Haverstraw Harbors

ROCKLAND COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: C344060

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I Paul H. Ciminello certify that I am currently a Qualified Environmental Professional as defined in 6NYCRR Part 375 and that this Site Management Plan was prepared in accordance with the applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Paul H. Ciminello	March 21, 2014	
Certified QEP # 08130024	Date	Signature

Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

MARCH 2014

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SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at Haverstraw Harbors Site (hereinafter referred to as the "site") under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index# W3-1009-04-06, Site # C344060, which was executed in July 2004.

1.1.1 General

Admiral's Cove, LLC entered into a BCA with the NYSDEC to remediate a 5.0479 acre property located in the Village of Haverstraw, Rockland County, New York. This BCA required the Remedial Party, Admiral's Cove, LLC, to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of this 5.0479-acre site is provided in Figure 1. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement. A copy of the Environmental Easement is provided as Appendix A.

After completion of the remedial work described in the Remedial Action Work Plan, some contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Ecosystems Strategies, Inc. (ESI) and Morris Associates Engineering Consultants, P.L.L.C (MA), on behalf of Admiral's Cove, LLC, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the site.

1.1.2 Purpose

The site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Rockland County Clerk, will require compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all treatment, collection, containment, or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual for complex systems).

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index # W3-1009-04-06; Site #C344060) for the site, and thereby subject to applicable penalties.
- This SMP and other site-related documents are maintained at the NYSDEC regional office and in the following document repositories:
    - NYSDEC – Region 3 Office
      21 South Putt Corners Road
      New Paltz, New York 12561
      (845) 256-3137
    - King's Daughters Public Library
      85 Main Street
      Haverstraw, New York 10927
      (845) 329-3445
    - Village of Haverstraw
      Village Hall
      40 Main Street
      Haverstraw, New York 10927
      (845) 429-0300

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The site is located in the Village of Haverstraw County of Rockland, New York. The site is comprised of five contiguous parcels identified as Section 27.62, Block 2, Lots 7.1, 7.2, 8 and 12; and Section 27.14, Block 1, Lot 5.1 on the Rockland County Tax Map. The site is an approximately 5.0479-acre area bounded by a portion of the Metro North Railroad (MNR) parking lot to the north, the Harbors at Haverstraw residential complex to the south, the Hudson River to the east, and West Street to the west (see Figure 1). Dr. George W. Girling Drive ("Girling Drive") traverses the Site in an "L" shape from the western Site boundary and ending in the central portion of the Site. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement. The Environmental Easement is presented as Appendix A.

1.2.2 Site History

The four parcels comprising the Site are historically known as:

- The former Rockland Fuel Oil Company (Rockland Fuel) parcel, located at the southeastern portion of the Site;
- A portion of the former Keahon parcel, located at the northeastern portion of the Site; and,
- The two Village of Haverstraw Department of Public Works ("DPW") parcels (northern and southern parcels), located at the western portion of the Site.

The Rockland Fuel and Keahon parcels are located at the eastern end of Girling Drive, along the western shoreline of the Hudson River. The DPW parcels are located on both the northern and southern sides of Girling Drive (the southern parcel also has frontage on West Street).

The Rockland Fuel parcel is the site of a former major oil storage facility (MOSF, PBS Facility ID: 3-1700), which contained fourteen aboveground storage tanks (ASTs) located within a secondary containment, and several on-site structures, including a

fueling rack and vehicle maintenance area. ESI supervised the removal of all on-site ASTs and associated features, and a limited area of solvent contaminated soil, in 2003. As per prior agreement with NYSDEC, Rockland Fuel parcel was temporarily covered with imported soils prior to construction of the temporary sales office for the Haverstraw Harbors residential complex (known as the Sales Center) and paved parking areas. The Sales Center, located in the southeastern portion of the Rockland Fuel parcel, was demolished in August 2013.

The Keahon parcel is the site of a former concrete manufacturer, which contained six petroleum ASTs and three fuel pumps, located within a concrete secondary containment on the northeastern portion of the Site (PBS Facility ID: 3-990485). The Remedial Party removed all ASTs and structures from the Keahon parcel prior to installation of the MNR parking lot.

The northern portion of the DPW parcel is utilized as a maintenance yard and contains one, small one-story brick pump house, a salt/gravel shed, and two aboveground storage tanks (diesel fuel and gasoline) with a fuel pump. A second one-story brick pump house was demolished in July 2013. The southern portion of the parcel contains a one-story, metal garage utilized for vehicle maintenance activities, an office trailer, construction trailer associated with the Harbors at Haverstraw residential complex, and a western landscaped area, which contains a 3,000-gallon underground storage tank (UST) supplying heating oil to the garage. An inactive 1,000-gallon UST was removed from the southwestern portion of the DPW parcel in January 2005. The northern DPW parcel site is the site of a former wastewater treatment plant. No interim remedial measures have been completed at this portion of the Site.

NYSDEC spill events were reported for the Keahon parcel (#9811999), Rockland Fuel parcel (#0001146) and Southern DPW parcel (#0411778) in December 1998, April 2000 and February 2005 (respectively), based on the presence of petroleum impacted soils.

Historic reports and Site environmental conditions were previously documented in the following reports issued by ESI:

- Phase I Environmental Site Assessment dated February 5, 1999, performed on the Keahon and Rockland Fuel parcels, and Combined Phase I – Phase II Environmental Site Assessment dated June 4, 1999, performed on the Rockland Fuel and northern DPW properties;

- Summary Report of Remedial Activities dated August 2003, documenting removal of solvent contaminated soil, and Tank Closure Site Assessment (TCSA) dated August 2003, documenting removal of ASTs, at the former Rockland Fuel MOSF;

- Letter Reports documenting sampling of on- and off-site monitoring wells (Status of Groundwater Quality at Rockland Fuel Oil Corporation Site dated April 23, 2002, and Letter Report of Groundwater Sampling dated February 24, 2004);

- Tank Closure Report dated February 2, 2005, documenting tank and soil removal activities, and Summary Report of Subsurface Investigation dated August 2005, documenting additional investigative activities, conducted at the DPW parcels.

1.2.3 Geologic Conditions

A review of the Geologic Map of New York and the Surficial Geologic Map of New York (lower Hudson sheets) indicates that soils on the Site are derived from artificial fill, which overlie sandstone, siltstone, and mudstone. Soil maps presented in the USDA NRCS Soil Survey of Rockland County, New York indicate that the smoothed Udorthenths (0-8% slopes) is located on the Site. The smoothed Udorthenths soil type is composed of channery and very gravelly loam with deep, somewhat excessively drained, gently sloping soil features.

Depth to restrictive feature in the smoothed Udorthenths soil type is greater than 80 inches below grade. No bedrock was observed at the site during subsurface investigations (see below).

Site-specific geologic conditions were documented in previous Site investigations. The geologic conditions encountered during remedial activities are consistent with previous Site investigations. Soils observed at the Site generally consisted of an upper layer of fill (light to dark, variable texture sands and gravels with extensive brick fragments) overlying native sands/silts and gray clay, or native clay alone. With the exception of the brick fragments, no significant quantities of debris materials were encountered in the subsurface. The clay is dense appears to form a continuous layer encountered from approximately 5 to 15 feet below surface grade (bsg). Saturated soils were typically encountered from 4 to 8 feet bsg, above the native clay layer. Portions of former foundations were encountered in the excavation areas located in the western end of the MNR parking lot and west of the former Sales Center.

Site-specific hydrogeological conditions were documented in previous Site investigations. The hydrogeological conditions encountered during remedial activities are consistent with previous Site investigations. Groundwater elevations at the Site range from 2 to 5 feet above mean sea level and appears to be somewhat tidally influenced in eastern portions of the Site. The overall groundwater flow direction is to the east towards the Hudson River. A groundwater flow figure is shown in Figure 2.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the Site Investigation Report (SIR), prepared by ESI in October 2007. Previous site investigations and interim remedial activities are documented in the reports listed in Section 1.2.2.

Generally, the RI determined that contamination was present in on-site subsurface soils in the northeastern and southeastern potions of the Site, and in the southwestern portion of the Site, west of the DPW garage. Light non-aqueous phase liquid (LNAPL) was identified in several areas associated with grossly contaminated petroleum-impacted soils. No significant off-site contamination associated with the Site was reported in the SIR.

Below is a summary of site conditions when the RI was performed in 2007:

Soil

Field evidence of petroleum contamination was encountered throughout the eastern portion of the Site, to the north of the Site on the former Keahon parcel, and to the west of the DPW garage; laboratory data, however, documented only limited, low-level exceedances of applicable guidance levels. The areal and vertical extent of petroleum impacted soils was sufficiently defined, based on a combination of field observations and laboratory data. Some limited contamination was also identified in the vicinity of the existing DPW aboveground fuel tanks. The depth of petroleum contamination was limited by a confining layer of native clay, encountered from approximately 5 to 15 feet bsg. Only a small number of samples collected from these areas contained volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) at concentrations above applicable guidance levels, suggesting that any future excavation of petroleum impacted materials would likely be primarily guided by encountered field conditions (e.g., odors) rather than by contaminant concentrations.

Laboratory data also documented the presence of limited, low-grade hydrocarbon, metal, and PCB impacts to Site soils (potentially related to on-site fill materials).

SIR laboratory results for SVOCs and VOCs in soil are presented in Tables 1 and 2, respectively. SIR sampling locations are presented in Figure 3.

Site-Related Groundwater

Petroleum impacts to groundwater were documented throughout the Site, with elevated concentrations of contaminants present at the central and eastern portions. Given the broad impact area, there may have been more than one historic VOC source (i.e. releases from both the former Rockland Fuel/Keahon areas and from fuel handling at the DPW facilities).

Significant impacts to groundwater by non-petroleum VOCs were limited to contamination by trichloroethylene (TCE) and its metabolites at HMW-8, suggesting that a contamination “hot spot” was located in this area (site monitoring well locations are provided as Figure 3).

Site-wide groundwater was also impacted by low-grade concentrations of metals, hydrocarbons and polychlorinated biphenyls (PCBs), potentially related to on-site fill materials.

SIR laboratory results for groundwater are presented in Tables 3 to 5.

Site-Related Soil Vapor Intrusion

No soil-gas sampling was conducted during the RI. Previous soil-gas investigations documented low-grade VOC soil-gas contamination beneath the eastern pump house in the northern DPW parcel and beneath the slab of the DPW garage in the southern DPW parcel.

Sediments

Petroleum impacts were documented in sediment samples collected from the Hudson River, both on Site and in off-Site areas to the south. The source of this impacted material is likely to have been releases from operations at the former Keahon and Rockland Fuel facilities. Field observations and laboratory data suggested that the contamination was limited in extent and that petroleum compounds have been naturally degrading over time.

PCBs were documented in Site river sediments at concentrations above guidance levels; these exceedances, however, are low level, consistent with known PCB contamination in other sections of the Hudson River, and are not likely to be related to any historical Site activities. No significantly elevated levels of metals were documented in the sediment.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the NYSDEC-approved Remedial Work Plan (RWP, November 2007) prepared by ESI.

The following interim environmental response actions were completed prior to the implementation of the RWP:

- All petroleum bulk storage tanks and associated piping on the Rockland Fuel and Keahon properties were removed in 2003 (documented in the TCSA).

- All structures (buildings, containment systems, and the oil-water separator) on the Rockland Fuel and Keahon properties were demolished.

- Soil contaminated with perchloroethane (PCA), an industrial solvent, was removed from the Rockland Fuel parcel, and disposed of off-site in 2003 (documented in the Summary Report of Remedial Activities).

- A temporary cap (asphalt and imported soil) was placed on the Rockland Fuel and Keahon parcels in conjunction with interim site development activities (construction of the Sales Center and parking lot).

- A 1,000-gallon abandoned fuel oil UST was removed from the southern DPW parcel in January 2005 (documented in the Tank Closure Report).

The following is a summary of the Remedial Actions performed at the site to implement the RWP:

1. Excavation of accessible soil/fill exceeding restricted residential SCOs listed in Tables 6 and 7 and/or grossly contaminated soils to varying depths (maximum depth of 12 feet bsg) in the northeast, southern, and southwestern portions of the Site;
2. Recovery, containerization and disposal of accessible LNAPL present in excavation areas;
3. Installation of a demarcation layer in areas with known or suspected remaining contamination;
4. Backfilling excavated areas with NYSDEC-approved material;
5. Demolition of the Sales Center (a temporary structure) during remedial activities to access grossly contaminated soils underneath the building;

6. Construction and maintenance of a cover system consisting of impermeable surfaces (asphalt, pavement and/or building/trailer footprint) or landscaped areas with at least 24 inches of clean soil to prevent human exposure to remaining contaminated soil/fill remaining at the site;
7. Provision for the installation of a sub-slab depressurization system (SSDS), if deemed necessary, in any future building erected on-site during development activities. This provision is specified in the SMP;
8. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site;
9. Establishing Institutional Controls specified in Sections 2.3;
10. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting. The SMP establishes a provision to address remaining contamination in the event LNAPL is encountered in remaining wells and/or this contamination migrates to areas where no previous contamination has been documented. Mobility of remaining contamination will be evaluated by the assessment of dissolved groundwater constituent's concentrations, and presence of LNAPL.

Remedial activities were completed at the site from May through November 2013.

1.4.1 Removal of Contaminated Materials from the Site

A list of the soil cleanup objectives (SCOs) for the primary contaminants of concern (COCs) and applicable land use for this site is provided in Tables 6 and 7. Approximately 8,774 tons of petroleum contaminated soils were excavated and removed from the Site. Petroleum contaminated soils were removed from the northeastern, southeastern and southwestern portions of the Site. Depth of the excavation areas generally ranged from 9-12 feet bsg. Figures showing excavation areas are provided as

Figures 4.1 through 4.3. All excavated areas were backfilled with NYSDEC-approved material.

Petroleum-impacted groundwater was containerized during excavation activities. Approximately 21,140 gallons of groundwater and sludge were removed with a vacuum truck and disposed off-site by a licensed hauler and approximately 35,000 gallons of groundwater were treated on-site with a filtration system and discharged on-site to subsurface soils. Seven, 55-gallon drums containing remediation-derived waste (mainly absorbent material containing petroleum) was containerized, removed and disposed off-site by a licensed hauler.

1.4.2 Site-Related Treatment Systems

No site-related treatment systems are present on-site to date. The following site-related treatments are proposed: a SSDS to address potential soils vapors, and in-situ treatment to address remaining contamination in subsurface soils (contingent upon presence of LNAPL in remaining wells and/or mobility of contamination as presented in Section 4.2.3). Additional information on these proposed treatment systems are presented in Section 2.2.

1.4.3 Remaining Contamination

A determination of the extent of remaining contamination was made based on field evidence of contamination (elevated photoionization detector [PID] readings, discoloration and/or presence of LNAPL) during excavation activities, and analytical results of post excavation soil samples. Remaining contamination is present in areas east, southwest and north of Girling Drive. Grossly contaminated soils could be potentially present in areas not remediated under the RWP. Grossly contaminated soils, if encountered, will be handled in accordance with the Excavation Work Plan presented in Appendix B.

<u>Areas east of Girling Drive</u>

Accessible grossly contaminated soils (including soils underneath the former Sales Center) and LNAPL were removed from the northeastern and southeastern portions

of the Site. No on-site structures remain in the areas east of Girling Drive as the former Sales Center was demolished in August 2013.

Petroleum-impacted soils, exhibiting odors and discoloration but meeting restricted residential SCOs, remain below the water table (encountered 8 to 10 feet bsg during excavation activities) in all areas east of Girling Drive.

The following observations were documented regarding the presence of LNAPL during excavation activities:

- A thin film of LNAPL covering 50% or more of the surface area of the excavation was present in the area immediately north of and under the former Sales Center.
- A thin film of LNAPL covering less than 50% of the surface area of the excavation was present in all other excavation areas north and northwest of the Sales Center.
- A thin film of LNAPL covering less than 10% of the surface area of the excavation (inclusive of emulsions) was present in the excavation area south and southwest of the former Sales Center.

LNAPL was recovered during excavation activities using absorbent material (pads and socks) to the extent feasible. Assessment of LNAPL following excavation activities is presented in the sub-section *Groundwater Contamination*, below.

Tables 8 to 11 and Figures 4.1 through 4.3 summarize the results of post-excavation soil sampling, and document any contamination above restricted residential SCOs in remaining soils after completion of remedial activities. Laboratory results above applicable SCOs for 2-methylnaphthalene were documented in post excavation bottom samples PE-2B and PE-3B (north of the former Sales Center). (Note: No restricted residential SCO exists for 2-methylnaphthalene. The SCO for the protection of ecological resources for 2-methylnaphthalene was used to compare post excavation laboratory results based on conversation with NYSDEC.) No other exceedances were documented in the bottom of the excavation areas east of Girling Drive. No exceedances were documented in the final walls of the excavation areas east of Girling Drive.

A demarcation layer, consisting of orange plastic snow fencing, was placed in all excavation areas east of Girling Drive at approximately 3 to 5 feet above the bottom of the excavation. Excavation depth generally ranged from 9 to 12 feet bsg. Based on the SIR findings, no contamination is anticipated more than 15 feet bsg. Final elevations at the Site will vary due to backfilling and regrading activities. Figures showing excavation areas and placement of the demarcation layer are shown in Figures 4.1 and 4.2.

Area southwest of Dr. Girling Drive (southern DPW parcel)

The office trailer of the DPW, located west of the DPW garage, was relocated prior to remedial activities to gain access to the excavation area. The office trailer was returned to the previous location after completion of remedial activities. The DPW garage, and associated UST, and construction trailer east of the DPW garage remained on-site after remedial activities.

All DPW structures (including the UST) in the southern DPW parcel will be demolished and removed (as appropriate) after the relocation of the DPW facilities during future Site development activities.

Accessible petroleum contaminated soils were removed from the areas west of the DPW garage. An 8-inch water main servicing the Harbors at Haverstraw residential complex formed the western and southern boundaries of the excavation area. The water main was encountered at a depth of 7.6 feet bsg. Soils with petroleum odors in this area were encountered at 6 feet bsg and left in place in the vicinity of the water main. These soils were left in place to avoid undermining or otherwise damaging this sensitive structure. No evidence of contamination was observed in the soils located at the bottom of the excavation. The water table in this area generally ranged from 7 to 8 feet bsg. A slight sheen was observed on the standing water in the excavation (no other evidence of LNAPL was encountered in this area).

Soil contamination above RR SCOs remains in the vicinity of sampling locations DPW-PE-5W and DPW-PE-6W. Excavation in the vicinity of these sidewall samples was not extended due to the presence of multiple utilities (water and sewer lines, and UST and oil/water separator pipes servicing the DPW garage) present in this area, and soils with petroleum odors and discoloration were left in place in this area. All other post

excavation sampling locations for the southern DPW parcel meet RR SCOs. Tables 12 to 13 and Figure 4.3 document the integrity of soils remaining at the Site after completion of Remedial Action that exceed UU SCOs and RR SCOs.

A demarcation layer, consisting of orange plastic snow fencing, was placed in the excavation area at approximately 5 to 7 feet above the bottom of the excavation. The depth of the excavation was approximately 9 feet bsg. Based on the SIR findings, no contamination is anticipated at depth greater than 15 feet bsg. Final elevations in this portion the Site are anticipated to remain unchanged. A figure showing the excavation area and placement of the demarcation layer is shown in Figure 4.3.

NYSDEC requested the collection of soil samples from the 0 to 2 feet bsg interval to document the integrity of soils west of the DPW trailer and north of Girling Drive. Soil sample (SS-1) was collected west of the DPW trailer. Laboratory results for VOCs, SVOCs, PCBs, pesticides and TAL metals for this and all other soil integrity samples were compared to Allowable Constituents Levels for Imported Fill or Soil (ACLs), presented in Appendix 5 of DER-10, for Unrestricted and Restricted-Residential Use. Soil sample SS-1 exhibited elevated concentrations of several PAHs above ACLs. Tables 14 to 15 and Figure 5 document the integrity of soils remaining at the Site after completion of Remedial Action that exceed ACLs.

NYSDEC indicated that no cover system is needed in the vicinity of sampling location SS-1 as slight exceedances of ACLs do not represent a threat to DPW personnel and these soils are not accessed by the public.

Area north of Dr. Girling Drive (northern DPW parcel)

No remedial activities were conducted in this area with exception of the installation of asphalt in portions of the northern DPW parcel.

Soil integrity samples (SS-2, SS-4, SS-5 and SS-6) were collected in the northern DPW parcel from the 0 to 2 feet bsg interval at the request of NYSDEC to document the integrity of soils in areas that will not be covered by asphalt. All laboratory results for

soil integrity samples analyzed for VOCs, SVOCs, PCBs, pesticides and TAL metals were compared to ACLs. A figure showing the sampling locations is provided as Figure 5.

Low-level exceedances of ACLs were documented for PAHs in samples SS-2 and SS-4; and for lead and chromium in sample SS-2. All other detected results were below ACLs. In addition, soil and groundwater contamination remains in the vicinity of the fuel pumps and ASTs in the northern DPW parcel as specified in the SIR and RWP.

The cover system installed in portions of the northern DPW parcel (asphalt) extended to cover soils in the vicinity of SS-4 (between and around the DPW storage trailers). No cover system was installed in the vicinity of SS-2 as this area is no longer part of the BCA. A request to modify the BCA site boundary was submitted to NYSDEC on November 6, 2013 and approved on December 12, 2013. Lands underwater and tidally influenced areas, such as the area in the vicinity of SS-2, are not subject to the BCA.

Site development activities after the relocation of the DPW are likely to include the development of the shoreline and the covering of contaminated soils with large, heavy riprap and/or imported clean landscaping material. All DPW structures (including the pump station and ASTs) in the northern DPW parcel will be demolished and removed (as appropriate) after the relocation on the DPW facilities during site development activities. All future site development and remedial activities will be performed in accordance with the NYSDEC-approved RWP and SMP.

Groundwater Contamination

Historically, fifteen wells were located on-site: HMW-1 to HMW-13, RMW-2 and RMW-3. Five monitoring wells were destroyed during remedial or DPW site maintenance activities (HMW-9, HMW-10, RMW-2, RMW-3 and HMW-3) and three monitoring wells are currently inaccessible (HMW-2, HMW-4 and HMW-11).

The network of accessible monitoring wells at the Site consists of the following seven monitoring wells: HMW-1, HMW-5, HMW-6, HMW-7, HMW-8, HMW-12 and HMW-13. Monitoring well locations (accessible, destroyed and inaccessible wells) are illustrated in Figure 6.

The most recent groundwater sampling event was conducted on October 30, 2013. Groundwater samples were collected from the following five monitoring wells: HMW-5, HMW-6, HMW-7, HMW-8 and HMW-13. NYSDEC approved limiting the collection of groundwater samples to these wells only as monitoring wells HMW-1 and HMW-12 have not exceeded guidance levels for VOCs and SVOCs in previous sampling events.

An oil water interface meter was utilized to collect depth-to-water and depth-to-LNAPL measurements. LNAPL with a thickness of 0.9 inches was observed in monitoring well HMW-7. No measurable LNAPL was observed in remaining wells. A slight sheen was observed in the purged groundwater of all monitoring wells, with exception of HMW-8. Petroleum odors were noted at all monitoring wells. A photoionization detector (PID) reading of 530 parts per million (ppm) was documented in monitoring well HMW-7. The peak PID reading for remaining wells was 7 ppm at HMW-8. All other PID readings in remaining wells were below 7 ppm. No other field evidence of contamination was observed while sampling the wells.

Elevated concentrations of VOCs were detected at monitoring wells HMW-5, HMW-8 and HMW-13. Methyl tert-butyl ether (MTBE, 15 µg/L, guidance level 10 µg/L) was detected at HMW-5. Trichloroethylene (TCE, 23 µg/L, guidance level 5 µg/L) and cis-1,2-dichloroethylene (5.2 µg/L, guidance level 5 µg/L) were detected at HMW-8. Chlorobenzene (24 µg/L, guidance level 5 µg/L) was detected at HMW-13. No other VOCs were detected above guidance levels in groundwater samples submitted for laboratory analysis. Groundwater sampling results, including historical data, are provided in Tables 3 to 5.

LNAPL assessment and removal activities were conducted on November 7 and 21, 2013, and December 3 and 12, 2013. Table A provides a summary of the observations noted during LNALP monitoring and recovery activities after the initial identification on October 30, 2013. LNAPL was recovered through the use of absorbent material on November 7 and 21. Two absorbent socks, consisting of absorbent material of 2 inches in diameter and 15 inches in length, were sufficient to recover LNAPL during each recovery event. No significant amounts of LNAPL were retrieved from HMW-7.

Table A: Summary of LNAPL Monitoring and Recovery Activities

Parameters	Fieldwork Dates			
	November 7	November 21[1]	December 3	December 12
Depth to Water[2](feet)	7.33 4.22[1]	7.62	7.29	7.36
Depth to LNAPL[2](feet)	7.30 4.21[1]	No LNAPL detected.	No LNAPL detected.	No LNAPL detected.
PID[3] Reading (ppm[4])	None collected.	209	109	97
LNAPL Thickness (inch)	0.36 0.12[1]	0	0	0

Notes:

[1] – Two hours after the retrieval of absorbent material.

[2] – Measurements collected from the top of the PVC pipe.

[3] – PID = photoionization detector

[4] – ppm = parts per million

Available data and fieldwork observations indicate that product removal activities were effective in capturing recoverable LNAPL at HMW-7. No LNAPL was observed in any of the remaining wells. LNAPL assessment will be conducted during groundwater monitoring events at the frequency specified in Table D.

A determination will be made regarding the need for in-situ treatment, in consultation with NYSDEC, after the periodic reassessment of wells as specified in Section 4.2.3.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil and groundwater/soil vapor exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Cover System

Exposure to remaining contamination in soil/fill at the site is prevented by a cover system placed over the site. This cover system is comprised of a minimum of 24 inches of clean soil, and asphalt pavement, concrete-covered sidewalks, trailers in the northern DPW parcel, or concrete building slabs of no less than 3 inches in thickness. The Excavation Work Plan that appears in Appendix B outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed.

Procedures for the inspection, maintenance and monitoring of the cover system are included in the Monitoring Plan (Section 3 of t1.0his SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.1.2 Sub-slab Depressurization System

A SSDS will be installed, if deemed necessary after the evaluation of soil-gas data and in consultation with NYSDEC, in any building erected on-site during future development activities to prevent exposure to any soil-gas intrusion from remaining contamination that exists beneath the Site. This system will be active (unless expressed permission to install a passive SSDS is provided by NYSDEC) and will operational prior to the Site being issued a Certificate of Occupancy for the buildings.

Procedures for operating and maintaining the SSDS are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the Site, occurs.

2.2.1.3 Contingency for In-situ Treatment

In-situ treatment of on-site soils and groundwater will be conducted in the event LNAPL is encountered in remaining wells and/or remaining contamination migrates to areas where no previous contamination has been documented. Mobility of remaining contamination will be evaluated by assessing contaminant concentrations in groundwater and the presence of LNAPL as specified in Section 4.2.3.

Procedures for evaluating the necessity of in-situ treatment are documented in the Operation and Maintenance Plan (Section 4 of this SMP).

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Cover System

The cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

2.2.2.2 Sub-slab Depressurization System

The active SSDS will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by the site owner to the NYSDEC and NYSDOH.

2.2.2.3 Contingency for In-situ Treatment

Any in-situ treatment system (if such system is deemed necessary by NYSDEC) will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the system is no longer required, a proposal to discontinue the system will be submitted by the site owner. Conditions that warrant discontinuing the system include contaminant concentrations in groundwater that: (1) reach levels that are consistently below ambient water quality standards, (2) have become

asymptotic to a low level over an extended period of time as accepted by the NYSDEC, or (3) the NYSDEC has determined that the system has reached the limit of its effectiveness. The absence of LNAPL in-onsite wells is also a condition that may be considered in determining the continuation or conversely the cessation of the system. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

2.2.2.4 Monitored Natural Attenuation

Groundwater monitoring activities, as specified in Section 3.3.1, will be conducted to document post-remedial groundwater quality, assess natural attenuation and evaluate the need to conduct in-situ treatment. Groundwater monitoring will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the Decision Document as well as described in the RWP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to restricted residential uses only. Adherence to these Institutional Controls on the site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;

- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Controlled Site must be inspected at a frequency and in a manner defined in the SMP.
- Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management of the Controlled Site must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Site are:

- The site may only be used for restricted residential use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The site may not be used for a higher level of use, such as unrestricted and residential uses without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the site that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the site is prohibited without treatment rendering it safe for intended use;
- Vegetable gardens and farming on the site are prohibited;
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Site are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP.

NYSDEC retains the right to access such Controlled Site at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The site has been remediated for restricted residential use, with the exception of the area north of Girling Drive. A cover system, consisting of asphalt pavement, was installed in portions of the area north of Girling Drive. The DPW storage trailers located in the area north of Girling Drive are considered part of the cover system in this area. No cover system was installed west of the DPW office trailer. No additional remedial activities were conducted as this area is actively occupied by the DPW. Future remedial activities in this area, to be performed during site development activities, will be conducted in accordance with the NYSDEC-approved RWP and SMP.

Any future intrusive work that will penetrate the soil cover or cap, including the removal of the DPW storage trailers in the northern DPW parcel prior to redevelopment activities, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix B to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. A sample HASP, inclusive of a CAMP, is attached as Appendix C to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

The RWP identifies the installation and operation of a SSDS to address soil vapor intrusion (SVI) in future buildings.

Prior to conducting an SVI investigation or installing the proposed mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. If any indoor air test results exceed NYSDOH guidelines, relevant NYSDOH fact sheets will be provided to all tenants and occupants of the Site within 15 days of receipt of validated data.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report (see Section 5.3).

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report (see Section 5.3). The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the site owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Brownfield Cleanup Agreement (BCA), 6NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.

- Notice within 48-hours of any damage or defect to the foundation, structures or engineering control that reduces or has the potential to reduce the effectiveness of an Engineering Control and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the Brownfield Cleanup Agreement (BCA), Index # W3-1009-04-06, Site # C344060, and all approved work plans and reports, including this SMP
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to Paul H. Ciminello of ESI. These emergency contact lists must be maintained in an easily accessible location at the site.

Table B: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362
Haverstraw Police Department	(845) 354-1500 or 911
Haverstraw Fire Department	(845) 429-0300 or 911
Village of Haverstraw Town Hall	(845) 429-0300
United Water New York	(845) 623-1500
Haverstraw Municipal Sewer	(845) 429-5715
Orange & Rockland Utilities Inc. (gas and electric)	(800) 533-5325 – Gas (877) 434-4100 – Electric

Table C: Site Contact Numbers

NYSDEC Division of Environmental Remediation James Candiloro, P.E. (NYSDEC Project Manager)	(518) 402-9662
Ginsburg Development Companies, LLC Joseph Dziegelewski (Remedial Party Representative)	(914) 747-3600 Extension 4617
Ecosystems Strategies, Inc. Paul H. Ciminello, President (Qualified Environmental Professional)	(845) 452-1658
Morris Associates Engineering Consultants, P.L.L.C Joseph Dennis, P.E. (Remedial Engineer)	(845) 454-3411

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 51 Dr. Girling Drive, Village of Haverstraw, Rockland County, NY

Nearest Hospital Name: Nyack Hospital

Hospital Location: 160 North Midland Avenue, Nyack

Hospital Telephone: 845-348-2345 – Emergency Room

Directions to the Hospital:

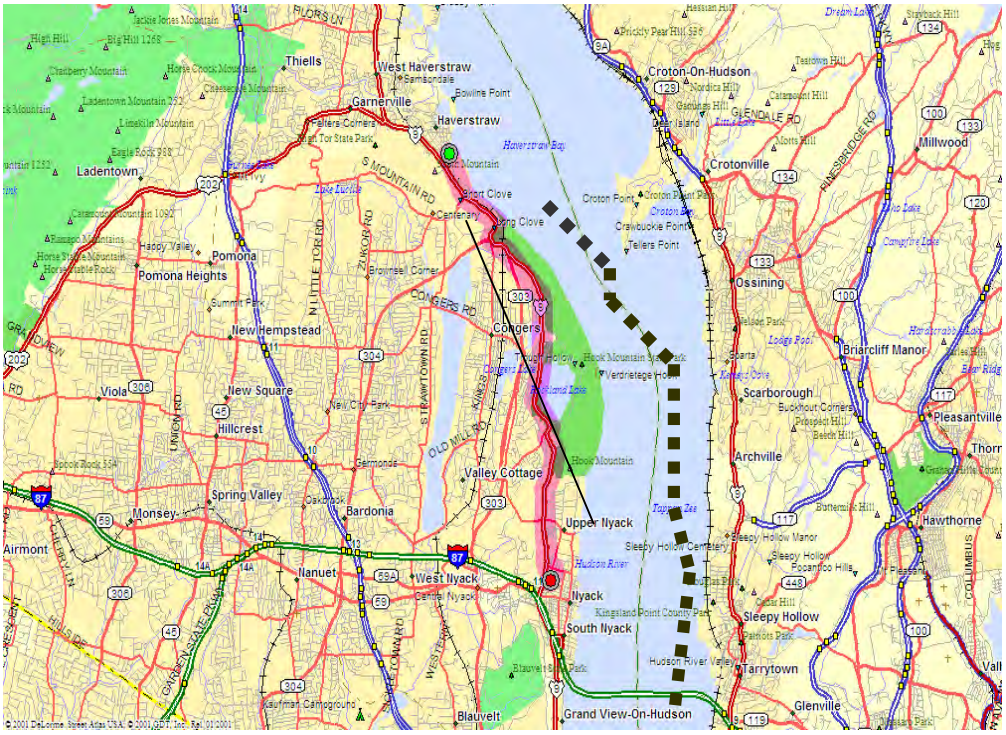
1. Exit the work site using Dr. Girling Drive.
2. Turn Left (southeast) onto West Street/Riverside Avenue, continue straight onto Short Clove Road.
3. Turn Left (South) onto US Route 9W, continue south into Upper Nyack.
4. Turn Left (East) onto 6th Avenue.
5. Turn Right (Southwest) onto North Midland Avenue. Hospital is located on Right at 160 North Midland Avenue (see Map on next page).

Total Distance: 8 miles

Total Estimated Time: 17 minutes

Map Showing Route from the site to the Hospital:

Figure A: Map to Nyack Hospital (overview)



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table B). The list will also be posted prominently at the site and made readily available to all personnel at all times.

Response procedures for several emergency conditions are described below:

a) Spill Response: Procedures presented in the NYSDEC's Spill Guidance Manual (1.1: Spill Reporting and Initial Notification Requirement) will be complied with in case of any future spill that may occur at the Site. As described in the manual, petroleum spills must be reported to the NYSDEC unless all of the following criteria are met:

The spill is known to be less than 5 gallons; and

The spill is contained and under the control of the spiller; and

The spill has not and will not reach the State's water or any land; and,

The spill is cleaned up within 2 hours of discovery.

All reportable petroleum spills and most hazardous materials spills must be reported to DEC hotline (1-800-457-7362) within New York State. The manual further indicates that for a spill not deemed reportable, it is strongly recommended that the facts concerning the incident be documented by the spiller and a record be maintained for one year.

b) Evacuation Plan: As indicated in the NYSDEC's Spill Guidance Manual (1.3: Emergency Response), protection of public health and safety during a spill or fire response may require evacuating residents and other personnel from the area temporarily. The manual indicates that a decision to evacuate is usually prompted by the discovery that an imminent health and/or safety threat exists. Common examples are when explosive conditions are detected in a structure, when the spilled material is inherently toxic or releases toxic vapors, or toxic. As indicated in the manual, when an emergency situation that may warrant an evacuation is realized, following actions will need to be performed:

- Notifying the agencies (Fire, Police and Health Departments) who have the authority to evacuate residents, and
- Providing technical support and advice to these agencies, as requested, consistent with Bureau of Spill Prevention and Response (BSPR) authority.
- On the other hand, if there is no time for contacting appropriate agencies, the site operator may give advice consistent with his/her training and experience.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the cover system, and all affected site media identified below. Monitoring of other Engineering Controls is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- Assessing achievement of the remedial performance criteria.
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

The following remedial components and media will be monitored to evaluate the performance of the remedy and overall reduction in contamination on-site: SSDS, cover integrity, groundwater quality, outdoor and indoor air quality, and soil vapor intrusion. Groundwater quality will used to evaluate the need for in-situ treatment. Monitoring will be conducted for the first three years at varying intervals for each remedial component and media. The frequency thereafter will be determined by field conditions and trends, and will be made in consultation with NYSDEC. Trends in contaminant levels in air, soil, and/or groundwater in the affected areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in Table D and outlined in detail in Sections 3.2 and 3.3 below.

Table D: Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater Monitoring Wells Network	Year 1 – Quarterly Year 2 – Biannually Year 3 – Annually (The need for continued monitoring after Year 3 will be determined by NYSDEC, based on the accumulated data.)	Groundwater	USEPA Method 8260 – VOCs Field evidence of contamination (LNAPL) Other indicators for in-situ treatment might be necessary.
Soil Vapor	Year 1 – One-time (To be conducted during the winter months and to assist in the design of the SSDS)	Gas	USEPA Method TO-15
Soil Vapor (from each SSDS effluent)	One-time (pending on satisfactory results)	Gas	USEPA Method TO-15
Indoor and Outdoor Air Quality (conducted after SSDS installation and operation)	One-time (pending on satisfactory results)	Air	USEPA Method TO-15
SSDS	Monthly (for 3-months following system start-up), and annually thereafter.	Operational (components inspection and vacuum assessment)	None
Cover Integrity	Years 1-3 – Annually	Not Applicable	None
In-situ Treatment	To be implemented as needed based on the evaluation of groundwater data.	Groundwater	USEPA Method 8260 – VOCs Field evidence of contamination (LNAPL)

Notes:

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

**Year 1 refers to the year following the issuance of the Certificate of Completion.

3.2 COVER SYSTEM MONITORING

The cover at the site will be inspected annually to document the system's integrity and effectiveness in protecting human health and the environment. Inspection frequency is subject to change by NYSDEC and NYSDOH. The annual visual inspection of the cover will document:

- Condition of the cover system;
- Cracks in building slabs;
- Vegetation growing between cracks in building footprint or paved areas,
- Establishment of vegetation in landscaped and grass-covered areas;
- Evidence of soil disturbance; and
- Ponding of surface water or surface depressions.

The landscaped and grass-covered areas of the cover system will be mowed at least twice a year to prevent unwanted trees, shrubs, scrub brush, etc. from establishing. Additional mowing or trimming events may be required if excessive growth of trees, shrubs, scrub brush, etc. are observed during the site-wide inspection.

Photographs and other relevant documentation will be collected during the inspection. A cover system monitoring checklist to evaluate the components of the system during the inspection is included in the Site-Wide Inspection Form presented in Appendix D. Significant soil and cover disturbance affecting the integrity of the system will be address in a manner consistent with the protocol presented in Section B-9, Appendix A (Cover System Restoration, Excavation Work Plan). The site owner or its successors is responsible for the maintenance and restoration (if needed) of the cover system.

3.3 MEDIA MONITORING PROGRAM

The media monitoring program at the site includes the periodic sampling of groundwater via the existing monitoring wells network and soil-gas in or near areas

where contamination remains to assess the need of an SSDS. The objectives of the media monitoring program are to:

- Document groundwater and soil-gas conditions post remediation;
- Assess natural attenuation of remaining contamination; and
- Evaluate the need for in-situ treatment to address remaining contamination.

The sub-sections provided below details the media monitoring program.

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. The existing network of monitoring wells is described in Section 1.4.3. The following additional wells are proposed for installation under the SMP:

- HMW-14 (upgradient from post excavation samples PE-2B and PE-3B [area with remaining contamination]),
- HMW-9R (downgradient from post excavation samples PE-2B and PE-3B [area with remaining contamination]),
- HMW-10R (in the vicinity of former monitoring well HMW-10),
- RMW-2R (in the vicinity of former monitoring well RMW-2), and,
- HMW-3R (in the vicinity of former monitoring well HMW-3).

The network of monitoring wells will be installed to monitor both up-gradient and down-gradient groundwater conditions at the site. Groundwater sampling to be conducted under the Site Management Plan will be limited to the following wells of significance: RMW-2R, HMW-3R, HMW-9R, HMW-10R, HMW-5 through HMW-8, HMW-13, and HMW-14. These monitoring wells were selected as wells of significance based on their proximity to remediated areas and areas with remaining petroleum contamination.

The following monitoring wells are considered inactive as data from these wells was not deemed relevant to remaining petroleum contamination: HMW-1 and HMW-12.

Monitoring well locations (accessible, destroyed and inaccessible wells) are illustrated in Figure 6 and the construction logs for the monitoring wells are included in Appendix E.

The table below provides a summary of the monitoring wells associated with the site.

Table E: Summary of Accessible Monitoring Wells

Well ID	Site Location	Screened Interval (bsg)	GW Depth from Top of Well Casing (November 2013)	Well Installation Date
HMW-1	Southwestern portion site, west of the DPW garage	-14 to -24 ft (EOB=24 ft)	15.56 ft.	9/18/06
HMW-5	North-central portion site, east of the former pump house	-5 to -15 ft (EOB=15 ft)	-3.86 ft.	9/18/06
HMW-6	Central portion site, on Dr. Girling Drive	-4 to -14 ft (EOB=14 ft)	-4.09 ft.	9/20/06
HMW-7	Eastern portion site, northwest of the former Sales Center	-5 to -15 ft (EOB=15 ft)	-7.33 ft.*	9/20/06
HMW-8	Eastern portion site, south of MNR parking lot	-4 to -14 ft (EOB=14 ft)	-6.23 ft.	9/15/06
HMW-12	Eastern portion site, on MNR parking lot, along the site boundary	-5 to -15 ft (EOB=15 ft)	Not measured	5/23/07
HMW-13	Western portion Site, north of the existing fuel tanks and pumps	-5 to -15 ft (EOB=17 ft)	-4.83 ft.	5/23/07

Notes:EOB – Elevation of Bottom, per Well Construction Logs presented in Appendix E.

*Depth to LNAPL was recorded as -7.30 feet.

3.3.1.1 Installation of Proposed Monitoring Wells

All proposed monitoring wells will be constructed of two-inch PVC casing with 0.1-inch slotted PVC well screening across the water table. No glue will be used to

thread the casing lengths. The wells will be constructed such that a minimum of 2.0 foot of screening will extend above the water table and approximately 8.0 feet of screening will extend below the water level. The annular space between well screen and the borehole will be backfilled with clean #1 silica sand to a depth of one to two feet above the well screen. A one-foot thick bentonite seal will be poured down the borehole above the sand pack and allowed to hydrate before grouting the remaining annular space with cement. Note: the length of the PVC screen, sand filter, and bentonite seal may be reduced (in that order) in order to accommodate a shallow water table. A locked cap with vent will be installed at the top of the PVC riser.

Wells will be completed as either stickup or drive-over wells, according to site conditions, and will be protected by locked, metal casings. Well locations and well construction logs will be provided to NYSDEC within two (2) weeks of well construction. Please refer to Sections 3.6 and 5.3 for monitoring reports associated with this SMP.

3.3.1.2 Monitoring Well Development

Subsequent to installation, the wells will be developed with a properly decontaminated mechanical pump and dedicated polyethylene tubing in order to clear fine-grained material that may have settled around the well screen and to enhance the natural hydraulic connection between the well screen and the surrounding soils. Prior to development, the monitoring well casing will be opened and the well column immediately screened with a PID to document the presence of any volatile organic vapors. Water removed from the monitoring well will be visually inspected for indications of petroleum contamination. Well water removed in the course of development will be containerized (disposal of collected groundwater will be based on the results of laboratory analysis).

Well development will begin at the top of the saturated portion of the screening to prevent clogging of the pump within the casing. The pump will be raised and lowered one to two feet within various portions of the screened interval to force water back and forth through the screen. Repeated surging and pumping at intervals of less than five feet will be performed to the bottom of the screen until the discharged water appears clear.

Upon completion, the pump assembly will be removed while the pump is still running to avoid discharge of purged water back into the well. The well will be considered developed when turbidity is determined to be less than 50 NTUs.

