

**Metal Etching Site**  
**NASSAU COUNTY, FREEPORT, NEW YORK**  

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**Site Management Plan**

**NYSDEC Site Number: 130110**

**Prepared for:**  
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Division of Environmental Remediation  
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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 the Metal Etching Co, Inc. site under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program administered by New York State Department of Environmental Conservation (NYSDEC). The Class 2 inactive hazardous waste disposal site (Site No. 130110) was remediated in accordance with the Record of Decision (ROD) (NYSDEC 2007)<sup>1</sup>.

##### 1.1.1 General

EA Engineering, P.C., and its affiliate EA Science and Technology (EA), along with its Joint Venture Partner, The Louis Berger Group, Inc. (Berger) were tasked by the NYSDEC to oversee the remediation of a 1.05 acre property located in Freeport, Nassau County, New York. The Remedial Party, EA and Berger, was required to investigate and oversee the remediation of contaminated media at the site. A figure showing the site location and boundaries of this 1.05-acre site is provided in Figure 1. The boundaries of the site are more fully described in the metes and bounds site descriptions that are part of three Environmental Notices (ENs) recorded with Nassau County in March 2014 and included in Appendix A. One EN was filed for each of the three parcels that make up the site.

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 ENs are extinguished. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in NYS.

This SMP was prepared by EA in accordance with the requirements in NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation (NYSDEC 2010)<sup>2</sup> 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 ENs for the site.

##### 1.1.2 Purpose

The site contains contamination left after completion of the remedial action. ECs have been incorporated into the site remedy to control exposure to remaining contamination during the use

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1. NYSDEC. 2007. Record of Decision. March.

2. NYSDEC. 2010. DER-10 Technical Guidance for Site Investigation and Remediation.

of the site to ensure protection of public health and the environment. Each of the three ENs recorded with the Nassau County Clerk requires 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 ENs 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 ENs 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 ECs and ICs; (2) media monitoring; and (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports. To address these needs, this SMP includes two plans: (1) an EC/IC Plan for implementation and management of EC/ICs; and (2) a Monitoring Plan for implementation of site monitoring.

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 ENs. Failure to properly implement the SMP is a violation of the ENs.
- Failure to comply with this SMP is also a violation of ECL, 6 New York Code of Rules and Regulations Part 375 and, thereby, subject to applicable penalties.

### **1.1.3 Revisions**

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the ENs 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 Metal Etching site is a Class 2 Site listed on the NYSDEC Registry of Inactive Hazardous Waste Sites (No. 1-30-110). The site is located adjacent to Freeport Creek at 435 South Main Street, Freeport, Nassau County, New York. A site location map is presented in Figure 1. The site is currently owned by Freeport Creek Associates and leased by Main Street Marina, 500 South Main Street, Freeport, New York. The Metal Etching property is designated as Section 62, Block 45, and Lots 144, 145, and 158 on the tax maps. The Metal Etching property is a 1.05 acre L-shaped area, bounded by Ray Street East and a commercial property to the north, Freeport

Creek to the south and east, and Main Street and Ray Street East to the west. Figure 1 depicts the site boundaries. The boundaries of the site are more fully described in Appendix A – Environmental Notices.

The site is currently used as a boat dealership, marina, and boat storage yard. Operations at the site are conducted in a single 2,400 ft<sup>2</sup> building located on the northeast corner of the property. A smaller 1,200 ft<sup>2</sup> building, located on the western portion of the property, has been restored and is used for office space for the boat dealership. Minor boat restoration activities are performed within the 2,400 ft<sup>2</sup> building and include engine rebuilds, sanding, and painting/varnishing. Prior to remediation, most areas of the site grounds were concrete or asphalt paved. Portions of the site adjacent to Freeport Creek were covered with gravel. Soil cover was observed on a small stretch of land on the southern property beneath a two-story boat rack.

### 1.2.2 Site History

The former Metal Etching buildings at the site were erected prior to 1954; however, the exact date of construction is unknown. These connected buildings occupied approximately 26,650 ft<sup>2</sup> of the property (approximately 60 percent of the Metal Etching portion of the site). Aside for the 2,400 ft<sup>2</sup> building, which was a portion of the Metal Etching quarters, the Metal Etching buildings were demolished in 2001; however, the concrete slabs and footings of the buildings remained in place at the site. A 6-in. thick concrete slab covering an approximate area of 7,750 ft<sup>2</sup> was the foundation of the Metal Etching plating slab and is visible to the west of the 2,400 ft<sup>2</sup> building.

Prior to 1966, the site operated as Flores Manufacturing, which manufactured handbags. The manufacturing process included decorative plating with nickel, chromium, and cadmium. From 1966 to 1999, Metal Etching Corporation manufactured metal nameplates, instrument panels, rulers, and miscellaneous plated products. All products were etched or printed. The process of etching included anodizing, chromate conversion, and chrome/nickel plating. From 1973 to 1982, Metal Etching Co. operated under the name of Plastic Associates, as a wholly owned subsidiary. From July 1982 to June 1999, Metal Etching Co., Inc. was the entity that operated the site. In the later years of the operation of Metal Etching Co., Inc., several of the metal coating operations were discontinued; i.e., chromate conversion (discontinued in 1997), chrome plating (discontinued in 1997), and anodizing (discontinued in 1998). All operations terminated in 1999 and Metal Etching Co., Inc. abandoned the premises during September of 1999. The facility buildings were demolished around 2001. During the demolition, limited decontamination and/or investigation was performed under the oversight of NYSDEC Resource Conservation and Recovery Act personnel. Two 4,000 gal aboveground storage tanks (ASTs), which formerly contained ferric chloride, were decontaminated and removed from the site during demolition activities.

### 1.2.3 Geologic Conditions

The top 3-4 ft of soil at the site consists of compacted fill material which includes sand, gravel, and brick and wood debris. Fill is underlain by organics and shells to approximately 11 ft below

ground surface (bgs). A geologic cross section of the site is provided in Figure 2. Some fill was excavated, disposed offsite, and replaced with clean granular fill during the 2011 remedial action. In areas depicted on Figure 3, fill has been excavated, disposed offsite and replaced with clean granular fill.

Depth to groundwater ranges from 3 to 5 ft bgs and is highly influenced by tides, as discussed in the remedial investigation (RI) report (Environmental Resource Management [ERM] 2007)<sup>3</sup>. Groundwater flow is to the southeast across the site. Overburden and bedrock groundwater flow is shown in Figure 4.

### **1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS**

A 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 RI Report (ERM 2007)<sup>3</sup>.

Generally, the RI determined that, based on the standards, criteria, and guidance (SCGs) used for the site, surface soil, subsurface soil, groundwater, and sediment contained metals and volatile organic compounds (VOCs) contamination that was to be addressed in the remedy selection. Soil vapor contained VOC contamination which was addressed by an interim remedial measure (IRM) conducted at the site prior to the remedial action.

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

#### **Soil**

Site soil was analyzed for VOCs and metals during the RI. Analytical results indicated that the site soil contained concentrations of VOCs and metals exceeding their SCGs. Metals were detected exceeding their SCGs in the top 7 ft of soil; specifically, nickel, copper, and zinc were detected at concentrations exceeding their SCGs. VOC contamination varied across the site. The eastern area was contaminated with petroleum related compounds including ethylbenzene, chlorobenzene, and xylene. Samples collected from the western area contained xylene and naphthalene exceeding their SCGs. Contaminants tetrachloroethene (PCE) (non-detect [ND] to 4.3 mg/kg), trichloroethene (TCE) (ND to 10 mg/kg), and methyl tert butyl ether (MTBE) (ND to 1.5 mg/kg) were the predominant VOCs detected in soil samples above their SCGs in the eastern central area of the site. The western central area of the site contained only TCE above its SCG.

Table 1 and Figures 5-5D show site soil sampling results from the RI.

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3 ERM. 2007. Remedial Investigation Report Metal Etching Co. Inc. Site (NYSDEC Site No. 1-30-110), Freeport, New York. Environmental Resource Management. January.

## Site-Related Groundwater

Groundwater samples were collected from 10 on-site monitoring wells at the water table interface and three monitoring wells installed directly above the clay layer. Samples collected from all on-site monitoring wells contained concentrations of VOCs including MTBE and PCE; and PCE breakdown contaminants TCE, dichloroethene (DCE), and vinyl chloride (VC). Samples collected from above the clay layer contained higher concentrations of PCE, TCE, DCE, and VC than samples collected from the water table interface. Concentrations of PCE from samples collected above the clay layer ranged from ND to 1,600  $\mu\text{g/L}$ , while concentrations of PCE from samples collected at the water table interface ranged from ND to 250  $\mu\text{g/L}$ . The highest concentrations of PCE and breakdown contaminants were detected in monitoring wells located west and south of the 2,400  $\text{ft}^2$  building in monitoring wells MW-02S/D and MW-07S/D. The distribution and concentrations of breakdown contaminants across the site indicated that degradation was occurring at the site.

MTBE was detected in groundwater samples across the site at concentrations ranging from ND to 2,100  $\mu\text{g/L}$ . The highest groundwater concentration of MTBE was collected as a grab sample at boring SB-21, south of MW-02S/D in the area of a suspected underground storage tank (UST) southwest of the 2,400  $\text{ft}^2$  building.

Table 2 and Figures 6A and 6B show the groundwater sampling results from the RI.

## Site-Related Soil Vapor Intrusion

The potential for vapor intrusion in on-site buildings was evaluated prior to the remedial action. Subslab vapor samples collected in July 2004 indicated that both PCE and TCE were present in subslab air beneath both on-site buildings (office building and warehouse building). The smaller office building subslab vapor sample contained PCE at a concentration of 292  $\mu\text{g/m}^3$  and TCE at a concentration of 187  $\mu\text{g/m}^3$ . The subslab vapor sample from the larger warehouse building contained PCE at a concentration of 5,772  $\mu\text{g/m}^3$  and TCE at a concentration of 16,014  $\mu\text{g/m}^3$ . Indoor air samples collected from both buildings did not contain detections of PCE or TCE. Potential vapor intrusion was addressed by the installation of sub-slab depressurization systems in March 2005 at the two on-site buildings prior to the remedial action; however, site soil vapor will continue to be monitored as part of the EC/IC Plan as discussed in Section 2.0.

Table 3 and Figure 7 show the soil vapor sampling results from the RI.

## Underground Storage Tanks

One UST was removed from the western area of the site in 1990, prior to the RI. This tank contained heating fuel. During the RI, two additional potential USTs were identified on the site. One was identified east of the smaller building and the other was identified south of the larger building. Contents were unknown prior to the remedial action.



## Sediment

Sediment within Freeport Creek surrounding the perimeter of the site was sampled during the RI. Two of the eight samples contained metals (i.e., nickel, chromium, and zinc) exceeding their respective SCGs. The sample collected from sediment just below the outfall in the northeastern part of the site contained nickel at a concentration of 40.4 mg/kg, exceeding the Effect Range-Low (ER-L) of 20.9 mg/kg. The sample collected south of the southeastern bulkhead contained chromium (127 mg/kg) and nickel (28.4 mg/kg) at concentrations exceeding their respective ER-L values (81 mg/kg and 20.9 mg/kg, respectively), as well as zinc (425 mg/kg) exceeding the Effect Range-Medium (ER-M) of 410 mg/kg. ER-L is the 10<sup>th</sup> percentile on a series of data that is ranked from the lowest, or least toxic concentrations, to the highest, or more toxic concentrations. ER-M is the 50<sup>th</sup> percentile on this continuum.

In addition to sediment within Freeport Creek, sediment from within an existing storm drain was sampled during the RI. The samples contained metals (i.e., nickel, copper, and zinc) exceeding their respective SCGs. Table 4 and Figure 5D show the sediment sampling results from the RI.

### 1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the NYSDEC-approved remedial design, which was part of the Contract Documents dated August 2010 and addendums dated September 28, 2010, September 30, 2010, and October 1, 2010.

The following is a summary of the remedial actions performed at the site:

- Excavation of 2,684 yd<sup>3</sup> of soil/fill exceeding soil cleanup objectives (SCOs) listed in Table 5A within identified excavation limits, to low-tide groundwater elevation, approximately 5 ft bgs.
- Construction and maintenance of a soil cover system consisting of a geotextile demarcation layer covered by asphalt or permeable pavement to prevent human exposure to contaminated soil/fill remaining at the site.
- Execution and recording of three ENs to restrict land use to commercial or industrial uses, and prevent future exposure to any contamination remaining at the site.
- Removal of approximately 2 yd<sup>3</sup> of sediment from the on-site storm water system and disposal at an approved offsite facility.
- Closure and removal of four USTs on-site in accordance with NYSDEC regulations.
- Limited removal of approximately 183 yd<sup>3</sup> of sediment from delineated area within Freeport Creek and disposal at an approved offsite facility.

- Development and implementation of a SMP for long-term management of remaining contamination as required by the ENs, which include plans for: (1) IC/ECs, (2) monitoring, (3) operation and maintenance, and (4) reporting.

Remedial activities were completed at the site in January 2012.

#### **1.4.1 Removal of Contaminated Materials from the Site**

Soil and sediment hot spots were identified on-site and delineated during design activities prior to the remedial construction. Hot spot locations were based on soil sample collection and analysis performed during the 2007 RI (ERM 2007)<sup>3</sup> and the 2008 additional site investigation.

##### **Soil**

Remedial activities at the site consisted of excavation and offsite disposal of contaminated soils from within excavation areas EX-1 through EX-7 shown on Figure 3. Asphalt and concrete top layers within excavation limits were saw-cut using walk-behind saw equipment, broken up by a CAT 320 excavator, and disposed of offsite. Remnant foundation walls encountered within excavation areas were removed to the bottom of the excavation limits, broken up, and disposed of offsite along with other construction and demolition (C&D) debris. Approximately 240 tons of C&D materials were removed and disposed offsite at 110 Sand Landfill in Melville, NY.

Soil within excavation areas EX1, EX3, EX4, EX5, and EX6 was removed down to 5 ft bgs. Soil within excavation area EX2 was removed down to 1 ft bgs. Contaminated soil from the excavation areas was removed using a CAT 320 excavator and disposed offsite at 110 Sand Landfill. During excavation within EX6, fuel-impacted soil was encountered directly to the west of excavation limit points EX6-7 and EX6-8. Excavation area EX6 was extended an additional 9 ft to the east of excavation limit points EX6-7 and EX6-8, down to approximately 5 ft bgs to remove visual impacts. Two additional USTs were uncovered within EX3, to the east side of the one-story brick office building. All product from within the USTs was pumped and disposed of at International Petroleum Corporation of Delaware. Cleaned USTs were delivered to Gershow Recycling in Freeport, NY.

During excavation in the vicinity of excavation limit points EX5-11, EX5-12, and EX5-13, down to 5 ft bgs, two USTs were encountered. These USTs were found to extend within the footprint of excavation area EX1. The area to the west of points EX5-11 and EX5-13, and entire excavation area EX1 were excavated down to the bottom of the USTs (approximately 5 ft bgs), and then further excavated another 2-3 ft below the bottom of the USTs to remove visually impacted soils.

Approximately 5,500 tons of contaminated soil was excavated and disposed off-site. This includes approximately 110 tons of fuel-impacted soil encountered within EX1 and EX6, and C&D materials. The fuel-impacted soil encountered at excavations EX1 and EX6 were segregated from other excavated soil, characterized, and disposed at 110 Sand Landfill, following disposal facility approval.

In addition, during excavation activities, monitoring wells MW02S/MW02D, MW03S/MW03D, and MW07S/MW07D were decommissioned, removed, and disposed of offsite in accordance with the Contract Documents. Monitoring wells MW-08S and MW-08D replaced MW-02S and MW-02D; monitoring wells MW-09S and MW-09D replaced MW-07S and MW-07D; and monitoring wells MW-10S and MW-10D replaced MW-03S and MW-03D.

### **Storm Drain Sediment**

Sediment from within an 18-in. reinforced-concrete storm pipe located in the east portion of the site was cleaned out on May 16, 2011 using a vactor truck (2100 Series DEC 1A-727).

No sediment or wash water was observed to flow out of the pipe into Freeport Creek from the outfall end. Following pipe clean out activities, water that had been pumped from the manhole during clean out activities was decanted from the vactor truck back into the manhole, then sediment from the vactor truck was loaded into 55 gal drums. Seven drums were packed with sediment and staged on-site until disposal at Residuals Management Services, Inc. (RMS) in Deer Park, NY on October 3, 2011.

### **Freeport Creek Contaminated Sediment**

Dredging of contaminated sediment located in the 40 ft × 60 ft targeted area within Freeport Creek (delineated by excavation limit points EX7-1 through EX7-4) was performed between 11 and January 20, 2012. Wood-finger docks were removed prior to dredging and restored following dredging activities. A turbidity barrier was installed prior to dredging operations to prevent migration of sediment outside of the targeted area and was removed following completion of dredging activities.

Pre- and post-dredging surveys of the dredging area were performed by Alphonse Pesce Land Surveying to verify the sediment removal limits and the volume of sediment removed. Dredging was performed by Hancock Bulkhead by means of clamshell boom mechanical dredging equipment. Sediment removal progressed in a grid pattern within the targeted area. AARCO removed sediment from the on-site barge and transported it to 110 Sand Landfill. Approximately 250 tons of dredged sediment were transported and disposed offsite.

A list of the ER-Ls and ER-Ms for the primary contaminants of concern is provided in Table 5B.

A figure showing areas where excavation was performed is shown in Figure 3.

#### **1.4.2 Site-Related Treatment Systems**

Two sub-slab depressurization systems (SSDSs) that were installed in March 2005 in the on-site buildings remain. The SSDS that was installed in the office building was not operational from October 2012 until April 2014, when it was repaired. The SSDS that was installed in the warehouse building has not been operational since October 2012. Both systems were damaged during Superstorm Sandy in October 2012. Post-remedial action termination sampling was

conducted in November 2013 and March 2014 to assess current soil vapor conditions. An evaluation of the need for repairing the warehouse SSDS to return to operational status and/or a decision to decommission the warehouse SSDS will be made in the near future dependent upon the results of the termination sampling events, and in consultation with NYSDEC and New York State Department of Health (NYSDOH). No additional long-term treatment systems were installed as part of the site remedy.

### 1.4.3 Remaining Contamination

Per the ROD, excavation depth was limited by the low-tide groundwater elevation; therefore, known contamination remains at the site. Mirafi<sup>®</sup> 180N/O non-woven geotextile was installed at a depth of 5 ft in excavation areas EX3, EX4, EX5, and EX6; it was installed at a depth of 1 ft in excavation areas EX1 and EX2.

During the RI, VOC and metals contamination was identified in various locations throughout the site deeper than the maximum excavation depth of 5 ft. Concentrations of metals and VOCs exceeded the SCOs at sampling intervals 7-8 ft bgs and 12 ft bgs. VOCs (i.e., xylene and naphthalene) were identified in the western area of the site near excavation EX3 7-8 ft bgs and 12 ft bgs. Various VOCs including TCE, benzene, toluene, and MTBE were identified in the central area of the site near excavation EX5 within intervals 7-8 ft bgs and 12 ft bgs. Xylenes were identified 7-8 ft bgs and 12 ft bgs in the northeast area of the site near an existing electrical conduit. Ethylbenzene, xylene, and chlorobenzene were identified 8 ft bgs in the southeast area of the site.

Metals including chromium, copper, nickel, and zinc were identified at concentrations exceeding the SCOs in soil within the central portion of the site 7-8 ft bgs and 12 ft bgs. Copper, nickel, and zinc were identified in soil within the east area of the site 7-8 ft bgs and 12 ft bgs. A confining clay layer was identified 31-38 ft bgs across the site.

Confirmation soil samples were collected at the excavation boundaries following remediation work. VOCs detected in confirmation soil samples with concentrations exceeding the site-specific SCGs include xylenes (north sidewall of EX1 and south central area of EX5); and 1,2-DCE as a combination of *cis*- and *trans*-1,2-DCE, and toluene (south central area of EX5).

Metals detected in confirmation soil samples with concentrations exceeding the site-specific SCGs include chromium, copper, nickel, and zinc. Some confirmation samples collected from the bottom of excavations EX1 and EX2 contained all four metals at concentrations in exceedance of the site-specific SCGs.

Of the three confirmation samples collected from the bottom of EX3, only one sample contained zinc at a concentration exceeding the site-specific SCGs. Four of the five side wall samples from EX3 contained zinc at a concentration exceeding the site-specific SCGs as well.

The bottom sample collected from EX4 contained chromium, copper, and zinc at concentrations exceeding the SCGs, while only one of the three side wall samples from EX4 contained a concentration of zinc exceeding the site-specific SCGs.

A majority of the bottom samples of EX5 contained a concentration of copper exceeding the site-specific SCGs, while the northwest quadrant contained chromium and the northeast quadrant contained nickel at concentrations exceeding the respective site-specific SCGs. A majority of side samples from EX5 contained concentrations of copper and zinc exceeding the site-specific SCGs, while 4 of 13 samples contained concentrations of nickel exceeding the site-specific SCGs. Only one side wall sample from EX5 contained chromium at a concentration exceeding the site-specific SCGs.

Excavation EX6 consisted of a northern and southern portion separated by the utility right-of-way. Both bottom samples in the northern portion and all three of the bottom samples in the southern portion contained concentrations of copper and zinc exceeding the site-specific SCGs. One of the northern bottom samples and two of the three southern bottom samples contained nickel at a concentration greater than the site-specific SCGs. All side wall samples collected from EX6 contained concentrations of zinc exceeding the site-specific SCGs, while all but two (along the northern and northwestern excavation boundary) contained concentrations of copper exceeding the site-specific SCGs. All but two of the side wall samples collected from the southern portion of EX6 and one of the side wall samples collected from the northern portion of EX6 (along the boundary with the right-of-way) contained nickel at a concentration exceeding the site-specific SCGs. One side wall sample along the southern boundary of EX6 contained a concentration of chromium at a concentration exceeding the site-specific SCGs.

EX7 was a 2 ft excavation within Freeport Creek. Documentation samples collected following dredging activities contained copper and mercury exceeding their respective ER-Ls of 34 mg/Kg and 0.15 mg/Kg. Sample location EX7P2 contained copper at a concentration of 299 mg/Kg exceeding the Effects Range-High (ER-H) of 270 mg/Kg. Sample location EX7P3 contained mercury at a concentration of 1.86 mg/Kg exceeding the ER-H of 0.71 mg/Kg. Four of the five documentation samples collected from EX7 contained concentrations of arsenic which exceeded the ER-L of 8.2 mg/Kg. Concentrations ranged from 8.48 mg/Kg in EX7P5 to 17.2 mg/Kg in EX7P2.

Tables 6A and 6B, and Figures 8-8C summarize the results of all soil samples remaining at the site after completion of remedial action that exceed the unrestricted levels for VOCs and metals, respectively. Tables 7A and 7B, and Figures 9-9C summarize the remaining soil contamination that exceeds the site-specific SCOs for VOCs and metals, respectively. Table 8 and Figure 9D summarizes the results of all sediment samples remaining at the site after completion of dredging activities that exceed the ER-L and ER-H.

Since contaminated soil and groundwater remain beneath the site after completion of the remedial action, ECs and ICs are required to protect human health and the environment. These ECs and ICs are described in the following sections. Long-term management of these ECs and ICs, and residual contamination will be performed under this SMP.

## **2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN**

### **2.1 INTRODUCTION**

#### **2.1.1 General**

Since remaining contaminated soil exists beneath the site, ECs and ICs are required to protect human health and the environment. This EC/IC 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 ENs
- 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 (EWP) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site
- 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 Final Cover System**

Exposure to remaining contamination in soil/fill at the site is prevented by a demarcation layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised of a geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP 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 and maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP. A figure showing the location of the different cover types is provided as Figure 10.

### **2.2.1.2 Sub-Slab Depressurization Systems**

Exposure to indoor air impacted with VOCs within the site buildings was prevented by the two existing SSDSs, which were installed in the site buildings in March 2005. The systems serve to reduce the pressure beneath the building slabs by venting potentially impacted soil vapor outside of the buildings. Both systems remained in operation until October 2012, but became inoperable due to a large storm, Superstorm Sandy, that resulted in site flooding. The office building was renovated following the flooding and re-occupied beginning in 2013. The SSDS at this building was repaired in April 2014 and is again operational.

### **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 Composite Cover System**

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

#### **2.2.2.2 Sub-Slab Depressurization Systems**

The SSDSs will be monitored on an annual basis to determine whether the systems remain necessary at the site, or if the remedial action objectives were achieved.

### **2.3 INSTITUTIONAL CONTROLS**

A series of ICs is required by the ROD to: (1) implement, maintain and monitor EC 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 commercial or industrial uses only. Adherence to these ICs on the site is required by the ENs and will be implemented under this SMP. These ICs are:

- Compliance with the ENs and this SMP by the Grantor and the Grantor's successors and assigns.
- All ECs must be operated and maintained as specified in this SMP.

- All ECs on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Groundwater and indoor air monitoring must be performed as defined in this SMP.
- Submission of a periodic certification of institutional and ECs to the NYSDEC by the property owner.
- Data and information pertinent to site management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP.

ICs identified in the ENs may not be discontinued without an amendment to or extinguishment of the ENs.

The site has a series of ICs in the form of site restrictions. Adherence to these ICs is required by the ENs. Site restrictions that apply to the Controlled Property are:

- The property may only be used for commercial use provided that the long-term ECs and ICs included in this SMP are employed. The property may also be used for industrial use, in conformance of local zoning.
- The property may not be used for a higher level of use, such as unrestricted use without additional remediation and amendment of the ENs, as approved by the NYSDEC.
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed within the site boundaries, and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property 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 Property 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 Property 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 commercial or industrial uses. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the 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 is attached as Appendix B-1 to the EWP that is in current compliance with DER-10, and 29 Code of Federal Regulations (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 (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 ECs described in this SMP.

### **2.3.2 Soil Vapor Intrusion Evaluation**

Prior to the construction of any enclosed structures within the area identified on Figure 11, a soil vapor intrusion (SVI) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, a SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive SSDS that is capable of being converted to an active system.

Prior to conducting a SVI investigation or installing a 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 (NYSDOH 2006)<sup>4</sup>. Measures to be employed to mitigate

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4 New York State Department of Health. 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. New York State Department of Health, Division of Environmental Health Assessment, Center for Environmental Health. October.

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 (un-validated) 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. Validated SVI data will be transmitted to the property owner within 30 days of validation. If any indoor air test results exceed NYSDOH guidelines, relevant NYSDOH fact sheets will be provided to all tenants and occupants of the property 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.

## **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. The inspections will determine and document the following:

- Whether ECs 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 ENs
- Achievement of remedial performance criteria
- Sampling and analysis of appropriate media during monitoring events
- If site records are complete and up to date
- 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 property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use in accordance with the ROD.
- 15-day advance notice of any proposed ground-intrusive activities pursuant to the EWP.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other ECs and likewise any action to be taken to mitigate the damage or defect.
- Notice within 48-hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, including 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 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 the NYSDEC project manager. These emergency contact lists must be maintained in an easily accessible location at the site.

Emergency Contact Numbers	
Medical, Fire, and Police:	911
	(800) 272-4480
One Call Center:	(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

Contact Numbers	
NYSDEC Division of Environmental Remediation	518-402-9814
Eric Hausamann (SSDS)	518-402-9814
NOTE: Contact numbers subject to change and should be updated as necessary	

### 2.5.2 Map and Directions to Nearest Health Facility

Site Location: Metal Etching Site

Nearest Hospital Name: South Nassau Communities Hospital

Hospital Location: 1 Healthy Way, Oceanside, New York 11572

Hospital Telephone: 516-632-3000

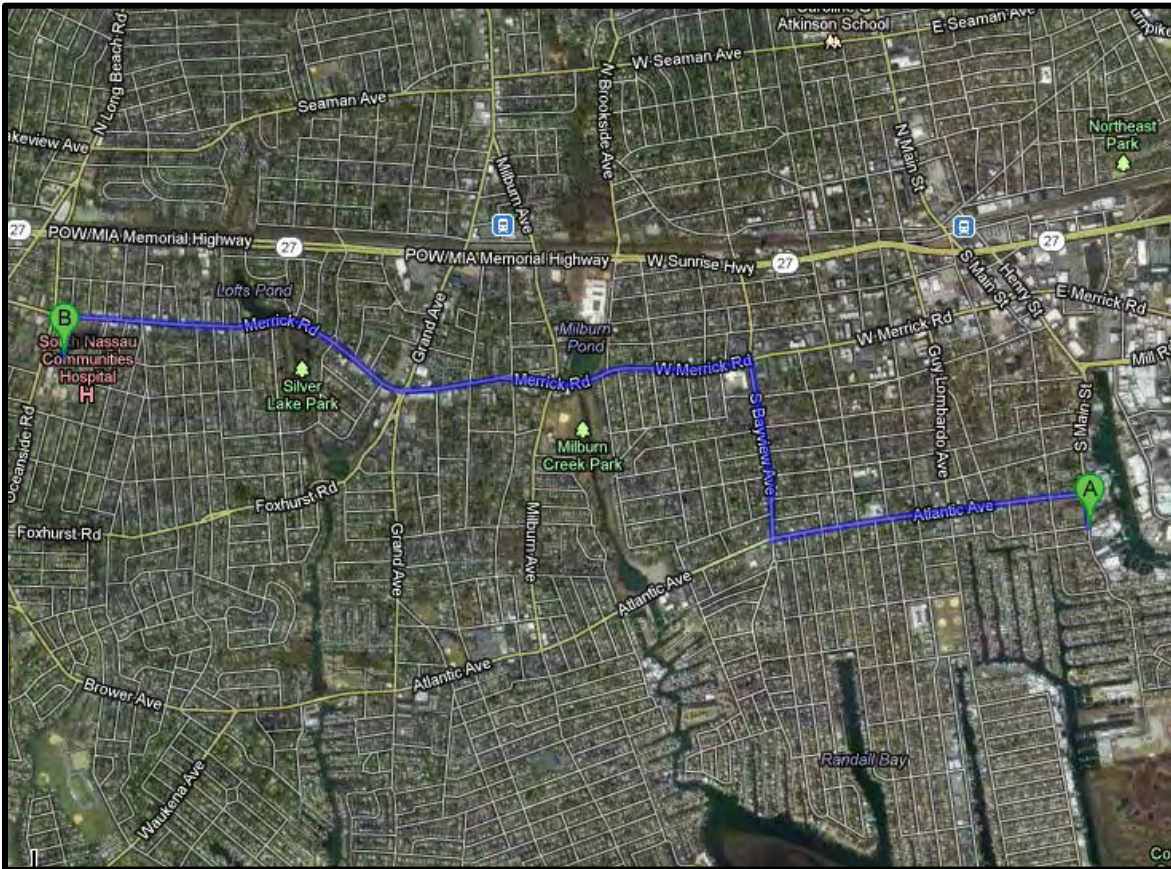
Directions to the Hospital:

1. Go north on S Main Street.
2. Take 1<sup>st</sup> left onto Atlantic Avenue.
3. Turn right onto S Bayview Avenue.
4. Turn left onto W Merrick Road.
5. Turn left onto Healthy Way.

Total Distance: 3.6 miles

Total Estimated Time: 10 minutes

**Map Showing Route from the site to the Hospital:**



\*Map is from maps.google.com

### **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. The list will also be posted prominently at the site and made readily available to all personnel at all times.

#### **2.5.3.1 Spill Procedures**

In the event that a hazardous substance is released on the site, all site personnel shall be notified immediately. If the substance poses an immediate threat to human health and the environment, evacuation and notification of the appropriate authorities including the NYSDEC Spill Response team (listed in previous table) may be necessary. If the release is minimal and does not pose a health risk, the leak shall be contained and the spilled material shall be cleaned up with appropriately sized absorbent pads. Materials used to contain the substance shall be disposed of properly.

#### **2.5.3.2 Evacuation Plan**

If site evacuation is necessary, site personnel shall exit the site on Main Street. All site personnel shall be notified of the evacuation.

## **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 soil cover system, and all affected site media identified below. Monitoring of other ECs is described in Chapter 4, Operation 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)
- Assessing compliance with applicable NYSDEC SCGs, 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
- 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 (QA)/Quality Control (QC) requirements
- Inspection and maintenance requirements for monitoring wells and SSDS
- Monitoring well decommissioning procedures
- Annual inspection and periodic certification.

Semi-annual monitoring of the performance of the remedy and overall reduction in contamination on-site will be conducted for the first year. The frequency thereafter will be determined by 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 the following table and outlined in detail in Sections 3.2 and 3.3 below.

<b>Monitoring/Inspection Schedule</b>			
<b>Monitoring Program</b>	<b>Frequency<sup>(1)</sup></b>	<b>Matrix</b>	<b>Analysis</b>
Groundwater	Semi-Annually (For first year)	Water	VOCs and Metals
Site Cover Inspection	Semi-Annually (For first year)	NA	NA
SSDS/Indoor Air	Annually for SSDS/As recommended by State Agencies for indoor air (During heating season)	Air	VOCs
(1) The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH			

### 3.2 COVER SYSTEM MONITORING

For the first year of monitoring, the cover system will be inspected on a semi-annual basis and after large storm events to ensure proper drainage, and to look for sedimentation issues. The inspector will also note whether the asphalt and porous pavement has settled unevenly, been overloaded, or otherwise disturbed. The porous pavement will be checked for signs of clogging by soil or debris or chemical sealers. Rip-rap areas will be inspected for disturbance and effectiveness. Concrete surrounding the slotted drains at the site entrances will be inspected for cracking or crumbling.

### 3.3 MEDIA MONITORING PROGRAM

Groundwater and indoor air will be monitored as part of the management of this site.

#### 3.3.1 Groundwater Monitoring

The network of monitoring wells has been installed to monitor both upgradient and downgradient groundwater conditions at the site. The network of on-site wells was designed and installed during the RI. A total of 10 wells were installed including three monitoring well clusters of one shallow and one deep well, three single shallow wells, and one single deep micro well. Deep wells were installed to a maximum of 33 ft bgs, which is the depth of the top of the clay layer observed during the soil boring investigation. Shallow wells were installed to 13 ft bgs to intercept any light non-aqueous phase liquid that may have been present. All wells were constructed with 10 ft of screen. Well locations were selected based on the geophysical, soil boring and groundwater investigations which took place as part of the RI and field observations. Wells are located throughout the site. Figure 12 show the shallow and deep monitoring well arrays.

As noted in Section 1.4.1, monitoring wells MW02S/MW02D, MW03S/MW03D, and MW07S/MW07D were decommissioned during soil excavation activities. These monitoring wells were replaced with monitoring wells MW-08S and MW-08D, MW-09S and MW-09D, and



MW-10S and MW-10D following cover installation in similar locations and to similar depths as the original wells. Monitoring well construction details for all wells present at the site are included in Appendix C.

New monitoring wells were last sampled on December 14, 2011. Samples were analyzed for oil and grease (Method E1664A), polychlorinated biphenyls (PCBs) and pesticides (Method E608), metals and mercury (Methods SW6010B and SW7470A, respectively,) VOCs (Method SW8260B), and semivolatile organic compounds (Method SW8270C). Results of the initial post-remedial groundwater sampling are shown on Figure 13.

Groundwater monitoring is to be performed twice per year for the first year and as directed by NYSDEC thereafter. Groundwater is to be analyzed for metals and mercury (Methods 6010B and SW7470A) and VOCs (Method 8260B). The following monitoring wells are to be sampled as part of the groundwater monitoring program for the Metal Etching site.

<b>Monitoring Wells at the Metal Etching Site</b>	
<b>On-site Monitoring Wells</b>	<b>Well Depth (ft bgs)</b>
MW-06	13
MW-04	13
MW-05R	13
MW-08SR	14
MW-08DR	31
MW-09S	14
MW-09D	32
MW-10S	14
MW-10D	32
<b>Off-site Monitoring Wells</b>	<b>Well Depth (ft bgs)</b>
MW-11S	15
MW-11D	30

The sampling frequency may be modified with the approval of the NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

The groundwater monitoring well network is shown in Figure 12. Figure 13 and Tables 9A and 9B provide a summary of the post-remaining groundwater quality for VOCs and metals, respectively.

Deliverables for the groundwater monitoring program are specified below.

### 3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater sampling log presented in Appendix D. 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.

Prior to sampling, all monitoring wells shall be inspected and gauged to obtain the static water levels for the site. Monitoring well purging will be performed and groundwater samples will be collected from the monitoring wells using a submersible pump and dedicated section of polyethylene tubing. A water quality meter (Horiba U-52 or similar) with flow-through cell (flushed with distilled water before use at each well) will be used during well purging for field measurement of pH, specific conductance, temperature, Eh, turbidity, and dissolved oxygen. Each well shall be purged three well volumes or until field parameters stabilize, whichever occurs first. Purge water is to be discharged to the ground surface near the well. In the event that a strong odor or sheen is evident, water is to be drummed, characterized, handled, and disposed of at a licensed treatment, storage, and disposal facility.

