/20/08	05/20/08
Sample Depth	8.5-9.0	12.0-12.5
NAPL	oil	oil
TarGOST	no data	no data
Total VOC	0.044	0.018
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	NR	NR

Soil Boring	SB-138	SB-138
Sampling Date	05/20/08	05/20/08
Sample Depth	9.0-9.5	14-14.5
NAPL	oil	oil
TarGOST	no data	no data
Total VOC	0.075	0.0561
Total BTEX	0.075	0.0061
Total PAHs	**138**	ND
Nickel	NR	NR

Soil Boring	SB-132	SB-132
Sampling Date	05/20/08	05/20/08
Sample Depth	9.0-9.5	11.5-12.0
NAPL	oil	none
TarGOST	no data	no data
Total VOC	ND	0.1922
Total BTEX	ND	ND
Total PAHs	**214.6**	**23.4**
Nickel	NR	NR

Soil Boring	SB-62
Sampling Date	05/02/08
Sample Depth	9.0 to 9.5
NAPL	Sheen
TarGOST	63 (J)
Total VOC	0.609
Total BTEX	0.494
Total PAHs	**237.1**
Nickel	NR

Soil Boring	SB-61	SB-61
Sampling Date	05/20/08	05/20/08
Sample Depth	9.0 to 9.5	11.0 to 12.0
NAPL	None	None
TarGOST	no data	no data
Total VOC	0.2915	0.0819
Total BTEX	0.101	0.0069
Total PAHs	5.039	3.612
Nickel	NR	NR

Soil Boring	SB-64	SB-64
Sampling Date	05/29/08	05/28/08
Sample Depth	10.4 to 10.9	13.5 to 14.0
NAPL	Oil	None
TarGOST	122.4	background
Total VOC	ND	0.1501
Total BTEX	ND	0.0266
Total PAHs	**292.13**	16.26
Nickel	NR	NR

Soil Boring	SB-48
Sampling Date	7/1/2004
Sample Depth	14.0 to 15.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.756
Nickel	NR

Soil Boring	MW-20D	MW-20D
Sampling Date	11/28/2001	11/28/2001
Sample Depth	10.0 to 10.0	25.5 to 25.5
NAPL	Tar	None
Total VOC	**37**	0.0058
Total BTEX	**37**	0.005
Total PAHs	**289.3**	0.075
Nickel	16.4	11.1

Soil Boring	SB-45A	SB-45A
Sampling Date	05/29/08	05/29/08
Sample Depth	9.2 to 9.7	15.0 to 15.5
NAPL	Oil	None
TarGOST	no data	no data
Total VOC	**1.41**	0.1872
Total BTEX	**1.41**	**0.1051**
Total PAHs	**155.2**	0.807
Nickel	NR	NR

Soil Boring	SB-68
Sampling Date	04/22/08
Sample Depth	8.5 to 9.5
NAPL	Oil
TarGOST	54.2
Total VOC	1.82
Total BTEX	**1.82**
Total PAHs	**7.918**
Nickel	NR

Soil Boring	SB-45	SB-45	SB-45	SB-45	SB-45	SB-45
Sampling Date	7/2/2004	7/2/2004	7/2/2004	7/15/2004	7/15/2004	7/15/2004
Sample Depth	8.0 to 9.0	10.0 to 11.0	11.0 to 12.0	18.0 to 20.0	24.0 to 25.0	27.0 to 28.0
NAPL	Tar	Tar	Odor	None	Odors	Sheen
Total VOC	**11.9**	**5.8**	0.008	ND	ND	ND
Total BTEX	**11.9**	**5.8**	0.008	ND	ND	ND
Total PAHs	**442.8**	**1060.8**	**3.594**	**23.58**	**25.12**	**3.391**
Nickel	NR	NR	NR	NR	NR	NR

Soil Boring	MW-29D
Sampling Date	11/29/2001
Sample Depth	29.0 to 29.0
NAPL	None
Total VOC	0.001
Total BTEX	0.001
Total PAHs	0.103
Nickel	7.4

Soil Boring	SB-58	SB-58
Sampling Date	7/12/2004	7/12/2004
Sample Depth	8.0 to 9.0	16.0 to 18.0
NAPL	Tar	None
Total VOC	**252.9**	**1.22**
Total BTEX	**252.9**	**1.22**
Total PAHs	**9918**	4.377
Nickel	NR	NR

Soil Boring	SB-86
Sampling Date	05/02/08
Sample Depth	13.0 to 13.5
NAPL	Oil / Tar
TarGOST	500 (J)
Total VOC	244.7
Total BTEX	**243**
Total PAHs	**3772**
Nickel	NR

Soil Boring	SB-78	SB-78
Sampling Date	05/02/08	05/02/08
Sample Depth	12.0 to 12.5	15.0 to15.5
NAPL	Oil	Oil
TarGOST	15 (J)	background
Total VOC	**0.8021**	0.037
Total BTEX	**0.528**	ND
Total PAHs	**26.39**	ND
Nickel	NR	NR

Soil Boring	SB-21S
Sampling Date	7/12/2004
Sample Depth	8.0 to 9.0
NAPL	None
Total VOC	0.015
Total BTEX	ND
Total PAHs	**6.593**
Nickel	NR

Soil Boring	SB-49	SB-49
Sampling Date	7/1/2004	7/1/2004
Sample Depth	7.0 to 8.0	13.5 to 14.5
NAPL	Oil	None
Total VOC	**115.6**	0.049
Total BTEX	**115.6**	0.049
Total PAHs	**40240**	**11.321**
Nickel	NR	NR

Soil Boring	SB-46	SB-46
Sampling Date	7/2/2004	7/2/2004
Sample Depth	10.0 to 11.0	14.0 to 15.0
NAPL		
Total VOC	**457.7**	ND
Total BTEX	**457.7**	ND
Total PAHs	**25040**	2.432
Nickel	NR	NR

Soil Boring	SB-85	SB-85	SB-85
Sampling Date	04/22/08	05/20/08	05/20/08
Sample Depth	13.0 to 13.5	13.0 to 13.5	16.0 to 17.0
NAPL	Oil	Oil	None
TarGOST	200 (J)	200 (J)	background
Total VOC	17.391	3.37	ND
Total BTEX	**17.1**	**3.25**	ND
Total PAHs	**3348**	**643.9**	3.503
Nickel	NR	NR	NR

Soil Boring	MW-21	MW-21
Sampling Date	11/28/2001	11/28/2001
Sample Depth	8.0 to 10.0	20.0 to 22.0
NAPL	Odors	None
Total VOC	0.119	ND
Total BTEX	0.119	ND
Total PAHs	**3.569**	0.013
Nickel	**30.9**	14.7

Soil Boring	SB-120
Sampling Date	05/01/08
Sample Depth	4.5 to 5.0
NAPL	none
TarGOST	background
Total VOC	0.0526
Total BTEX	ND
Total PAHs	ND
Nickel	NR

Soil Boring	SB-121	SB-121
Sampling Date	05/29/08	05/29/08
Sample Depth	13.0-13.5	17.0-17.5
NAPL	oil	none
TarGOST	30 (J)	background
Total VOC	**2.69**	0.0363
Total BTEX	2.39	ND
Total PAHs	**321.7**	ND
Nickel	NR	NR

Soil Boring	SB-88	SB-88
Sampling Date	04/25/08	04/25/08
Sample Depth	4.5 to 5.0	5.5 to 6.0
NAPL	None	Oil
TarGOST	background	20 (J)
Total VOC	0.061	0.2133
Total BTEX	ND	0.0093
Total PAHs	5	**224.7**
Nickel	NR	NR

Soil Boring	SB-142	SB-142
Sampling Date	05/29/08	05/29/08
Sample Depth	8.2-8.7	12.5-13.0
NAPL	none	oil
TarGOST	no data	no data
Total VOC	0.0408	0.018
Total BTEX	0.0034	ND
Total PAHs	**99.23**	0.116
Nickel	NR	NR

Soil Boring	MW-60
Sampling Date	7/13/2004
Sample Depth	8.0 to 9.0
NAPL	Oil
Total VOC	**2.39**
Total BTEX	**2.39**
Total PAHs	**7954**
Nickel	NR

Soil Boring	SB-100
Sampling Date	04/30/08
Sample Depth	8.25 to 8.75
NAPL	Oil
TarGOST	53.5
Total VOC	2.6
Total BTEX	**2.6**
Total PAHs	**1602**
Nickel	NR

Soil Boring	SB-92
Sampling Date	05/01/08
Sample Depth	5.0 to 5.5
NAPL	Sheen
TarGOST	background
Total VOC	0.073
Total BTEX	ND
Total PAHs	3.472
Nickel	NR

Soil Boring	SB-107
Sampling Date	04/30/08
Sample Depth	5.5 to 6.0
NAPL	None
TarGOST	background
Total VOC	0.015
Total BTEX	ND
Total PAHs	ND
Nickel	NR

Soil Boring	MW-55
Sampling Date	7/12/2004
Sample Depth	10.0 to 12.0
NAPL	Sheen
Total VOC	0.012
Total BTEX	0.012
Total PAHs	**99.44**
Nickel	NR

Soil Boring	SB-59
Sampling Date	7/12/2004
Sample Depth	15.5 to 16.0
NAPL	Oil
Total VOC	**64.2**
Total BTEX	**35.1**
Total PAHs	**4911.9**
Nickel	NR

Soil Boring	SB-94	SB-94
Sampling Date	04/30/08	05/28/08
Sample Depth	9.0 to 9.5	9.0 to 10.0
NAPL	Tar	Tar
TarGOST	630.6	630.6
Total VOC	1129	483
Total BTEX	**1100**	**480**
Total PAHs	**28350**	**19205**
Nickel	NR	NR

Soil Boring	SB-56
Sampling Date	7/12/2004
Sample Depth	14.0 to 16.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	0.108
Nickel	NR

Soil Boring	SB-84	SB-84A	SB-84A	SB-84A
Sampling Date	05/01/08	05/29/08	05/29/08	05/29/08
Sample Depth	4.5 to 5.0	12.0 to 12.5	13.5 to 14.5	13.5 to 13.5
NAPL	None	Oil	None	None
TarGOST	15 (J)	no data	no data	no data
Total VOC	0.0648	0.1619	0.032	0.058
Total BTEX	0.0018	0.0707	ND	ND
Total PAHs	4.75	**89.7**	0.382	1.947
Nickel	NR	NR	NR	NR

Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consitutent compounds.
BTEX	The sum of benzene, toluene, ethylbenzene, and xylene concentrations
PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

NOTE:

PROPERTY INFORMATION SHOWN AND METES AND BOUNDS DERIVED FROM ATZL, SCATASSA & ZIGLER LAND SURVEYORS–PLANNERS
234 NORTH MAIN STREET, NEW CITY NEW YORK 10956.
156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY
PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND

- VC–03 VIBRACORE SAMPLE LOCATION
- SG–1 PRE–2008 SOIL GAS SAMPLE LOCATION
- MW–20 PRE–2008 MONITORING WELL LOCATION
- SB–17 PRE–2008 SOIL BORING LOCATION
- HA–1 1998–2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION
- SB–83/MW–83 2008 SRI MONITORING WELL LOCATION
- TP–2 1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION
- SW013102–6 1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION
- SD013102–2 1998–2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION
- SB–106 2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT
- SV–01 2008 SOIL GAS SAMPLE ONLY
- STORM SEWER
- EXISTING STRUCTURE
- PROPERTY BOUNDARY, SURVEYED
- PROPERTY BOUNDARY APPROXIMATE
- HISTORICAL STRUCTURE
- RIVER SHORELINE
- WOOD FENCE
- CHAIN–LINK FENCE
- GAS MAINS
- OVERHEAD WIRE
- UTILITY POLE
- WATER GATE VALVE
- FIRE HYDRANT
- SEWER MANHOLE
- CATCH BASIN
- INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (938 MAPLE AVENUE FORMER MGP SITE)

NOTE:

ALL CONCENTRATIONS SHOWN ARE EXPRESSED IN ppm(mg/kg)

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.
– DATUM: NGVD 1927.

NOT FOR BID OR CONSTRUCTION

REVISION NO.	DATE	REVISION

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30 0 30 60
GRAPHIC SCALE IN FEET
1"=30'

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FAX (914)686–1222

PLATE 5A–SOIL ANALYTICAL RESULTS–AREA NORTH OF MAPLE
SUPPLEMENTAL REMEDIAL INVESTIGATION–2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW — ROCKLAND COUNTY — NEW YORK

PROJECT NO.	DATE
A/W748502	1/28/2009
DRAWN BY	DESIGNED BY
MVS	ERG
SCALE	CHECKED BY
1"=30'	ERG
CMX	
SHEET NO.	1 of 1

Soil Boring	SB-112A	SB-112B	SB-112B
Sampling Date	05/09/08	05/12/08	05/12/08
Sample Depth	18.0 to 19.0	22.0 to 23.0	32.0 to 33.0
NAPL	None	None	None
TarGOST	no data	no data	no data
Total VOC	0.89	0.042	37.32
Total BTEX	0.89	0.01	**36.56**
Total PAHs	16.54	0.176	0.0504
Nickel	9.8	10.2	20.8

Soil Boring	MW-06	MW-06
Sampling Date	3/2/1999	3/2/1999
Sample Depth	5.0 to 5.5	16.5 to 17.0
NAPL	None	None
Total VOC	1.048	ND
Total BTEX	**1.032**	ND
Total PAHs	**0.26**	ND
Nickel	24.8	13.2

Soil Boring	SB-114	SB-114	SB-114	SB-114	SB-114
Sampling Date	05/07/08	05/07/08	05/07/08	05/07/08	05/07/08
Sample Depth	6.5 to 7.0	16.5 to 17.5	16.5 to 17.5	19.0 to 19.5	29.5 to 30.0
NAPL	Oil	Oil	Oil	None	None
TarGOST	no data	no data	no data	no data	no data
Total VOC	107.1	98	3	0.28	ND
Total BTEX	**62.1**	**58**	**3**	**0.24**	ND
Total PAHs	**599.3**	73.13	**946.4**	**8.616**	0.1516
Nickel	26.2	22.5	18.1	23.3	14.8

Soil Boring	MW-02
Sampling Date	5/15/1997
Sample Depth	12.0 to 14.0
NAPL	Tar
Total VOC	94.4
Total BTEX	**94.4**
Total PAHs	**1499**
Nickel	NR

Soil Boring	MW-05
Sampling Date	12/15/1998
Sample Depth	18.0 to 20.0
NAPL	Trace Tar
Total VOC	0.032
Total BTEX	ND
Total PAHs	0.975
Nickel	7.8

Soil Boring	SB-129	SB-129	SB-129	SB-129
Sampling Date	05/16/08	05/16/08	05/19/08	05/19/08
Sample Depth	10.8-11.3	13.25 to 13.75	15.0 to 15.5	26.1 to 26.6
NAPL	oil	oil	none	none
TarGOST	no data	no data	no data	no data
Total VOC	6.2	26.06	0.245	0.0154
Total BTEX	**6.2**	**26**	0.2444	ND
Total PAHs	**54.03**	**184.53**	0.9982	0.0891
Nickel	**40.3**	**38.2**	28.6	14.5

Soil Boring	SB-16	SB-16	SB-16
Sampling Date	6/20/2001	6/20/2001	6/20/2001
Sample Depth	18.0 to 18.0	30.0 to 30.0	36.0 to 36.0
NAPL	Tar	Sheen	None
Total VOC	**233.2**	0.255	0.008
Total BTEX	**189.5**	0.165	ND
Total PAHs	**208.6**	**51.79**	ND
Nickel	7.8	7.6	10.1

Soil Boring	MW-04
Sampling Date	12/15/1998
Sample Depth	16.0 to 18.0
NAPL	Trace Tar
Total VOC	1.045
Total BTEX	0.81
Total PAHs	0.658
Nickel	6

Soil Boring	MW-08	MW-08
Sampling Date	12/11/1998	12/11/1998
Sample Depth	10.0 to 12.0	14.0 to 16.0
NAPL	Odors	None
Total VOC	ND	0.021
Total BTEX	NR	0.021
Total PAHs	**54.57**	ND
Nickel	**32.2**	25.3

Soil Boring	SB-119	SB-119	SB-119	SB-119	SB-119
Sampling Date	5/14/2008	5/14/2008	5/14/2008	5/14/2008	5/14/2008
Sample Depth	12.0 to 13.0	18.0 to 19.0	21.2 to 21.7	23.0-24.0	37.2-37.7
NAPL	oil	non	oil	none	none
TarGOST	no data	no data	no data	no data	no data
Total VOC	54.1	1.166	172	ND	0.0385
Total BTEX	**40.8**	**0.99**	**129**	ND	0.0184
Total PAHs	**1380.5**	1.773	**387.13**	3.366	3.238
Nickel	29.6	**30.1**	11	9.2	9.6

Soil Boring	SB-22	SB-22
Sampling Date	6/18/2001	6/18/2001
Sample Depth	12.0 to 12.0	20.0 to 20.0
NAPL	None	None
Total VOC	0.083	0.045
Total BTEX	0.036	ND
Total PAHs	0.317	ND
Nickel	9.4	7.7

Soil Boring	SG-15	SG-15
Sampling Date	10/21/1998	10/21/1998
Sample Depth	8.0 to 8.5	19.0 to 20.0
NAPL		
Total VOC	ND	ND
Total BTEX	ND	ND
Total PAHs	0.103	ND
Nickel	14.5	11.7

Soil Boring	SB-14	SB-14	SB-14
Sampling Date	6/19/2001	6/19/2001	6/19/2001
Sample Depth	10.0 to 10.0	22.0 to 22.0	22.0 to 22.0
NAPL	Tar	None	None
Total VOC	151	ND	0.043
Total BTEX	**141**	ND	0.04
Total PAHs	**421.2**	0.433	0.329
Nickel	**30.9**	8.7	11.1

Soil Boring	MW-11	MW-11
Sampling Date	12/17/1998	12/18/01998
Sample Depth	12.0 to 14.0	20.0 to 22.0
NAPL	None	None
Total VOC	0.004	0.006
Total BTEX	ND	ND
Total PAHs	0.169	0.041
Nickel	**31.7**	11.6

Soil Boring	SB-18	SB-18
Sampling Date	6/19/2001	6/19/2001
Sample Depth	11.5 to 11.5	31.0 to 31.0
NAPL	Tar	None
Total VOC	**146.6**	0.071
Total BTEX	**137.3**	0.069
Total PAHs	**145.84**	**1.007**
Nickel	13.2	7.7

Soil Boring	SB-118	SB-118	SB-118
Sampling Date	05/06/08	05/06/08	05/06/08
Sample Depth	14.2-14.7	18.0-18.5	28.0-28.5
NAPL	oil	none	none
TarGOST	no data	no data	no data
Total VOC	ND	ND	ND
Total BTEX	ND	ND	ND
Total PAHs	**19.035**	**4.639**	ND
Nickel	13.7	12.9	10.8

Soil Boring	SG-16	SG-16
Sampling Date	10/21/1998	10/12/1998
Sample Depth	12.0 to 13.0	23.5 to 24.0
NAPL		
Total VOC	ND	ND
Total BTEX	ND	ND
Total PAHs	ND	**4.499**
Nickel	11	10.2

Soil Boring	MW-03
Sampling Date	5/15/1997
Sample Depth	10.0 to 12.0
NAPL	Staining
Total VOC	627
Total BTEX	**627**
Total PAHs	**1325.7**
Nickel	NR

Soil Boring	MW-24
Sampling Date	6/22/2001
Sample Depth	18.0 to 18.0
NAPL	None
Total VOC	0.002
Total BTEX	ND
Total PAHs	0.11
Nickel	11.5

Soil Boring	SB-117	SB-117
Sampling Date	05/06/08	05/06/08
Sample Depth	14.2 to 14.7	28.5-29.0
NAPL	None	None
TarGOST	no data	no data
Total VOC	ND	ND
Total BTEX	ND	ND
Total PAHs	**5.65**	ND
Nickel	14.9	11.3

Soil Boring	MW-09	MW-09
Sampling Date	12/10/1998	12/10/1998
Sample Depth	8.0 to 10.0	12.0 to 14.0
NAPL	Odors	Odors
Total VOC	0.496	ND
Total BTEX	0.496	ND
Total PAHs	**227.63**	0.511
Nickel	11.1	**13**