3.3.1.3 Sampling Protocol

The following sampling protocol has been established for the groundwater monitoring at the site:

- All monitoring well sampling activities will be recorded in a field book, including basic climatologically data, and a groundwater-sampling log/ Well Purging Form presented in Appendix F. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.
- All wells will be purged and sampled following the USEPA Low-Flow Method.
- New latex gloves will be worn by the sampler at each well location.
- The protective cover of the well will be removed; the air in the well head will be screened with the PID. The presence and thickness of LNAPL (if encountered) will be measured, relative to the top of the PVC and with an accuracy of measuring to the nearest 0.01 foot, utilizing a decontaminated oil/water interface probe. Depth to groundwater measurements will also be recorded.
- All sampling will be conducted using the Horiba® U-52 or comparable equipment, dedicated plastic tubing and a peristaltic pump.
- Teflon or Teflon-lined polyethylene tubing, attached to a peristaltic pump, will be slowly lowered until reaching one to two feet off of the bottom to prevent disturbance and re-suspension of any sediment present in the bottom of the well.

- The water level will be measured before the pump is started, the well will be pumped at a rate of 200 to 500 milliliters per minute, and the water level will be measured approximately every five minutes to ensure that stabilization (drawdown of 0.3 feet or less) is achieved.
- During pumping, field indicator parameters (turbidity, temperature, specific conductance, pH, redox potential and dissolved oxygen) will be monitored and recorded approximately every five minutes. A Well Purging Form is included in Appendix F. The well will be considered stabilized when the indicator parameters have stabilized for three consecutive readings.
- Groundwater samples will be collected from the well using dedicated tubing following established USEPA procedures. Each groundwater VOC sample will be placed in three, appropriately labeled, 40-ml glass vials preserved at the laboratory with hydrochloric acid. Precautions will be taken to ensure that there are no air bubbles in the vials/jars during sample collection. All samples will be maintained at appropriate cold temperatures.
- The protective cap on the well will be replaced and locked following sampling, and the field sampling crew will move to the next well and the process will be repeated.
- After sample collection the containers will be placed in a cool (approximately 4°C) dry place prior to their transport via courier to NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory. The holding time for water samples to be analyzed for VOCs is 14 days.

3.3.1.4 Monitoring Well Repairs, Replacement And Decommissioning

If biofouling or silt accumulation occurs in the on-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will

be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance. The structural integrity of the monitoring wells associated with the site will be assessed during each quarterly sampling event and recorded in each groundwater monitoring report. If the structural integrity of any well is found to be compromised, the well will be repaired and sampling will be continued, as appropriate.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.3.2 Soil Vapor Monitoring

Soil-gas monitoring will be performed to assess the performance of the remedy, evaluate the need for the installation of a SSDS, and assist in the design of the SSDS. Soil-gas sampling will be conducted in locations were the proposed buildings will be erected. Soil-gas samples will be collected in accordance with the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, by NYSDOH and dated 2006 (NYSDOH Guidance).

3.3.2.1 Pre-Sampling Building Inventory and Inspection

A building inspection will be conducted for all soil-gas sampling conducted within future structures (and for any indoor air sampling) in order to 1) inventory any on-site products or equipment that may interfere or influence the sampling, and 2) evaluate the condition of the building and the foundation slab to identify any defects that may affect the proposed sampling or act as preferential pathways.

3.3.2.2 Sampling Protocol

The following sampling protocol has been established for the soil vapor monitoring at the site:

- A tracer gas (e.g., helium) will be used at all soil-gas sampling locations to verify that adequate sampling techniques are being implemented (i.e. to verify the absence of significant infiltration of outside air) in accordance with NYSDOH protocols. Continued use of the tracer gas may be waived based upon verification of methodology effectiveness, after consultation with NYSDEC personnel.
- A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil-gas for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration.
- Sampling will occur for the duration of two hours. Samples will be collected in appropriate sized SUMMA® canisters that have been certified clean by a NYSDOH ELAP-certified laboratory.
- Soil-gas samples will be collected via soil-gas implants set at a depth of no less than six feet bsg. The soil-gas probe will be installed between one and two feet above the groundwater interface. Groundwater is expected to be encountered at a depth of eight to ten feet bsg.
- Flow rate for both purging and sampling will not exceed 0.2 liters per minute (L/min). After a period of 24-hours following soil-gas probe installation, one to three implant volumes shall be purged prior to the collection of any soil-gas samples.
- A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth and location, identity of samplers, sampling methods and devices, soil-gas purge volumes, volume of the soil-gas extracted, vacuum of canisters before and after the

samples are collected, apparent moisture content of the sampling zone, applicable site and atmospheric conditions during the sampling, and chain of custody protocols.

- At the conclusion of the sampling round, tracer monitoring will be performed a second time to confirm the integrity of the probe seals.

3.3.3 Indoor and Outdoor Air Monitoring

Indoor and outdoor air monitoring will be performed to document on-site air quality both within the on-site building(s) and the exterior areas. Indoor and outdoor air will be collected in accordance with the NYSDOH Guidance. It is anticipated that three indoor air samples and three outdoor air samples will be collected after the installation and initial operation of the SSDS. Air sampling locations will be determined in the field at the time of sampling based on-site conditions. A pre-sampling building inventory and inspection will be conducted as specified in Section 3.3.2.1 prior the collection of samples.

3.3.3.1 Sampling Protocol

The following sampling protocol has been established for the indoor and outdoor air monitoring at the site:

- A tracer gas will be used as specified in Section 3.3.2.2, as needed.
- Samples will be collected into 6-liter, stainless steel SUMMA® canisters that have been certified clean by a NYSDOH ELAP-certified laboratory. Each canister will be equipped with a 24-hour flow regulator to collect a sample representative of exposure for a typical exposure period.
- Sample canisters will be set up in the morning and sample collection will be initiated at approximately the same time. Indoor and outdoor air samples will be collected simultaneously.

- Flow regulators will be closed and sampling will be ceased after approximately 23.5-hours, in order to maintain a small amount of negative pressure within each sample canister.

- A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling locations, identity of samplers, sampling methods and devices, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, applicable site and atmospheric conditions during the sampling, and chain of custody protocols.

3.3.4 Media Sampling Frequency, Parameters, and Deliverables

All groundwater samples will be submitted for laboratory analysis of VOCs utilizing USEPA Method 8260. All soil-gas samples, and indoor and outdoor air samples, will be submitted for laboratory analysis of VOCs utilizing USEPA Method TO-15. The analyte list for each media may be limited to contaminants of concern, with NYSDEC approval, following the evaluation of previous sampling rounds. The sampling frequency and length for all media samples is specified in Table D. The sampling frequency may be modified with the approval NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

The NYSDEC electronic data deliverable format for the analytical data will be requested from the testing laboratory. NYSDEC Analytical Services Protocol Category B Data Deliverables will be requested from the testing laboratory and forwarded to an independent third party data validator for the development of Data Usability Summary Report (DUSR).

Groundwater, soil vapor monitoring, and indoor and outdoor air reports will be submitted to the NYSDEC within two (2) weeks of the receipt of validated data. Please refer to Sections 3.6 and 5.3 for monitoring reports associated with this SMP.

If in-situ treatment is implemented, additional field testing of reagents and/or sampling may be conducted to determine the treatment protocols.

3.4 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix D). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that site records are up to date.

3.5 MONITORING QUALITY ASSURANCE/QUALITY CONTROL

All sampling and analyses will be performed in accordance with the requirements set forth in NYSDEC DER-10 Sections 2.2 and 2.3 and Section 3.3.4 of this Site Management Plan. Main components of the quality assurance and quality control protocols in DER-10 include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.

  - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.

- Sample Tracking and Custody;
- Calibration Procedures:
  - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
  - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.6 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. A letter report will also be prepared, subsequent to each sampling event. The report (or letter) will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc.);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether groundwater conditions have changed since the last reporting event.
- A recommendation for the implementation of in-situ treatment, if deemed necessary, based on the evaluation of groundwater conditions.

Data will be reported in hard copy or digital format as determined by NYSDEC.

A summary of the monitoring program deliverables are summarized in Table F below.

Table F: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Site Wide Inspection (includes SSDS and cover integrity annual inspections)	Annual – To be reported in the Period Review Report (PRR)
Soil Vapor Sampling (to assist in SSDS Design)	Year 1** – One-time– To be reported in LR.
SSDS Design	Prior to the proposed installation of the SSDS. – To be reported in the SSDS Design Document.
SSDS Effluent	One-time event – To be reported in Letter Report (LR).
SSDS Operation Verification (manometer testing and other system-star-up and balancing activities)	Monthly for the first three months after installation (to be reported in LR), annually thereafter (to be reported in PRR).
Indoor/Outdoor Air Sampling (following SSDS Operation)	One-time event – To be reported in Letter Report (LR).
Groundwater Monitoring Wells Network Sampling	Year 1** – Quarterly – To be reported in LR. Year 2 – Biannually – To be reported in LR. Year 3 – Annually – To be reported in PRR.
Well Installation	1-time event – To be reported in Letter Report (LR).
In-situ Treatment Implementation*** (to include design and implementation plans)	Prior to the proposed implementation of in-situ treatment. – To be reported in In-situ Treatment Design Document.

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC.

**Year 1 refers to the year following the issuance of the Certificate of Completion.

*** Task to be executed if deemed necessary. Implementation will be based on the evaluation of groundwater data, and will be made in consultation with NYSDEC.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

This Operation and Maintenance Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the steps necessary to allow individuals unfamiliar with the site to operate and maintain the SSDS;
- Includes an operation and maintenance contingency plan;
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDS is operated and maintained; and,
- Includes a protocol to evaluate monitoring data to determine the need for in-situ treatment of on-site soils and groundwater.

Information on non-mechanical Engineering Controls (i.e. cover system) is provided in Section 3 - Engineering and Institutional Control Plan. A copy of this Operation and Maintenance Plan, along with the complete SMP, will be kept at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the SMP.

4.2 ENGINEERING CONTROL SYSTEM OPERATION AND MAINTENANCE

4.2.1 Scope

This section of the SMP describes the operations and maintenance activities for the mechanical components of the remedy that will be implemented after completion of remedial activities. The site owner (or its successors) is responsible for the implementation of the operation and maintenance activities outlined in this section, unless otherwise indicated. The objectives of the operations and maintenance activities for the site are to:

- Operate, maintain and monitor the SSDS for the site; and

- Establish a protocol to evaluate the need for in-situ treatment of on-site soils and groundwater.

4.2.2 Sub-slab Depressurization System

4.2.2.1 SSDS Design and Installation

An active SSDS will be installed in each future building at the site, unless expressed approval to avoid SSDS installation or SSDS activation is secured from NYSDEC. The sub-slab vapor barrier will consist of a minimum 10 mil plastic liner (or equivalent), which overlies a highly porous substrate (e.g., clean 1 ½" aggregate) containing a horizontal network of PVC piping. The horizontal piping network will be connected to non-perforated vertical piping extending above the roofline of the proposed building. All vapor barrier penetrations and overlapping sections of plastic liner will be appropriately sealed, as will any penetrations or significant openings in sub-grade portions of foundation slabs or foundation walls. Low-grade vacuum pumps or fans, located outside of the usable interior space and sized to maintain vacuum beneath the foundation slab, will be connected to the vertical piping system. System discharge points will be located above the roofline and at a sufficient distance from roof-mounted air intakes to prevent re-entrainment of airborne contaminants. A visual pressure indicator (U-tube manometer or magnehelic gauge) will be installed for regular inspection purposes. In addition, an audible and/or visual fail-safe system will be installed to alert maintenance personnel to conditions of insufficient vacuum, which may be caused by vacuum pump/fan failure. The precise system design will be developed following confirmation of final soil conditions and submitted to NYSDEC for review and approval in the SSDS Design Document.

4.2.2.2 SSDS Start-Up and Testing

System start-up and initial testing will occur after the concrete slabs of the on-site structures have been poured. The following activities will be conducted:

1. Prior to system start-up all visible system components will be visually inspected for verification of proper installation. The system will be

temporarily started and all unit(s) generating sub-slab vacuum will be inspected for proper functioning. The system will be shut off and documentation of system conditions will be maintained in field logbooks.

2. At least four permanent monitoring points will be installed throughout the building by drilling ¼ inch – ½ inch diameter holes through the slab and placing appropriate fittings. An assessment of sub-lab pressure, both with the system off and with the system temporarily on, will be made at each monitoring point using a digital micro-manometer. A difference in pressure of -0.002 inches of water column (in. w.c.) at each monitoring point. Observed pressure readings that fall short of these standards may indicate the need for system modification, such as the installation of additional extraction point(s).

3. Carbon filtration will be installed at each system discharge point if field observations indicate the potential for significant vapors in the emission. The system will be operated for a minimum of 12 hours and pre- and post carbon filtration effluent air samples will be subsequently collected and analyzed for VOCs (USEPA Method TO-15). These data will be used to determine the need for and extent of an air quality permit (including the need for continued air discharge treatment).

4. The operation of the audible and/or visual fail-safe system alerting of fan/blower failure will be confirmed.

5. The system will be permanently engaged following the completion of system modifications, the addition of any effluent air treatment, and the receipt of any necessary permits.

6. After the system has been permanently engaged the site owner will be responsible for inspections of the system's pressure. In addition, the system fans will be inspected periodically for signs of wear and/or failure. Periodic inspections will be conducted monthly and annually utilizing the SSDS Inspection Forms presented in Appendix D and G.

7. Sub-slab pressures at each monitoring point, laboratory results for effluent air samples, recommendation for system modification (if necessary), and an assessment of all the mechanical components of the system, including audible and/or visual fail-safe system, will be reported to NYSDEC in a Letter Report following star-up and testing activities.

8. The system testing described above will be conducted anytime the system must be restarted following significant modifications.

4.2.2.3 SSDS Sampling Protocol

One grab sample of SSDS exhaust air from each building will be collected with an individually-certified clean Summa® canister. If a carbon filtration system is installed (based on field observations), an SSDS exhaust air sample post filtration system will also be collected. All pertinent data will be recorded in the field notebook and/or data collection forms. This information will include the following items:

- Sampler's name;
- Date, time and PID reading;
- Date and time of sample start and stop;
- Summa® canister serial number;
- Initial and final Summa® canister vacuum;
- Sample identification, and descriptive location of the sampling area;
- Weather conditions including ambient temperature inside and outside the building;
- SSDS operating conditions;
- Apparent moisture content of the air being sampled; and
- Description of features that may impact the vapor measurements (e.g., storage areas for materials that may contain VOCs, drainage facilities, utility lines, any contamination noted, stains, etc.); and all equipment calibrations performed.

At the conclusion of the sampling, the canister will be shipped via overnight delivery to an ELAP-certified laboratory. Soil vapor samples will be analyzed for VOCs using USEPA Method TO-15. All laboratory data will be provided in ASP Category B deliverable format and the data validated. A letter report will be prepared and submitted to NYSDEC that includes: 1) a summary of the sampling activities performed including any required deviations from this SMP, 2) a summary table of all sampling results, 3) sampling logs, 4) photographs of sampling locations, 5) Data Validation Reports and 6) Category B Laboratory Data Deliverables.

4.2.2.4 SSDS Operation: Routine Operation Procedures

Routine maintenance and inspection will be conducted to ensure that the SSDS is operating properly. Qualified building personnel will confirm that the unit(s) generating sub-slab vacuum, and the audible and/or visual fail-safe system, are properly working on a monthly basis. Section 4.2.6 describes procedures to follow in the event that one or both of these devices are not working properly.

On an annual basis, the following will performed:

- Conduct a visual inspection of the complete system.
- Inspect unit(s) generating sub-slab vacuum for signs of abnormal operations, and repair or replace if required.
- Inspect the discharge location of the vent pipe to ensure that no air intake or operable window has been located nearby.
- Determine, through discussions with building management, if any Heating, Ventilation, and Air Conditioning (HVAC) system modifications occurred that might affect the performance of the SSDS.
- Inspect the floor slab and foundation walls for evidence of cracks and/or holes, and repair of cracks and/or holes, if required.

4.2.2.5 SSDS Operation: Routine and Non-Routine Equipment Maintenance

Routine equipment maintenance for the unit(s) generating sub-slab vacuum (e.g. blower or fan) will be conducted as per the Manufacturer's recommendations. The precise system design for the SSDS will be developed following confirmation of final soil conditions and submitted to NYSDEC for review and approval in the SSDS Design Document. The SSDS Design Document will include the relevant information regarding the operations and maintenance for the unit(s) generating sub-slab vacuum. An Operations and Maintenance Manual for the unit(s) will be incorporated in this SMP after a determination has been regarding the unit model and system configuration.

Non-routine maintenance typically occurs when the audible and/or visual fail-safe system indicates the system is not working properly, the system becomes damaged, or if the building's HVAC has undergone modifications that may reduce the effectiveness of the system. The scope of non-routine maintenance will vary depending upon the situation. In general, the following actions will be taken as part of non-routine maintenance:

- Examine the building for structural or HVAC system changes, or other changes that may affect the performance of the depressurization system (e.g., new combustion appliances or deterioration of the concrete slab).
- Examine and address the operation of the audible and/or visual fail-safe system and the unit(s) generating sub-slab vacuum, and measure the sub-slab pressure at monitoring points, via a manometer.
- Repair or adjust the SSDS as appropriate. If necessary, the SSDS should be redesigned and restarted as indicated in Section 4.2.2.2.

4.2.2.6 SSDS Repair, Modification and/or Deactivation

NYSDEC will be notified prior to any major repair of the SSDS that would require temporary deactivation for a period longer than 24 hours. Repair activities will be documented in the Periodic Review Report.

A Work Plan will be submitted to NYSDEC for review and approval in the event significant modifications to or permanent deactivation of the SSDS are proposed. The system may be deactivated with NYSDEC and NYSDOH approval. All repair, modification or decommissioning activities will be documented in the Periodic Review Report.

4.2.3 Contingency for In-situ Treatment

The need for in-situ treatment of remaining contamination in on-site soil and groundwater will be evaluated based on media monitoring data. The media monitoring data to be evaluated include:

- Persistent presence of LNAPL in existing and proposed on-site monitoring wells after physical removal of LNAPL (Note: A protocol for the physical removal of LNAPL is proved below); and,
- Spatial and historical trends in dissolved groundwater contamination in existing and proposed on-site monitoring wells; and,

The presence of LNAPL will be assessed during each groundwater monitoring event to be conducted at the frequency indicated in Section 3.1.2, Table D. NYSDEC will be informed of the presence of LNAPL and LNAPL recovery in the Letter Report associated with the groundwater monitoring as specified in Section 3.6, Table F.

Physical removal of LNAPL will be initiated in the event LNAPL is detected in any on-site or off-site well. A water/oil interface probe or absorbent material will be lowered inside the monitoring well to detect LNAPL. If LNAPL is encountered absorbent material will be introduced inside the monitoring well to recover accessible LNAPL. LNAPL recovery activities will cease when all accessible LNAPL has been recovered as indicated by the lack of LNAPL in the absorbent material or a LNAPL thickness of 0.10 inches. Spent absorbent material, and other material in contact with LNAPL, will be disposed of in accordance with applicable NYSDEC regulations (6 NYCRR Part 370 - 374).

Monitoring wells will be reassessed weekly for one month to assess LNAPL accumulation and determine the effectiveness of LNAPL recovery efforts. Based on the

frequency of LNAPL reoccurrence and amount of LNAPL present in the wells a determination of the need for additional treatment (in-situ treatment) will be evaluated in consultation with NYSDEC.

An evaluation for in-situ treatment will be made following each groundwater monitoring event as specified in Table D for the first two years of media monitoring. A yearly evaluation for in-situ treatment will be made following the initial two years of media monitoring. The yearly evaluation will be documented in the Periodic Review Report. A determination of the need for in-situ treatment will be made in consultation with NYSDEC.

Meeting one of the following criteria will activate the contingency plan for in-situ treatment at the site:

- Persistent presence of LNAPL in one or more on-site monitoring wells after physical removal of LNAPL; or
- Significantly elevated levels of dissolved groundwater contamination exceeding guidance levels presented in the NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (TOGS 1.1.1) by two orders of magnitude in one or more monitoring wells.

An In-situ Treatment Design Document will be prepared no later than 30 days following the initial determination for in-situ treatment and submitted to NYSDEC for review and approval. The In-situ treatment Design Document will include at a minimum: delineation of proposed treatment area, description of in-situ treatment method and application, monitoring and reporting requirements, media sampling schedule and frequency, and proposed target reduction levels and indicators.

4.3 ENGINEERING CONTROL SYSTEM PERFORMANCE MONITORING

Two engineering controls, the cover system and the SSDS, will be present on-site. Cover system monitoring is described in Section 3.2 of this SMP (the cover system

monitoring is presented in a separate section due to the passive nature of this system). The performance monitoring for in-situ treatment will be described in the In-situ treatment Design Document and related documentation, if such treatment is deemed necessary. The In-situ Treatment Design Document and associated documentation, if deemed necessary, will be incorporated in this SMP. The following sections describe the performance monitoring for the SSDS.

4.3.1 Monitoring Schedule

The monitoring schedule for the SSDS (monthly and annual) is described in Section 4.2.2.4. In addition, the initial monitoring schedule and required reporting is presented in Section 4.2.2.2. Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSDS has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the SSDS are specified later in this Plan.

4.3.2 General Equipment Monitoring

A visual inspection of the complete system will be conducted during the monitoring event. SSDS components to be monitored include, but are not limited to, the following:

- Building(s) concrete slab
- Vertical risers and other associated piping leading to the unit(s) generating sub-slab vacuum (above ground)
- Valve box (s), located in the vertical risers, for control of air flow from each extraction point
- Sub-slab monitoring points
- Unit(s) generating sub-slab vacuum
- Visual pressure indicator (U-manometer or magnehelic gauge)
- Audible and/or visual fail-safe system
- Monitoring points at selected vertical risers

A complete list of components to be checked is provided in the SSDS Inspection Forms, presented in Appendices D and G. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan are required immediately, and the SSD system is to be restarted.

4.3.3 System Monitoring Devices and Alarms

The SSDS has two warning devices, an audible and/or visual fail-safe system, and a visual pressure indicator, to indicate that the system is not operating properly. In the event that the warning devices are activated or indicate inadequate functioning, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the SSDS restarted. Operational problems will be noted in the subsequent Periodic Review Report.

4.3.4 Sampling Event Protocol

SSDS effluent sampling and indoor and outdoor air sampling will be conducted as specified in Sections 4.2.2.3 and 3.3.3, respectively. No other media sampling is associated with the maintenance and operation of the SSDS.

4.4 MAINTENANCE AND PERFORMANCE MONITORING REPORTING REQUIREMENTS

Maintenance reports and any other information generated during regular operations at the site will be kept on-file on-site. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and submitted as part of the Periodic Review Report, as specified in the Section 5 of this SMP.

4.4.1 Routine Maintenance Reports

Checklists or forms (see Appendices D and G) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

4.4.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

5. 0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms for their respective system which are contained in Appendices D and G [SSDS (monthly and annual reporting forms)]. Additionally, a general site-wide inspection form, including an inspection of the SSDS, will be completed during the site-wide inspection (see Appendix D). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,

- The site remedy continues to be protective of public health and the environment and is performing as designed in the RWP and FER.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare the following certification:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and

- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name] of [business address], am certifying as [Owner or Owner's Designated Site Representative] I have been authorized and designated by all site owners to sign this certification] for the site.

The signed certification will be included in the Periodic Review Report described below.

For each institutional identified for the site, I certify that all of the following statements are true:

- The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement.
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative] for the site.

- No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid; and

  Every five years the following certification will be added:

- The assumptions made in the qualitative exposure assessment remain valid.

The signed certification will be included in the Periodic Review Report described below.

5.3 PERIODIC REVIEW REPORT

A Periodic Review Report will be submitted to the Department every second year, beginning fifteen months after the Certificate of Completion or equivalent document is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix A (Environmental Easement, Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted.

These will include a presentation of past data as part of an evaluation of contaminant concentration trends;

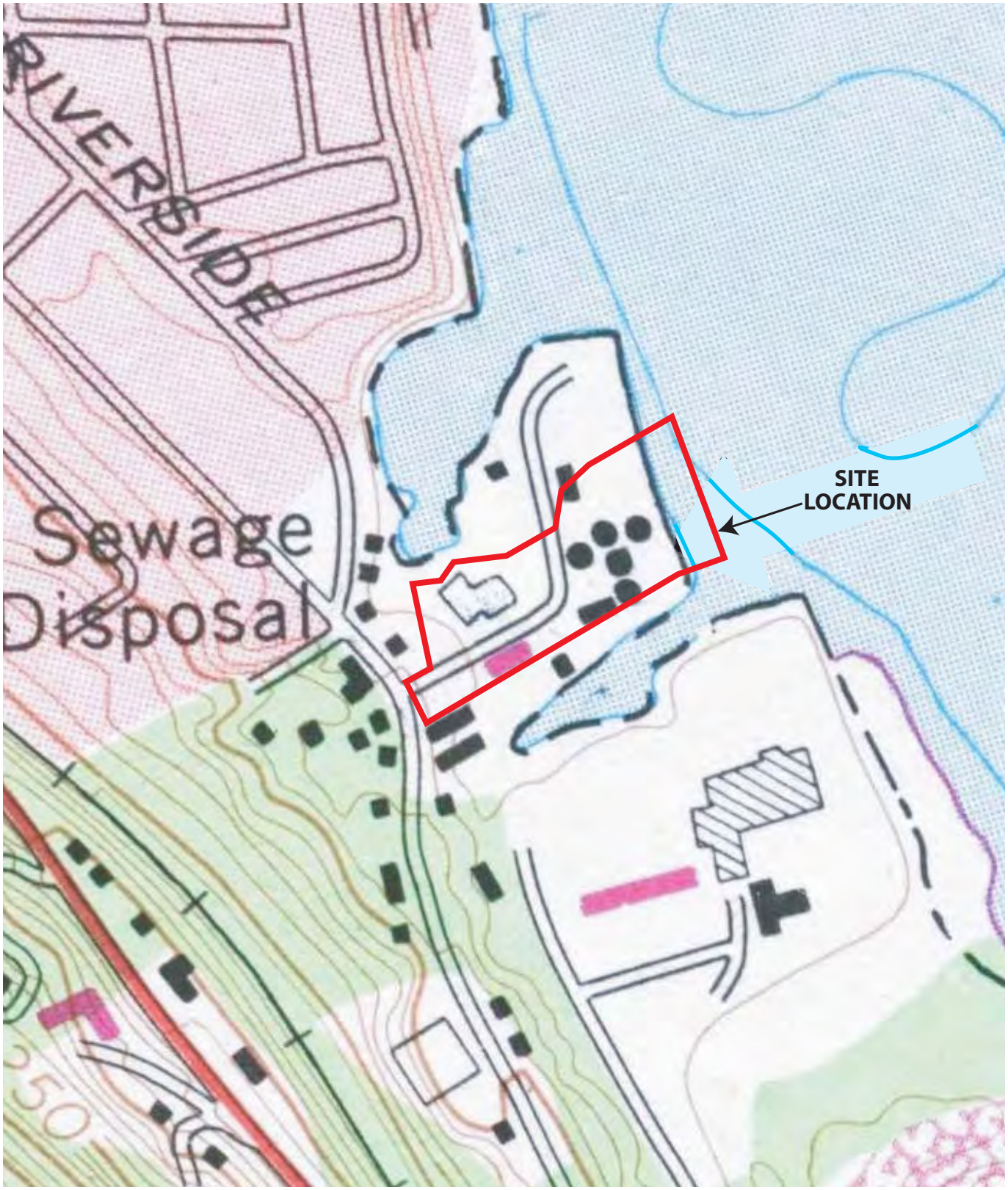
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific RWP, ROD or Decision Document;
    - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.
- A performance summary for all treatment systems at the site during the calendar year, including information such as:
    - The number of days the system was run for the reporting period;
    - The average, high, and low flows per day;
    - A description of breakdowns and/or repairs along with an explanation for any significant downtime;
    - A description of the resolution of performance problems;
    - A summary of the performance, effluent and/or effectiveness monitoring; and
    - Comments, conclusions, and recommendations based on data evaluation.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and Regional Office in which the site is located, and in electronic format to NYSDEC Central Office, Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 CORRECTIVE MEASURES PLAN

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

FIGURES



Source: U.S. Department of Interior Geological Survey Topographic Map of the Haverstraw, NY Quadrangle, dated 1967 (photorevised 1979)

Figure 1 - Site Location and Boundaries Map
Haverstraw Harbors Site - BCP Site ID C344060
Dr. George W. Girling Drive
Village of Haverstraw
Rockland County, New York

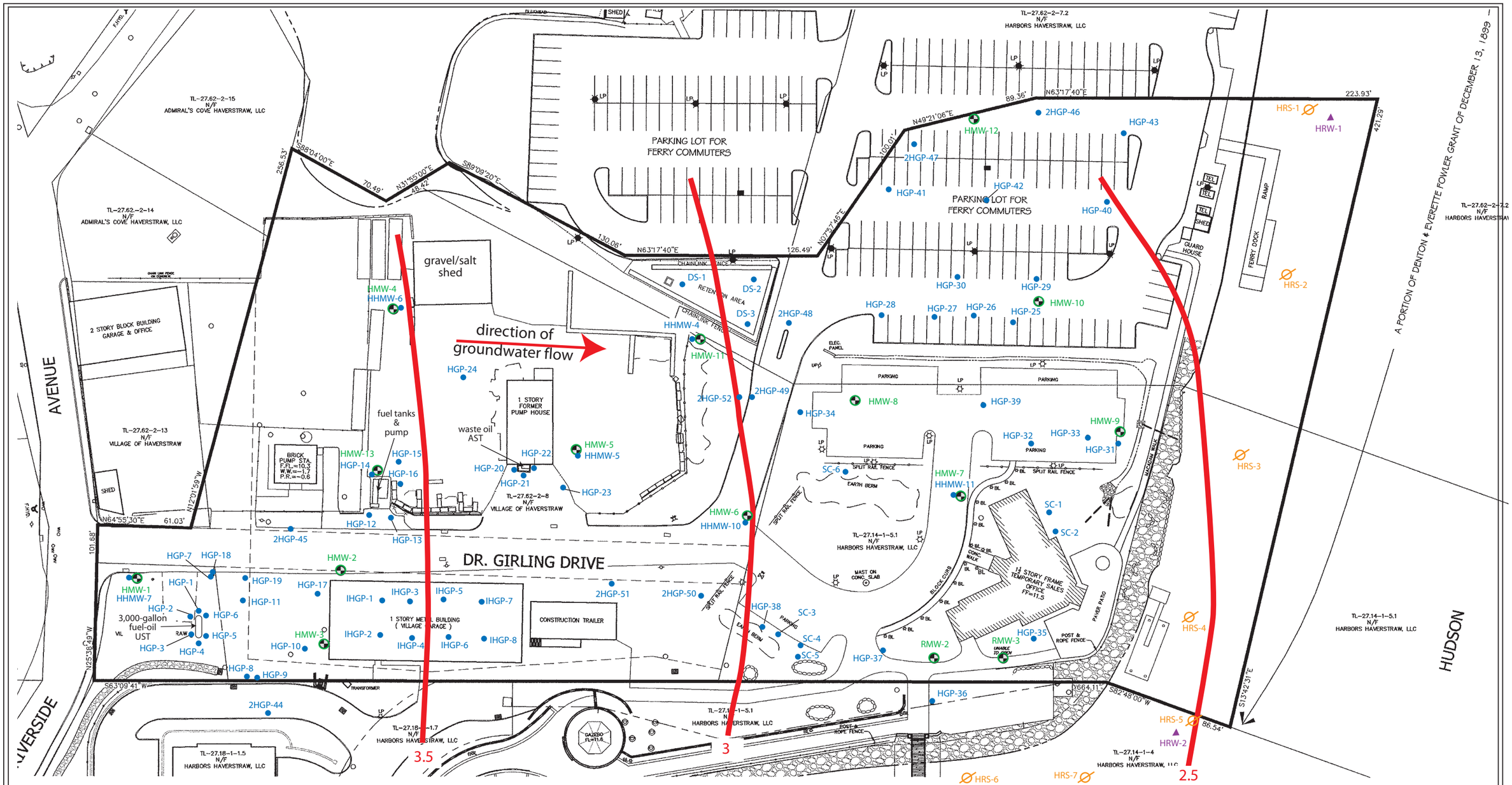
N

ESI File: GH9964.50

September 2013

Figures

Ecosystems Strategies, Inc.



Legend:

- monitoring well location
- soil boring location
- sediment sample location
- water sample location

Figure 2 - Groundwater Flow Map

Haverstraw Harbors Site
Dr. George W. Girling Drive
Village of Haverstraw
Rockland County, New York

ESI File: GH9964.50

Scale: 1" = 60' (approximately)

September 2013 | Figures

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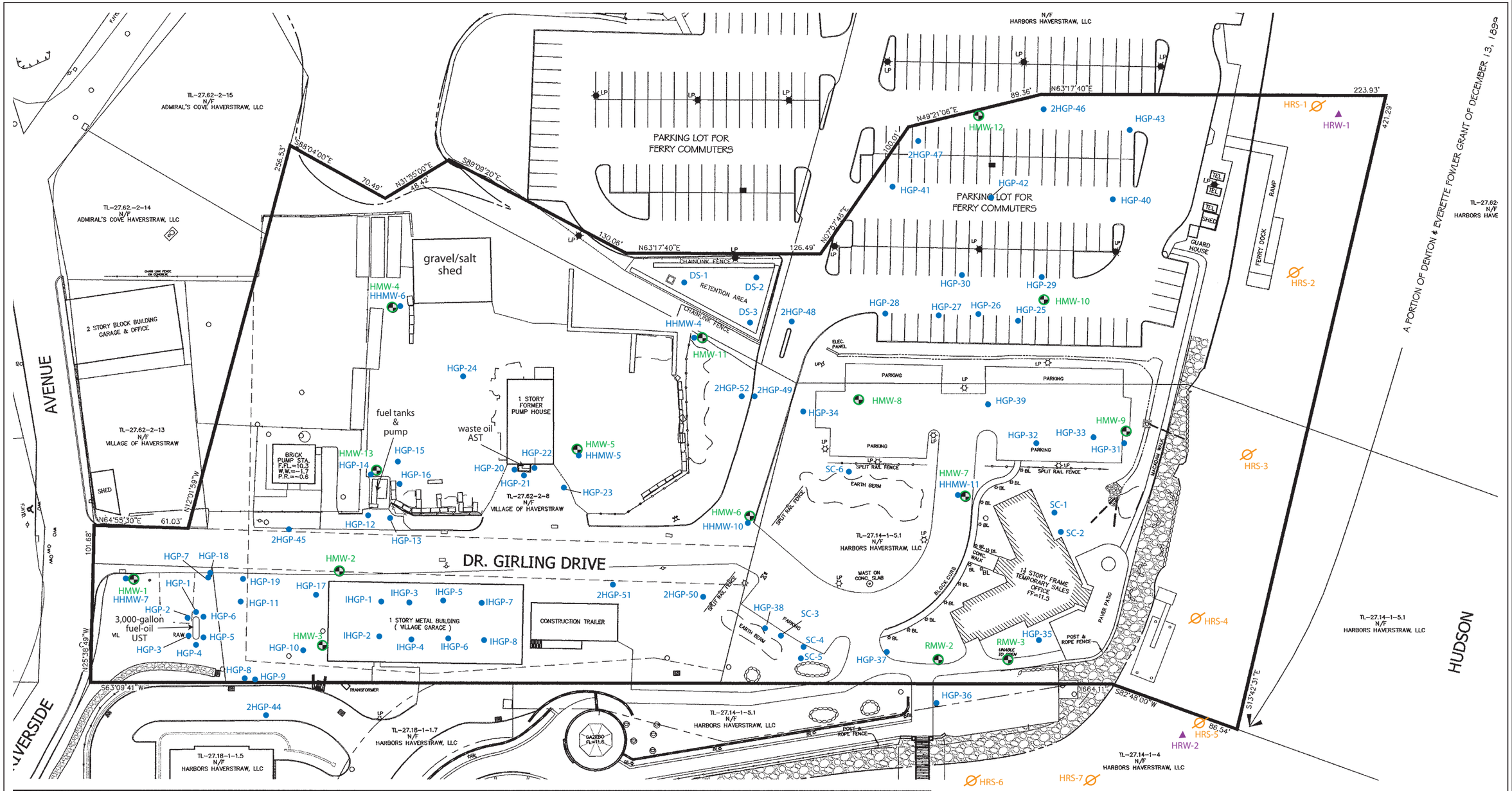


N

Legend:

- monitoring well location
- soil boring location
- sediment sample location
- water sample location

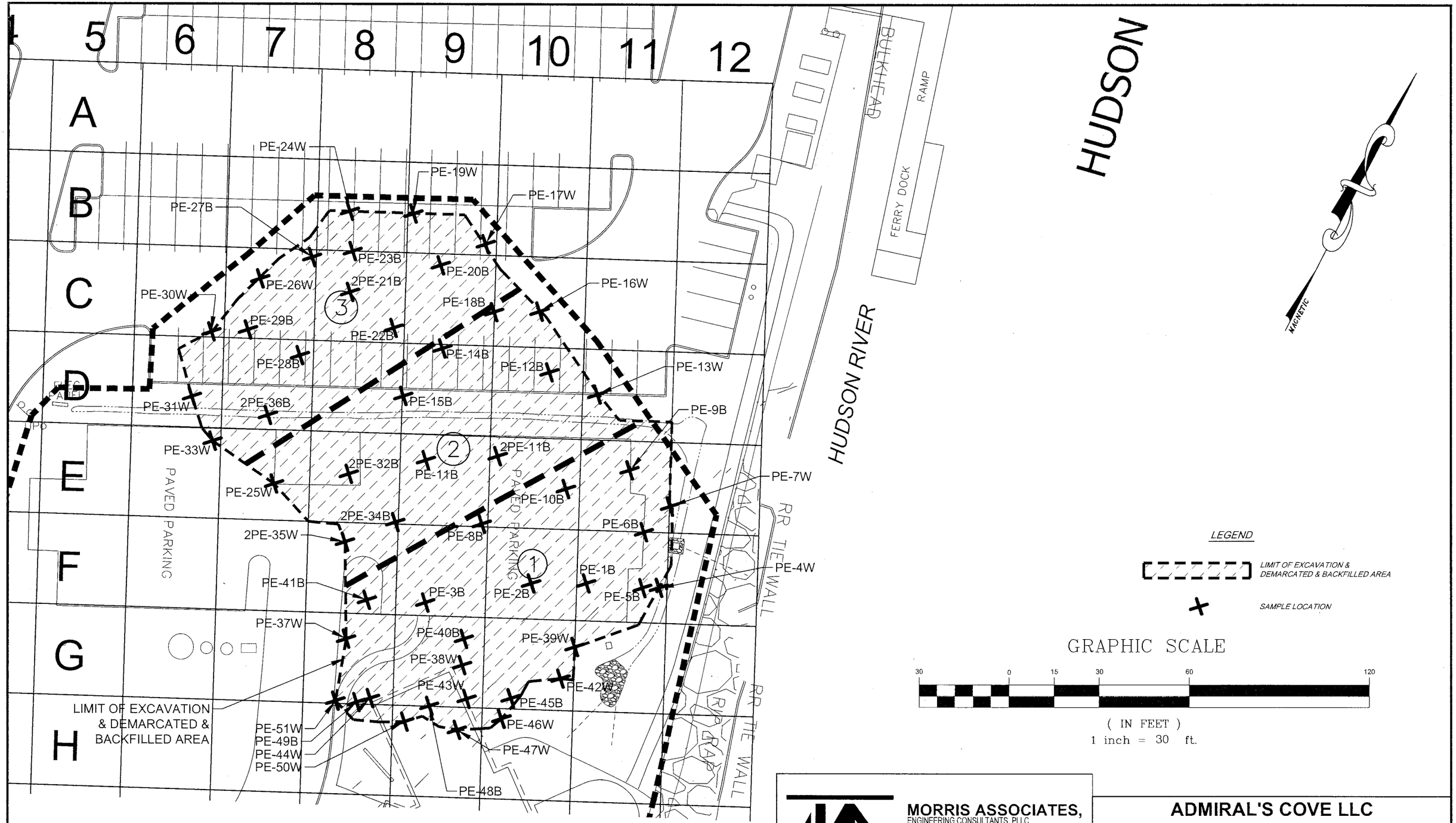
Figure 3 - Site Investigation Sampling Locations

Haverstraw Harbors Site
Dr. George W. Girling Drive
Village of Haverstraw
Rockland County, New York

ESI File: GH9964.50

Scale: 1" = 60' (approximately)

September 2013 | Figures



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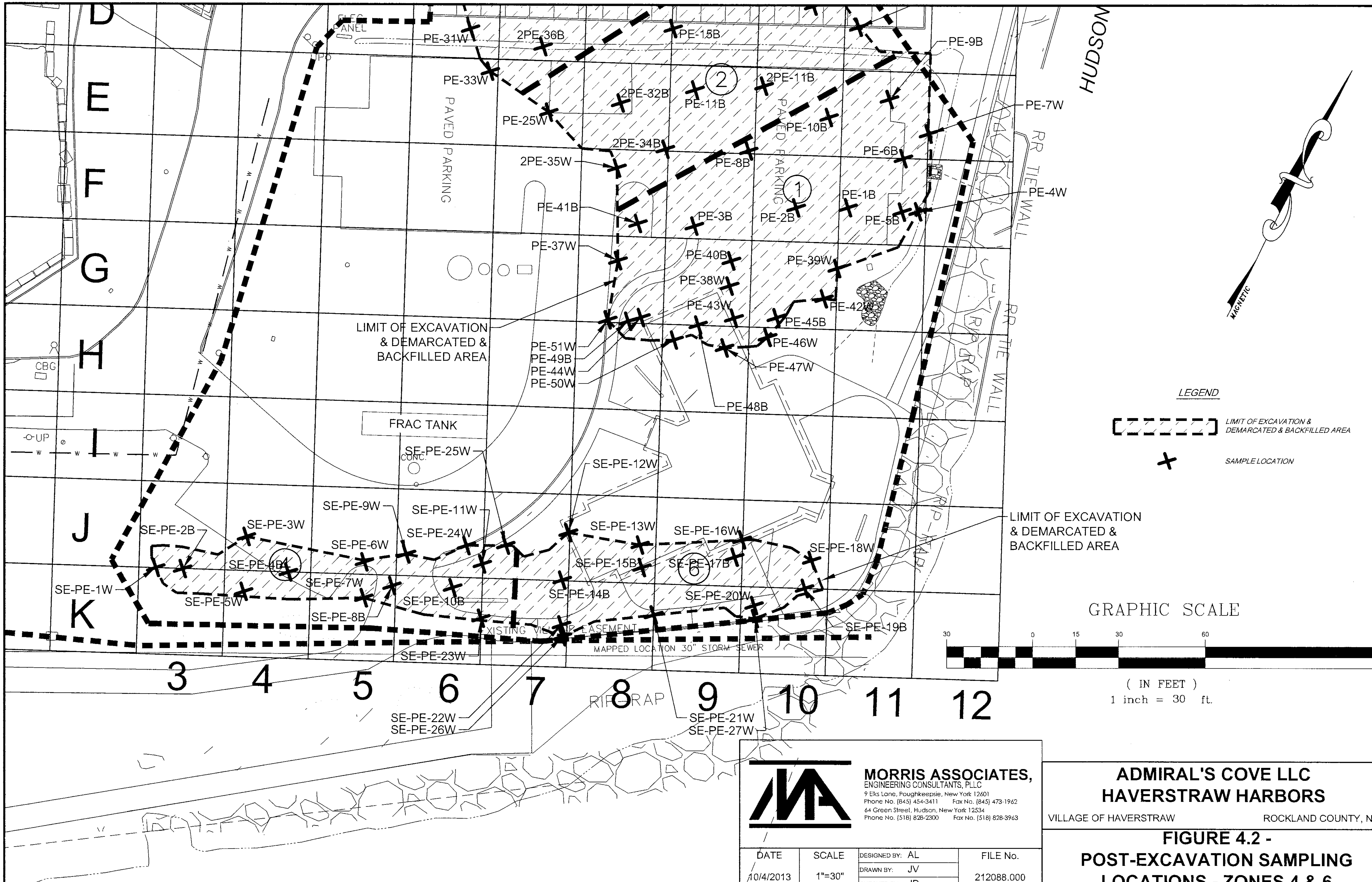
DATE	SCALE		FILE No.
10/4/2013	1"=30"	DESIGNED BY: AL DRAWN BY: JV CHECKED BY: JD	212088.000