The following procedures will be used for monitoring well groundwater sampling:

- Wear appropriate personal protective equipment as specified in the site-specific HASP Addendum (Appendix B-1). In addition, samplers will use new nitrile sampling gloves for the collection of each sample.
- Unlock and remove the well cap.
- Measure the static water level in the well with an electronic water level indicator.
- The water level indicator will be washed with Alconox detergent and water, then rinsed with deionized water between individual monitoring wells to prevent cross-contamination.
- Calculate the volume of water in the well.
- Place polyethylene sheeting around the well casing to prevent contamination of sampling equipment in the event sampling equipment is dropped.
- Purge 3-5 well volumes of water from the well or until water quality parameters are stabilized, using the method described below.
- Pump with a submersible pump equipped with new polyethylene tubing dedicated to each well. Set pump intake at the approximate mid-point of the monitoring wells screened interval and start pump.
- Allow field parameters of pH, reduction-oxidation potential (Eh), dissolved oxygen, specific conductivity, turbidity, and temperature to stabilize before sampling. Purging will be considered complete if the following conditions are met:
  - Consecutive pH readings are  $\pm 0.1$  pH units of each other
  - Consecutive dissolved oxygen readings are  $\pm 10$  percent of each other
  - Consecutive Redox readings are  $\pm 0.10$  units of each other
  - Consecutive measured specific conductance is  $\pm 3$  percent of each other

- Turbidity < 50 Nephelometric turbidity units

If these parameters are not met after purging a volume equal to 3-5 times the volume of standing water in the well, the EA Project Manager will be contacted to determine the appropriate action(s).

- If the well is purged dry before the required volumes are removed, the well may be sampled when it recovers (recovery period up to 24 hours).
- Place analytical samples in cooler and chill to 4°C. Samples will be shipped to the analytical laboratories within 24 hours.
- Pump will be decontaminated and the polyethylene suction/discharge line will be properly discarded.
- Re-lock well cap.
- Fill out field sampling form, labels, custody seals, and chain-of-custody forms.

Groundwater samples will be placed in appropriate sample containers, sealed, and submitted to the laboratory for analysis.

### **3.3.1.2 Monitoring Well Repairs, Replacement, and Decommissioning**

If biofouling or silt accumulation occurs in the on-site and/or offsite 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.

Well decommissioning procedures are as follows:

- Measure total depth of the well to ensure the well depth is consistent with the recorded construction depth.
- Remove the steel manhole or steel stickup protective casing with an effort being made to ensure that the riser does not splinter and/or become structurally unstable for pulling.
- The bottom of the casing shall be punctured and the casing freed from the hole using suitable equipment (i.e., drill rig cable system). Well materials shall be disposed of at a licensed disposal facility.
- The well shall be tremie-grouted with a cement bentonite grout while removing the casing. The grout shall be completed to a depth of approximately 5 ft below grade.

- A bentonite seal shall be placed on top of the grout.
- The remaining riser shall be sealed with a Portland cement plug to the ground surface.

In the event the casing or well screen is severed during casing pulling, or if a borehole collapse occurs, the remaining materials will be removed by over-drilling using the conventional augering method described below:

- Overdrilling shall be conducted by either using a hollow-stem auger with outward facing carbide cutting teeth with a diameter 2 in. larger than the casing and/or using a hollow-stem auger fitting with a plug used to grind the well materials which will be brought to the surface by the auger. Spoils shall be drummed and disposed of at a licensed disposal facility.
- Overdrilling shall be advanced 0.5 ft beyond the original bore depth.
- Once the desired drilling depth has been completed (using open ended hollow-stem auger method) the casing and screen shall be retrieved from the center of the augers.
- As the augers are being retracted, cement-bentonite grout shall be pumped down the center of the augers.
- Bore hole shall be grouted and sealed with bentonite and Portland cement as described above.

Replacement wells shall be constructed using methods consistent with those used during the RI. Monitoring well construction logs are provided in Appendix C.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

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 Commissioner Policy – 43 Groundwater Monitoring Well Decommissioning Policy (NYSDEC 2009)<sup>5</sup>. 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.

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<sup>5</sup> NYSDEC. 2009. Commissioner Policy–43 Groundwater Monitoring Well Decommissioning Policy. 3 November.

### 3.3.2 Indoor Air Monitoring

Indoor air sampling is to take place in the existing office building and warehouse (Figure 14), as discussed in Section 1.3 of this plan, on-site on an annual basis to monitor effectiveness of SSDSs and potential SVI. Samples are to be analyzed by an Environmental Laboratory Analytical Program-certified laboratory for VOCs using U.S. Environmental Protection Agency (EPA) Method TO-15. In accordance with the NYSDOH guidance for evaluating SVI, the analysis for the indoor air samples is to achieve detection limits of  $0.25 \mu\text{g}/\text{m}^3$  for each compound.

Prior to collection of indoor air, an inspection of general site conditions is to be performed. The inspection is to include the following activities:

- Completion of the NYSDOH Indoor Air Quality Questionnaire and Building Inventory included in Indoor Air Sampling and Analysis Guidance (NYSDOH 2006)<sup>4</sup>. A sample of the questionnaire is provided in Appendix D. As directed by NYSDEC, a limited product inventory will be prepared. Sections 1 through 12 of the questionnaire will be completed with the exception of Section 4. In addition, a floor plan sketch of the first floor will not be required.
- Documentation of weather conditions outside and temperature inside.
- Ambient air (indoor and outdoor) screening using field equipment (i.e., parts per billion photoionization detector).
- Selection of air sampling locations.

An active approach, utilizing laboratory batch-certified Summa canisters, regulated for an 8-hour sample collection, will be used to monitor the indoor air conditions. An associated outdoor ambient air sample shall be collected during the same time period as the indoor air sample. The following procedures will be used for all indoor and outdoor air sampling:

- Visually assess the building to be sampled. Select an area for indoor air sampling that is approximately 3-4 ft above the floor surface, out of the line of traffic, and away from any vents or windows. Select an area for outdoor air sampling that is approximately 3-4 ft above the ground surface, out of the line of traffic, and in the vicinity of the building to be sampled.
- Place a canister in the selected sample location. The canister must be certified clean in accordance with EPA Method TO-15 and under a vacuum pressure of no more than -30 in. of mercury in Hg. Flow controllers must be set for an 8-hour collection period.
- Record the serial number of the canister and associated regulator on the chain-of-custody form and field notebook/sample form. Assign a sample identification on the canister

identification tag and record this on chain-of-custody and field notebook/sample form. For the property owner's privacy, do not use a sample identifier containing the name of the property owner or the address of the property.

- Record the gauge pressure; the vacuum gauge pressure must read -25 in Hg or less, or the canister cannot be used.
- Record the start time on the chain-of-custody form and on the air sampling form (Appendix D), and take a digital photograph of canister setup and the surrounding area.

To terminate the sample collection:

- Close the canister valve; record the stop time on the chain-of-custody form and in the field notebook/sample form.
- Record the final gauge pressure and disconnect the pressure gauge/flow controller from the canister.
- Install the plug on the canister inlet fitting and place the sample container in the original box.
- Complete the sample collection log with the appropriate information, and log each sample on the chain-of-custody form.

### **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 ECs 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, sampling and a health and safety inspection
- Compliance with permits and schedules included in the Operation and Maintenance Plan
- Confirm that site records are up to date.

- Confirm that site use has not changed since the previous inspection.

SSDS inspections will take place as part of the annual site-wide inspection and are discussed in Section 4.0 of this plan.

### **3.5 MONITORING QUALITY ASSURANCE/QUALITY CONTROL**

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site (Appendix E). Main components of the QAPP 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 Analytical Services Protocol 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 EPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures
- Preparation of a Data Usability Summary Report, 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. 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 will include, at a minimum:

- Date of event
- Personnel conducting sampling
- Description of the activities performed
- Type of samples collected (e.g., groundwater, indoor 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, sampling locations, and analytical results
- 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
- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized below.

<b>Schedule of Monitoring/Inspection Reports</b>	
<b>Task</b>	<b>Reporting Frequency<sup>(1)</sup></b>
Letter Inspection and Monitoring Report	Twice a year for the first year only
Periodic Review Report	January 2014 (first), annually after <sup>(1)</sup>
(1) The frequency of events will be conducted as specified until otherwise approved by 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 in place at the site. This Operation and Maintenance Plan:

- Includes the steps necessary to allow individuals unfamiliar with the site to operate and maintain the SSDSs
- Includes an operation and maintenance contingency plan
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDSs are operated and maintained.

Information on non-mechanical ECs (i.e., soil cover system) is provided in Section 2 - 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 SUB-SLAB DEPRESSURIZATION SYSTEM OPERATION AND MAINTENANCE**

There are two SSDSs on-site: one in the small office building and another in the larger warehouse building. The systems serve to reduce sub-slab pressure and vent built-up soil gas outside of the building. The systems consist of slotted screen installed beneath the slabs, connected to polyvinyl chloride pipe, an in-line ventilation fan, and an exterior exhaust point. The pipe for the smaller office building runs up the exterior wall and vents above the roof of the building. The pipe for the larger warehouse building runs up an interior wall, along the ceiling, and out through an existing hole in a window. Both vent fans are outside of the buildings. Both exhaust points are covered with rain caps. System locations are shown on Figure 14. Both systems ran continuously from March 2005 until October 2012 when Superstorm Sandy caused flooding on the site. The system for the office building was repaired in April 2014; the warehouse building system is currently being evaluated for termination and/or repair by the NYSDEC and NYSDOH.

#### **4.2.1 Scope**

Typically, SSDSs are continuously operational, and require minimal maintenance and oversight; however, annual inspections are required to verify continuous and effective operation. The following sections detail system startup, inspections, and maintenance.

#### **4.2.1.2 System Startup and Testing**

Prior to system startup, the building slab, including the system slab and wall penetration and any gaps between the slab and the walls are to be sealed with a polyurethane sealant. After the fan is turned on, the operating pressure is to be marked on the pressure gauge located on the vertical pipe. The pressure is to be checked weekly during continuous operation, until the pressure is observed to be the same during two consecutive weeks.

Following system startup, a field test is to be conducted to check negative pressure beneath the slab. Starting approximately 5 ft from the system, a ¼-in. diameter hole is to be drilled completely through the concrete slab. The vacuum is to be measured using a handheld electric manometer at the test location. This is to be repeated an additional 5 ft from each previous test hole, until the furthest possible point on the slab has been tested. Each previously tested hole is to be filled with fast-setting concrete prior to the succeeding test. The system is working properly if all points tested show a pressure drop of 0.5 Pa or higher.

The system testing described above will be conducted if, in the course of the SSDS lifetime, significant changes are made to the system, and the system must be restarted.

#### **4.2.1.3 System Operation: Equipment Maintenance**

In the event that the annual inspection discussed in Section 4.3 reveals system failure or potential for system failure, the building owner and NYSDEC SSDS contact should be notified immediately. Faulty parts of the system should be replaced if possible, or cracks should be sealed using a polyurethane sealant. Depending on the complexity of the problem, an experienced professional should be consulted to return the system to service.

### **4.3 ENGINEERING CONTROL SYSTEM PERFORMANCE MONITORING**

Sub-slab depressurization systems have been installed to mitigate possible SVI into occupied buildings. While the systems involve very little in the way of operation and maintenance, monitoring is necessary to verify system functionality and effectiveness. An annual inspection described in Section 4.3.1 will serve to verify that the system components are in working condition and are not compromised in any way. Annual air sampling as discussed in Section 4.3.2 will serve to verify that the system is effectively mitigating vapor intrusion.

#### **4.3.1 General Equipment Monitoring**

An annual inspection will be performed on both systems in conjunction with the annual site-wide inspection discussed in Section 3.4 of this plan. The inspection is to include the following:

- Inspect all visible system components, including the system piping, fans, manometer, etc. Note any cracks in piping or other operational issues

- Inspect slab for cracks, noting location and size of gaps, or where seals have begun to fail
- Make sure that contact information on the SSDS is up to date
- Note changes in building use and changes in heating, ventilation and air conditioning.

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.

A complete list of components to be checked is provided in the Inspection Checklist, which is part of the site-wide inspection form presented in Appendix D. If any equipment readings are not within their typical range, if 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 SSDS is to be restarted.

#### **4.3.2 Sampling Event Protocol**

Indoor air monitoring is to take place on an annual basis, and is discussed in Section 3.3.2 of this plan. In the event that indoor air monitoring indicates VOC contamination in the air, or per NYSDEC's request, a full sub-slab soil vapor intrusion evaluation is to be completed. This would include the collection of an indoor air sample, a sub-slab air sample, and an outdoor air sample. The indoor sample is to be collected as discussed in Section 3.3.2. The following procedures will be used for collection of sub-slab soil vapor samples:

- Visually assess the condition of the floor. Select an area for sampling that is out of the line of traffic and away from major cracks and other floor penetrations (sumps, pipes, etc.). Refer to historical sample forms (Appendix F) for ideal sample locations.
- Drill a  $\frac{3}{8}$ -in. diameter hole completely through the concrete floor slab using an electric hammer drill.
- Sweep concrete dust away from the drill hole and wipe the floor with a dampened towel. Concrete dust can be cleaned up with a vacuum equipped with a high efficiency particulate air filter only after the sample tubing is properly sealed and sample collection has begun.
- Insert the Teflon-lined polyethylene tubing ( $\frac{1}{4}$ -in. inside diameter  $\times$   $\frac{3}{8}$ -in. outside diameter, approximately 3-ft long) into the hole drilled in the floor, extending no further than 2 in. below the bottom of the floor slab.
- Pour the melted beeswax around the tubing at the floor penetration, packing it in tightly around the tubing.

- Attach a syringe to the sample tube and purge approximately 100 mL of air/vapor. The syringe will be capped and the air released outside the building as to not interfere with the indoor air sample collection.
- Place a canister on the floor adjacent to the sample tube. The canister will be a 6-L canister (provided by an independent laboratory) with a vacuum gauge and flow controller. The canister must be certified clean in accordance with EPA Method TO-15 and under a vacuum pressure of no more than -30 in. of mercury in HG. Flow controllers must be set for a 24-hour collection period.
- Record the serial number of the canister and associated regulator on the chain-of-custody form and field notebook/sample form. Assign a sample identification on the canister identification tag and record this on the chain-of-custody form and field notebook/sample form. For the property owner's privacy, do not use a sample identifier containing the name of the property owner or the address of the property.
- Record the gauge pressure; the vacuum gauge pressure must read -25 in Hg or less, or the canister cannot be used.
- Record the start time on the chain-of-custody form and on the field record of air sampling (Appendix D), and take a digital photograph of canister setup and the surrounding area.

To complete the sample collection:

- Close the canister valve and record the stop time on the chain-of-custody form and in the field notebook/sample form.
- Record the final gauge pressure and disconnect the sample tubing and the pressure gauge/flow controller from the canister, if applicable.
- Install the plug on the canister inlet fitting and place the sample container in the original box.
- Complete the sample collection log with the appropriate information, and log each sample on the chain-of-custody form.
- Remove the temporary subsurface probe and properly seal the hole in the slab with hydraulic cement.

Field QC samples will include duplicates and trip blanks. Field duplicates will be collected at the rate of 1 duplicate per 20 original samples (20 percent). Field duplicates will be collected by installing an in-line "tee," which will essentially split the flow coming from the sample tubing penetrating the floor to two canisters set up adjacent to each other and each collecting vapors at identical flow rates.

Concurrently with the indoor air and sub-slab soil vapor monitoring program, one outdoor ambient air sample will be collected each day that indoor air monitoring occurs. The ambient air samples will be collected during the same 8-hour period as the indoor air samples, which represent outdoor air conditions for the sampling area. The ambient air samples will be collected in a laboratory batch-certified Summa canister regulated for an 8-hour sample collection. A section of Teflon or polyethylene tubing that is identified as laboratory- or food-grade will be extended from the Summa canister to collect the ambient air sample from the breathing zone at approximately 3-5 ft above ground surface. Consistent with the indoor and sub-slab vapor sampling, the collecting rate of the outdoor air sample will be less than 0.2 L per minute.

Air samples will be analyzed by an Environmental Laboratory Analytical Program-certified laboratory for VOCs using EPA Method TO-15. In accordance with the NYSDOH Indoor Air Sampling and Analysis Guidance, the analysis for indoor and outdoor air samples will achieve a minimum reporting limit of  $0.25 \mu\text{g}/\text{m}^3$ . The analysis for sub-slab soil vapor samples will achieve minimum reporting limit of  $5 \mu\text{g}/\text{m}^3$  for structures with full slab foundations, and a minimum  $1 \mu\text{g}/\text{m}^3$  for structures with less than a full slab foundation. For specific parameters identified by NYSDOH, where the selected parameters may have a higher detection limit (e.g., acetone), the higher detection limits will be designated by NYSDOH. The analytical turnaround time will be 14 days from receipt of sample containers. Analytical results will be provided as an electronic data deliverable.

#### **4.4 MAINTENANCE AND PERFORMANCE MONITORING REPORTING REQUIREMENTS**

Maintenance reports and any other information generated during regular operations at the site will be filed 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 Maintenance Reports**

During each 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)
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

## **5. INSPECTIONS, REPORTING AND CERTIFICATIONS**

### **5.1 SITE INSPECTIONS**

#### **5.1.1 Inspection Frequency**

All inspections will be conducted at the frequency specified in the schedule provided in Section 3 Monitoring Plan of this SMP. At a minimum, a site-wide inspection will be conducted twice a year. Inspections of remedial components (SSDS in this case) 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**

A general site-wide inspection form will be completed during the site-wide inspection (Appendix D). This form is 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 Remedial Action Work Plan and Final Engineering Report.

### **5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS**

After the last inspection of the reporting period, a qualified environmental professional will prepare the following certification:

For each IC/EC 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 ICs and ECs required by the remedial program was performed under my direction
- The IC and/or EC employed at this site is unchanged from the date the control was put in place, or last approved by the NYSDEC
- 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 SMP for this control
- Access to the site will continue to be provided to the NYSDEC 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 ENs
- The EC 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
- 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]. The signed certification will be included in the Periodic Review Report described below.

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

- The IC employed at this site is unchanged from the date the control was put in place, or last approved by the NYSDEC
- 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 NYSDEC 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 ENs.
- 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]

### **5.3 PERIODIC REVIEW REPORT**

A Periodic Review Report will be submitted to the NYSDEC every year, beginning 18 months after approval of the Final Engineering Report. 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 Notices). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also be 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 (e.g., groundwater, soil vapor), 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

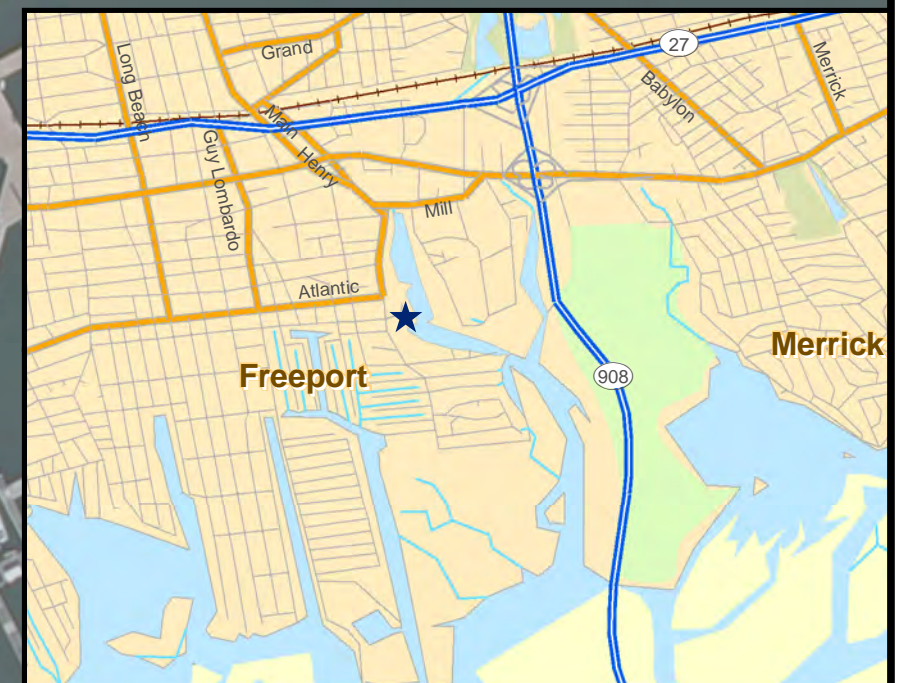
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format
- A site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific Remedial Action Work Plan, 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.

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

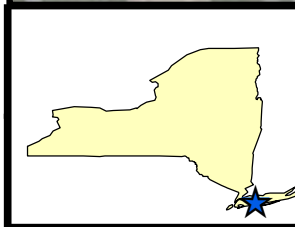
#### **5.4 CORRECTIVE MEASURES PLAN**

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 IC/EC, 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.



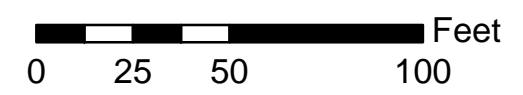


Source: NYS GIS Clearing House



**FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK**

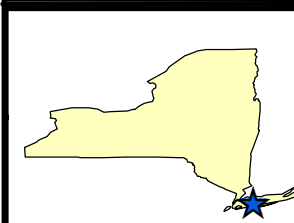
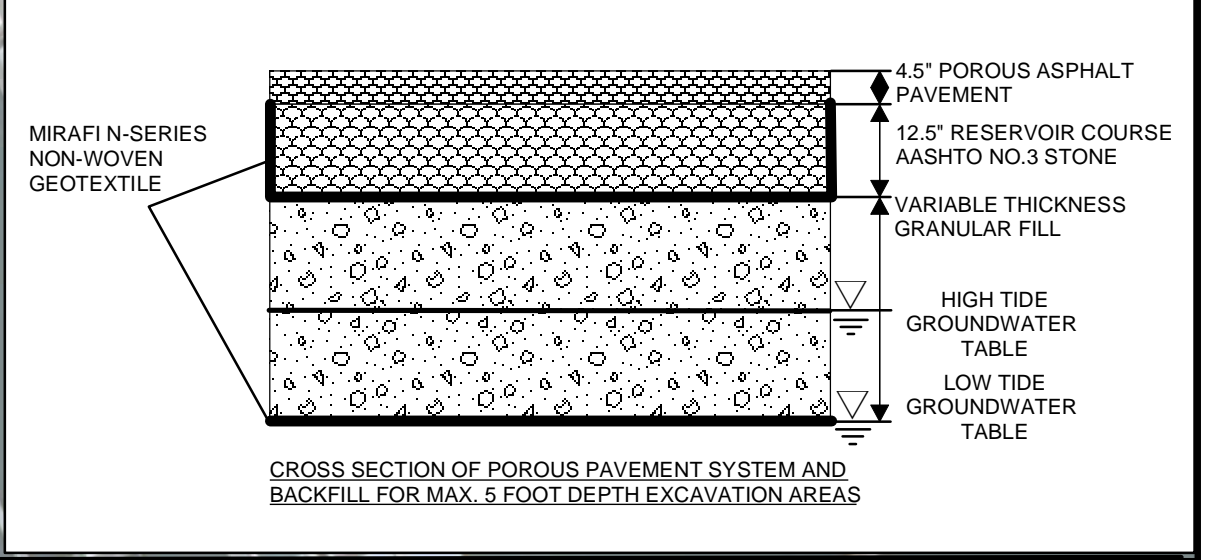
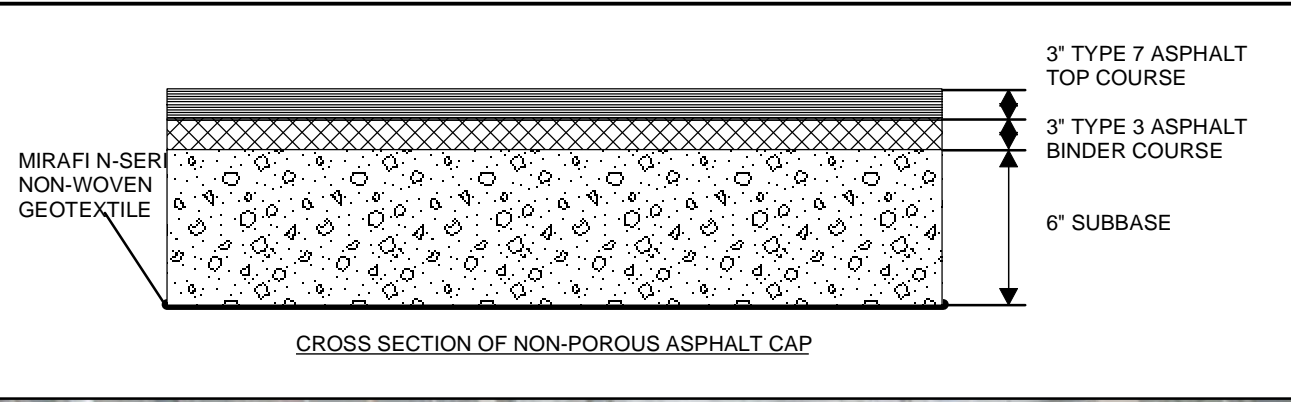
**FIGURE 1  
Site Location and Boundary Map**



- Site Boundary
- Property Parcels
- Existing Buildings
- Approximate Locations of Former Buildings
- ★ Site Location

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 14474.37	DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\SMP\FIG1
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**FREERPORT METAL ETCHING  
SITE MONITORING PLAN  
FREERPORT, NEW YORK**

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM
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**FIGURE 2  
Cross Sections**

CHECKED BY: RSC	PROJECT NO: 14474.37
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**0 25 50 100 Feet**

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Source: NYS GIS Clearing House





Main Street

Ray Street

Warehouse

Office

A

A'

EX3

EX4

EX5

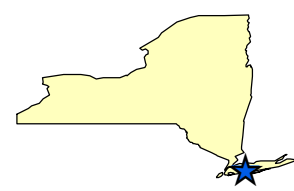
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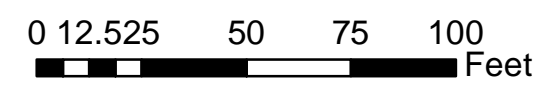
EX7



FREPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREPORT, NEW YORK

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FIGURE 3  
Remedial Investigation Soil  
and Sediment Sample Locations

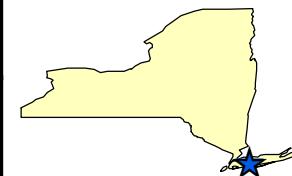


Source: NYS GIS Clearing House

**Legend**

- Surveyed Location of Excavated Underground Storage Tanks 1 and 2
- Excavation Area Boundaries
- Approximate Location of Excavated Underground Storage Tanks 3 and 4
- Cross Section





FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

PROJECT MGR:  
RSC

DESIGNED BY:  
RSC

CREATED BY:  
MEM

CHECKED BY:  
RSC

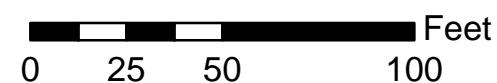
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FIGURE 4  
Groundwater Contours  
June 2008



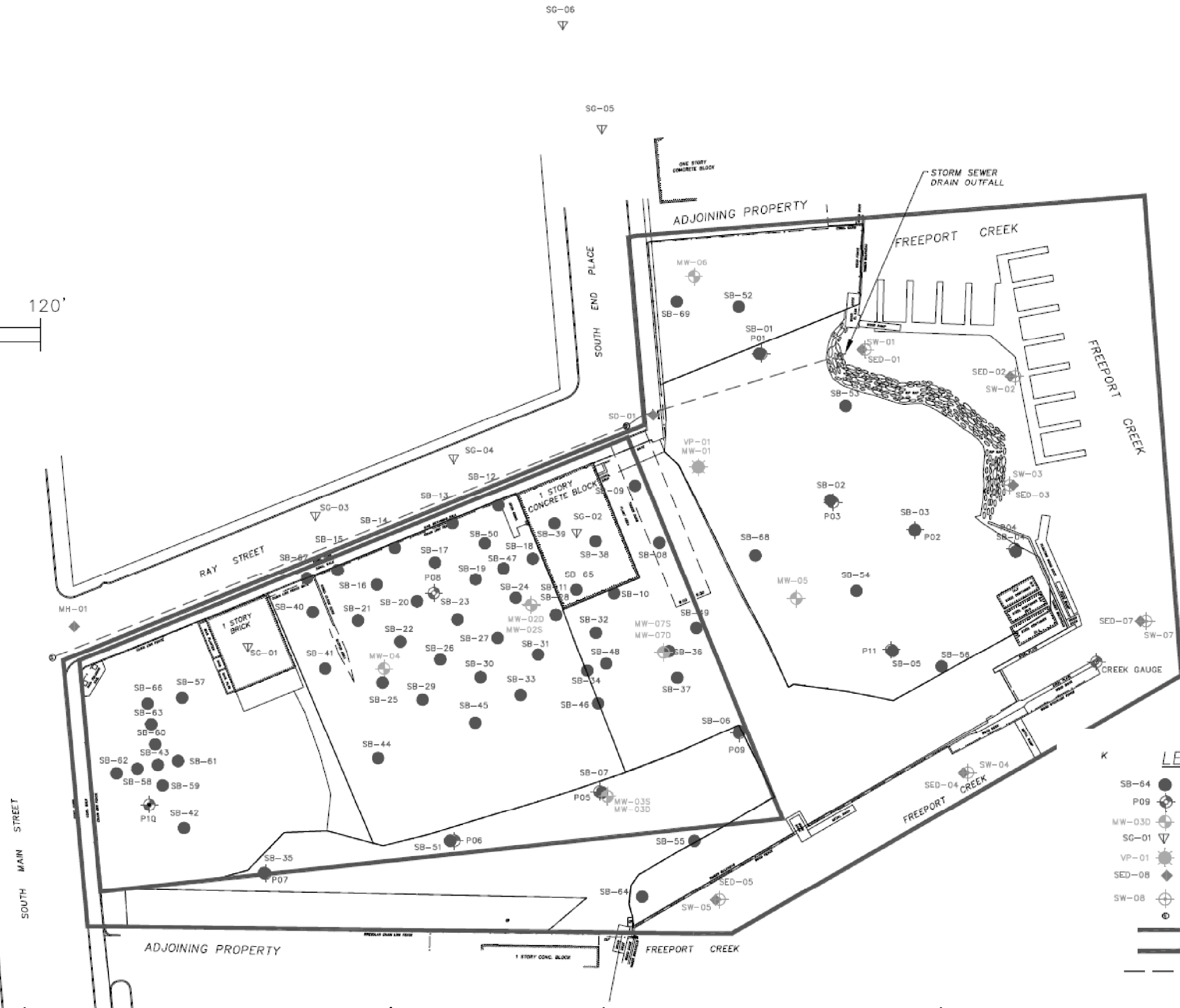
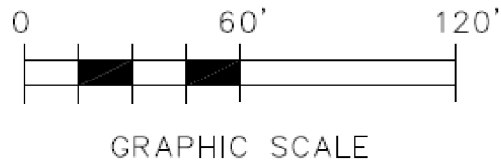
**Legend**

- Monitoring Well (Groundwater Elevation ft amsl)
- Groundwater Contours
- Groundwater Flow Direction

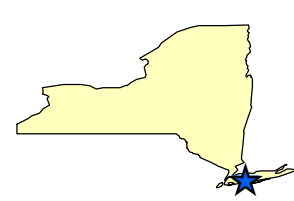
Source: NYS GIS Clearing House



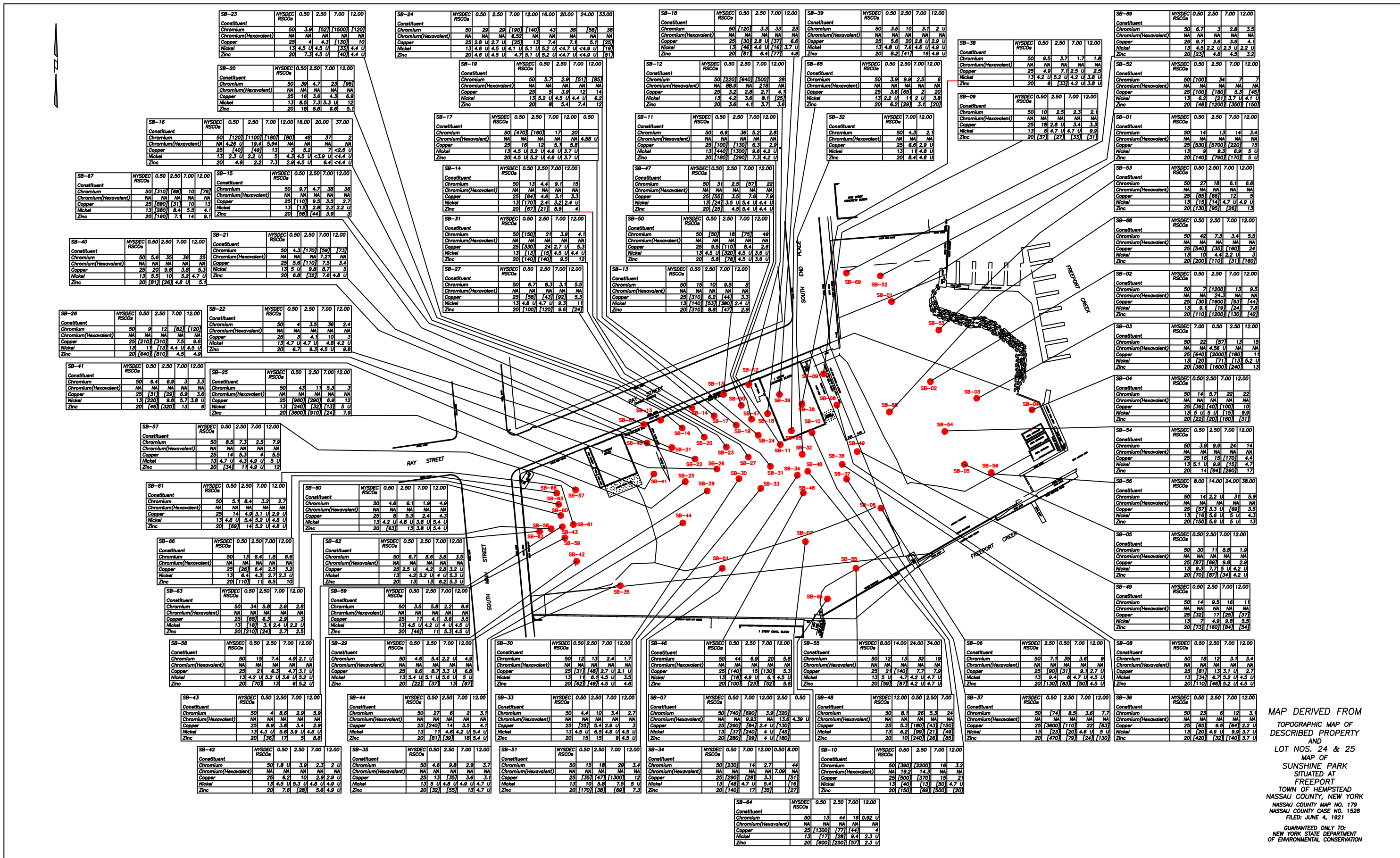
MAP DERIVED FROM  
 TOPOGRAPHIC MAP OF  
 DESCRIBED PROPERTY  
 AND  
 LOT NOS. 24 & 25  
 MAP OF  
 SUNSHINE PARK  
 SITUATED AT  
 FREEPORT  
 TOWN OF HEMPSTEAD  
 NASSAU COUNTY, NEW YORK  
 NASSAU COUNTY MAP NO. 170  
 NASSAU COUNTY CASE NO. 1528  
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- LEGEND**
- SB-84 ● SOIL BORING
  - P09 ⊕ PIEZOMETER
  - MW-03D ⊕ MONITORING WELL
  - SG-01 ▽ SOIL GAS POINT
  - VP-01 ⊙ VERTICAL PROFILE
  - SED-08 ◆ SEDIMENT SAMPLE
  - SW-08 ⊕ SURFACE WATER SAMPLE
  - MANHOLE
  - ▭ STUDY AREA
  - ▭ SITE
  - STORM SEWER DRAIN

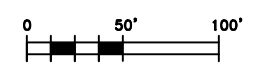


FREEPORT METAL ETCHING SITE MANAGEMENT PLAN FREEPORT, NEW YORK		FIGURE 5 Remedial Investigation Soil and Sediment Sample Locations		Source: ERM Remedial Investigation (2007) Figure 2-2			
PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 14474.37	DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\SMP\FIG2



MAP DERIVED FROM  
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AND  
LOT NOS. 24 & 25  
MAP OF  
SUNSHINE PARK  
SITUATED AT  
FREEDPORT  
TOWN OF HEMPSTEAD  
MASSAU COUNTY, NEW YORK  
MASSAU COUNTY MAP NO. 179  
MASSAU COUNTY CASE NO. 1528  
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Figure 5A  
Remedial Investigation  
Soil Sample Results - Metals



Legend  
SB-57 ● Soil boring location  
Concentrations of constituents are shown in milligrams per kilogram (mg/kg)  
[ ] Detected soil concentration is above NYSDEC TAGM SCO's  
U Not Detected at indicated detection limit  
Note: Map was developed for the 2007 Remedial Investigation by Environmental Remedial Management, Inc.



PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 1447437	DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\SMP\FIG5A
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SED-01	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	34.7
	Mercury	(mg/kg)	0.71	2.5 J
	Nickel	(mg/kg)	51.6	15.4 J
	Zinc	(mg/kg)	410	338 J

SED-06	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	89.2 J
	Mercury	(mg/kg)	0.71	0.61 J
	Nickel	(mg/kg)	51.6	26.8 J
	Zinc	(mg/kg)	410	417 J

SED-02	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	16.0
	Mercury	(mg/kg)	0.71	0.065 J
	Nickel	(mg/kg)	51.6	8.8 J
	Zinc	(mg/kg)	410	93.2 J

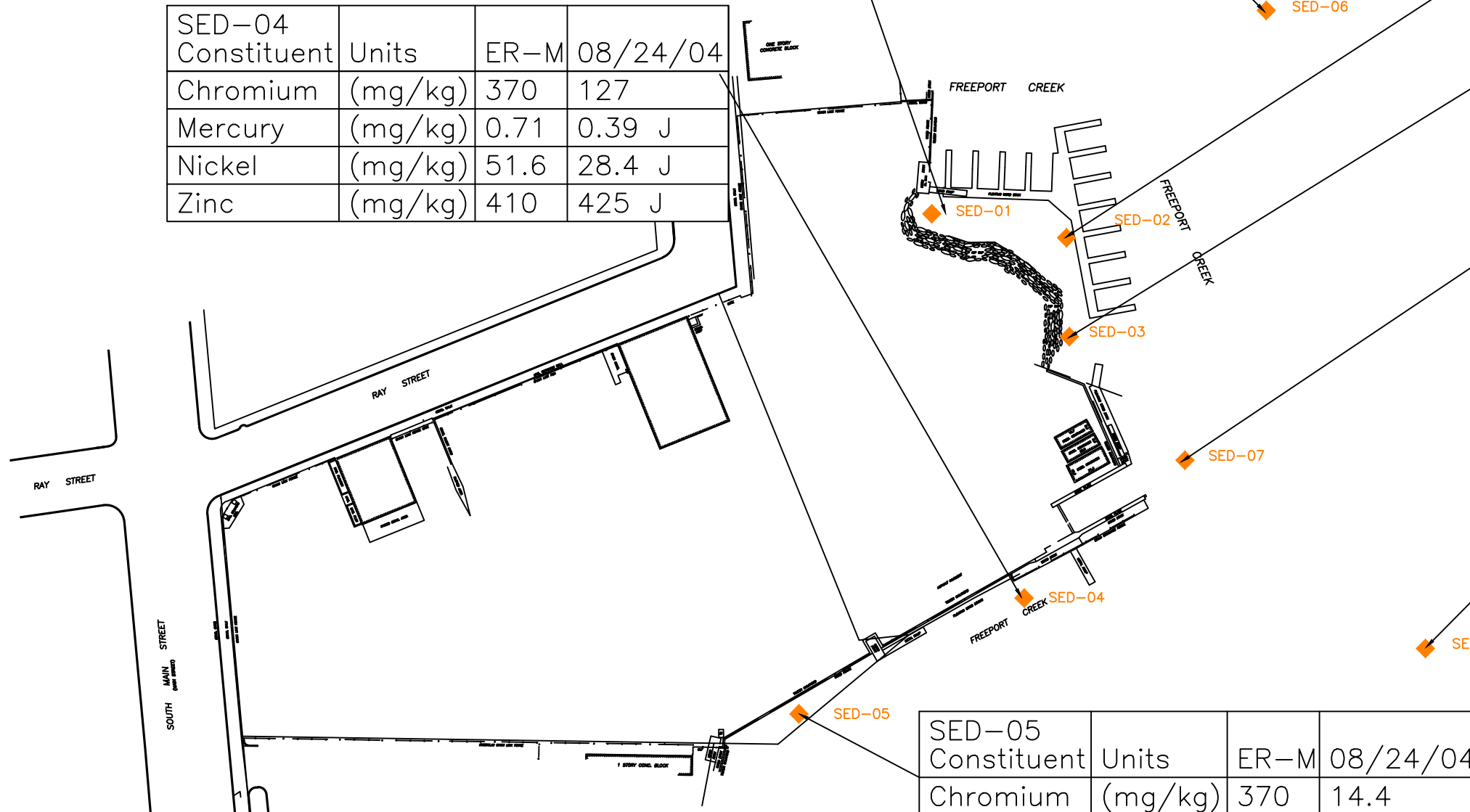
SED-04	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	127
	Mercury	(mg/kg)	0.71	0.39 J
	Nickel	(mg/kg)	51.6	28.4 J
	Zinc	(mg/kg)	410	425 J

SED-03	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	3.3
	Mercury	(mg/kg)	0.71	0.059U J
	Nickel	(mg/kg)	51.6	3.2 J
	Zinc	(mg/kg)	410	59.7 J

SED-07	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	3.4
	Mercury	(mg/kg)	0.71	0.047U J
	Nickel	(mg/kg)	51.6	1.4 J
	Zinc	(mg/kg)	410	16.5 J

SED-08	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	6.5
	Mercury	(mg/kg)	0.71	0.089 J
	Nickel	(mg/kg)	51.6	2.6 J
	Zinc	(mg/kg)	410	26.5 J

SED-05	Constituent	Units	ER-M	08/24/04
	Chromium	(mg/kg)	370	14.4
	Mercury	(mg/kg)	0.71	0.054U J
	Nickel	(mg/kg)	51.6	2.3 J
	Zinc	(mg/kg)	410	46.5 J



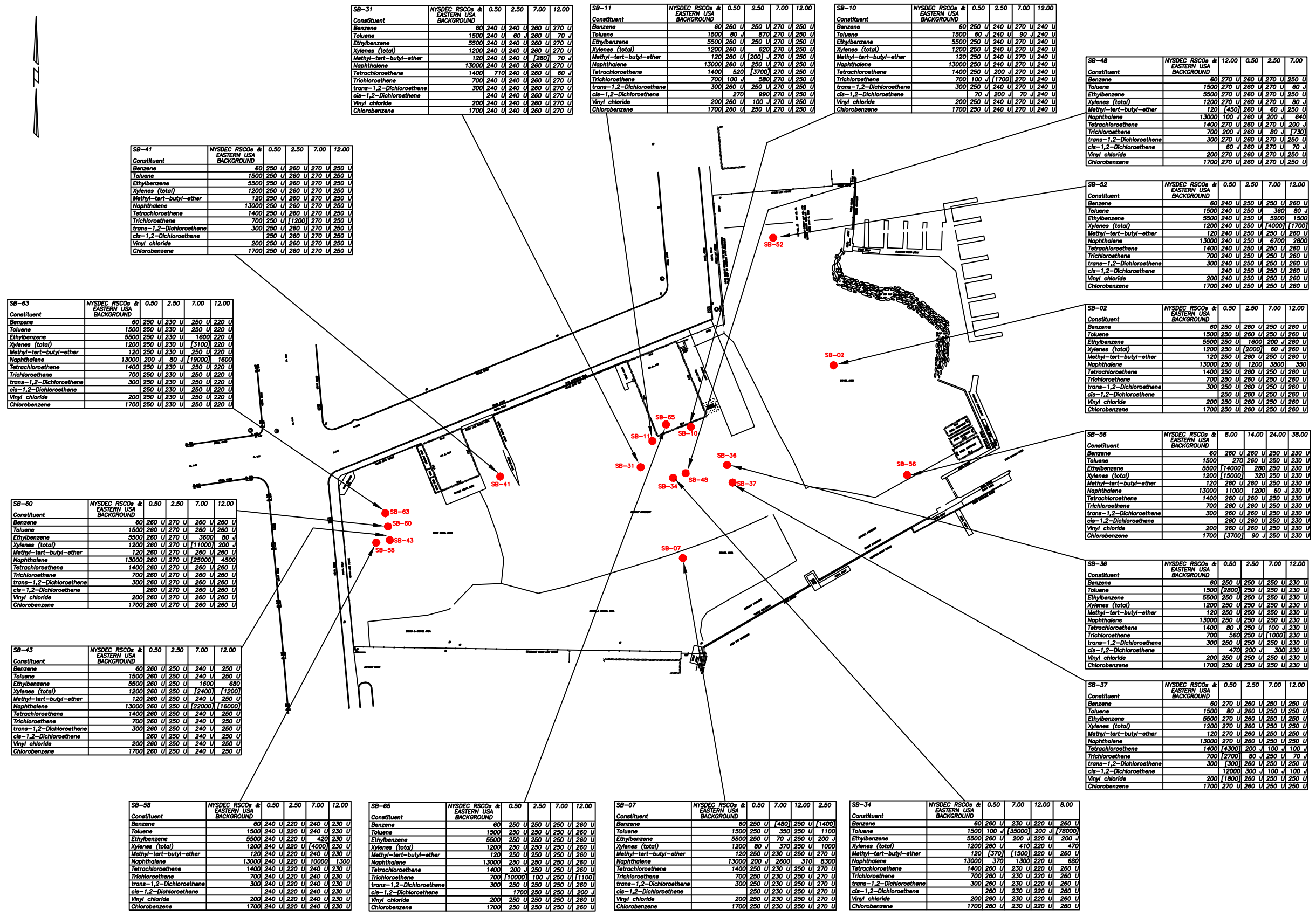
TOPOGRAPHIC MAP OF DESCRIBED PROPERTY AND LOT NOS. 24 & 25 MAP OF SUNSHINE PARK SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY, NEW YORK NASSAU COUNTY MAP NO. 179 NASSAU COUNTY CASE NO. 1528 FILED: JUNE 4, 1921  
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FREEPORT METAL ETCHING SITE MANAGEMENT PLAN FREEPORT, NEW YORK			Figure 5B Remedial Investigation Sediment Sample Results - Metals				
PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 1447437	DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\SMP\FIG5B

**Legend**  
 ◆ SED-07 Sediment sample location  
 ER-M Effect Range-Median- Values derived from NYSDEC Technical Guidance for Screening Contaminated Sediments ( NYSDEC 1999)

Notes: Map was developed for the 2007 Remedial Investigation by Environmental Remediation Management, Inc.



TOPOGRAPHIC MAP OF DESCRIBED PROPERTY AND LOT NOS. 24 & 25 MAP OF SUNSHINE PARK SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY, NEW YORK NASSAU COUNTY MAP NO. 178 NASSAU COUNTY CASE NO. 1528 FILED: JUNE 4, 1921

NOTES: ELEVATIONS SHOWN ESTABLISHED FROM BENCHMARK 22011 E.L. 9.842 FROM THE NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS BENCHMARK BOOK, U.S.C. & G.S. DATUM.

HORIZONTAL DATUM IS N.A.D. 1927 ESTABLISHED FROM NASSAU COUNTY GIS GPS MONUMENTS 11EDEN AND 11EDENAZ. BEARINGS SHOWN TAKEN FROM RECORD DESCRIPTIONS. ABSTRACT OF TITLE AND EASEMENTS FOR SUBJECT PARCEL AND ADJOINING PARCELS NOT PROVIDED FOR THE PREPARATION OF THIS SURVEY. ABSENCE OF EASEMENTS DOES NOT DENY THE EXISTENCE OF SAME.



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FREEPORT METAL ETCHING SITE MANAGEMENT PLAN FREEPORT, NEW YORK

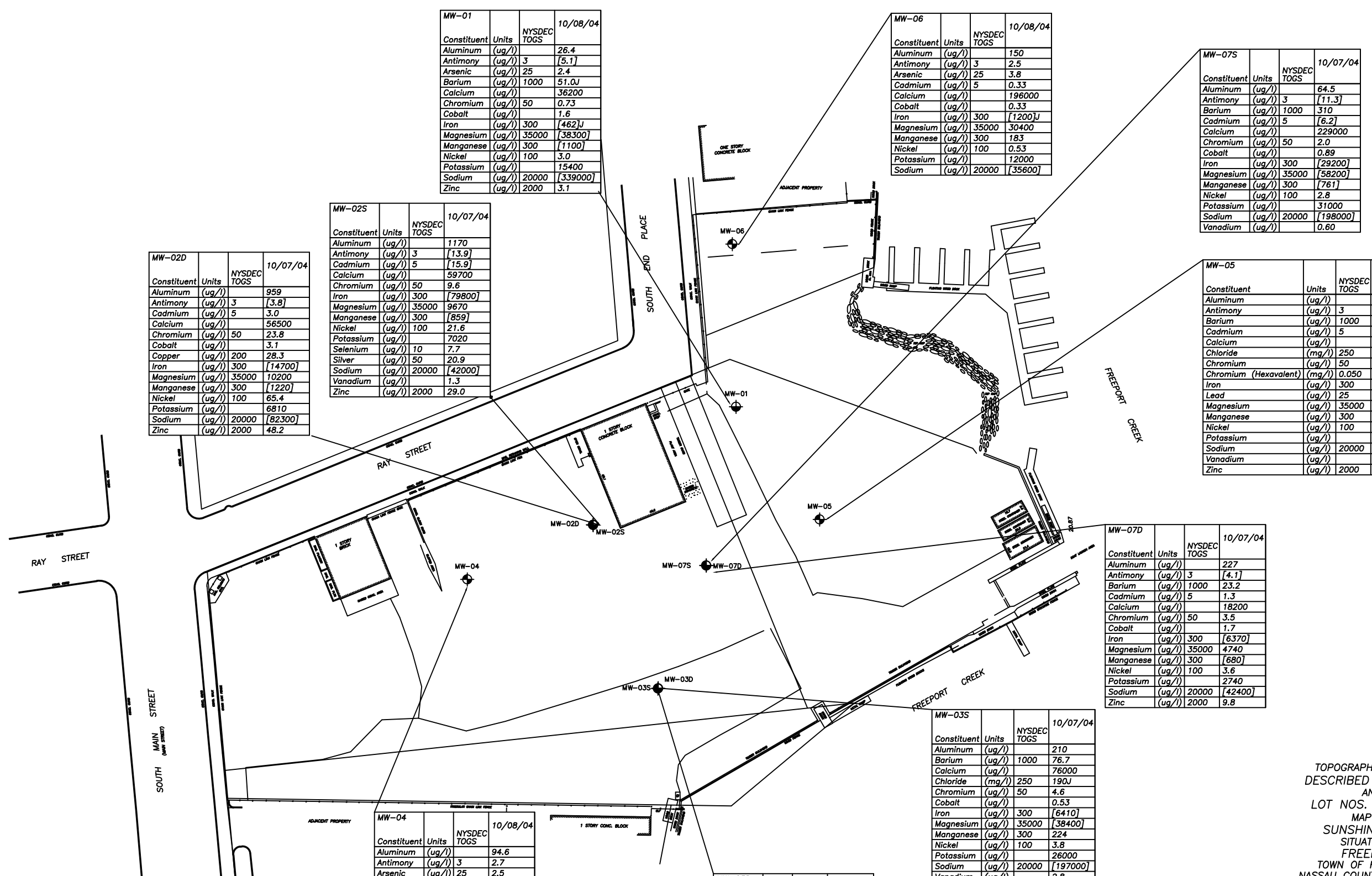
Figure 5C Remedial Investigation Soil Sample Results - VOCs

Legend: SB-56 (red dot) Soil Boring location exceeding the NYSDEC RSCO (Recommended Soil Cleanup Objective per TAGM 4046). Concentrations reported in micrograms per kilogram (ug/kg).

Scale: 0, 30', 60' GRAPHIC SCALE

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Note: Map was developed for the 2007 Remedial Investigation by Environmental Remediation Management, Inc.



MW-01			
Constituent	Units	NYSDEC TOGS	10/08/04
Aluminum	(ug/l)		26.4
Antimony	(ug/l)	3	[5.1]
Arsenic	(ug/l)	25	2.4
Barium	(ug/l)	1000	51.0J
Calcium	(ug/l)		36200
Chromium	(ug/l)	50	0.73
Cobalt	(ug/l)		1.6
Iron	(ug/l)	300	[462]J
Magnesium	(ug/l)	35000	[38300]
Manganese	(ug/l)	300	[1100]
Nickel	(ug/l)	100	3.0
Potassium	(ug/l)		15400
Sodium	(ug/l)	20000	[339000]
Zinc	(ug/l)	2000	3.1

MW-06			
Constituent	Units	NYSDEC TOGS	10/08/04
Aluminum	(ug/l)		150
Antimony	(ug/l)	3	2.5
Arsenic	(ug/l)	25	3.8
Cadmium	(ug/l)	5	0.33
Calcium	(ug/l)		196000
Cobalt	(ug/l)		0.33
Iron	(ug/l)	300	[1200]J
Magnesium	(ug/l)	35000	30400
Manganese	(ug/l)	300	183
Nickel	(ug/l)	100	0.53
Potassium	(ug/l)		12000
Sodium	(ug/l)	20000	[35600]

MW-07S			
Constituent	Units	NYSDEC TOGS	10/07/04
Aluminum	(ug/l)		64.5
Antimony	(ug/l)	3	[11.3]
Barium	(ug/l)	1000	310
Cadmium	(ug/l)	5	[6.2]
Calcium	(ug/l)		229000
Chromium	(ug/l)	50	2.0
Cobalt	(ug/l)		0.89
Iron	(ug/l)	300	[29200]
Magnesium	(ug/l)	35000	[58200]
Manganese	(ug/l)	300	[761]
Nickel	(ug/l)	100	31000
Potassium	(ug/l)		198000
Sodium	(ug/l)	20000	
Vanadium	(ug/l)		0.60

MW-02D			
Constituent	Units	NYSDEC TOGS	10/07/04
Aluminum	(ug/l)		959
Antimony	(ug/l)	3	[3.8]
Cadmium	(ug/l)	5	3.0
Calcium	(ug/l)		56500
Chromium	(ug/l)	50	23.8
Cobalt	(ug/l)		3.1
Copper	(ug/l)	200	28.3
Iron	(ug/l)	300	[14700]
Magnesium	(ug/l)	35000	10200
Manganese	(ug/l)	300	[1220]
Nickel	(ug/l)	100	65.4
Potassium	(ug/l)		6810
Sodium	(ug/l)	20000	[82300]
Zinc	(ug/l)	2000	48.2

MW-02S			
Constituent	Units	NYSDEC TOGS	10/07/04
Aluminum	(ug/l)		1170
Antimony	(ug/l)	3	[13.9]
Cadmium	(ug/l)	5	[15.9]
Calcium	(ug/l)		59700
Chromium	(ug/l)	50	9.6
Iron	(ug/l)	300	[29800]
Magnesium	(ug/l)	35000	9670
Manganese	(ug/l)	300	[859]
Nickel	(ug/l)	100	21.6
Potassium	(ug/l)		7020
Selenium	(ug/l)	10	7.7
Silver	(ug/l)	50	20.9
Sodium	(ug/l)	20000	[42000]
Vanadium	(ug/l)		1.3
Zinc	(ug/l)	2000	29.0

MW-05			
Constituent	Units	NYSDEC TOGS	10/08/04
Aluminum	(ug/l)		96.8
Antimony	(ug/l)	3	[7.2]
Barium	(ug/l)	1000	[1050]J
Cadmium	(ug/l)	5	3.6
Calcium	(ug/l)		128000
Chloride	(mg/l)	250	[400]J
Chromium	(ug/l)	50	0.90
Chromium (Hexavalent)	(mg/l)	0.050	[0.069]J
Iron	(ug/l)	300	[17400]J
Lead	(ug/l)	25	6.2
Magnesium	(ug/l)	35000	[37800]
Manganese	(ug/l)	300	[529]
Nickel	(ug/l)	100	4.6
Potassium	(ug/l)		31300
Sodium	(ug/l)	20000	[243000]
Vanadium	(ug/l)		2.6
Zinc	(ug/l)	2000	7.2

MW-07D			
Constituent	Units	NYSDEC TOGS	10/07/04
Aluminum	(ug/l)		227
Antimony	(ug/l)	3	[4.1]
Barium	(ug/l)	1000	23.2
Cadmium	(ug/l)	5	1.3
Calcium	(ug/l)		18200
Chromium	(ug/l)	50	3.5
Cobalt	(ug/l)		1.7
Iron	(ug/l)	300	[6370]
Magnesium	(ug/l)	35000	4740
Manganese	(ug/l)	300	[680]
Nickel	(ug/l)	100	3.6
Potassium	(ug/l)		2740
Sodium	(ug/l)	20000	[42400]
Zinc	(ug/l)	2000	9.8

MW-04			
Constituent	Units	NYSDEC TOGS	10/08/04
Aluminum	(ug/l)		94.6
Antimony	(ug/l)	3	2.7
Arsenic	(ug/l)	25	2.5
Barium	(ug/l)	1000	37.1J
Calcium	(ug/l)		90900
Chromium	(ug/l)	50	14.7
Cobalt	(ug/l)		0.33
Iron	(ug/l)	300	171J
Magnesium	(ug/l)	35000	10000
Manganese	(ug/l)	300	21.3
Nickel	(ug/l)	100	16.5
Potassium	(ug/l)		10800
Sodium	(ug/l)	20000	[63500]
Zinc	(ug/l)	2000	10.9

MW-03S			
Constituent	Units	NYSDEC TOGS	10/07/04
Aluminum	(ug/l)		210
Barium	(ug/l)	1000	76.7
Calcium	(ug/l)		76000
Chloride	(mg/l)	250	190J
Chromium	(ug/l)	50	4.6
Cobalt	(ug/l)		0.53
Iron	(ug/l)	300	[6410]
Magnesium	(ug/l)	35000	[38400]
Manganese	(ug/l)	300	224
Nickel	(ug/l)	100	3.8
Potassium	(ug/l)		26000
Sodium	(ug/l)	20000	[197000]
Vanadium	(ug/l)		2.8
Zinc	(ug/l)	2000	3.4J

MW-03D			
Constituent	Units	NYSDEC TOGS	10/07/04
Aluminum	(ug/l)		158
Chromium	(ug/l)	50	4.0
Iron	(ug/l)	300	[892]
Manganese	(ug/l)	300	[380]
Potassium	(ug/l)		6450
Zinc	(ug/l)	2000	2.8

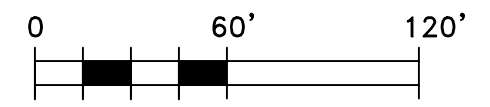
TOPOGRAPHIC MAP OF  
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AND  
LOT NOS. 24 & 25  
MAP OF  
SUNSHINE PARK  
SITUATED AT  
FREEPORT  
TOWN OF HEMPSTEAD  
NASSAU COUNTY, NEW YORK  
NASSAU COUNTY MAP NO. 179  
NASSAU COUNTY CASE NO. 1528  
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FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

Figure 6A  
Remedial Investigation  
Groundwater Sample Results - Metals



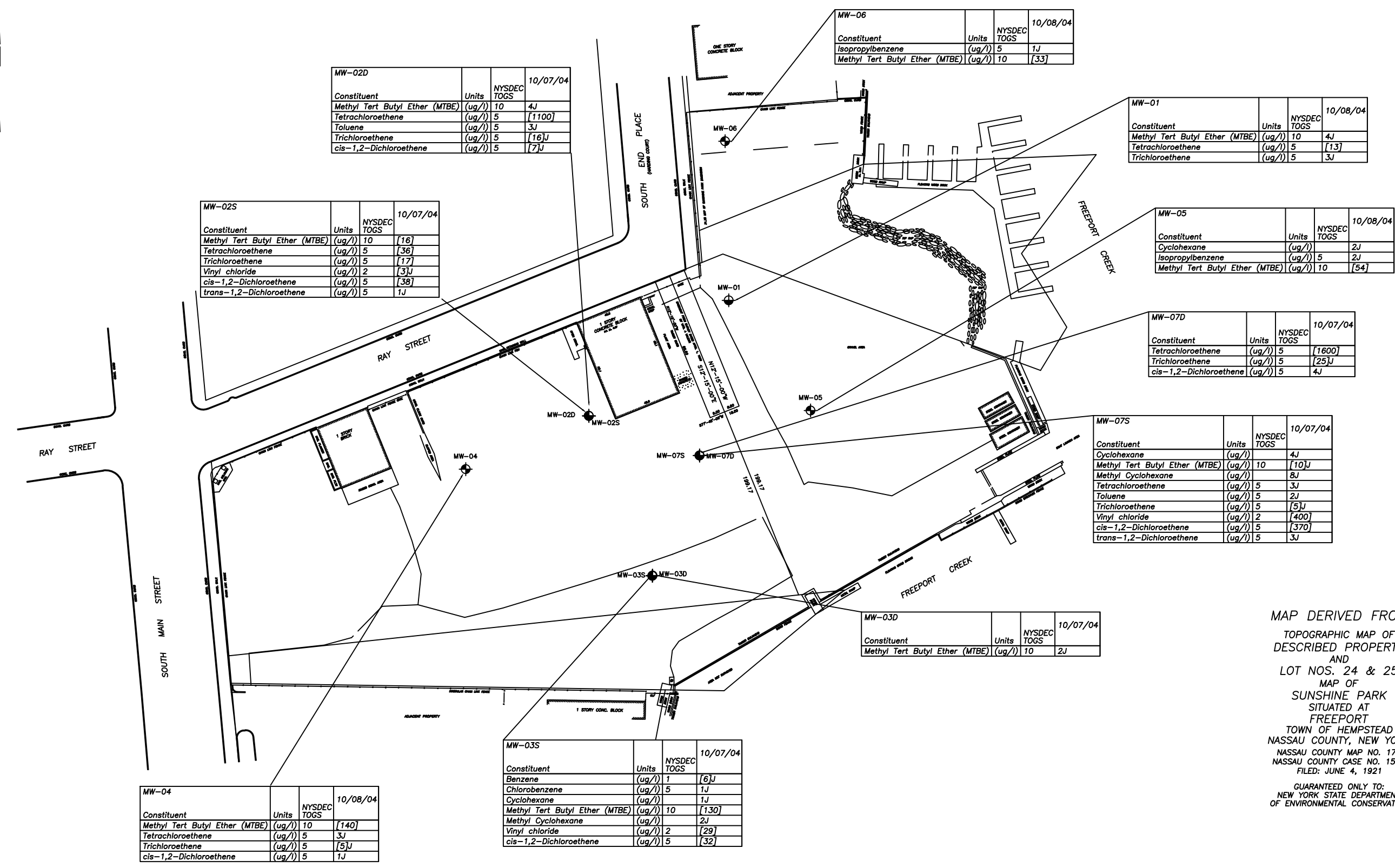
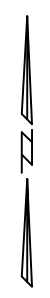
Legend

- MW-05 Monitoring Well Location
- [ ] Detected groundwater concentration is above NYSDEC TOGS Class GA Groundwater Standard
- J Estimated value

Note: Map was developed for the 2007 Remedial Investigation by Environmental Remediation Management, Inc.

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 DESCRIBED PROPERTY  
 AND  
 LOT NOS. 24 & 25  
 MAP OF  
 SUNSHINE PARK  
 SITUATED AT  
 FREEPORT  
 TOWN OF HEMPSTEAD  
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0:\Users\jrmiller\Working\VE Remedial\Fig\FIG6B.dwg

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FREEPORT METAL ETCHING SITE MANAGEMENT PLAN FREEPORT, NEW YORK												Figure 6B Remedial Investigation Groundwater Sample Results - VOCs											

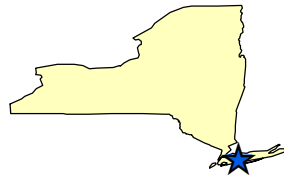
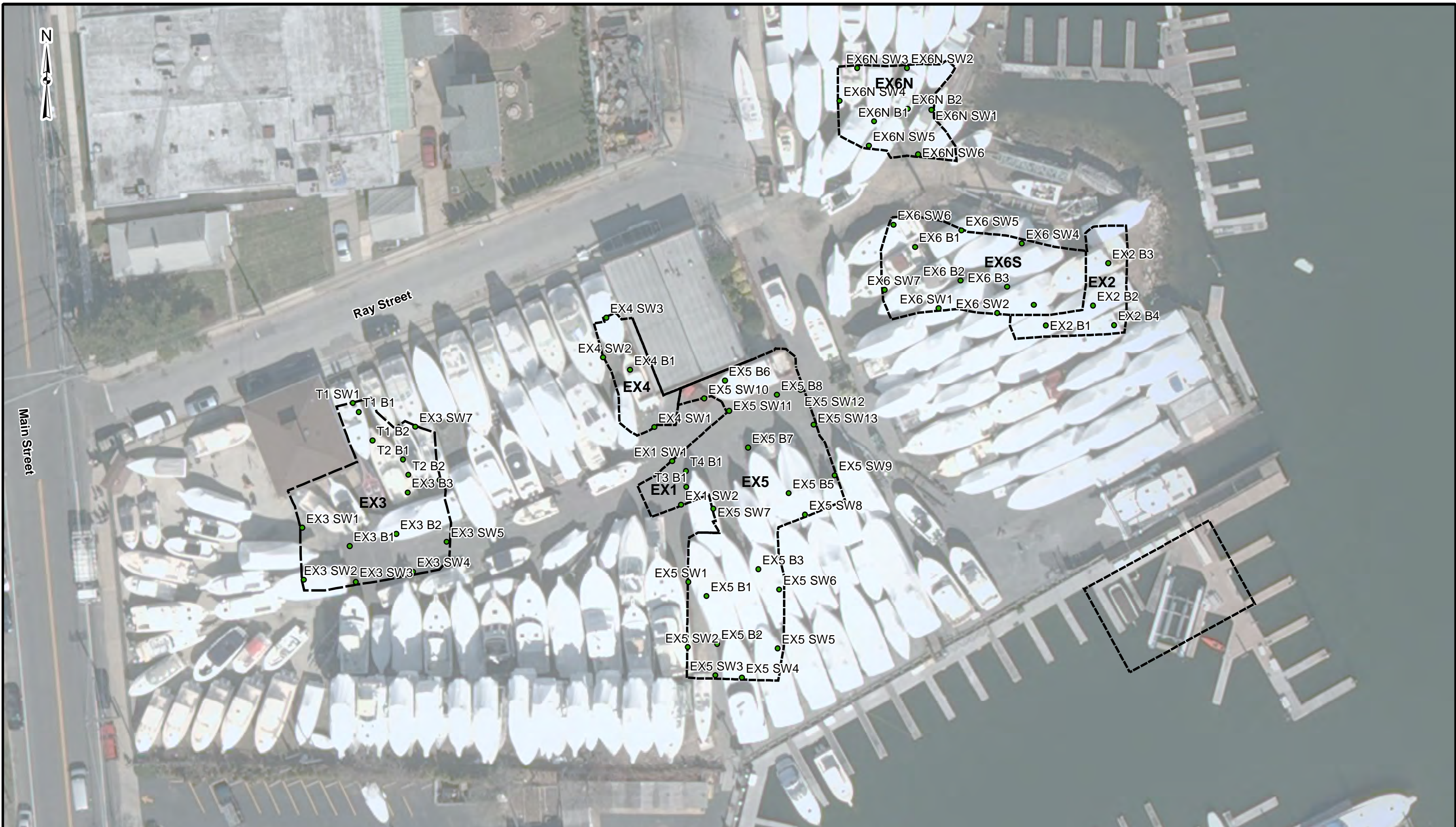
**Legend**

- Monitoring Well Location
- [ ] Detected groundwater concentration is above NYSDEC TOGS Class GA Groundwater Standard
- J Estimated value

Notes: Map was developed for the 2007 Remedial Investigation by Environmental Remediation Management, Inc.







FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

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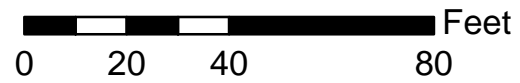
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14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig8

FIGURE 8  
Documentation Soil &  
Sediment Sample Locations

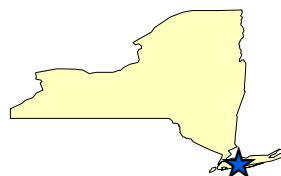
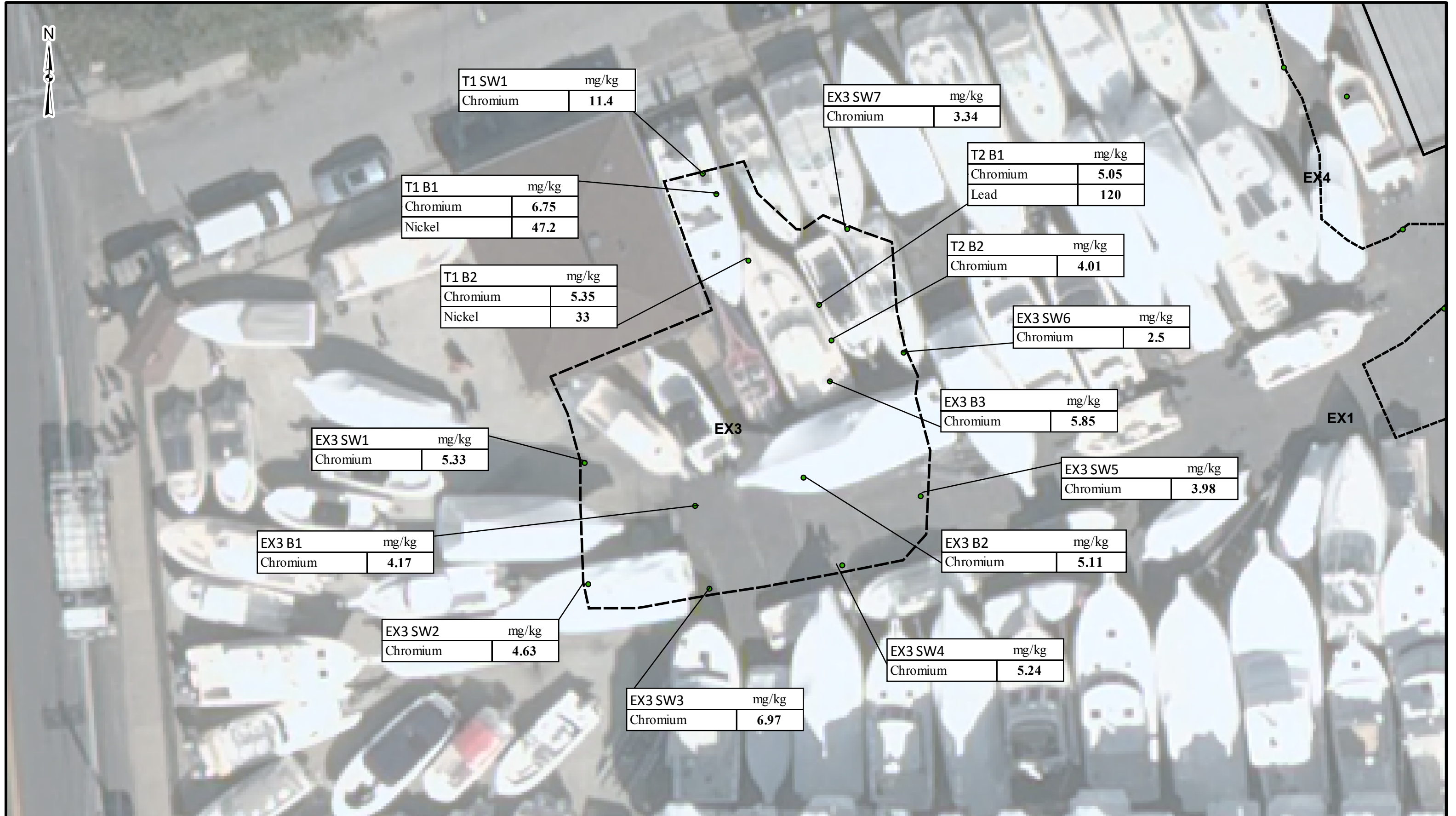


Source: NYS GIS Clearing House

Legend

---- Excavation Area Boundaries





FREEMPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEMPORT, NEW YORK

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RSC

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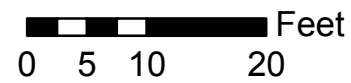
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14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig8

FIGURE 8A  
Documentation Sample  
Locations with Exceedences  
of Unrestricted Levels in EX-3



**Legend**

- Documentation Sample Location
- Excavation Area Boundaries

Source: NYS GIS Clearing House



EX4 SW3	mg/kg
Chromium	3.89

EX4 SW2	mg/kg
Chromium	8.19

EX4 SW1	mg/kg
Chromium	9.12

EX1 SW1	mg/kg
Chromium	71.6
Copper	107
Nickel	32.7
1,2,4-Trimethylbenzene	20,000
m,p Xylene	2,100
o-Xylene	1,000

T4 B1	mg/kg
Chromium	12
Zinc	158

T3 B1	mg/kg
Chromium	29.8
Copper	105
Lead	70.7
Mercury	0.227

EX1 SW2	mg/kg
Chromium	15.8
Lead	68.3
Zinc	135

Ray Street

EX4 B1	mg/kg
Chromium	78.3

EX3

EX5 SW7	mg/kg
Chromium	4.78

EX5 SW1	mg/kg
Chromium	7.15
Zinc	178

EX5 B1	mg/kg
Chromium	8.1
Copper	73.8

EX5 SW2	mg/kg
Chromium	28.7
Copper	449
Lead	101
Zinc	314

EX5 SW3	mg/kg
Chromium	20.9
Copper	92.2
Lead	121
Zinc	183

EX5 SW4	mg/kg
Chromium	27.6
Copper	84.9
Lead	81.4

EX5 SW10	mg/kg
Chromium	218
Copper	1190
Lead	227
Mercury	0.191
Nickel	110
Silver	8.75
Zinc	311

EX4

EX1

EX5

EX5 B6	mg/kg
Chromium	61.3
Copper	953
Nickel	56.4
Zinc	345

EX5 SW11	mg/kg
Chromium	15.8

EX6S

EX5 SW12	mg/kg
Chromium	10.8

EX5 SW13	mg/kg
Chromium	17.2
Copper	53.7
Lead	117

EX5 B7	mg/kg
Chromium	30.3
Copper	114
Nickel	31.8

EX5 SW9	mg/kg
Chromium	6.75
Lead	65.8

EX5 B5	mg/kg
Chromium	4.33

EX5 SW8	mg/kg
Chromium	7.24
Copper	266
Lead	80.3
Nickel	42.6
Zinc	193

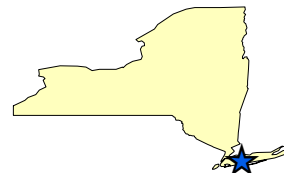
EX5 B3	mg/kg
Chromium	10.1
Lead	458

EX5 SW6	mg/kg
Chromium	7.3
Copper	120

EX5 B4	mg/kg
Chromium	6.3
cis 1,2-DCE	390
m,p Xylene	1500
o-Xylene	460
Toluene	1600