Soil Boring	SB-23
Sampling Date	6/21/2001
Sample Depth	22.0 to 22.0
NAPL	None
Total VOC	ND
Total BTEX	ND
Total PAHs	ND
Nickel	9.7

Soil Boring	SB-115	SB-115
Sampling Date	05/08/08	05/09/08
Sample Depth	17.0 to 18.0	26.0 to 26.5
NAPL	None	None
TarGOST	no data	no data
Total VOC	ND	ND
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	10.9	9.5

Soil Boring	TP-05
Sampling Date	10/18/1998
Sample Depth	12.0 to 13.0
NRPL	None
Total VOC	**16.5**
Total BTEX	**14.5**
Total PAHs	NR
Nickel	29.7

Soil Boring	SB-108	SB-108
Sampling Date	05/15/08	05/16/08
Sample Depth	13.0 to 14.0	33.0 to 34.0
NAPL	None	None
TarGOST	no data	no data
Total VOC	ND	ND
Total BTEX	ND	ND
Total PAHs	0.092	ND
Nickel	13.3	12.6

Soil Boring	SB-113	SB-113	SB-113
Sampling Date	05/07/08	05/07/08	05/07/08
Sample Depth	13.0 to 13.5	22.0 to 22.5	31.5 to 32.0
NAPL	Tar	None	None
TarGOST	background	background	no data
Total VOC	5.29	0.0006	ND
Total BTEX	**4.9**	0.0006	ND
Total PAHs	23.359	7.236	ND
Nickel	18.5	8.9	11.7

Soil Boring	SB-128	SB-128	SB-128
Sampling Date	05/14/08	05/14/08	05/15/08
Sample Depth	10.5 to 11.0	14.0-14.5	28.1-28.6
NAPL	staining	none	none
TarGOST	no data	no data	no data
Total VOC	ND	ND	0.014
Total BTEX	ND	ND	ND
Total PAHs	**63.41**	0.035	0.012
Nickel	12.1	11.3	12.4

Soil Boring	SB-116	SB-116
Sampling Date	05/08/08	05/08/08
Sample Depth	8.0 to 9.0	30.0 to 30.5
NAPL	None	None
TarGOST	no data	no data
Total VOC	ND	0.002
Total BTEX	ND	ND
Total PAHs	0.043	ND
Nickel	11.6	10.8

Soil Boring	SB-110	SB-110
Sampling Date	05/13/08	05/13/08
Sample Depth	10.5 to 11.0	28.0 to 28.5
NAPL	None	None
TarGOST	no data	no data
Total VOC	0.0353	0.0299
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	10.5	12.5

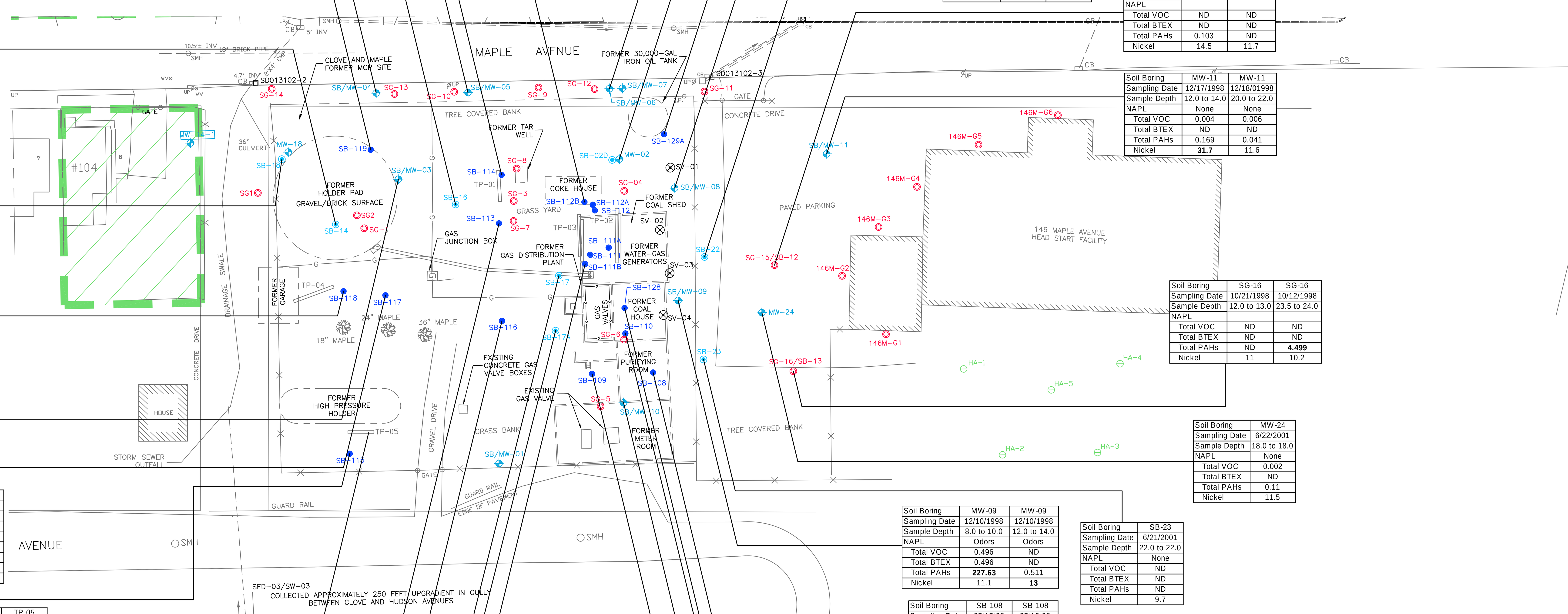
Soil Boring	SB-17	SB-17	SB-17
Sampling Date	6/18/2001	6/18/2001	6/18/2001
Sample Depth	4.0 to 4.0	12.0 to 12.0	14.0 to 14.0
NAPL	Oil	Oil	None
Total VOC	**71.557**	**255.9**	0.028
Total BTEX	**68.3**	**204.2**	0.003
Total PAHs	**636.5**	**331.7**	**6.123**
Nickel	17.7	9.2	7.2

Soil Boring	SB-17A
Sampling Date	6/22/2001
Sample Depth	28.0 to 28.0
NAPL	None
Total VOC	0.001
Total BTEX	ND
Total PAHs	ND
Nickel	8.2

Soil Boring	MW-10	MW-10
Sampling Date	12/16/1998	12/17/1998
Sample Depth	22.0 to 24.0	36.0 to 38.0
NAPL	None	None
Total VOC	0.006	0.003
Total BTEX	ND	ND
Total PAHs	0.037	ND
Nickel	8.1	9

Soil Boring	SB-111B	SB-111B	SB-111B
Sampling Date	05/12/08	05/13/08	05/13/08
Sample Depth	8.5 to 9.0	22.2 to 22.7	32.5 to 33.0
NAPL	Oil	None	None
TarGOST	no data	no data	no data
Total VOC	31.25	0.0524	0.0252
Total BTEX	**30.73**	ND	0.0014
Total PAHs	**1794.1**	0.0746	0.1684
Nickel	26.3	12.1	19

Soil Boring	SB-109	SB-109
Sampling Date	05/20/08	05/20/08
Sample Depth	14.5 to 15.0	29.5 to 30.0
NAPL	None	None
TarGOST	no data	no data
Total VOC	0.039	0.0694
Total BTEX	ND	ND
Total PAHs	ND	ND
Nickel	11.1	7.9



Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consitutent compounds.
BTEX	The sum of benzene, toluene, ethylbenzene, and xylene concentrations
PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

NOTE:
PROPERTY INFORMATION SHOWN AND METES AND BOUNDS DERIVED FROM AZZL, SCATASSA & ZIGLER P.C. SURVEYORS-PLANNERS, 234 NORTH MAIN STREET, NEW CITY NEW YORK 10956, 156 ORANGE AVENUE, WALDEN NEW YORK 12586
DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:
VILLAGE OF HAVERSTRAW TAX MAP TL 27.62-2-17.1, 17.2, 17.3, AND 17.4

NOTE:
THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF DRY WELLS, SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND
VIBRACORE SAMPLE LOCATION
PRE-2008 SOIL GAS SAMPLE LOCATION
PRE-2008 MONITORING WELL LOCATION
PRE-2008 SOIL BORING LOCATION
1998-2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION
2008 SRI MONITORING WELL LOCATION
1998-2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION
1998-2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION
1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION
2008 SRI SOIL BORING LOCATION; WHERE INDICATED - "SV" REPRESENTS CO-LOCATED SOIL VAPOR POINT; "TMP" REPRESENTS CO-LOCATED TEMPORARY WELL POINT
2008 SOIL GAS SAMPLE ONLY
STORM SEWER
EXISTING STRUCTURE
PROPERTY BOUNDARY, SURVEYED
PROPERTY BOUNDARY APPROXIMATE
HISTORICAL STRUCTURE
RIVER SHORELINE
WOOD FENCE
CHAIN-LINK FENCE
GAS MAINS
OVERHEAD WIRE
UTILITY POLE
WATER GATE VALVE
FIRE HYDRANT
SEWER MANHOLE
CATCH BASIN
INTERIM REMEDIAL ACTIONS COMPLETED 2003-2005 (938 MAPLE AVENUE FORMER MGP SITE)

NOTE:
ALL CONCENTRATIONS SHOWN ARE EXPRESSED IN ppm(mg/kg)

GEODETIC REFERENCES:
- NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.
- DATUM: NGVD 1927.