ADMIRAL'S COVE LLC
HAVERSTRAW HARBORS

VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

FIGURE 4.1 - POST-EXCAVATION SAMPLING LOCATIONS - ZONES 1, 2 & 3


HUDSON
PAVED PARKING
LIMIT OF EXCAVATION & DEMARCATED & BACKFILLED AREA
FRAC TANK
RR TIE WALL
RIP-RAP
EXISTING VILLAGE EASEMENT
MAPPED LOCATION 30" STORM SEWER
MAGNETIC
LEGEND
LIMIT OF EXCAVATION & DEMARCATED & BACKFILLED AREA
SAMPLE LOCATION
GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.
PE-31W
2PE-36B
PE-15B
PE-9B
PE-33W
2PE-32B
PE-11B
2PE-11B
PE-7W
PE-25W
PE-10B
2PE-34B
PE-8B
PE-6B
2PE-35W
PE-1B
PE-4W
PE-41B
PE-3B
PE-2B
PE-5B
PE-37W
PE-40B
PE-39W
PE-38W
PE-43W
PE-42W
PE-45B
PE-46W
PE-47W
PE-51W
PE-49B
PE-44W
PE-50W
PE-48B
SE-PE-25W
SE-PE-12W
SE-PE-9W
SE-PE-11W
SE-PE-3W
SE-PE-2B
SE-PE-24W
SE-PE-13W
SE-PE-16W
SE-PE-6W
SE-PE-18W
SE-PE-4B
SE-PE-15B
SE-PE-17B
SE-PE-1W
SE-PE-7W
SE-PE-10B
SE-PE-14B
SE-PE-20W
SE-PE-5W
SE-PE-8B
SE-PE-19B
SE-PE-23W
SE-PE-22W
SE-PE-26W
SE-PE-21W
SE-PE-27W

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HAVERSTRAW HARBORS

VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

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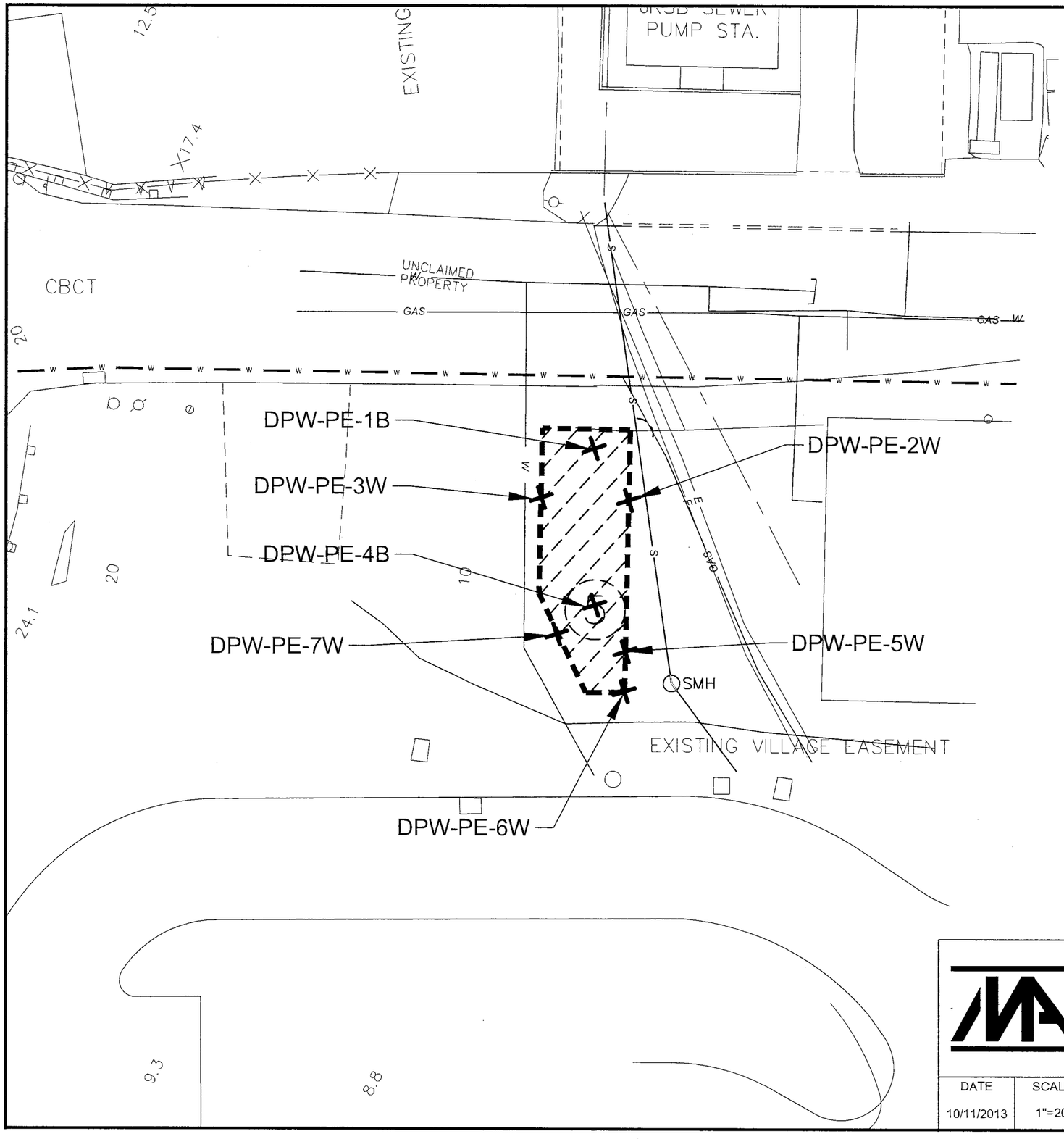
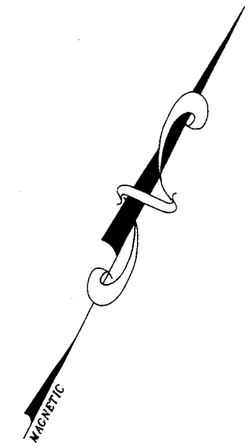
FIGURE 4.2 - POST-EXCAVATION SAMPLING LOCATIONS - ZONES 4 & 6





LEGEND

LIMIT OF EXCAVATION & DEMARCATED & BACKFILLED AREA

SAMPLE LOCATION

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

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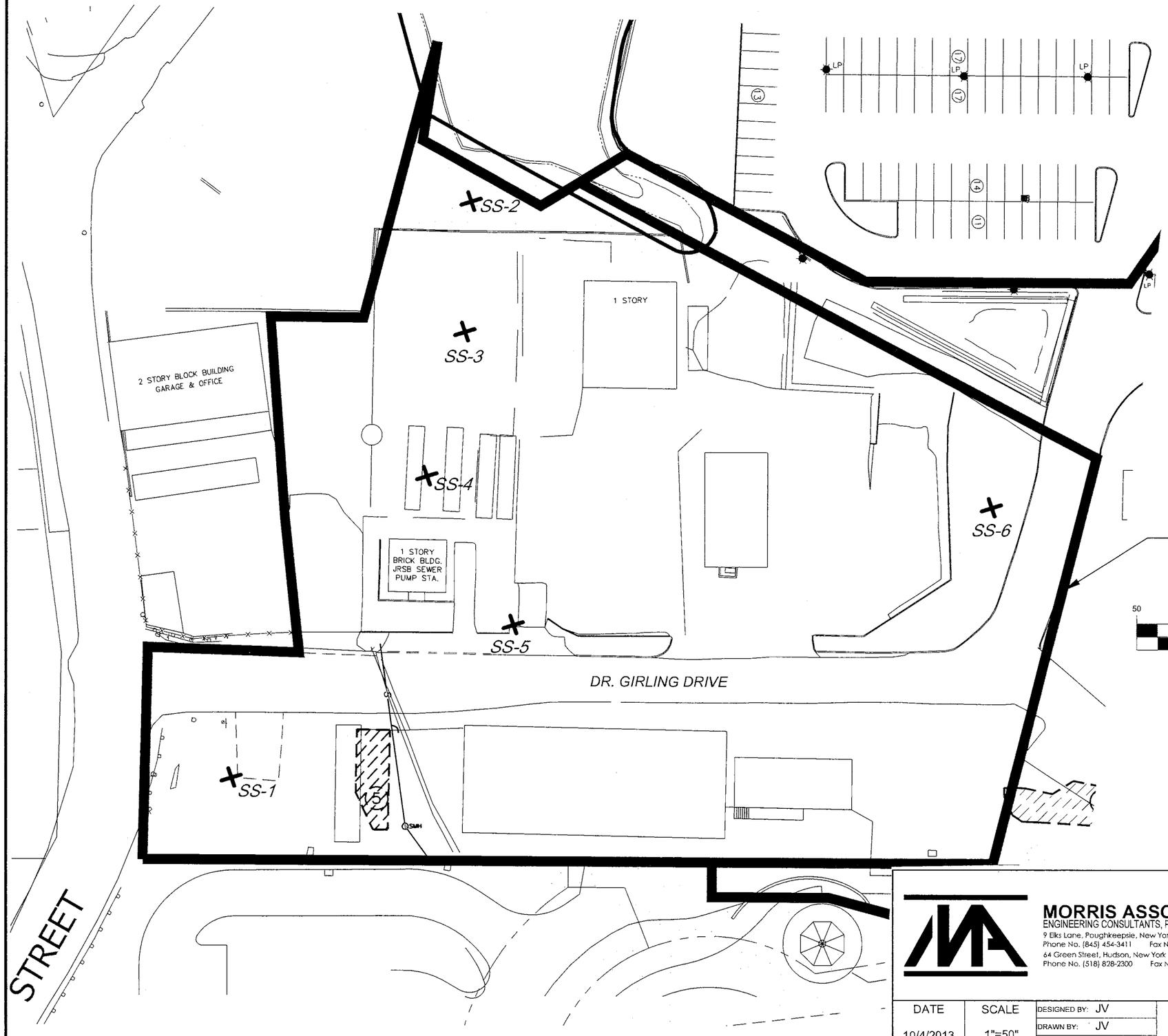
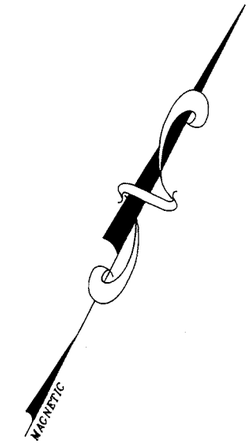
HAVERSTRAW HARBORS

VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

FIGURE 4.3 - POST-EXCAVATION SAMPLING LOCATIONS - ZONES 5





LEGEND

SAMPLE LOCATION

SITE BOUNDARY

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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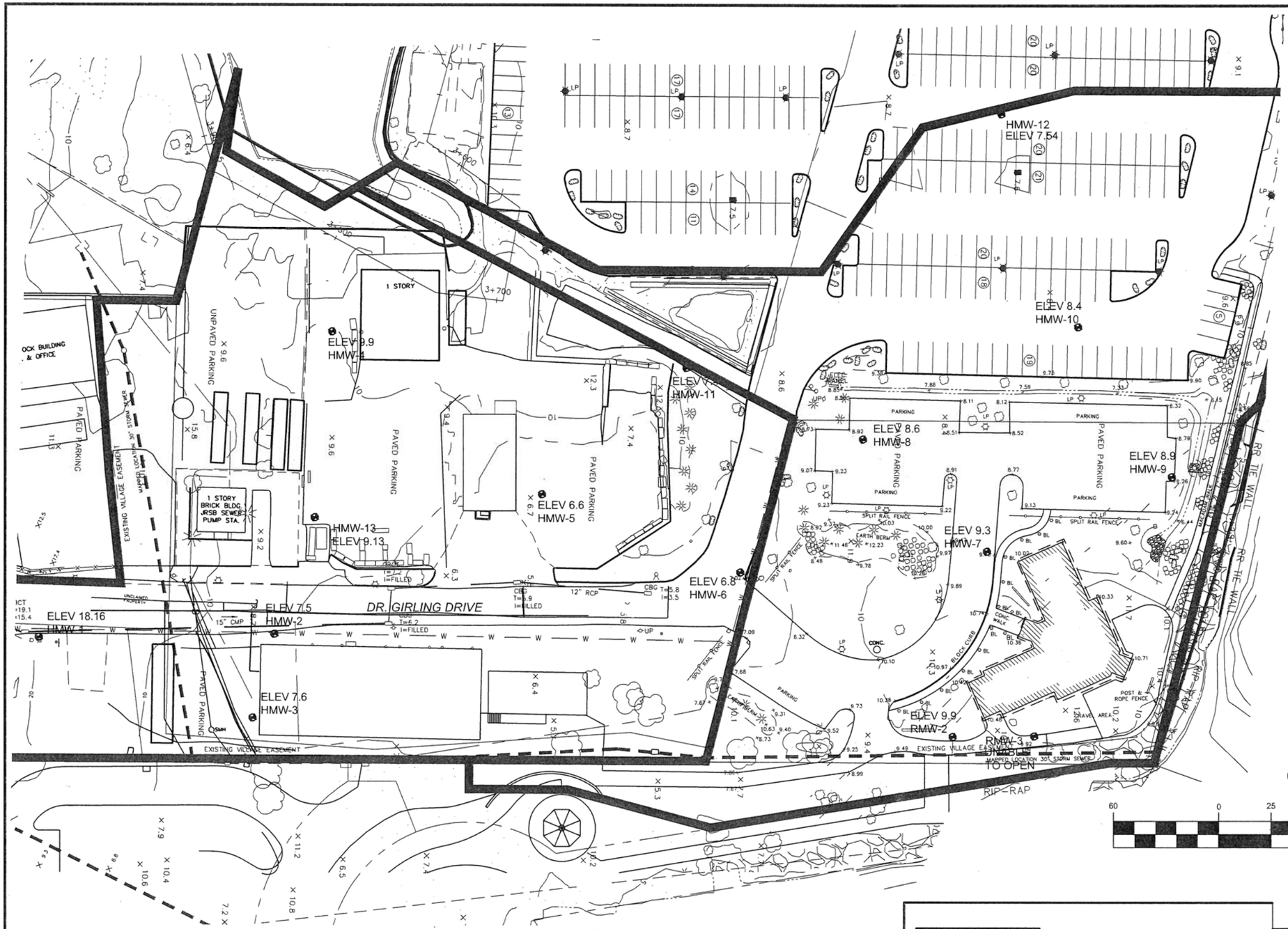
HAVERSTRAW HARBORS

VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

FIGURE 5 - DPW SOIL INTEGRITY SAMPLING LOCATIONS



LEGEND

- *MONITORING WELL LOCATION*
- *ELEV = ELEVATION*

GRAPHIC SCALE

60 0 25 50 100 200

(IN FEET)
1 inch = 60 ft.

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HAVERSTRAW HARBORS

VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

FIGURE 6 -
MONITORING WELL LOCATIONS

Ecosystems Strategies, Inc.

Table 1: SVOCs in Soil - Remedial Investigation

Results provided in µg/kg (parts per billion). Results shown in **bold** exceed guidance levels.

Compound (USEPA Method 8270C)	Guidance Level	Sample Identification																																	
		HGP-1 (7'-8')	HGP-2 (10'-12')	HGP-3 (11'-12')	HGP-4 (11'-12')	HGP-5 (11'-12')	HGP-6 (11'-12')	HGP-7 (11'-12')	HGP-8 (6'-7')	HGP-9 (6'-7')	HGP-9 (11'-12')	HGP-9 (13.5'-14')	HGP-9 (15'-16')	HGP-10 (4'-8')	HGP-10 (8'-12')	HGP-11 (8'-12')	HGP-12 (7'-8')	HGP-13 (3.5'-4')	HGP-13 (7.5'-8')	HGP-14 (3.5'-4')	HGP-15 (1.5')	HGP-16 (2.5'-3')	HGP-17 (4'-5')	HGP-19 (10'-11')	HGP-19 (15'-16')	HGP-20 (4'-6')	HGP-21 (0.5'-1')	HGP-21 (4'-8')	HGP-22 (4'-8')	HGP-22 (8'-12')	HGP-23 (7'-8')	HGP-24 (1'-2')	HGP-25 (6'-7')	HGP-28 (7'-8')
1,2,4-Trichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110 J	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	80 J	ND	ND	ND	ND	ND
2,2-oxybis (1-chloropropane)	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	100*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2,4,6-Trichlorophenol	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2,4-Dichlorophenol	400*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2,4-Dimethylphenol	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2,4-Dinitrophenol	200*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2,4-Dinitrotoluene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	1,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	800*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2-Methylnaphthalene	36,400*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	100*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
2-Nitroaniline	430*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	300*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
3,3-Dichlorobenzidine	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	500*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
4-Bromophenyl phenyl ether	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	240*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
4-Chloroaniline	220*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	900*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
4-Nitroaniline	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	100*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
Acenaphthene	100,000	ND	1700	ND	ND	ND	ND	ND	ND	4400	78000	**120000**	6800	ND	ND	7300	ND	380 J	ND	ND	ND	ND	ND	17000 J	ND	ND	ND	ND	ND	ND	140 J	150 J	2700	ND	ND
Acenaphthylene	100,000	100 J	ND	ND	ND	240 J	60 J	52 J	400	ND	37000	8300 J	340 J	ND	ND	1700 J	84 J	1500	ND	ND	ND	ND	ND	12000 J	ND	ND	48 J	ND	ND	ND	48 J	840	ND	ND
Anthracene	100,000	190 J	3200	ND	ND	190 J	ND	ND	310 J	7200	40000	59000	2100	ND	ND	10000	72 J	870	ND	ND	ND	ND	ND	29000	ND	ND	120 J	ND	ND	ND	120 J	910	800 J	ND	ND
Benzo(a)anthracene	1,000	760	**5300**	ND	230 J	260 J	210 J	110 J	**1600**	**8800**	**59000**	**39000**	**1200 J**	ND	ND	**7000**	110 J	**1700**	ND	ND	ND	ND	ND	**74000**	ND	ND	260 J	ND	ND	ND	91 J	**2000**	ND	ND
Benzo(a)pyrene	1,000	790	**4600**	ND	190 J	250 J	230 J	120 J	**1500**	**6900**	**110000**	**33000 J**	**1100 J**	ND	ND	**5600**	100 J	**2600**	ND	ND	ND	ND	ND	**65000**	ND	ND	280 J	ND	ND	ND	69 J	**2100**	ND	ND
Benzo(b)fluoranthene	1,000	700	**4200**	ND	230 J	190 J	190 J	ND	**1300**	**5300**	**53000**	**15000 J**	600 J	ND	ND	**2800 J**	ND	**1400**	ND	ND	ND	ND	ND	**37000**	ND	ND	260 J	ND	ND	ND	ND	**1500**	ND	ND
Benzo(ghi)perylene	100,000	870	2700	ND	240 J	540	310 J	160 J	1700	4000	71000	16000 J	470 J	ND	ND	3800	84 J	4200	ND	ND	ND	ND	ND	35000	ND	ND	270 J	ND	ND	ND	70 J	1300	ND	ND
Benzo(k)fluoranthene	3,900	730	3800	ND	170 J	170 J	150 J	91 J	1000	**6200**	**60000**	**19000 J**	350 J	ND	ND	3500 J	67 J	1400	ND	ND	ND	ND	ND	**44000**	ND	ND	170 J	ND	ND	ND	53 J	1700	ND	ND
Benzyl alcohol	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	50,000*	ND	ND	ND	ND	ND	ND	63 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50 J	ND	91 J	ND	66 J	ND	ND	ND	ND
Butyl benzyl phthalate	50,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	**	94 J	1700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	93	ND	ND	ND	ND	ND	ND	ND	ND	66 J	ND	ND	ND	ND	210 J	ND	ND	ND
Chrysene	3,900	860	**4900**	ND	270 J	280 J	250 J	140 J	1600	**8400**	**70000**	**35000 J**	990 J	ND	ND	**7100**	150 J	2000	ND	ND	ND	ND	ND	**97000**	ND	ND	310 J	ND	ND	ND	100 J	2300	ND	ND	ND
Dibenzo(a h)anthracene	330	140 J	**950 J**	ND	53 J	79 J	45 J	ND	**420**	**1200 J**	**11000 J**	ND	ND	ND	ND	ND	ND	**700**	ND	ND	ND	ND	ND	**7100 J**	ND	ND	69 J	ND	ND	ND	ND	300 J	ND	ND	ND
Dibenzofuran	6,200*	ND	1200 J	ND	ND	ND	ND	ND	ND	3700	3200 J	6200 J	380 J	ND	ND	ND	ND	170 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	89 J	2600	ND	ND
Diethyl phthalate	7,100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	2,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	8,100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	75 J	79 J	54 J	ND	ND	ND	59 J	54 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	50,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100,000	1400	11000	ND	330 J	190 J	290 J	170 J	2500	19000	95000	84000	2700	ND	ND	15000	140 J	1500	ND	ND	47 J	ND	ND	**140000**	ND	ND	670	ND	63 J	ND	320 J	3300	260 J	ND	ND
Fluorene	100,000	61 J	1500 J	ND	ND	ND	ND	ND	ND	4400	33000	60000	3000	ND	ND	6000	ND	360 J	ND	ND	ND	ND	ND	15000 J	ND	ND	47 J	ND	ND	ND	96 J	210 J	5500	ND	ND
Hexachlorobenzene	410*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1 2 3-cd)pyrene	500	**900**	**3500**	ND	240 J	440	250 J	150 J	**1800**	**4600**	**63000**	**14000 J**	450 J	ND	ND	ND	71 J	**3200**	ND	ND	ND	ND	ND	**30000**	ND	ND	310 J	ND	41 J	ND	55 J	**1400**	ND	ND
Isophorone	4,400*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	100,000	ND	1800	ND	ND	ND	330 J	230 J	ND	2400 J	83000	**320000**	17000	ND	ND	ND	ND	1400	ND	96 J	1300	310 J	ND	6200 J	ND	ND	ND	ND	ND	ND	ND	200 J	110 J	ND	ND
Nitrobenzene	200*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitroso-di-n-propylamine	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Nitrosodiphenylamine	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	6,700	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
Phenanthrene	100,000	800	12000	ND	74 J	110 J	120 J	99 J	600	27000	**110000**	**230000**	9100	ND	ND	40000	130 J	1400	ND	ND	ND	ND	ND	**120000**	ND	ND	440	ND	ND	ND	250 J	2000	9700	ND	ND
Phenol	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Pyrene	100,000	1700	9700	ND	410 J	310 J	410	230 J	2600	17000	**200000**	**110000**	2800	ND	ND	20000	180 J	2900	ND	ND	55 J	ND	ND	**230000**	ND	110 J	590	ND	98 J	ND	370 J	3100	490 J	ND	ND
Total TICs	**	78370 J	168610 J	9690 J	93770 J	91120 J	73340 J	88470 J	105590 J	40500 J	**386000 J**	**755000 J**	144280 J	1340 J	95000 J	153800 J	87750 J	NA	65930 J	87350 J	90270 J	75300 J	NA	NA	NA	NA	NA	NA	NA	NA	1500 J	NA	346000 J	NA	NA
Total Unknown Compounds	**	2710 J	14610 J	79490 J	1380 J	3690 J	600 J	900 J	5460 J	15600 J	**542000 J**	**233000 J**	11790 J	1160 J	1470 J	36800 J	4480 J	NA	3080 J	1610 J	9910 J	1040 J	NA	NA	NA	NA	NA	NA	NA	NA	10920 J	NA	439700 J	NA	NA
Total SVOCs	500,000*	91175	256970	89180	97587	98059	76785	90985	128380	186600	**2104200**	**2156500**	205450	2500	96470	320400	93418	27773	69085	89135	101636	76650	ND	**958300**	59	164	3960	ND	483	ND	14532	23585	**807750**	ND	ND

Notes:

Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.

* = Guidance level based on NYSDEC TAGM 4046.

** = Guidance level not established (total individual and sum of SVOCs not listed must be less than or equal to 500,000 ppb).

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

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

ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 1: SVOCs in Soil - Remedial Investigation (continued)
Results provided in µg/kg (parts per billion). Results shown in **bold** exceed guidance levels.

Compound (USEPA Method 8270C)	Guidance Level	HGP-31 (2'-3')	HGP-31 (7.5'-8')	HGP-34 (0.5'-2')	HGP-34 (5'-7')	HGP-35 (0.5'-2')	HGP-35 (6'-7')	HGP-36 (6'-8')	HGP-37B (6.5'-7.5')	HGP-38 (6'-7')	HGP-39 (6'-8')	HGP-40 (6.5'-7.5')	HGP-41 (6'-7')	HGP-42 (6'-7')	HGP-43 (6'-7')	2HGP-44 (9'-10')	2HGP-45 (10'-11')	2HGP-46 (6'-7')	2HGP-47 (6'-7')	2HGP-48 (6'-7')	2HGP-50 (5'-6')	2HGP-51 (5'-6')	2HGP-52 (4'-5')	IHGP-1 (0-4')	IHGP-2 (5'-6')	IHGP-3 (4'-6')	IHGP-4 (5'-7')	IHGP-5 (6'-7.5')	IHGP-6 (3.5'-4')	HHMW-4 (4'-5')	HHMW-10 (8'-10')	HHMW-11 (6'-8')	DS-3 (SURFACE)	COMP-SC (0-2')
1,2,4-Trichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
1,2-Dichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
1,3-Dichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
1,4-Dichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,2-oxybis (1-chloropropane)	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,4,5-Trichlorophenol	100*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,4,6-Trichlorophenol	**	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,4-Dichlorophenol	400*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,4-Dimethylphenol	**	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,4-Dinitrophenol	200*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,4-Dinitrotoluene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2,6-Dinitrotoluene	1,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2-Chloronaphthalene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2-Chlorophenol	800*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2-Methylnaphthalene	36,400*	490	ND	ND	230 J	99 J	390	ND	ND	610 J	810	6300	ND	ND	ND	ND	ND	ND	ND	ND	120 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	4100	ND	150 J
2-Methylphenol	100*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2-Nitroaniline	430*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
2-Nitrophenol	300*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
3,3-Dichlorobenzidine	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
3-Nitroaniline	500*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4,6-Dinitro-2-methylphenol	**	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Bromophenyl phenyl ether	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Chloro-3-methylphenol	240*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Chloroaniline	220*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Chlorophenyl phenyl ether	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Methylphenol	900*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Nitroaniline	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
4-Nitrophenol	100*	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Acenaphthene	100,000	2000	ND	70 J	1000	160 J	ND	ND	ND	3500	ND	2100	ND	ND	ND	ND	140 J	ND	ND	ND	220 J	80 J	ND	95 J	ND	ND	ND	ND	280 J	ND	710	680	ND	94 J
Acenaphthylene	100,000	ND	ND	190 J	ND	320 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	480	ND	ND	ND	ND	ND	71 J	ND	99 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	160 J
Anthracene	100,000	3100	670 J	270 J	310 J	560	ND	ND	1100 J	1000 J	ND	530 J	ND	ND	ND	200 J	ND	ND	ND	ND	170 J	200 J	ND	310 J	ND	ND	89 J	ND	450	ND	170 J	220 J	84 J	220 J
Benzo(a)anthracene	1,000	**4400**	ND	870	ND	**1700**	ND	ND	ND	ND	ND	ND	ND	100 J	ND	330 J	ND	ND	ND	ND	ND	630	94 J	790	86 J	ND	100 J	ND	680	ND	57 J	95 J	87 J	590
Benzo(a)pyrene	1,000	**4400**	ND	890	ND	**1600**	ND	ND	ND	ND	ND	ND	ND	ND	ND	430	ND	ND	ND	ND	ND	710	90 J	790	89 J	ND	70 J	ND	530	ND	ND	64 J	92 J	560
Benzo(b)fluoranthene	1,000	**3700**	ND	730	ND	**1500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	260 J	ND	ND	ND	ND	ND	680	ND	620	ND	ND	140 J	ND	480	ND	ND	ND	120 J	600
Benzo(ghi)perylene	100,000	4000	ND	600	ND	760	ND	ND	ND	ND	ND	ND	ND	ND	ND	580	ND	ND	ND	ND	ND	960	65 J	560	77 J	ND	180 J	ND	560	ND	56 J	ND	120 J	850
Benzo(k)fluoranthene	3,900	3100	ND	630	ND	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	390	ND	ND	ND	ND	ND	560	88 J	600	81 J	ND	73 J	ND	530	ND	ND	ND	ND	260 J
Benzyl alcohol	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Bis(2-chloroethoxy)methane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Bis(2-chloroethyl)ether	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Bis(2-ethylhexyl)phthalate	50,000*	ND	ND	3000	ND	250 J	ND	ND	200 J B	ND	ND	ND	ND	74 J B	ND	NA	NA	NA	NA	NA	NA	NA	NA	62 J	ND	ND	320 J B	ND	ND	NA	NA	NA	140 J	180 J
Butyl benzyl phthalate	50,000*	ND	ND	ND	ND	69 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Carbazole	**	1000 J	ND	98 J	ND	240 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	83 J	ND	ND	ND	ND	230 J	NA	NA	NA	ND	79 J
Chrysene	3,900	**4900**	420 J	950	ND	1800	ND	ND	290 J	ND	ND	ND	ND	100 J	ND	450	ND	ND	ND	ND	ND	720	100 J	830	130 J	ND	140 J	ND	690	ND	93 J	120 J	97 J	590
Dibenzo(a h)anthracene	330	**940 J**	ND	160 J	ND	220 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	140 J	ND	ND	ND	ND	ND	160 J	ND	89 J	ND	ND	ND	ND	140 J	ND	ND	ND	ND	150 J
Dibenzofuran	6,200*	1400 J	3200	ND	ND	110 J	ND	ND	ND	ND	74 J	1900	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	90 J	ND	160 J	NA	NA	NA	ND	ND
Diethyl phthalate	7,100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Dimethyl phthalate	2,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Di-n-butyl phthalate	8,100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Di-n-octyl phthalate	50,000*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Fluoranthene	100,000	12000	ND	1600	ND	3300	ND	ND	340 J	ND	ND	ND	ND	81 J	ND	400	ND	ND	ND	ND	ND	1200	180 J	1600	170 J	98 J	130 J	ND	1100	ND	160 J	100 J	170 J	920
Fluorene	100,000	1900	5700	64 J	1600	190 J	360 J	ND	5800	6400	99 J	3800	ND	ND	ND	50 J	ND	ND	ND	ND	220 J	80 J	ND	110 J	ND	ND	110 J	ND	250 J	ND	1100	1000	ND	110 J
Hexachlorobenzene	410*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Hexachlorobutadiene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Hexachlorocyclopentadiene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Hexachloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Indeno(1 2 3-cd)pyrene	500	**4100**	ND	**690**	ND	**960**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**550**	ND	ND	ND	ND	ND	**870**	62 J	**640**	85 J	ND	140 J	ND	460	ND	ND	ND	100 J	760
Isophorone	4,400*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Naphthalene	100,000	620 J	ND	ND	ND	170 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	120 J	ND	ND	ND	ND	140 J	ND	390	ND	ND	ND	130 J	340 J
Nitrobenzene	200*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
n-Nitroso-di-n-propylamine	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
n-Nitrosodiphenylamine	**	ND	ND	ND	ND	ND	ND	ND	ND	5900	290 J	3400	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Pentachlorophenol	6,700	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Phenanthrene	100,000	11000	9200	870	3700	1900	300 J	ND	11000	13000	120 J	6800	ND	ND	ND	150 J	ND	ND	ND	ND	190 J	670	110 J	1100	120 J	69 J	240 J	ND	1400	ND	1900	2100	140 J	740
Phenol	100,000	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	120 J
Pyrene	100,000	14000	1100 J	1500	210 J	2400	ND	ND	1300 J	540 J	ND	160 J	ND	140 J	ND	520	ND	ND	ND	ND	82 J	1200	190 J	1400	150 J	110 J	400	ND	1500	ND	140 J	120 J	180 J	1100
Total TICs	**	NA	NA	NA	NA	NA	NA	NA	334000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10500 J	NA	NA	NA	NA	NA	NA
Total Unknown Compounds	**	NA	NA	NA	NA	NA	NA	NA	256100 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8160 J	NA	NA	NA	NA	NA	NA
Total SVOCs	500,000*	77050	20290	13182	7050	19608	1050	ND	**610130**	30950	1393	24990	ND	495	ND	4930	140	ND	ND	ND	1002	8911	979	9778	988	ND	2362	18660	9830	ND	4386	8599	1460	8573

Notes:
Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.
* = Guidance level based on NYSDEC TAGM 4046.
** = Guidance level not established (total individual and sum of SVOCs not listed must be less than or equal to 500,000 p
J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the sample.
ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not

Table 2: VOCs in Soil - Remedial Investigation

All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification								
		HGP-1 (7'-8')	HGP-2 (10'-12')	HGP-3 (11'-12')	HGP-4 (11'-12')	HGP-5 (11'-12')	HGP-6 (11'-12')	HGP-7 (11'-12')	HGP-8 (6'-7')	HGP-9 (6'-7')
1,1,1,2-Tetrachloroethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,3-Trichlorobenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,3-Trichloropropane	400*	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,4-Trichlorobenzene	3,400*	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,4-Trimethylbenzene	52,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dibromo-3-chloropropane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dibromoethane (EDB)	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichlorobenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,3-Dichlorobenzene	49,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,3-Dichloropropane	300*	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,4-Dichlorobenzene	13,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1-Chlorohexane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
2,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
2-Butanone (MEK)	300*	NA	NA	NA	NA	NA	NA	ND	ND	ND
2-Chlorotoluene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
2-Hexanone	**	NA	NA	NA	NA	NA	NA	ND	ND	ND
4-Chlorotoluene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1000*	NA	NA	NA	NA	NA	NA	ND	ND	ND
Acetone	100,000	NA	NA	NA	NA	NA	NA	12 J B	ND	3.5 J B
Benzene	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	NA	NA	NA	NA	NA	NA	ND	ND	ND
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Dichlorodifluoromethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Ethylbenzene	41,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Isopropylbenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
m&p-Xylenes	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Methylene chloride	100,000	16 J B	13 J B	9.9 J B	11 J B	12 J B	8.4 J B	9.4 J B	7.0 J B	6.9 J B
Methyl-tert-butyl-ether (MTBE)	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Naphthalene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
n-Butylbenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
n-Propylbenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
o-Xylene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
p-Isopropyltoluene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
sec-Butylbenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	1.2 J	1.4 J	ND
Toluene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND
Total TICs	**	4 J	4 J	3 J	4 J	4 J	ND	ND	ND	ND
Total Unknown Compounds	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	**	20	17	12.9	15	16	8.4	22.6	8.4	10.4

Notes:

Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.

* = Guidance level based on NYSDEC TAGM 4046.

** = Guidance level not established (TAGM 4046 total individual and sum of VOCs not listed must be less than or equal to 10,000 ppb).

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

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

ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 2: VOCs in Soil - Remedial Investigation (continued)
All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification								
		HGP-9 (11'-12')	HGP-9 (13.5'-14')	HGP-9 (15'-16')	HGP-10 (4'-8')	HGP-10 (8'-12')	HGP-11 (8'-12')	HGP-12 (7'-8')	HGP-13 (3.5'-4')	HGP-13 (7.5'-8')
1,1,1,2-Tetrachloroethane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2,3-Trichlorobenzene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2,3-Trichloropropane	400*	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2,4-Trichlorobenzene	3,400*	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2,4-Trimethylbenzene	52,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2-Dibromo-3-chloropropane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2-Dibromoethane (EDB)	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2-Dichlorobenzene	100,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,3-Dichlorobenzene	49,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,3-Dichloropropane	300*	NA	NA	NA	NA	NA	NA	ND	NA	ND
1,4-Dichlorobenzene	13,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
1-Chlorohexane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
2,2-Dichloropropane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
2-Butanone (MEK)	300*	ND	ND	13 J	5.8 J	ND	ND	NA	11 J	NA
2-Chlorotoluene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
2-Hexanone	**	ND	ND	ND	ND	ND	ND	NA	ND	NA
4-Chlorotoluene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1000*	ND	ND	ND	ND	ND	ND	NA	ND	NA
Acetone	100,000	ND	14 J	65 B	43 B	9.7 J	7.0 J	NA	75	NA
Benzene	4,800	ND	ND	1.7 J	ND	ND	ND	ND	11	ND
Bromobenzene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	ND	ND	ND	ND	ND	ND	NA	ND	NA
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	NA	ND	NA
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Dichlorodifluoromethane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Ethylbenzene	41,000	8.1	17	120	ND	ND	ND	ND	2.2 J	ND
Hexachlorobutadiene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Isopropylbenzene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
m&p-Xylenes	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Methylene chloride	100,000	9.1 J B	7.8 J B	12 J B	8.8 J B	15 J B	10 J B	11 J B	22 J B	11 J B
Methyl-tert-butyl-ether (MTBE)	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Naphthalene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
n-Butylbenzene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
n-Propylbenzene	100,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
o-Xylene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
p-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
sec-Butylbenzene	100,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	NA	NA	NA	NA	NA	NA	ND	NA	ND
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100,000	ND	1.1 J	2.5 J	ND	ND	ND	ND	2.9 J	ND
trans-1,2-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	NA	ND	NA
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	NA	NA	NA	NA	NA	NA	ND	NA	ND
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	4.0 J	6.6	99	ND	ND	ND	NA	150	NA
Total TICs	**	3060 J	2660 J	1963 J	ND	30 J	128 J	46 J	364 J	42 J
Total Unknown Compounds	**	3330 J	920 J	ND	ND	ND	604 J	ND	21 J	4 J
Total VOCs	**	6411.2	3626.5	2276.2	57.6	54.7	749	57	659.1	55

Notes:
Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.
* = Guidance level based on NYSDEC TAGM 4046.
** = Guidance level not established (TAGM 4046 total individual and sum of VOCs not listed must be less than or equal to 10,000 ppb).
J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the sample.
ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 2: VOCs in Soil - Remedial Investigation (continued)

All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification								
		HGP-14 (3.5'-4')	HGP-15 (1.5')	HGP-16 (2.5'-3')	HGP-17 (4'-5')	HGP-19 (10'-11')	HGP-19 (15'-16')	HGP-20 (4'-6')	HGP-21 (0.5'-1')	HGP-21 (4'-8')
1,1,1,2-Tetrachloroethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,3-Trichlorobenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,3-Trichloropropane	400*	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,4-Trichlorobenzene	3,400*	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2,4-Trimethylbenzene	52,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dibromo-3-chloropropane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dibromoethane (EDB)	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichlorobenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,3-Dichlorobenzene	49,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,3-Dichloropropane	300*	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,4-Dichlorobenzene	13,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
1-Chlorohexane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
2,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
2-Butanone (MEK)	300*	NA	NA	NA	NA	NA	NA	ND	ND	ND
2-Chlorotoluene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
2-Hexanone	**	NA	NA	NA	NA	NA	NA	ND	ND	ND
4-Chlorotoluene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1000*	NA	NA	NA	NA	NA	NA	ND	ND	ND
Acetone	100,000	NA	NA	NA	NA	NA	NA	21 J	25	21 J
Benzene	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	NA	NA	NA	NA	NA	NA	ND	ND	ND
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Dichlorodifluoromethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Ethylbenzene	41,000	180	43	140	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Isopropylbenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
m&p-Xylenes	**	450	2.0 J	8.5	ND	ND	ND	NA	NA	NA
Methylene chloride	100,000	51 J B	11 J B	11 J B	18 J B	14 J B	20 J B	18 J B	11 J B	31 B
Methyl-tert-butyl-ether (MTBE)	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Naphthalene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
n-Butylbenzene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
n-Propylbenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
o-Xylene	**	4.4 J	ND	1.1 J	ND	2.3 J	ND	NA	NA	NA
p-Isopropyltoluene	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
sec-Butylbenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100,000	ND	ND	2.2 J	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	ND	ND	ND	ND	ND	ND	NA	NA	NA
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND
Total TICs	**	**17780 J**	443 J	606 J	ND	376 J	13 J	ND	28 J	ND
Total Unknown Compounds	**	1600 J	ND	ND	4 J	582 J	ND	895 J	ND	ND
Total VOCs	**	**20065.4**	999	768.8	22	974.3	33	934	64	52

Notes:

Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.

* = Guidance level based on NYSDEC TAGM 4046.

** = Guidance level not established (TAGM 4046 total individual and sum of VOCs not listed must be less than or equal to 10,000 ppb).

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

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

ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 2: VOCs in Soil - Remedial Investigation (continued)

All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification								
		HGP-22 (4'-8')	HGP-22 (8'-12')	HGP-23 (7'-8')	HGP-24 (1'-2')	HGP-25 (6'-7')	HGP-28 (7'-8')	HGP-31 (2'-3')	HGP-31 (7.5'-8')	HGP-34 (0.5'-2')
1,1,1,2-Tetrachloroethane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	9.7	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2,3-Trichlorobenzene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2,3-Trichloropropane	400*	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2,4-Trichlorobenzene	3,400*	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2,4-Trimethylbenzene	52,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dichlorobenzene	100,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,3-Dichlorobenzene	49,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,3-Dichloropropane	300*	NA	NA	NA	NA	NA	ND	ND	ND	ND
1,4-Dichlorobenzene	13,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
1-Chlorohexane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
2,2-Dichloropropane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
2-Butanone (MEK)	300*	ND	ND	ND	ND	ND	NA	NA	NA	NA
2-Chlorotoluene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
2-Hexanone	**	ND	ND	ND	ND	ND	NA	NA	NA	NA
4-Chlorotoluene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1000*	ND	ND	ND	ND	ND	NA	NA	NA	NA
Acetone	100,000	65 J	16 J	28	49	ND	NA	NA	NA	NA
Benzene	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	4.2 J	1.3 J	ND	ND	ND	NA	NA	NA	NA
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	2.6 J	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	ND	ND	ND	ND	ND	NA	NA	NA	NA
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Dichlorodifluoromethane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Ethylbenzene	41,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Isopropylbenzene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
m&p-Xylenes	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Methylene chloride	100,000	59 J B	15 J B	9.8 J B	16 J B	ND	7.1 J B	4.5 J B	720 J B	8.4 J B
Methyl-tert-butyl-ether (MTBE)	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Naphthalene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
n-Butylbenzene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
n-Propylbenzene	100,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
o-Xylene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
p-Isopropyltoluene	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
sec-Butylbenzene	100,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	NA	NA	NA	NA	NA	ND	ND	ND	ND
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	ND	ND	ND	ND	ND	NA	NA	NA	NA
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	NA	NA	NA	NA	NA	ND	ND	ND	ND
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	ND	ND	ND	ND	ND	NA	NA	NA	NA
Total TICs	**	9200 J	ND	470 J	ND	**78000 J**	ND	NA	NA	ND
Total Unknown Compounds	**	3510 J	46 J	4154 J	ND	**232000 J**	ND	NA	NA	ND
Total VOCs	**	**12838.2**	90.9	4671.5	65	**310000**	7.1	4.5	720	8.4

Notes:

Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.

* = Guidance level based on NYSDEC TAGM 4046.

** = Guidance level not established (TAGM 4046 total individual and sum of VOCs not listed must be less than or equal to 10,000 ppb).