EX5 SW5	mg/kg
Chromium	12.6
Copper	221
Zinc	133

EX5 B2	mg/kg
Chromium	18.4
Copper	168
Zinc	166
m,p-Xylene	780



FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

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CHECKED BY:  
RSC

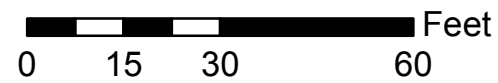
PROJECT NO:  
14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig8B

FIGURE 8B  
Documentation Sample Locations  
with Exceedences of Unrestricted  
Levels in EX-1, -4, & -5



Legend

- Documentation Sample Location
- Excavation Area Boundaries

Source: NYS GIS Clearing House





EX6N SW4 mg/kg	
Chromium	11.2
Zinc	132

EX6N SW3 mg/kg	
Chromium	8.65
Lead	86.5

EX6N B1 mg/kg	
Chromium	20
Copper	102
Lead	146
Zinc	114

EX6N SW2 mg/kg	
Chromium	10.8
Copper	162
Lead	254
Mercury	0.22
Zinc	371

EX6N B2 mg/kg	
Chromium	10.1
Copper	54.9
Lead	63.3
Zinc	146

EX6N SW1 mg/kg	
Barium	572
Chromium	14.1
Copper	314
Lead	275
Zinc	399

EX6 SW6 mg/kg	
Arsenic	17.6
Chromium	9.43
Copper	76.1
Lead	81
Zinc	159

EX6N SW5 mg/kg	
Chromium	32.2
Copper	149
Lead	113
Zinc	168

EX6 B1 mg/kg	
Chromium	6.98
Copper	56.7
Lead	739
Zinc	280

EX6N SW6 mg/kg	
Chromium	9.16
Copper	61.5

EX6 B2 mg/kg	
Chromium	12.1
Copper	55.8
Lead	80.6
Zinc	127

EX6 SW5 mg/kg	
Arsenic	17.9
Chromium	9.09
Copper	220

EX6 SW4 mg/kg	
Chromium	16.1
Copper	283
Lead	82.3
Nickel	596
Zinc	358

EX6 SW7 mg/kg	
Chromium	18.4
Copper	1670
Lead	107
Nickel	41.3
Zinc	473

EX2 B3 mg/kg	
Chromium	21.2
Copper	77.1
Lead	72.7

EX6 B3 mg/kg	
Arsenic	25.2
Chromium	12.4
Lead	206
Mercury	0.348
Nickel	45.3
Zinc	264

EX6 SW1 mg/kg	
Chromium	22
Copper	285
Lead	75.9
Nickel	39.9
Zinc	215

EX6 SW2 mg/kg	
Chromium	86.3
Copper	2430
Lead	70.6
Nickel	71.1
Zinc	558

EX6 SW3 mg/kg	
Chromium	19.8
Lead	107
Nickel	122
Zinc	281

EX2 B1 mg/kg	
Chromium	32.4
Copper	482
Zinc	365

EX2 B2 mg/kg	
Chromium	91.5
Copper	631
Lead	171
Mercury	0.121
Nickel	52.4
Zinc	442

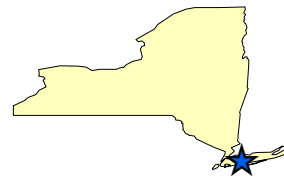
EX2 B4 mg/kg	
Chromium	60.1
Copper	288
Lead	71.6
Nickel	244
Zinc	256

EX4

EX6N

EX6S

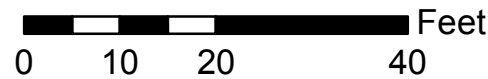
EX2



**FREEMPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEMPORT, NEW YORK**

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 14474.37
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**FIGURE 8C**  
Documentation Sample  
Locations with Exceedences of  
Unrestricted Levels in EX-2 & -6



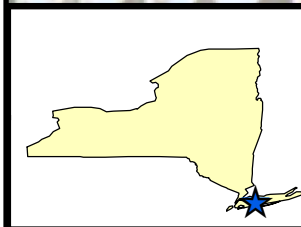
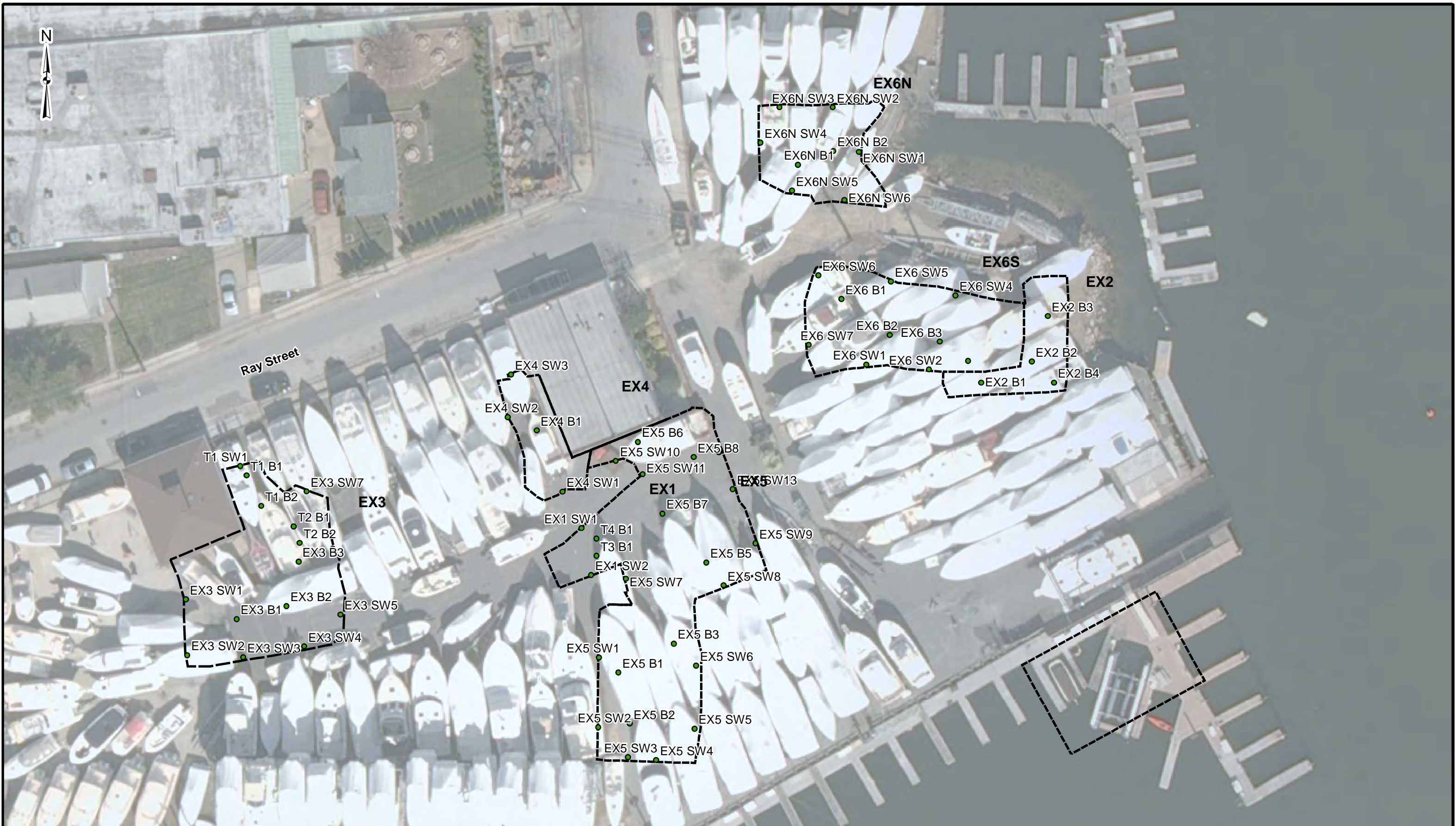
DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\Fig8C
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**Legend**

- Documentation Sample Location
- Excavation Area Boundaries

Source: NYS GIS Clearing House





FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

PROJECT MGR:  
RSC

DESIGNED BY:  
RSC

CREATED BY:  
MEM

CHECKED BY:  
RSC

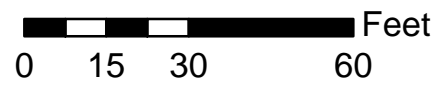
PROJECT NO:  
14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig9

FIGURE 9  
Documentation Soil &  
Sediment Sample Locations



Legend

- Documentation Sample Locations
- Excavation Area Boundaries

Source: NYS GIS Clearing House





Main Street

Ray Street

T1 B1	
Nickel	47.2
Zinc	62.1

T1 SW1 (No Exceedences)

T1 B2	
Nickel	33
Zinc	38.6

EX3 SW7 (No Exceedences)

T2 B1	
Zinc	53.9

EX4

T2 B2	
Zinc	27.3

EX3 SW1	
Zinc	33.0

EX3 SW6 (No Exceedences)

EX3 B3 (No Exceedences)

EX3 B2 (No Exceedences)

EX1

EX5

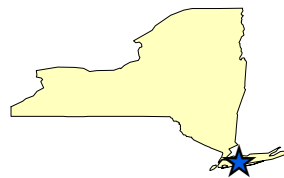
EX3 B1	
Zinc	22.0

EX3 SW2 (No Exceedences)

EX3 SW5	
Zinc	59.6

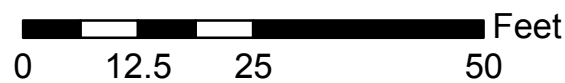
EX3 SW4	
Zinc	22.8

EX3 SW3	
Zinc	35.2



FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

FIGURE 9A  
Documentation Sample Locations  
with Exceedences of  
Site-Specific SCO's  
EX3



**Legend**

● Documentation Sample Locations

--- Excavation Area Boundaries

NOTE: VOC results in ug/kg, Metals results in mg/kg

Source: NYS GIS Clearing House

PROJECT MGR:  
RSC

DESIGNED BY:  
RSC

CREATED BY:  
MEM

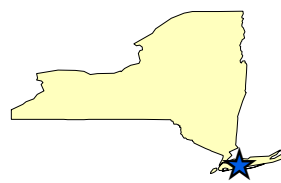
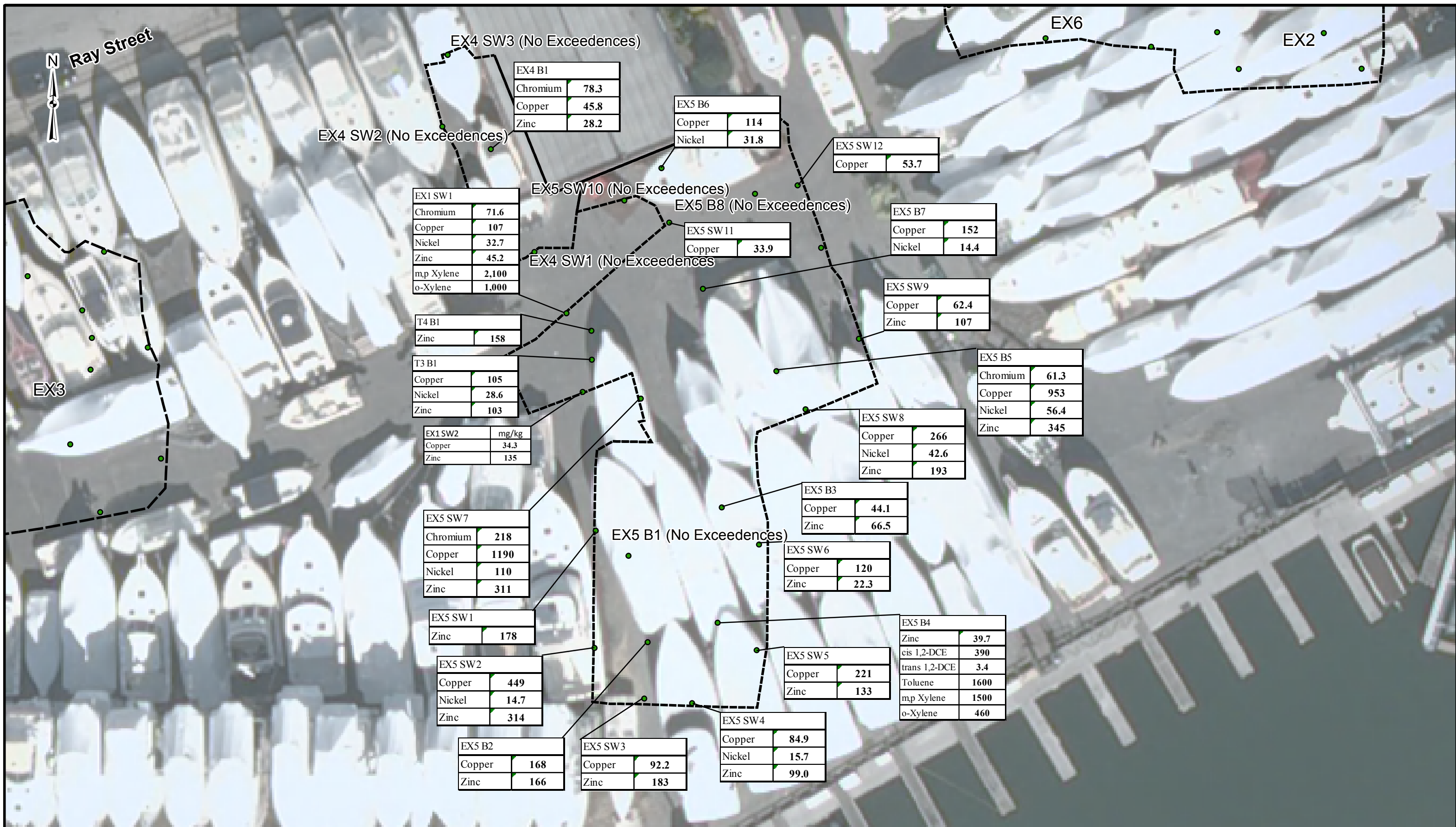
CHECKED BY:  
RSC

PROJECT NO:  
14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig9A



**FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK**

PROJECT MGR:  
RSC

DESIGNED BY:  
RSC

CREATED BY:  
MEM

CHECKED BY:  
RSC

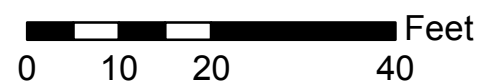
PROJECT NO:  
14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig9B

**FIGURE 9B**  
Documentation Sample Locations  
with Exceedences of  
Site-Specific SCO's  
EX1, EX4 and EX5



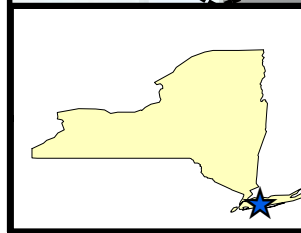
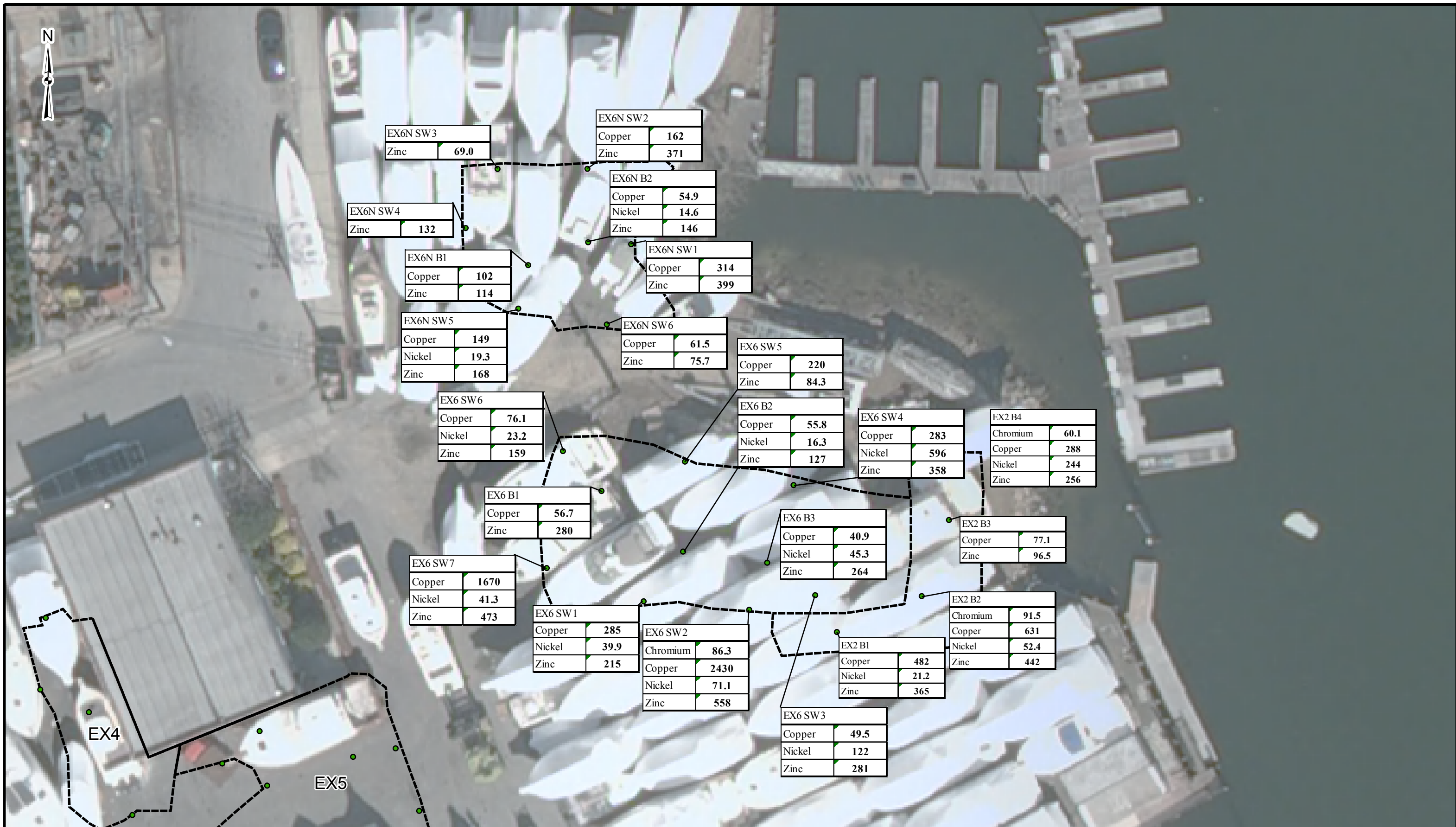
**Legend**

- Documentation Sample Locations
- Excavation Area Boundaries

NOTE: VOC results in ug/kg, Metals results in mg/kg

Source: NYS GIS Clearing House





**FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK**

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM
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**FIGURE 9C  
Documentation Sample Locations  
with Exceedances of  
Site-Specific SCO's  
EX2 and EX6**

CHECKED BY: RSC	PROJECT NO: 14474.37
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**0 10 20 40 Feet**

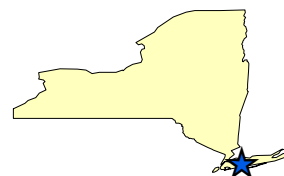
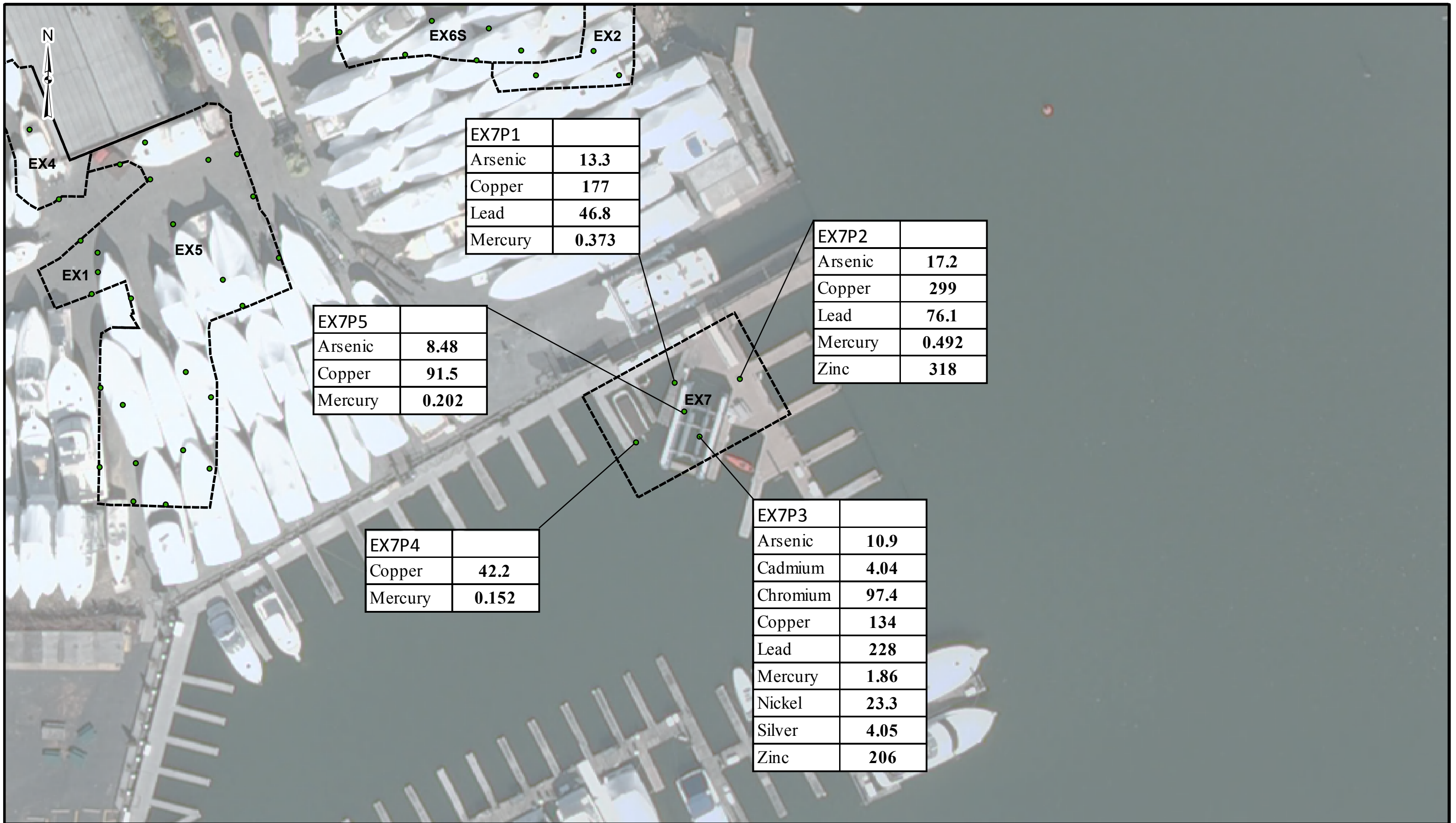
DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\Fig9C
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**Legend**

- Documentation Sample Location
- Excavation Area Boundaries

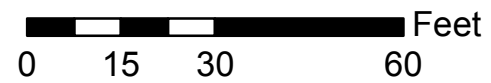
NOTE: VOC results in ug/kg, Metals results in mg/kg

Source: NYS GIS Clearing House



FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

FIGURE 9D  
Documentation Sample Locations  
with Exceedences of SCOs in EX7



**Legend**

- Documentation Sample Locations
- Excavation Area Boundaries

Source: NYS GIS Clearing House

PROJECT MGR:  
RSC

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RSC

CREATED BY:  
MEM

CHECKED BY:  
RSC

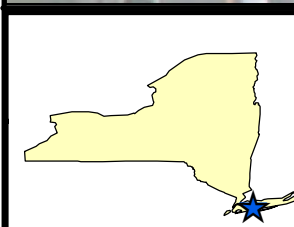
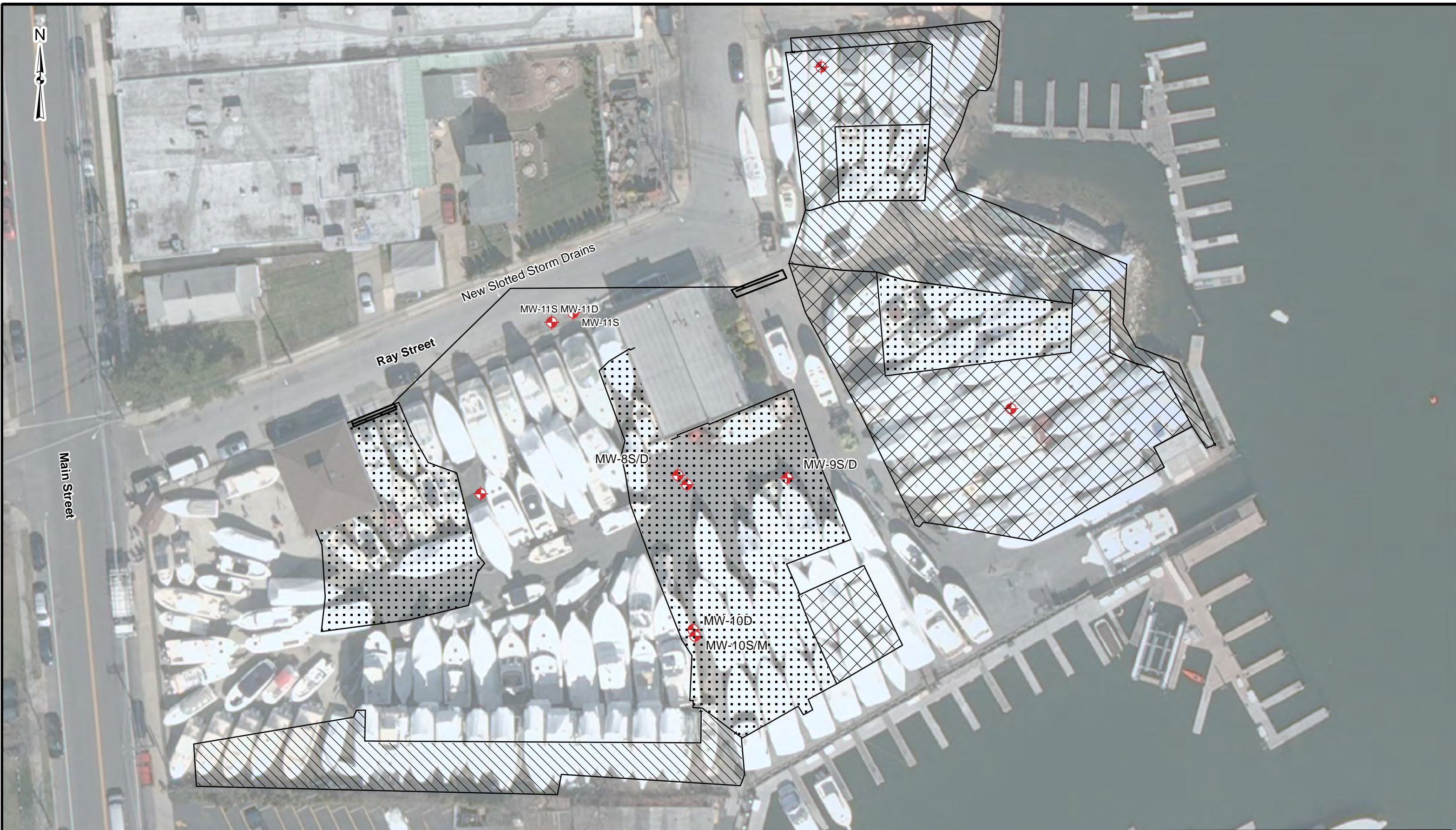
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14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\Fig9D



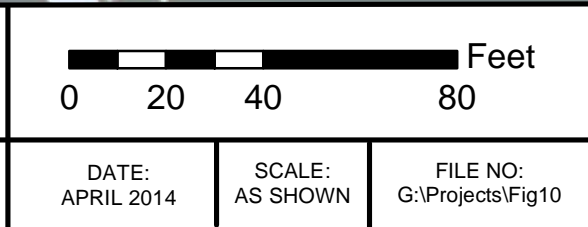


**FREEPORT METAL ETCHING  
SITE MONITORING PLAN  
FREEPORT, NEW YORK**

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC
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**FIGURE 10  
Location of Cover System Types**

PROJECT NO: 14474.37
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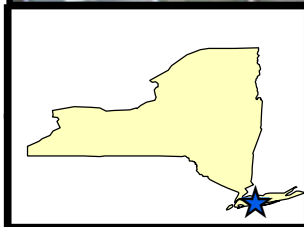


Source: NYS GIS Clearing House

**Legend**

<ul style="list-style-type: none"> <li> New Monitoring Wells</li> <li> Asphalt Cover</li> <li> Stone Cover</li> </ul>	<ul style="list-style-type: none"> <li> Porous Pavement Cover</li> </ul>
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**FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK**

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC
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**FIGURE 11  
Area of Soil Vapor Concern**

0    25    50    100    Feet

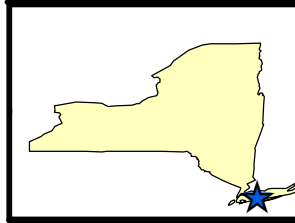
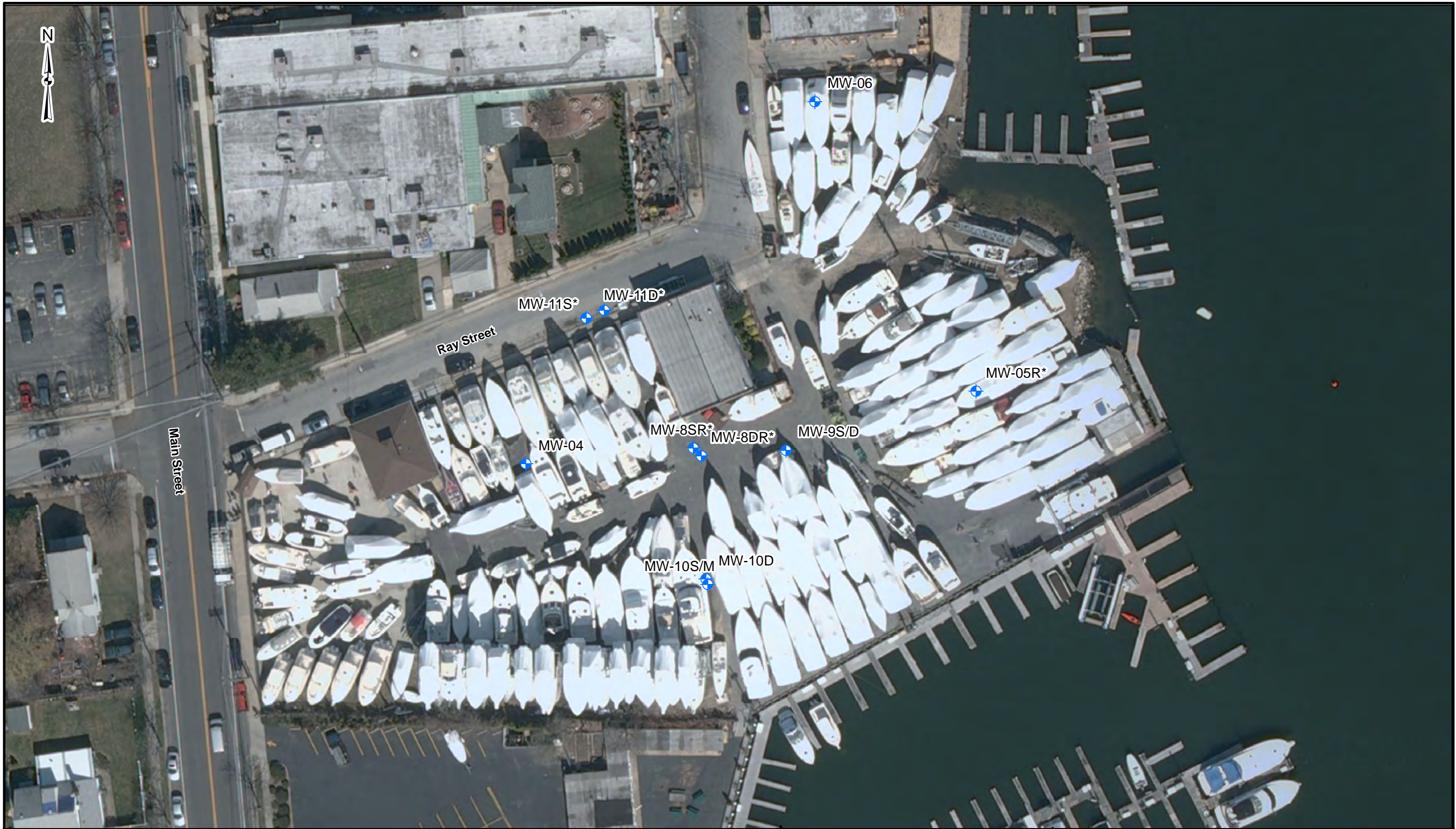
DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\SMP\FIG11
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Source: NYS GIS Clearing House

**Legend**

— Area of Soil Vapor Intrusion Concern





FREERPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREERPORT, NEW YORK

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM
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FIGURE 12  
Groundwater Monitoring  
Well Network

CHECKED BY: RSC	PROJECT NO: 14474.37
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0 25 50 100 Feet

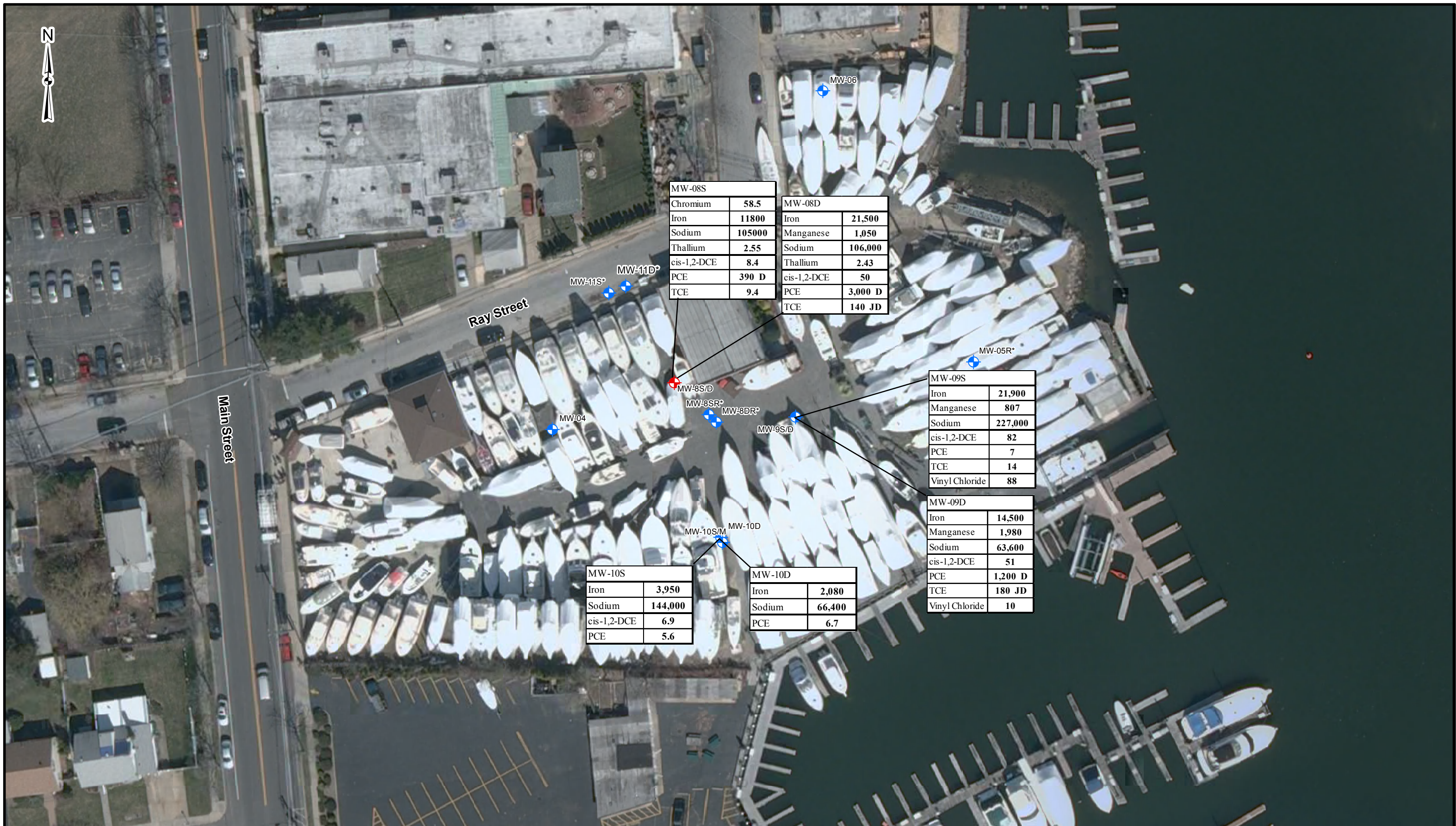
DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\MegalEtching\ SMP\Fig12
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**Legend**  
 Existing Monitoring Wells

\*Wells not surveyed; locations approximate

Source: NYS GIS Clearing House





MW-08S	
Chromium	58.5
Iron	11800
Sodium	105000
Thallium	2.55
cis-1,2-DCE	8.4
PCE	390 D
TCE	9.4