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REVISION NO.	DATE	REVISION

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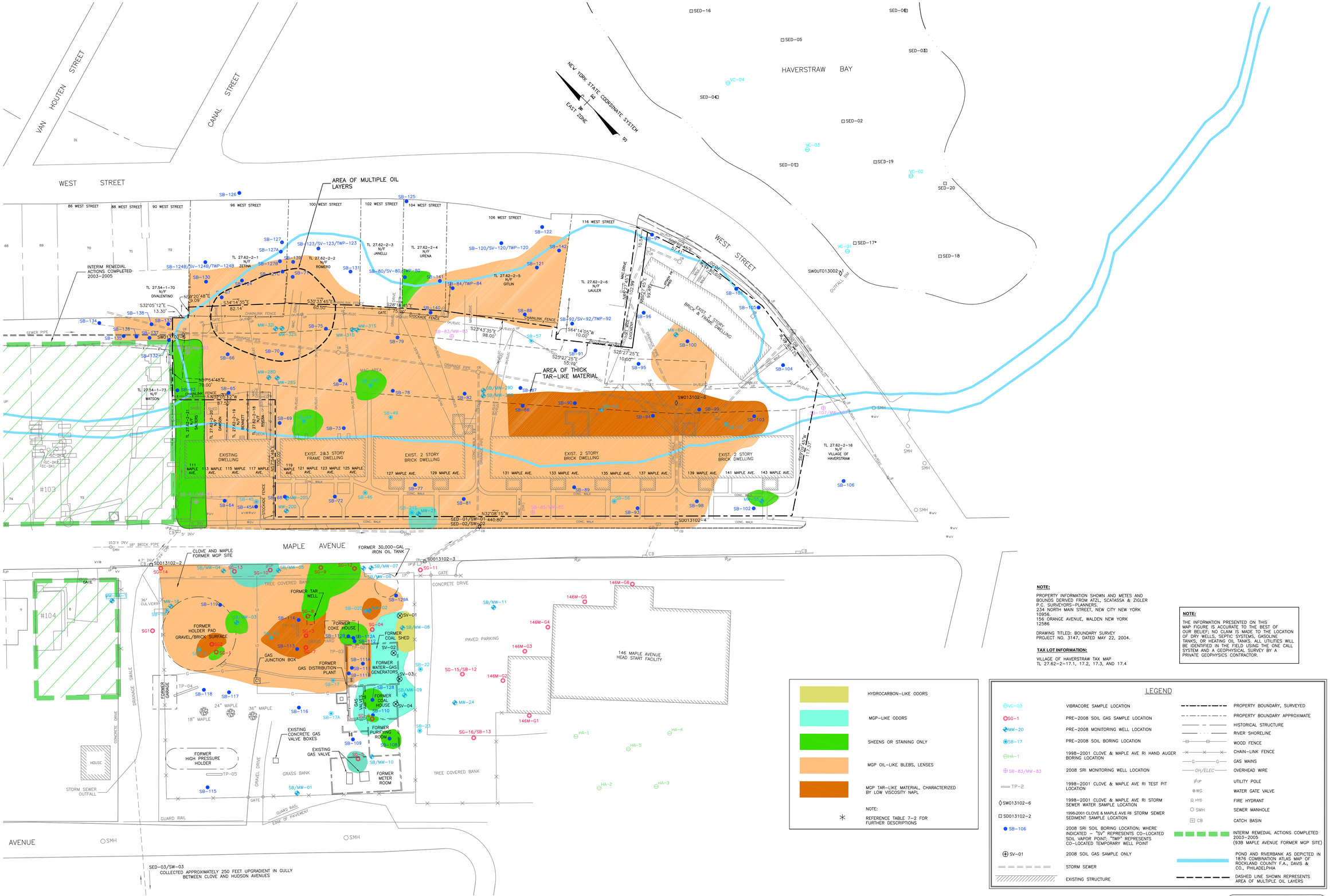
PLATE 5B-SOIL ANALYTICAL RESULTS-AREA SOUTH OF MAPLE AVE
SUPPLEMENTAL REMEDIAL INVESTIGATION-2008
CLOVE AND MAPLE FORMER MGP SITE
HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	DATE
7748502	1/28/2009
DRAWN BY	DESIGNED BY
MVS	ERG
SCALE	CHECKED BY
1" = 30'	ERG
SHEET NO.	1 of 1


VAN HOUTEN STREET
CANAL STREET
WEST STREET
HAVERSTRAW BAY
NEW YORK STATE COORDINATE SYSTEM
EAST ZONE
AREA OF MULTIPLE OIL LAYERS
INTERIM REMEDIAL ACTIONS COMPLETED 2003-2005
AREA OF THICK TAR-LIKE MATERIAL
MAPLE AVENUE
CLOVE AND MAPLE FORMER MGP SITE
FORMER 30,000-GAL IRON OIL TANK
FORMER TAR WELL
FORMER COKE HOUSE
FORMER COAL SHED
FORMER HOLDER PAD GRAVEL/BRICK SURFACE
GAS JUNCTION BOX
FORMER GAS DISTRIBUTION PLANT
FORMER WATER-GAS GENERATORS
FORMER COAL HOUSE
FORMER PURIFYING ROOM
FORMER METER ROOM
FORMER HIGH PRESSURE HOLDER
FORMER GARAGE
EXISTING CONCRETE GAS VALVE BOXES
EXISTING GAS VALVE
GAS VALVES
TREE COVERED BANK
GRASS BANK
PAVED PARKING
CONCRETE DRIVE
GRAVEL DRIVE
DRAINAGE SWALE
STORM SEWER OUTFALL
HOUSE
146 MAPLE AVENUE HEAD START FACILITY
EXISTING DWELLING
EXIST. 2&3 STORY FRAME DWELLING
EXIST. 2 STORY BRICK DWELLING
EXIST. 2 STORY BRICK DWELLING
EXIST. 2 STORY BRICK DWELLING
EXIST. 4 STORY BRICK & FRAME DWELLING
SED-01/SW-01
SED-02/SW-02
SED-03/SW-03
COLLECTED APPROXIMATELY 250 FEET UPGRADIENT IN GULLY BETWEEN CLOVE AND HUDSON AVENUES
GUARD RAIL
EDGE OF PAVEMENT
CONC. WALK
OUTFALL
SEWER PIPE
DRAINAGE PIPE
CHAINLINK FENCE
STOCKADE FENCE
GATE
SMH
CB
HYD
WG
SV-01
SV-02
SV-03
SV-04
SG-1
SG-2
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SB-83/MW-83
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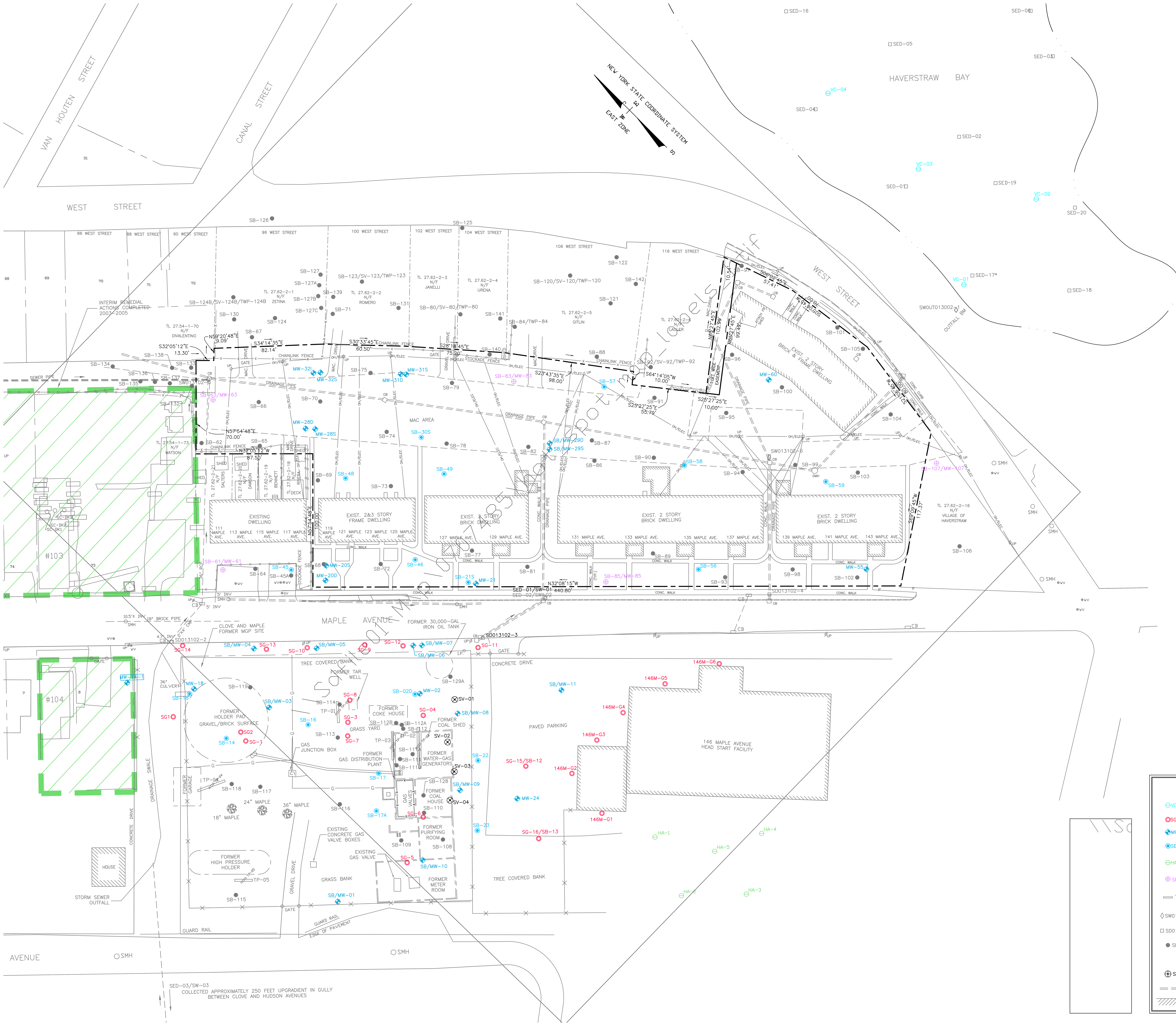

NOTE:

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156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF DRY WELLS, SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND

Symbol	Description	Symbol	Description
VC-03	VIBRACORE SAMPLE LOCATION		PROPERTY BOUNDARY, SURVEYED
SG-1	PRE-2008 SOIL GAS SAMPLE LOCATION		PROPERTY BOUNDARY APPROXIMATE
MW-20	PRE-2008 MONITORING WELL LOCATION		HISTORICAL STRUCTURE
SB-17	PRE-2008 SOIL BORING LOCATION		RIVER SHORELINE
HA-1	1998-2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION		WOOD FENCE
SB-83/MW-83	2008 SRI MONITORING WELL LOCATION		CHAIN-LINK FENCE
TP-2	1998-2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION	G	GAS MAINS
SW013102-6	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION	OH/ELEC	OVERHEAD WIRE
SD013102-2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION	UP	UTILITY POLE
SB-106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO-LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO-LOCATED TEMPORARY WELL POINT	WG	WATER GATE VALVE
SV-01	2008 SOIL GAS SAMPLE ONLY	HYD	FIRE HYDRANT
	STORM SEWER	SMH	SEWER MANHOLE
	EXISTING STRUCTURE	CB	CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