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

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

ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 2: VOCs in Soil - Remedial Investigation (continued)

All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification								
		HGP-34 (5'-7')	HGP-35 (0.5'-2')	HGP-35 (6'-7')	HGP-36 (6'-8')	HGP-37B (6.5'-7.5')	HGP-38 (6'-7')	HGP-39 (6'-8')	HGP-40 (6.5'-7.5')	HGP-41 (6'-7')
1,1,1,2-Tetrachloroethane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2,3-Trichlorobenzene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2,3-Trichloropropane	400*	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2,4-Trichlorobenzene	3,400*	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2,4-Trimethylbenzene	52,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2-Dibromo-3-chloropropane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2-Dibromoethane (EDB)	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2-Dichlorobenzene	100,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,3-Dichlorobenzene	49,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,3-Dichloropropane	300*	ND	ND	ND	ND	NA	ND	ND	NA	ND
1,4-Dichlorobenzene	13,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
1-Chlorohexane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
2,2-Dichloropropane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
2-Butanone (MEK)	300*	NA	NA	NA	NA	ND	NA	NA	ND	NA
2-Chlorotoluene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
2-Hexanone	**	NA	NA	NA	NA	ND	NA	NA	ND	NA
4-Chlorotoluene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1000*	NA	NA	NA	NA	ND	NA	NA	ND	NA
Acetone	100,000	NA	NA	NA	NA	2300 B	NA	NA	ND	NA
Benzene	4,800	ND	ND	13	ND	ND	ND	ND	ND	ND
Bromobenzene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	NA	NA	NA	NA	ND	NA	NA	ND	NA
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	NA	NA	NA	NA	ND	NA	NA	ND	NA
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
Dichlorodifluoromethane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
Ethylbenzene	41,000	ND	ND	3.0 J	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
Isopropylbenzene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
m&p-Xylenes	**	ND	ND	7.2	ND	NA	ND	ND	NA	ND
Methylene chloride	100,000	4.5 J B	11 J B	3.3 J B	8.2 J B	54 J B	31 J B	25 J B	76 J B	7.4 J B
Methyl-tert-butyl-ether (MTBE)	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
Naphthalene	**	ND	2.3 J	ND	ND	NA	ND	ND	NA	ND
n-Butylbenzene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
n-Propylbenzene	100,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
o-Xylene	**	ND	ND	2.3 J	ND	NA	ND	ND	NA	ND
p-Isopropyltoluene	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
sec-Butylbenzene	100,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	ND	ND	ND	ND	NA	ND	ND	NA	ND
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100,000	ND	ND	6.3	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	NA	NA	NA	NA	ND	NA	NA	ND	NA
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	ND	ND	ND	ND	NA	ND	ND	NA	ND
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	NA	NA	NA	NA	120 J	NA	NA	ND	NA
Total TICs	**	140 J	ND	450 J	ND	**11000 J**	**18000 J**	**71000 J**	**63000 J**	1010 J
Total Unknown Compounds	**	865 J	20 J	2470 J	ND	**135000 J**	**361000 J**	**234000 J**	**86000 J**	5446 J
Total VOCs	**	1009.5	33.3	2955.1	8.2	**148474**	**379031**	**305025**	**149076**	6463.4

Notes:

Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.

* = Guidance level based on NYSDEC TAGM 4046.

** = Guidance level not established (TAGM 4046 total individual and sum of VOCs not listed must be less than or equal to 10,000 ppb).

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ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 2: VOCs in Soil - Remedial Investigation (continued)

All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification									
		HGP-42 (6'-7')	HGP-43 (6'-7')	2HGP-44 (9'-10')	2HGP-45 (10'-11')	2HGP-46 (6'-7')	2HGP-47 (6'-7')	2HGP-48 (6'-7')	2HGP-50 (5'-6')	2HGP-51 (5'-6')	2HGP-52 (4'-5')
1,1,1,2-Tetrachloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	400*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	3,400*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	52,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	300*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Chlorohexane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	300*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1000*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	41,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m&p-Xylenes	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	100,000	6.1 J B	9.6 J B	6.1 J B	7.6 J B	7.2 J B	6.4 J B	7.0 J B	33 J B	6.0 J B	6.1 J B
Methyl-tert-butyl-ether (MTBE)	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TICs	**	ND	ND	ND	15 J	ND	ND	ND	8480 J	ND	ND
Total Unknown Compounds	**	ND	104 J	ND	ND	130 J	ND	ND	**10530 J**	ND	ND
Total VOCs	**	6.1	113.6	6.1	22.6	137.2	6.4	7.0	**19043**	6.0	6.1

Notes:

Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.

* = Guidance level based on NYSDEC TAGM 4046.

** = Guidance level not established (TAGM 4046 total individual and sum of VOCs not listed must be less than or equal to 10,000 ppb).

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

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

ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 2: VOCs in Soil - Remedial Investigation (continued)
All results provided in µg/kg (parts per billion). Results in **bold** exceed designated guidance levels.

Compound (USEPA Method 8260)	Guidance Level	Sample Identification										
		IHGP-1 (0-4')	IHGP-2 (5'-6')	IHGP-3 (4'-6')	IHGP-4 (5'-7')	IHGP-5 (6'-7.5')	IHGP-6 (3.5'-4')	HHMW-4 (4'-5')	HHMW-10 (8'-10')	HHMW-11 (6'-8')	DS-3 (SURFACE)	COMP-SC (0-2')
1,1,1,2-Tetrachloroethane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	600*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	400*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	3,400*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	52,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2-Dichloroethane	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,2-Dichloropropane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	52,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	49,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,3-Dichloropropane	300*	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	13,000	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
1-Chlorohexane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
2,2-Dichloropropane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
2-Butanone (MEK)	300*	ND	ND	ND	ND	15	8.0 J	NA	NA	NA	NA	NA
2-Chlorotoluene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
2-Hexanone	**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
4-Chlorotoluene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
4-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
4-Methyl-2-pentanone (MIBK)	1000*	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
Acetone	100,000	32	24 J	31	120	84	66	NA	NA	NA	6.2 J	21 J
Benzene	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Bromodichloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	2700*	ND	ND	ND	0.83 J	ND	ND	NA	NA	NA	NA	NA
Carbon tetrachloride	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1,900*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Dichlorodifluoromethane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Ethylbenzene	41,000	ND	ND	ND	ND	ND	ND	ND	1900	ND	ND	ND
Hexachlorobutadiene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Isopropylbenzene	**	NA	NA	NA	NA	NA	NA	ND	6000	5.5 J	ND	ND
m&p-Xylenes	**	NA	NA	NA	NA	NA	NA	ND	**12000**	ND	ND	ND
Methylene chloride	100,000	13 J B	14 J B	36 B	10 J B	8.6 J B	6.9 J B	7.0 J B	ND	4.7 J B	7.1 J B	7.6 J B
Methyl-tert-butyl-ether (MTBE)	**	NA	NA	NA	NA	NA	NA	ND	ND	4.3 J	ND	ND
Naphthalene	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	12 J
n-Butylbenzene	**	NA	NA	NA	NA	NA	NA	ND	ND	13	ND	ND
n-Propylbenzene	100,000	NA	NA	NA	NA	NA	NA	ND	17000	10	ND	ND
o-Xylene	**	NA	NA	NA	NA	NA	NA	ND	2500	ND	ND	ND
p-Isopropyltoluene	**	NA	NA	NA	NA	NA	NA	ND	**15000**	ND	NA	NA
sec-Butylbenzene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	15	ND	ND
Styrene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	100,000	NA	NA	NA	NA	NA	NA	ND	ND	2.2 J	ND	ND
Tetrachloroethene	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
Vinyl chloride	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	100,000	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
Total TICs	**	ND	ND	ND	631 J	ND	28 J	NA	NA	NA	NA	NA
Total Unknown Compounds	**	ND	5 J	ND	681 J	11 J	4 J	NA	NA	NA	NA	NA
Total VOCs	**	45.0	43	67	1442.83	118.6	112.9	7	**54400**	54.7	13.3	40.6

Notes:
Guidance levels based on BCP Restricted Use, "Restricted Residential" SCOs, 6 NYCRR Part 375, Table 375-6.8(b), except as noted.
* = Guidance level based on NYSDEC TAGM 4046.
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J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
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ND = Not Detected TBD = To Be Determined TICs = Tentatively Identified Compounds NA = Not Analyzed

Table 3: Groundwater Sample Results - VOCs

VOCs (USEPA Method 8260)	Regulatory Criteria/ Guidance Level µg/L	Sample Identification																																												
		HMW-1	HMW-2	HMW-3	HMW-4	HMW-5		HMW-6/HHMW10						HMW-7/HHMW-11						HMW-8						HMW-9		HMW-10			HMW-11		HMW-12				HMW-13				RMW-2				Trip Blank			
		2007	2007	2007	2007	2007	Oct-2013	2007	2012	Jan-2013	Apr-2013	Jul-2013	Oct-2013	2007	2012	Jan-2013	Apr-2013	Jul-2013	Oct-2013	2007	2012	Jan-2013	Apr-2013	Jul-2013	Oct-2013	2007	2012	2007	2012	May-2013	2007	2012	2012	Jan-2013	Apr-2013	Jul-2013	Jan-2013	Apr-2013	Jul-2013	Oct-2013	2007	2012	May-2013	Jul-2013	Jan-2013	May-2013	Jul-2013	Oct-2013
1,1,1,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**19**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8 J	2.8 J	**5.7**	**5.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1 J	ND	**5.4**	4.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethylene (total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Chlorohexane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8 J	2.6 J	ND	ND	ND	27	4.1 J	ND	ND	12	ND	4.3 J	3.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.3 J	ND	ND	ND	ND	ND	ND	15	ND	ND	ND
Benzene	1	ND	ND	ND	ND	0.62 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.8 J**	**1.0 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.7**	**2.3 J**	**3.2 J**	ND	ND	ND	ND	ND
Bromobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1 J,B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8 J,B	ND	ND
Bromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7 B**	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11**	**18**	**18**	**24**	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0 J	ND
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropylene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	5	ND	ND	3.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	0.96 J	ND	ND	ND	ND	ND	**5.8**	**5.1**	4.6 J	3.3 J	3.3 J	3.6 J	ND	ND	ND	ND	ND	ND	3.2 J	ND	**13**	2.7 J	ND	**5.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	1.4 J	ND	ND	ND	ND	ND	ND
Methylene chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether (MTBE)	10	ND	4.5 J	0.57J	0.41 J	**23**	**15**	**11**	3.2 J	ND	ND	ND	2.7 J	5.2	5.1	4.4 J	3.8 J	4.2 J	6.6	ND	ND	ND	ND	ND	ND	ND	ND	2.2 J	2.9 J	ND	5.1	ND	1.8 J	1.2 J	ND	ND	ND	ND	ND	3.0 J	3.8	3.8 J	3.7 J	4.4 J	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND	1.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND	0.81 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8**	3.6 J	3.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4 J	3.0 J	ND	ND	ND	ND	ND
Xylenes (o,m,p)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4 J	ND	ND	3.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND	ND	ND	2.9 J	3.4 J	3.9 J	2.6 J	ND	3.3 J	ND	ND	ND	ND	ND	ND	3.2 J	ND	**7**	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	3.3 J	2.8 J	3.6 J	ND	3.2 J	ND	ND	ND	ND	ND	ND	1.6 J	ND	2.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	0.68 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.91 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.7 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**40**	**40**	**25**	**27**	**46**	**23**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.89	0.89 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Regulatory Criteria/Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate.
J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
B - Analyte is found in the associated analysis batch blank.
ND = Not Detected
Blue shade indicates detectable concentrations.
Bold and yellow shade indicates exceedance of applicable regulatory criteria.
ESI File: GH9964.50

Ecosystems Strategies, Inc.

Table 4: Groundwater Sample Results - SVOCs

SVOCs (USEPA Method 8270)	Regulatory Criteria/ Guidance Level µg/L	Sample Identification																																							
		HMW-1	HMW-2	HMW-3	HMW-4	HMW-5	HMW-6/HHMW-10					HMW-7/HHMW-11					HMW-8					HMW-9		HMW-10			HMW-11		HMW-12					HMW-13			RMW-2			
		2007	2007	2007	2007	2007	2007	2012	Jan-2013	Apr-2013	Jul-2013	2007	2012	Jan-2013	Apr-2013	Jul-2013	2007	2012	Jan-2013	Apr-2013	Jul-2013	2007	2012	2007	2012	May-2013	2007	2012	2012	Jan-2013	Apr-2013	Jul-2013	Jan-2013	Apr-2013	Jul-2013	2007	2012	May-2013	Jul-2013
1,2,4-Trichlorobenzene	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
1,2-Dichlorobenzene	**3**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
1,3-Dichlorobenzene	**3**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
1,4-Dichlorobenzene	**3**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
2,2-oxybis (1-chloropropane)	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
2,4-Dinitrotoluene	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
2,6-Dinitrotoluene	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
2-Chloronaphthalene	**10**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
2-Methylnaphthalene	**4.7**	ND	ND	ND	ND	0.8 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
3,3-Dichlorobenzidine	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
3-Nitroaniline	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
4-Bromophenyl phenyl ether	**NE**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
4-Chloroaniline	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
4-Chlorophenyl phenyl ether	**NE**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
4-Nitroaniline	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Acenaphthene	**20**	ND	ND	ND	ND	2 J	7 J	ND	ND	ND	ND	0.9 J	2.01 J	2.71 J	ND	ND	ND	ND	ND	ND	ND	3 J	ND	8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.94 J	ND
Acenaphthylene	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	**50**	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(ghi)perylene	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	**NE**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Bis(2-chloroethoxy)methane	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Bis(2-chloroethyl)ether	**1**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Bis(2-ethylhexyl)phthalate	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Butyl benzyl phthalate	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Carbazole	**NE**	ND	ND	ND	ND	ND	2 J	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Chrysene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a h)anthracene	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	**NE**	ND	ND	ND	ND	ND	4 J	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	3 J	NA	8 J	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Diethyl phthalate	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Dimethyl phthalate	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Di-n-butyl phthalate	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Di-n-octyl phthalate	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Fluoranthene	**50**	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	2.21 J	3.23 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.04 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	**50**	ND	ND	ND	ND	0.8 J	7 J	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	6 J	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	**0.04**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Hexachlorobutadiene	**0.5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Hexachlorocyclopentadiene	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Hexachloroethane	**5**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Indeno(1 2 3-cd)pyrene	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	**50**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Naphthalene	**10**	ND	ND	ND	ND	1 J	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	**0.4**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
n-Nitrosodimethylamine	**NE**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
n-Nitroso-di-n-propylamine	**NE**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA
Phenanthrene	**50**	ND	ND	ND	ND	1 J	9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	ND	ND	ND	ND	3 J	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	**50**	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Regulatory Criteria/Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate.
J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
ND = Not Detected
NE = Not Established
NA = Not Analyzed
Blue shade indicates detectable concentrations.
ESI File: GH9964.50

Table 5: Groundwater Sample Results - Metals

TAL METAL	Regulatory Criteria/ Guidance Level µg/L	Sample Identification															
		HMW-1		HMW-2		HMW-3		HMW-4		HMW-5		HMW-6/HHMW10			HMW-7/HHMW11		
		2007		2007		2007		2007		2007		2007		2012	2007		2012
		Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Dissolved	Total	Dissolved	Dissolved
Aluminum	100	**620**	ND	**145 B**	ND	**298 B**	ND	**664**	ND	**171 B**	ND	**258 B**	ND	ND	**320 B**	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	5.1 B	9.9 B	ND	7.5 B	12.8 B	9.9 B	ND	4.2 B	9.4 B	9.1 B	ND	ND	22.0 B	9.5 B	ND
Barium	1,000	159	157	365	324	265	247	**3,640**	**3,230**	**1,070**	978	308	264	0.081	287	258	0.234
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	0.98 B	ND	0.79 B	ND	**7.5 B**	3.6 B	1.9 B	ND	0.92 B	ND	ND	1.1 B	ND	ND
Calcium	NE	119,000	120,000	54,600	55,300	76,000	79,500	416,000	40,900	193,000	192,000	119,000	116,000	80.9	151,000	154,000	132
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	5	2.8 B	2.2 B	**5.5 B**	**5.2 B**	**5.4 B**	**5.3 B**	**5.7 B**	**6.3 B**	3.9 B	2.2 B	2.8 B	2.0 B	ND	**6.6 B**	**6.5 B**	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300*	**1,120**	ND	**6,210**	ND	**2,660**	175 B	**55,200**	**24,000**	**9,430**	ND	**4,460**	69.2 B	0.066	**9,120**	**411**	1.97
Lead	25	ND	ND	4.4 B	ND	ND	ND	ND	ND	4.8 B	6.8 B	ND	ND	ND	ND	ND	ND
Magnesium	35,000	17,200	17,200	8,370	8,510	14,000	14,400	**84,200**	**82,300**	**43,500**	**43,600**	27,900	27,200	17	23,900	23,900	23.3
Manganese	300*	**572**	**564**	**2,380**	**2,410**	**2,360**	**2,380**	**7,280**	**7,000**	**4,260**	**4,210**	**3,330**	**3,230**	0.734	**2,060**	**2,040**	1.42
Mercury	0.7	0.10 B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12 B	ND	ND
Nickel	100	2.8 B	2.5 B	4.0 B	4.2 B	4.4 B	3.9 B	3.1 B	2.7 B	4.1 B	2.5 B	2.8 B	3.0 B	ND	6.7 B	7.1 B	ND
Potassium	NE	11,700	11,500	19,400	19,800	18,100	18,000	90,600	86,700	86,800	88,200	28,400	28,000	9.4	22,200	21,800	17.6
Selenium	10	ND	ND	ND	ND	ND	ND	**12.0 B**	ND	ND	ND	ND	ND	ND	ND	ND	0.014
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	1.3 B	1.7 B	ND	ND	ND	ND	ND	ND
Sodium	20,000	**188,000**	**191,000**	**224,000**	**223,000**	**203,000**	**205,000**	**190,000**	**193,000**	**172,000**	**169,000**	**224,000**	**221,000**	281	**212,000**	**212,000**	336
Thallium	0.5	ND	ND	ND	**12.6 B**	**12.0 B**	ND	ND	ND	**15.8 B**	**18.4 B**	ND	ND	ND	ND	ND	ND
Vanadium	14	0.88 B	ND	0.74 B	ND	1.1 B	ND	ND	ND	1.1 B	ND	1.1 B	ND	ND	0.73 B	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TAL METAL	Regulatory Criteria/ Guidance Level µg/L	Sample Identification														
		HMW-8			HMW-9			HMW-10			HMW-11			HMW-12	RMW-2	
		2007		2012	2007		2012	2007		2012	2007		2012	2012	2007	
		Total	Dissolved	Dissolved	Total	Dissolved	Dissolved	Total	Dissolved	Dissolved	Total	Dissolved	Dissolved	Dissolved	Total	Dissolved
Aluminum	100	**7,820**	**7,640**	0.7746	**30,300**	ND	ND	**41,200**	ND	ND	ND	ND	ND	ND	**178 B**	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	11.5 B	10.8 B	0.013	**38.0 B**	7.3 B	ND	**27.2 B**	4.4 B	ND	14.0 B	7.6 B	ND	ND	7.0 B	4.0 B
Barium	1,000	75.1	73.9	ND	470	161	0.156	461	203	0.136	124	105	0.112	0.083	133	99.0
Beryllium	3	ND	ND	ND	1.3 B	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	0.77 B	0.81 B	ND	3.5 B	ND	ND	4.5 B	ND	ND	1.0 B	ND	ND	ND	0.89 B	ND
Calcium	NE	142,000	138,000	8.03	134,000	111,000	111	148,000	130,000	96.9	123,000	130,000	146	61	125,000	124,000
Chromium	50	ND	ND	ND	37.7	ND	ND	**51.1**	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	5	1.6 B	1.9 B	ND	**26.9**	3.7 B	ND	**33.9**	3.0 B	ND	4.2 B	4.3 B	ND	ND	2.5 B	1.7 B
Copper	200	ND	ND	ND	85.8	ND	ND	102	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300*	196 B	47.8 B	0.061	**54,600**	ND	0.032	**78,300**	254	0.041	**7,630**	ND	0.057	0.268	**3,700**	105 B
Lead	25	6.6 B	4.2 B	ND	**119**	3.3 B	ND	**92.0**	3.2 B	ND	ND	ND	ND	ND	5.1 B	4.1 B
Magnesium	35,000	43.9 B	ND	0.147	24,400	11,900	12.2	**35,300**	20,600	13.6	27,200	27,500	25.1	9.82	10,600	10,900
Manganese	300*	6.5 B	1.7 B	ND	**6,740**	**5,380**	2.15	**6,940**	**5,380**	1.57	**3,420**	**3,580**	1.9	1.73	**1,600**	**1,600**
Mercury	0.7	ND	ND	ND	0.27	ND	ND	0.14 B	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	22.4	21.8	0.013	50.5	4.8 B	0.007	62.3	2.2 B	ND	4.6 B	5.3 B	ND	ND	4.6 B	3.7 B
Potassium	NE	200,000	199,000	65.1	13,600	9,570	13.9	19,700	16,700	10.1	36,000	35,000	14	9.21	13,800	15,000
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	0.013	ND	ND	0.013	ND	ND	8.7 B
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	**179,000**	**177,000**	242	**84,100**	**80,400**	122	**114,000**	**120,000**	404	**196,000**	**206,000**	249	147	**87,400**	**115,000**
Thallium	0.5	ND	ND	ND	ND	ND	ND	**14.3 B**	**10.9 B**	ND	ND	ND	ND	ND	ND	ND
Vanadium	14	8.9	8.7	0.06	**57.7**	ND	ND	**59.4**	ND	ND	ND	ND	ND	ND	2.0 B	ND
Zinc	2,000	ND	ND	ND	234	ND	ND	230	ND	ND	ND	ND	ND	ND	30.3 B	ND

Notes:
Regulatory Criteria/Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the sample.
Blue shade indicates detectable concentrations.
Bold and yellow shade indicates exceedance of applicable regulatory criteria.
ND = Not Detected * = Guidance level for total iron and manganese is 500.
NE = Not Established
ESI File: GH9964.50

Table 6: Soil Cleanup Objectives for the Site (Restricted Residential) - VOCs

All SCOs are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8260	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCO
1,1,1,2-Tetrachloroethane	NE	NE
1,1,1-Trichloroethane	680	100,000
1,1,2,2-Tetrachloroethane	NE	NE
1,1,2-Trichloro-1,2,2-trifluoroethane	NE	NE
1,1,2-Trichloroethane	NE	NE
1,1-Dichloroethane	270	26,000
1,1-Dichloroethylene	330	100,000
1,1-Dichloropropylene	NE	NE
1,2,3-Trichlorobenzene	NE	NE
1,2,3-Trichloropropane	NE	NE
1,2,4-Trichlorobenzene	NE	NE
1,2,4-Trimethylbenzene	3,600	52,000
1,2-Dibromo-3-chloropropane	NE	NE
1,2-Dibromoethane	NE	NE
1,2-Dichlorobenzene	1,100	100,000
1,2-Dichloroethane	20	3,100
1,2-Dichloropropane	NE	NE
1,3,5-Trimethylbenzene	8,400	52,000
1,3-Dichlorobenzene	2,400	49,000
1,3-Dichloropropane	NE	NE
1,4-Dichlorobenzene	1,800	13,000
1,4-Dioxane	100	13,000
2,2-Dichloropropane	NE	NE
2-Butanone	NE	NE
2-Chlorotoluene	NE	NE
2-Hexanone	NE	NE
4-Chlorotoluene	NE	NE
4-Methy-2-Pentanone	NE	NE
Acetone	50	100,000
Benzene	60	4,800
Bromobenzene	NE	NE
Bromochloromethane	NE	NE
Bromodichloromethane	NE	NE
Bromoform	NE	NE
Bromomethane	NE	NE
Carbon tetrachloride	760	2,400
Carbon Disulfide	NE	NE
Chlorobenzene	1,100	100,000
Chloroethane	NE	NE
Chloroform	370	49,000
Chloromethane	NE	NE
Cyclohexane	NE	NE
cis-1,2-Dichloroethylene	250	100,000
cis-1,3-Dichloropropylene	NE	NE
Dibromochloromethane	NE	NE
Dibromomethane	NE	NE
Dichlorodifluoromethane	NE	NE
Ethyl Benzene	1,000	41,000
Hexachlorobutadiene	NE	NE
Isopropylbenzene	NE	NE
Methyl Acetate	NE	NE
Methyl tert-butyl ether (MTBE)	930	100,000
Methylene chloride	50	100,000
Methylcyclohexane	NE	NE
Naphthalene	12,000	100,000
n-Butylbenzene	12,000	100,000
n-Propylbenzene	3,900	100,000
o-Xylene	NE	NE
p- & m- Xylenes	NE	NE
p-Isopropyltoluene	NE	NE
sec-Butylbenzene	11,000	100,000
Styrene	NE	NE
tert-Butylbenzene	5,900	100,000
Tetrachloroethylene	1,300	19,000
Toluene	700	100,000
trans-1,2-Dichloroethylene	190	100,000
trans-1,3-Dichloropropylene	NE	NE
Trichloroethylene	470	21,000
Trichlorofluoromethane	NE	NE
Vinyl Acetate	NE	NE
Vinyl Chloride	20	900
Xylenes, Total	260	100,000

Notes:
NE - Not Eatablished

Table 7: Soil Cleanup Objectives for the Site (Restricted Residential) - SVOCs
All SCOs are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8270	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCO
Acetophenone	NE	NE
Acenaphthene	20	100,000
Acenaphthylene	100,000	100,000
Aniline*	NE	100,000
Anthracene	100,000	100,000
Atrazine	NE	NE
Benzaldehyde	NE	NE
Benzo(a)anthracene	1,000	1,000
Benzo(a)pyrene	1,000	1,000
Benzo(b)fluoranthene	1,000	1,000
Benzo(g,h,i)perylene	100,000	100,000
Benzyl alcohol	NE	NE
Benzo(k)fluoranthene	800	3,900
Benzyl butyl phthalate	NE	NE
4-Bromophenyl phenyl ether	NE	NE
4-Chloro-3-methylphenol	NE	NE
4-Chloroaniline	NE	NE
Bis(2-chloroethoxy)methane	NE	NE
Bis(2-chloroethyl)ether	NE	NE
Bis(2-chloroisopropyl)ether	NE	NE
Bis(2-ethylhexyl)phthalate	NE	NE
Butylbenzylphthalate	NE	NE
1,1-Biphenyl	NE	NE
2-Chloronaphthalene	NE	NE
2-Chlorophenol	NE	NE
2,2-oxybis(1-Chloropropane)	NE	NE
4-Chlorophenyl phenyl ether	NE	NE
Caprolactam	NE	NE
Chrysene	1,000	3,900
Dibenzo(a,h)anthracene	330	330
Dibenzofuran	NE	NE
Di-n-butyl phthalate	NE	NE
1,2-Dichlorobenzene	NE	NE
1,4-Dichlorobenzene	NE	NE
1,3-Dichlorobenzene	NE	NE
3,3'-Dichlorobenzidine	NE	NE
2,4-Dichlorophenol	NE	NE
Diethyl phthalate	NE	NE
2,4-Dimethylphenol	NE	NE
Dimethyl phthalate	NE	NE
4,6-Dinitro-2-methylphenol	NE	NE
2,4-Dinitrophenol	NE	NE
2,6-Dinitrotoluene	NE	NE
2,4-Dinitrotoluene	NE	NE
Di-n-octyl phthalate	NE	NE
Fluoranthene	100,000	100,000
Fluorene	30,000	100,000
Hexachlorobenzene	NE	NE
Hexachlorobutadiene	NE	NE
Hexachlorocyclopentadiene	NE	NE
Hexachloroethane	NE	NE
Indeno(1,2,3-cd)pyrene	500	500
Isophorone	NE	NE
2-Methylnaphthalene**	NE	36,400
2-Methylphenol	NE	NE
4-Methylphenol	NE	NE
Naphthalene	12,000	100,000
3-Nitroaniline	NE	NE
4-Nitroaniline	NE	NE
Nitrobenzene*	NE	15,000
4-Nitrophenol	NE	NE
2-Nitrophenol	NE	NE
N-nitroso-di-n-propylamine	NE	NE
N-Nitrosodimethylamine	NE	NE
N-Nitrosodiphenylamine	NE	NE
Pentachlorophenol	800	6,700
Phenanthrene	100,000	100,000
Phenol	330	100,000
Pyrene	100,000	100,000
Pyridine	NE	NE
1,2,4-Trichlorobenzene	NE	NE
1,2,4,5-Trichlorobenzene	NE	NE
2,4,5-Trichlorophenol	NE	NE
2,4,6-Trichlorophenol	NE	NE
2,3,4,6-Trichlorophenol	NE	NE
m-Cresol	330	100,000
o-Cresol	330	100,000
p-Cresol	330	100,000

Notes:
NE - Not Established
*SCO for restricted residential use presented in *CP-51 Soil Cleanup Guidance*.
** No restricted residential SCO exists for 2-methylnaphthalene. The SCO for the protection of ecological

Table 8: Post-Excavation Sample Results - VOCs - Zones 1, 2 and 3

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8260	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification																									
			PE-1B (5/15/2013)	PE-2B (5/15/2013)	PE-3B (5/16/2013)	PE-4W (5/20/2013)	PE-5B (5/20/2013)	PE-6B (5/20/2013)	PE-7W (5/20/2013)	PE-8B (5/21/2013)	PE-9B (5/29/2013)	PE-10B (5/28/2013)	PE-11B (6/5/2013)	2PE-11B (5/31/2013)	PE-12B (6/12/2013)	PE-13W (6/12/2013)	PE-14B (6/12/2013)	PE-15B (6/17/2013)	PE-16W (6/24/2013)	PE-17W (6/24/2013)	PE-18B (6/24/2013)	DUP-1 (PE-18B) (6/24/13)	PE-19W (6/25/2013)	PE-20B (6/25/2013)	2PE-21B (7/8/2013)	PE-22B (6/27/2013)	PE-23B (7/3/2013)	PE-24W (7/3/2013)
1,1,1,2-Tetrachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	**680**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	**270**	**26,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	**3,600**	**52,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,300	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	**1,100**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	**20**	**3,100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	**8,400**	**52,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	**2,400**	**49,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	**1,800**	**13,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	**100**	**13,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	ND	4.7 J	ND	ND
2-Chlorotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
4-Chlorotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methy-2-Pentanone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND
Acetone	**50**	**100,000**	**650 J,B**	**2,300 J,B**	**2,900 J,B**	ND	**360 J**	18	15	ND	**420 J,B**	**490 J,B**	**700 J,B**	**1,900 J**	**1,800 J**	ND	**1,500 J**	**400 J**	ND	**3,300 J,B**	**1,500 J,B**	**4,000 J,B**	24 J	16	ND	23	29.1	ND
Benzene	**60**	**4,800**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,500	2,800 J	2,300 J	2,200 J	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	**760**	**2,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	6.9 J
Chlorobenzene	**1,100**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**370**	**49,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,000 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.3	ND
cis-1,2-Dichloroethylene	**250**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	**1,000**	**41,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**NE**	**NE**	ND	5,800	3,200	ND	250 J	5.7	6.5	2,900	270 J	290 J	ND	ND	ND	ND	ND	ND	910 J	ND	ND	2,300 J	ND	ND	ND	ND	ND	ND
Methyl Acetate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
Methyl tert-butyl ether (MTBE)	**930**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	**50**	**100,000**	**530 J,B**	**3,400 J,B**	**2,900 J,B**	**590 J**	**560 J**	6.8 J	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0 J,B	ND	ND
Methylcyclohexane	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87.9	5.2 J
Naphthalene	**12,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**12,000**	**100,000**	ND	11,000	6,400	280 J	610	20	23	6,800	ND	ND	ND	ND	ND	2,100 J	2,100 J	ND	2,800	2,800 J	2,700 J	5,100	ND	ND	190	ND	ND	ND
n-Propylbenzene	**3,900**	**100,000**	330 J	**13,000**	**6,000**	250 J	610	13	15	**6,500**	730	750	ND	ND	ND	ND	1,300 J	ND	1,800	2,600 J	2,000 J	**4,000**	ND	ND	50 J	ND	ND	ND
o-Xylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p- & m- Xylenes	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	**NE**	**NE**	ND	3,000	1,800 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,100 J	ND	ND	ND	ND	ND	48 J	ND	ND	ND
sec-Butylbenzene	**11,000**	**100,000**	290 J	9,500	5,500	240 J	500	17	19	6,600	800	780	ND	ND	ND	ND	1,500 J	ND	2,400	2,300 J	2,400 J	4,400	ND	ND	120	ND	ND	ND
Styrene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	**5,900**	**100,000**	ND	2,500 J	1,600 J	ND	ND	3.5 J	3.7 J	1,500	ND	ND	ND	ND	ND	ND	ND	ND	850 J	ND	ND	ND	ND	ND	ND	ND	NA	NA
Tetrachloroethylene	**1,300**	**19,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**700**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	**190**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	**470**	**21,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	**20**	**900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes, Total	**260**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - Analyte is found in the associated analysis batch blank.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established

Blue shade indicates detectable concentrations.

Bold and green shade indicates exceedance of UU SCOs.

ESI File: GH9964.50

Table 8: Post-Excavation Sample Results - VOCs - Zones 1, 2 and 3 (cont'd)

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8260	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification																									
			PE-25W (7/23/2013)	PE-26W (7/11/2013)	PE-27B (7/11/2013)	PE-28B (7/12/2013)	PE-29B (7/15/2013)	PE-30W (7/15/2013)	PE-31W (7/16/2013)	2PE-32B (7/23/2013)	PE-33W (7/17/2013)	2PE-34B (7/23/2013)	2PE-35W (7/26/2013)	PE-36B (7/18/2013)	PE-37W (8/2/2013)	PE-38W (7/31/2013)	PE-39W (7/30/2013)	PE-40B (7/31/2013)	PE-41B (8/2/2013)	PE-42W (9/10/2013)	PE-43W (9/10/2013)	PE-44W (9/10/2013)	PE-45B (9/24/2013)	PE-46W (9/24/2013)	PE-47W (9/24/2013)	PE-48B (9/24/2013)	PE-49B (9/27/2013)	PE-50W (9/27/2013)	PE-51W (9/27/2013)
1,1,1,2-Tetrachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	**680**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	420	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	**270**	**26,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND
1,1-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	**3,600**	**52,000**	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	680	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	**1,100**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	**20**	**3,100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	**8,400**	**52,000**	ND	ND	ND	ND	ND	ND	ND	ND	4.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	**2,400**	**49,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	**1,800**	**13,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,4-Dioxane	**100**	**13,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
2-Butanone	**NE**	**NE**	ND	ND	4.0	ND	9.1	4.4	ND	4.1 J	ND	ND	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
2-Hexanone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	1,300	ND	ND	ND	ND	NA	NA
4-Chlorotoluene	**NE**	**NE**	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	NA	NA
4-Methy-2-Pentanone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	350	ND	ND	ND	ND	NA	NA
Acetone	**50**	**100,000**	**1,800**	ND	9.2	**4,400 J,B**	31 B	19	ND	23 B	18 B	30 B	8.0	ND	**440 J,B**	NA	NA	NA	NA	**890 J**	ND	**260 J**	ND	ND	ND	ND	**470 CCV-E,J**	**790 CCV-E,J**	ND
Benzene	**60**	**4,800**	ND	ND	ND	ND	ND	ND	8.6	2.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
Bromochloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
Bromodichloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
Bromoform	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	120 J	ND	ND	ND	ND	ND	ND
Bromomethane	**NE**	**NE**	560 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	**760**	**2,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	NA
Chlorobenzene	**1,100**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**370**	**49,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7,700	1,200	2,600	1,400	NA	NA
cis-1,2-Dichloroethylene	**250**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	**1,000**	**41,000**	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**NE**	**NE**	ND	ND	7.1	ND	7.9	ND	12	4.9 J	8.0	3.9 J	ND	ND	1,800	8,700	2,600	6,000	ND	NA	NA	NA	8,300	990	1,900	ND	1,600	1,200	1,300
Methyl Acetate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	NA	NA	NA
Methyl tert-butyl ether (MTBE)	**930**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	**50**	**100,000**	ND	**380 J**	2.0 J	ND	2.4 J	ND	ND	ND	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31,800	6,700	12,400	11,600	ND	ND	ND
Naphthalene	**12,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**12,000**	**100,000**	ND	ND	ND	ND	ND	ND	13	ND	19	5.7	ND	ND	3,200	ND	4,100	9,200	ND	1,700	4,000	820	**15,500**	2,100	3,300	5,300	3,200	3,100	3,100
n-Propylbenzene	**3,900**	**100,000**	ND	ND	12	ND	15	ND	18	10	25	5.7	ND	1,800 J	3,600	**18,000**	**5,600**	**12,000**	310 J	2,000	**6,300**	650	**19,400**	2,100	**4,300**	ND	3,900	2,600	2,700
o-Xylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p- & m- Xylenes	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	7.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,300	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	**11,000**	**100,000**	ND	ND	ND	ND	ND	ND	11	ND	9.7	6.8	ND	ND	3,500	**12,000**	3,500	8,400	ND	1,500	4,100	720	**12,900**	1,900	2,700	ND	3,300	2,700	3,000
Styrene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	**5,900**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7 J	ND	ND	1,000	4,000 J	740	2,800	ND	430 J	1,500	260	NA	NA	NA	NA	800	ND	850
Tetrachloroethylene	**1,300**	**19,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**700**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	**190**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND
Trichloroethylene	**470**	**21,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	**20**	**900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes, Total	**260**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - Analyte is found in the associated analysis batch blank.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established

CCV - E = The value reported is estimated. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for averge Rf or >20% Drift for quadratic fit).

Blue shade indicates detectable concentrations.

Bold and green shade indicates exceedance of UU SCOs.

ESI File: GH9964.50

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Table 9: Post Excavation Sample Results - SVOCs - Zones 1, 2 and 3

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8270	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification																								
			PE-1B (5/15/2013)	PE-2B (5/15/2013)	PE-3B (5/16/2013)	PE-4W (5/20/2013)	PE-5B (5/20/2013)	PE-6B (5/20/2013)	PE-7W (5/20/2013)	PE-8B (5/21/2013)	PE-9B (5/29/2013)	PE-10B (5/28/2013)	PE-11B (6/5/2013)	2PE-11B (5/31/2013)	PE-12B (6/12/2013)	PE-13W (6/12/2013)	PE-14B (6/12/2013)	PE-15B (6/17/2013)	PE-16W (6/24/2013)	PE-17W (6/24/2013)	PE-18B (6/24/2013)	PE-18B (DUP-1) (6/24/13)	PE-19W (6/25/2013)	PE-20B (6/25/2013)	2PE-21B (7/8/2013)	PE-22B (6/27/2013)	PE-23B (7/3/2013)	PE-24W (7/3/2013)
Acetophenone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
Acenaphthene	**20**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,040 J	ND	ND	ND
Acenaphthylene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	**NE**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	**100,000**	**100,000**	ND	ND	ND	ND	315 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	238 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Atrazine	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
Benzaldehyde	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
Benzo(a)anthracene	**1,000**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	172 J	ND	ND	ND	ND	ND
Benzo(a)pyrene	**1,000**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	175 J	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	**1,000**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	170 J	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	108 J	ND	ND	ND	ND	ND
Benzyl alcohol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	**800**	**3,900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl butyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4-Bromophenyl phenyl ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	951	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	803	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	135 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
Bis(2-ethylhexyl)phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
1,1-Biphenyl	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
2-Chloronaphthalene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-oxybis(1-Chloropropane)	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
4-Chlorophenyl phenyl ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Caprolactam	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
Chrysene	**1,000**	**3,900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	166 J	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	**330**	**330**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	599	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	260 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250 J	180 J	
4,6-Dinitro-2-methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	448	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	424	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	337	ND	ND	ND	ND	ND
Fluorene	**30,000**	**100,000**	ND	ND	ND	ND	1,090	ND	98.1 J	5,140 J	ND	ND	ND	ND	ND	ND	3,170 J	1,150	ND	ND	ND	ND	ND	ND	1,580 J	ND	ND	ND
Hexachlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	208 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	**500**	**500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	99.7 J	ND	ND	ND	ND	ND
Isophorone	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	**NE**	**36,400**	251 J	**49,700**	**43,600**	ND	ND	ND	ND	ND	6,070	7,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	**12,000**	**100,000**	ND	ND	3,930 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	321	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	184 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	210 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	770	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	573	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,350	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	**800**	**6,700**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	**100,000**	**100,000**	374	17,000	13,700	2,610	2,000	169 J	ND	9,490 J	ND	2,800 J	ND	ND	ND	ND	5,370	1,850	ND	ND	ND	11,200 J	288	ND	2,880	ND	ND	ND
Phenol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	122 J	ND	ND	ND	ND	246	ND	ND	ND	ND	ND
Pyridine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Trichlorobenzene	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
2,4,5-Trichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Trichlorophenol	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
m-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
o-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
p-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA

Notes:

Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .

J - Data indicate the presence of a compound that meets the identification criteria.

The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established.

Blue shade indicates detectable concentrations.

Bold and yellow shade indicates exceedance of RRU SCOs.

Bold and green shade indicates exceedance of UU SCOs.