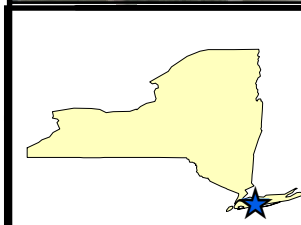
MW-08D	
Iron	21,500
Manganese	1,050
Sodium	106,000
Thallium	2.43
cis-1,2-DCE	50
PCE	3,000 D
TCE	140 JD

MW-09S	
Iron	21,900
Manganese	807
Sodium	227,000
cis-1,2-DCE	82
PCE	7
TCE	14
Vinyl Chloride	88

MW-09D	
Iron	14,500
Manganese	1,980
Sodium	63,600
cis-1,2-DCE	51
PCE	1,200 D
TCE	180 JD
Vinyl Chloride	10

MW-10S	
Iron	3,950
Sodium	144,000
cis-1,2-DCE	6.9
PCE	5.6

MW-10D	
Iron	2,080
Sodium	66,400
PCE	6.7



**FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK**

PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM
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**FIGURE 13  
Baseline Post-Remediation  
Groundwater Quality**

CHECKED BY: RSC	PROJECT NO: 14474.37
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0 25 50 100 Feet

DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\MegalEtching\ SMP\Fig13
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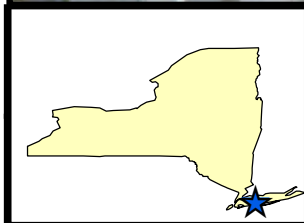
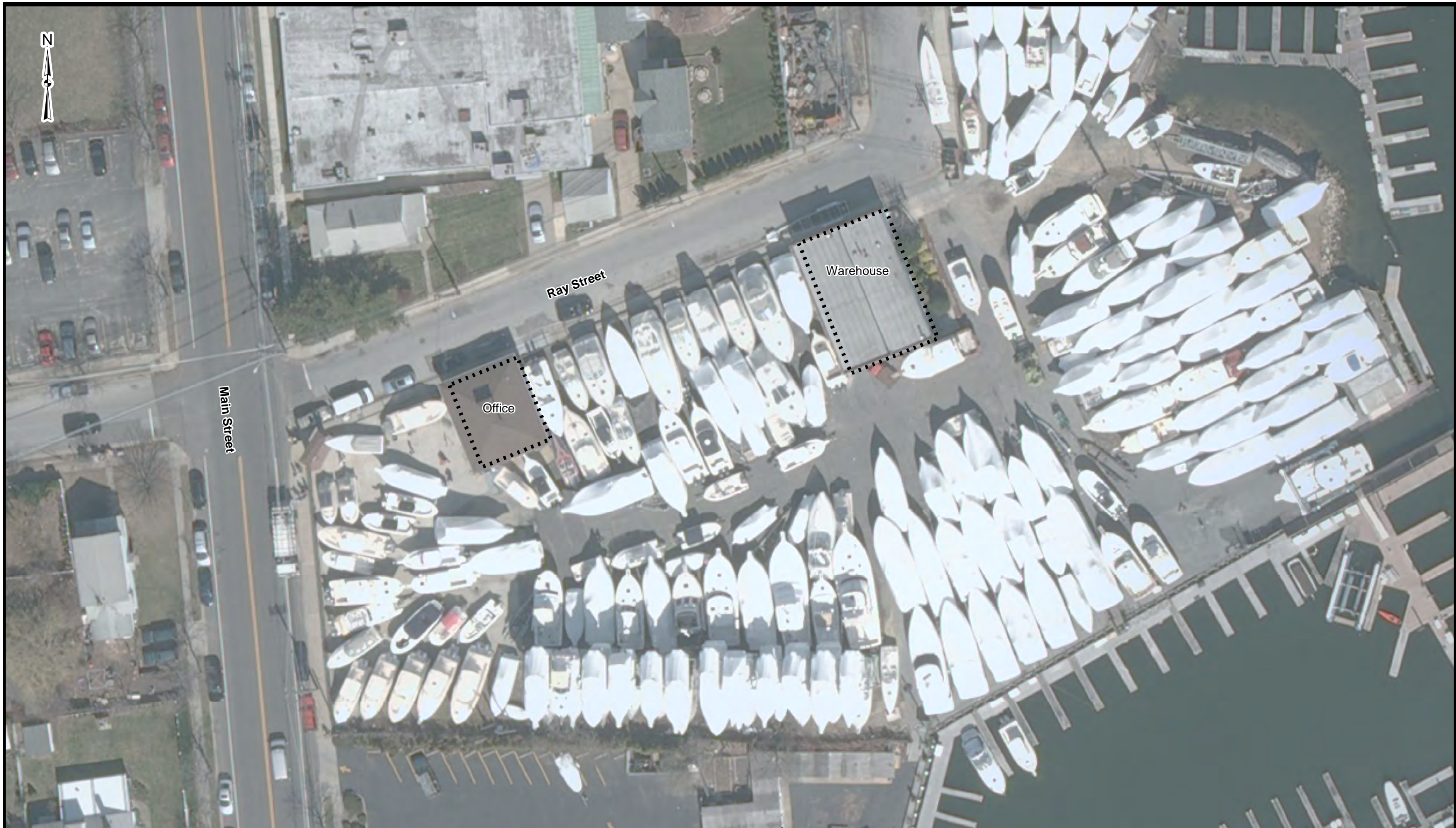
Source: NYS GIS Clearing House

**Legend**

- ◆ Existing Monitoring Wells
- ◆ Monitoring wells covered by concrete slab

NOTE: Results are in ug/L  
\*Wells not surveyed; locations approximate





FREEPORT METAL ETCHING  
SITE MANAGEMENT PLAN  
FREEPORT, NEW YORK

PROJECT MGR:  
RSC

DESIGNED BY:  
RSC

CREATED BY:  
MEM

CHECKED BY:  
RSC

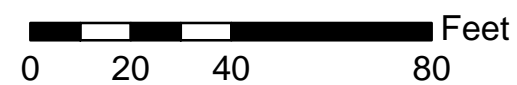
PROJECT NO:  
14474.37

DATE:  
APRIL 2014

SCALE:  
AS SHOWN

FILE NO:  
G:\Projects\SMP\FIG12

FIGURE 14  
Location of Remedial  
Treatment Systems



**Legend**

..... Location of Sub Slab Depressurization System

Source: NYS GIS Clearing House



TABLE 1 REMEDIAL INVESTIGATION SOIL CONTAMINATION SUMMARY

Chemical	Maximum Detected Concentration	TAGM RSCO Level	Direct Contact Criteria	Protection of Groundwater Criteria
<b>VOCs (µg/kg)</b>				
Trans-1,2-dichloroethene	300	300	2,000,000	300
Benzene	1,400	60	24,000	60
Chlorobenzene	3,700	2,700	2,000,000	1700
Ethylbenzene	14,000	5,500	8,000,000	5500
Methyl-tert-butyl ether	1,500	120	-	120
Naphthalene	25,000	13,000	300,000	13000
Tetrachloroethene	4,300	1,400	800,000	1400
Toluene	78,000	1,500	20,000,000	1500
Trichloroethene	10,000	700	64,000	700
Xylene	15,000	1,200	200,000,000	1200
Vinyl Chloride	1,800	200	-	120
<p>NOTE: TAGM = Technical and Administrative Guidance Memorandum  RSCO = Recommended Soil Cleanup Objective  VOC = Volatile Organic Compound  µg/kg = Micrograms per kilogram  Direct Contact Criteria Values obtained from TAGM #4046 EPA Health Based Column.  Protection of Groundwater Criteria obtained from the TAGM #4046 Protection of Groundwater.</p>				

Constituent	Maximum Detected Concentration (mg/kg)	Eastern US Background <sup>1</sup> (mg/kg)	New York Region <sup>2</sup> (mg/kg)	NYSDEC RSCO (mg/kg)	Frequency of Detection Above RSCOs
<b>METALS</b>					
Arsenic	29	<0.1 - 73	3 - 12	7.5 or SB	11/273
Barium	970	10 - 1500	15 - 600	300 or SB	1/273
Beryllium	1	<1 - 7	0 - 1.75	0.16 or SB	12/273
Cadmium	78	N/A	0.1 - 1	10	2/273
Calcium	72000	100 - 280000	130 - 35000	SB	5/273
Chromium	2200	1 - 1000	1.5 - 40	50	40/273
Chromium-Hexavalent	218			50	-
Cobalt	91	0.3 - 70	2.5 - 60	30 or SB	3/273
Copper	5700	<1 - 700	<1 - 50	25 or SB	91/273
Iron	43000	100 - >100000	2000 - 550000	2,000 or SB	239/273
Lead	3900	<10 - 300	200 - 500	SB	6/273
Magnesium	22000	50 - 50000	100 - 5000	SB	0/273
Nickel	1300	<5 - 700	0.5 - 25	13 or SB	52/273
Selenium	6.7	<0.1 - 3.9	<0.1 - 3.9	2 or SB	11/273
Zinc	3600	<5 - 2900	9 - 50	20 or SB	126/273
<p>1. Shacklette, HT and JG Boerngen, 1984. Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, USGS Professional Paper 1270</p> <p>2. Background Concentrations of 20 Elements in Soils with Special Regard for New York State, E. Carol McGovern, NYSDEC Wildlife Resources Center. These values are the same as the background concentrations listed in TAGM 4046.</p> <p>NOTE: NYSDEC = New York State Department of Environmental Conservation</p> <p>mg/kg = Milligram per kilogram</p> <p>SB = Site Background</p> <p>Shaded cells represent chemicals detected above both Eastern US Background and New York Region Background.</p>					

TABLE 2 REMEDIAL INVESTIGATION GROUNDWATER CONTAMINATION SUMMARY

Constituents	Screening Levels	MW-01	MW-02D	MW-02S	MW-03D	MW-03S	MW-04	MW-05	MW-06	MW-07D	MW-07S
		C1292-03 10/8/2004	C1282-03 10/7/2004	C1282-02 10/7/2004	C1282-05 10/7/2004	C1282-04 10/7/2004	C1292-04 10/8/2004	C1292-01 10/8/2004	C1292-02 10/8/2004	C1282-07 10/7/2004	C1282-06 10/7/2004
<b>VOLATILE ORGANIC COMPOUNDS (µg/L)</b>											
Benzene	1900					6 J					
Benzene, 1-methylethyl-	na							2 J	1 J		
Bromoform	na				2 J						
Chlorobenzene	50					1 J					
cis-1,2-Dichloroethylene	na		7 J	38			1 J			4 J	370
Cyclohexane	na					1 J		2 J			4 J
Ethene, 1,2-dichloro-, (E)-	na			1 J							3 J
Methylcyclohexane	na					2 J					8 J
Methyltert-butylether	na	4 J	4 J	16	2 J	130	140	54	33		10
Tetrachloroethylene	na	13	1100	36			3 J			1600	3 J
Toluene	920		3 J								2 J
Trichloroethylene	400 a	3 J	16	17			5 J			25	5 J
Vinyl chloride	na			3 J		29					400
<b>SEMIVOLATILE ORGANIC COMPOUNDS (µg/L)</b>											
2-Methylnaphthalene	42										1 J
Acenaphthene	66								3 J		2 J
Bis(2-ethylhexyl)phthalate (BEHP)	na			1 J							1 J
Carbazole	na										1 J
Dibenzofuran	na										1 J
Fluorene	25								3 J		1 J
Naphthalene	160					2 J					6 J
N-Nitrosodiphenylamine	na										15
Phenanthrene	15										2 J
<b>METALS (µg/L)</b>											
Aluminum	na	26.4	959	1170	158	210	94.6	96.8	150	227	64.5
Antimony	na	5.1	3.8	13.9		3.1	2.7	7.2	2.5	4.1	11.3
Arsenic	630	2.4				3.2	2.5		3.8		
Barium	na	51 J				34.2	76.7	37.1 J	1050 J	23.2	310
Cadmium	77		3	15.9		1.4		3.6	0.33	1.3	6.2
Calcium	na	36200	56500	59700	24400	76000	90900	128000	196000	18200	229000
Chloride	na					190 J		400 J			
Chromium	na	0.73	23.8	9.6	4	4.6	14.7	0.9		3.5	2
Chromium (Hexavalent)	540							0.069 J			
Cobalt	na	1.6	3.1		0.31	0.53	0.33		0.33	1.7	0.89
Copper	34		28.3								
Iron	na	462 J	14700	79800	892	6410	171 J	17400 J	1200 J	6370	29200
Lead	80							6.2			
Magnesium	na	38300	10200	9670	15600	38400	10000	37800	30400	4740	58200
Manganese	na	1100	1220	859	380	224	21.3	529	183	680	761
Nickel	82	3	65.4	21.6	2.8	3.8	16.5	4.6	0.53	3.6	2.8
Potassium	na	15400	6810	7020	6450	26000	10800	31300	12000	2740	31000
Selenium	na			7.7							
Silver	na			20.9							
Sodium	na	339000	82300	42000	142000	197000	63500	243000	35600	42400	198000
Vanadium	na			1.3		2.8		2.6			0.6
Zinc	660	3.1	48.2	29	2.8	3.4 J	10.9	7.2		9.8	
<b>PESTICIDES (µg/L)</b>											
Endrin ketone	na										0.079 J
<p>1. Screening Levels shown were obtained from New York State Department of Environmental Conservation Water Quality Regulations: Surface Water and Groundwater Classifications and Standards (New York State Codes, Rules and Regulations; Title 6, Chapter X Parts 700-706, Amendments through August 4, 1999) - Fish Propagation (saline waters) values used unless otherwise noted.</p> <p>NOTE: µg/L = Micrograms per liter  J = Estimated value. The value was designated as estimated as a result of the data validation criteria. Also used to indicate when an organic compound is present, but the concentration is less than the Contract Required Quantitation Limit (CRQL).  The value is usable as an estimated result.  na = Not Available  a = Human Consumption of Fish (saline) value used  No qualifier indicates the analyte was positively identified at the associated numerical value which is the concentration of the analyte in the sample.  All screening levels are multiplied by 10 to adjust for ground water to surface water dilution (see text).  Only detected values are shown on this table</p>											

TABLE 3 REMEDIAL INVESTIGATION SOIL VAPOR DATA SUMMARY

Soil Gas Survey Sample Point Identification	Sample Serial Number	Installation Date/Time	Initial Reading	Sustained Reading
<b>Gore Sorbers</b>				
GS-01	452988	7/15/2004 / 8:16:00 AM	0.0 ppm	0.0 ppm
GS-02	452989	7/16/2004 / 9:00:00 AM	9.5 ppm	9.5 ppm
GS-03	452990	7/16/2004 / 9:15:00 AM	0.6 ppm	0.6 ppm
GS-04	452991	7/16/2004 / 10:20:00 AM	0.0 ppm	0.0 ppm
GS-05	452992	7/16/2004 / 10:30:00 AM	0.0 ppm	0.0 ppm
GS-06	452993	7/16/2004 / 11:00:00 AM	0.0 ppm	0.0 ppm
GS-07	452994	7/16/2004 / 11:30:00 AM	0.9 ppm	0.9 ppm
GS-08	452995	7/16/2004 / 11:45:00 AM	0.0 ppm	0.0 ppm
GS-09	452996	7/16/2004 / 12:50:00 PM	30 ppm	30 ppm
GS-10	452997	7/16/2004 / 1:29:00 PM	1.5 ppm	1.5 ppm
NOTE: ppm = parts per million.				

TABLE 4 REMEDIAL INVESTIGATION SEDIMENT CONTAMINATION SUMMARY

	ER-L mg/kg (Metals); ug/kg (PCBs, VOCs, SVOCs)	ER-M mg/kg (Metals); ug/kg (PCBs, VOCs, SVOCs)	SED-01	SED-01	SED-02	SED-03	SED-04	SED-05	SED-07	Background Locations	
			C1024-01 8/24/2004	C1024-09 8/24/2004	C1024-02 8/24/2004	C1024-03 8/24/2004	C1024-04 8/24/2004	C1024-05 8/24/2004	C1024-07 8/24/2004	C1024-06 8/24/2004	SED-08 C1024-08 8/24/2004
			Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary
<b>VOCs (ug/kg)</b>											
Acetone	NA	NA	24	17	18	13 U	36	13 U	7	560	17
Carbon disulfide	NA	NA	14 U	12 U	13 U	13 U	7	13 U	12 U	87	13 U
Methylene chloride	NA	NA	14 U	12 U	10	13 U	19 U	13 U	12 U	19	10
Methyl-tert-butyl-ether	NA	NA	14 U	12 U	13 U	13 U	19 U	3	13 U	42 U	12 U
<b>Sum of Constituents</b>			<b>24</b>	<b>17</b>	<b>28</b>	<b>0</b>	<b>43</b>	<b>3</b>	<b>7</b>	<b>751</b>	<b>27</b>
<b>SVOCs (ug/kg)</b>											
2-Methylnaphthalene	70	670	480 U	400 U	410 U	430 U	610 U	430 U	390 U	1400 U	430 U
4-Methylphenol	NA	NA	480 U	400 U	86	430 U	610 U	430 U	390 U	1400 U	430 U
Acenaphthene	16	500	110	80	410 U	430 U	610 U	260	390 U	1400 U	430 U
Acetophenone	NA	NA	480 U	42	410 U	66	610 U	430 U	390 U	1400 U	430 U
Anthracene	85.3	1100	280	260	97	430 U	610 U	660	390 U	1400 U	430 U
Benzaldehyde	NA	NA	130	69	410 U	430 U	610 U	430 U	390 U	1400 U	430 U
Benzo(a)anthracene	261	1600	1100	930	340	61	410	3000	390 U	350	430 U
Benzo(a)pyrene	430	1600	1200	940	380	64	250	3000	390 U	410	430 U
Benzo(b)fluoranthene	NA	NA	2200	1600	620	95	490	4000	43	750	76
Benzo(ghi)perylene	NA	NA	290	260	110	430 U	610 U	690	390 U	250	430 U
Benzo(k)fluoranthene	NA	NA	740	570	250	46	160	2000	390 U	280	430 U
Bis(2-ethylhexyl)phthalate	NA	NA	6000	1700	690	100	1000	270	160	1400	240
Butyl benzyl phthalate	NA	NA	810	400	120	430 U	610 U	430 U	390 U	1400 U	430 U
Carbazole	NA	NA	200	140	50	430 U	610 U	390	390 U	1400 U	430 U
Chrysene	384	2800	1400	1500	430	79	350	3400	390 U	550	58
Dibenzo(a,h)anthracene	63.4	260	180	150	69	430 U	610 U	460	390 U	1400 U	430 U
Dibenzofuran	NA	NA	65	51	410 U	430 U	610 U	130	390 U	1400 U	430 U
Dimethyl phthalate	NA	NA	140	93	410 U	430 U	610 U	430 U	390 U	1400 U	430 U
Di-n-butyl phthalate	NA	NA	310	250	410 U	430 U	610 U	430 U	390 U	1400 U	430 U
Di-n-octyl phthalate	NA	NA	91	53	410 U	430 U	610 U	430 U	390 U	1400 U	430 U
Fluoranthene	600	5100	2500	1900	650	110	510	5100	390 U	470	61
Fluorene	19	540	130	140	410 U	430 U	610 U	270	390 U	1400 U	430 U
Indeno(1,2,3-cd)pyrene	NA	NA	740	570	240	430 U	610 U	1700	390 U	330	430 U
Naphthalene	160	2100	480 U	400 U	410 U	430 U	610 U	50	390 U	1400 U	430 U
Pentachlorophenol	NA	NA	1200 U	73	1000 U	1100 U	1500 U	1100 U	970 U	3500 U	1100 U
Phenanthrene	240	1500	1600	1400	410	58	610 U	3200	390 U	160	430 U
Pyrene	665	2600	3100	2300	910	130	3000	5200	42	930	75
<b>Sum of Constituents</b>			<b>23316</b>	<b>15471</b>	<b>5452</b>	<b>809</b>	<b>6170</b>	<b>33780</b>	<b>245</b>	<b>5880</b>	<b>510</b>
<b>Pest/PCBs (ug/kg)</b>											
4,4'-DDD	NA	NA	4.1	10	4.1 U	3.7	6.1 U	4.3 U	3.9 U	14 U	4.3 U
4,4'-DDE	2.2	27	2.3	19	4.1 U	4.2	4.3	4.3 U	3.9 U	14 U	4.3 U
4,4'-DDT	1.58	46.1	4.8 U	8.2	4.1 U	4.3 U	6.1 U	4.3 U	3.9 U	14 U	4.3 U
Aldrin	NA	NA	2.5 U	2 U	2.1 U	2.2 U	3.1 U	2.2 U	2 U	7.1 U	2.2 U
alpha-BHC	NA	NA	2.5 U	2 U	2.1 U	2.2 U	3.1 U	2.2 U	2 U	7.1 U	2.2 U
alpha-Chlordane	0.5	6	2.5 U	2 U	2.7	1.9	3.1 U	1.2	2 U	7.1 U	2.2 U
Dieldrin	0.02	8	4.8 U	4 U	4.1 U	4.3 U	6.1 U	4.3 U	3.9 U	14 U	4.3 U
Endosulfan I	NA	NA	2.5 U	2 U	2.1 U	2.2 U	3.1 U	2.2 U	2 U	7.1 U	2.2 U
Endosulfan sulfate	NA	NA	4.8 U	4 U	4.1 U	4.3 U	6.1 U	4.3 U	3.9 U	14 U	4.3 U
Endrin aldehyde	NA	NA	4.8 U	17	4.1 U	4.3 U	6.9	4.3 U	3.9 U	14 U	4.3 U
Endrin ketone	0.02	45	4.8 U	4 U	4.1 U	4.3 U	8.9	4.3 U	3.9 U	14 U	4.3 U
gamma-Chlordane	0.5	6	1.7	12	2.5	2.3	3.1 U	2.2 U	2 U	7.1 U	2.2 U
Heptachlor epoxide	NA	NA	2.5 U	2 U	2.1 U	2.2 U	3.1 U	2.2 U	2 U	7.1 U	2.2 U
Methoxychlor	NA	NA	25 U	14	21 U	22 U	12	22 U	20 U	71 U	22 U
Aroclor 1254	22.7	180	96	2300	70	86	170	43 U	39 U	140 U	43 U
<b>Metals (mg/kg)</b>											
Aluminum	NA	NA	3560	5120	2950	1310	8200	1670	1050	17800	1740
Arsenic	8.2	70	6.3	5.6	5.2	2.7	15	5.1	0.77	26	1.6
Barium	NA	NA	23.5	18.6	8	5	52.8	7.6	3.6	67.5	6.4
Beryllium	NA	NA	0.39	0.35	0.34	0.12	0.79	0.15	0.077	1.5	0.15
Cadmium	1.2	9.6	0.42	0.64	0.18	1.1 UJ	1	0.93 UJ	0.96	1	0.096
Calcium	NA	NA	16700	9050	11000	2090	2230	329	1680	12900	12700
Chromium	81	370	34.7	84.9	16	3.3	127	14.4	3.4	89.2	6.5
Cobalt	NA	NA	2.6	3	1.8	0.43	5.6	1	0.3	6.7	0.7
Copper	34	270	285	261	52.3	30.1	290	57.8	39	338	17.5
Iron <sup>1</sup>	2%	4%	11000	10500	6040	4840	21400	7100	1910	39300	3210
Lead	46.7	218	63.8	105	98.6	17.1	134	19	6	154	15.2
Magnesium	NA	NA	11400	8590	1430	2200	3880	553	529	11500	994
Manganese <sup>1</sup>	460	1100	64.3	83.6	36.5	32.5	116	38.9	13.1	268	25.6
Mercury	0.15	0.71	2.5	0.083	0.065	0.12 UJ	0.39	0.11 UJ	0.094 UJ	0.61	0.089
Nickel	20.9	51.6	15.4	40.4	8.8	3.2	28.4	2.3	1.4	26.8	2.6
Potassium	NA	NA	627	585	450	230	1850	358	284	5730	479
Silver	1	3.7	0.67	0.69	0.33	0.22	1.8	0.39		3.4	0.13
Sodium	NA	NA	4990	3940	2680	1700	6200	473	1580	33300	3260
Thallium	NA	NA	1.8	1.1	0.63	2.1 UJ	2.1	1.9 UJ	1.9 UJ	4.8	0.76
Vanadium	NA	NA	31.5	20.6	10.6	9.4	40.7	7.5	3.4	81.7	5.9
Zinc	150	410	338	315	93.2	59.7	425	46.5	16.5	417	26.5
Above Effects Range Low (ER-L) and above SED-06 & SED-08											
Above Effects Range Medium (ER-M) and above SED-06 & SED-08											
NA Not applicable											
U: Chemical was not detected at indicated chemical limit.											
UJ: Chemical was undetected but estimated to be at indicated level.											
1. Persaud, D., Jaagumagi, R., and A. Hayton, 1992. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario. Ontario Ministry of the Environment, Queen's Printer for Ontario.											



TABLE 5A SITE-SPECIFIC SOIL AND GROUNDWATER  
CLEANUP OBJECTIVES

Constituent	Standards, Criteria, and Guidance	Units
<b>VOLATILE ORGANIC COMPOUNDS - SOIL</b>		
Tetrachloroethylene (PCE)	1.4	mg/Kg
Trichloroethylene (TCE)	0.7	mg/Kg
1,2-Dichloroethylene (DCE)	0.3	mg/Kg
Vinyl Chloride	0.2	mg/Kg
Benzene	0.06	mg/Kg
Toluene	1.5	mg/Kg
Ethylbenzene	5.5	mg/Kg
Xylene	1.2	mg/Kg
Naphthalene	13	mg/Kg
Chlorobenzene	17	mg/Kg
<b>INORGANICS (METALS) - SOIL</b>		
Chromium	50	mg/Kg
Copper	25	mg/Kg
Nickel	13	mg/Kg
Zinc	20	mg/Kg
<b>VOLATILE ORGANIC COMPOUNDS - GROUNDWATER</b>		
Tetrachloroethylene (PCE)	5	µg/L
Trichloroethylene (TCE)	5	µg/L
1,2-Dichloroethylene (DCE)	5	µg/L
Vinyl Chloride	2	µg/L
Methyl Tert Butyl Ether (MTBE)	10	µg/L
<b>INORGANICS (METALS) - GROUNDWATER</b>		
Chromium	50	µg/L
Copper	200	µg/L
Nickel	100	µg/L
Zinc	2000	µg/L
NOTE: Soil Cleanup Objectives developed for 2007 Record of Decision		

TABLE 5B SITE-SPECIFIC SEDIMENT CLEANUP OBJECTIVES

Constituent	Effects Range-Low	Effects Range-High	Units
<b>INORGANICS (METALS)</b>			
Arsenic	8.2	70	mg/Kg
Cadmium	1.2	9.6	mg/Kg
Chromium	81	370	mg/Kg
Copper	34	270	mg/Kg
Iron <sup>(a)</sup>	2%	4%	mg/Kg
Lead	46.7	218	mg/Kg
Manganese <sup>(a)</sup>	460	1100	mg/Kg
Mercury	0.15	0.71	mg/Kg
Nickel	20.9	51.6	mg/Kg
Silver	1	3.7	mg/Kg
Zinc	150	410	mg/Kg
a) Persaud, D., Jaagumagi, R., and A. Hayton, 1992. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario. Ontario Ministry of the Environment, Queen's Printer for Ontario.			

TABLE 6A SUMMARY OF REMAINING SOIL CONTAMINATION ABOVE UNRESTRICTED LEVELS FOR VOCs

Parameter List EPA Method 8260B	Sample ID	EX1SW1	EX1SW2	T3B1	T4B1	EX2B1	EX2B2	EX2B3	Part 375 Unrestricted Use Soil Cleanup Objectives				
	Lab ID	C3524-03	C3524-04	C3524-01	C3524-02	C3109-07	C3109-08	C3109-09					
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
	Sample Date	8/25/2011	8/25/2011	8/25/2011	8/25/2011	7/21/2011	7/21/2011	7/21/2011					
1,2,4-Trimethylbenzene	(µg/kg)	<b>20,000</b>	D	3.2	D	U	U	U	U	3,600			
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	U	250			
m,p-Xylene	(µg/kg)	<b>2,100</b>	D	U	D	U	U	U	U	260 <sup>(a)</sup>			
o-Xylene	(µg/kg)	<b>1,000</b>	D	U	D	U	U	U	U	260 <sup>(a)</sup>			
Toluene	(µg/kg)	13	U	U	U	U	U	U	U	700			
Parameter List EPA Method 8260B	Sample ID	EX2B4	EX3B1	EX3B2	EX3B3	EX3SW1	EX3SW2	EX3SW3	Part 375 Unrestricted Use Soil Cleanup Objectives				
	Lab ID	C3109-10	C3068-06	C3068-07	C3109-02	C3068-01	C3068-02	C3068-03					
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
	Sample Date	7/21/2011	7/19/2011	7/19/2011	7/21/2011	7/19/2011	7/19/2011	7/19/2011					
1,2,4-Trimethylbenzene	(µg/kg)	U	U	U	U	U	U	U	U	3,600			
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	U	250			
m,p-Xylene	(µg/kg)	U	U	U	U	U	U	U	U	260 <sup>(a)</sup>			
o-Xylene	(µg/kg)	U	U	U	U	U	U	U	U	260 <sup>(a)</sup>			
Toluene	(µg/kg)	U	U	U	U	U	U	U	U	700			
Parameter List EPA Method 8260B	Sample ID	EX3SW4	EX3SW5	EX3SW6	EX3SW7	T1B1	T1B2	T1SW1	Part 375 Unrestricted Use Soil Cleanup Objectives				
	Lab ID	C3068-04	C3068-05	C3109-01	C3153-06	C3153-01	C3153-02	C3153-05					
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
	Sample Date	7/19/2011	7/19/2011	7/21/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011					
1,2,4-Trimethylbenzene	(µg/kg)	U	U	U	U	U	U	U	U	3,600			
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	U	250			
m,p-Xylene	(µg/kg)	U	U	U	U	U	U	U	U	260 <sup>(a)</sup>			
o-Xylene	(µg/kg)	U	U	U	U	U	U	U	U	260 <sup>(a)</sup>			
Toluene	(µg/kg)	U	U	U	U	U	U	U	U	700			
Parameter List EPA Method 8260B	Sample ID	T2B1	T2B2	EX4B1	EX4SW1	EX4SW2	EX4SW3	EX5B1	Part 375 Unrestricted Use Soil Cleanup Objectives				
	Lab ID	C3153-03	C3153-04	C3473-06	C3473-01	C3473-02	C3473-03	C3265-04					
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
	Sample Date	7/27/2011	7/27/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011	8/4/2011					
1,2,4-Trimethylbenzene	(µg/kg)	7.5	31	U	1.1	J	U	U	U	3,600			
cis-1,2-Dichloroethylene	(µg/kg)	U	U	1.7	J	U	U	U	U	250			
m,p-Xylene	(µg/kg)	U	U	U	7.2	J	U	U	U	260 <sup>(a)</sup>			
o-Xylene	(µg/kg)	U	1.4	J	U	1.0	J	U	U	260 <sup>(a)</sup>			
Toluene	(µg/kg)	U	U	U	1.1	J	U	U	U	700			
Parameter List EPA Method 8260B	Sample ID	EX5B2	EX5B3	EX5B4	EX5B5	EX5B6	EX5B7	EX5B8	Part 375 Unrestricted Use Soil Cleanup Objectives				
	Lab ID	C3265-05	C3355-04	C3355-05	C3355-09	C3473-08	C3622-04	C3622-05					
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
	Sample Date	8/4/2011	8/11/2011	8/11/2011	8/22/2011	8/22/2011	9/7/2011	9/7/2011					
1,2,4-Trimethylbenzene	(µg/kg)	2,700	D	U	1,300	D	U	1.9	J	2.4	J	U	3,600
cis-1,2-Dichloroethylene	(µg/kg)	U	1.4	J	<b>390</b>	JD	U	22	U	1.9	J	U	250
m,p-Xylene	(µg/kg)	<b>780</b>	JD	U	<b>1,500</b>	D	U	U	U	U	U	U	260 <sup>(a)</sup>
o-Xylene	(µg/kg)	U	U	U	<b>460</b>	JD	U	U	U	U	U	U	260 <sup>(a)</sup>
Toluene	(µg/kg)	2	J	U	<b>1,600</b>	D	U	2.3	J	1.6	J	U	700

(a) Standards, Criteria, and Guidance is for total xylenes

NOTE: EPA = U.S. Environmental Protection Agency.  
ID = Identification  
µg/kg = micrograms per kilogram = parts per billion (ppb).  
D = Indicates the reported value was obtained by analysis at a secondary dilution factor.  
U = Non-detect, detection below the method detection limit.  
J = Indicates the reported value was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit.

Data provided by Chemtech Consulting Group. Only analytes included in Table 1 of the ROD are included  
Concentration values in **BOLD** indicate that analyte was detected above the site specific standards, criteria, and guidance.