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PLATE 6B–TarGOST RESPONSE MAP
SUPPPLEMENTAL REMEDIAL INVESTIGATION–2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	DATE
070748502	1/28/2009
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SCALE: 1"=30'	CHECKED BY: ERG
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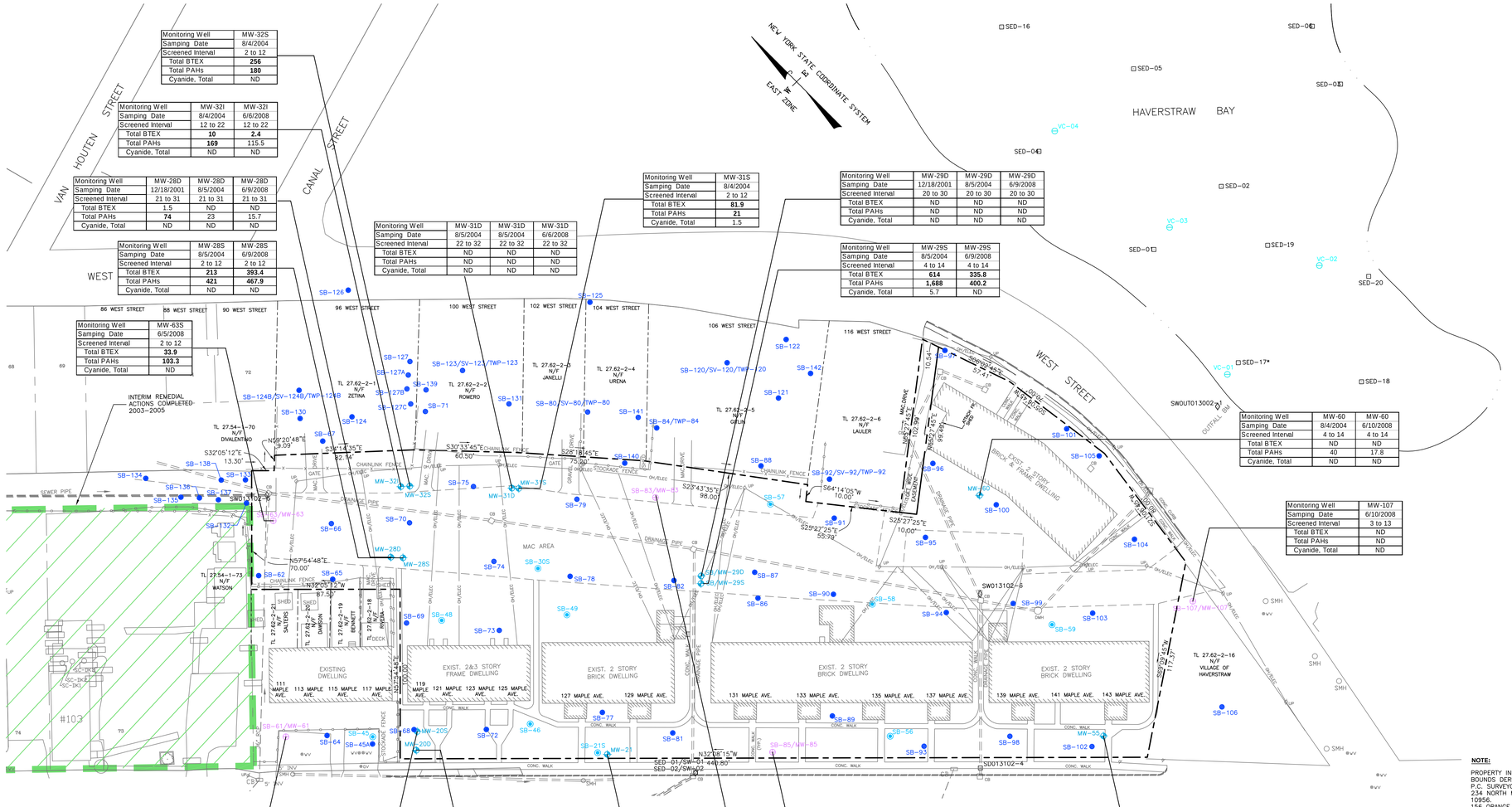
SHEET NO. 1 of 1	



Monitoring Well	MW-32S
Samping Date	8/4/2004
Screened Interval	2 to 12
Total BTEX	**256**
Total PAHs	**180**
Cyanide, Total	ND

Monitoring Well	MW-32I	MW-32I
Samping Date	8/4/2004	6/6/2008
Screened Interval	12 to 22	12 to 22
Total BTEX	**10**	**2.4**
Total PAHs	**169**	115.5
Cyanide, Total	ND	ND

Monitoring Well	MW-28D	MW-28D	MW-28D
Samping Date	12/18/2001	8/5/2004	6/9/2008
Screened Interval	21 to 31	21 to 31	21 to 31
Total BTEX	1.5	ND	ND
Total PAHs	**74**	23	15.7
Cyanide, Total	ND	ND	ND

Monitoring Well	MW-28S	MW-28S
Samping Date	8/5/2004	6/9/2008
Screened Interval	2 to 12	2 to 12
Total BTEX	**213**	**393.4**
Total PAHs	**421**	**467.9**
Cyanide, Total	ND	ND

Monitoring Well	MW-63S
Samping Date	6/5/2008
Screened Interval	2 to 12
Total BTEX	**33.9**
Total PAHs	**103.3**
Cyanide, Total	ND

Monitoring Well	MW-31D	MW-31D	MW-31D
Samping Date	8/5/2004	8/5/2004	6/6/2008
Screened Interval	22 to 32	22 to 32	22 to 32
Total BTEX	ND	ND	ND
Total PAHs	ND	ND	ND
Cyanide, Total	ND	ND	ND

Monitoring Well	MW-31S
Samping Date	8/4/2004
Screened Interval	2 to 12
Total BTEX	**81.9**
Total PAHs	**21**
Cyanide, Total	1.5

Monitoring Well	MW-29D	MW-29D	MW-29D
Samping Date	12/18/2001	8/5/2004	6/9/2008
Screened Interval	20 to 30	20 to 30	20 to 30
Total BTEX	ND	ND	ND
Total PAHs	ND	ND	ND
Cyanide, Total	ND	ND	ND

Monitoring Well	MW-29S	MW-29S
Samping Date	8/5/2004	6/9/2008
Screened Interval	4 to 14	4 to 14
Total BTEX	**614**	**335.8**
Total PAHs	**1,688**	**400.2**
Cyanide, Total	5.7	ND

Monitoring Well	MW-60	MW-60
Samping Date	8/4/2004	6/10/2008
Screened Interval	4 to 14	4 to 14
Total BTEX	ND	ND
Total PAHs	40	17.8
Cyanide, Total	ND	ND

Monitoring Well	MW-107
Samping Date	6/10/2008
Screened Interval	3 to 13
Total BTEX	ND
Total PAHs	ND
Cyanide, Total	ND

Monitoring Well	MW-61
Samping Date	6/11/2008
Screened Interval	2 to 12
Total BTEX	**898**
Total PAHs	**9,633**
Cyanide, Total	17

Monitoring Well	MW-20S	MW-20S
Samping Date	8/4/2004	6/11/2008
Screened Interval	6 to 16	6 to 16
Total BTEX	**255**	**48.7**
Total PAHs	**3250**	**214.6**
Cyanide, Total	2.4	ND

Monitoring Well	MW-20D	MW-20D	MW-20D
Samping Date	12/17/2001	8/4/2004	6/11/2008
Screened Interval	16 to 26	16 to 26	16 to 26
Total BTEX	**58**	ND	ND
Total PAHs	**117**	ND	ND
Cyanide, Total	ND	ND	ND

Monitoring Well	MW-21	MW-21	MW-21
Samping Date	12/17/2001	8/4/2004	6/10/2008
Screened Interval	12 to 22	12 to 22	12 to 22
Total BTEX	ND	ND	ND
Total PAHs	ND	ND	ND
Cyanide, Total	ND	ND	ND

Monitoring Well	MW-83S
Samping Date	6/9/2008
Screened Interval	3 to 13
Total BTEX	ND
Total PAHs	ND
Cyanide, Total	ND

Monitoring Well	MW-85
Samping Date	6/10/2008
Screened Interval	5 to 15
Total BTEX	ND
Total PAHs	**33.1**
Cyanide, Total	ND

Monitoring Well	MW-55	MW-55
Samping Date	8/4/2004	6/10/2008
Screened Interval	6 to 16	6 to 16
Total BTEX	ND	ND
Total PAHs	4	1.3
Cyanide, Total	2.3	ND

Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consitutent compounds.
BTEX	The sum of benzene, toluene, ethylbenzene, and xylene concentrations
PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

NOTE:

PROPERTY INFORMATION SHOWN AND METES AND BOUNDS DERIVED FROM ATZL, SCATASSA & ZIGLER P.C. SURVEYORS–PLANNERS. 234 NORTH MAIN STREET, NEW CITY NEW YORK 10956. 156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF DRY WELLS, SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND

VC–03	VIBRACORE SAMPLE LOCATION		PROPERTY BOUNDARY, SURVEYED
SG–1	PRE–2008 SOIL GAS SAMPLE LOCATION		PROPERTY BOUNDARY APPROXIMATE
MW–20	PRE–2008 MONITORING WELL LOCATION		HISTORICAL STRUCTURE
SB–17	PRE–2008 SOIL BORING LOCATION		RIVER SHORELINE
HA–1	1998–2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION		WOOD FENCE
SB–83/MW–83	2008 SRI MONITORING WELL LOCATION		CHAIN–LINK FENCE
TP–2	1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION		GAS MAINS
SW013102–6	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION		OVERHEAD WIRE
SD013102–2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION		UTILITY POLE
SB–106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT		WATER GATE VALVE
SV–01	2008 SOIL GAS SAMPLE ONLY		FIRE HYDRANT
	STORM SEWER		SEWER MANHOLE
	EXISTING STRUCTURE		CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)

NOTE:

ALL CONCENTATIONS SHOWN ARE IN EXPRESSED IN ppb(ug/L)

GEODETIC REFERENCES:

– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

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REVISION NO.	DATE	REVISION

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PLATE 7A–GROUNDWATER ANALYTICAL RESULTS–AREA NORTH OF MAPLE
SUPPLEMENTAL REMEDIAL INVESTIGATION–2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO.	DATE
AVE748502	1/28/2009
DRAWN BY	DESIGNED BY
MVS	ERG
SCALE	CHECKED BY
1"=30'	ERG
CMX	
SHEET NO.	1 of 1

Monitoring Well	MW-05	MW-05	MW-05	MW-05
Samping Date	2/3/1999	12/19/2001	8/2/2004	6/18/2008
Screened Interval	11 to 21	11 to 21	11 to 21	11 to 21
Total BTEX	1	ND	ND	ND
Total PAHs	31	6	32	14.8
Cyanide, Total	NR	ND	ND	ND

Monitoring Well	MW-06	MW-06	MW-06	MW-06
Samping Date	3/26/1999	12/19/2001	8/2/2004	6/18/2008
Screened Interval	9 to 19	9 to 19	9 to 19	9 to 19
Total BTEX	ND	ND	ND	ND
Total PAHs	8	ND	ND	ND
Cyanide, Total	NR	ND	5.5	ND

Monitoring Well	MW-07	MW-07	MW-07	MW-07	MW-07
Samping Date	3/26/1999	12/19/2001	8/2/2004	8/2/2004	6/18/2008
Screened Interval	34 to 44	34 to 44	34 to 44	34 to 44	34 to 44
Total BTEX	ND	ND	ND	ND	ND
Total PAHs	ND	ND	ND	ND	ND
Cyanide, Total	NR	ND	ND	ND	ND

Monitoring Well	MW-03	MW-03	MW-03	MW-03	MW-03
Samping Date	6/3/1997	2/2/1999	12/19/2001	8/3/2004	6/5/2008
Screened Interval	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16
Total BTEX	**8,500**	**4,090**	**6,380**	**4,640**	**6,100**
Total PAHs	**10,456**	**2,626**	**9,370**	**5,250**	**2,301**
Cyanide, Total	NR	NR	5	5.7	ND

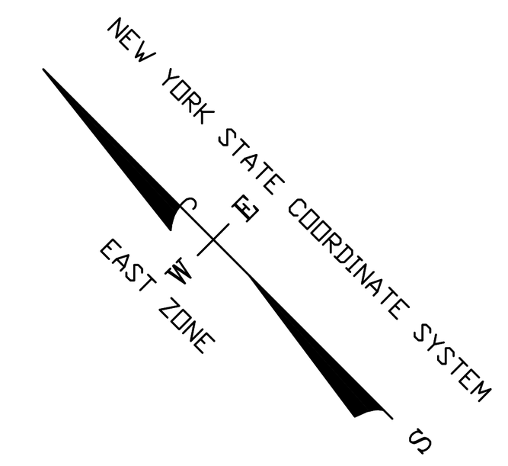
Monitoring Well	MW-02	MW-02	MW-02
Samping Date	6/3/1997	2/1/1999	8/4/2004
Screened Interval	8 to 18	8 to 18	8 to 18
Total BTEX	**7,870**	**129**	**1,340**
Total PAHs	**3,877**	**14,396**	**11,593**
Cyanide, Total	NR	NR	40.8

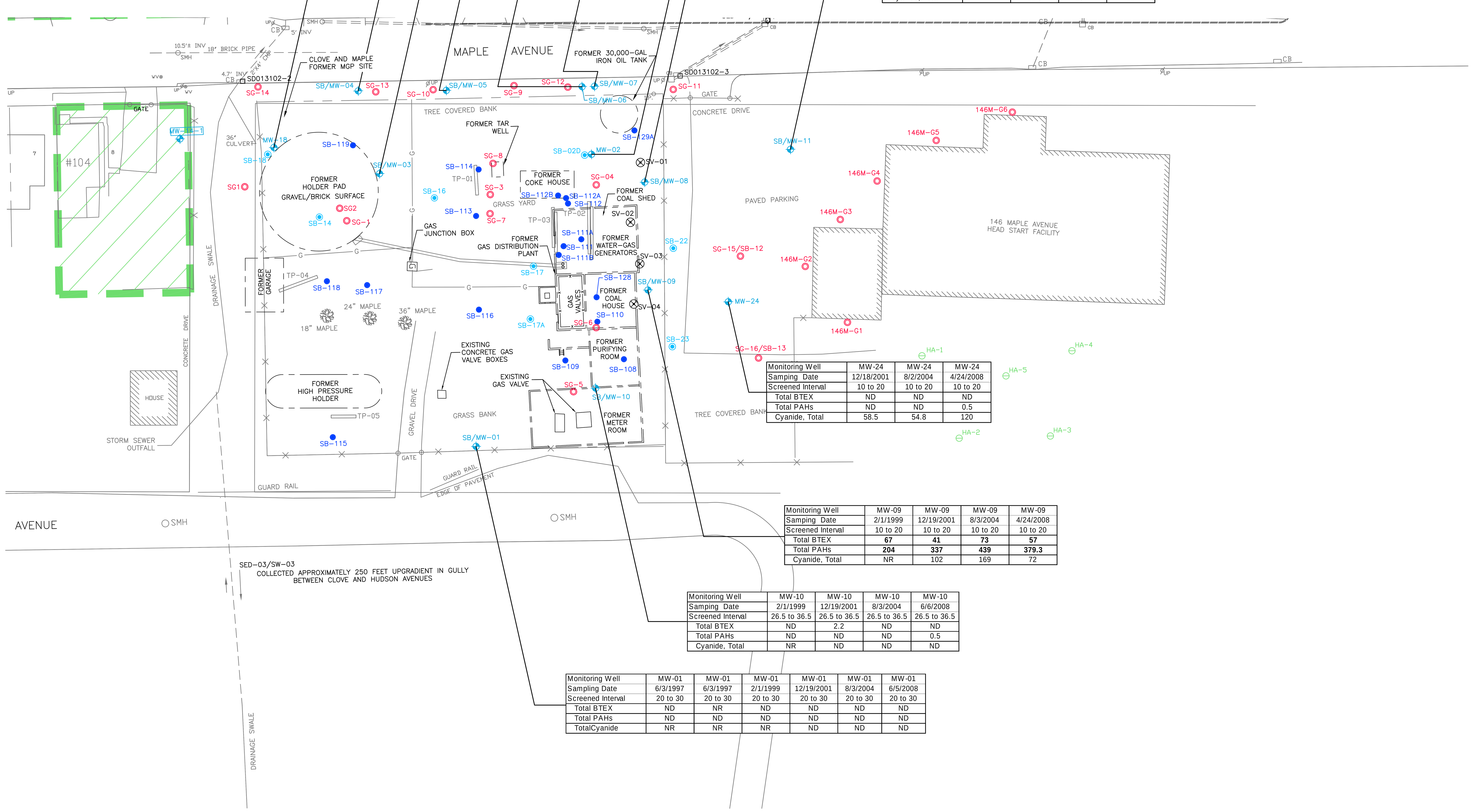
Monitoring Well	MW-04	MW-04	MW-04	MW-04	MW-04
Samping Date	2/3/1999	12/19/2001	12/19/2001	8/2/2004	6/18/2008
Screened Interval	11 to 21	11 to 21	11 to 21	11 to 21	11 to 21
Total BTEX	**1,005**	**533**	**538**	**185**	**231**
Total PAHs	**3,594**	**2,200**	**3,573**	**3,420**	**2,537**
Cyanide, Total	NR	ND	ND	ND	ND

Monitoring Well	MW-08	MW-08	MW-08	MW-08
Samping Date	2/1/1999	12/19/2001	8/3/2004	4/24/2008
Screened Interval	9 to 19	9 to 19	9 to 19	9 to 19
Total BTEX	**32**	**1**	**211**	0.5
Total PAHs	**33**	ND	ND	ND
Cyanide, Total	NR	3.8	5.8	25

Monitoring Well	MW-18	MW-18	MW-18
Samping Date	12/20/2001	8/3/2004	6/5/2008
Screened Interval	5 to 15	5 to 15	5 to 15
Total BTEX	**20,720**	4.4	4.3
Total PAHs	**2,200**	ND	0.6
Cyanide, Total	ND	ND	ND

Monitoring Well	MW-11	MW-11	MW-11	MW-11
Samping Date	2/2/1999	2/19/2001	8/2/2004	4/24/2008
Screened Interval	10 to 20	10 to 20	10 to 20	10 to 20
Total BTEX	ND	ND	ND	ND
Total PAHs	**16**	ND	ND	ND
Cyanide, Total	NR	11.6	19.4	11





Monitoring Well	MW-24	MW-24	MW-24
Samping Date	12/18/2001	8/2/2004	4/24/2008
Screened Interval	10 to 20	10 to 20	10 to 20
Total BTEX	ND	ND	ND
Total PAHs	ND	ND	0.5
Cyanide, Total	58.5	54.8	120

Monitoring Well	MW-09	MW-09	MW-09	MW-09
Samping Date	2/1/1999	12/19/2001	8/3/2004	4/24/2008
Screened Interval	10 to 20	10 to 20	10 to 20	10 to 20
Total BTEX	**67**	**41**	**73**	**57**
Total PAHs	**204**	**337**	**439**	**379.3**
Cyanide, Total	NR	102	169	72

Monitoring Well	MW-10	MW-10	MW-10	MW-10
Samping Date	2/1/1999	12/19/2001	8/3/2004	6/6/2008
Screened Interval	26.5 to 36.5	26.5 to 36.5	26.5 to 36.5	26.5 to 36.5
Total BTEX	ND	2.2	ND	ND
Total PAHs	ND	ND	ND	0.5
Cyanide, Total	NR	ND	ND	ND

Monitoring Well	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01
Sampling Date	6/3/1997	6/3/1997	2/1/1999	12/19/2001	8/3/2004	6/5/2008
Screened Interval	20 to 30	20 to 30	20 to 30	20 to 30	20 to 30	20 to 30
Total BTEX	ND	NR	ND	ND	ND	ND
Total PAHs	ND	ND	ND	ND	ND	ND
TotalCyanide	NR	NR	NR	ND	ND	ND

NOTE:

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DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