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Table 9: Post Excavation Sample Results - SVOCs - Zones 1, 2 and 3 (cont'd)
All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8270	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification																									
			PE-25W (7/23/2013)	PE-26W (7/11/2013)	PE-27B (7/11/2013)	PE-28B (7/12/2013)	PE-29B (7/15/2013)	PE-30W (7/15/2013)	PE-31W (7/16/2013)	2PE-32B (7/23/2013)	PE-33W (7/17/2013)	2PE-34B (7/23/2013)	2PE-35W (7/26/2013)	PE-36B (7/18/2013)	PE-37W (8/2/2013)	PE-38W (7/31/2013)	PE-39W (7/30/2013)	PE-40B (7/31/2013)	PE-41B (8/2/2013)	PE-42W (9/10/2013)	PE-43W (9/10/2013)	PE-44W (9/10/2013)	PE-45B (9/24/2013)	PE-46W (9/24/2013)	PE-47W (9/24/2013)	PE-48B (9/24/2013)	PE-49B (9/27/2013)	PE-50W (9/27/2013)	PE-51W (9/27/2013)
Acetophenone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	**20**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**152 J**	ND	ND	ND	**3,600 D**	ND	ND	**1,600 D**	ND	ND
Acenaphthylene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	**NE**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,080 J	ND	ND	ND	1,540 J	1,190 J	1,300 JD	ND	370 J	450 JD	ND	1,260 J
Atrazine	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	**1,000**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,350 J**	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	**1,000**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,290 J**	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	**1,000**	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	**800**	**3,900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl butyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroisopropyl)ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Biphenyl	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-oxybis(1-Chloropropane)	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	**1,000**	**3,900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,740**	ND	ND	ND	ND	ND	**1,410 J**	ND	ND	ND	ND	ND	NA
Dibenzo(a,h)anthracene	**330**	**330**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,480 J	ND	ND	ND	ND	ND	2,070 J
Fluorene	**30,000**	**100,000**	ND	ND	302 J	494	ND	ND	ND	522	ND	ND	268 J	ND	ND	ND	ND	ND	311	ND	7,860	2,270 J	8,000 D	290 J	1,400	3,300 D	3,430 J	5,070	1,820 J
Hexachlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	**500**	**500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	**NE**	**36,400**	ND	ND	594	ND	ND	ND	ND	ND	789	ND	ND	ND	ND	ND	ND	ND	978	ND	25,100	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	**12,000**	**100,000**	ND	ND	ND	90.5 J	ND	ND	ND	ND	ND	ND	89.8 J	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND
3-Nitroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-nitroso-di-n-propylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	**800**	**6,700**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	**100,000**	**100,000**	ND	ND	481	906	194 J	ND	ND	ND	1,010	225 J	ND	475	3,600	3,390	9,430	ND	559	65.6 J	9,790	5,270	10,000 D	430	2,500	4,600 D	5,220	7,490	3,670 J
Phenol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,480	ND	ND	151 J	NA	NA	2,580 J	780 JD	ND	380 J	270 JD	ND	ND	1,970 J
Pyridine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4,5-Trichlorobenzene	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6-Trichlorophenol	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .
J - Data indicate the presence of a compound that meets the identification criteria.
The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
D - Dilution
ND = Not Detected ; NA = Not Analyzed; NE = Not Established; D= Dilution.
Blue shade indicates detectable concentrations.
Bold and yellow shade indicates exceedance of RRU SCOs.
Bold and green shade indicates exceedance of UU SCOs.
ESI File: GH9964.50

Table 10: Post-Excavation Sample Results - VOCs - Zones 4 and 6

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8260	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification																											
			SE-PE-1W (8/15/2013)	SE-PE-2B (8/15/2013)	SE-PE-3W (8/16/2013)	SE-PE-4W (8/16/2013)	SE-PE-5B (8/16/2013)	SE-PE-6W (8/19/2013)	SE-PE-7W (8/19/2013)	SE-PE-8W (8/19/2013)	SE-PE-9W (8/20/2013)	SE-PE-10B (8/20/2013)	SE-PE-11W (8/26/2013)	SE-PE-12W (8/26/2013)	SE-PE-13W (8/28/2013)	SE-PE-14B (8/22/2013)	SE-PE-15B (8/28/2013)	SE-PE-16W (8/28/2013)	SE-PE-17B (8/29/2013)	SE-PE-18W (8/29/2013)	SE-PE-19B (9/9/2013)	SE-PE-20W (9/05/2013)	SE-PE-21W (9/04/2013)	SE-PE-22W (9/03/2013)	DUP-2 (SE-PE-22W) (9/03/2013)	SE-PE-23W (9/03/2013)	SE-PE-24W (9/18/2013)	SE-PE-25W (9/18/2013)	SE-PE-26W (9/18/2013)	SE-PE-27W (9/18/2013)
1,1,1,2-Tetrachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	**680**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,600	ND	ND	ND
1,1-Dichloroethane	**270**	**26,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	**3,600**	**52,000**	ND	ND	ND	ND	5.5 J	ND	ND	ND	ND	750	**3,700 J**	ND	ND	640 J	ND	1,700	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	**1,100**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	**20**	**3,100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	**8,400**	**52,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	**2,400**	**49,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	**1,800**	**13,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	**100**	**13,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	**NE**	**NE**	24	15	58	6.1	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.7 J	ND	16	ND	ND	ND	ND	ND	ND	2.8 J	8.6	
2-Chlorotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methy-2-Pentanone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	**50**	**100,000**	**97 B**	**62 B**	**280 B**	45 B	**100 B**	ND	ND	ND	**200 J,B**	ND	ND	**2,000 J,B**	ND	ND	**780 J,B**	ND	30 B	ND	46	ND	ND	**300 J,B**	ND	**310 J,B**	ND	ND	23 B	**84 B**
Benzene	**60**	**4,800**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4,100**	ND	**2,200**	**460 J**	ND	**2,800**	1.7 J	ND	ND	ND	ND	ND	ND	**170 J**	**610**	**300 J**	**1,400**	ND	24
Bromobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	**NE**	**NE**	ND	ND	ND	ND	ND	520	ND	670	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	**760**	**2,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	**1,100**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**370**	**49,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethylene	**250**	**100,000**	5.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	**1,000**	**41,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,300 J**	ND	ND	ND	ND	**1,700**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	390 J	320 J	360	340 J	9,200	ND	8,900	1,300	ND	3,800	ND	ND	NA	ND	ND	ND	ND	ND	1,400	2,800	2.9 J	43
Methyl Acetate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	**930**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	**50**	**100,000**	ND	ND	30 J	3.2 J	13 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	**12,000**	**100,000**	ND	ND	ND	ND	ND	1,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	**12,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	830	700	**18,000**	3,600	**17,000**	2,600	350 J	8,200	14	2,800	ND	1,400	720	ND	450	270 J	2,800	5,800	5.8	47
n-Propylbenzene	**3,900**	**100,000**	ND	ND	ND	ND	ND	ND	330 J	350 J	740	630	**28,000**	3,500	**23,000**	3,600	ND	**11,000**	16	3,600	5.7	1,500	1,000	ND	710	ND	3,500	**7,700**	7.2	85
o-Xylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	150 J	ND	3,000 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	660 J	ND	ND
p- & m- Xylenes	**NE**	**NE**	ND	ND	ND	ND	ND	730 J	ND	ND	350 J	ND	ND	ND	ND	ND	ND	3,000	ND	160 J	ND	160 J	ND	ND	ND	410 J	ND	ND	ND	ND
p-Isopropyltoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,100	ND	ND	2,000	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	**11,000**	**100,000**	ND	ND	ND	ND	ND	ND	1,800	1,700	680	440 J	8,500	ND	**12,000**	1,200	ND	5,800	9.3	2,400	9.7	1,100	440 J	ND	190 J	ND	1,700	2,900	2.7 J	41
Styrene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	**5,900**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,400	ND	ND	780 J	1.7	240 J	3.8 J	180 J	ND	ND	ND	ND	300 J	ND	ND	7.8
Tetrachloroethylene	**1,300**	**19,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**700**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	150 J	ND	ND	ND	ND	ND	ND	**3,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	**190**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	**470**	**21,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	**20**	**900**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes, Total	**260**	**100,000**	ND	ND	ND	ND	ND	**870 J**	ND	ND	**500 J**	ND	ND	ND	ND	ND	ND	**3,500 J**	ND	220 J	ND	160 J	ND	ND	ND	**410 J**	ND	ND	ND	ND

Notes:

Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - Analyte is found in the associated analysis batch blank.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established

Blue shade indicates detectable concentrations.

Bold and green shade indicates exceedance of UU SCOs.

ESI File: GH9964.50

Ecosystems Strategies, Inc.

Table 11: Post-Excavation Sample Results - SVOCs - Zones 4 and 6

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8270	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification																										
			SE-PE-1W (8/15/2013)	SE-PE-2B (8/15/2013)	SE-PE-3W (8/16/2013)	SE-PE-4W (8/16/2013)	SE-PE-5B (8/16/2013)	SE-PE-6W (8/19/2013)	SE-PE-7W (8/19/2013)	SE-PE-8W (8/19/2013)	SE-PE-9W (8/20/2013)	SE-PE-10B (8/20/2013)	SE-PE-11W (8/26/2013)	SE-PE-12W (8/26/2013)	SE-PE-13W (8/28/2013)	SE-PE-14B (8/22/2013)	SE-PE-15B (8/28/2013)	SE-PE-16W (8/28/2013)	SE-PE-17B (8/29/2013)	SE-PE-18W (8/29/2013)	SE-PE-19B (9/9/2013)	SE-PE-20W (9/05/2013)	SE-PE-21W (9/04/2013)	SE-PE-22W (9/03/2013)	DUP-2 (SE-PE-22W) (9/03/2013)	SE-PE-23W (9/03/2013)	SE-PE-24W (9/18/2013)	SE-PE-25W (9/18/2013)	SE-PE-26W (9/18/2013)	SE-PE-27W (9/18/2013)
Acetophenone	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	**20**	**100,000**	ND	ND	ND	**2,810**	ND	ND	**167 J**	**121 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**136 J**	ND	ND	**52.8 J**	ND	ND	ND	ND
Acenaphthylene	**100,000**	**100,000**	ND	ND	ND	389 J	ND	ND	ND	56.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	**NE**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	**100,000**	**100,000**	ND	ND	ND	685 J	130 J	ND	ND	ND	612 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64.5 J	ND	ND	ND
Atrazine	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	**1,000**	**1,000**	ND	ND	ND	ND	138 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	320 J	ND	64.5 J	ND	ND	ND	ND	ND	286 J	ND
Benzo(a)pyrene	**1,000**	**1,000**	ND	ND	ND	ND	117 J	62.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	310 J	ND	ND	ND	ND	ND	ND	ND	351 J	ND
Benzo(b)fluoranthene	**1,000**	**1,000**	ND	ND	ND	ND	63.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	83.9 J	ND	ND	ND	ND	ND	273 J	ND
Benzo(g,h,i)perylene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	**800**	**3,900**	ND	ND	ND	ND	130 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71.9 J	ND	ND	ND	ND	ND	372 J	ND
Benzyl butyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroisopropyl)ether	**NE**	**NE**	ND	ND	235 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,310 J	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Biphenyl	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-oxybis(1-Chloropropane)	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	**1,000**	**3,900**	ND	ND	ND	269 J	161 J	62.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	306 J	ND	ND	69.0 J	ND	ND	ND	ND	336 J	ND
Dibenzo(a,h)anthracene	**330**	**330**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	**NE**	**NE**	ND	ND	ND	2,550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	**100,000**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	613 J	1,480	ND	183 J	267 J	ND	ND	NA	NA	572 J	NA
Fluorene	**30,000**	**100,000**	ND	ND	ND	5,050	251	78.1 J	ND	ND	1,430 J	786 J	ND	ND	4,470	ND	ND	2,430 J	ND	ND	ND	211	ND	ND	75.3 J	ND	ND	ND	201 J
Hexachlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	**500**	**500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	**NE**	**36,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND	950 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,080	2,790 J	ND	813
2-Methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	**12,000**	**100,000**	ND	ND	ND	4,440	ND	ND	660	710	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	**NE**	**15,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-nitroso-di-n-propylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	**800**	**6,700**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	**100,000**	**100,000**	ND	ND	298 J	6,980	234	129 J	72.3 J	101 J	3,890	2,080	16,100	3,650 J	5,200	1,640 J	ND	2,250 J	435 J	1,260	NA	352	321 J	NA	119 J	422	7,460	8,190	309 J	233 J
Phenol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	**100,000**	**100,000**	ND	ND	239 J	ND	232	77.3 J	ND	50.5 J	482 J	544 J	1,480 J	ND	ND	ND	ND	ND	521 J	NA	NA	123 J	NA	NA	NA	NA	NA	NA	463 J	NA
Pyridine	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4,5-Trichlorobenzene	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	**NE**	**NE**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6-Trichlorophenol	**NE**	**NE**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol	**330**	**100,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .

J - Data indicate the presence of a compound that meets the identification criteria.

The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established.

Blue shade indicates detectable concentrations.

Bold and green shade indicates exceedance of UU SCOs.

ESI File: GH9964.50

Table 12: Post-Excavation Sample Results - VOCs - Zone 5

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8260	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification							
			DPW-PE-1B (10/4/2013)	DPW-PE-2W (10/4/2013)	DPW-PE-3W (10/4/2013)	DPW-PE-4B (10/7/2013)	DPW-PE-5W (10/7/2013)	DPW-PE-6W (10/7/2013)	DPW-PE-7W (10/7/2013)	DUP-3 (DPW-PE-7W) (10/7/2013)
1,1,1,2-Tetrachloroethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	100,000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	270	26,000	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	330	100,000	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropylene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	52,000	ND	ND	ND	2,300 J	2,600	1,900	ND	9.0
1,2-Dibromo-3-chloropropane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	20	3,100	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	52,000	ND	ND	ND	ND	ND	ND	ND	7.0
1,3-Dichlorobenzene	2,400	49,000	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	13,000	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	100	13,000	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	NE	NE	ND	3.1 J	ND	ND	ND	ND	ND	9.6
2-Chlorotoluene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
4-Methy-2-Pentanone	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	50	100,000	5.1 J	29	36	ND	ND	ND	18	48
Benzene	60	4,800	52	ND	ND	ND	**370 J**	**950 J**	ND	ND
Bromobenzene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	760	2,400	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	370	49,000	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethylene	250	100,000	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropylene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	1,000	41,000	ND	ND	ND	ND	**1,200**	**3,100**	ND	ND
Hexachlorobutadiene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NE	NE	ND	ND	ND	ND	960	ND	ND	7.9
Methyl Acetate	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	930	100,000	6.3	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	100,000	ND	2.2 J	ND	**1,900 J**	ND	**980 J**	4.2 J	ND
Methylcyclohexane	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	12,000	100,000	ND	3.7 J,B	5.0 J,B	39,000	7,400 B	10,000 B	6.7 J,B	ND
n-Butylbenzene	12,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	100,000	ND	ND	ND	ND	370 J	ND	ND	2.2 J
o-Xylene	NE	NE	ND	ND	ND	ND	560 J	ND	ND	2.4 J
p- & m- Xylenes	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	NE	NE	ND	ND	ND	ND	ND	ND	ND	2.5 J
sec-Butylbenzene	11,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	100,000	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1,300	19,000	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	700	100,000	ND	ND	ND	ND	**1,100**	**2,700**	ND	ND
trans-1,2-Dichloroethylene	190	100,000	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	470	21,000	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	20	900	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes, Total	260	100,000	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - Analyte is found in the associated analysis batch blank.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established

Blue shade indicates detectable concentrations.

Bold and green shade indicates exceedance of UU SCOs.

ESI File: GH9964.50

Table 13: Post-Excavation Sample Resutls - SVOCs - Zone 5

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8270	Table 375-6.8(a): Unrestricted Use SCOs	Table 375-6.8(b): Restricted Residential Use SCOs	Sample Identification							
			DPW-PE-1B (10/4/2013)	DPW-PE-2W (10/4/2013)	DPW-PE-3W (10/4/2013)	DPW-PE-4B (10/7/2013)	DPW-PE-5W (10/7/2013)	DPW-PE-6W (10/7/2013)	DPW-PE-7W (10/7/2013)	DUP-3 (DPW-PE-7W) (10/7/2013)
Acenaphthene	**20**	**100,000**	ND	ND	**660**	**97.0 J**	**699 J**	**2,210**	ND	**441**
Acenaphthylene	**100,000**	**100,000**	ND	ND	103 J	ND	484 J	1,970	ND	132 J
Anthracene	**100,000**	**100,000**	ND	ND	686	132 J	1,700 J	5,260	585	437
Benzo(a)anthracene	**1,000**	**1,000**	ND	ND	380	215 J	**2,090**	**5,440**	557	393
Benzo(a)pyrene	**1,000**	**1,000**	ND	ND	322	214 J	768 J	**1,420 J**	534	377
Benzo(b)fluoranthene	**1,000**	**1,000**	ND	ND	129 J	106 J	681 J	**2,060**	215 J	173 J
Benzo(g,h,i)perylene	**100,000**	**100,000**	ND	ND	177 J	ND	ND	ND	329	233 J
Benzo(k)fluoranthene	**800**	**3,900**	ND	ND	167 J	139 J	747 J	**1,900**	302	212 J
Chrysene	**1,000**	**3,900**	ND	ND	356	251 J	**3,280**	**10,400**	611	453
Dibenzo(a,h)anthracene	**330**	**330**	ND	ND	ND	ND	ND	ND	83.5 J	ND
Fluoranthene	**100,000**	**100,000**	ND	ND	979	386	4,060	11,600	1,270	929
Fluorene	**30,000**	**100,000**	ND	ND	537	ND	1,190 J	4,210	ND	319
Indeno(1,2,3-cd)pyrene	**500**	**500**	ND	ND	108 J	94.2 J	ND	ND	227 J	167 J
2-Methylnaphthalene	**NE**	**36,400**	ND	80.2 J	228 J	ND	865 J	ND	314	249 J
Naphthalene	**12,000**	**100,000**	ND	237 J	207 J	280 J	ND	939 J	ND	113 J
Phenanthrene	**100,000**	**100,000**	ND	ND	2,240	398	6,500	19,200	1,490	1,260
Pyrene	**100,000**	**100,000**	ND	ND	1,140	432	5,970	16,700	1,290	978

Notes:
Guidance levels based on BCP Unrestricted Use SCOs (UU SCOs)and Restricted-Residential Use SCOs (RRU SCOs), 6 NYCRR Part 375, Table 375-6.8 (a) and(b), respectively, and *CP-51 Soil Cleanup Guidance* .
J - Data indicate the presence of a compound that meets the identification criteria.
The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
ND = Not Detected ; NA = Not Analyzed; NE = Not Established.

Blue shade indicates detectable concentrations.
Bold and yellow shade indicates exceedance of RRU SCOs.
Bold and green shade indicates exceedance of UU SCOs.
ESI File: GH9964.50

Table 14: Soil Integrity Sample Results - DPW Parcels - VOCs

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8260	Unrestricted Use	Restricted-Residential Use	Sample Identification				
			SS-1 (10/8/13)	SS-2 (10/8/13)	SS-4 (10/8/13)	SS-5 (10/8/13)	SS-6 (10/8/13)
1,1,1,2-Tetrachloroethane	NE	NE	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	680	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	NE	NE	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	NE	NE	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NE	NE	ND	ND	ND	ND	ND
1,1-Dichloroethane	270	270	ND	ND	ND	ND	ND
1,1-Dichloroethylene	330	330	ND	ND	ND	ND	ND
1,1-Dichloropropylene	NE	NE	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NE	NE	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	NE	NE	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NE	NE	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	3,600	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	NE	NE	ND	ND	ND	ND	ND
1,2-Dibromoethane	NE	NE	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100	1,100	ND	ND	ND	ND	ND
1,2-Dichloroethane	20	20	ND	ND	ND	ND	ND
1,2-Dichloropropane	NE	NE	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	8,400	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400	2,400	ND	ND	ND	ND	ND
1,3-Dichloropropane	NE	NE	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	1,800	ND	ND	ND	ND	ND
1,4-Dioxane	100	100	ND	ND	ND	ND	ND
2,2-Dichloropropane	NE	NE	ND	ND	ND	ND	ND
2-Butanone	NE	NE	ND	ND	18	ND	ND
2-Chlorotoluene	NE	NE	ND	ND	ND	ND	ND
4-Chlorotoluene	NE	NE	ND	ND	ND	ND	ND
2-Hexanone	NE	NE	NA	NA	NA	NA	NA
4-Methy-2-Pentanone	NE	NE	NA	NA	NA	NA	NA
Acetone	50	50	ND	ND	**67**	ND	ND
Benzene	60	60	ND	ND	ND	ND	ND
Bromobenzene	NE	NE	ND	ND	ND	ND	ND
Bromochloromethane	NE	NE	ND	ND	ND	ND	ND
Bromodichloromethane	NE	NE	ND	ND	ND	ND	ND
Bromoform	NE	NE	ND	ND	ND	ND	ND
Bromomethane	NE	NE	ND	ND	ND	ND	ND
Carbon Disulfide	NE	NE	NA	NA	NA	NA	NA
Carbon tetrachloride	760	760	ND	ND	ND	ND	ND
Chlorobenzene	1,100	1,100	ND	ND	ND	ND	ND
Chloroethane	NE	NE	ND	ND	ND	ND	ND
Chloroform	370	370	ND	ND	ND	ND	ND
Chloromethane	NE	NE	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	250	250	ND	ND	ND	ND	ND
cis-1,3-Dichloropropylene	NE	NE	ND	ND	ND	ND	ND
Cyclohexane	NE	NE	NA	NA	NA	NA	NA
Dibromochloromethane	NE	NE	ND	ND	ND	ND	ND
Dibromomethane	NE	NE	ND	ND	ND	ND	ND
Dichlorodifluoromethane	NE	NE	ND	ND	ND	ND	ND
Ethyl Benzene	1,000	1,000	ND	ND	ND	ND	ND
Hexachlorobutadiene	NE	NE	ND	ND	ND	ND	ND
Isopropylbenzene	NE	NE	ND	ND	ND	ND	ND
Methyl tert-butyl ether (MTBE)	930	930	ND	ND	ND	ND	ND
Methyl Acetate	NE	NE	NA	NA	NA	NA	NA
Methylene chloride	50	50	12 B	27 B	4.4 J,B	7.3 J,B	ND
Methylcyclohexane	NE	NE	NA	NA	NA	NA	NA
Naphthalene	12,000	12,000	ND	ND	4.5 J,B	ND	ND
n-Butylbenzene	12,000	12,000	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	3,900	ND	ND	ND	ND	ND
o-Xylene	NE	NE	ND	ND	ND	ND	ND
p- & m- Xylenes	NE	NE	ND	ND	ND	ND	ND
p-Isopropyltoluene	NE	NE	ND	ND	ND	ND	ND
sec-Butylbenzene	11,000	11,000	ND	ND	ND	ND	ND
Styrene	NE	NE	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	5,900	ND	ND	ND	ND	ND
Tetrachloroethylene	1,300	1,300	ND	ND	ND	ND	ND
Toluene	700	700	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	190	190	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	NE	NE	ND	ND	ND	ND	ND
Trichloroethylene	470	470	ND	ND	ND	ND	ND
Trichlorofluoromethane	NE	NE	ND	ND	ND	ND	ND
Vinyl Acetate	NE	NE	ND	ND	ND	ND	ND
Vinyl Chloride	20	20	ND	ND	ND	ND	ND
Xylenes, Total	260	1,600	ND	ND	ND	ND	ND

Notes:

Guidance levels based on Allowable Constituents Levels for Imported Fill or Soil, Subdivision 5.4(e), for Unrestricted Use and Restricted-Residential Use, presented in Appendix 5 of DER-10.

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - Analyte is found in the associated analysis batch blank.

ND = Not Detected; NA = Not Analyzed; NE = Not Established

Bold and yellow shade indicates exceedance of Unrestricted Use and Restricted-Residential Use.

Blue shade indicates detectable concentrations.

ESI File: GH9964.50

Table 15: Soil Integrity Sample Results - DPW Parcels - SVOCs

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

Analytes USEPA Method 8270	Unrestricted Use	Restricted-Residential Use	Sample Identification				
			SS-1 (10/8/13)	SS-2 (10/8/13)	SS-4 (10/8/13)	SS-5 (10/8/13)	SS-6 (10/8/13)
Acetophenone	NE	NE	NA	NA	NA	NA	NA
Acenaphthene	20,000	98,000	ND	ND	ND	ND	ND
Acenaphthylene	100,000	100,000	ND	1,870 J	640 J	ND	ND
Aniline	NE	100,000	ND	ND	ND	ND	ND
Anthracene	100,000	100,000	575 J	924 J	558 J	ND	ND
Atrazine	NE	NE	NA	NA	NA	NA	NA
Benzaldehyde	NE	NE	NA	NA	NA	NA	NA
Benzo(a)anthracene	1,000	1,000	923	**5,490**	**2,090**	422 J	ND
Benzo(a)pyrene	1,000	1,000	**1,300**	**6,100**	**2,000**	329 J	ND
Benzo(b)fluoranthene	1,000	1,000	**1,560**	**3,720**	**1,500**	262 J	ND
Benzo(g,h,i)perylene	100,000	100,000	641 J	2,550	653 J	ND	ND
Benzyl alcohol	NE	NE	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	800	1,700	**1,200**	**4,230**	**1,740**	325 J	ND
Benzyl butyl phthalate	NE	NE	ND	ND	ND	ND	ND
Butylbenzylphthalate	NE	NE	NA	NA	NA	NA	NA
1,1-Biphenyl	NE	NE	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NE	NE	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	NE	NE	ND	ND	ND	ND	ND
4-Chloroaniline	NE	NE	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	NE	NE	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	NE	NE	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	NE	NE	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	NE	NE	ND	ND	ND	ND	ND
2-Chloronaphthalene	NE	NE	ND	ND	ND	ND	ND
2-Chlorophenol	NE	NE	ND	ND	ND	ND	ND
2,2-oxybis(1-Chloropropane)	NE	NE	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NE	NE	ND	ND	ND	ND	ND
Caprolactam	NE	NE	NA	NA	NA	NA	NA
Chrysene	1,000	1,000	**1,200**	**6,600**	**2,000**	389 J	ND
Dibenzo(a,h)anthracene	330	330	235 J	ND	**331 J**	ND	ND
Dibenzofuran	NE	NE	ND	ND	ND	ND	ND
Di-n-butyl phthalate	NE	NE	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	NE	NE	ND	ND	ND	ND	ND
1,2,4,5-Trichlorobenzene	NE	NE	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NE	NE	ND	ND	ND	ND	ND
1,4-Dioxane	100	100	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NE	NE	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	NE	NE	ND	ND	ND	ND	ND
2,4-Dichlorophenol	NE	NE	ND	ND	ND	ND	ND
2,3,4,6-Trichlorophenol	NE	NE	NA	NA	NA	NA	NA
Diethyl phthalate	NE	NE	ND	ND	ND	ND	ND
2,4-Dimethylphenol	NE	NE	ND	ND	ND	ND	ND
Dimethyl phthalate	NE	NE	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	NE	NE	ND	ND	ND	ND	ND
2,4-Dinitrophenol	NE	NE	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	NE	NE	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	NE	NE	ND	ND	ND	ND	ND
Di-n-octyl phthalate	NE	NE	ND	ND	ND	ND	ND
Fluoranthene	100,000	100,000	1,890	11,300	3,690	747 J	ND
Fluorene	30,000	100,000	ND	ND	265 J	ND	ND
Hexachlorobenzene	NE	NE	ND	ND	ND	ND	ND
Hexachlorobutadiene	NE	NE	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	NE	NE	ND	ND	ND	ND	ND
Hexachloroethane	NE	NE	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	**645 J**	**2,330**	**687 J**	ND	ND
Isophorone	NE	NE	ND	ND	ND	ND	ND
2-Methylnaphthalene	NE	36,400	ND	ND	ND	ND	ND
2-Methylphenol	NE	NE	ND	ND	ND	ND	ND
3&4-Methylphenol	NE	NE	ND	ND	ND	ND	ND
Naphthalene	12,000	12,000	ND	ND	ND	ND	ND
2-Nitroaniline	NE	NE	ND	ND	ND	ND	ND
3-Nitroaniline	NE	NE	ND	ND	ND	ND	ND
4-Nitroaniline	NE	NE	ND	ND	ND	ND	ND
Nitrobenzene	NE	15,000	ND	ND	ND	ND	ND
4-Nitrophenol	NE	NE	ND	ND	ND	ND	ND
2-Nitrophenol	NE	NE	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	NE	NE	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	NE	NE	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	NE	NE	ND	ND	ND	ND	ND
Pentachlorophenol	800	800	ND	ND	ND	ND	ND
Phenanthrene	100,000	100,000	ND	3,650	1,430	379 J	ND
Phenol	330	330	ND	ND	ND	ND	ND
Pyrene	100,000	100,000	1,810	14,300	4,220	704 J	ND
Pyridine	NE	NE	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NE	NE	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	NE	NE	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	NE	NE	ND	ND	ND	ND	ND

Notes:

Guidance levels based on Allowable Constituents Levels for Imported Fill or Soil, Subdivision 5.4(e), for Unrestricted Use and Restricted-Residential Use, presented in Appendix 5 of DER-10. Guidance levels for nitrobenzene and aniline were based on guidance levels presented in CP-51, Soil Cleanup Guidance.

J - Data indicate the presence of a compound that meets the identification criteria.
The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

ND = Not Detected; NA = Not Analyzed; NE = Not Established.

Blue shade indicates detectable concentrations.

Bold and yellow shade indicates exceedance of Restricted-Residential Use.

Bold and green shade indicates exceedance of Unrestricted Use.

ESI File: GH9964.50

Table 16: Soil Integrity Sample Results - DPW Parcels - Metals

All analytical results and guidance levels are presented in mg/kg, parts per million (ppm).

Compound	Unrestricted Use	Restricted-Residential Use	Sample Identification				
			SS-1 (10/8/13)	SS-2 (10/8/13)	SS-4 (10/8/13)	SS-5 (10/8/13)	SS-6 (10/8/13)
Aluminum	**NE**	**NE**	12,900	11,100	11,100	9,790	8,380
Antimony	**NE**	**NE**	ND	0.943	ND	ND	ND
Arsenic	**13**	**16**	4.71	9.34	3.46	2.98	4.44
Barium	**350**	**400**	79.8	165	115	37.8	107
Beryllium	**7.2**	**47**	ND	ND	ND	ND	ND
Cadmium	**2.5**	**4.3**	ND	ND	ND	ND	ND
Calcium	**NE**	**NE**	7,220	10,500	19,100	12,400	10,800
Chromium Total	**1**	**19**	**14.6**	**23.7**	**10.2**	**7.9**	**15.4**
Chromium, Hexavalent	**1**	**19**	NA	NA	NA	NA	NA
Chromium,Trivalent	**30**	**180**	NA	NA	NA	NA	NA
Cobalt	**NE**	**NE**	10.1	10.5	8.15	12	7.14
Copper	**50**	**270**	49	**158**	49	**115**	47.5
Iron	**NE**	**NE**	23,800	30,800	18,200	24,800	16,700
Lead	**63**	**400**	**63.9**	**432**	54.8	40.3	**105**
Magnesium	**NE**	**NE**	6,250	4,490	12,200	7,200	3,560
Manganese	**1,600**	**2,000**	449	517	314	299	297
Mercury (total)	**0.18**	**0.73**	**0.396**	0.155	0.0713	0.0562	**0.351**
Nickel	**30**	**130**	23	**31.1**	16.5	17.5	20.6
Potassium	**NE**	**NE**	1,650	1,590	1,210	1,150	1,260
Selenium	**3.9**	**4**	1.85	2.75	1.72	1.77	1.39
Silver	**2**	**8.3**	ND	ND	ND	ND	ND
Sodium	**NE**	**NE**	388 B	537 B	822 B	637 B	289 B
Thallium	**NE**	**NE**	ND	ND	ND	ND	ND
Vanadium	**NE**	**NE**	32.2	38.1	33.9	59	29.2
Zinc	**109**	**2,480**	89.4	**324**	**119**	80.2	102

Notes:

Guidance levels based on Allowable Constituents Levels for Imported Fill or Soil, Subdivision 5.4(e), for Unrestricted Use and Restricted-Residential Use, presented in Appendix 5 of DER-10.

B = Analyte is found in the associated analysis batch blank.

ND = Not Detected ; NA = Not Analyzed; NE = Not Established

Blue shade indicates detectable concentrations.

Bold and yellow shade indicates exceedance of Restricted-Residential Use.

Bold and green shade indicates exceedance of Unrestricted Use.

ESI File: GH9964.50

Table 17: Soil Integrity Sample Results - DPW Parcels - PCBs and Pesticides

All analytical results and guidance levels are presented in µg/kg, parts per billion (ppb).

PCBs (USEPA Method 8082)	Unrestricted Use	Restricted-Residential Use	Sample Identification				
			SS-1 (10/8/13)	SS-2 (10/8/13)	SS-4 (10/8/13)	SS-5 (10/8/13)	SS-6 (10/8/13)
Aroclor 1016	**100**	**1,000**	ND	ND	ND	ND	ND
Aroclor 1221	**100**	**1,000**	ND	ND	ND	ND	ND
Aroclor 1232	**100**	**1,000**	ND	ND	ND	ND	ND
Aroclor 1242	**100**	**1,000**	ND	ND	ND	ND	ND
Aroclor 1248	**100**	**1,000**	ND	ND	ND	ND	ND
Aroclor 1254	**100**	**1,000**	42.3	ND	ND	ND	ND
Aroclor 1260	**100**	**1,000**	ND	ND	ND	ND	ND
Aroclor, Total	**100**	**1,000**	ND	ND	ND	ND	ND
Pesticides (USEPA Method 8081)							
4,4-DDD	**3.3**	**13,000**	ND	ND	ND	ND	ND
4,4-DDE	**3.3**	**8,900**	ND	ND	**4.23**	ND	ND
4,4-DDT	**3.3**	**7,900**	**8.76**	**3.55**	2.44	ND	ND
Aldrin	**5**	**97**	ND	ND	ND	ND	ND
alpha-BHC	**20**	**20**	ND	ND	ND	ND	ND
alpha-Chlordane	**94**	**2,900**	NA	NA	NA	NA	NA
beta-BHC	**36**	**90**	ND	ND	ND	ND	ND
delta-BHC	**40**	**250**	ND	ND	ND	ND	ND
Dieldrin	**5**	**100**	ND	ND	ND	ND	ND
Endosulfan I	**2,400**	**24,000**	ND	ND	ND	ND	ND
Endosulfan II	**2,400**	**24,000**	ND	ND	ND	ND	ND
Endosulfan sulfate	**2,400**	**24,000**	ND	ND	ND	ND	ND
Endrin	**14**	**60**	ND	ND	ND	ND	ND
Endrin aldehyde	**NE**	**NE**	ND	ND	ND	ND	ND
Enrin ketone	**NE**	**NE**	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	**100**	**100**	ND	ND	ND	ND	ND
Heptachlor	**42**	**380**	ND	ND	ND	ND	ND
Heptachlor epoxide	**NE**	**NE**	ND	ND	ND	ND	ND
Methoxychlor	**NE**	**NE**	ND	ND	ND	ND	ND
Toxaphene	**NE**	**NE**	ND	ND	ND	ND	ND
Chlordane Total	**NE**	**NE**	ND	ND	ND	21.5	ND

Notes:
Guidance levels based on Allowable Constituents Levels for Imported Fill or Soil, Subdivision 5.4(e), for Unrestricted Use and Restricted-Residential Use, presented in Appendix 5 of DER-10.
ND = Not Detected ; NA = Not Analyzed; NE = Not Established
Blue shade indicates detectable concentrations.
Bold and green shade indicates exceedance of Unrestricted Use.
ESI File: GH9964.50

APPENDIX A

Environmental Easement

Rockland County, NY
Paul Piperato County Clerk

1 South Main St., Ste. 100
New City, NY 10956
Phone Number : (845) 638-5070

Official Receipt : 2014-00040278

Printed On : 08/26/2014 **at** 2:32:20 PM **By :** 98 **on** COUNTER1

Customer :
Attn: C/O GINSBURG DEVELOPMENT CO, LLC
ADMIRALS COVE HAVERSTRAW LLC
100 SUMMIT LAKE DRIVE 2ND FLR
VALHALLA, NY 10595

Date Recorded : August 26, 2014

Instrument ID	Amount
File Number : 2014-00022775	$101.00

Transaction : EASE, R-WAY, ASMT RENT-LEASE
Name(s) : ADMIRALS COVE HAVERSTRAW LLC
To : NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Instrument ID	Amount
	$12.50

Transaction : RECORDING - MISC

Itemized Check Listing

Check Number : 589	$113.50

Total Due :	$113.50
Paid by Check :	$113.50
Change Tendered :	$0.00

HAVE A NICE DAY!

Paul Piperato, County Clerk
1 South Main St., Ste. 100
New City, NY 10956
(845) 638-5070

Rockland County Clerk Recording Cover Sheet

Received From :
ADMIRALS COVE HAVERSTRAW LLC
100 SUMMIT LAKE DRIVE 2ND FLR
VALHALLA, NY 10595

Return To :
ADMIRALS COVE HAVERSTRAW LLC
100 SUMMIT LAKE DRIVE 2ND FLR
VALHALLA, NY 10595

Method Returned : MAIL

First GRANTOR
ADMIRALS COVE HAVERSTRAW LLC

First GRANTEE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Index Type : Land Records
Instr Number : 2014-00022775
Book : **Page :**

Type of Instrument : Easement
Type of Transaction : Ease, R-Way, Asmt Rent-Lease

Recording Fee:	$101.00
Recording Pages :	11

The Property affected by this instrument is situated in Haverstraw, in the County of Rockland, New York

Real Estate Transfer Tax

RETT # :	361
Deed Amount :	$0.00
RETT Amount :	$0.00
Total Fees :	$101.00

State of New York
County of Rockland

I hereby certify that the within and foregoing was recorded in the Clerk's office for Rockland County, New York

On (Recorded Date) : 08/26/2014
At (Recorded Time) : 2:29:00 PM

Paul Piperato, County Clerk

Doc ID - 033449890011

State of New York (County of Rockland) SS:
I, PAUL PIPERATO, County Clerk and Clerk of the Supreme and County Courts, Rockland County, DO HEREBY CERTIFY that I have compared this copy with the original thereof filed or recorded in my office on 8/26/14 and the same is a correct transcript thereof. IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal. 8/26/14

Paul Piperato County Clerk & Clerk of the Supreme County Courts Rockland County

This sheet constitutes the Clerks endorsement required by Section 319 of Real Property Law of the State of New York

Entered By: NYROCKLANDUSER23 Printed On : 08/26/2014 At : 2:32:21PM

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 22nd day of June, 2014 between Owner(s) Admiral's Cove Haverstraw, LLC, having an office at c/o Ginsburg Development Companies, LLC, 100 Summit Lake Drive – 2nd Floor, Valhalla, 10595, County of Rockland, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 30-34 Dr. Girling Drive and 51 Dr. Girling Drive in the Village of Haverstraw, County of Rockland and State of New York, known and designated on the tax map of the County Clerk of Rockland as tax map parcel numbers: Section 27.62 & 27.14 Block 2 & 1 Lot 7.1, 7.2, & 5.1, being the same as that property conveyed to Grantor by deed dated August 20, 1940 and recorded in the Rockland County Clerk's Office in Instrument No. 2006-00046899; 2006-00011638; 2006-00013124; 2006-00011048; 2006-00011052. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 2.5766 +/- acres, and is hereinafter more fully described in the Land Title Survey dated July 22, 2013 and revised on September 18, 2013, September 27, 2013, October 15, 2013, October 31, 2013, Novermber 6, 2013, and November 26, 2013 prepared by John R. Atzl, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: W3-1009-04-06, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Rockland County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled

Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held

by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C344060
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Admiral's Cove Haverstraw, LLC:

By: _____

Print Name: MARTIN GINSBURG

Title: Principal Date: 7/10/14

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Westchester)

On the 10th day of July, in the year 20 14, before me, the undersigned, personally appeared Martin Ginsburg personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

DOUGLAS A. RAMSAY
Notary Public, State of New York
No. 01RA5066680
Qualified in Westchester County
Commission Expires Sept. 30, 2014

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____

Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 22nd day of July, in the year 20__, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

BRADFORD D. BURNS
Notary Public, State of New York
No. 02BU6173754
Qualified in Albany County
Commission Expires Sept. 4, 2015

SCHEDULE "A" PROPERTY DESCRIPTION

ENVIRONMENTAL EASEMENT DESCRIPTION - BCP ID: C344060

AREA II Schedule "A"

TOWN of Haverstraw

All that certain plot, piece or parcel of land situate, lying and being in the Village of Haverstraw, County of Rockland and State of New York. Being more fully bounded and described as follows:

BEGINNING at a point on the easterly right of way line of West Street located at the southwest corner of lands now or formerly of the Village of Haverstraw (Tax Lot 27.62-2-12) said point being distant the following course and distance N63-09-41E, 409.11 feet to the southwest corner of the hereinafter intended to be described parcel; running thence along the easterly and northerly line of lands now or formerly of the village of Haverstraw (Tax Lot 27.62-2-8) the following two (2) courses and distances;

1) N12-44-20W, 200.60 feet along the easterly line of lands now or formerly of the Village of Haverstraw (Tax Lot 27.62-2-8); thence

2) N89-09-20W, 239.16 feet along the northerly line of lands now or formerly of the Village of Haverstraw (Tax Lot 27.62-2-8); running thence thru the lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.62-2-7.1 and 27.62-2-7.2) the following eight (8) courses and distances;

3) N63-32-20E, 48.18 feet;

4) S89-09-20E, 59.48 feet;

5) N63-17-40E, 126.49 feet;

6) N07-57-46E, 100.00 feet;

7) N49-21-06E, 89.36 feet;

8) N63-17-40E, 142.14 feet;

9) S17-13-38E, 121.94 feet;

10) S11-28-19E, 58.96 feet;

11) S18-48-59W, 14.78 feet; running thence thru the lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.14-1-5.1)

12) S12-42-00E, 200.02 feet; running thence along the northerly line of lands now or formerly of Harbors Haverstraw, LLC (Tax Lots 27.14-1-4 & Tax Lot 27.14-1-1.7) the following four (4) courses and distances;

13) S63-09-41W, 24.94 feet;

14) S53-41-03W, 230.23 feet;

15) S77-48-17W, 84.06 feet;

16) S63-14-21W, 56.53 feet; running thence along the easterly line of lands now or formerly of Harbors Haverstraw, LLC (Tax Lots 27.18-1-1.5)

17) N26-50-19W, 16.58 feet to the southerly line of lands now or formerly of the Village of Haverstraw (Tax lot 27.62-2-8); thence

18) N63-09-41W, 134.88 feet along the southerly line of lands now or formerly of the Village of Haverstraw (Tax lot 27.62-2-8) to the point or place of BEGINNING.

Consisting of 2.5766 acres of land.

Rockland County, NY
Paul Piperato County Clerk
1 South Main St., Ste. 100
New City, NY 10956
Phone Number : (845) 638-5070

Official Receipt : 2014-00041844

Printed On : 09/05/2014 **at** 2:34:40 PM **By :** 98 **on** COUNTER1

Customer :
VILLAGE OF HAVERSTRAW
40 MAIN ST
HAVERSTRAW, NY 10927

Date Recorded : September 05, 2014

Instrument ID	Amount
File Number : 2014-00023851	$0.00
Transaction : EASE, R-WAY, ASMT RENT-LEASE	
Name(s) : HAVERSTRAW VILLAGE OF	
To : NEW YORK STATE	

Instrument ID	Amount
	$12.50
Transaction : RECORDING - MISC	

Itemized Check Listing

Check Number : 591	$12.50

Total Due :	$12.50
Paid by Check :	$12.50
Change Tendered :	$0.00

HAVE A NICE DAY!

1 South Main St., Ste. 100
New City, NY 10956
(845) 638-5070

Rockland County Clerk Recording Cover Sheet

Received From :
VILLAGE OF HAVERSTRAW
40 MAIN ST
HAVERSTRAW, NY 10927

Return To :
VILLAGE OF HAVERSTRAW
40 MAIN ST
HAVERSTRAW, NY 10927

Method Returned : MAIL

First GRANTOR
HAVERSTRAW VILLAGE OF

First GRANTEE
NEW YORK STATE

Index Type : Land Records
Instr Number : 2014-00023851
Book : **Page :**

Type of Instrument : Easement
Type of Transaction : Ease, R-Way, Asmt Rent-Lease
Recording Fee: $0.00
Recording Pages : 11

The Property affected by this instrument is situated in Haverstraw, in the County of Rockland, New York

Real Estate Transfer Tax	
RETT # :	552
Deed Amount :	$0.00
RETT Amount :	$0.00
Total Fees :	$0.00

State of New York
County of Rockland

I hereby certify that the within and foregoing was recorded in the Clerk's office for Rockland County, New York

On (Recorded Date) : 09/05/2014
At (Recorded Time) : 2:32:00 PM

Doc ID - 033503210011

Paul Piperato, County Clerk

State of New York (County of Rockland) SS:
I, PAUL PIPERATO, County Clerk and Clerk of the Supreme and County Courts, Rockland County, DO HEREBY CERTIFY that I have compared this copy with the original filed or recorded in my office on 9/5/14 and the same is a correct transcript thereof. IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal.