Parameter List EPA Method 8260B	Sample ID	EX5SW1	EX5SW2	EX5SW3	EX5SW4	EX5SW5	EX5SW6	EX5SW7	Part 375 Unrestricted Use Soil Cleanup Objectives		
	Lab ID	C3265-01	C3265-02	C3265-03	C3355-01	C3355-02	C3355-03	C3355-06			
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
	Sample Date	8/4/2011	8/4/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/22/2011			
1,2,4-Trimethylbenzene	(µg/kg)	U	8.3	U	4.3	J	U	U	3,600		
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	250		
m,p-Xylene	(µg/kg)	U	21	U	U	U	U	U	260 <sup>(a)</sup>		
o-Xylene	(µg/kg)	U	U	U	U	U	U	U	260 <sup>(a)</sup>		
Toluene	(µg/kg)	U	U	U	U	U	U	U	700		
Parameter List EPA Method 8260B	Sample ID	EX5SW8	EX5SW9	EX5SW10	EX5SW11	EX5SW12	EX5SW13	EX6B1	Part 375 Unrestricted Use Soil Cleanup Objectives		
	Lab ID	C3355-07	C3355-08	C3473-07	C3622-03	C3622-01	C3622-02	C3109-03			
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
	Sample Date	8/16/2011	8/16/2011	9/7/2011	9/7/2011	9/7/2011	9/7/2011	7/21/2011			
1,2,4-Trimethylbenzene	(µg/kg)	U	U	U	3.4	J	U	4.5	J	3,600	
cis-1,2-Dichloroethylene	(µg/kg)	U	U	33	U	U	U	U	U	250	
m,p-Xylene	(µg/kg)	U	U	5.9	J	U	U	U	U	260 <sup>(a)</sup>	
o-Xylene	(µg/kg)	U	U	2.5	J	U	U	U	U	260 <sup>(a)</sup>	
Toluene	(µg/kg)	U	U	13	U	2.6	J	U	U	700	
Parameter List EPA Method 8260B	Sample ID	EX6B2	EX6B3	EX6SW1	EX6SW2	EX6SW3	EX6SW4	EX6SW5	Part 375 Unrestricted Use Soil Cleanup Objectives		
	Lab ID	C3100-04	C3109-05	C3100-01	C3100-02	C3100-03	C3100-04	C3100-05			
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
	Sample Date	7/21/2011	7/21/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011			
1,2,4-Trimethylbenzene	(µg/kg)	U	U	U	33	U	U	U	U	3,600	
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	U	250	
m,p-Xylene	(µg/kg)	U	3.1	J	U	U	U	U	U	260 <sup>(a)</sup>	
o-Xylene	(µg/kg)	U	U	U	U	U	U	U	U	260 <sup>(a)</sup>	
Toluene	(µg/kg)	3.2	J	U	U	U	U	U	U	700	
Parameter List EPA Method 8260B	Sample ID	EX6SW6	EX6SW7	EX6NB1	EX6NB2	EX6NSW1	EX6NSW2	EX6NSW3	Part 375 Unrestricted Use Soil Cleanup Objectives		
	Lab ID	C3100-06	C3109-06	C3265-15	C3265-16	C3265-06	C3265-07	C3265-08			
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
	Sample Date	7/20/2011	7/21/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011			
1,2,4-Trimethylbenzene	(µg/kg)	U	U	U	U	U	U	39	U	3,600	
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	U	250	
m,p-Xylene	(µg/kg)	U	U	U	U	U	U	U	20	U	260 <sup>(a)</sup>
o-Xylene	(µg/kg)	U	U	U	U	U	U	2.1	J	260 <sup>(a)</sup>	
Toluene	(µg/kg)	U	U	U	U	U	U	U	U	700	
Parameter List EPA Method 8260B	Sample ID	EX6NSW4	EX6NSW5	EX6NSW6					Part 375 Unrestricted Use Soil Cleanup Objectives		
	Lab ID	C3265-09	C3265-13	C3265-14							
	Sample Type	Soil	Soil	Soil							
	Sample Date	8/4/2011	8/4/2011	8/4/2011							
1,2,4-Trimethylbenzene	(µg/kg)	U	U	U					3,600		
cis-1,2-Dichloroethylene	(µg/kg)	U	U	U					250		
m,p-Xylene	(µg/kg)	U	U	U					260 <sup>(a)</sup>		
o-Xylene	(µg/kg)	U	U	U					260 <sup>(a)</sup>		
Toluene	(µg/kg)	U	U	U					700		

TABLE 6B SUMMARY OF REMAINING SOIL CONTAMINATION ABOVE UNRESTRICTED LEVELS FOR METALS

Parameter List EPA Method 6010B/7471A	Sample ID	EX1SW1	EX1SW2	T3B1	T4B1	EX2B1	EX2B2	EX2B3	Part 375 Unrestricted Use Soil Cleanup Objectives			
	Lab ID	C3524-03	C3524-04	C3524-01	C3524-02	C3109-07	C3109-08	C3109-09				
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
	Sample Date	8/25/2011	8/25/2011	8/25/2011	8/25/2011	7/21/2011	7/21/2011	7/21/2011				
Arsenic (mg/kg)	4.490	5.410	3.110	1.840	3.080	*	3.300	*	6.840	*	13	
Barium (mg/kg)	14.8	23.5	50.7	7.740	32.6		107		38.8		350	
Chromium (Total) (mg/kg)	<b>71.6</b>	<b>15.8</b>	<b>29.8</b>	<b>12.0</b>	<b>32.4</b>		<b>91.5</b>		<b>21.2</b>		1 <sup>(a)</sup> , 30 <sup>(b)</sup>	
Copper (mg/kg)	<b>107</b>	34.3	<b>105</b>	3.700	<b>482</b>		<b>631</b>		<b>77.1</b>		50	
Lead (mg/kg)	22.2	<b>68.3</b>	<b>70.7</b>	2.440	61.6		<b>171</b>		<b>72.7</b>		63	
Mercury (mg/kg)	0.056	0.105	<b>0.227</b>		0.058	U	<b>0.121</b>		0.077		0.18	
Nickel (mg/kg)	<b>32.7</b>	12.3	28.6	8.520	21.2		<b>52.4</b>		12.4		30	
Silver (mg/kg)	0.433	J	0.437	0.542		U	0.272	J	0.263	J	2	
Zinc (mg/kg)	45.2	<b>135</b>	103	<b>158</b>	<b>365</b>		<b>442</b>		96.5		109	
Parameter List EPA Method 6010B/7471A	Sample ID	EX2B4	EX3B1	EX3B2	EX3B3	EX3SW1	EX3SW2	EX3SW3	Part 375 Unrestricted Use Soil Cleanup Objectives			
	Lab ID	C3109-10	C3068-06	C3068-07	C3109-02	C3068-01	C3068-02	C3068-03				
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
	Sample Date	7/21/2011	7/19/2011	7/19/2011	7/21/2011	7/19/2011	7/19/2011	7/19/2011				
Arsenic (mg/kg)	6.93	*	1.270	1.510	2.16	*	2.150	6.950	4.090		13	
Barium (mg/kg)	32.4		12.0	6.900	8.270		28.3	13.9	24.3		350	
Chromium (Total) (mg/kg)	<b>60.1</b>		<b>4.170</b>	<b>5.110</b>	<b>5.850</b>		<b>5.330</b>	<b>4.630</b>	<b>6.970</b>		1 <sup>(a)</sup> , 30 <sup>(b)</sup>	
Copper (mg/kg)	<b>288</b>		4.100	2.960	3.810		2.850	5.460	11.4		50	
Lead (mg/kg)	<b>71.6</b>		11.4	3.370	5.740		17.8	5.130	40.2		63	
Mercury (mg/kg)	0.084		0.094	*	0.013	*	0.013	0.036	*	0.012	*	0.18
Nickel (mg/kg)	<b>244</b>		3.690	3.510	3.740		3.120	3.230	4.670		30	
Silver (mg/kg)		U	0.155	J	0.159	J		0.146	J	0.259	J	2
Zinc (mg/kg)	<b>256</b>		22.0	11.8	14.8		33.0	16.5	35.2		109	
Parameter List EPA Method 6010B/7471A	Sample ID	EX3SW4	EX3SW5	EX3SW6	EX3SW7	T1B1	T1B2	T1SW1	Part 375 Unrestricted Use Soil Cleanup Objectives			
	Lab ID	C3068-04	C3068-05	C3109-01	C3153-06	C3153-01	C3153-02	C3153-05				
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
	Sample Date	7/19/2011	7/19/2011	7/21/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011				
Arsenic (mg/kg)	2.310		1.220	0.6	J*	1.130		1.610	2.810		3.510	
Barium (mg/kg)	16.6		13.7	8.180		7.410		16.4	18.6		20.2	
Chromium (Total) (mg/kg)	<b>5.240</b>		<b>3.980</b>	<b>2.500</b>		<b>3.340</b>		<b>6.750</b>	<b>5.350</b>		<b>11.4</b>	
Copper (mg/kg)	3.900		6.600	6.870		2.880		10.1	13.6		4.770	
Lead (mg/kg)	8.780		31.0	2.620		2.720		26.1	18.6		5.580	
Mercury (mg/kg)	0.018	*	0.064	*	0.004	J	0.005	J	0.049		0.072	
Nickel (mg/kg)	3.490		3.430	3.850		3.730		<b>47.2</b>	<b>33.0</b>		6.420	
Silver (mg/kg)	0.216	J	0.178	J							U	
Zinc (mg/kg)	22.8		59.6	11.7		10.7	*	62.1	*	38.6	*	17.2

(a) Value is for hexavalent Chromium but is considered to be met if the analysis for total Chromium is below the specific **SCBOLD** concentrations exceed this specific SCO

(b) Value is for trivalent Chromium but is considered to be met if the analysis for total Chromium is below the specific **SCWALICIZED** concentrations exceed this specific SCO

NOTE: EPA = U.S. Environmental Protection Agency.

Identification  
mg/kg = Milligrams per kilogram  
\* = Indicates the duplicate analysis was not within the control limits.  
U = Non-detect, detection below the method detection limit.  
J = Indicates the reported value was less than the Contract Required Detection Limit, but greater than or equal to the Method Detection Limit.  
N = Indicates the spiked sample recovery was not within the control limits.

Data provided by Chemtech Consulting Group. Only analytes that were detected in at least one sample are shown.  
Concentration values in **BOLD** indicate that analyte was detected above the site specific standards, criteria, and guidance.



Parameter List EPA Method 6010B/7471A	Sample ID	T2B1		T2B2		EX4B1		EX4SW1		EX4SW2		EX4SW3		EX5B1		Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3153-03		C3153-04		C3473-06		C3473-01		C3473-02		C3473-03		C3265-04		
	Sample Type	Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Sample Date	7/27/2011		7/27/2011		8/22/2011		8/22/2011		8/22/2011		8/22/2011		8/4/2011		
Arsenic	(mg/kg)	2.340		1.820		0.88	J	2.500		3.620		0.67	J	4.040		13
Barium	(mg/kg)	34.7		13.0		20.4		13.6		1.370	J	6.170		27.7		350
Chromium (Total)	(mg/kg)	<b>5.050</b>		<b>4.010</b>		<b>78.3</b>		<b>9.120</b>		<b>8.190</b>		<b>3.890</b>		<b>8.1</b>	*	1 <sup>(a)</sup> , 30 <sup>(b)</sup>
Copper	(mg/kg)	14.1		5.950		45.8		22.5		3.100		3.770		<b>73.8</b>		50
Lead	(mg/kg)	<b>120</b>		20.9		4.860	*	34.4	*	0.53	J*	1.580	*	52.2		63
Mercury	(mg/kg)	0.042		0.090		0.015		0.078		0.018		0.010	J	0.061	*	0.18
Nickel	(mg/kg)	6.120		5.070		5.700		8.160			U	10.8		8.420		30
Silver	(mg/kg)		U		U	0.16	J		U		U		U		U	2
Zinc	(mg/kg)	53.9	*	27.3	*	28.2		63.8		4.380		14.9		62.5		109

Parameter List EPA Method 6010B/7471A	Sample ID	EX5B2		EX5B3		EX5B4		EX5B5		EX5B6		EX5B7		EX5B8		Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3265-05		C3355-04		C3355-05		C3355-09		C3473-08		C3622-04		C3622-05		
	Sample Type	Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Sample Date	8/4/2011		8/11/2011		8/11/2011		8/22/2011		8/22/2011		9/7/2011		9/7/2011		
Arsenic	(mg/kg)	2.620		2.220		2.440		1.560		2.560		3.440	N	3.090	N	13
Barium	(mg/kg)	25.6		35.2		20.1		11.4		34.8		30.9		36.8		350
Chromium (Total)	(mg/kg)	<b>18.4</b>	*	<b>10.1</b>		<b>6.300</b>		<b>4.330</b>		<b>61.3</b>		<b>30.3</b>		<b>34.2</b>		1 <sup>(a)</sup> , 30 <sup>(b)</sup>
Copper	(mg/kg)	<b>168</b>		44.1		18.4		4.240		<b>953</b>		<b>114</b>		<b>152</b>		50
Lead	(mg/kg)	48.6		<b>458</b>		32.1		4.170		50.9	*	40.5		62.4		63
Mercury	(mg/kg)	0.096	*	0.036		0.032		0.048		0.055		0.034		0.069		0.18
Nickel	(mg/kg)	11.0		5.180		4.770		3.220		<b>56.4</b>		<b>31.8</b>		14.4		30
Silver	(mg/kg)		U		U	0.18	J		U	0.84			U		U	2
Zinc	(mg/kg)	<b>166</b>		66.5		39.7		10.6		<b>345</b>		88.6	N	<b>116</b>	N	109

Parameter List EPA Method 6010B/7471A	Sample ID	EX5SW1		EX5SW2		EX5SW3		EX5SW4		EX5SW5		EX5SW6		EX5SW7		Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3265-01		C3265-02		C3265-03		C3355-01		C3355-02		C3355-03		C3355-06		
	Sample Type	Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Sample Date	8/4/2011		8/4/2011		8/4/2011		8/11/2011		8/11/2011		8/11/2011		8/22/2011		
Arsenic	(mg/kg)	1.690		5.300		6.600		2.920		3.970		1.940		1.740		13
Barium	(mg/kg)	13.6		59.6		81.0		25.9		63.4		20.9		12.4		350
Chromium (Total)	(mg/kg)	<b>7.15</b>	*	<b>28.7</b>	*	<b>20.9</b>	*	<b>27.6</b>		<b>12.6</b>		<b>7.300</b>		<b>4.780</b>		1 <sup>(a)</sup> , 30 <sup>(b)</sup>
Copper	(mg/kg)	8.230		<b>449</b>		<b>92.2</b>		<b>84.9</b>		<b>221</b>		<b>120</b>		11.2		50
Lead	(mg/kg)	31.7		<b>101</b>		<b>121</b>		<b>81.4</b>		48.5		33.6		22.8		63
Mercury	(mg/kg)	0.085	*	0.124	*	0.174	*	0.057		0.097		0.035		0.036		0.18
Nickel	(mg/kg)	3.170		14.7		10.4		15.7		8.480		4.180		3.220		30
Silver	(mg/kg)		U		U		U	0.75		0.35	J		U		U	2
Zinc	(mg/kg)	<b>178</b>		<b>314</b>		<b>183</b>		99.0		<b>133</b>		22.3		25.0		109

Parameter List EPA Method 6010B/7471A	Sample ID	EX5SW8		EX5SW9		EX5SW10		EX5SW11		EX5SW12		EX5SW13		EX6B1		Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3355-07		C3355-08		C3473-07		C3622-03		C3622-01		C3622-02		C3109-03		
	Sample Type	Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Sample Date	8/16/2011		8/16/2011		9/7/2011		9/7/2011		9/7/2011		9/7/2011		7/21/2011		
Arsenic	(mg/kg)	3.450		3.090		7.270		2.820	N	8.260	N	4.430	N	4.36	*	13
Barium	(mg/kg)	38.7		30.2		50.2		22.5		43.2		51.5		19.9		350
Chromium (Total)	(mg/kg)	<b>7.240</b>		<b>6.750</b>		<b>218</b>		<b>15.8</b>		<b>10.8</b>		<b>17.2</b>		<b>6.980</b>		1 <sup>(a)</sup> , 30 <sup>(b)</sup>
Copper	(mg/kg)	<b>266</b>		62.4		<b>1190</b>		20.1		33.9		<b>53.7</b>		<b>56.7</b>		50
Lead	(mg/kg)	<b>80.3</b>		<b>65.8</b>		<b>227</b>	*	36.0		53.5		<b>117</b>		<b>739</b>		63
Mercury	(mg/kg)	0.079		0.068		<b>0.191</b>		0.024		0.070		0.081		0.109		0.18
Nickel	(mg/kg)	<b>42.6</b>		10.7		<b>110</b>		9.550		12.8		11.7		6.450		30
Silver	(mg/kg)		U		U	<b>8.750</b>			U		U		U		U	2
Zinc	(mg/kg)	<b>193</b>		107		<b>311</b>		67.1	N	51.3	N	95.7	N	<b>280</b>		109

Parameter List EPA Method 6010B/7471A	Sample ID	EX6B2		EX6B3		EX6SW1		EX6SW2		EX6SW3		EX6SW4		EX6SW5		Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3109-04		C3109-05		C3100-01		C3100-02		C3100-03		C3100-04		C3100-05		
	Sample Type	Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Sample Date	7/21/2011		7/21/2011		7/20/2011		7/20/2011		7/20/2011		7/20/2011		7/20/2011		
Arsenic	(mg/kg)	11.2	*	25.2	*	9.760		4.640		7.630		11.6		17.9		13
Barium	(mg/kg)	59.7		59.6		35.0		39.7		44.2		30.5		45.5		350
Chromium (Total)	(mg/kg)	12.1		12.4		22.0		86.3		19.8		16.1		9.090		1 <sup>(a)</sup> , 30 <sup>(b)</sup>
Copper	(mg/kg)	55.8		40.9		285		2430		49.5		283		220		50
Lead	(mg/kg)	80.6		206		75.9		70.6		107		82.3		51.5		63
Mercury	(mg/kg)	0.117		0.348		0.142		0.087		0.079		0.091		0.051		0.18
Nickel	(mg/kg)	16.3		45.3		39.9		71.1		122		596		11.2		30
Silver	(mg/kg)		U		U		U	0.602			U		U		U	2
Zinc	(mg/kg)	127		264		215		558		281		358		84.3		109
Parameter List EPA Method 6010B/7471A	Sample ID	EX6SW6		EX6SW7		EX6NB1		EX6NB2		EX6NSW1		EX6NSW2		EX6NSW3		Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3100-06		C3109-06		C3265-15		C3265-16		C3265-06		C3265-07		C3265-08		
	Sample Type	Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Sample Date	7/20/2011		7/21/2011		8/4/2011		8/4/2011		8/4/2011		8/4/2011		8/4/2011		
Arsenic	(mg/kg)	17.6		7.03	*	4.610		4.220		4.060		4.300		3.210		13
Barium	(mg/kg)	24.3		65.7		94.2		26.8		572		126		28.5		350
Chromium (Total)	(mg/kg)	9.430		18.4		20	*	10.1	*	14.1	*	10.8	*	8.65	*	1(a), 30(b)
Copper	(mg/kg)	76.1		1670		102		54.9		314		162		23.6		50
Lead	(mg/kg)	81.0		107		146		63.3		275		254		86.5		63
Mercury	(mg/kg)	0.049		0.118			U*	0.075	*	0.052	*	0.22	*	0.092	*	0.18
Nickel	(mg/kg)	23.2		41.3		11.3		14.6		10.8		11.5		5.420		30
Silver	(mg/kg)		U		U		U		U		U	0.684			U	2
Zinc	(mg/kg)	159		473		114		146		399		371		69.0		109
Parameter List EPA Method 6010B/7471A	Sample ID	EX6NSW4		EX6NSW5		EX6NSW6										Part 375 Unrestricted Use Soil Cleanup Objectives
	Lab ID	C3265-09		C3265-13		C3265-14										
	Sample Type	Soil		Soil		Soil										
	Sample Date	8/4/2011		8/4/2011		8/4/2011										
Arsenic	(mg/kg)	2.030		5.120		2.420										13
Barium	(mg/kg)	27.6		45.4		18.6										350
Chromium (Total)	(mg/kg)	11.2	*	32.2	*	9.16	*									1 <sup>(a)</sup> , 30 <sup>(b)</sup>
Copper	(mg/kg)	13.8		149		61.5										50
Lead	(mg/kg)	58.2		113		46.6										63
Mercury	(mg/kg)	0.034	*	0.085	*	0.051	*									0.18
Nickel	(mg/kg)	7.790		19.3		8.060										30
Silver	(mg/kg)		U	0.161	J		U									2
Zinc	(mg/kg)	132		168		75.7										109

TABLE 7A SUMMARY OF REMAINING SOIL CONTAMINATION ABOVE SITE-SPECIFIC SOIL CLEANUP OBJECTIVES FOR VOCs

Parameter List EPA Method 8260B	Sample ID	EX1SW1	EX1SW2	T3B1	T4B1	EX2B1	EX2B2	EX2B3	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3524-03	C3524-04	C3524-01	C3524-02	C3109-07	C3109-08	C3109-09	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	8/25/2011	8/25/2011	8/25/2011	8/25/2011	7/21/2011	7/21/2011	7/21/2011	
Benzene	(µg/kg)		U	U	U	U	U	U	60
Chlorobenzene	(µg/kg)		U	U	U	U	U	U	17,000
cis 1,2- Dichloroethylene	(µg/kg)		U	U	U	U	U	U	300 <sup>(a)</sup>
trans 1,2- Dichloroethylene	(µg/kg)		U	U	U	U	U	U	300 <sup>(a)</sup>
Ethylbenzene	(µg/kg)	570	D	U	U	U	U	U	5,500
Methyl tert-butyl ether	(µg/kg)	2	J	U	4	J	U	U	120
Naphthalene	(µg/kg)	13,000	D	U	U	U	U	U	13,000
Tetrachloroethylene (PCE)	(µg/kg)		U	U	U	U	U	U	1,400
Toluene	(µg/kg)	13		U	U	U	U	U	1,500
Trichloroethylene (TCE)	(µg/kg)		U	U	U	U	U	U	700
Vinyl chloride	(µg/kg)		U	U	U	U	U	U	200
m,p- Xylene	(µg/kg)	<b>2,100</b>	D	U	U	U	U	U	1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)	<b>1,000</b>	D	U	U	U	U	U	1,200 <sup>(b)</sup>

Parameter List EPA Method 8260B	Sample ID	EX2B4	EX3B1	EX3B2	EX3B3	EX3SW1	EX3SW2	EX3SW3	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3109-10	C3068-06	C3068-07	C3109-02	C3068-01	C3068-02	C3068-03	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	7/21/2011	7/19/2011	7/19/2011	7/21/2011	7/19/2011	7/19/2011	7/19/2011	
Benzene	(µg/kg)		U	U	U	U	U	U	60
Chlorobenzene	(µg/kg)		U	U	U	U	U	U	17,000
cis 1,2- Dichloroethylene	(µg/kg)		U	U	U	U	U	U	300 <sup>(a)</sup>
trans 1,2- Dichloroethylene	(µg/kg)		U	U	U	U	U	U	300 <sup>(a)</sup>
Ethylbenzene	(µg/kg)		U	U	U	U	U	U	5,500
Methyl tert-butyl ether	(µg/kg)		U	U	U	U	U	U	120
Naphthalene	(µg/kg)	3	J	U	U	U	U	U	13,000
Tetrachloroethylene (PCE)	(µg/kg)		U	U	U	U	U	6	1,400
Toluene	(µg/kg)		U	U	U	U	U	U	1,500
Trichloroethylene (TCE)	(µg/kg)		U	U	U	U	U	U	700
Vinyl chloride	(µg/kg)		U	U	U	U	U	U	200
m,p- Xylene	(µg/kg)		U	U	U	U	U	U	1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)		U	U	U	U	U	U	1,200 <sup>(b)</sup>

(a) SCG is for the sum of cis 1,2-DCE and trans 1,2-DCE  
(b) SCG is for total Xylenes

NOTE: EPA = U.S. Environmental Protection Agency.  
ID = Identification  
µg/kg = micrograms per kilogram = parts per billion (ppb).  
U = Non-detect, detection below the method detection limit.  
D = Indicates the reported value was obtained by analysis at a secondary dilution factor.  
J = Indicates the reported value was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit.

Data provided by Chemtech Consulting Group. Only analytes included in Table 1 of the ROD are included  
Concentration values in**BOLD** indicate that analyte was detected above the site specific standards, criteria, and guidance.

Parameter List EPA Method 8260B	Sample ID	EX3SW4	EX3SW5	EX3SW6	EX3SW7	T1B1	T1B2	T1SW1	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3068-04	C3068-05	C3109-01	C3153-06	C3153-01	C3153-02	C3153-05	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	7/19/2011	7/19/2011	7/21/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011	
Benzene	(µg/kg)	U	U	U	U	U	U	U	60
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000
cis 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>
trans 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>
Ethylbenzene	(µg/kg)	U	U	U	U	U	U	U	5,500
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	120
Naphthalene	(µg/kg)	U	U	U	U	U	U	U	13,000
Tetrachloroethylene (PCE)	(µg/kg)	U	U	U	U	U	U	U	1,400
Toluene	(µg/kg)	U	U	U	U	U	U	U	1,500
Trichloroethylene (TCE)	(µg/kg)	U	U	U	U	U	U	U	700
Vinyl chloride	(µg/kg)	U	U	U	U	U	U	U	200
m,p- Xylene	(µg/kg)	U	U	U	U	U	U	U	1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)	U	U	U	U	U	U	U	1,200 <sup>(b)</sup>

Parameter List EPA Method 8260B	Sample ID	T2B1	T2B2	EX4B1	EX4SW1	EX4SW2	EX4SW3	EX5B1	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3153-03	C3153-04	C3473-06	C3473-01	C3473-02	C3473-03	C3265-04	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	7/27/2011	7/27/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011	8/4/2011	
Benzene	(µg/kg)	U	U	U	U	U	U	U	60
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000
cis 1,2- Dichloroethylene	(µg/kg)	U	U	1.7	J	U	U	U	300 <sup>(a)</sup>
trans 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>
Ethylbenzene	(µg/kg)	U	U	U	U	U	U	U	5,500
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	120
Naphthalene	(µg/kg)	U	81	J	U	U	U	U	13,000
Tetrachloroethylene (PCE)	(µg/kg)	U	U	96	D	3	J	U	1,400
Toluene	(µg/kg)	U	U	U	1.1	J	U	U	1,500
Trichloroethylene (TCE)	(µg/kg)	5.2	J	3.4	J	12	U	U	700
Vinyl chloride	(µg/kg)	U	U	U	U	U	U	U	200
m,p- Xylene	(µg/kg)	U	U	U	7.2	J	U	U	1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)	U	1.4	J	U	1	J	U	1,200 <sup>(b)</sup>

Parameter List EPA Method 8260B	Sample ID	EX5B2	EX5B3	EX5B4	EX5B5	EX5B6	EX5B7	EX5SW1	Site Specific Standards, Criteria, and Guidance		
	Lab ID	C3265-05	C3355-04	C3355-05	C3473-08	C3622-04	C3622-05	C3265-01			
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
	Sample Date	8/4/2011	8/11/2011	8/11/2011	8/22/2011	9/7/2011	9/7/2011	8/4/2011			
Benzene	(µg/kg)	U	U	U	U	U	U	U	60		
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000		
cis 1,2- Dichloroethylene	(µg/kg)	U	1.4	J	390	JD	22	1.9	J	300 <sup>(a)</sup>	
trans 1,2- Dichloroethylene	(µg/kg)	U	U	3.4	J	U	U	U	U	300 <sup>(a)</sup>	
Ethylbenzene	(µg/kg)	430	JD	U	340	JD	U	U	U	5,500	
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	U	120	
Naphthalene	(µg/kg)	470	JD	U	31	U	1.9	J	U	13,000	
Tetrachloroethylene (PCE)	(µg/kg)	U	U	1.6	J	26	U	U	U	1,400	
Toluene	(µg/kg)	2	J	U	1,600	D	2.3	J	1.6	J	1,500
Trichloroethylene (TCE)	(µg/kg)	U	U	U	U	36	U	U	U	700	
Vinyl chloride	(µg/kg)	U	U	14	U	U	U	U	U	200	
m,p- Xylene	(µg/kg)	780	JD	U	1,500	D	U	U	U	1,200 <sup>(b)</sup>	
o- Xylene	(µg/kg)	U	U	460	JD	U	U	U	U	1,200 <sup>(b)</sup>	

Parameter List EPA Method 8260B	Sample ID	EX5SW2	EX5SW3	EX5SW4	EX5SW5	EX5SW6	EX5SW7	EX5SW8	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3265-02	C3265-03	C3355-01	C3355-02	C3355-03	C3473-07	C3355-07		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	8/4/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/22/2011	8/16/2011		
Benzene	(µg/kg)	U	U	U	U	U	U	U	60	
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000	
cis 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	33	U	300 <sup>(a)</sup>	
trans 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	1.9	J	300 <sup>(a)</sup>	
Ethylbenzene	(µg/kg)	9.2	U	U	U	U	U	U	5,500	
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	120	
Naphthalene	(µg/kg)	2.9	J	U	U	U	6	U	13,000	
Tetrachloroethylene (PCE)	(µg/kg)	U	U	U	U	U	2.1	J	1,400	
Toluene	(µg/kg)	U	U	U	U	U	13	U	1,500	
Trichloroethylene (TCE)	(µg/kg)	U	U	U	U	U	U	U	700	
Vinyl chloride	(µg/kg)	U	U	U	U	U	8.1	U	200	
m,p- Xylene	(µg/kg)	21	U	U	U	U	5.9	J	1,200 <sup>(b)</sup>	
o- Xylene	(µg/kg)	U	U	U	U	U	2.5	J	1,200 <sup>(b)</sup>	
Parameter List EPA Method 8260B	Sample ID	EX5SW9	EX5SW10	EX5SW11	EX5SW12	EX6B1	EX6B2	EX6B3	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3355-08	C3622-03	C3622-01	C3622-02	C3109-03	C3109-04	C3109-05		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	8/16/2011	9/7/2011	9/7/2011	9/7/2011	7/21/2011	7/21/2011	7/21/2011		
Benzene	(µg/kg)	U	U	U	U	U	U	U	60	
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000	
cis 1,2- Dichloroethylene	(µg/kg)	U	3.4	J	U	U	U	U	300 <sup>(a)</sup>	
trans 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>	
Ethylbenzene	(µg/kg)	U	U	U	U	U	U	U	5,500	
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	120	
Naphthalene	(µg/kg)	3.6	J	U	2.4	J	U	U	13,000	
Tetrachloroethylene (PCE)	(µg/kg)	U	U	U	U	U	U	U	1,400	
Toluene	(µg/kg)	U	2.6	J	U	U	3.2	J	1,500	
Trichloroethylene (TCE)	(µg/kg)	U	U	U	U	U	U	U	700	
Vinyl chloride	(µg/kg)	U	U	U	U	U	U	U	200	
m,p- Xylene	(µg/kg)	U	U	U	U	U	U	3.1	J	1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)	U	U	U	U	U	U	U	1,200 <sup>(b)</sup>	
Parameter List EPA Method 8260B	Sample ID	EX6SW1	EX6SW2	EX6SW3	EX6SW4	EX6SW5	EX6SW6	EX6SW7	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3100-01	C3100-02	C3100-03	C3100-04	C3100-05	C3100-06	C3109-06		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/21/2011		
Benzene	(µg/kg)	U	U	U	U	U	U	U	60	
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000	
cis 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>	
trans 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>	
Ethylbenzene	(µg/kg)	U	U	U	U	U	U	U	5,500	
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	120	
Naphthalene	(µg/kg)	U	7.3	U	U	U	U	U	13,000	
Tetrachloroethylene (PCE)	(µg/kg)	U	U	U	U	U	U	U	1,400	
Toluene	(µg/kg)	U	U	U	U	U	U	U	1,500	
Trichloroethylene (TCE)	(µg/kg)	U	U	U	U	U	U	U	700	
Vinyl chloride	(µg/kg)	U	U	U	U	U	U	U	200	
m,p- Xylene	(µg/kg)	U	U	U	U	U	U	U	1,200 <sup>(b)</sup>	
o- Xylene	(µg/kg)	U	U	U	U	U	U	U	1,200 <sup>(b)</sup>	



Parameter List EPA Method 8260B	Sample ID	EX6NB1	EX6NB2	EX6NSW1	EX6NSW2	EX6NSW3	EX6NSW4	EX6NSW5	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3265-15	C3265-16	C3265-06	C3265-07	C3265-08	C3265-09	C3265-13	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	
Benzene	(µg/kg)	U	U	U	U	U	U	U	60
Chlorobenzene	(µg/kg)	U	U	U	U	U	U	U	17,000
cis 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>
trans 1,2- Dichloroethylene	(µg/kg)	U	U	U	U	U	U	U	300 <sup>(a)</sup>
Ethylbenzene	(µg/kg)	U	U	U	U	1.8	J	U	5,500
Methyl tert-butyl ether	(µg/kg)	U	U	U	U	U	U	U	120
Naphthalene	(µg/kg)	U	U	U	U	35	U	U	13,000
Tetrachloroethylene (PCE)	(µg/kg)	U	U	U	U	U	U	U	1,400
Toluene	(µg/kg)	U	U	U	U	U	U	U	1,500
Trichloroethylene (TCE)	(µg/kg)	U	U	U	U	U	U	U	700
Vinyl chloride	(µg/kg)	U	U	U	U	U	U	U	200
m,p- Xylene	(µg/kg)	U	U	U	U	20	U	U	1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)	U	U	U	U	2.1	J	U	1,200 <sup>(b)</sup>

Parameter List EPA Method 8260B	Sample ID	EX6NSW6		Site Specific Standards, Criteria, and Guidance
	Lab ID	C3265-14		
	Sample Type	Soil		
	Sample Date	8/4/2011		
Benzene	(µg/kg)	U		60
Chlorobenzene	(µg/kg)	U		17,000
cis 1,2- Dichloroethylene	(µg/kg)	U		300 <sup>(a)</sup>
trans 1,2- Dichloroethylene	(µg/kg)	U		300 <sup>(a)</sup>
Ethylbenzene	(µg/kg)	U		5,500
Methyl tert-butyl ether	(µg/kg)	U		120
Naphthalene	(µg/kg)	U		13,000
Tetrachloroethylene (PCE)	(µg/kg)	U		1,400
Toluene	(µg/kg)	U		1,500
Trichloroethylene (TCE)	(µg/kg)	U		700
Vinyl chloride	(µg/kg)	U		200
m,p- Xylene	(µg/kg)	U		1,200 <sup>(b)</sup>
o- Xylene	(µg/kg)	U		1,200 <sup>(b)</sup>

TABLE 7B SUMMARY OF REMAINING SOIL CONTAMINATION ABOVE SITE-SPECIFIC SOIL CLEANUP OBJECTIVES FOR METALS

Parameter List EPA Method 6010/7470	Sample ID	EX1SW1	EX1SW2	T3B1	T4B1	EX2B1	EX2B2	EX2B3	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3524-03	C3524-04	C3524-01	C3524-02	C3109-07	C3109-08	C3109-09		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	8/25/2011	8/25/2011	8/25/2011	8/25/2011	7/21/2011	7/21/2011	7/21/2011		
Chromium (total)	(mg/kg)	<b>71.6</b>	15.8	29.8	12.0	32.4	<b>91.5</b>	21.2	50	
Copper	(mg/kg)	<b>107</b>	<b>34.3</b>	<b>105</b>	3.700	<b>482</b>	<b>631</b>	<b>77.1</b>	25	
Nickel	(mg/kg)	<b>32.7</b>	12.3	<b>28.6</b>	8.520	<b>21.2</b>	<b>52.4</b>	12.4	13	
Zinc	(mg/kg)	<b>45.2</b>	<b>135</b>	<b>103</b>	<b>158</b>	<b>365</b>	<b>442</b>	<b>96.5</b>	20	
Parameter List EPA Method 6010/7470	Sample ID	EX2B4	EX3B1	EX3B2	EX3B3	EX3SW1	EX3SW2	EX3SW3	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3109-10	C3068-06	C3068-07	C3109-02	C3068-01	C3068-02	C3068-03		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	7/21/2011	7/19/2011	7/19/2011	7/21/2011	7/19/2011	7/19/2011	7/19/2011		
Chromium (total)	(mg/kg)	<b>60.1</b>	4.170	5.110	5.850	5.330	4.630	6.970	50	
Copper	(mg/kg)	<b>288</b>	4.100	2.960	3.810	2.850	5.460	11.4	25	
Nickel	(mg/kg)	<b>244</b>	3.690	3.510	3.740	3.120	3.230	4.670	13	
Zinc	(mg/kg)	<b>256</b>	<b>22.0</b>	11.8	14.8	<b>33.0</b>	16.5	<b>35.2</b>	20	
Parameter List EPA Method 6010/7470	Sample ID	EX3SW4	EX3SW5	EX3SW6	EX3SW7	T1B1	T1B2	T1SW1	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3068-04	C3068-05	C3109-01	C3153-06	C3153-01	C3153-02	C3153-05		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	7/19/2011	7/19/2011	7/21/2011	7/27/2011	7/27/2011	7/27/2011	7/27/2011		
Chromium (total)	(mg/kg)	5.240	3.980	2.500	3.340	6.75	5.35	11.4	50	
Copper	(mg/kg)	3.900	6.600	6.870	2.880	10.1	13.6	4.77	25	
Nickel	(mg/kg)	3.490	3.430	3.850	3.730	<b>47.2</b>	<b>33</b>	6.42	13	
Zinc	(mg/kg)	<b>22.8</b>	<b>59.6</b>	11.7		U	<b>62.1</b>	<b>38.6</b>	17.2	20
Parameter List EPA Method 6010/7470	Sample ID	T2B1	T2B2	EX4B1	EX4SW1	EX4SW2	EX4SW3	EX5B1	Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3153-03	C3153-04	C3473-06	C3473-01	C3473-02	C3473-03	C3265-04		
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
	Sample Date	7/27/2011	7/27/2011	8/22/2011	8/22/2011	8/22/2011	8/22/2011	8/4/2011		
Chromium (total)	(mg/kg)	5.05	4.01	<b>78.3</b>	9.120	8.190	3.890		U	50
Copper	(mg/kg)	14.1	5.95	<b>45.8</b>	22.5	3.100	3.770	73.8		25
Nickel	(mg/kg)	6.12	5.07	5.700	8.160		U	10.8	8.420	13
Zinc	(mg/kg)	<b>53.9</b>	<b>27.3</b>	<b>28.2</b>	63.8	4.380	14.9	62.5		20
Parameter List EPA Method 6010/7470	Sample ID	EX5B2							Site Specific Standards, Criteria, and Guidance	
	Lab ID	C3265-05								
	Sample Type	Soil								
	Sample Date	8/4/2011								
Chromium (total)	(mg/kg)								U	50
Copper	(mg/kg)	<b>168</b>								25
Nickel	(mg/kg)	11.0								13
Zinc	(mg/kg)	<b>166</b>								20
NOTE:	EPA = U.S. Environmental Protection Agency. Identification mg/kg = Milligrams per kilogram U = Non-detect, detection below the method detection limit. Data provided by Chemtech Consulting Group. Only analytes that were detected in at least one sample are shown. Concentration values in <b>BOLD</b> indicate that analyte was detected above the site specific standards, criteria, and guidance.									