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Concentration	Concentrations in bold exceed NYSDEC Part 375 Remediation Program Soil Cleanup Objectives Tables 375-6.8(a) or (b); all concentrations expressed in ppm (mg/kg); for BTEX, PAHs, or total VOCs, bold indicates an exceedance by one of the consitutent compounds.
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PAHs	Polycyclic Aromatic Hydrocarbons - all totals listed are the sum of the concentrations of Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene
NAPL	Non-aqueous phase liquid detected at the sampling interval
ND	Not detected; no constituents of the total were detected
NR	No result, sample not analyzed for this compound
Sample Depth	Interval listed is in feet below ground surface
VOCs	The sum of all Volatile Organic Compounds
TarGOST	The TarGOST signal response at this interval

LEGEND

Symbol	Description	Symbol	Description
VC-03	VIBRACORE SAMPLE LOCATION		PROPERTY BOUNDARY, SURVEYED
SG-1	PRE-2008 SOIL GAS SAMPLE LOCATION		PROPERTY BOUNDARY APPROXIMATE
MW-20	PRE-2008 MONITORING WELL LOCATION		HISTORICAL STRUCTURE
SB-17	PRE-2008 SOIL BORING LOCATION		RIVER SHORELINE
HA-1	1998-2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION		WOOD FENCE
SB-83/MW-83	2008 SRI MONITORING WELL LOCATION		CHAIN-LINK FENCE
TP-2	1998-2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION	G G	GAS MAINS
SW013102-6	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION	OH/ELEC	OVERHEAD WIRE
SD013102-2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION	UP	UTILITY POLE
SB-106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO-LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO-LOCATED TEMPORARY WELL POINT	WG	WATER GATE VALVE
SV-01	2008 SOIL GAS SAMPLE ONLY	HYD	FIRE HYDRANT
	STORM SEWER	SMH	SEWER MANHOLE
	EXISTING STRUCTURE	CB	CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)

NOTE:

ALL CONCENTATIONS SHOWN ARE IN EXPRESSED IN ppb(ug/L)

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

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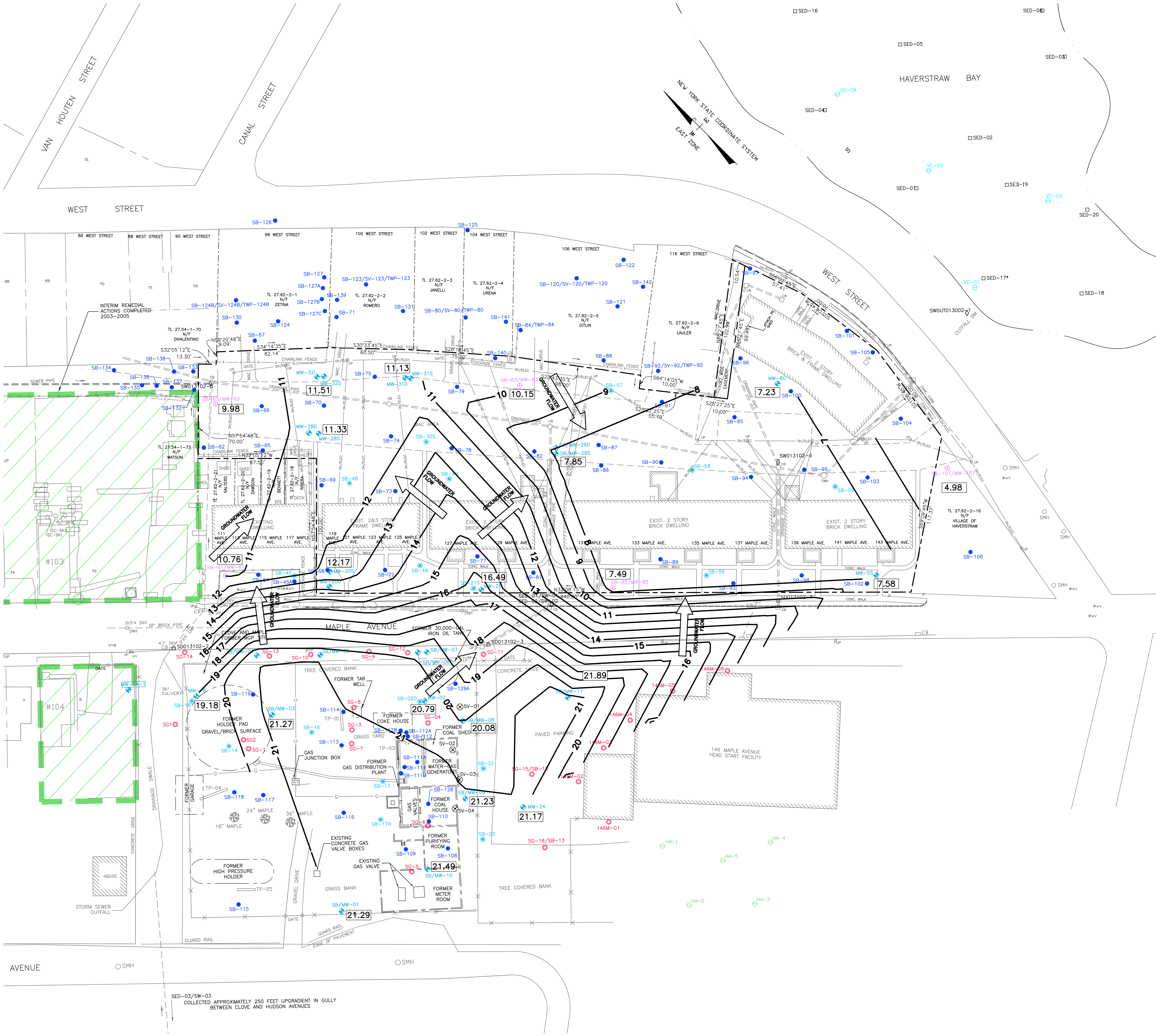
PLATE 7B–GROUNDWATER ANALYTICAL RESULTS–AREA SOUTH OF MAPLE

SUPPLEMENTAL REMEDIAL INVESTIGATION–2008 CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	DATE
070748502	1/28/2009
DRAWN BY: MVS	DESIGNED BY: ERG
SCALE: 1" = 30'	CHECKED BY: ERG
CMX	
SHEET NO. 1 of 1	

R–New Basemap !r–borings 6–10–08 !r–borings 5–08–08
F–Plate 7A & B Groundwater–Exceedance Map 1–28–09.dwg GW–Exceedance Map–South Side



NOTE:

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234 NORTH MAIN STREET, NEW CITY NEW YORK 10956.
156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY
PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

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LEGEND

Symbol	Description	Symbol	Description
VC–03	VIBRACORE SAMPLE LOCATION		PROPERTY BOUNDARY, SURVEYED
SG–1	PRE–2008 SOIL GAS SAMPLE LOCATION		PROPERTY BOUNDARY APPROXIMATE
MW–20	PRE–2008 MONITORING WELL LOCATION		HISTORICAL STRUCTURE
SB–17	PRE–2008 SOIL BORING LOCATION		RIVER SHORELINE
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SB–83/MW–83	2008 SRI MONITORING WELL LOCATION		CHAIN–LINK FENCE
TP–2	1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION	G	GAS MAINS
SW013102–6	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION	OH/ELEC	OVERHEAD WIRE
SD013102–2	1998-2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION	UP	UTILITY POLE
SB–106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT	WG	WATER GATE VALVE
SV–01	2008 SOIL GAS SAMPLE ONLY	HYD	FIRE HYDRANT
	STORM SEWER	SMH	SEWER MANHOLE
	EXISTING STRUCTURE	CB	CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)
		7	POTENTIOMETRIC SURFACE GROUNDWATER CONTOUR
			GROUNDWATER FLOW DIRECTION
		21.17	GROUNDWATER ELEVATION, FEET MSL

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

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PLATE 8–GROUNDWATER POTENTIOMETRIC SURFACE–JUNE 2008
SUPPLEMENTAL REMEDIAL INVESTIGATION 2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ORANGE COUNTY NEW YORK

PROJECT NO	DATE
0748502	1/28/2009
DRAWN BY	DESIGNED BY
MVS	ERG
SCALE	CHECKED BY
1" = 30'	ERG
SHEET NO. 1 of 1	

User: jseybert
1/29/2009 1:42:25 PM
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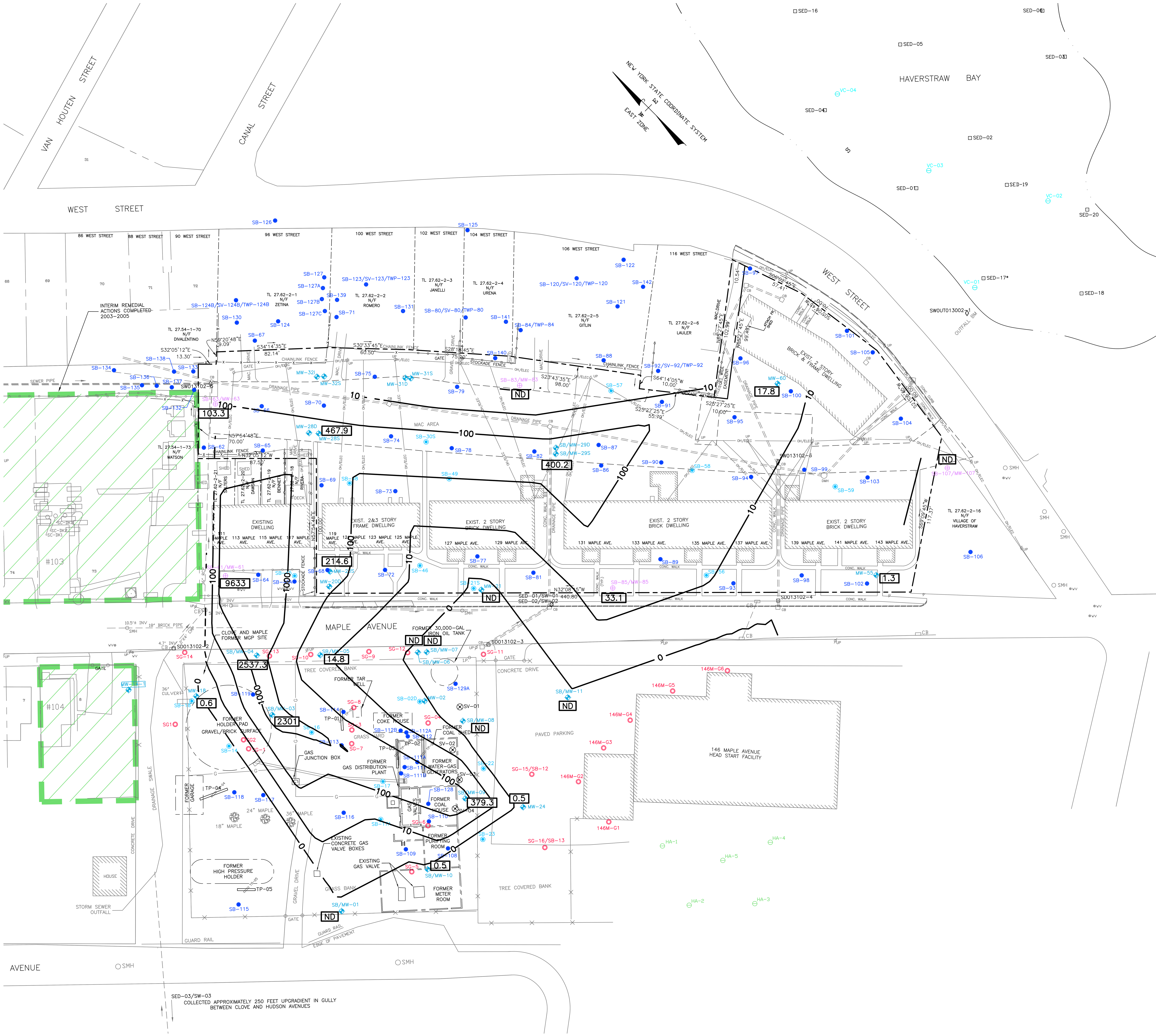
R–Contour Layout
Ir–borings 6–10–08
Ir–borings 5–08–08
R–New Basemap