9/5/14

Paul Piperato County Clerk & Clerk
of the Supreme County Courts
Rockland County

This sheet constitutes the Clerks endorsement required by Section 319 of Real Property Law of the State of New York

Entered By: NYROCKLANDUSER23 Printed On : 09/05/2014 At : 2:40:53PM

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 22nd day of July, 2014 between Owner(s) Village of Haverstraw, having an office at Village Hall, 40 Main Street, Haverstraw, New York, County of Rockland, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

HAV 9

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 2 Dr. Girling Drive, 147-149 West Street, 141-143 West Street, 30-34 Dr. Girling Drive, 51 Dr. Girling Drive, and 152 Broadway, in the Village of Haverstraw, County of Rockland and State of New York, known and designated on the tax map of the County Clerk of Rockland as tax map parcel numbers: Section 27.62 Block 2 Lot 8 & 12, being the same as that property conveyed to Grantor by deed dated August 20, 1940 and recorded in the Rockland County Clerk's Office in Liber and Page 383, 72; Liber 383 page 76; and by deed dated December 14, 1966 in Liber 903 page 596. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 2.4713 +/- acres, and is hereinafter more fully described in the Land Title Survey dated July 22, 2013 and revised on September 18, 2013, September 27, 2013, October 15, 2013, October 31, 2013, Novermber 6, 2013, and November 26, 2013 prepared by John R. Atzl, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: W3-1009-04-06, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Rockland County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled

Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held

by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C344060
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Village of Haverstraw:

By: _____

Print Name: Michael F. Cohen

Title: Mayor Date: 7/7/14

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Rockland)

On the 7TH day of July, in the year 2014, before me, the undersigned, personally appeared Michael F. Zahnt personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Beverly A. Swift
Notary Public, State of New York

BEVERLY A. SWIFT
Notary Public, State of New York
No. 01SW6101838
Qualified in Rockland County
Commission Expires Nov. 17, 2015

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 22nd day of July, in the year 2014, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

BRADFORD D. BURNS
Notary Public, State of New York
No. 02BU6173754
Qualified in Albany County
Commission Expires Sept. 4, 2015

SCHEDULE "A" PROPERTY DESCRIPTION

ENVIRONMENTAL EASEMENT DESCRIPTION - BCP ID: C344060

TOWN OF HAVERSTRAW

AREA I Schedule "A"

All that certain plot, piece or parcel of land situate, lying and being in the Village of Haverstraw, County of Rockland and State of New York. Being more fully bounded and described as follows:

BEGINNING at a point on the easterly right of way line of West Street said point being located at the northwest corner of lands now or formerly of Harbors Haverstraw, LLC (Tax Lot 27.18-1-1.5) and the southwest corner of the hereinafter intended to be described parcel; running thence

1) N25-38-49W, 101.68 along the easterly right of way line of West Street; running thence along the southerly and easterly line of lands now or formerly of the Admiral's Cove Haverstraw, LLC (Tax Lot 27.62-2-13) the following three (3) courses and distances;

2) N64-55-30E, 73.00 feet;

3) N33-05-15E, 64.00 feet;

4) N31-14-29W, 97.48 feet; running thence along the southerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.62-2-14);

5) N63-38-11E, 44.80 feet; running thence northerly thru the lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.62-2-14 & 27.62-2-15);

6) N22-11-50W, 44.47 feet; running thence easterly thru the lands now or formerly of the Village of Haverstraw, (Tax Lot 27.62-2-8) to a point on the southerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.62-2-7.1); thence

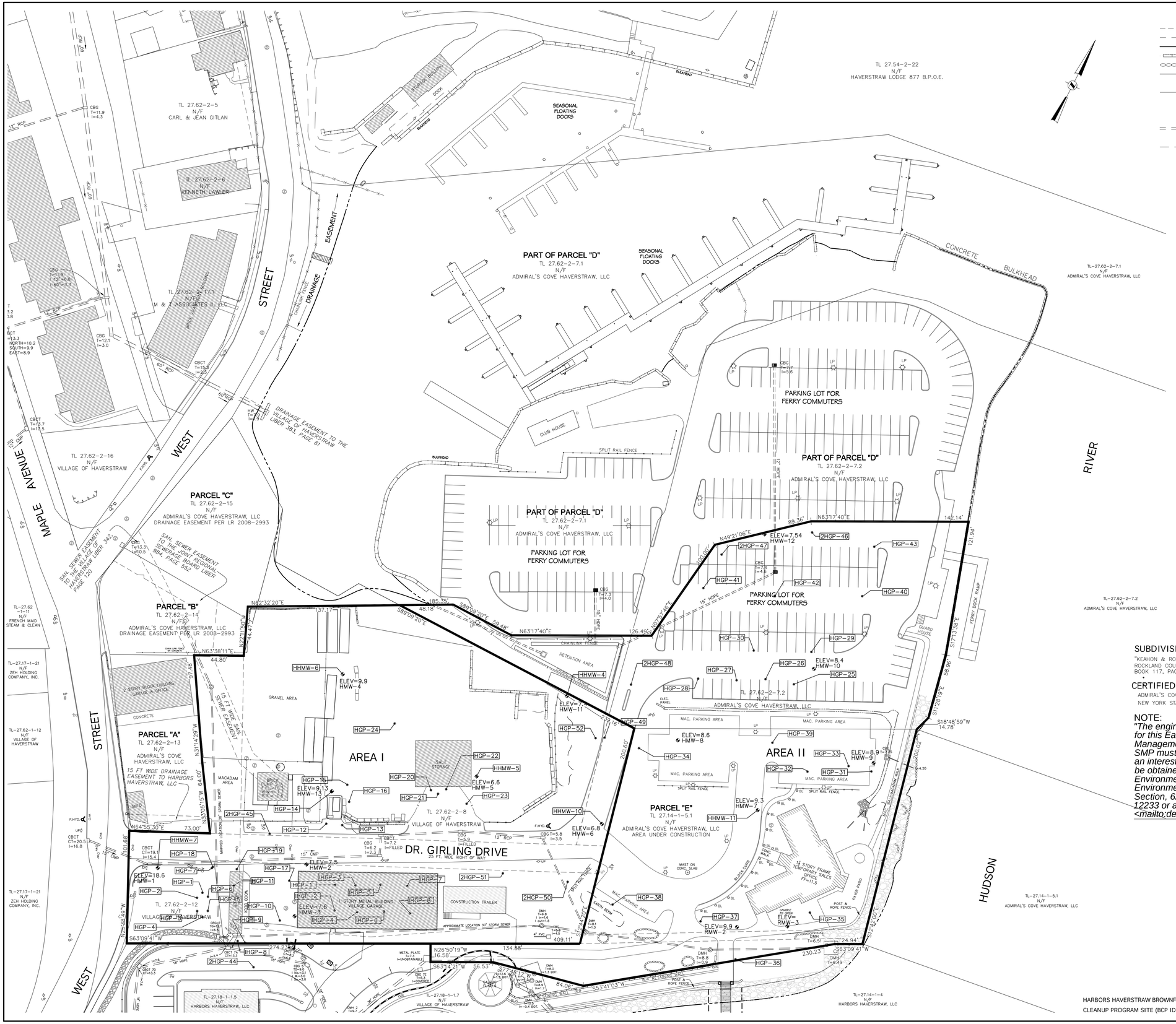
7) N62-32-20E, 137.17 feet; running thence along the southerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.62-2-7.1 & 27.62-2-7.2); thence

8) S89-09-20E, 239.16 feet; running thence along the westerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.14-1-5.1);

9) S12-44-20E, 200.60 feet; thence

10) S63-09-41W, 409.11 feet along the northerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.14-1-5.1) and along the northerly line of lands now or formerly of Harbors Haverstraw, LLC (Tax Lots 27.18-1-1.5) to the point or place of BEGINNING.

Consisting of 2.4713 acres of land.



HARBORS HAVERSTRAW BROWNFIELDS
CLEANUP PROGRAM SITE (BCP ID: C344060)

LEGEND

— — 362 — —	EXISTING 2' CONTOUR
— 360 —	EXISTING 10' CONTOUR
——— — — ———	EXISTING ZONE LINE
▭▭▭▭	EXISTING BLOCK WALL
○○○○○	EXISTING STONEWALL
—WM—	EXISTING WATER MAIN
F.HYD.	EXISTING FIRE HYDRANT
— G —	EXISTING GAS LINE
▭ CBCT	EXISTING CATCH BASIN CURB TOP
▭ CBG	EXISTING CATCH BASIN GRATE
Ⓓ DMH	EXISTING DRAINAGE MANHOLE
═ ═ ═	EXISTING STORM DRAIN LINE
Ⓢ SMH	EXISTING SEWER MANHOLE
— S —	EXISTING SEWER LINE
+ 360.0	EXISTING SPOT ELEVATION
UP	EXISTING UTILITY POLE
☼ LP	EXISTING LIGHT POLE
☼ BL	EXISTING BOLLARD LIGHT
○ SP	EXISTING SUPPORT POLE
○ SCO	EXISTING SEWER CLEANOUT
○ WV	EXISTING WATER VALVE
○ GV	EXISTING GAS VALVE
VP	EXISTING VALVE PIT
E	EXISTING ELECTRIC BOX
TR	EXISTING ELECTRIC TRANSFORMER
○ STP	EXISTING STAND PIPE

SIGN LEGEND

—o— OW	DENOTES ONE WAY SIGN
—o— FL	DENOTES FIRE LANE SIGN
—o— DNE	DENOTES DO NOT ENTER SIGN
—o— HC	DENOTES HANDICAP SIGN
—o— NS	DENOTES NO STANDING SIGN
—o— ST	DENOTES STOP SIGN
—o— SS	DENOTES STREET SIGN
—o— TS	DENOTES TRAFFIC SIGN
—o— SL	DENOTES SPEED LIMIT SIGN
—o— SBS	DENOTES CAUTION SPEED BUMP SIGN

ENVIRONMENTAL EASEMENT DESCRIPTION - BCP ID: C344060

AREA I Schedule "A"

All that certain plot, piece or parcel of land situate, lying and being in the Village of Haverstraw, County of Rockland and State of New York. Being more fully bounded and described as follows:

BEGINNING at a point on the easterly right of way line of West Street said point being located at the northwest corner of lands now or formerly of Harbors Haverstraw, LLC (Tax Lot 27.18-1-1.5) and the southwest corner of the hereinafter intended to be described parcel; running thence

1) N25-38-49W, 101.68 along the easterly right of way line of West Street; running thence along the southerly and easterly line of lands now or formerly of the Admiral's Cove Haverstraw, LLC (Tax Lot 27.62-2-13) the following three (3) courses and distances;

2) N64-55-30E, 73.00 feet;

3) N33-05-15E, 64.00 feet;

4) N31-14-29W, 97.48 feet; running thence along the southerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.62-2-14);

5) N63-38-11E, 44.80 feet; running thence northerly thru the lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.62-2-14 & 27.62-2-15);

6) N22-11-50W, 44.47 feet; running thence easterly thru the lands now or formerly of the Village of Haverstraw, (Tax Lot 27.62-2-8) to a point on the southerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.62-2-7.1); thence

7) N62-32-20E, 137.17 feet; running thence along the southerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.62-2-7.1 & 27.62-2-7.2); thence

8) S89-09-20E, 239.16 feet; running thence along the westerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.14-1-5.1);

9) S12-44-20E, 200.60 feet; thence

10) S63-09-41W, 409.11 feet along the northerly line of lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.14-1-5.1) and along the northerly line of lands now or formerly of Harbors Haverstraw, LLC (Tax Lots 27.18-1-1.5) to the point or place of BEGINNING.

Consisting of 2.4713 acres of land.

ENVIRONMENTAL EASEMENT DESCRIPTION - BCP ID: C344060

AREA II Schedule "A"

All that certain plot, piece or parcel of land situate, lying and being in the Village of Haverstraw, County of Rockland and State of New York. Being more fully bounded and described as follows:

BEGINNING at a point on the easterly right of way line of West Street located at the southwest corner of lands now or formerly of the Village of Haverstraw (Tax Lot 27.62-2-12) said point being distant the following course and distance N63-09-41E, 409.11 feet to the southwest corner of the hereinafter intended to be described parcel; running thence along the easterly and northerly line of lands now or formerly of the village of Haverstraw (Tax Lot 27.62-2-8) the following two (2) courses and distances;

1) N12-44-20W, 200.60 feet along the easterly line of lands now or formerly of the Village of Haverstraw (Tax Lot 27.62-2-8); thence

2) N89-09-20W, 239.16 feet along the northerly line of lands now or formerly of the Village of Haverstraw (Tax Lot 27.62-2-8); running thence thru the lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lots 27.62-2-7.1 and 27.62-2-7.2) the following eight (8) courses and distances;

3) N63-32-20E, 48.18 feet;

4) S89-09-20E, 59.48 feet;

5) N63-17-40E, 126.49 feet;

6) N07-57-46E, 100.00 feet;

7) N49-21-06E, 89.36 feet;

8) N63-17-40E, 142.14 feet;

9) S17-13-38E, 121.94 feet;

10) S11-28-19E, 58.96 feet;

11) S18-48-59W, 14.78 feet; running thence thru the lands now or formerly of Admiral's Cove Haverstraw, LLC (Tax Lot 27.14-1-5.1)

12) S12-42-00E, 200.02 feet; running thence along the northerly line of lands now or formerly of Harbors Haverstraw, LLC (Tax Lots 27.14-1-4 & Tax Lot 27.14-1-1.7) the following four (4) courses and distances;

13) S63-09-41W, 24.94 feet;

14) S53-41-03W, 230.23 feet;

15) S77-48-17W, 84.06 feet;

16) S63-14-21W, 56.53 feet; running thence along the easterly line of lands now or formerly of Harbors Haverstraw, LLC (Tax Lots 27.18-1-1.5)

17) N26-50-19W, 16.58 feet to the southerly line of lands now or formerly of the Village of Haverstraw (Tax lot 27.62-2-8); thence

18) N63-09-41W, 134.88 feet along the southerly line of lands now or formerly of the Village of Haverstraw (Tax lot 27.62-2-8) to the point or place of BEGINNING.

Consisting of 2.5766 acres of land.

SUBDIVISION REFERENCE:

"KEAHON & ROCKLAND FUEL OIL CO., INC." FILED IN THE ROCKLAND COUNTY CLERK'S OFFICE ON JULY 2, 1996, IN BOOK 117, PAGE 22, AS MAP No. 6990.

CERTIFIED TO:

ADMIRAL'S COVE HAVERSTRAW, LLC
NEW YORK STATE DEPARTMENT of ENVIRONMENTAL CONSERVATION

NOTE:

"The engineering and institutional controls for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us <mailto:derweb@gw.dec.state.ny.us> ".

"UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S EMBOSSED SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW."
"ONLY COPIES FROM THE ORIGINAL TRACING OF THIS SURVEY MAP MARKED WITH THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES."
"CERTIFICATION INDICATED HERE ON SIGNIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR LAND SURVEYOR'S ADOPTED BY THE DELAWARE - HUDSON LAND SURVEYORS ASSOCIATION. SAID CERTIFICATIONS SHALL RUN ONLY TO THOSE NAMED INDIVIDUALS AND/OR INSTITUTIONS FOR WHOM THE SURVEY WAS PREPARED. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INDIVIDUALS, INSTITUTIONS, THEIR SUCCESSORS AND/OR ASSIGNS OR SUBSEQUENT OWNERS."

40 0 20 40
1 IN.= 40 FT.

JOHN R. ATZL
N.Y.S. P.L.S. LIC. NO. 50228

REVISION	DATE	DESCRIPTION
No. 6	11-26-13	AMENDED ENVIRONMENTAL EASEMENT AREA I & II
No. 5	11-6-13	AMENDED ENVIRONMENTAL EASEMENT AREA I & II
No. 4	10-31-13	AMENDED ENVIRONMENTAL EASEMENT AREA II
No. 3	10-15-13	AMENDED ENVIRONMENTAL EASEMENT
No. 2	9-27-13	ADDED EASEMENT FILING INFORMATION
No. 1	9-18-13	ADDED NYS DEC MAP NOTE

ATZL, SCATASSA & ZIGLER P.C.

234 North Main Street ◦ New City, New York 10956
Tel: (845) 634-4694 ◦ Fax: (845) 634-5543
P.O. Box 636 Chester, New York 10918
Tel: (845) 469-1015 Fax: (845) 469-1016
Email: ASZSurveys@aol.com

PROJECT:

ADMIRAL'S COVE HAVERSTRAW, LLC

VILLAGE OF HAVERSTRAW
ROCKLAND COUNTY, NEW YORK

TITLE:

ENVIRONMENTAL EASEMENT PLAN

DRAWN BY: ASA	CHECKED BY: JRA
DATE: JULY 22, 2013	SCALE: 1 IN. = 40 FT.
PROJECT NO: 2290-B	DRAWING NO: 2

APPENDIX B

Excavation Work Plan

APPENDIX B – EXCAVATION WORK PLAN

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the Department. Currently, this notification will be made to:

James E. Candiloro, P.E.
Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014
Phone: (518) 402-9662
Fax: (518) 402-9679

.

Regional Hazardous Waste Remediation Engineer
New York State Department of Environmental Conservation - Region 3 Office
21 South Putt Corners Road
New Paltz, New York. 12561

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix C of this document,
- Identification of disposal facilities for potential waste streams,
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

Excavated material will be handled and sampled as specified in Section B-7 (material for on-site reuse) and in accordance with DER-10.

B-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

B-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the site and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined (if needed), tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash or dry truck decontamination procedures (as needed) will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed or cleaned at the truck wash or dry

decontamination area before leaving the site until the activities performed under this section are complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed or cleaned (dry decontamination) prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport routes are as follows:

- Exit the site using Dr. Girling Drive.
- Turn left unto West Street/Riverside Avenue.
- Turn left unto Short Clove Road.
- Make appropriate turn unto Route 9W (based on location of disposal facility)

All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account:

(a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; [(g) community input [where necessary]]

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

B-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in Table B-1 of this Excavation Work Plan. All material above the demarcation layer will be suitable for on-site reuse and will not be subject to chemical testing unless field evidence of contamination is observed. Material below the demarcation will be inspected as specified in Section A-2. All material below the demarcation layer exhibiting no to minor field evidence of contamination will be suitable for on-site reuse and will not be subject to chemical testing. Material below the demarcation layer exhibiting moderate field evidence of contamination will be subject to chemical testing as specified in DER-10 for on-site reuse. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

B-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

B-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the RWP. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

B-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table B-1 of this Excavation Work Plan. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

B-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

B-13 COMMUNITY AIR MONITORING PLAN

The location of air sampling stations will be determined in the field based on prevailing wind conditions. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

B-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include: covering of stockpiled material during non-invasive activities, and application of odor control suppressant solutions (such as a Bio-Solve solution). If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the site owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams or other odor control suppressant solutions to cover exposed odorous soils; . If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of

chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

B-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

B-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

Table B-1: Allowable Constituent Levels for Imported Fill/Soil and On-site Reuse Material

Constituent levels are presented in mg/kg, parts per million (ppm).

Constituent	Constituent Levels for Restricted Residential Use (as presented in Appendix 5, DER-10)
Metals	
Arsenic	16
Barium	400
Beryllium	47
Cadmium	4.3
Chromium, hexavalent	19
Chromium, trivalent	180
Copper	270
Cyanide	27
Lead	400
Manganese	2,000
Total Mercury	0.73
Nickel	130
Selenium	4
Silver	8.3
Zinc	2,480
PCBs/Pesticides	
2,4,5-TP Acid (Silvex)	3.8
4,4'-DDE	8.9
4,4'-DDT	7.9
4,4'-DDD	13
Aldrin	0.097
alpha-BHC	0.02
beta-BHC	0.09
Chlordane (alpha)	2.9
delta-BHC	0.25
Dibenzofuran	59
Dieldrin	0.1
Endosulfan I	24
Endosulfan II	24
Endosulfan sulfate	24
Endrin	0.06
Heptachlor	0.38
Lindane	0.1
Polychlorinated biphenyls (PCBs)	1
Semi-volatile Organic Compounds (SVOCs)	
Acenaphthene	98
Acenapthylene	100
Anthracene	100
Benz(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(g,h,i)perylene	100
Benzo(k)fluoranthene	1.7
Chrysene	1
Dibenz(a,h)anthracene	0.33 (a)
Fluoranthene	100
Fluorene	100
Indeno(1,2,3-cd)pyrene	0.5
m-Cresol	0.33 (a)
Naphthalene	12
o-Cresol	0.33 (a)
p-Cresol	0.33
Pentachlorophenol	0.8 (a)
Phenanthrene	100
Phenol	0.33 (a)
Pyrene	100

Notes:

(a) For constituents where the calculated Soil Cleanup Objective (SCO) was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

Table B-1: Allowable Constituent Levels for Imported Fill/Soil and On-site Reuse Material (cont'd)

Constituent levels are presented in mg/kg, parts per million (ppm).

Constituent	Constituent Levels for Restricted Residential Use (as presented in Appendix 5, DER-10)
Volatile Organic Compounds (VOCs)	
1,1,1-Trichloroethane	**0.68**
1,1-Dichloroethane	**0.27**
1,1-Dichloroethene	**0.33**
1,2-Dichlorobenzene	**1.1**
1,2-Dichloroethane	**0.02**
cis-1,2-Dichloroethene	**0.25**
trans-1,2-Dichloroethene	**0.19**
1,3-Dichlorobenzene	**2.4**
1,4-Dichlorobenzene	**1.8**
1,4-Dioxane	**0.1 (a)**
Acetone	**0.05**
Benzene	**0.06**
Butylbenzene	**12**
Carbon tetrachloride	**0.76**
Chlorobenzene	**1.1**
Chloroform	**0.37**
Ethylbenzene	**1**
Hexachlorobenzene	**3.2**
Methyl ethyl ketone	**0.12**
Methyl tert-butyl ether	**0.93**
Methylene chloride	**0.05**
n-Propylbenzene	**3.9**
sec-Butylbenzene	**11**
tert-Butylbenzene	**5.9**
Tetrachloroethene	**1.3**
Toluene	**0.7**
Trichloroethene	**0.47**
1,2,4-Trimethylbenzene	**3.6**
1,3,5- Trimethylbenzene	**8.4**
Vinyl chloride	**0.02**
Xylene (mixed)	**1.6**

Notes:

(a) For constituents where the calculated Soil Cleanup Objective (SCO) was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

APPENDIX C

Health and Safety Plan and Community Air Monitoring Plan

HEALTH AND SAFETY PLAN

FOR

SITE MANAGEMENT

(INCORPORATING COMMUNITY HEALTH AND SAFETY PLAN)

Haverstraw Harbors Site

Dr. George W. Girling Drive
Village Of Haverstraw
Rockland County, New York

NYSDEC Brownfields Cleanup Program Site ID: C344060
NYSDEC Spill Files: 9811999, 0001146, and 0411778

September 2013

ESI File: GH9964.42

Appendix C of the Site Management Plan

Prepared By

ECOSYSTEMS STRATEGIES, INC.
24 Davis Avenue
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TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

This Health and Safety Plan for Site Remediation (HASP) has been developed to provide the requirements and general procedures to be followed by Ecosystems Strategies, Inc. (ESI) and designated subcontractors while performing remedial activities at the "Haverstraw Harbors" property located at Dr. George W. Girling Drive, Village of Haverstraw, Rockland County, New York.

This HASP incorporates policies, guidelines, and procedures that have the objective of protecting the public health of the community during the performance of fieldwork activities, and therefore serves as a Community Health and Safety Plan (CHASP). The objectives of the CHASP are met by establishing guidelines to minimize community exposure to hazards during fieldwork, and by planning for and responding to emergencies affecting the public.

This HASP describes the responsibilities, training requirements, protective equipment, and standard operating procedures to be utilized by all personnel while on the Site. This HASP incorporates by reference the applicable Occupational Safety and Health Administration (OSHA) requirements in 29 CFR 1910 and 29 CFR 1926.

The requirements and guidelines in this HASP are based on a review of available information and evaluation of potential on-site hazards. This HASP will be discussed with Site personnel and will be available on-site for review while work is underway. On-site personnel will report to the Site Safety and Health Officer (SSHO) in matters of health and safety. The on-site project supervisor(s) are responsible for enforcement and implementation of this HASP.

This HASP is specifically intended for the conduct of activities within the defined scope of work in specified areas of the Site. Changes in site conditions and future actions that may be conducted at this site may necessitate the modification of the requirements of the HASP. Although this HASP can be made available to interested persons for informational purposes, ESI has no responsibility over the interpretations or activities of any other persons or entities other than employees of ESI and designated subcontractors to ESI.

1.2 Site Location and Description

The Site as defined in this HASP is the Haverstraw Harbors Property - Site "B", located at Dr. George W. Girling Drive in the Village of Haverstraw. A Site Location Map and a Proposed Site Remediation Map (illustrating the configuration of the Site as well as the areas of proposed remedial activities) are included in the Attachments of this HASP.

1.3 Work Activities

Environmental remediation activities are detailed in the Remedial Work Plan and Alternatives Analysis (RWP) dated November 2007. The specific tasks detailed in the RWP are wholly incorporated by reference into this HASP. The RWP was prepared as a requirement of the Developers participation in the New York State Department of Environmental Conservation (NYSDEC) Brownfields Cleanup Program (BCP), subsequent to preparation of a Site Investigation Report, and describes tasks required to adequately remediate documented on-site environmental conditions. Existing contamination primarily consists of petroleum impacted soils and sediment, petroleum impacted groundwater, and limited areas of metals contamination.

The Scope of Work includes:

- Excavation of grossly impacted, petroleum contaminated soils (PCS), using heavy equipment;
- Installation of subslab depressurization systems beneath new residential structures, and soil vapor and/or air-quality testing ;
- Installation of a barrier layer of clean soil (or the equivalent); and,
- Installation of new groundwater monitoring wells, as warranted, and sampling of existing wells.

2.0 HEALTH AND SAFETY HAZARDS

2.1 Hazard Overview for On-site Personnel

The potential exists for the presence of elevated levels of petroleum hydrocarbons and metals in on-site soils and elevated levels of petroleum hydrocarbons in groundwater. The possibility exists for on-site personnel to have contact with contaminated soils, groundwater, and vapor during site investigative work. Contact with contaminated substances may present a skin contact, inhalation, and/or ingestion hazard. These potential hazards are addressed in Sections 3.0 through 11.0, below.

2.2 Potential Hazards to the Public from Fieldwork Activities

The potential exists for the public to be exposed to identify contaminated soils, groundwater, and vapor, which may present a skin contact, inhalation, and/or ingestion hazard. Additional potential hazards to the public that are associated with fieldwork activities include mechanical/physical hazards, traffic hazards from fieldwork vehicles, and noise impacts associated with operation of mechanical equipment.

Impacts to public health and safety are expected to be limited to hazards that could directly affect on-site visitors and/or trespassers. These effects will be mitigated through site access and control measures (see Section 6.0, below). Specific actions taken to protect the public health (presented in Sections 3.0 through 11, below, and in the Community Air Monitoring Plan) are anticipated to minimize any potential off-site impacts from contaminant migration, noise, and traffic hazards.

3.0 PERSONAL PROTECTIVE EQUIPMENT

The levels of protection identified for the services specified in the RWP represent a best estimate of exposure potential and protective equipment needed for that exposure. Determination of levels was based on data provided by previous studies of the Site and information reviewed on current and past Site usage. The SSHO may recommend revisions to these levels based on an assessment of actual exposures.

The level of protective clothing and equipment selected for this project is Level D. Workers will wear Level D protective clothing including, but not limited to, a hard hat, steel-toed boots, latex gloves (when handling soils and/or groundwater), and safety goggles (when decontaminating equipment). Personal protective equipment (PPE) will be worn at all times, as designated by this HASP. The requirement for the use of PPE by official on-site visitors shall be determined by the SSHO. All on-site visitors shall, at a minimum, be required to wear an approved hardhat and be provided with appropriate hearing protection as necessary.

The need for an upgrade in PPE will be determined based upon encountered Site conditions, including measurements taken in the breathing zone of the work area using a photo-ionization detector (PID). An upgrade to a higher level of protection will begin when PID readings above specified limits are measured, or as otherwise required by the SSHO (see Section 5.0, below).

If any equipment fails and/or any employee experiences a failure or other alteration of their protective equipment that may affect its protective ability, that person will immediately leave the work area. The Project Manager and the SSHO will be notified and, after reviewing the situation, determine the effect of the failure on the continuation of on-going operations. If the failure affects the safety of personnel, the work site, or the surrounding environment, personnel will be evacuated until appropriate corrective actions have been taken.

4.0 CONTAMINANT CONTROL

Precautions will be taken during dry weather (e.g., wetting or covering exposed soils) to avoid generating and breathing dust-generated from soils. A PID and P-5 Digital Dust Indicator (or equivalent equipment) will be used to monitor potential contaminant levels. Response to the monitoring will be in accordance with the action levels provided in Section 5.0.

5.0 MONITORING AND ACTION LEVELS

Concentrations of petroleum hydrocarbons and metals in the air are expected to be below the OSHA Permissible Exposure Limits (PELs). A Community Air Monitoring Plan (CAMP) will be implemented for all fieldwork (a copy of the CAMP is provided attached). Air monitoring will be conducted for VOCs and dust. Monitoring will be conducted at all times that fieldwork activities which are likely to generate emissions are occurring. PID readings consistently in excess of 5 ppm, and dust levels in excess of 150 ug/m3 will be used as an indication of the need to initiate personnel monitoring, increase worker protective measures, and/or modify or cease on-site operations in order to mitigate off-site community exposure.

PID and/or dust readings that consistently exceed background in the breathing zone (during any of the proposed tasks) will necessitate moving away from the source or implementing a higher PPE level.

6.0 SITE ACCESS AND CONTROL

Site control procedures will be established to reduce the possibility of worker/visitor contact with compounds present in the soil, to protect the public in the area surrounding the Site and to limit access to the Site to only those persons required to be in the work zone. Notices will be placed near the Site warning the public not to enter fieldwork areas and directing visitors to report to the Project Manager or SSHO. Measures will be taken to limit the entry of unauthorized personnel into the specific areas of field activity and to safely direct and control all vehicular traffic in and near the Site (e.g., placement of traffic cones and warning tape).

7.0 NOISE CONTROL

All fieldwork activities will be conducted in a manner designed to reduce unnecessary noise generation, and to minimize the potential for both on-site and off-site harmful noise levels. The Project Manager and SSHO will establish noise reduction procedures (as appropriate to the Site and the work) to meet these requirements.

8.0 PERSONNEL TRAINING

Work zones that will accomplish the general objective stated above will be established by the Project Manager and the SSHO. Site access will be monitored by the SSHO, who will maintain a log-in sheet for personnel that will include, at the minimum, personnel on the Site, their arrival and departure times, and their destination on the Site. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). Personnel exiting the work zone(s) will be decontaminated prior to exiting the Site. Site-specific training will be provided to each employee. Personnel will be briefed by the SSHO as to the potential hazards to be encountered. Topics will include:

- Availability of this HASP;
- General site hazards and specific hazards in the work areas, including those attributable to known of suspect on-site contaminants;
- Selection, use, testing, and care of the body, eye, hand, and foot protection being worn, with the limitations of each;
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the Site;
- Emergency response procedures and requirements;
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed; and,
- Methods to obtain emergency assistance and medical attention.

9.0 DECONTAMINATION

The SSHO will establish a decontamination system and decontamination procedures (appropriate to the Site and the work) that will prevent potentially hazardous materials from leaving the Site. Trucks will be brushed to remove materials adhering to their surfaces. Sampling equipment will be segregated and, after decontamination, stored separately from splash protection equipment. Decontaminated or clean sampling equipment not in use will be covered with plastic and stored in a designated storage area in the work zone.

10.0 EMERGENCY RESPONSE

10.1 Notification of Site Emergencies

In the event of an emergency, the SSHO will be immediately notified of the nature and extent of the emergency (the names and contact information for key site safety and management personnel, as well as other site safety contact telephone numbers, shall be posted at the Site).

Table 1 in this HASP contains Emergency Response Telephone Numbers, and immediately following is a map detailing the directions to the nearest hospital emergency room. This information will be maintained at the work Site by the SSHO. The location of the nearest telephone will be determined prior to the initiation of on-site activities. In addition to any permanent phone lines, a cellular phone will be available.

10.2 Responsibilities

Prior to the initiation of on-site work activities, the SSHO will:

- Notify individuals, authorities, and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the investigation.
- Confirm that first aid supplies and a fire extinguisher are available on-site.
- Have a working knowledge of safety equipment available.
- Confirm that a map detailing the most direct route to the hospital is prominently posted with the emergency telephone numbers.

The SSHO will be responsible for directing notification, response, and follow-up actions and for contacting outside response personnel (ambulance, fire department, or others). In the case of an evacuation, the SSHO will account for personnel. A log of individuals entering and leaving the Site will be kept so that everyone can be accounted for in an emergency.

Upon notification of an exposure incident, the SSHO will contact the appropriate emergency response personnel for recommended medical diagnosis and, if necessary, treatment. The SSHO will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring.

10.3 Accidents and Injuries

In the event of an accident or injury, measures will be taken to assist those who have been injured or exposed and to protect others from hazards. If an individual is transported to a hospital or doctor, a copy of the HASP will accompany the individual.

The SSHO will be notified and will respond according to the severity of the incident. The SSHO will perform an investigation of the incident and prepare a signed and dated report documenting the investigation. An exposure-incident report will also be completed by the SSHO and the exposed individual. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

10.4 Communication

No special hand signals will be utilized within the work zone. Field personnel will utilize standard hand signals during the operation of heavy equipment.

10.5 Safe Refuge

Vehicles and on-site structures will serve as the immediate place of refuge in the event of an emergency. If evacuation from the area is necessary, project vehicles will be used to transport on-site personnel to safety.

10.6 Site Security and Control

Site security and control during emergencies, accidents, and incidents will be monitored by the SSHO. The SSHO is responsible for limiting access to the Site to authorized personnel and for oversight of reaction activities.

10.7 Emergency Evacuation

In case of an emergency, personnel will evacuate to the safe refuge identified by the SSHO, both for their personal safety and to prevent the hampering of response/rescue efforts.

10.8 Resuming Work

A determination that it is safe to return to work will be made by the SSHO and/or any personnel assisting in the emergency, e.g., fire department, police department, utility company, etc. No personnel will be allowed to return to the work areas until a full determination has been made by the above-identified personnel that all field activities can continue unobstructed. Such a determination will depend upon the nature of the emergency (e.g., downed power lines -- removal of all lines from the property; fire -- extinguished fire; injury -- safe transport of the injured party to a medical facility with either assurance of acceptable medical care present or completion of medical care; etc.).
Before on-site work is resumed following an emergency, necessary emergency equipment will be recharged, refilled, or replaced. Government agencies will be notified as appropriate. An Incident Report Form will be filed.

10.9 Fire Fighting Procedures

A fire extinguisher will be available in the work zone during on-site activities. This extinguisher is intended for small fires. When a fire cannot be controlled with the extinguisher, the area will be evacuated immediately. The SSHO will be responsible for directing notification, response, and follow-up actions and for contacting ambulance and fire department personnel.

10.10 Emergency Decontamination Procedure

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Whenever possible, minimum decontamination will consist of washing, rinsing, and/or removal of contaminated outer clothing and equipment. If time does not permit decontamination, the person will be given first aid treatment and then wrapped in plastic or a blanket prior to transport.

10.11 Emergency Equipment

The following on-site equipment for safety and emergency response will be maintained in the on-site vehicle of the SSHO:

- Fire extinguisher;
- First-aid kit; and,
- Extra copy of this Health and Safety Plan.

11.0 SPECIAL PRECAUTIONS AND PROCEDURES

The activities associated with this investigation may involve potential risks of exposure to both chemical and physical hazards. The potential for chemical exposure to hazardous or regulated substances will be significantly reduced through the use of monitoring, personal protective clothing, engineering controls, and implementation of safe work practices.

11.1 Heat/Cold Stress

Training in prevention of heat/cold stress will be provided as part of the site-specific training. The timing of this project is such that heat/cold stress may pose a threat to the health and safety of personnel. Work/rest regimens will be employed, as necessary, so that personnel do not suffer adverse effects from heat/cold stress. Special clothing and appropriate diet and fluid intake regimens will be recommended to personnel to further reduce this temperature-related hazard. Rest periods will be recommended in the event of high/low temperatures and/or humidity to counter the negative effects of heat/cold stress.

11.2 Heavy Equipment

Working in the vicinity of heavy equipment is the primary safety hazard at the Site. Physical hazards in working near heavy construction equipment include the following: overhead hazards, slips/trip/falls, hand and foot injuries, moving part hazards, improper lifting/back injuries, and noise. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). No workers will be permitted within any excavated areas without proper personal protective equipment (PPE), including, as warranted, respirators, Tyvek suits and/or gloves. Air monitoring for VOCs will be conducted in accordance with the HASP and the Community Air Monitoring Plan (RWP appendices E and F).

11.3 Additional Safety Practices

The following are important safety precautions which will be enforced during this investigation:

- Medicine and alcohol can aggravate the effect of exposure to certain compounds. Controlled substances and alcoholic beverages will not be consumed during investigation activities. Consumption of prescribed drugs will only be at the discretion of a physician familiar with the person's work.
- Eating, drinking, chewing gum or tobacco, smoking, or other practices that increase the probability of hand-to-mouth transfer and ingestion of material is prohibited except in areas designated by the SSHO.
- Contact with potentially contaminated surfaces will be avoided whenever possible. Workers will not unnecessarily walk through puddles, mud, or other discolored surfaces; kneel on the ground; or lean, sit, or place equipment on drums, containers, vehicles, or the ground.
- Personnel and equipment in the work areas will be minimized, consistent with effective site operations.
- Unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.
- Work areas for various operational activities will be established.

11.4 Daily Log Contents

The SSHO will establish a system appropriate to the Site, the work, and the work zones that will record, at a minimum, the following information:

- Personnel on the Site, their arrival and departure times, and their destination on the Site.
- Incidents and unusual activities that occur on the Site such as, but not limited to, accidents, spills, breaches of security, injuries, equipment failures, and weather-related problems.
- Changes to the HASP.
- Daily information generated such as: changes to work and health and safety plans; work accomplished and the current Site status; and monitoring results.

12.0 TABLE AND FIGURES

Table 1: Emergency Response Telephone Numbers

Emergency Agencies	Phone Numbers
EMERGENCY	**911**
Nyack Hospital 160 N. Midland Avenue, Nyack	**(845) 348-2345 - Emergency Room**
Haverstraw Police Department	**(845) 354-1500 or 911**
Haverstraw Fire Department	**(845) 429-0300 or 911**
Village of Haverstraw Town Hall	(845) 429-0300
United Water New York	(845) 623-1500
Haverstraw Municipal Sewer	(845) 429-5715

Figure 1: Directions to Hospital

Exit the work site using **Dr. Girling Drive**.

Turn Left (southeast) onto **West Street/Riverside Avenue,** continue straight onto **Short Clove Road**.

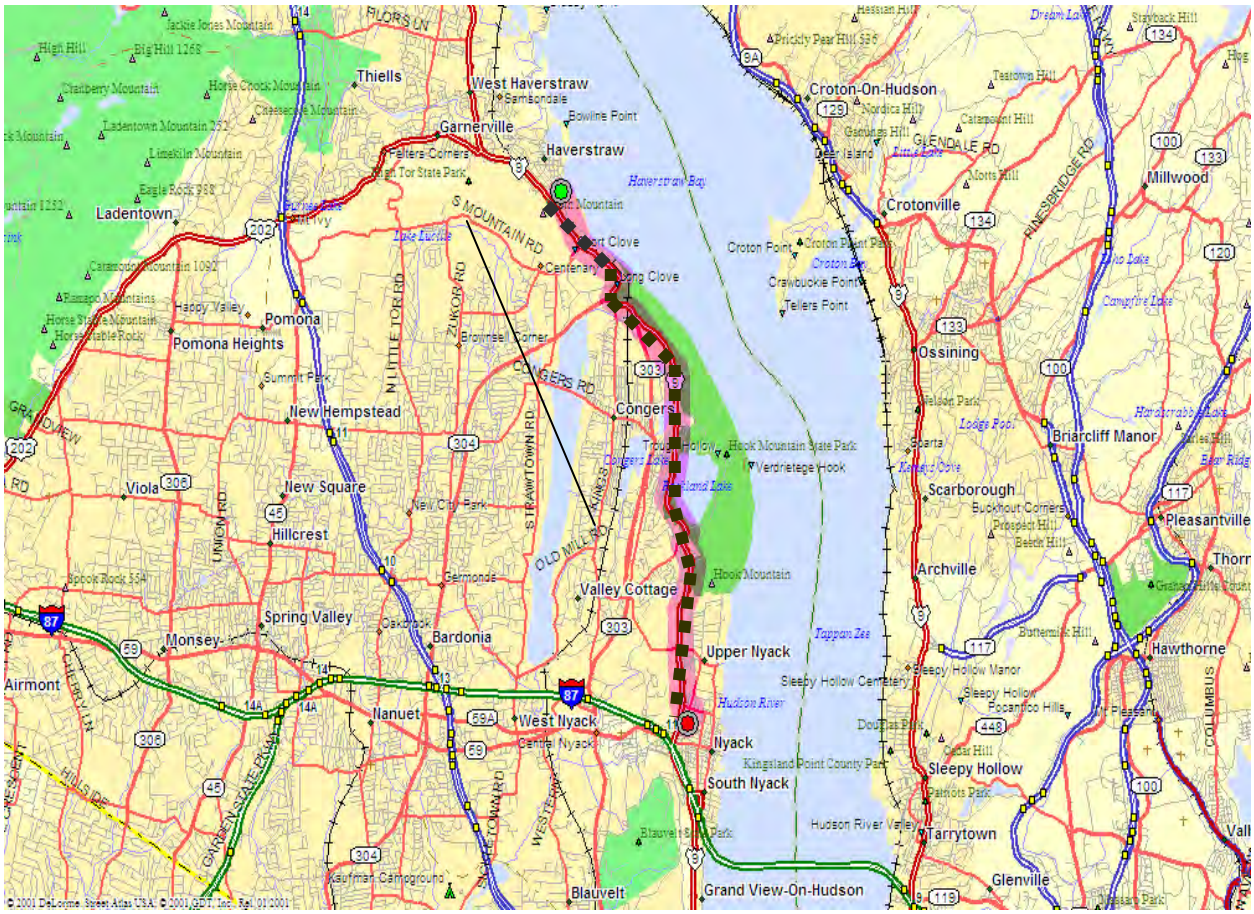
Turn Left (South) onto **US Route 9W, continue south into Upper Nyack**.

Turn Left (East) onto **6th Avenue**.

Turn Right (Southwest) onto **North Midland Avenue**.

Hospital is located on Right at 160 North Midland Avenue (see Map on next page).