Parameter List EPA Method 6010/7470	Sample ID	EX5B3	EX5B4	EX5B5	EX5B6	EX5B7	EX5SW1	EX5SW2	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3355-04	C3355-05	C3473-08	C3622-04	C3622-05	C3265-01	C3265-02	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	8/11/2011	8/11/2011	8/22/2011	9/7/2011	9/7/2011	8/4/2011	8/4/2011	
Chromium (total)	(mg/kg)	10.1	6.300	61.3	30.3	34.2	U	U	50
Copper	(mg/kg)	44.1	18.4	95.3	114	152	8.230	449	25
Nickel	(mg/kg)	5.180	4.770	56.4	31.8	14.4	3.170	14.7	13
Zinc	(mg/kg)	66.5	39.7	345	U	U	178	314	20
Parameter List EPA Method 6010/7470	Sample ID	EX5SW3	EX5SW4	EX5SW5	EX5SW6	EX5SW7	EX5SW8	EX5SW9	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3265-03	C3355-01	C3355-02	C3355-03	C3473-07	C3355-07	C3355-08	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/22/2011	8/16/2011	8/16/2011	
Chromium (total)	(mg/kg)	U	27.6	12.6	7.300	218	7.240	6.750	50
Copper	(mg/kg)	92.2	84.9	221	120	1190	266	62.4	25
Nickel	(mg/kg)	10.4	15.7	8.480	4.180	110	42.6	10.7	13
Zinc	(mg/kg)	183	99.0	133	22.3	311	193	107	20
Parameter List EPA Method 6010/7470	Sample ID	EX5SW10	EX5SW11	EX5SW12	EX6B1	EX6B2	EX6B3	EX6SW1	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3622-03	C3622-01	C3622-02	C3109-03	C3109-04	C3109-05	C3109-01	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	9/7/2011	9/7/2011	9/7/2011	7/21/2011	7/21/2011	7/21/2011	7/20/2011	
Chromium (total)	(mg/kg)	15.8	10.8	17.2	6.980	12.1	12.4	22.0	50
Copper	(mg/kg)	20.1	33.9	53.7	56.7	55.8	40.9	285	25
Nickel	(mg/kg)	9.550	12.8	11.7	6.450	16.3	45.3	39.9	13
Zinc	(mg/kg)	U	U	U	280	127	264	215	20
Parameter List EPA Method 6010/7470	Sample ID	EX6SW2	EX6SW3	EX6SW4	EX6SW5	EX6SW6	EX6SW7	EX6NB1	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3100-02	C3100-03	C3100-04	C3100-05	C3100-06	C3109-06	C3265-15	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/21/2011	8/4/2011	
Chromium (total)	(mg/kg)	86.3	19.8	16.1	9.090	9.430	18.4	U	50
Copper	(mg/kg)	2430	49.5	283	220	76.1	1670	102	25
Nickel	(mg/kg)	71.1	122	596	11.2	23.2	41.3	11.3	13
Zinc	(mg/kg)	558	281	358	84.3	159	473	114	20
Parameter List EPA Method 6010/7470	Sample ID	EX6NB2	EX6NSW1	EX6NSW2	EX6NSW3	EX6NSW4	EX6NSW5	EX6NSW6	Site Specific Standards, Criteria, and Guidance
	Lab ID	C3265-16	C3265-06	C3265-07	C3265-08	C3265-09	C3265-13	C3265-14	
	Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Sample Date	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	
Chromium (total)	(mg/kg)	U	U	U	U	U	U	U	50
Copper	(mg/kg)	54.9	314	162	23.6	13.8	149	61.5	25
Nickel	(mg/kg)	14.6	10.8	11.5	5.420	7.790	19.3	8.060	13
Zinc	(mg/kg)	146	399	371	69.0	132	168	75.7	20

TABLE 8 SUMMARY OF REMAINING SEDIMENT CONTAMINATION ABOVE SITE-SPECIFIC CLEANUP OBJECTIVES FOR METALS

Parameter List EPA Method 6010/7470	Sample ID	EX7P1	EX7P2	EX7P3	EX7P4	EX7P5	Effects Range- Low (mg/kg)	Effects Range- Median (mg/kg)
	Lab ID	D1315-01	D1315-02	D1315-03	D1315-04	D1315-05		
	Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment		
	Sample Date	1/27/2012	1/27/2012	1/27/2012	1/27/2012	1/27/2012		
Arsenic	(mg/kg)	<b>13.3</b>	<b>17.2</b>	<b>10.9</b>	3.81	<b>8.48</b>	8.2	70
Cadmium	(mg/kg)	0.512	0.981	<b>4.04</b>	0.123	J 0.309	J 1.2	9.6
Chromium	(mg/kg)	40.7	55.2	<b>97.4</b>	17.4	42.6	81	370
Copper	(mg/kg)	<b>177</b>	<b>299</b>	<b>134</b>	<b>42.2</b>	<b>91.5</b>	34	270
Iron <sup>(a)</sup>	(mg/kg)	14000	21100	21900	5630	11900	2%	4%
Lead	(mg/kg)	<b>46.8</b>	<b>76.1</b>	<b>228</b>	24.5	40.9	46.7	218
Mercury	(mg/kg)	<b>0.373</b>	<b>0.492</b>	<b>1.86</b>	D <b>0.152</b>	<b>0.202</b>	0.15	0.71
Nickel	(mg/kg)	15.8	16.7	<b>23.3</b>	5.28	15.3	20.9	51.6
Silver	(mg/kg)		U	U	<b>4.05</b>	U	U 1	3.7
Zinc	(mg/kg)	141	<b>318</b>	<b>206</b>	44.8	100	150	410

NOTE: EPA = U.S. Environmental Protection Agency.  
mg/kg = Milligrams per kilogram  
J = Indicates the reported value was less than the Contract Required Detection Limit , but greater than or equal to the Method Detection Limit.  
D = Indicates the reported value is from a dilution.  
U = Non-detect, detection below the method detection limit.  
Data provided by Chemtech Consulting Group. Only analytes that were detected in at least one sample are shown.  
Concentration values in **BOLD** indicate that analyte was detected above the Effects Range-Low. Concentration values in *ITALICS* indicate that analyte was detected above the Effects Range-Median.

TABLE 9A SUMMARY OF GROUNDWATER CONTAMINATION ABOVE SITE-SPECIFIC CLEANUP OBJECTIVES FOR VOCs

Parameter List EPA Method 8260B	Sample ID	MW-08S		MW-08D		MW-09S		MW-09D		MW-10S		MW-10D		Duplicate		Trip Blank		NYSDEC Ambient Water Quality Standard Class GA (µg/L)
	Lab ID	C5040-01		C5040-02		C5040-03		C5040-04		C5040-05		C5040-06		C5040-07		C5040-21		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		QA/QC		
	Sample Date	12/14/2011		12/14/2011		12/14/2011		12/14/2011		12/14/2011		12/14/2011		12/14/2011		NA		
Acetone	(µg/L)	<25	U	<25	U	44		<25	U	4	J	<25	U	47		<25	U	50 (g)
cis-1,2-Dichloroethene	(µg/L)	<b>8.4</b>		<b>50</b>		<b>82</b>		<b>51</b>		<b>6.9</b>		<5.0	U	<b>67</b>		<5	U	5 (s)
Methyl tert-butyl ether	(µg/L)	3	J	<5.0	U	2	J	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5	U	10 (g)
Tetrachloroethene (PCE)	(µg/L)	<b>390</b>	<b>D</b>	<b>3,000</b>	<b>D</b>	<b>7</b>		<b>1,200</b>	<b>D</b>	<b>5.6</b>		<b>6.7</b>		<b>7</b>		<5	U	5 (s)
trans-1,2-Dichloroethene	(µg/L)	<5.0	U	1	J	<5.0	U	1.9	J	<5.0	U	<5.0	U	<5.0	U	<5	U	5 (s)
Trichloroethene (TCE)	(µg/L)	<b>9.4</b>		<b>140</b>	<b>JD</b>	<b>14</b>		<b>180</b>	<b>JD</b>	<5.0	U	<5.0	U	<b>7</b>		<5	U	5 (s)
Vinyl chloride	(µg/L)	<5.0	U	<5.0	U	<b>88</b>		<b>10</b>		<5.0	U	<5.0	U	<b>75</b>		<5	U	2 (s)
<p>NOTE: EPA = U.S. Environmental Protection Agency.  ID = Identification  QA/QC = Quality assurance/quality control  NA = Not applicable  NYSDEC = New York State Department of Environmental Conservation.  µg/L = micrograms per Liter = parts per billion (ppb).  U = Non-detect, detection below the method detection limit.  J = Indicates the reported value was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit.  D = Indicates the reported value was obtained by analysis at a secondary dilution factor.  Duplicate sample was collected at MW-09S.  Data provided by Chemtech Consulting Group. Only analytes that were detected in at least one sample are shown.  Concentration values in <b>BOLD</b> indicate that analyte was detected above the NYSDEC Ambient Water Quality Standard (g) guidance value, (s) standard value.  April 2014 Revision - New monitoring wells MW-11S and MW-11D will be sampled in Spring 2014; data will be provided in a letter report and/or Periodic Review Report.</p>																		

TABLE 9B SUMMARY OF GROUNDWATER CONTAMINATION ABOVE SITE-SPECIFIC CLEANUP OBJECTIVES FOR METALS

Parameter List EPA Method 6010/7470	Sample ID	MW-08S	MW-08D	MW-09S	MW-09D	MW-10S	MW-10D	Duplicate	NYSDEC Ambient Water Quality Standard Class GA (µg/L)
	Lab ID	C5040-01	C5040-02	C5040-03	C5040-04	C5040-05	C5040-06	C5040-07	
	Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
	Sample Date	12/14/2011	12/14/2011	12/14/2011	12/14/2011	12/14/2011	12/14/2011	12/14/2011	
Aluminum	(µg/L)	485	65.5	1,010	1,570	903	550	995	---
Arsenic	(µg/L)	(<10) U	(<10) U	(<10) U	(<10) U	5.76 J	(<10) U	(<10) U	25 (s)
Barium	(µg/L)	81.6	35.5 J	119	46.2 J	71.1	13.2 J	116	1,000 (s)
Boron	(µg/L)	188	169	554	73.6	779	74.4	573	1,000 (s)
Cadmium	(µg/L)	0.709 J	1.41 J	1.37 J	0.853 J	(<3) U	(<3) U	1.46 J	5 (s)
Calcium	(µg/L)	32,700	100,000	60,300	36,000	33,200	13,500	58,300	---
Chromium (total)	(µg/L)	<b>58.5</b>	5.69	11.9	12.5	12.5	6.57	<b>68.8</b>	50 (s)
Copper	(µg/L)	15.5	7.91 J	6.8 J	4.64 J	12.3	(<10) U	(<10) U	200 (s)
Iron	(µg/L)	<b>11,800</b>	<b>21,500</b>	<b>21,900</b>	<b>14,500</b>	<b>3,950</b>	<b>2,080</b>	<b>22,000</b>	300 (s)
Lead	(µg/L)	3 J	(<6) U	(<6) U	3.68 J	4.13 J	(<6) U	3.01 J	25 (s)
Magnesium	(µg/L)	3,480	10,200	19,600	7,740	3,430	6,010	19,200	35,000 (g)
Manganese	(µg/L)	239	<b>1,050</b>	<b>807</b>	<b>1,980</b>	106	227	<b>778</b>	300 (s)
Nickel	(µg/L)	20.4	10.4 J	(<20) U	7.17 J	6.11 J	(<20) U	30.9	100 (s)
Potassium	(µg/L)	4,150.0	7,370	14,000	3,880	6,950	3,340	14,200	---
Silver	(µg/L)	(<5) U	(<5) U	(<5) U	(<5) U	(<5) U	1.61 J	1.51 J	50 (s)
Sodium	(µg/L)	<b>105,000</b>	<b>106,000</b>	<b>227,000</b>	<b>63,600</b>	<b>144,000</b>	<b>66,400</b>	<b>225,000</b>	20,000 (s)
Thallium	(µg/L)	<b>2.55</b> J	<b>2.43</b> J	(<20) U	(<20) U	(<20) U	(<20) U	<b>2.73</b> J	0.5 (g)
Vanadium	(µg/L)	(<20) U	(<20) U	(<20) U	(<20) U	8.46 J	(<20) U	(<20) U	---
Zinc	(µg/L)	22.8	21	24.1	13.9	15.7	18.3	17.3	2,000 (g)

NOTE: EPA = U.S. Environmental Protection Agency.  
 ID = Identification  
 NYSDEC = New York State Department of Environmental Conservation.  
 µg/L = micrograms per Liter = parts per billion (ppb).  
 --- = No applicable standard  
 U = Non-detect, detection below the method detection limit.  
 J = Indicates the reported value was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit.  
 Duplicate was collected at MW-09S.  
 Data provided by Chemtech Consulting Group. Only analytes that were detected in at least one sample are shown.  
 Concentration values in **BOLD** indicate that analyte was detected above the NYSDEC Ambient Water Quality Standard (g) guidance value, (s) standard value.  
 April 2014 Revision - New monitoring wells MW-11S and MW-11D will be sampled in Spring 2014; data will be provided in a letter report and/or Periodic Review Report.



**APPENDIX A**

**ENVIRONMENTAL NOTICES**

Metal Etching  
Owner: Apache Realty Corporation  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 155 and 157

### ENVIRONMENTAL NOTICE

**THIS ENVIRONMENTAL NOTICE** is made the 5<sup>th</sup> day of March 2024, by the New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233.

**WHEREAS**, a parcel of real property located at the address of 435 Main Street and 24 Ray Street in the Incorporated Village of Freeport, Town of Hempstead, County of Nassau and State of New York, known and designated on the tax map of the County Clerk of Nassau as tax map parcel numbers: Section 62. Block 45 Lot 155, being the same as that property conveyed to Grantor by deed dated March 15, 1983 and recorded in the Nassau County Clerk's Office in Liber 9463 at Page 571 and Section 62. Block 45 Lot 157, being the same as that property conveyed to Grantor by deed dated August 2, 1983 and recorded October 4, 1983 in Liber 9505 at Page 357, comprising approximately 0.81 +/- acres, being more particularly described in the Property Description attached hereto and made a part hereof in Appendix "A," and hereinafter referred to as "the Property" is the subject of a remedial program performed by the Department; and

**WHEREAS**, the Department approved a cleanup to address contamination disposed at the Property and such cleanup was conditioned upon certain limitations.

**NOW, THEREFORE**, the Department provides notice that:

**FIRST**, the part of lands subject to this Environmental Notice is as shown on a survey map dated April 12, 2013 prepared by MJ Engineering and Land Surveying, P.C., attached to this Notice as Appendix "B" and made a part hereof.

**SECOND**, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. A violation of this provision is a violation of 6 NYCRR 375-1.1 1(b)(2).

**THIRD**, no person shall disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the Remedy, including but not limited to those engineering controls described in the SMP and listed below, unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

**FOURTH**, the remedy was designed to be protective for Commercial or Industrial uses. Therefore, any use for purposes other than Commercial or Industrial uses without the express written waiver of such prohibition by the Relevant Agency may result in a significantly

Metal Etching  
Owner: Apache Realty Corporation  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 155 and 157

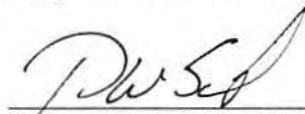
increased threat of harm or damage at any site.

**FIFTH**, the no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency. Use of the groundwater without appropriate treatment may result in a significantly increased threat of harm or damage at any site.

**SIXTH**, it is a violation of 6 NYCRR 375-1.11(b) to use the Property in a manner inconsistent with this environmental notice.

**IN WITNESS WHEREOF**, the undersigned has executed this instrument the day written below.

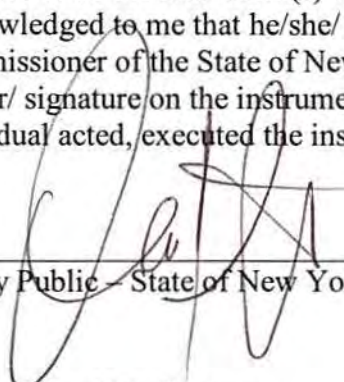
By:



Robert W. Schick, P.E., Director  
Division of Environmental Remediation

STATE OF NEW YORK ) ss:  
COUNTY OF ALBANY )

On the 5<sup>th</sup> day of March, in the year 20  , before me, Robert W. Schick, the undersigned, personally appeared, and is 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

David J. Chiusano  
Notary Public, State of New York  
No. 01CH5032146  
Qualified in Schenectady County  
Commission Expires August 22, 20  14

Metal Etching  
Owner: Apache Realty Corporation  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 155 and 157

## Appendix A

### METES AND BOUNDS DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF SOUTH MAIN STREET AT ITS INTERSECTION WITH THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE SOUTH AND LANDS NOW OR FORMERLY FREEPORT CREEK ASSOCIATES TO THE NORTH, BEING 113.10' SOUTHERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE ALONG SAID DIVISION LINE THE FOLLOWING TWO (2) COURSES:

- 1) S 86°19'00" E, 331.25' TO A POINT;
- 2) N 12°15'00" W, 199.17' TO A POINT ON THE SOUTH SIDE OF RAY STREET;

THENCE ALONG RAY STREET IN PART AND LANDS NOW OR FORMERLY BWMHIGH & DRY INC. THE FOLLOWING TWO (2) COURSES:

- 1) N 77°45'00" E, 33.26' TO A POINT;
- 2) S 60°06'00" E, 146.22' TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING THIRTEEN (13) COURSES:

- 1) S 27°30'08" E, 3.52' TO A POINT;
- 2) S 46°43'34" E, 19.95' TO A POINT;
- 3) S 54°48'18" E, 13.53' TO A POINT;
- 4) S 13°15'20" E, 12.03' TO A POINT;
- 5) S 06°14'04" W, 20.87' TO A POINT;
- 6) S 31°12'03" W, 13.01' TO A POINT;
- 7) S 35°49'59" W, 17.03' TO A POINT;
- 8) S 47°18'43" W, 23.33' TO A POINT;
- 9) S 62°36'32" W, 23.33' TO A POINT;
- 10) S 71°43'13" W, 27.02' TO A POINT;
- 11) S 70°16'31" W, 40.11' TO A POINT;
- 12) S 86°19'00" E, 9.70' TO A POINT;
- 13) S 61°16'43" W, 95.3' TO A POINT ON THE DIMENSION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE NORTH AND LANDS NOW OR FORMERLY OF FREEPORT MOTOR INN & BOAT RENTAL TO THE SOUTH; THENCE ALONG SAID DIMENSION LINE N 77°43'08" W, 289.63' TO A POINT AT THE EASTERLY SIDE OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET N 04°35'45" E, 15.95' TO THE POINT AND PLACE OF BEGINNING CONTAINING 0.81 ACRES OF LAND, MORE OR LESS.

BEING AND INTENDING TO DESCRIBE THE SAME PARCEL CONVEYED TO APACHE REALTY CORP., FROM FREEPORT CREEK PROPERTIES, INC. BY DEED DATED AUGUST 2, 1983 AND RECORDED IN LIBER 9505 AT PAGE 357 AT THE NASSAU COUNTY CLERK'S OFFICE AND ALSO THAT PARCEL CONVEYED TO APACHE REALTY CORP., FROM FREDERICK J. VALENTINE BY DEED DATED MARCH 15, 1983 AND RECORDED IN LIBER 9463 AT PAGE 571 AT THE NASSAU COUNTY CLERK'S OFFICE.

# **APPENDIX B**

## **SURVEY**



**GENERAL NOTES:**

- MAP PREPARED FROM A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING P.C., DATED JUNE 2008 AND UPDATED OCTOBER 2012.
- PARCELS SURVEYED IS FURTHER REFERENCED TO THE TOWN OF FREEPORT SECTION 62, BLOCK 45, LOTS 155 AND 157.
- UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE ONLY, AND SUBJECT TO VERIFICATION BY EXCAVATION.
- SUBJECT TO ANY AND ALL RIGHTS, EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- VERTICAL DATUM BASED UPON NAVD 83 TRANSFERRED TO THE SITE BY CONVENTIONAL METHODS.
- BUILDING HEIGHTS SHOWN ARE MEASURED FROM GRADE.
- SITE IS LOCATED 480' SOUTH OF THE INTERSECTION OF ATLANTIC AVE AT THE INTERSECTION OF MAIN ST. AND RAY ST EAST.
- NORTH REFERENCE SHOWN HEREON PER DEED REFERENCE ONE.
- THIS SURVEY HAS BEEN REVISED WITH THE BENEFIT OF TITLE REPORT PREPARED BY FRONTIER ABSTRACT AND RESEARCH SERVICES AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 5032264, DATED OCTOBER 2, 2012.

**DEED REFERENCES:**

- CONVEYANCE FROM FREEPORT CREEK PROPERTIES, INC. TO APACHE REALTY CORP. DATED AUGUST 2, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9505 OF DEEDS, PAGE 357 AS FILED ON OCTOBER 4, 1983.
- CONVEYANCE FROM FREDERICK J. VALENTINE TO APACHE REALTY CORP. DATED MARCH 15, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9463 OF DEEDS, PAGE 571 AS FILED MARCH 22, 1983.

**MAP REFERENCES:**

- MAP ENTITLED "DESCRIPTIVE PROPERTY", PREPARED BY VITO A. VALENTI, DATED APRIL 1, 1999.
- MAP ENTITLED "MAP OF PROPERTY SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY-N.Y.", PREPARED BY BALDWIN & CORNELIUS, P.C. DATED AUGUST 2, 1985 LAST REVISED NOVEMBER 21, 1988.
- MAP ENTITLED "MAP OF SUNSHINE PARK AT FREEPORT, NEW YORK" DATED JUNE 4, 1921 FILED IN NASSAU COUNTY CLERK'S OFFICE AS MAP NUMBER 179.

**DESCRIPTION OF ENVIRONMENTAL EASEMENT**

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY SIDE OF SOUTH MAIN STREET AT ITS INTERSECTION WITH THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE SOUTH AND LANDS NOW OR FORMERLY FREEPORT CREEK ASSOCIATES TO THE NORTH, BEING 113.10' SOUTHERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE ALONG SAID DIVISION LINE THE FOLLOWING TWO (2) COURSES:

- S 86°19'00" E, 331.25' TO A POINT;
- N 12°15'00" W, 199.17' TO A POINT ON THE SOUTH SIDE OF RAY STREET;

THENCE ALONG RAY STREET IN PART AND LANDS NOW OR FORMERLY BWM HIGH & DRY INC. THE FOLLOWING TWO (2) COURSES:

- N 77°45'00" E, 33.26' TO A POINT;
- S 60°06'00" E, 146.22' TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING THIRTEEN (13) COURSES:

- S 27°30'08" E, 3.52' TO A POINT;
- S 46°43'34" E, 19.95' TO A POINT;
- S 54°48'18" E, 13.53' TO A POINT;
- S 13°15'20" E, 12.03' TO A POINT;
- S 06°14'04" W, 20.87' TO A POINT;
- S 31°12'03" W, 13.01' TO A POINT;
- S 35°49'59" W, 17.03' TO A POINT;
- S 47°18'43" W, 23.33' TO A POINT;
- S 62°36'32" W, 23.33' TO A POINT;
- S 71°43'13" W, 27.02' TO A POINT;
- S 70°16'31" W, 40.11' TO A POINT;
- S 86°19'00" E, 9.70' TO A POINT;
- S 61°16'43" W, 95.3' TO A POINT ON THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE NORTH AND LANDS NOW OR FORMERLY FREEPORT MOTOR INN & BOAT RENTAL TO THE SOUTH; THENCE ALONG SAID DIVISION LINE N 77°45'00" E, 289.63' TO A POINT AT THE EASTERLY SIDE OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET N 04°35'45" E, 15.95' TO THE POINT AND PLACE OF BEGINNING CONTAINING 0.81 ACRES OF LAND, MORE OR LESS.

BEING AND INTENDING TO DESCRIBE THE SAME PARCEL CONVEYED TO APACHE REALTY CORP. FROM FREEPORT CREEK PROPERTIES, INC. BY DEED DATED AUGUST 2, 1983 AND RECORDED IN LIBER 9505 AT PAGE 357 AT THE NASSAU COUNTY CLERK'S OFFICE AND ALSO THAT PARCEL CONVEYED TO APACHE REALTY CORP. FROM FREDERICK J. VALENTINE BY DEED DATED MARCH 15, 1983 AND RECORDED IN LIBER 9463 AT PAGE 571 AT THE NASSAU COUNTY CLERK'S OFFICE.

**ENGINEERING / INSTITUTIONAL CONTROLS**

- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan (SMP).
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the purposes of construction or utilities work, must be replaced or repaired according to the SMP. Site soil excavated or removed from the property must be managed, characterized, and properly disposed of in accordance with the NYSDEC regulations and directives. Guidelines for management of subsurface soils/fill and long-term maintenance of the natural site cover is provided in the SMP.
- Groundwater monitoring and other environmental or public health monitoring must be performed as defined in the SMP.
- The use of Groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site; and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- Land Use - The use and development of the site is limited to Commercial and Industrial uses only as defined in 6 NYCRR Part 375-1.8(g)(2) (iii) & (iv).

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail 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 may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at [derveb@gw.dec.state.ny.us](mailto:derveb@gw.dec.state.ny.us).

TOTAL ENVIRONMENTAL EASEMENT AREA = 0.81 ACRES ±  
(INCLUDES SEC. 62, BLK. 45, LOT 157 AREA = 0.54 ACRES ±  
AND SEC. 62, BLK. 45, LOT 155 AREA = 0.27 ACRES ±)

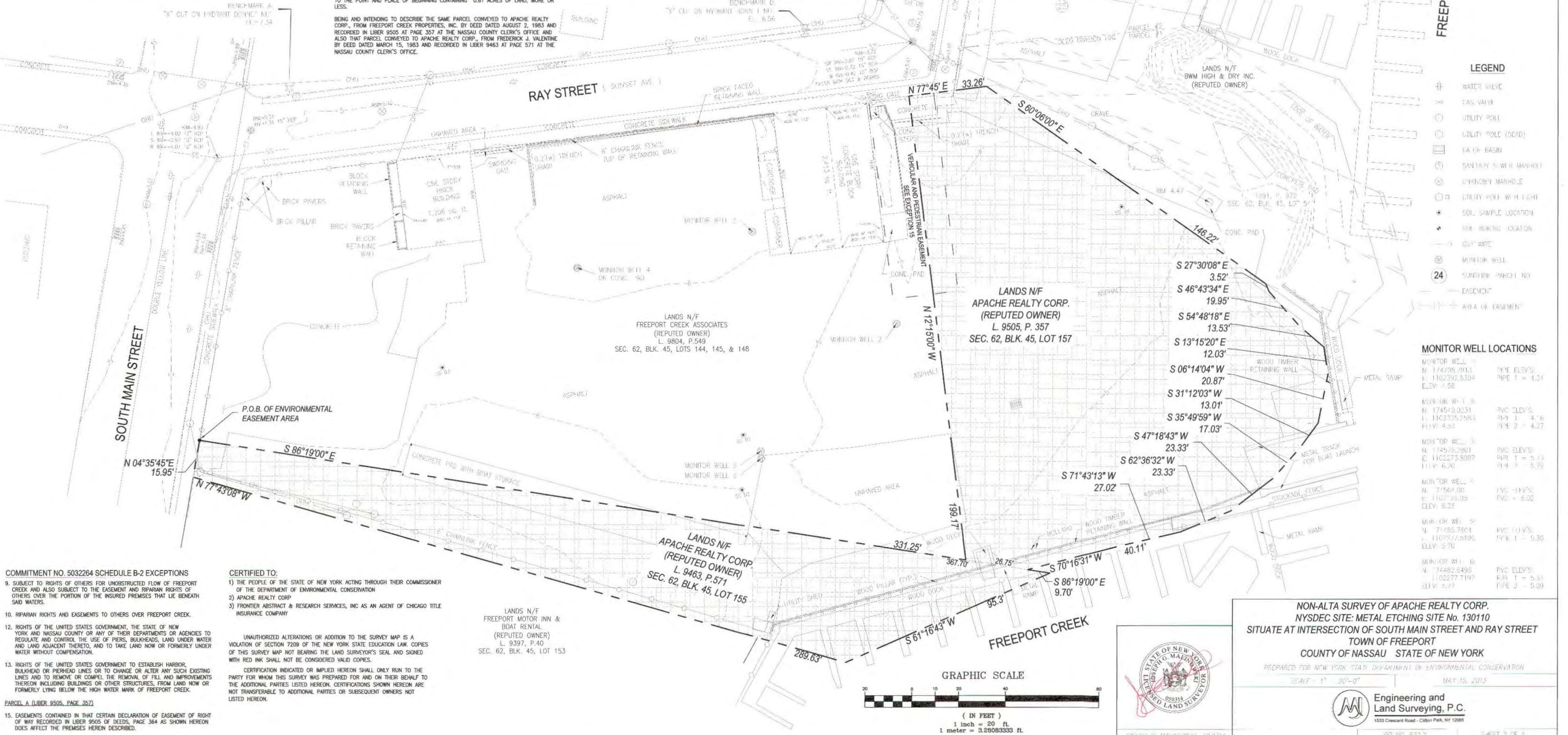
This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

**ENVIRONMENTAL EASEMENT AREA ACCESS**

THE DEC OR THEIR AGENT MAY ACCESS THE ENVIRONMENTAL EASEMENT AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS OR BUILDING INGRESS/EGRESS ACCESS POINT



SITE LOCATION MAP  
SCALE: N.T.S.



**LEGEND**

- ⊕ WATER VALVE
- ⊗ GAS VALVE
- ⊕ UTILITY POLE
- ⊕ UTILITY POLE (DEAD)
- ⊕ G.A. OF BASIN
- ⊕ SANITARY S.W.ER MANHOLE
- ⊕ UNKNOWN MANHOLE
- ⊕ UTILITY POLE WITH LIGHT
- ⊕ SOIL SAMPLE LOCATION
- ⊕ SOIL BURNING LOCATION
- ⊕ GUY WIRE
- ⊕ MONITOR WELL
- ⊕ SURVEYOR MARCH NAIL
- ⊕ EASEMENT
- ⊕ AREA OF EASEMENT

**MONITOR WELL LOCATIONS**

MONITOR WELL #	N	E	TYPE	ELEV.	PIPE
MONITOR WELL 1	N 174705.7813	E 1102392.5304	PVC	4.58	1 - 1.24
MONITOR WELL 2	N 174543.0231	E 1102335.2963	PVC	4.53	1 - 4.76
MONITOR WELL 3	N 174578.2801	E 1102273.5087	PVC	6.30	1 - 4.27
MONITOR WELL 4	N 174568.06	E 1107780.03	PVC	6.35	1 - 5.73
MONITOR WELL 5	N 77485.7804	E 1107775.8196	PVC	5.70	1 - 5.30
MONITOR WELL 6	N 174482.5495	E 1027771.97	PVC	6.31	1 - 5.31
					PIPE 2 - 5.39

**COMMITMENT NO. 5032264 SCHEDULE B-2 EXCEPTIONS**

- SUBJECT TO RIGHTS OF OTHERS FOR UNOBSTRUCTED FLOW OF FREEPORT CREEK AND ALSO SUBJECT TO THE EASEMENT AND RIPARIAN RIGHTS OF OTHERS OVER THE PORTION OF THE INSURED PREMISES THAT LIE BETWEEN SAID WATERS.
- RIPARIAN RIGHTS AND EASEMENTS TO OTHERS OVER FREEPORT CREEK.
- RIGHTS OF THE UNITED STATES GOVERNMENT, THE STATE OF NEW YORK AND NASSAU COUNTY OR ANY OF THEIR DEPARTMENTS OR AGENCIES TO REGULATE AND CONTROL THE USE OF PIER, BULKHEAD, LAND UNDER WATER AND LAND ADJACENT THERETO, AND TO TAKE LAND NOW OR FORMERLY UNDER WATER WITHOUT COMPENSATION.
- RIGHTS OF THE UNITED STATES GOVERNMENT TO ESTABLISH HARBOR, BULKHEAD OR PIERHEAD LINES OR TO CHANGE OR ALTER ANY SUCH EXISTING LINES AND TO REMOVE OR COMPEL THE REMOVAL OF FILL AND IMPROVEMENTS THEREON INCLUDING BUILDINGS OR OTHER STRUCTURES, FROM LAND NOW OR FORMERLY LYING BELOW THE HIGH WATER MARK OF FREEPORT CREEK.

PARCEL A (LIBER 9505, PAGE 357)

15. EASEMENTS CONTAINED IN THAT CERTAIN DECLARATION OF EASEMENT OF RIGHT OF WAY RECORDED IN LIBER 9505 OF DEEDS, PAGE 364 AS SHOWN HEREON DOES AFFECT THE PREMISES HEREIN DESCRIBED.

**CERTIFIED TO:**

- THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- APACHE REALTY CORP
- FRONTIER ABSTRACT & RESEARCH SERVICES, INC AS AN AGENT OF CHICAGO TITLE INSURANCE COMPANY

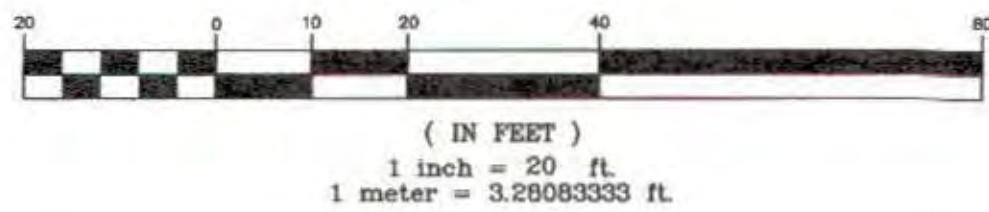
UNAUTHORIZED ALTERATIONS OR ADDITION TO THE SURVEY MAP IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S SEAL AND SIGNED WITH RED INK SHALL NOT BE CONSIDERED VALID COPIES.

CERTIFICATION INDICATED OR IMPLIED HEREON SHALL ONLY RUN TO THE PARTY FOR WHOM THIS SURVEY WAS PREPARED FOR AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATIONS SHOWN HEREON ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES OR SUBSEQUENT OWNERS NOT LISTED HEREON.

LANDS N/F  
FREEPORT MOTOR INN &  
BOAT RENTAL  
(REPUTED OWNER)  
L. 9397, P.40  
SEC. 62, BLK. 45, LOT 153

LANDS N/F  
APACHE REALTY CORP.  
(REPUTED OWNER)  
L. 9463, P.571  
SEC. 62, BLK. 45, LOT 155

**GRAPHIC SCALE**



NON-ALTA SURVEY OF APACHE REALTY CORP.  
NYSDEC SITE: METAL ETCHING SITE No. 130110  
SITUATE AT INTERSECTION OF SOUTH MAIN STREET AND RAY STREET  
TOWN OF FREEPORT  
COUNTY OF NASSAU STATE OF NEW YORK

PREPARED FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
SCALE: 1" = 20'-0" MAY 15, 2013

Engineering and  
Land Surveying, P.C.  
1533 Crescent Road - Clifton Park, NY 12065



**DESCRIPTION OF ENVIRONMENTAL EASEMENT**

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE FROM SAID POINT OF BEGINNING EASTERLY, ALONG THE SOUTHERLY SIDE OF RAY STREET, N 77°45' E, 306.01' TO A POINT ON THE EAST SIDE OF SOUTH END PLACE;

THENCE NORTHERLY ALONG SAID EAST SIDE OF SOUTH END PLACE N 52°40' E, 74.86' TO A POINT;

THENCE S 84°57'20" E, 102' +/- TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING EIGHTEEN (18) COURSES:

- 1) S 13°22'30" W, 29.69' TO A POINT;
- 2) S 59°50'30" E, 71.88' TO A POINT;
- 3) S 27°46'50" E, 71.86' TO A POINT;
- 4) S 41°03'10" W, 29.19' TO A POINT;
- 5) N 80°06' W, 35.49' TO A POINT;
- 6) S 27°30'08" E, 3.52' TO A POINT;
- 7) S 46°43'34" E, 19.95' TO A POINT;
- 8) S 54°48'18" E, 13.53' TO A POINT;
- 9) S 13°15'20" E, 12.03' TO A POINT;
- 10) S 06°14'04" W, 20.87' TO A POINT;
- 11) S 31°12'03" W, 13.01' TO A POINT;
- 12) S 35°49'59" W, 17.03' TO A POINT;
- 13) S 47°18'43" W, 23.33' TO A POINT;
- 14) S 62°36'32" W, 23.33' TO A POINT;
- 15) S 71°43'13" W, 27.02' TO A POINT;
- 16) S 70°16'31" W, 40.11' TO A POINT;
- 17) S 86°19'00" E, 9.70' TO A POINT;
- 18) S 61°16'43" W, 95.3' TO A POINT ON THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE NORTH AND LANDS NOW OR FORMERLY OF FREEPORT MOTOR INN & BOAT RENTAL TO THE SOUTH; THENCE ALONG SAID DIVISION LINE N 77°43'08" W, 289.63' TO A POINT AT THE EASTERLY SIDE OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET, N 4°35'45" E, 128.05' TO THE POINT AND PLACE OF BEGINNING CONTAINING 2.25 ACRES OF LAND, MORE OR LESS.

**GENERAL NOTES:**

- 1) MAP PREPARED FROM A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING P.C., DATED JUNE 2008 AND UPDATED OCTOBER 2012.
- 2) PARCELS SURVEYED IS FURTHER REFERENCED TO THE TOWN OF FREEPORT SECTION 62, BLOCK 45, LOTS 144, 145, 148, 155, AND 157.
- 3) UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE ONLY, AND SUBJECT TO VERIFICATION BY EXCAVATION.
- 4) SUBJECT TO ANY AND ALL RIGHTS, EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- 5) VERTICAL DATUM BASED UPON NAVD 88 TRANSFERRED TO THE SITE BY CONVENTIONAL METHODS.
- 6) BUILDING HEIGHTS SHOWN ARE MEASURED FROM GRADE.
- 7) SITE IS LOCATED 480± SOUTH OF THE INTERSECTION OF ATLANTIC AVE. AT THE INTERSECTION OF SOUTH MAIN ST. AND RAY ST. EAST.
- 8) NORTH REFERENCE SHOWN HEREON PER DEED REFERENCE ONE, TWO, AND FOUR.

**CERTIFIED TO:**

- 1) THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
- 2) FREEPORT CREEK ASSOCIATES.
- 3) BWM HIGH & DRY, INC.
- 4) APACHE REALTY CORP.
- 5) FRONTIER ABSTRACT & RESEARCH SERVICES, INC. AS AN AGENT OF CHICAGO TITLE INSURANCE COMPANY
- 6) FRONTIER ABSTRACT & RESEARCH SERVICES, INC. AS AN AGENT OF STEWART TITLE INSURANCE COMPANY

UNAUTHORIZED ALTERATIONS OR ADDITION TO THE SURVEY MAP IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S SEAL AND SIGNED WITH RED INK SHALL NOT BE CONSIDERED VALID COPIES.

CERTIFICATION INDICATED OR IMPLIED HEREON SHALL ONLY RUN TO THE PARTY FOR WHOM THIS SURVEY WAS PREPARED FOR AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATIONS SHOWN HEREON ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES OR SUBSEQUENT OWNERS NOT LISTED HEREON.

**ENGINEERING / INSTITUTIONAL CONTROLS**

- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the purposes of construction or utilities work, must be replaced or repaired according to the SMP. Site soil excavated or removed from the property must be managed, characterized, and properly disposed of in accordance with the NYSDEC regulations and directives. Guidelines for management of subsurface soils/fill and long-term maintenance of the natural site cover is provided in the SMP.
- Groundwater monitoring and other environmental or public health monitoring must be performed as defined in the SMP.
- The use of Groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site; and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- Land Use - The use and development of the site is limited to Commercial and Industrial uses only as defined in 6 NYCRR Part 375-1.8(g)(2) (iii) & (iv).

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail 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 may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.