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DRAWING TITLED: BOUNDARY SURVEY PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

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LEGEND

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	STORM SEWER	SMH	SEWER MANHOLE
	EXISTING STRUCTURE	CB	CATCH BASIN
			INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)
		100	GROUNDWATER CONCENTRATION ISOPLETHS IN ug/L
		2301	GROUNDWATER CONCENTRATION ug/L

GEODETIC REFERENCES:
– NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE.

– DATUM: NGVD 1927.

NOT FOR BID OR CONSTRUCTION

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GRAPHIC SCALE IN FEET
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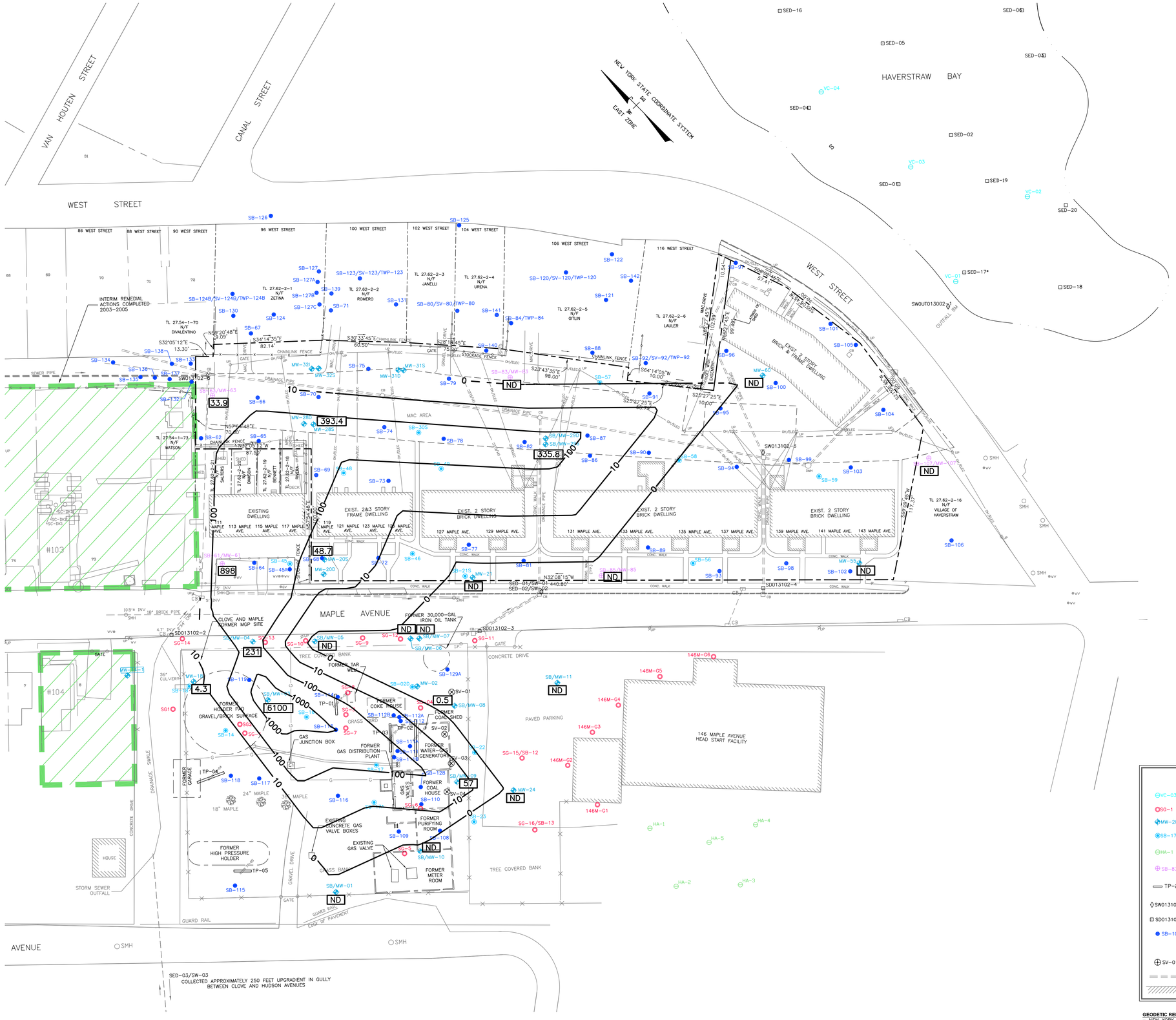
PLATE 9A–GROUNDWATER CONCENTRATION ISOPLETHS – TOTAL PAHS
SUPPLEMENTAL REMEDIAL INVESTIGATION 2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO 076748502	DATE 1/28/2009
DRAWN BY MVS	DESIGNED BY ERG
SCALE 1"=30'	CHECKED BY ERG
CMX	
SHEET NO. 1 of 1	



NOTE:

PROPERTY INFORMATION SHOWN AND METES AND BOUNDS DERIVED FROM ATZL, SCATASSA & ZIGLER P.C. SURVEYORS–PLANNERS, 234 NORTH MAIN STREET, NEW CITY NEW YORK 10956, 156 ORANGE AVENUE, WALDEN NEW YORK 12586

DRAWING TITLED: BOUNDARY SURVEY
PROJECT NO. 3147, DATED MAY 22, 2004.

TAX LOT INFORMATION:

VILLAGE OF HAVERSTRAW TAX MAP
TL 27.62–2–17.1, 17.2, 17.3, AND 17.4

NOTE:

THE INFORMATION PRESENTED ON THIS MAP FIGURE IS ACCURATE TO THE BEST OF OUR BELIEF; NO CLAIM IS MADE TO THE LOCATION OF DRY WELLS, SEPTIC SYSTEMS, GASOLINE TANKS, OR HEATING OIL TANKS. ALL UTILITIES WILL BE IDENTIFIED IN THE FIELD USING THE ONE CALL SYSTEM AND A GEOPHYSICAL SURVEY BY A PRIVATE GEOPHYSICS CONTRACTOR.

LEGEND

VC–03	VIBRACORE SAMPLE LOCATION
SG–1	PRE–2008 SOIL GAS SAMPLE LOCATION
MW–20	PRE–2008 MONITORING WELL LOCATION
SB–17	PRE–2008 SOIL BORING LOCATION
HA–1	1998–2001 CLOVE & MAPLE AVE RI HAND AUGER BORING LOCATION
SB–83/MW–83	2008 SRI MONITORING WELL LOCATION
TP–2	1998–2001 CLOVE & MAPLE AVE RI TEST PIT LOCATION
SW013102–6	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER WATER SAMPLE LOCATION
SD013102–2	1998–2001 CLOVE & MAPLE AVE RI STORM SEWER SEDIMENT SAMPLE LOCATION
SB–106	2008 SRI SOIL BORING LOCATION; WHERE INDICATED – "SV" REPRESENTS CO–LOCATED SOIL VAPOR POINT; "TWP" REPRESENTS CO–LOCATED TEMPORARY WELL POINT
SV–01	2008 SOIL GAS SAMPLE ONLY
	STORM SEWER
	EXISTING STRUCTURE
	PROPERTY BOUNDARY, SURVEYED
	PROPERTY BOUNDARY APPROXIMATE
	HISTORICAL STRUCTURE
	RIVER SHORELINE
	WOOD FENCE
	CHAIN–LINK FENCE
	GAS MAINS
OH/ELEC	OVERHEAD WIRE
UP	UTILITY POLE
WG	WATER GATE VALVE
HYD	FIRE HYDRANT
SMH	SEWER MANHOLE
CB	CATCH BASIN
	INTERIM REMEDIAL ACTIONS COMPLETED 2003–2005 (93B MAPLE AVENUE FORMER MGP SITE)
500	GROUNDWATER CONCENTRATION ISOPLETHS IN ug/L
335.8	GROUNDWATER CONCENTRATION ug/L

GEODETIC REFERENCES:
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PLATE 9B–GROUNDWATER CONCENTRATION ISOPLETHS – TOTAL VOCs
SUPPLEMENTAL REMEDIAL INVESTIGATION 2008
CLOVE AND MAPLE FORMER MGP SITE

HAVERSTRAW ROCKLAND COUNTY NEW YORK

PROJECT NO	0748502
DATE	1/28/2009
DRAWN BY	MVS
DESIGNED BY	ERG
SCALE	1" = 30'
CHECKED BY	ERG
SHEET NO.	1 of 1