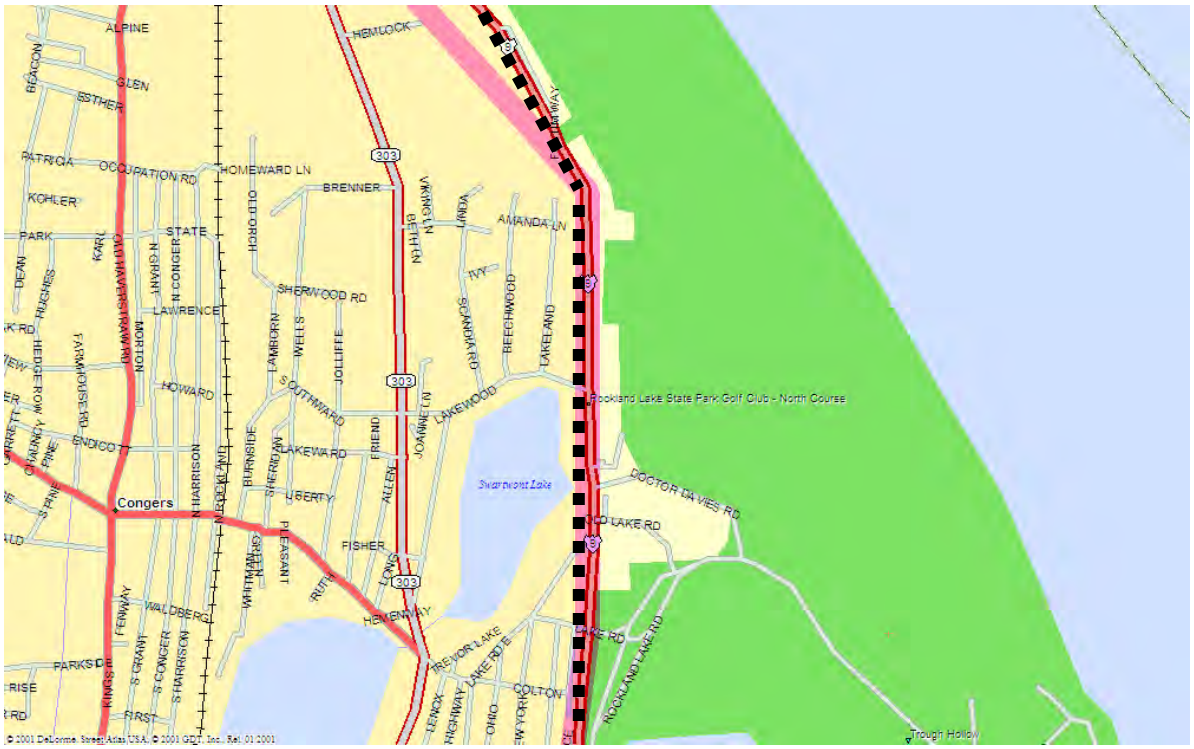
Figure 2: Map to Hospital (overview)



Zoomed in Map to Hospital (1 of 6)

Zoomed in Map to Hospital (2 of 6)

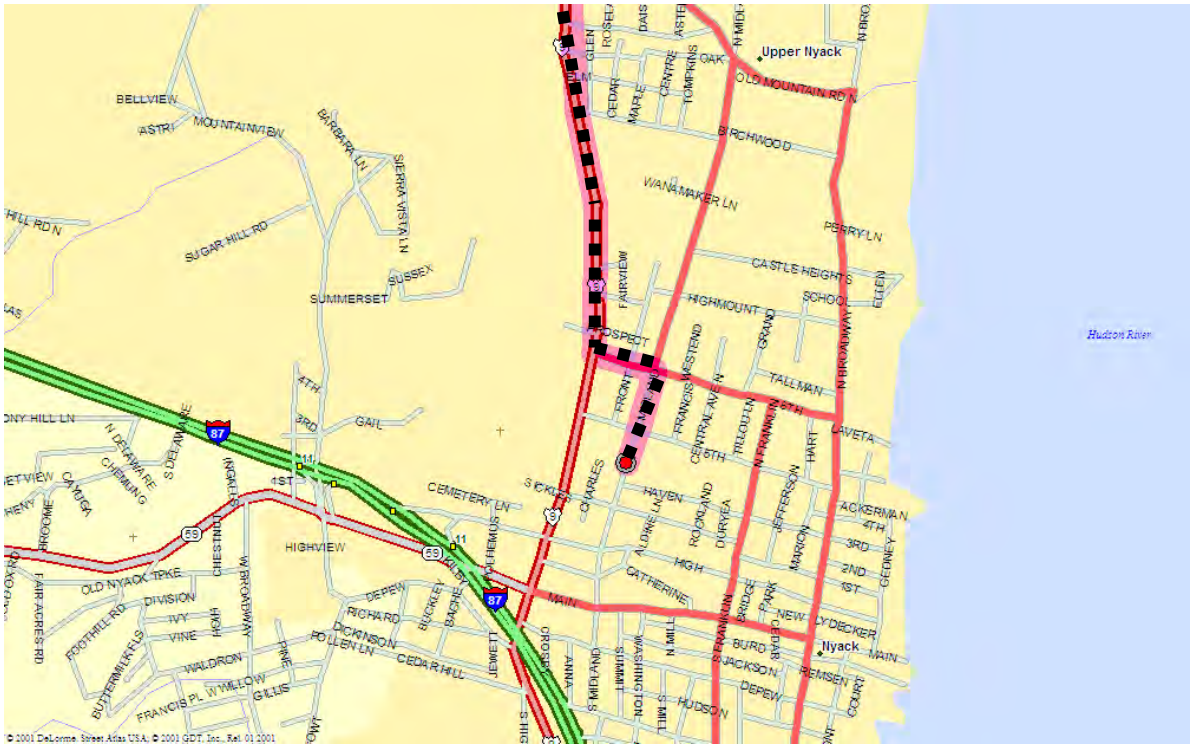
Zoomed in Map to Hospital (3 of 6)



Zoomed in Map to Hospital (4 of 6)

Zoomed in Map to Hospital (5 of 6)

Zoomed in Map to Hospital (6 of 6)

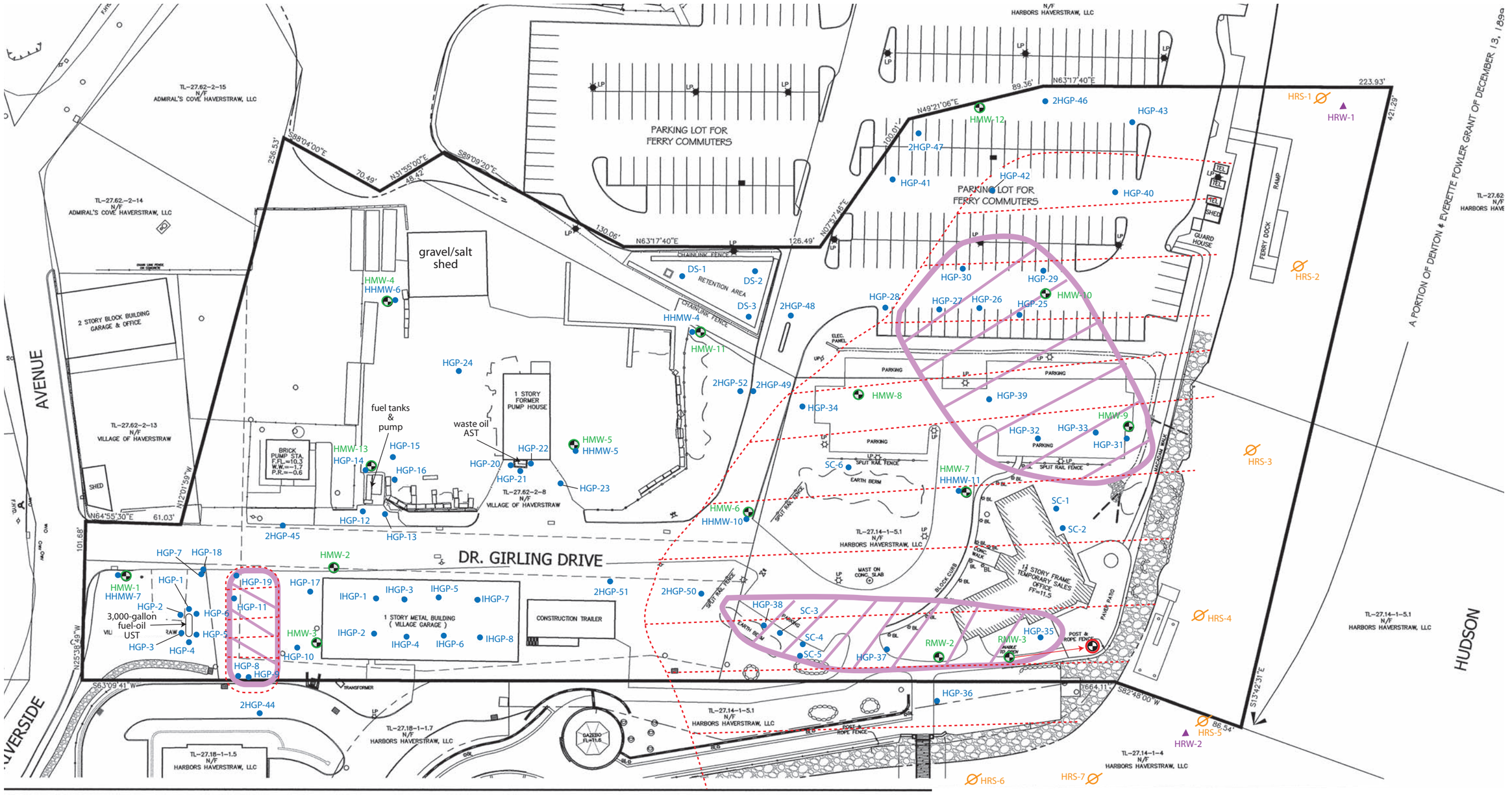


Ecosystems Strategies, Inc.

Source: U.S. Department of the Interior Geological Survey Topographic Map of the Haverstraw, NY Quadrangle, dated 1967 (photorevised 1979)

Site Location Map – Overview Haverstraw Harbors Site Dr. George W. Girling Drive Village of Haverstraw Rockland County, New York	N	ESI File: GH9964.50 September 2013 Attachment

Ecosystems Strategies, Inc.



N

Legend:

- monitoring well location
- monitoring well (to be relocated)
- soil boring location
- sediment sample location
- water sample location
- area of impacted soil
- area of significant petroleum contamination (proposed areas of soil removal)

Proposed Fieldwork Map

Haverstraw Harbors Site - BCP Site ID C344606
Dr. George W. Girling Drive
Village of Haverstraw
Rockland County, New York

ESI File: GH9964.42

Scale: 1" = 60' (approximately)

September 2013

Attachment

New York State Department of Health
Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all <u>ground intrusive</u> activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

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

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

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

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

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

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

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

P:\Bureau\Common\CommunityAirMonitoringPlan (CAMP)\GCAMPR1.DOC

APPENDIX D

Side-wide Inspection Form

SITE-WIDE INSPECTION FORM

Haverstraw Harbors (NYSDEC Site ID: 366040)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Inspection Item	Yes	No	NA	Comments (Include Corrective Actions Needed)
General Checklist				
Change of ownership or use (Restricted Residential)? Transfer of COC?				
Erection of structures?				
Any activity likely to disrupt or expose contamination?				
Any activity that will or may interfere with on-going or completed remedial program or the continued ability to implement engineering or institutional controls?				
Cover System Monitoring Checklist				
Where there any ground-intrusive activites conducted (installation/relocation of utilities, etc.)? If so, specify.				
Is there evidence that ground-intrusive activites were conducted? If so, specify.				
Are there signs of soil erosion in the landscpaed areas that could interfere with the cover system integrity? If so, specify.				
Are there any holes, cracks, vegetation, or physical deficiences in the asphalt and paved areas? If so, sketch area on reverse side.				
Areas of significant ponding on-site?				
Are there any holes, cracks, vegetation, or physical deficiences in the building floor slab? If so, identify the building and sketch area on reverse side.				
Groundwater Monitoring Well Network				
Are the monitoring wells (HMW-7, HMW-8, HMW-13 through HMW-18) usable and in good condition?				
SSDS Checklist (Complete a separate sheet for every SSDS on-site and include system identification.)				
Is there an SSDS in place for building erected on-site? (If SSDS are yet to be installed, indicate in the comments section and do not complete the remainder of this section)				
Are the units generating vacuum operating and maintaned?				
Is the discharge vent pipe functional and maintained? Are there any blockages in the vent pipe?				
Are there any holes, cracks or physical deficiences in the riser pipes?				
Has the SSDS effluent sample been collected, analyzed and submitted to NYSDEC? (on-time event, or othwerwise indicated by NYSDEC). Report to NYSDEC.				
Sub-slab vacuum at all monitoring points greater than 0.002 in. of w.c.? Include vacuum readings on comments section. Report to NYSDEC.				
Site Records				
Does the site operator have updated SMP and FER available on-site?				

Inspection Date: _____

Weather: _____

Inspector Name: _____

Inspector Signature: _____

Date of Last Inspection: _____

Required Date of Next Inspection: (based on findings, otherwise annually) _____

Agency: _____

Agency's Telephone: _____

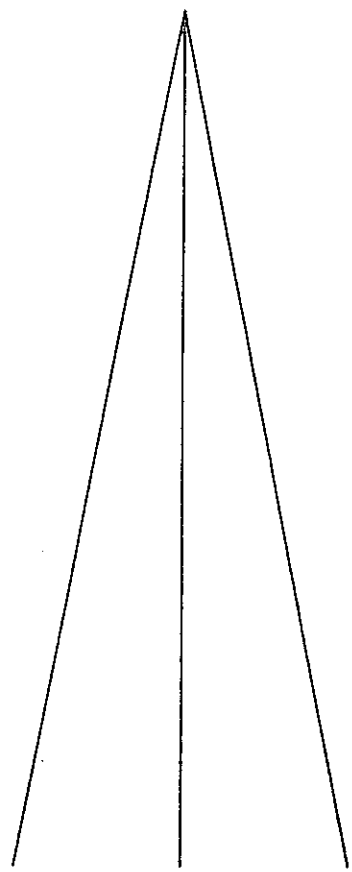
Additional Comments or Drawings (Use Reverse Side): _____

APPENDIX E

Monitoring Well Boring and Construction Logs

SOILTESTING, INC.

TO	Ecosystems Strategies Inc.	DATE	September 25, 2006
ADDRESS	24 Davis Avenue, Poughkeepsie, NY 12603-2332		
SITE LOCATION	DOT Yard, 17 Dr. Girling Drive, Haverstraw, NY		
REPORT SENT TO	Scott Spitzer		
SAMPLES SENT TO	Storage (Max. 60 days)		



140 Oxford Road
Oxford, Connecticut 06478
203-888-4531

Branch Office:
White Plains, New York 10607
914-946-4850

JOB NO.
E49-7726-06

ESI note: monitoring well ID=HMW-1 (soil boring ID=HHMW-7)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc. PROJECT NO. E49-7726-06 PROJECT NAME DOT Yard LOCATION 17 Dr. Girling Drive, Haverstraw, NY	SHEET 1 OF 1 HOLE NO. HH-MW-7 BORING LOCATIONS per plan
FOREMAN - DRILLER MD/cb INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 13 FT AFTER 0 HOURS AT __FT AFTER __HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 4¼", 1 3/8" HAMMER WT.: 140# HAMMER FALL: 30" BIT	DATE START 9/20/06 DATE FINISH 9/20/06 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	7"	2'0"	2 / 5		dry loose	7"	Topsoil
							2 / 3		dry loose		
		2	ss	24"	3"	4'0"	7 / 6		dry compact		
							12 / 14		dry compact		
5		3	ss	24"	6"	6'0"	6 / 8		dry compact		
							12 / 10		dry compact		Dkbrn FC SAND,sm silt,brick in tip of spoon
		4	ss	24"	6"	8'0"	6 / 8		dry compact		
							10 / 10		dry compact		
		5	ss	24"	5"	10'0"	4 / 6		dry loose		
10							4 / 5		dry loose		SAME,sm brick
		6	ss	24"	12"	12'0"	7 / 9		dry compact		
							4 / 10		dry compact		
		7	ss	24"	16"	14'0"	7 / 6		wet loose		
							4 / 4		wet loose		
15											
20											
25											E.O.B. 24'0"
											SET WELL
30											
35											
40											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-7

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

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(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

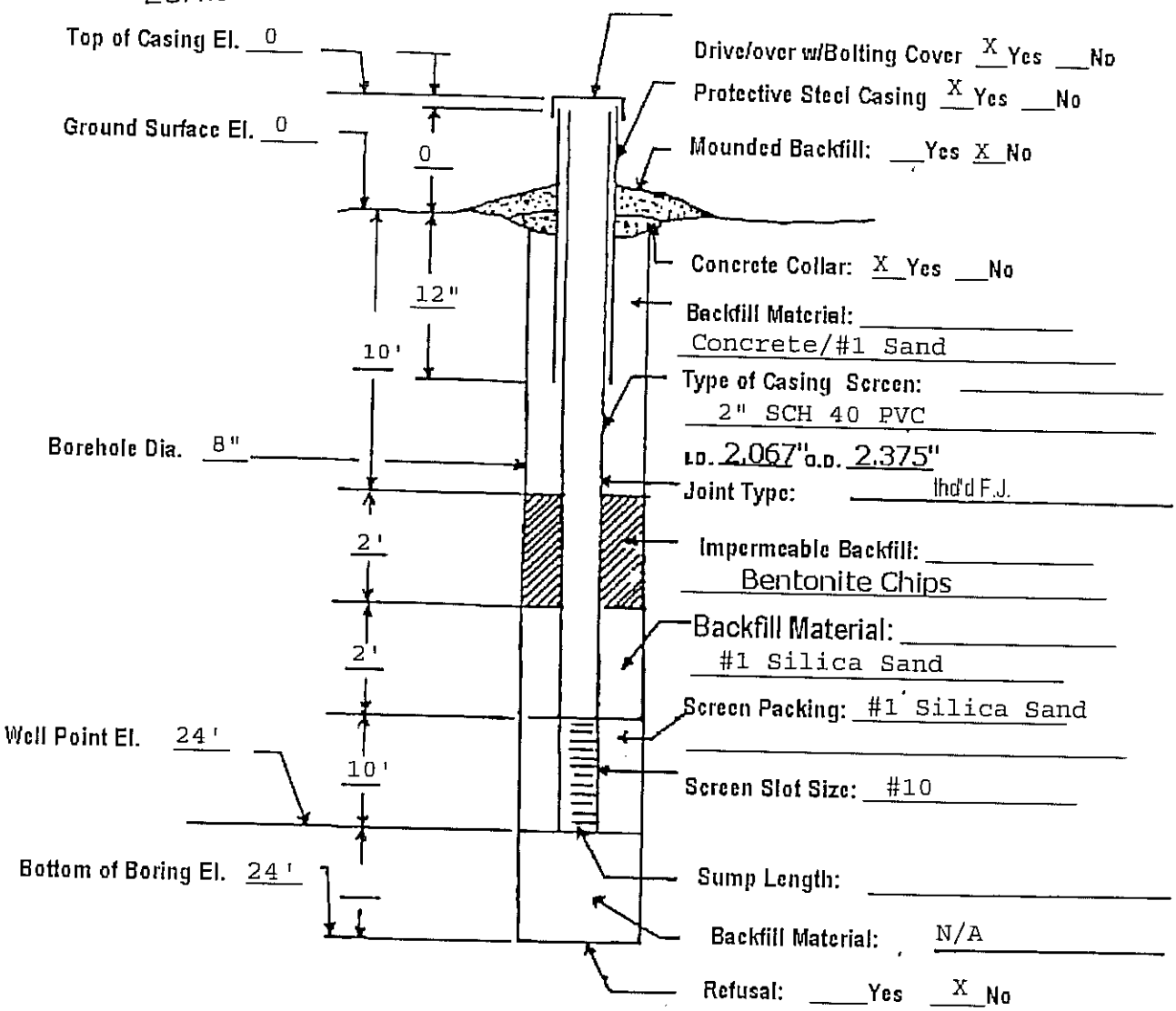
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-7

JOB# : E49-7726-06

ESI note: monitoring well HMW-1



Materials Used:

Screen (PVC) 10'	Bentonite Pellets 1/2 bag	Locking Exp. Plug 1
Riser (PVC) 15'	Bentonite Chips	Lock
Plug (PVC)	Concrete Mix 1 bag	D/O 1
Slip Cap (PVC)	Portland 2 bags	S/U
Silica Sand 300#		
Powdered Bentonite		

ESI note: monitoring well ID=HMW-2 (soil boring ID=HHMW-9)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: **Ecosystems Strategies Inc.**	SHEET 1 OF 1 HOLE NO. HH-MW-9
	PROJECT NO. **E49-7726-06**	
	PROJECT NAME **DOT Yard**	BORING LOCATIONS per plan
FOREMAN - DRILLER **MD/cb**	LOCATION **17 Dr. Girling Drive Haverstraw, NY**	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 8 FT AFTER 0 HOURS AT __FT AFTER __HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 4¼" / 1 3/8" HAMMER WT.: 140# HAMMER FALL: 30" BIT	DATE START 9/19/06 DATE FINISH 9/19/06 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
											Dkbrn SILT,FC sand,lit brick,FC gravel
5											
									wet		Gry CLAY
10											
											SAME
15											
											E.O.B. 14'0"
20											SET WELL
25											
30											
35											
40											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-9

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

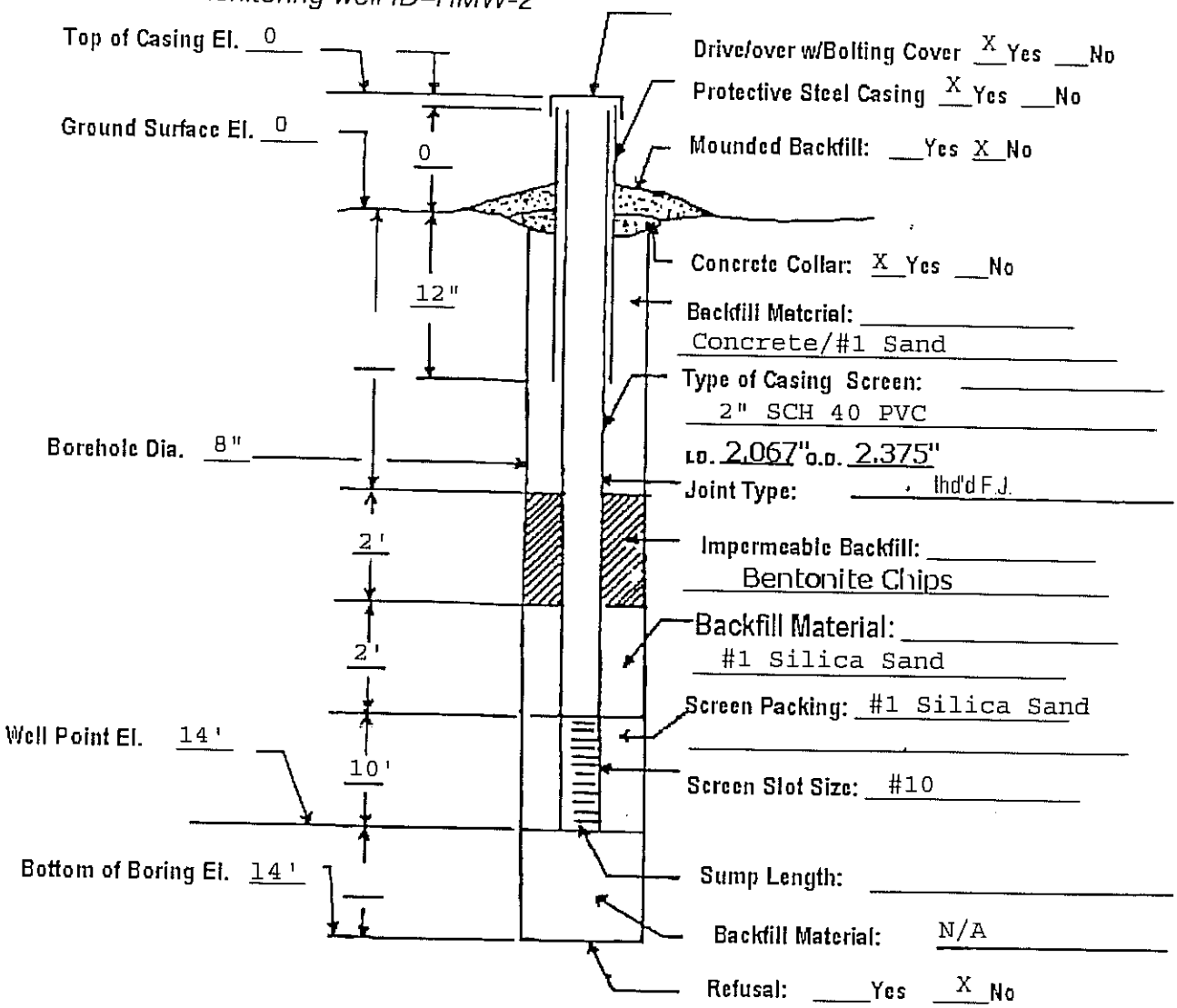
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-9

JOB# : E49-7726-06

ESI note: monitoring well ID=HMW-2



Materials Used:

Screen (PVC) 10'	Bentonite Pellets 1 bag	Locking Exp. Plug 1
Riser (PVC) 5'	Bentonite Chips	Lock
Plug (PVC) 1	Concrete Mix 1 bag	D/O 1
Slip Cap (PVC)	Portland	S/U
Silica Sand 350#		
Powdered Bentonite		

ESI note: monitoring well ID=HMW-3 (soil boring ID=HHMW-8)

SOILTESTING, INC.
140 OXFORD RD.
OXFORD, CT 06478
CT (203) 888-4531
NY (914) 946-4850

CLIENT: Ecosystems Strategies Inc.

SHEET 1 OF 1
HOLE NO. HH-MW-8

PROJECT NO. E49-7726-06

PROJECT NAME DOT Yard

LOCATION 17 Dr. Girling Drive, Haverstraw, NY

BORING LOCATIONS per plan

FOREMAN - DRILLER MD/cb

INSPECTOR

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	
SIZE I.D.	4¼"	1 3/8"	
HAMMER WT.		140#	BIT
HAMMER FALL		30"	

OFFSET

DATE START 9/19/06
DATE FINISH 9/19/06
SURFACE ELEV.
GROUND WATER ELEV.

GROUND WATER OBSERVATIONS
AT 8 FT AFTER 0 HOURS
AT __ FT AFTER __ HOURS

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
											Dkbrn SILT,FC sand,lit brick,FC gravel
5											
									wet		Gry CLAY
10											
											SAME
15											
											E.O.B. 14'0"
											SET WELL
20											
25											
30											
35											
40											

GROUND SURFACE TO ____ FT. USED ____ CASING THEN ____ CASING TO ____ FT. HOLE NO. HH-MW-8

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

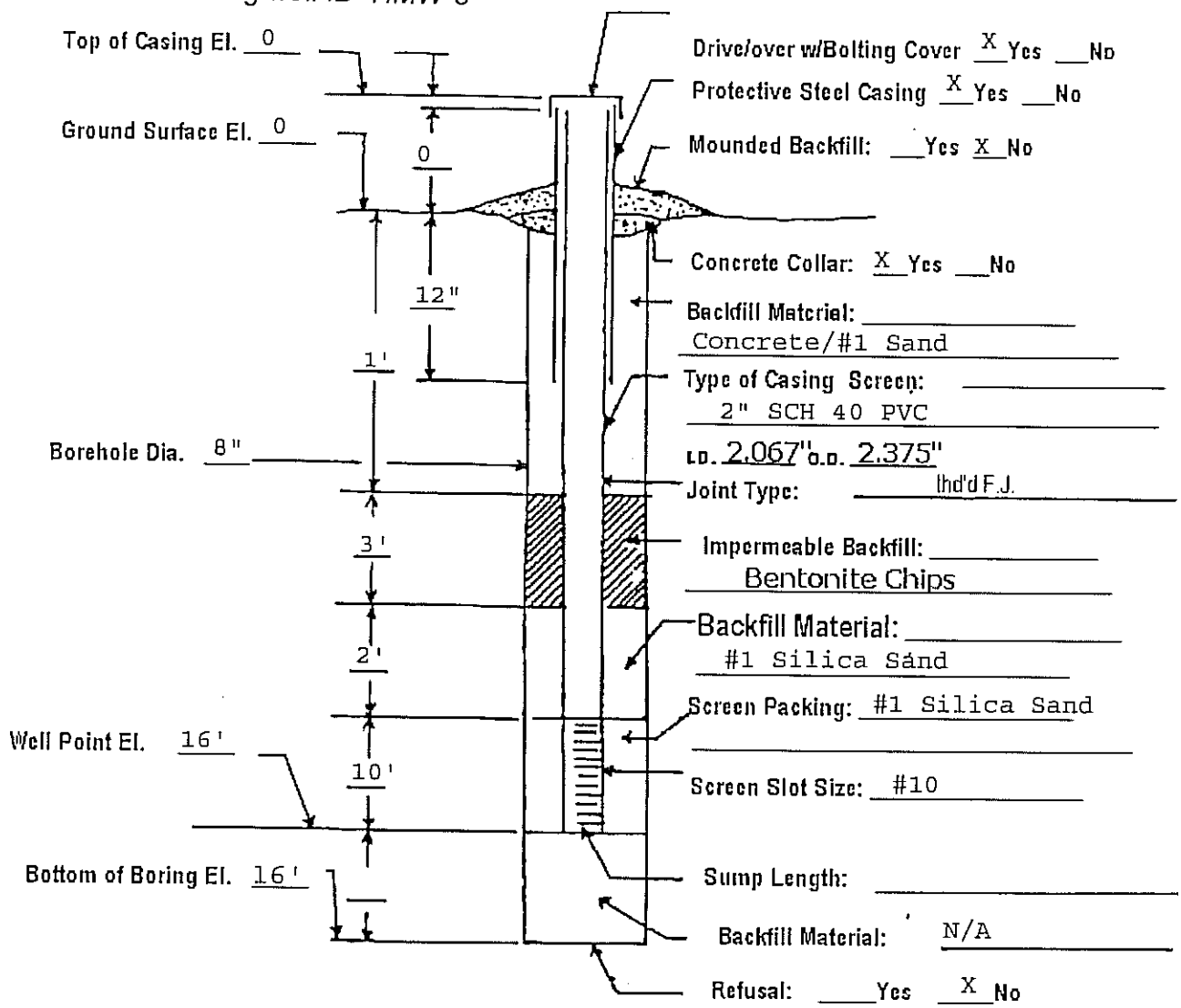
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

JOB# : E49-7726-06

Observation Well # HH-MW-8

ESI note: monitoring well ID=HMW-3



Materials Used:

Screen (PVC) 10'	Bentonite Pellets 1/2 bag	Locking Exp. Plug 1
Riser (PVC) 10'	Bentonite Chips	Lock
Plug (PVC) 1	Concrete Mix 1 bag	D/O 1
Slip Cap (PVC)	Portland	S/U
Silica Sand 300#		
Powdered Bentonite		

ESI note: monitoring well ID=HMW-4 (soil boring ID=HHMW-6)

SOILTESTING, INC.
140 OXFORD RD.
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CLIENT: Ecosystems Strategies Inc.

SHEET 1 OF 1
HOLE NO. HH-MW-6

PROJECT NO. E49-7726-06

PROJECT NAME DOT Yard

LOCATION 17 Dr. Girling Drive, Haverstraw, NY

BORING LOCATIONS per plan

FOREMAN - DRILLER MD/cb

INSPECTOR

GROUND WATER OBSERVATIONS
AT 8 FT AFTER 0 HOURS
AT __ FT AFTER __ HOURS

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	
SIZE I.D.	4¼"	1 3/8"	
HAMMER WT.		140#	BIT
HAMMER FALL		30"	

OFFSET
DATE START 9/18/06
DATE FINISH 9/18/06
SURFACE ELEV.
GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6	6-12	12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
												4"	Blacktop
5		1	ss	5"	3"	4'5"	100/5				v dense		Dkbrn FC SAND,sm FC gravel,brick
													Concrete to 8'
10		2	ss	24"	4"	10'0"	10	9			wet compact		
							5	3					Gry FM SAND,sm silt,clay
15													
													E.O.B. 16'0"
20													SET WELL
25													
30													
35													
40													

GROUND SURFACE TO ____ FT. USED ____ CASING THEN ____ CASING TO ____ FT. HOLE NO. HH-MW-6
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%
C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

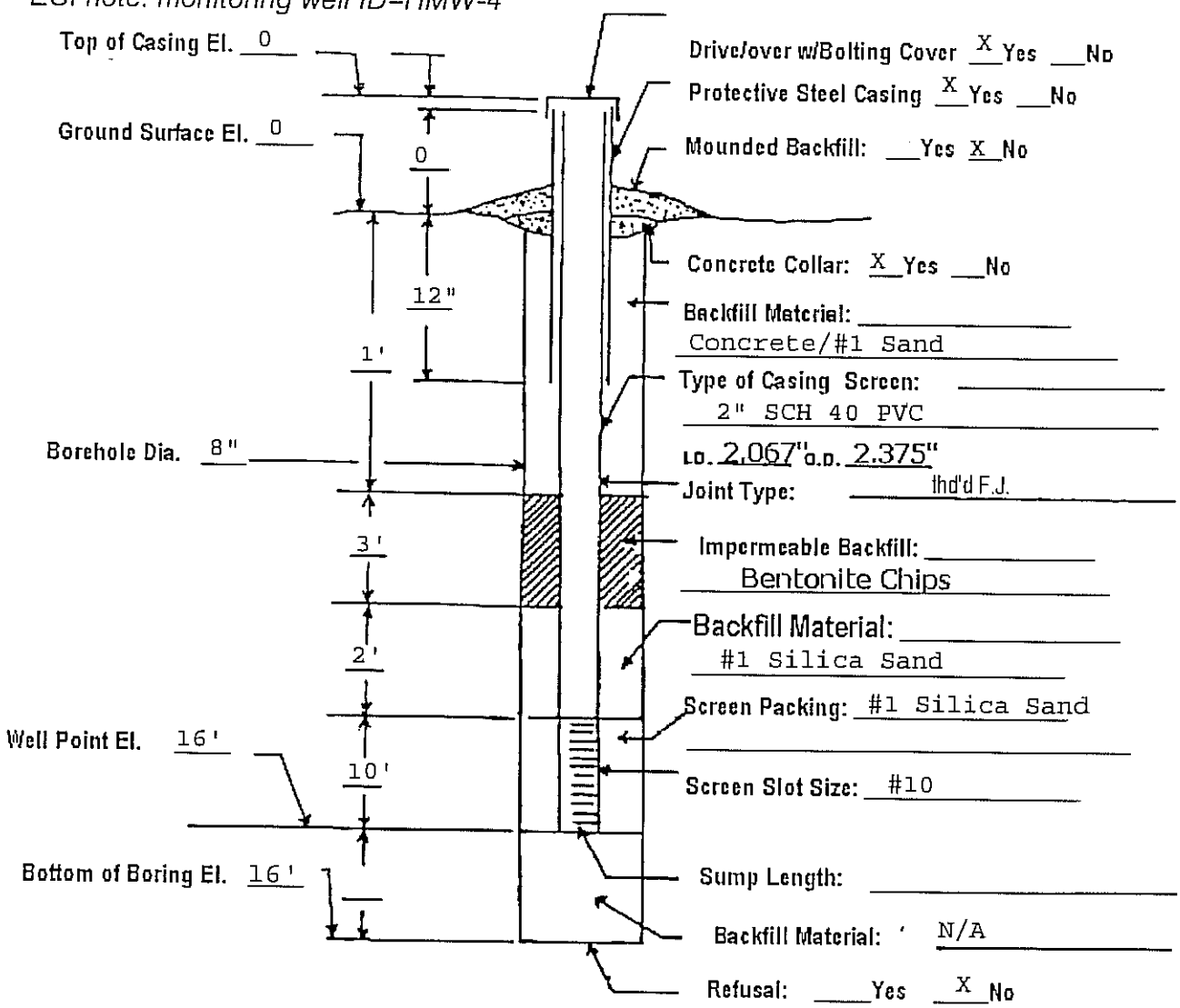
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-6

JOB# : E49-7726-06

ESI note: monitoring well ID=HMW-4



Materials Used:

Screen (PVC) 10'	Bentonite Pellets 1/2 bag	Locking Exp. Plug 1
Riser (PVC) 10'	Bentonite Chips	Lock
Plug (PVC) 1	Concrete Mix 1 bag	D/O 1
Slip Cap (PVC)	Portland	S/U
Silica Sand 300#		
Powdered Bentonite		

ESI note: monitoring well ID=HMW-5 (soil boring ID=HHMW-5)

SOILTESTING, INC.
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FOREMAN - DRILLER: MD/cb
INSPECTOR:

GROUND WATER OBSERVATIONS
AT 7 FT AFTER 0 HOURS
AT __ FT AFTER __ HOURS

CLIENT: Ecosystems Strategies Inc.
PROJECT NO. E49-7726-06
PROJECT NAME: DOT Yard
LOCATION: 17 Dr. Girling Drive, Haverstraw, NY

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	
SIZE I.D.	4¼"	1 3/8"	
HAMMER WT.		140#	BIT
HAMMER FALL		30"	

SHEET 1 OF 1
HOLE NO. HH-MW-5
BORING LOCATIONS: per plan
OFFSET:
DATE START 9/18/06
DATE FINISH 9/18/06
SURFACE ELEV.:
GROUND WATER ELEV.:

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
5		1	ss	24"	3"	6'0"	1 2		v loose wet		Dkbrn blk FC SAND & F GRAVEL,sm C gravel,lit silt,brick
							2 1				
		2	ss	24"	3"	8'0"	10 9		compact wet		Gry SILT,sm FM sand,lit clay
							7 5				
		3	ss	24"	10"	10'0"	6 5				
10							5 5		loose		SAME
15											
											E.O.B. 15'0"
20											SET WELL
25											
30											
35											
40											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-5
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%
C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

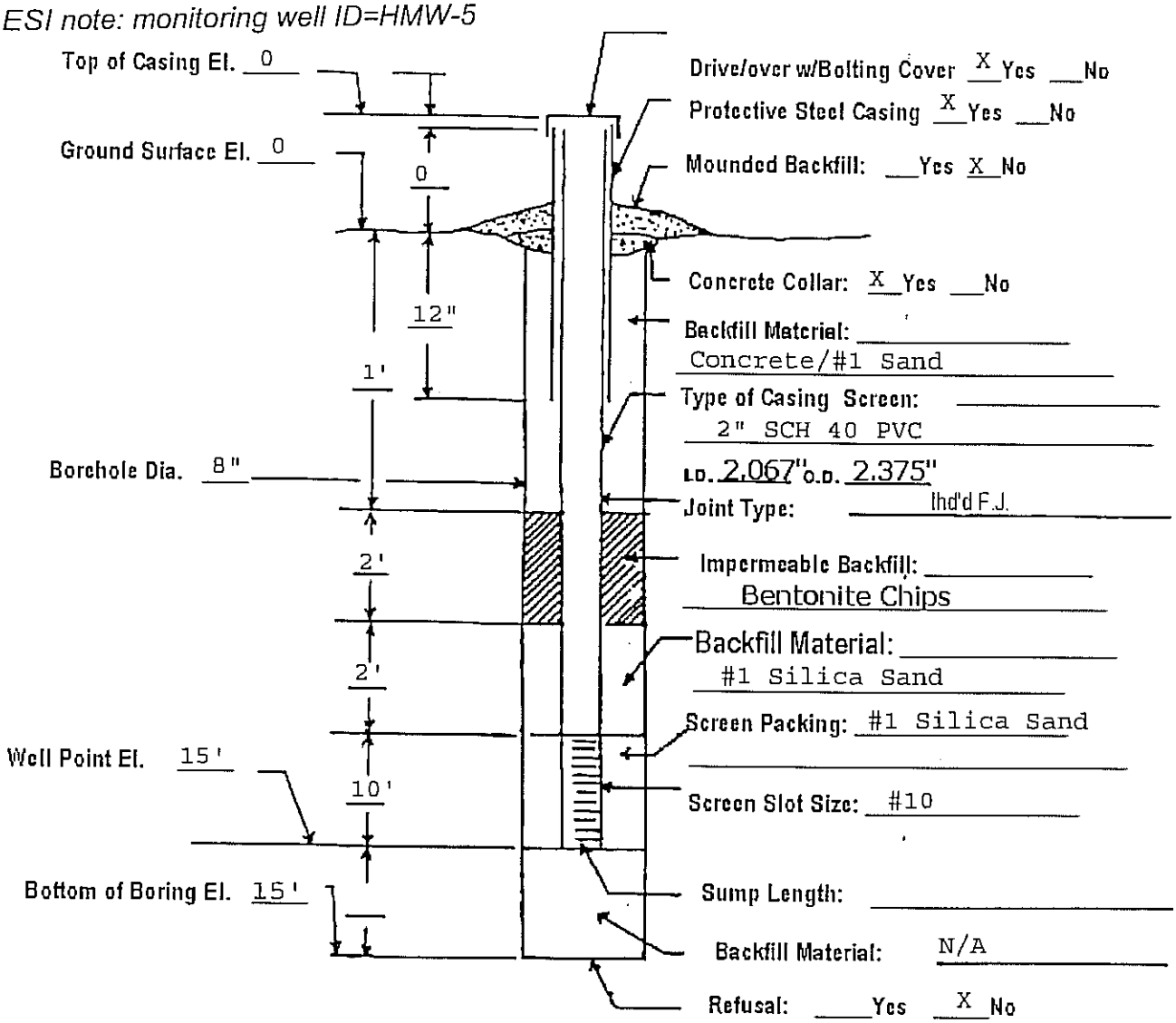
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-5

JOB# : E49-7726-06

ESI note: monitoring well ID=HMW-5



Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 350#
Powdered Bentonite

Bentonite Pellets 1/2 bag
Bentonite Chips
Concrete Mix 1 bag
Portland

Locking Exp. Plug 1
Lock
D/O 1
S/U

ESI note: monitoring well ID=HMW-6 (soil boring ID=HHMW-11)

SOILTESTING, INC.
140 OXFORD RD.
OXFORD, CT 06478
CT (203) 888-4531
NY (914) 946-4850

FOREMAN - DRILLER: MD/cb
INSPECTOR:
GROUND WATER OBSERVATIONS
AT 6 FT AFTER 0 HOURS
AT __FT AFTER __HOURS

CLIENT: Ecosystems Strategies Inc.
PROJECT NO. E49-7726-06
PROJECT NAME: DOT Yard
LOCATION: 17 Dr. Girling Drive, Haverstraw, NY

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	
SIZE I.D.	4¼"	1 3/8"	
HAMMER WT.		140#	BIT
HAMMER FALL		30"	

SHEET 1 OF 1
HOLE NO. HH-MW-1
BORING LOCATIONS: per plan
OFFSET:
DATE START 9/20/06
DATE FINISH 9/20/06
SURFACE ELEV.:
GROUND WATER ELEV.:

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6	6-12	12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
												3"	Blacktop
5		1	ss	24"	6"	6'0"	6	12			wet compact		
							9	4					Dkbrn FC SAND,sm F gravel,lit silt,brick
		2	ss	24"	11"	8'0"	6	6			wet compact		
							13	21					Brn gry brn FC SAND & FC GRAVEL,lit silt
		3	ss	24"	10"	10'0"	9	11			wet compact		
10							10	9					Gry FC SAND & SILT
15													
													E.O.B. 14'0"
20													
25													
30													
35													
40													

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT.
HOLE NO. HH-MW-11
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%
C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

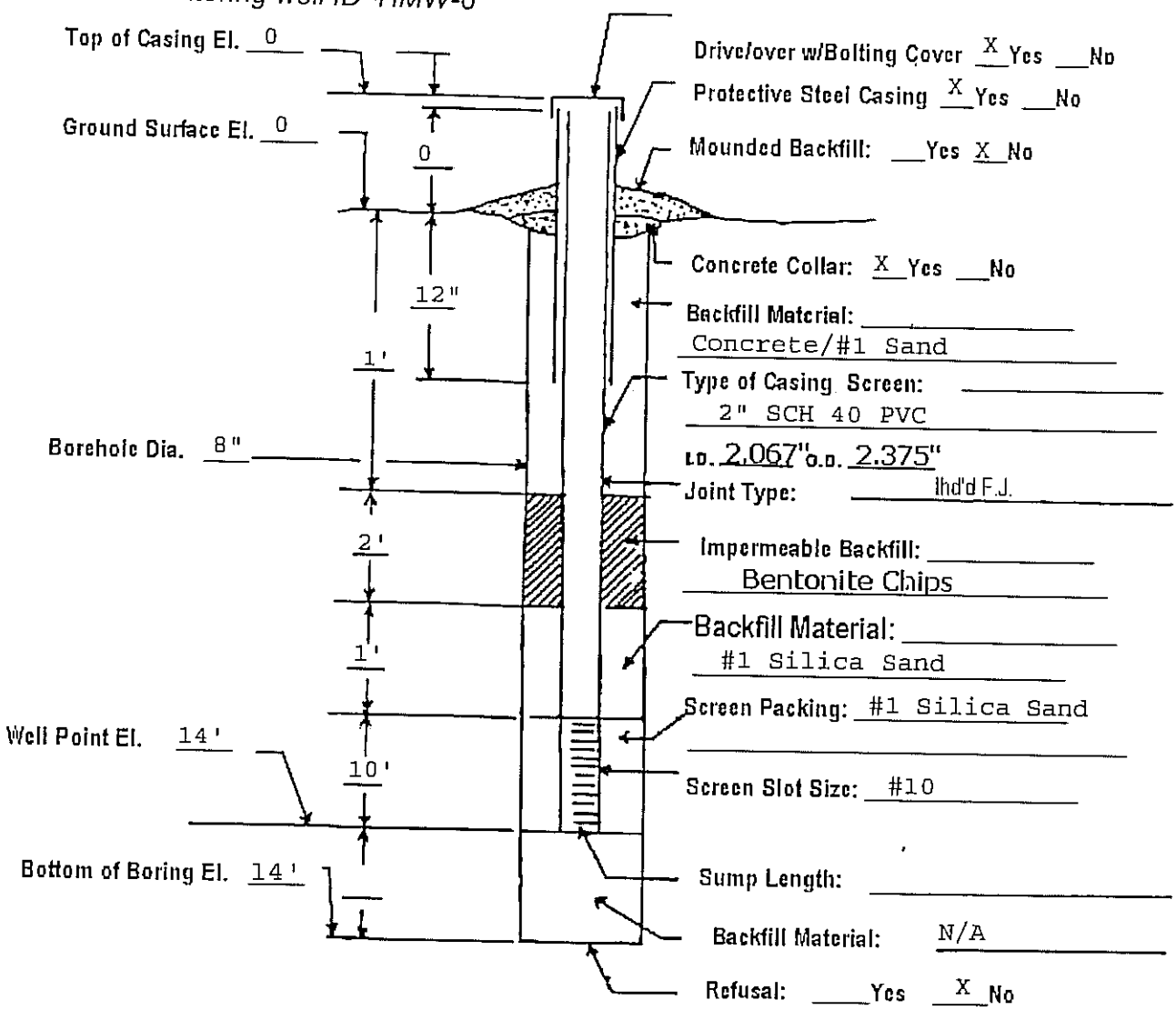
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-11

JOB# : E49-7726-06

ESI note: monitoring well ID=HMW-6



Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 350#
Powdered Bentonite

Bentonite Pellets 1/2 bag
Bentonite Chips
Concrete Mix 1 bag
Portland

Locking Exp. Plug 1
Lock
D/O 1
S/U

ESI note: monitoring well ID=HMW-7 (soil boring ID=HHMW-10)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc. PROJECT NO. E49-7726-06 PROJECT NAME DOT Yard LOCATION 17 Dr. Girling Drive, Haverstraw, NY	SHEET 1 OF 1 HOLE NO. HH-MW-10 BORING LOCATIONS per plan
FOREMAN - DRILLER MD/cb INSPECTOR GROUND WATER OBSERVATIONS AT 7 FT AFTER 0 HOURS AT __ FT AFTER __ HOURS	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 4¼" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30"	OFFSET DATE START 9/20/06 DATE FINISH 9/20/06 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
										3"	Blacktop
5		1	ss	24"	6"	6'0"	22 / 18		dry dense		Brn dkbrn FM SAND,sm silt,F gravel,lit C gravel,tr cobble,boulder
							14 / 13		wet		
		2	ss	24"	12"	8'0"	12 / 8		compact		
							9 / 15		wet		SAME,tr brick
		3	ss	24"	12"	10'0"	10 / 9		compact		
10							16 / 22				Gry FC SAND,sm F gravel,lit silt,brick
15											
											E.O.B. 15'0"
											SET WELL
20											
25											
30											
35											
40											

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. HOLE NO. HH-MW-10

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

Phone
(203) - 888-4531

Telefax
(203) - 888-6247

WHITE PLAINS, N.Y.
(914) - 946-4850

MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

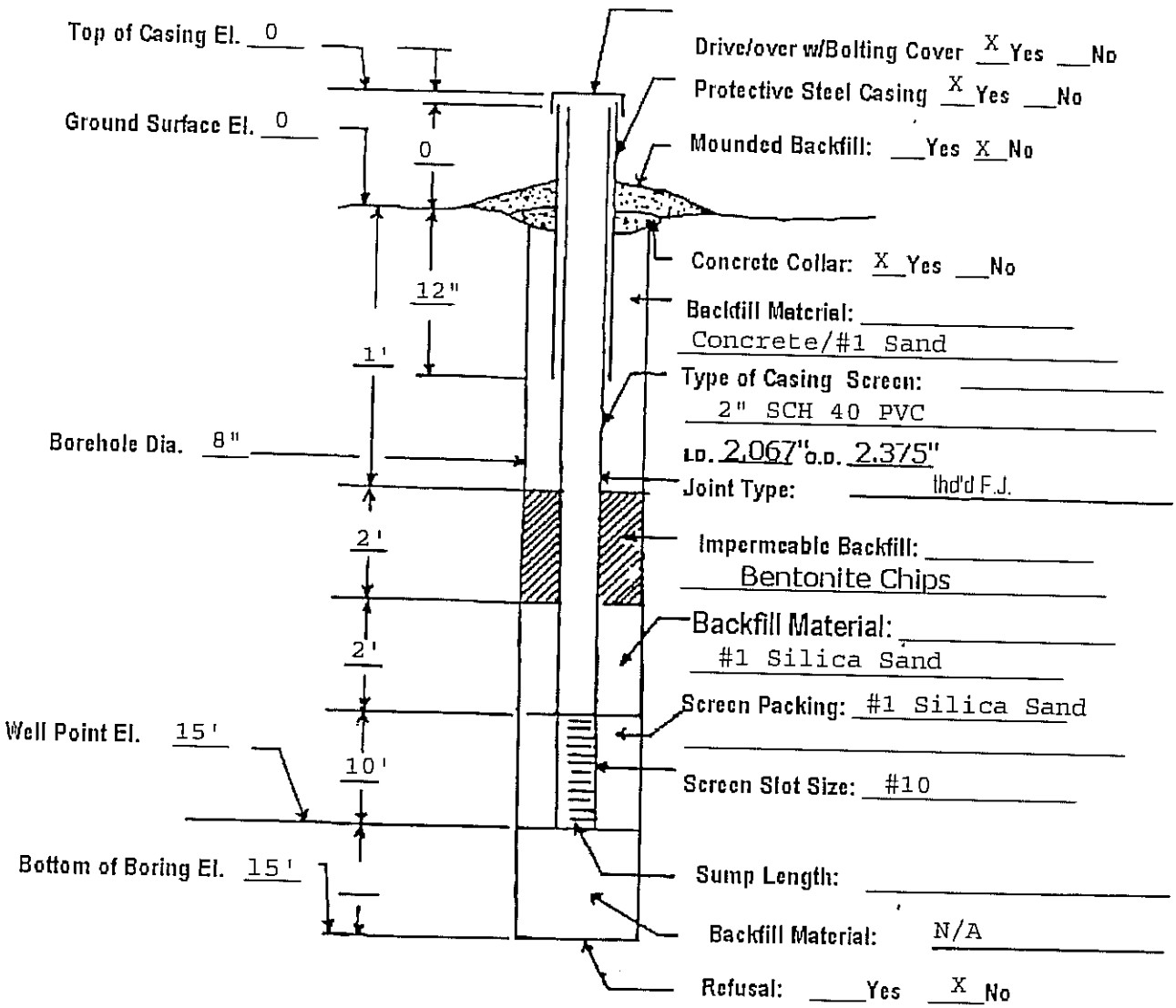
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

JOB# : E49-7726-06

Observation Well # HH-MW-10

ESI note: monitoring well ID=HMW-7



Materials Used:

Screen (PVC) 10'	Bentonite Pellets 1/2 bag	Locking Exp. Plug 1
Riser (PVC) 5'	Bentonite Chips	Lock
Plug (PVC) 1	Concrete Mix 1 bag	D/O 1
Slip Cap (PVC)	Portland	S/U
Silica Sand 350#		
Powdered Bentonite		

ESI note: monitoring well ID=HMW-8 (soil boring ID=HHMW-2)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc.	SHEET 1 OF 1 HOLE NO. HH-MW-2
	PROJECT NO. E49-7726-06	
	PROJECT NAME DOT Yard	BORING LOCATIONS per plan
FOREMAN - DRILLER MD/cb	LOCATION 17 Dr. Girling Drive Haverstraw, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 4¼" / 1 3/8" HAMMER WT. / 140# HAMMER FALL / 30"	OFFSET DATE START 9/15/06 DATE FINISH 9/15/06 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 6 FT AFTER 0 HOURS AT __FT AFTER __HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 / 6-12 / 12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									v moist		
5		1	ss	24"	14"	6'0"	7 / 8		wet		Dkgry brn FM SAND,sm silt
							8 / 8		v stiff		Olv blue brn SILT,lit clay
		2	ss	24"	4"	8'0"	2 / 2		wet		
							2 / 2		v loose		FC SAND,F gravel,lit silt
		3	ss	24"	14"	10'0"	2 / 3		wet		
10							4 / 4		medium		Gry CLAY
15											E.O.B. 14'0"
20											
25											
30											
35											
40											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-2

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

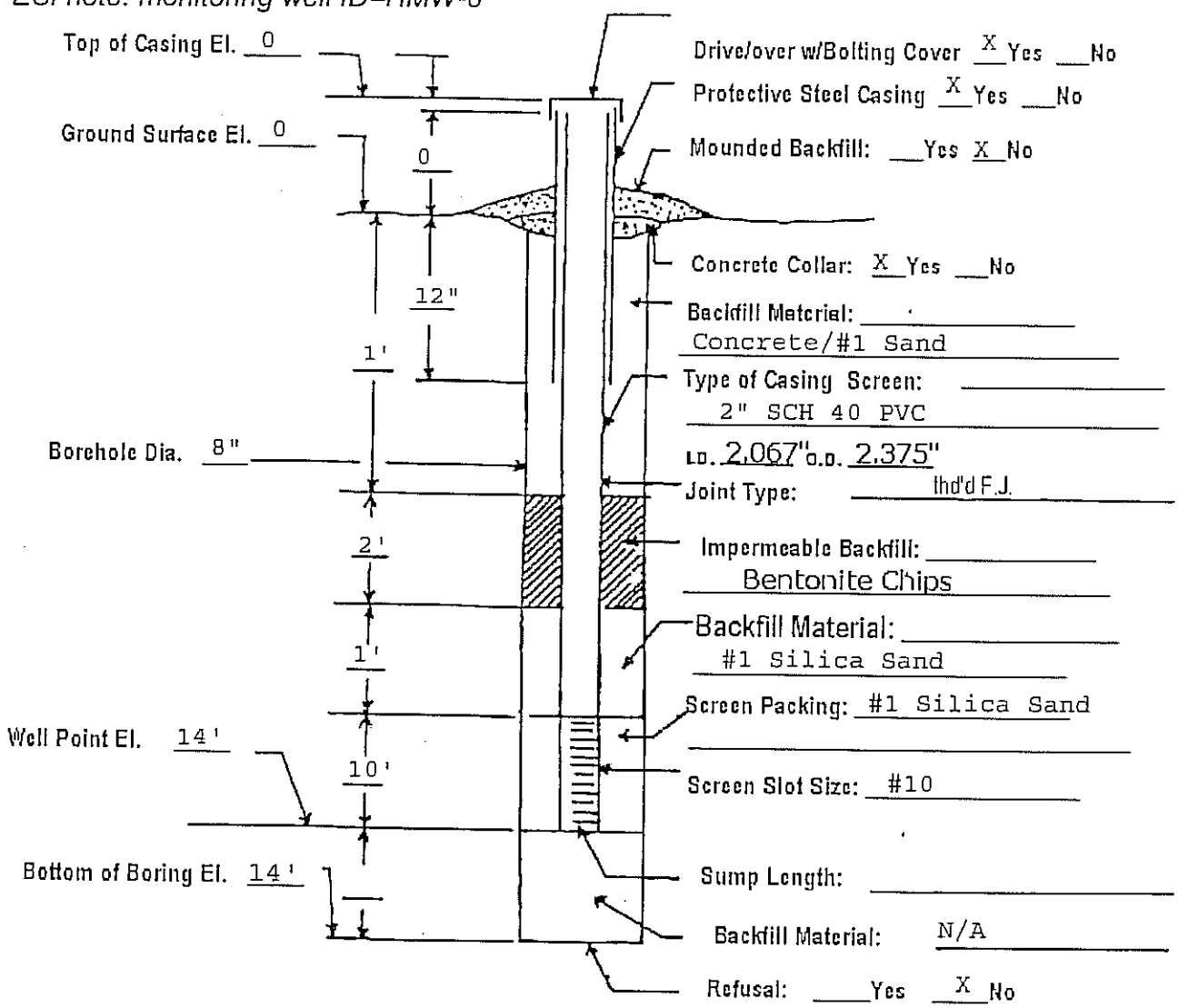
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-2

JOB# : E49-7726-06

ESI note: monitoring well ID=HMW-8



Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 350#
Powdered Bentonite

Bentonite Pellets 1/2 bag
Bentonite Chips
Concrete Mix 1 bag
Portland

Locking Exp. Plug 1
Lock
D/O 1
S/U

ESI note: monitoring well ID=HMW-9 (soil boring ID=HHMW-1)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc.	SHEET 1 OF 1 HOLE NO. HH-MW-1
	PROJECT NO. E49-7726-06	
	PROJECT NAME DOT Yard	BORING LOCATIONS per plan
FOREMAN - DRILLER MD/cb	LOCATION 17 Dr. Girling Drive Haverstraw, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 4¼" / 1 3/8" HAMMER WT. 140# HAMMER FALL 30"	OFFSET DATE START 9/15/06 DATE FINISH 9/15/06 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 7 FT AFTER 0 HOURS AT __ FT AFTER __ HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
									moist		Dkbrn FC SAND,sm F gravel,lit silt,tr cobble
5									wet		SAME,gry petroleum odor
10											
15											
											E.O.B. 15'0"
20											
25											
30											
35											
40											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-1

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

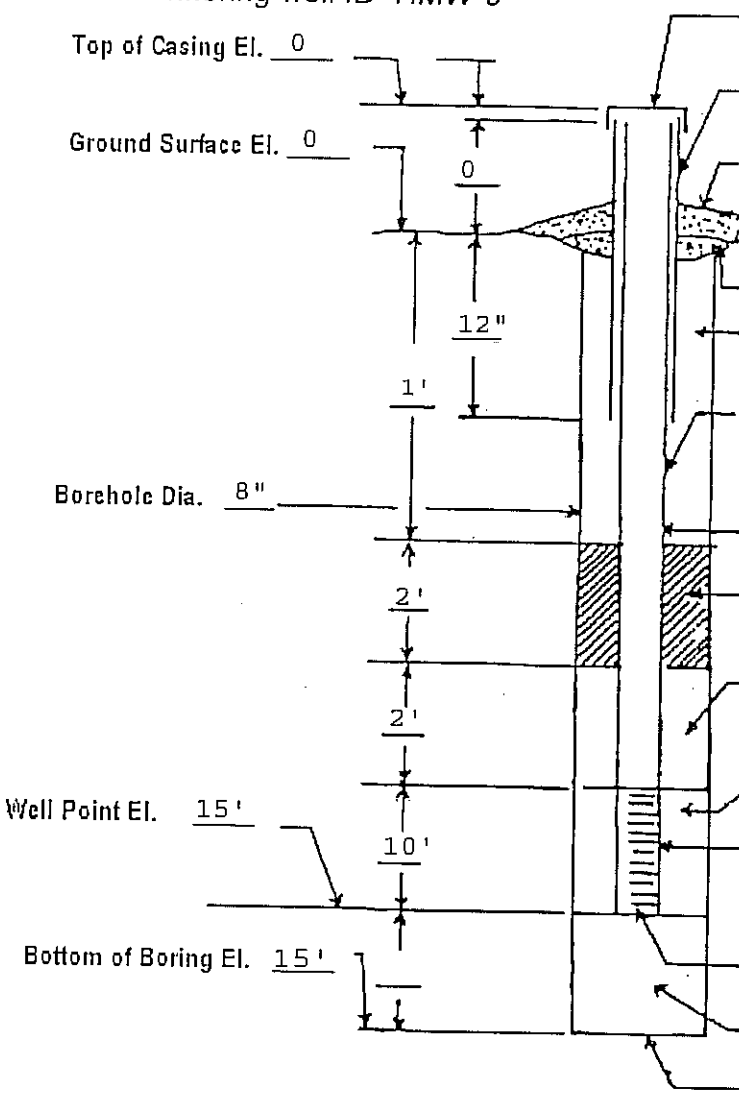
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

Observation Well # HH-MW-1

JOB# : E49-7726-06

ESI note: monitoring well ID=HMW-9



Drive/over w/Bolting Cover X Yes ___ No

Protective Steel Casing X Yes ___ No

Mounded Backfill: ___ Yes X No

Concrete Collar: X Yes ___ No

Backfill Material: Concrete/#1 Sand

Type of Casing Screen: 2" SCH 40 PVC

I.D. 2.067" O.D. 2.375"

Joint Type: Thd'd F.J.

Impermeable Backfill: Bentonite Chips

Backfill Material: #1 Silica Sand

Screen Packing: #1 Silica Sand

Screen Slot Size: #10

Sump Length:

Backfill Material: N/A

Refusal: ___ Yes X No

Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 300#
Powdered Bentonite

Bentonite Pellets 1/2 bag
Bentonite Chips
Concrete Mix 1 bag
Portland

Locking Exp. Plug 1
Lock
D/O 1
S/U

ESI note: monitoring well ID=HMW-10 (soil boring ID=HHMW-3)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc.	SHEET 1 OF 1 HOLE NO. HH-MW-3
	PROJECT NO. E49-7726-06	
	PROJECT NAME DOT Yard	BORING LOCATIONS per plan
FOREMAN - DRILLER MD/cb	LOCATION 17 Dr. Girling Drive Haverstraw, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT 6 FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: HSA / SS SIZE I.D.: 4¼" / 1 3/8" HAMMER WT.: / 140# HAMMER FALL: / 30" BIT	DATE START 9/15/06 DATE FINISH 9/15/06 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6 6-12 12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
0									moist		Brn FM SAND,sm C sand,lit silt,F gravel,tr brick
5									wet		SAME
10											
15											E.O.B. 14'0"
20											SET WELL
25											
30											
35											
40											

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-3

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

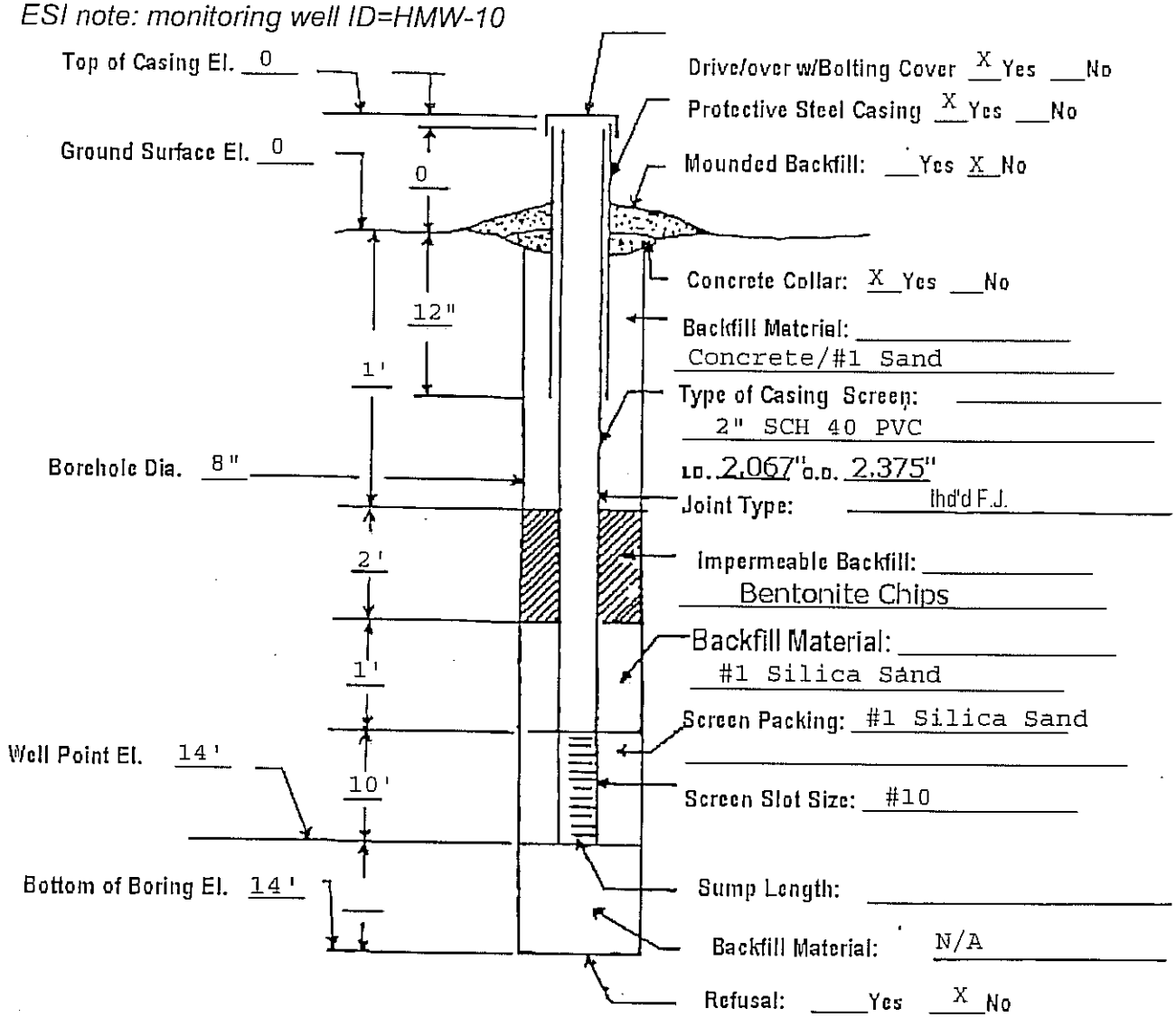
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

JOB# : E49-7726-06

Observation Well # HH-MW-3

ESI note: monitoring well ID=HMW-10



Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 350#
Powdered Bentonite

Bentonite Pellets 1/2 bag
Bentonite Chips
Concrete Mix 1 bag
Portland

Locking Exp. Plug 1
Lock
D/O 1
S/U

ESI note: monitoring well ID=HMW-11 (soil boring ID=HHMW-4)

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc.	SHEET 1 OF 1 HOLE NO. HH-MW-4
	PROJECT NO. E49-7726-06	
	PROJECT NAME DOT Yard	BORING LOCATIONS per plan
FOREMAN - DRILLER MD/cb	LOCATION 17 Dr. Girling Drive Haverstraw, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 4¼" / 1 3/8" HAMMER WT. / 140# HAMMER FALL / 30"	OFFSET DATE START 9/18/06 DATE FINISH 9/18/06 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 5 FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6	6-12	12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
5		1	ss	24"	17"	6'0"	6	3			wet loose		Brn FC SAND,sm F gravel
							2	2			wet		
		2	ss	24"	20"	8'0"	2	1			soft		Gry CLAY
							2	2			wet		
		3	ss	24"	14"	10'0"	2	2			soft		SAME
10							1	2					
15													E.O.B. 13'0" SET WELL
20													
25													
30													
35													
40													

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HH-MW-4

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

140 OXFORD ROAD - OXFORD, CONN. 06478-1943

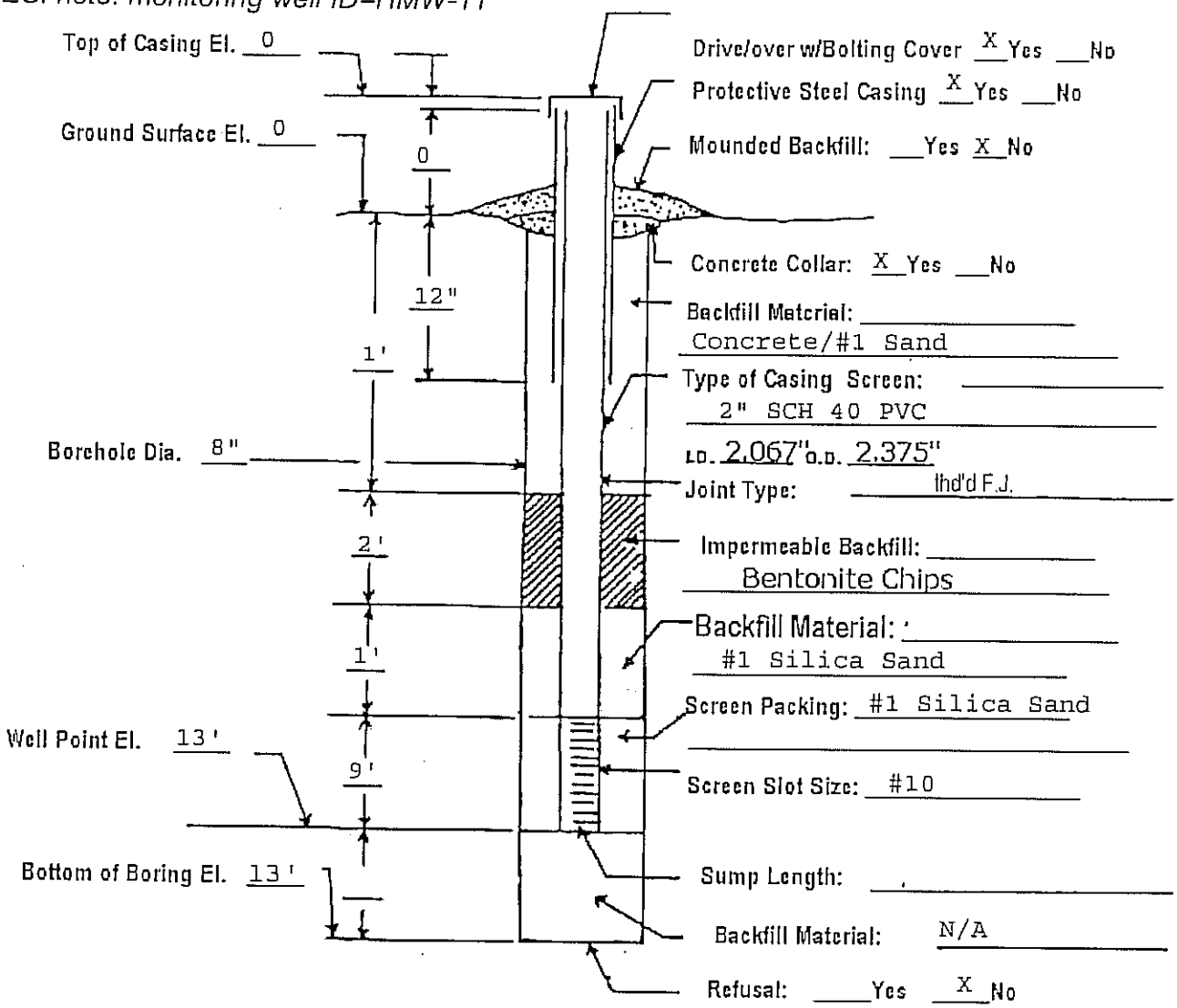
GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies

JOB# : E49-7726-06

Observation Well # HH-MW-4

ESI note: monitoring well ID=HMW-11

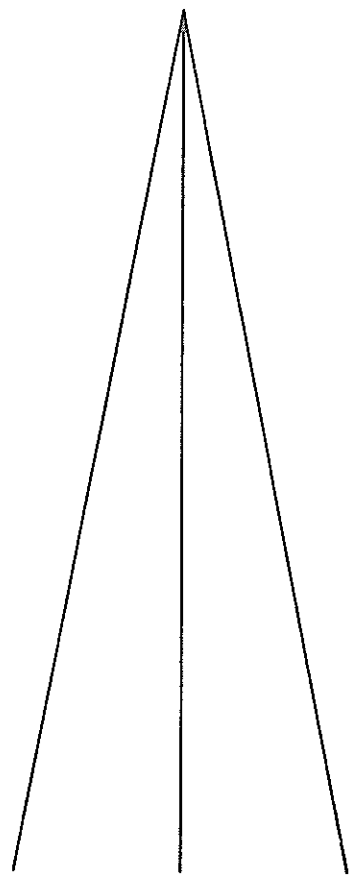


Materials Used:

Screen (PVC) 10'	Bentonite Pellets 1/2 bag	Locking Exp. Plug 1
Riser (PVC) 5'	Bentonite Chips	Lock
Plug (PVC) 1	Concrete Mix 1 bag	D/O 1
Slip Cap (PVC)	Portland	S/U
Silica Sand 350#		
Powdered Bentonite		

SOILTESTING, INC.

TO	Ecosystems Strategies Inc.	DATE	May 29, 2007
ADDRESS	24 Davis Avenue, Poughkeepsie, NY 12603-2332		
SITE LOCATION	DPW, Dr. Girling Drive, Haverstraw, NY		
REPORT SENT TO	Scott Spitzer		
SAMPLES SENT TO	Storage (Max. 60 days)		



140 Oxford Road
Oxford, Connecticut 06478
203-888-4531

Branch Office:
White Plains, New York 10607
914-946-4850

JOB NO.
E20-7915-07

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc.	SHEET 1 OF 1 HOLE NO. HMW-12
	PROJECT NO. E20-7915-07	
	PROJECT NAME DPW	BORING LOCATIONS as directed
FOREMAN - DRILLER DD/ja	LOCATION Dr. Girling Drive, Haverstraw, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 4¼" / 1 3/8" HAMMER WT. / 140# HAMMER FALL / 30" BIT	OFFSET DATE START 5/23/07 DATE FINISH 5/23/07 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 5 FT AFTER 0 HOURS AT __FT AFTER __HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6	6 - 12	12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
												4"	Blacktop
5		1	ss	24"	12"	7'0"	12	8			wet compact		Red brn FC SAND,F gravel,sm silt
							8	8					
10		2	ss	24"	18"	12'0"	14	5			wet stiff	11'6"	Gry CLAY
							5	6					
15		3	ss	24"	18"	17'0"	2	1			wet soft		
							2	1					E.O.B. 17'0"
20													
25													
30													
35													
40													

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HMW-12

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

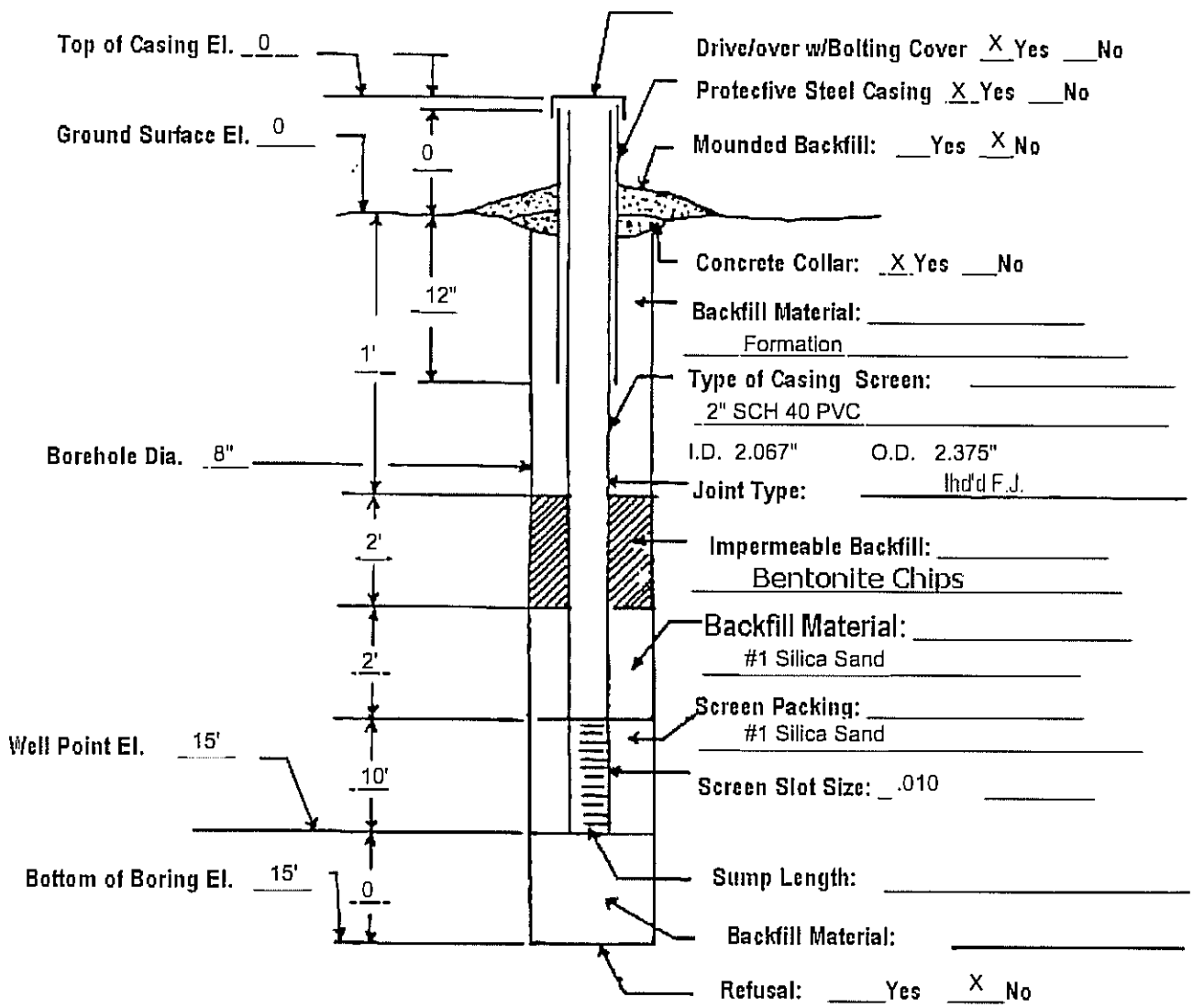
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

CLIENT: Ecosystems Strategies Inc.

Observation Well # MW-12

JOB# : E20-7915-07



Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 300#
Powdered Bentonite

Bentonite Pellets
Bentonite Chips 1/2
Concrete Mix 1
Portland

Locking Exp. Plug 1
Lock 1
D/O 1
S/U

SOILTESTING, INC. 140 OXFORD RD. OXFORD, CT 06478 CT (203) 888-4531 NY (914) 946-4850	CLIENT: Ecosystems Strategies Inc.	SHEET 1 OF 1 HOLE NO. HMW-13
	PROJECT NO. E20-7915-07	
	PROJECT NAME DPW	BORING LOCATIONS as directed
FOREMAN - DRILLER DD/ja	LOCATION Dr. Girling Drive, Haverstraw, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 4¼" / 1 3/8" HAMMER WT. / 140# HAMMER FALL / 30"	OFFSET DATE START 5/23/07 DATE FINISH 5/23/07 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT 5 FT AFTER 0 HOURS AT __FT AFTER __HOURS		BIT

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	SAMPLE Type	SAMPLE PEN	SAMPLE REC.	SAMPLE DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6	6 - 12	12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
												3"	Blacktop
													Brn FC SAND,F gravel,sm silt
5													
		1	ss	24"	18"	7'0"	6	6			wet	6'0"	
							10	10			v stiff		Gry silty CLAY,lit VF sand
10													
		2	ss	24"	18"	12'0"	2	1			wet		
							1	1			v soft		
15													
													E.O.B. 15'0"
20													
25													
30													
35													
40													

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. HMW-13

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

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M = MEDIUM
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MONITOR WELL INSTALLATION DETAIL

SOILTESTING, INC.

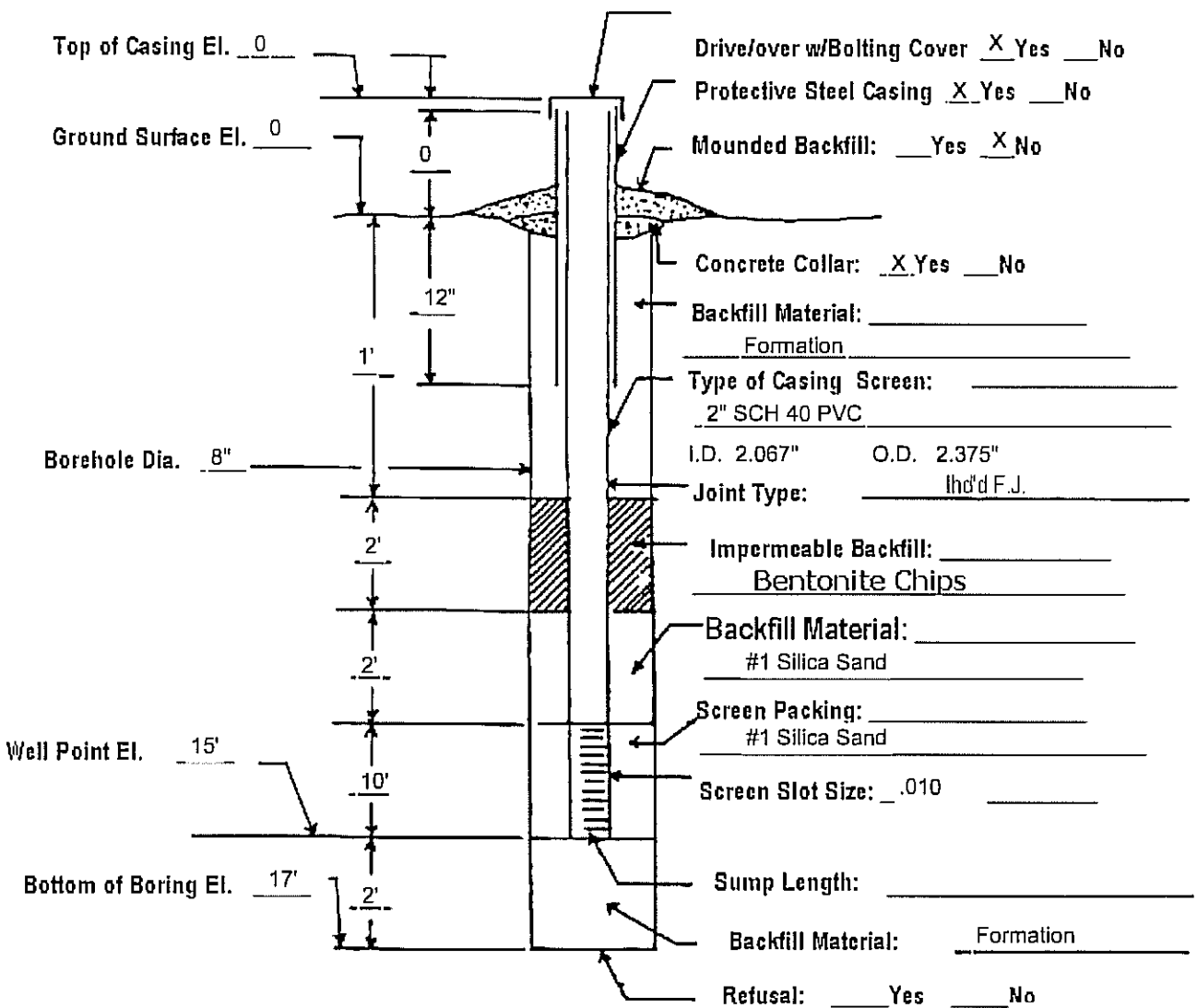
140 OXFORD ROAD - OXFORD, CONN. 06478-1943

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling

Observation Well # MW-13

CLIENT: Ecosystems Strategies Inc.

JOB# : E20-7915-07



Materials Used:

Screen (PVC) 10'
Riser (PVC) 5'
Plug (PVC) 1
Slip Cap (PVC)
Silica Sand 300#
Powdered Bentonite

Bentonite Pellets
Bentonite Chips 1'2
Concrete Mix 1
Portland

Locking Exp. Plug 1
Lock 1
D/O 1
S/U

APPENDIX F

Groundwater Monitoring Well Sampling Log Form

Ecosystems Strategies, Inc.

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG
Haverstraw Harbors Site (NYSDEC Site ID: C344060)
51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date:
Field Personnel _____
Monitoring Well No.: _____
PID Reading: _____ ppm

Depth to well water: _____ ft
Depth to well bottom: _____ ft.
Purging Device (pump type): Geopump/ _____
Purged Volume: _____ gallon

Purged Water Characteristics:-

Odor (circle one): slight/moderate/strong; **Sheen** (circle one): slight/moderate/strong **LNAPL** (circle one): Yes/No
LNAPL thickness (in.):

Clock Time 24 hr	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged lilters	Temp °C	Spec. Cond.2 uS/CM	pH	ORP[3] mv	DO mg/L	Turbidty NTU	Comments
Stabilization Criteria					3%	3%	+-0.1	+-10mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25°C
3. Oxidation reduction potential (ORP)

APPENDIX G

SSDS Inspection Forms

Ecosystems Strategies, Inc.

Monthly SSDS Inspection Form

Complete one inspection form per SSDS located in each building.

Site Name: Haverstraw Harbors Site

NYSDEC BCP Site No.: C366040

Building/System ID: _____

Instructions:

1) This form is to be maintained on-site and made available to site owner, ESI and NYSDEC, as needed.

2) Inspect the SSDS on amonthly basis. Record U-manometer readings as described in the instructions adjacent to each U-manometer (to be provided).

3) The liquid level on the side of the tubing connected to the pipe should be higher than the side of the tubing exposed to the air.

4) If you have questions on how to read the manometer please contact Ecosystems Strategies Inc. (ESI) at (845)452-1658.

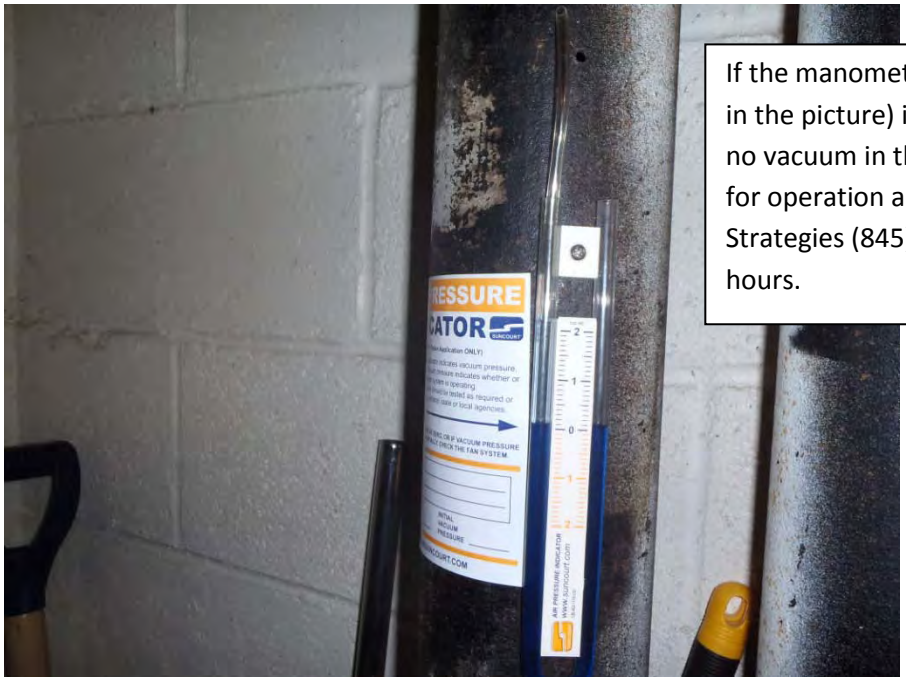
5) **If the liquid level is NOT higher on the side of the tubing exposed to the air, contact ESI within 48 hours.**

Date	Inspector Name	Inspector Signature	SSDS units (fan/blower) operating? (Yes or No)	SSDS audible and/or visual fail-safe system operating? (Yes or No)	U-manometer Readings (inches of water column)			Additional Notes
					UM-1*	UM-2*	UM-3*	

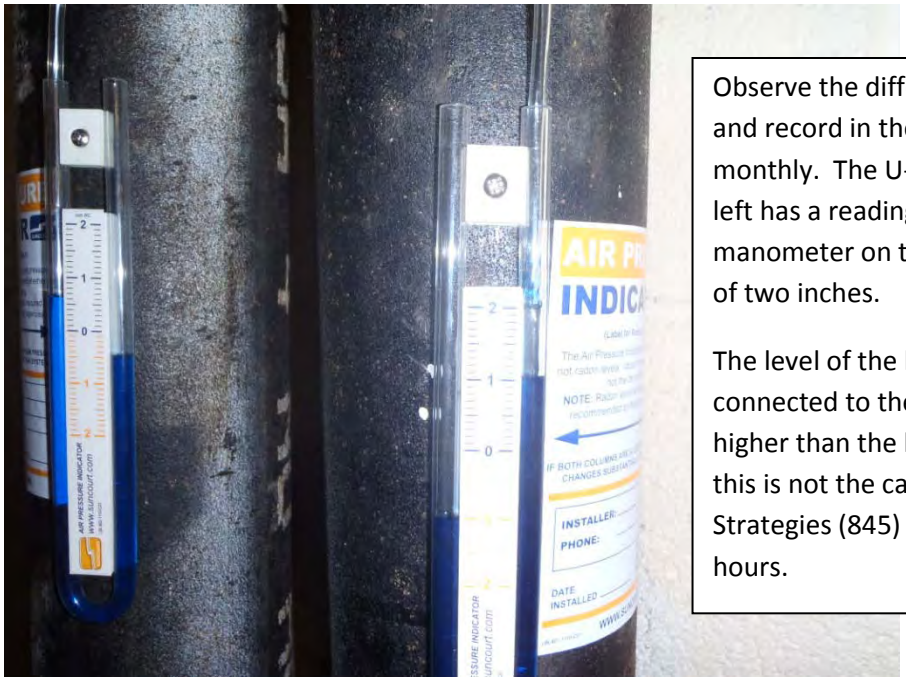
* UM - U-manometer attached to riser pipe. Any given SSDS could have several U-manometers. The number of U-manometers will be determined based on the system configuration.

Ecosystems Strategies, Inc.
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

Haverstraw Harbors Site
Reading U-manometer Instructions



If the manometer is leveled (like shown in the picture) it indicates that there is no vacuum in the pipe. Check the fan for operation and call Ecosystems Strategies (845) 452-1658 within 48 hours.



Observe the difference in the liquid and record in the reporting form monthly. The U-manometer on the left has a reading of 1 inch. The U-manometer on the right has a reading of two inches.

The level of the liquid in the leg connected to the pipe should be higher than the leg exposed to air. If this is not the case call Ecosystems Strategies (845) 452-1658 within 48 hours.