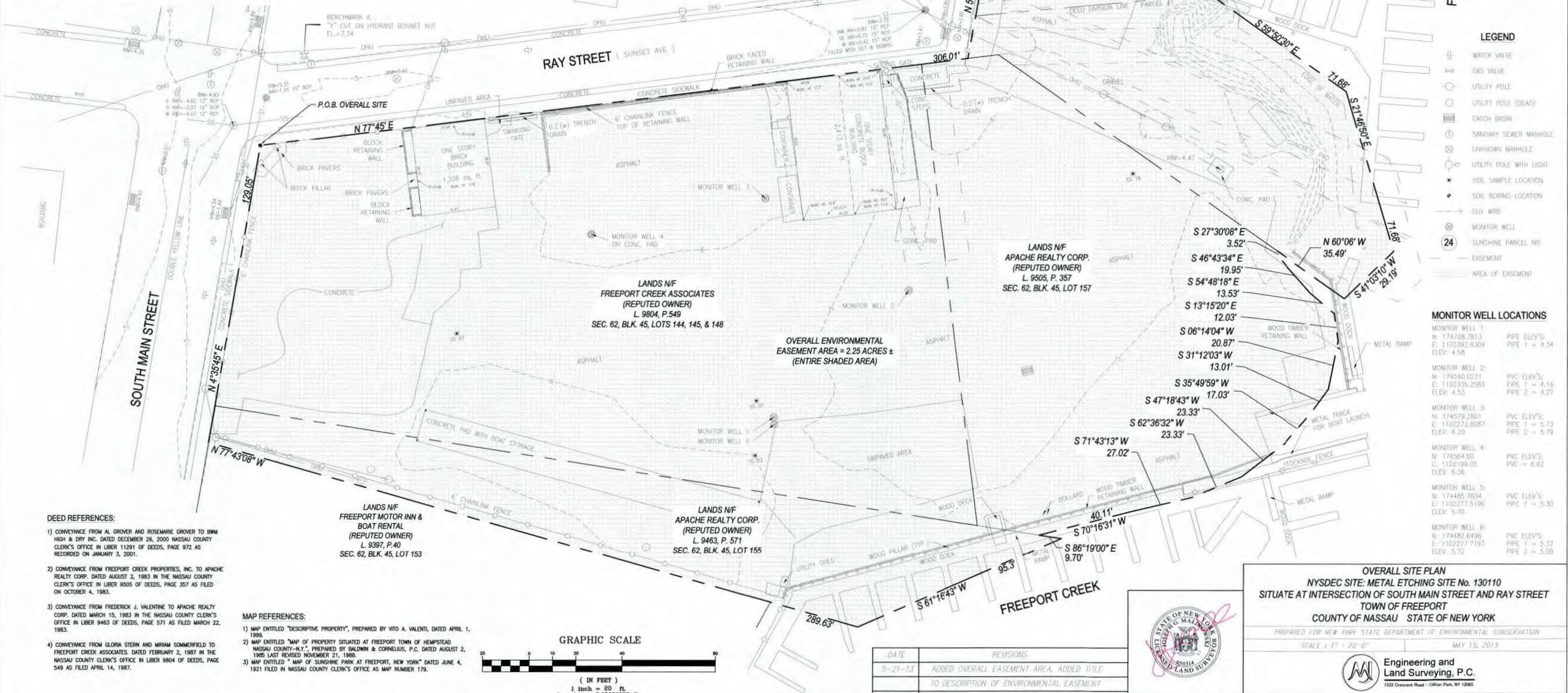
This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

**ENVIRONMENTAL EASEMENT AREA ACCESS**

THE DEC OR THEIR AGENT MAY ACCESS THE ENVIRONMENTAL EASEMENT AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS OR BUILDING INGRESS/EGRESS ACCESS POINT



**SITE LOCATION MAP**  
SCALE: N.T.S.

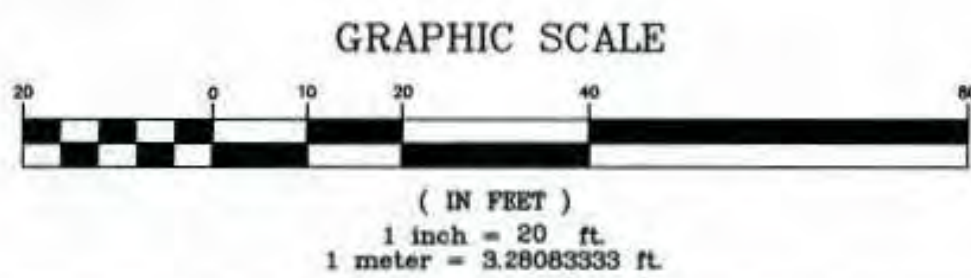


**DEED REFERENCES:**

- 1) CONVEYANCE FROM AL GROVER AND ROSEMARIE GROVER TO BWM HIGH & DRY INC. DATED DECEMBER 26, 2000 NASSAU COUNTY CLERK'S OFFICE IN LIBER 11291 OF DEEDS, PAGE 972 AS RECORDED ON JANUARY 3, 2001.
- 2) CONVEYANCE FROM FREEPORT CREEK PROPERTIES, INC. TO APACHE REALTY CORP. DATED AUGUST 2, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9505 OF DEEDS, PAGE 357 AS FILED ON OCTOBER 4, 1983.
- 3) CONVEYANCE FROM FREDERICK J. VALENTINE TO APACHE REALTY CORP. DATED MARCH 15, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9463 OF DEEDS, PAGE 571 AS FILED MARCH 22, 1983.
- 4) COVENANTS FROM GLORIA STERN AND MIRIAM SOMMERFELD TO FREEPORT CREEK ASSOCIATES. DATED FEBRUARY 2, 1987 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9804 OF DEEDS, PAGE 549 AS FILED APRIL 14, 1987.

**MAP REFERENCES:**

- 1) MAP ENTITLED "DESCRIPTIVE PROPERTY", PREPARED BY VITO A. VALENTI, DATED APRIL 1, 1998.
- 2) MAP ENTITLED "MAP OF PROPERTY SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY-N.Y.", PREPARED BY BALDWIN & CORNELIUS, P.C. DATED AUGUST 2, 1985 LAST REVISED NOVEMBER 21, 1988.
- 3) MAP ENTITLED "MAP OF SUNSHINE PARK AT FREEPORT, NEW YORK" DATED JUNE 4, 1921 FILED IN NASSAU COUNTY CLERK'S OFFICE AS MAP NUMBER 179.



DATE	REVISIONS
5-21-13	ADDED OVERALL EASEMENT AREA, ADDED TITLE TO DESCRIPTION OF ENVIRONMENTAL EASEMENT



**OVERALL SITE PLAN**  
**NYSDEC SITE: METAL ETCHING SITE No. 130110**  
 SITUATE AT INTERSECTION OF SOUTH MAIN STREET AND RAY STREET  
 TOWN OF FREEPORT  
 COUNTY OF NASSAU STATE OF NEW YORK

PREPARED FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
 SCALE: 1" = 20'-0"  
 MAY 15, 2013

Engineering and Land Surveying, P.C.  
 1533 Crescent Road - Oyster Bay, NY 11776  
 JOE NO. 6322 SHEET 1 OF 4

- LEGEND**
- WATER VALVE
  - GAS VALVE
  - UTILITY POLE
  - UTILITY POLE (DEAD)
  - CATCH BASIN
  - SANITARY SEWER MANHOLE
  - UNKNOWN MANHOLE
  - UTILITY POLE WITH LIGHT
  - SOIL SAMPLE LOCATION
  - SOIL BORING LOCATION
  - GUY WIRE
  - MONITOR WELL
  - SUNSHINE PARCEL NO. 24
  - EASEMENT
  - AREA OF EASEMENT

**MONITOR WELL LOCATIONS**

MONITOR WELL #	N	E	ELEV.	PVC ELEV'S	PIPE 1 =	PIPE 2 =
MONITOR WELL 1	174708.7913	1102392.8304	4.58		4.34	
MONITOR WELL 2	174540.0231	1102335.2983	4.53		4.16	4.27
MONITOR WELL 3	174579.2801	1102271.8087	6.20		5.73	5.79
MONITOR WELL 4	174564.90	1102199.05	6.36		6.02	
MONITOR WELL 5	174485.7604	1102277.5195	5.70		5.30	
MONITOR WELL 6	174482.6496	1102277.7197	5.72		5.37	5.09



Metal Etching  
Owner: BWM High & Dry, Inc.  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 24 and 54

## ENVIRONMENTAL NOTICE

**THIS ENVIRONMENTAL NOTICE** is made the 5<sup>th</sup> day of MARCH 2014, by the New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233.

**WHEREAS**, a parcel of real property located at the address of South End Place and 16 South End Place in the Incorporated Village of Freeport, Town of Hempstead, County of Nassau and State of New York, known and designated on the tax map of the County Clerk of Nassau as tax map parcel numbers: Section 62. Block 45 Lot(s) 24 and 54, being the same as that property conveyed to Grantor by deed dated December 26, 2000 and recorded in the Nassau County Clerk's Office in Liber 11291 at Page 972, comprising approximately 0.35 +/- acres, and hereinafter more fully described in property description and attached hereto as Appendix "A," attached to this notice and made a part hereof, and hereinafter referred to as "the Property" is the subject of a remedial program performed by the Department; and

**WHEREAS**, the Department approved a cleanup to address contamination disposed at the Property and such cleanup was conditioned upon certain limitations.

**NOW, THEREFORE**, the Department provides notice that:

**FIRST**, the part of lands subject to this Environmental Notice is as shown on a survey map dated April 12, 2013 prepared by M J Engineering and Land Surveying, P.C. attached to this Notice as Appendix "B" and made a part hereof.

**SECOND**, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. A violation of this provision is a violation of 6 NYCRR 375-1.1 1(b)(2).

**THIRD**, no person shall disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the Remedy, including but not limited to those engineering controls described in the SMP and listed below, unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

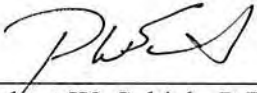
**FOURTH**, the remedy was designed to be protective for Commercial or Industrial uses. Therefore, any use for purposes other than Commercial or Industrial uses without the express written waiver of such prohibition by the Relevant Agency may result in a significantly increased threat of harm or damage at any site.

Metal Etching  
Owner: BWM High & Dry, Inc.  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 24 and 54

**FIFTH**, the no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency. Use of the groundwater without appropriate treatment may result in a significantly increased threat of harm or damage at any site.

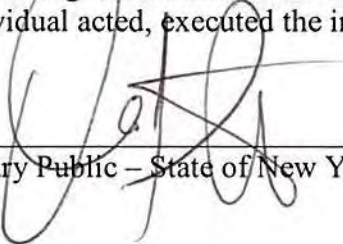
**SIXTH**, it is a violation of 6 NYCRR 375-1.11(b) to use the Property in a manner inconsistent with this environmental notice.

**IN WITNESS WHEREOF**, the undersigned has executed this instrument the day written below.

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

STATE OF NEW YORK ) ss:  
COUNTY OF ALBANY )

On the 5<sup>th</sup> day of March, in the year 2014, before me, Robert W. Schick, the undersigned, personally appeared, and is 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

**David J. Chiusano**  
Notary Public, State of New York  
No. 01CH5032146  
Qualified in Schenectady County  
Commission Expires August 22, 2014



Metal Etching  
Owner: BWM High & Dry, Inc.,  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 24 and 54

## Appendix A

### METES AND BOUNDS DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF RAY STREET AND THE EASTERLY SIDE OF SOUTH END PLACE;

THENCE FROM SAID POINT OF BEGINNING RUNNING NORTHERLY ALONG THE EAST SIDE OF SOUTH END PLACE N 5°02'40" E, 74.86' TO A POINT ;

THENCE NORTH S 84°57' 20 E, 102' +/- TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING FOUR (4) COURSES:

- 1) S 13°22'30" W, 29.69' TO A POINT;
- 2) S 59°50'30" E, 71.68' TO A POINT;
- 3) S 21°46'50" E, 71.68' TO A POINT;
- 4) S 41°03'10" W, 29.19' TO A POINT ON THE DIVISION LINE BETWEEN FREEPORT CREEK AND LANDS NOW OR FORMERLY OF APACHE REALTY CORP. TO THE SOUTH AND THE LANDS HEREIN DESCRIBED TO THE NORTH;

THENCE ALONG SAID DIVISION LINE THE FOLLOWING TWO (2) COURSES:

- 1) N 60°06' W, 181.71' TO A POINT;
- 2) S 77°45' W, 12.96' TO THE PLACE AND POINT OF BEGINNING CONTAINING 0.35 ACRES OF LAND MORE OR LESS.

BEING AND INTENDING TO DESCRIBE THE SAME PARCEL CONVEYED TO BWM HIGH & DRY INC., FROM AL GROVER AND ROSEMARIE GROVER, HUSBAND AND WIFE BY DEED DATED DECEMBER 26, 2000 AND RECORDED IN LIBER 11291 AT PAGE 972 AT THE NASSAU COUNTY CLERK'S OFFICE.

# **APPENDIX B**

## **SURVEY**



**GENERAL NOTES:**

- 1) MAP PREPARED FROM A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING P.C., DATED JUNE 2008 AND UPDATED OCTOBER 2012.
- 2) PARCELS SURVEYED IS FURTHER REFERENCED TO THE TOWN OF FREEPORT SECTION 62, BLOCK 45, LOT 54.
- 3) UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE ONLY, AND SUBJECT TO VERIFICATION BY EXCAVATION.
- 4) SUBJECT TO ANY AND ALL RIGHTS, EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- 5) VERTICAL DATUM BASED UPON NAVD 88 TRANSFERRED TO THE SITE BY CONVENTIONAL METHODS.
- 6) BUILDING HEIGHTS SHOWN ARE MEASURED FROM GRADE.
- 7) SITE IS LOCATED 480' SOUTH OF THE INTERSECTION OF ATLANTIC AVE AT THE INTERSECTION OF MAIN ST. AND RAY ST. EAST.
- 8) NORTH REFERENCE SHOWN HEREON PER DEED REFERENCE ONE.
- 9) THIS SURVEY HAS BEEN REVISED WITH THE BENEFIT OF TITLE REPORT PREPARED BY FRONTIER ABSTRACT & RESEARCH SERVICES AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 5032429, DATED OCTOBER 4, 2012.

**DEED REFERENCES:**

- 1) CONVEYANCE FROM AL GROVER AND ROSEMARIE GROVER TO BWM HIGH & DRY INC. DATED DECEMBER 26, 2000 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 11291 OF DEEDS, PAGE 972 AS RECORDED ON JANUARY 3, 2001.

**MAP REFERENCES:**

- 1) MAP ENTITLED "DESCRIPTIVE PROPERTY", PREPARED BY VITO A. VALENTI, DATED APRIL 1, 1999.
- 2) MAP ENTITLED "MAP OF PROPERTY SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY, N.Y.", PREPARED BY BALDWIN & CORNELIUS, P.C. DATED AUGUST 2, 1985 LAST REVISED NOVEMBER 21, 1988.
- 3) MAP ENTITLED "MAP OF SUNSHINE PARK AT FREEPORT, NEW YORK" DATED JUNE 4, 1921 FILED IN NASSAU COUNTY CLERK'S OFFICE AS MAP NUMBER 179.

**DESCRIPTION OF ENVIRONMENTAL EASEMENT**

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF RAY STREET AND THE EASTERLY SIDE OF SOUTH END PLACE;

THENCE FROM SAID POINT OF BEGINNING RUNNING NORTHERLY ALONG THE EAST SIDE OF SOUTH END PLACE N 5°02'40" E, 74.86' TO A POINT;

THENCE NORTH S 84°57'20" E, 102'+/- TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING FOUR (4) COURSES:

- 1) S 13°22'30" W, 29.69' TO A POINT;
- 2) S 59°50'30" E, 71.68' TO A POINT;
- 3) S 21°46'50" E, 71.68' TO A POINT;
- 4) S 41°03'10" W, 29.19' TO A POINT ON THE DIVISION LINE BETWEEN FREEPORT CREEK AND LANDS NOW OR FORMERLY OF APACHE REALTY CORP. TO THE SOUTH AND THE LANDS HEREIN DESCRIBED TO THE NORTH;

THENCE ALONG SAID DIVISION LINE THE FOLLOWING TWO (2) COURSES:

- 1) N 6°00'6" W, 181.71' TO A POINT;
- 2) S 77°45' W, 12.96' TO THE PLACE AND POINT OF BEGINNING CONTAINING 0.35 ACRES OF LAND MORE OR LESS.

BEING AND INTENDING TO DESCRIBE THE SAME PARCEL CONVEYED TO BWM HIGH & DRY INC. FROM AL GROVER AND ROSEMARIE GROVER, HUSBAND AND WIFE BY DEED DATED DECEMBER 26, 2000 AND RECORDED IN LIBER 11291 AT PAGE 972 AT THE NASSAU COUNTY CLERK'S OFFICE.

**ENGINEERING / INSTITUTIONAL CONTROLS**

- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the purposes of construction or utilities work, must be replaced or repaired according to the SMP. Site soil excavated or removed from the property must be managed, characterized, and properly disposed of in accordance with the NYSDEC regulations and directives. Guidelines for management of subsurface soils/fill and long-term maintenance of the natural site cover is provided in the SMP.
- Groundwater monitoring and other environmental or public health monitoring must be performed as defined in the SMP.
- The use of Groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site; and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- Land Use - The use and development of the site is limited to Commercial and Industrial uses only as defined in 6 NYCRR Part 375-1.8(g)(2) (iii) & (iv).

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail 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 may be obtained from the New York State 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).

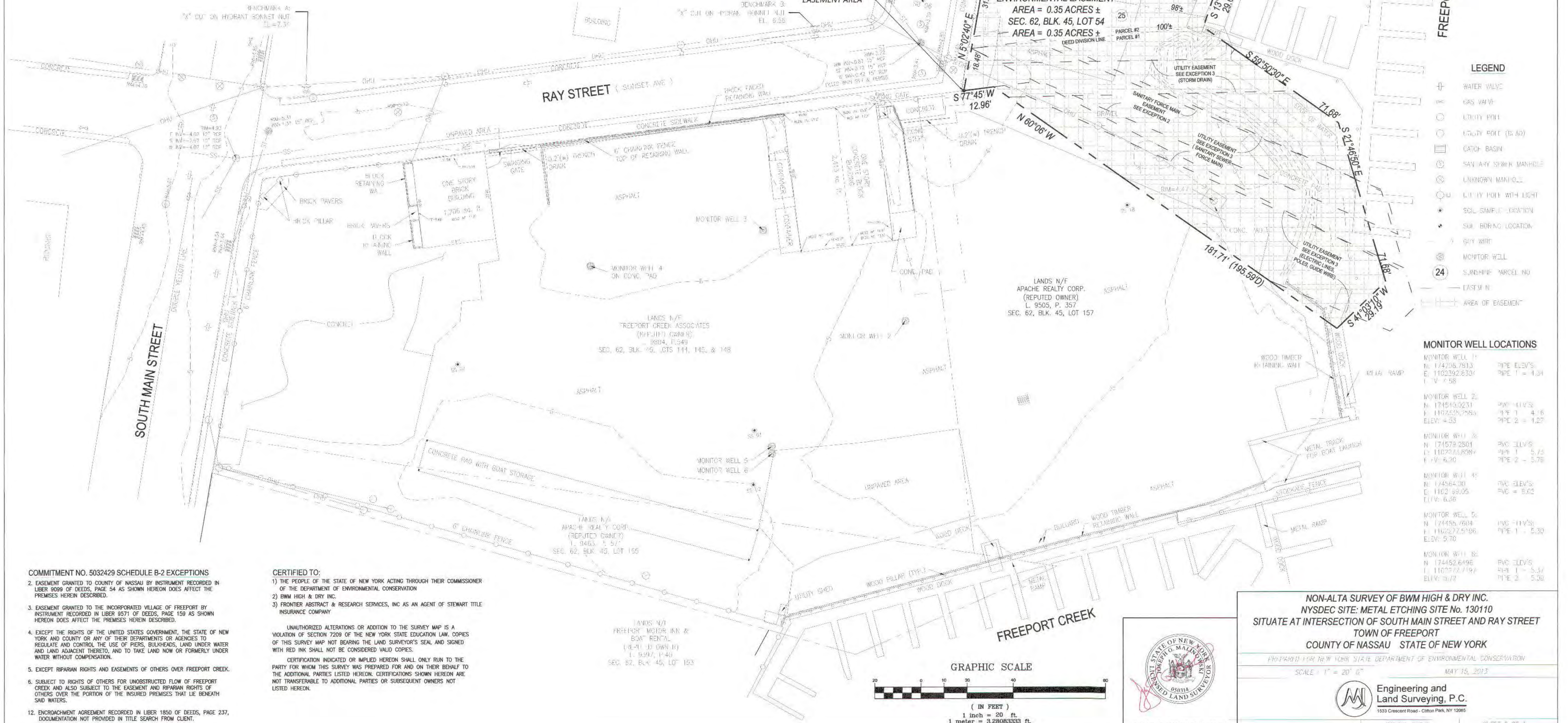
This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

**ENVIRONMENTAL EASEMENT AREA ACCESS**

THE DEC OR THEIR AGENT MAY ACCESS THE ENVIRONMENTAL EASEMENT AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS OR BUILDING INGRESS/EGRESS ACCESS POINT



**SITE LOCATION MAP**  
SCALE: N.T.S.



**LEGEND**

- ⊕ WATER VALVE
- ⊕ GAS VALVE
- ⊕ UTILITY POLE
- ⊕ UTILITY POLE (B.B.D)
- ⊕ CATCH BASIN
- ⊕ SANITARY SEWER MANHOLE
- ⊕ UNKNOWN MANHOLE
- ⊕ UTILITY POLE WITH LIGHT
- ⊕ SOIL SAMPLE LOCATION
- ⊕ SOIL BORING LOCATION
- ⊕ GUY WIRE
- ⊕ MONITOR WELL
- ⊕ SUNSHINE PARCEL ID
- LAST M.N.
- AREA OF EASEMENT

**MONITOR WELL LOCATIONS**

MONITOR WELL #	N	E	TYPE	ELEV'S	PIPE
MONITOR WELL 1	174738.7913	1102342.8307	1" V	4.58	1 - 4.34
MONITOR WELL 2	174549.0231	1102524.7959	4" V	4.16	2 - 1.27
MONITOR WELL 3	174579.2501	1102524.8089	4" V	5.72	2 - 5.78
MONITOR WELL 4	174564.00	1102589.05	4" V	6.02	
MONITOR WELL 5	174458.7604	1102572.5196	4" V	5.30	
MONITOR WELL 6	174452.6199	1102572.7197	4" V	5.37	

**COMMITMENT NO. 5032429 SCHEDULE B-2 EXCEPTIONS**

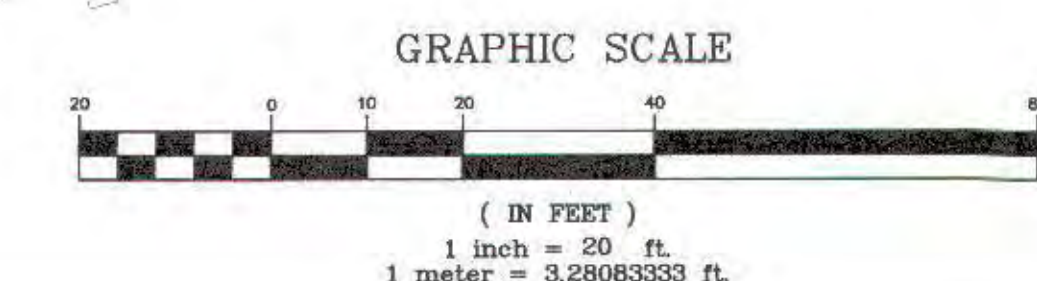
2. EASEMENT GRANTED TO COUNTY OF NASSAU BY INSTRUMENT RECORDED IN LIBER 1099 OF DEEDS, PAGE 54 AS SHOWN HEREON DOES AFFECT THE PREMISES HEREIN DESCRIBED.
3. EASEMENT GRANTED TO THE INCORPORATED VILLAGE OF FREEPORT BY INSTRUMENT RECORDED IN LIBER 1871 OF DEEDS, PAGE 159 AS SHOWN HEREON DOES AFFECT THE PREMISES HEREIN DESCRIBED.
4. EXCEPT THE RIGHTS OF THE UNITED STATES GOVERNMENT, THE STATE OF NEW YORK AND COUNTY OR ANY OF THEIR DEPARTMENTS OR AGENCIES TO REGULATE AND CONTROL THE USE OF PIERS, BULKHEADS, LAND UNDER WATER AND LAND ADJACENT THERETO, AND TO TAKE LAND NOW OR FORMERLY UNDER WATER WITHOUT COMPENSATION.
5. EXCEPT RIPARIAN RIGHTS AND EASEMENTS OF OTHERS OVER FREEPORT CREEK.
6. SUBJECT TO RIGHTS OF OTHERS FOR UNOBSTRUCTED FLOW OF FREEPORT CREEK AND ALSO SUBJECT TO THE EASEMENT AND RIPARIAN RIGHTS OF OTHERS OVER THE PORTION OF THE INSURED PREMISES THAT LIE BENEATH SAID WATERS.
7. ENCROACHMENT AGREEMENT RECORDED IN LIBER 1850 OF DEEDS, PAGE 237, DOCUMENTATION NOT PROVIDED IN TITLE SEARCH FROM CLIENT.

**CERTIFIED TO:**

- 1) THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- 2) BWM HIGH & DRY INC.
- 3) FRONTIER ABSTRACT & RESEARCH SERVICES, INC AS AN AGENT OF STEWART TITLE INSURANCE COMPANY

UNAUTHORIZED ALTERATIONS OR ADDITION TO THE SURVEY MAP IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S SEAL AND SIGNED WITH RED INK SHALL NOT BE CONSIDERED VALID COPIES.

CERTIFICATION INDICATED OR IMPLIED HEREON SHALL ONLY RUN TO THE PARTY FOR WHOM THIS SURVEY WAS PREPARED FOR AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATIONS SHOWN HEREON ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES OR SUBSEQUENT OWNERS NOT LISTED HEREON.



**NON-ALTA SURVEY OF BWM HIGH & DRY INC.**  
**NYSDEC SITE: METAL ETCHING SITE No. 130110**  
**SITUATE AT INTERSECTION OF SOUTH MAIN STREET AND RAY STREET**  
**TOWN OF FREEPORT**  
**COUNTY OF NASSAU STATE OF NEW YORK**

PREPARED FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
 SCALE: 1" = 20' 6"  
 MAY 15, 2013

**Engineering and Land Surveying, P.C.**  
 1533 Crescent Road - Cinton Park, NY 12065

JOSEPH G. MALINOWSKI 050314  
 JOB NO. 6327  
 SHEET 2 OF 1



**DESCRIPTION OF ENVIRONMENTAL EASEMENT**

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE FROM SAID POINT OF BEGINNING EASTERLY, ALONG THE SOUTHERLY SIDE OF RAY STREET, N 77°45' E, 306.01' TO A POINT ON THE EAST SIDE OF SOUTH END PLACE;

THENCE NORTHERLY ALONG SAID EAST SIDE OF SOUTH END PLACE N 52°40' E, 74.86' TO A POINT;

THENCE S 84°57'20" E, 102' +/- TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING EIGHTEEN (18) COURSES:

- 1) S 13°22'30" W, 29.69' TO A POINT;
- 2) S 59°50'30" E, 71.88' TO A POINT;
- 3) S 27°46'50" E, 71.86' TO A POINT;
- 4) S 41°03'10" W, 29.19' TO A POINT;
- 5) N 80°06' W, 35.49' TO A POINT;
- 6) S 27°30'08" E, 3.52' TO A POINT;
- 7) S 46°43'34" E, 19.95' TO A POINT;
- 8) S 54°48'18" E, 13.53' TO A POINT;
- 9) S 13°15'20" E, 12.03' TO A POINT;
- 10) S 06°14'04" W, 20.87' TO A POINT;
- 11) S 31°12'03" W, 13.01' TO A POINT;
- 12) S 35°49'59" W, 17.03' TO A POINT;
- 13) S 47°18'43" W, 23.33' TO A POINT;
- 14) S 62°36'32" W, 23.33' TO A POINT;
- 15) S 71°43'13" W, 27.02' TO A POINT;
- 16) S 70°16'31" W, 40.11' TO A POINT;
- 17) S 86°19'00" E, 9.70' TO A POINT;
- 18) S 61°16'43" W, 95.3' TO A POINT ON THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE NORTH AND LANDS NOW OR FORMERLY OF FREEPORT MOTOR INN & BOAT RENTAL TO THE SOUTH; THENCE ALONG SAID DIVISION LINE N 77°43'08" W, 289.63' TO A POINT AT THE EASTERLY SIDE OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET, N 4°35'45" E, 128.05' TO THE POINT AND PLACE OF BEGINNING CONTAINING 2.25 ACRES OF LAND, MORE OR LESS.

**GENERAL NOTES:**

- 1) MAP PREPARED FROM A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING P.C., DATED JUNE 2008 AND UPDATED OCTOBER 2012.
- 2) PARCELS SURVEYED IS FURTHER REFERENCED TO THE TOWN OF FREEPORT SECTION 62, BLOCK 45, LOTS 144, 145, 148, 155, AND 157.
- 3) UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE ONLY, AND SUBJECT TO VERIFICATION BY EXCAVATION.
- 4) SUBJECT TO ANY AND ALL RIGHTS, EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- 5) VERTICAL DATUM BASED UPON NAVD 88 TRANSFERRED TO THE SITE BY CONVENTIONAL METHODS.
- 6) BUILDING HEIGHTS SHOWN ARE MEASURED FROM GRADE.
- 7) SITE IS LOCATED 480'± SOUTH OF THE INTERSECTION OF ATLANTIC AVE. AT THE INTERSECTION OF SOUTH MAIN ST. AND RAY ST. EAST.
- 8) NORTH REFERENCE SHOWN HEREON PER DEED REFERENCE ONE, TWO, AND FOUR.

**CERTIFIED TO:**

- 1) THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
- 2) FREEPORT CREEK ASSOCIATES.
- 3) BWM HIGH & DRY, INC.
- 4) APACHE REALTY CORP.
- 5) FRONTIER ABSTRACT & RESEARCH SERVICES, INC. AS AN AGENT OF CHICAGO TITLE INSURANCE COMPANY
- 6) FRONTIER ABSTRACT & RESEARCH SERVICES, INC. AS AN AGENT OF STEWART TITLE INSURANCE COMPANY

UNAUTHORIZED ALTERATIONS OR ADDITION TO THE SURVEY MAP IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S SEAL AND SIGNED WITH RED INK SHALL NOT BE CONSIDERED VALID COPIES.

CERTIFICATION INDICATED OR IMPLIED HEREON SHALL ONLY RUN TO THE PARTY FOR WHOM THIS SURVEY WAS PREPARED FOR AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATIONS SHOWN HEREON ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES OR SUBSEQUENT OWNERS NOT LISTED HEREON.

**ENGINEERING / INSTITUTIONAL CONTROLS**

- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the purposes of construction or utilities work, must be replaced or repaired according to the SMP. Site soil excavated or removed from the property must be managed, characterized, and properly disposed of in accordance with the NYSDEC regulations and directives. Guidelines for management of subsurface soils/fill and long-term maintenance of the natural site cover is provided in the SMP.
- Groundwater monitoring and other environmental or public health monitoring must be performed as defined in the SMP.
- The use of Groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site; and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- Land Use - The use and development of the site is limited to Commercial and Industrial uses only as defined in 6 NYCRR Part 375-1.8(g)(2) (iii) & (iv).

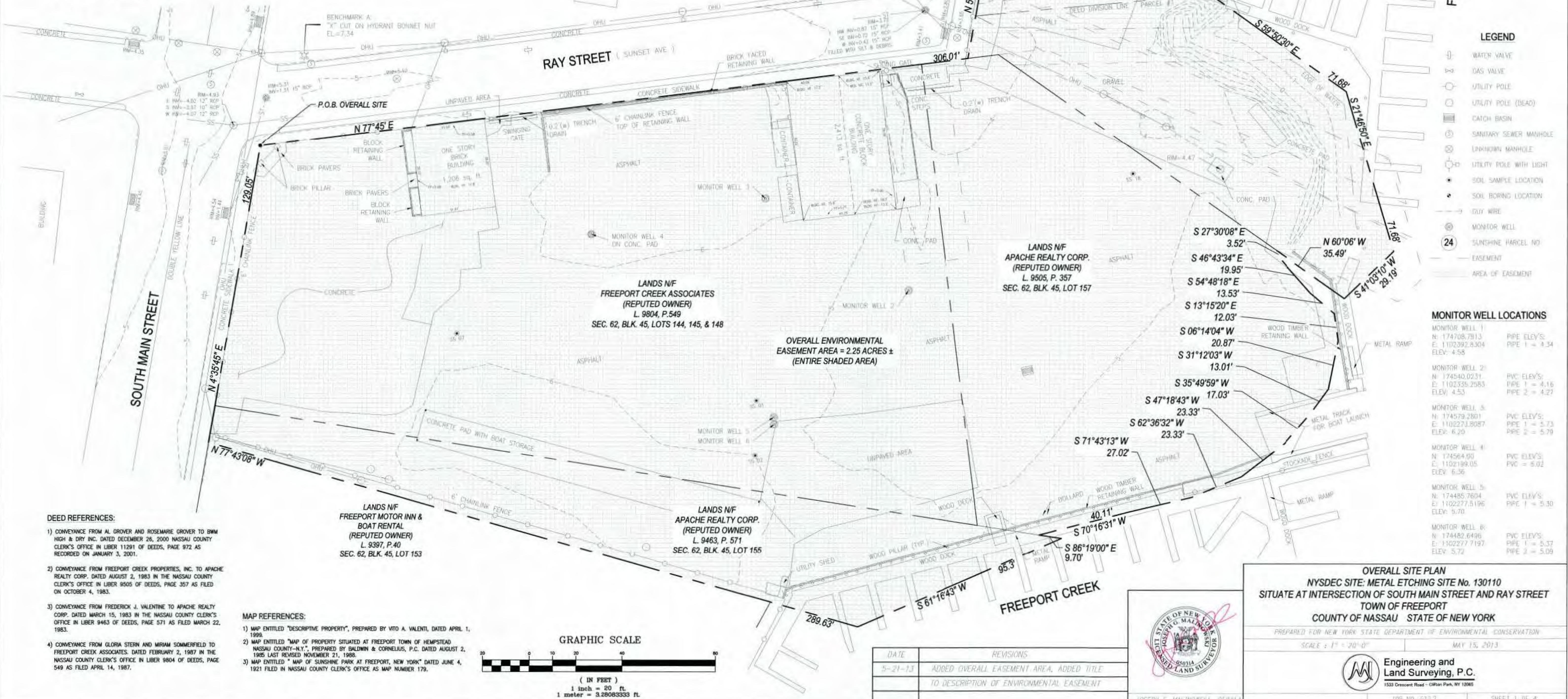
THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail in the Site Management Plan ("SMP"), a copy of the SMP must be obtained by any party with an interest in the property. The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.

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 New York Environmental Conservation Law.

**ENVIRONMENTAL EASEMENT AREA ACCESS**  
THE DEC OR THEIR AGENT MAY ACCESS THE ENVIRONMENTAL EASEMENT AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS OR BUILDING INGRESS/EGRESS ACCESS POINT



SITE LOCATION MAP  
SCALE: N.T.S.

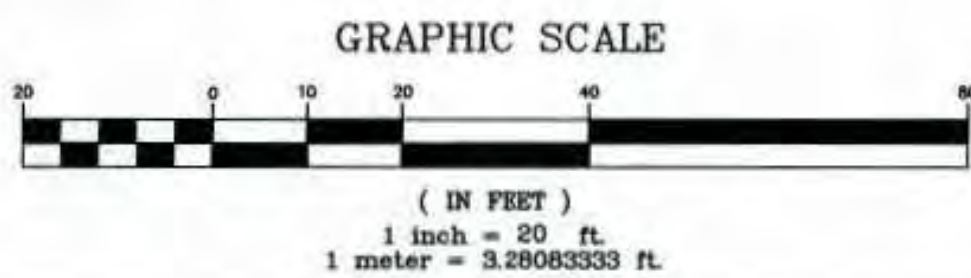


**DEED REFERENCES:**

- 1) CONVEYANCE FROM AL GROVER AND ROSEMARIE GROVER TO BWM HIGH & DRY INC. DATED DECEMBER 26, 2000 NASSAU COUNTY CLERK'S OFFICE IN LIBER 11291 OF DEEDS, PAGE 972 AS RECORDED ON JANUARY 3, 2001.
- 2) CONVEYANCE FROM FREEPORT CREEK PROPERTIES, INC. TO APACHE REALTY CORP. DATED AUGUST 2, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9505 OF DEEDS, PAGE 357 AS FILED ON OCTOBER 4, 1983.
- 3) CONVEYANCE FROM FREDERICK J. VALENTINE TO APACHE REALTY CORP. DATED MARCH 15, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9463 OF DEEDS, PAGE 571 AS FILED MARCH 22, 1983.
- 4) COVENANTS FROM GLORIA STERN AND MIRIAM SOMMERFELD TO FREEPORT CREEK ASSOCIATES. DATED FEBRUARY 2, 1987 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9804 OF DEEDS, PAGE 549 AS FILED APRIL 14, 1987.

**MAP REFERENCES:**

- 1) MAP ENTITLED "DESCRIPTIVE PROPERTY", PREPARED BY VITO A. VALENTI, DATED APRIL 1, 1998.
- 2) MAP ENTITLED "MAP OF PROPERTY SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY-N.Y.", PREPARED BY BALDWIN & CORNELIUS, P.C. DATED AUGUST 2, 1985 LAST REVISED NOVEMBER 21, 1988.
- 3) MAP ENTITLED "MAP OF SUNSHINE PARK AT FREEPORT, NEW YORK" DATED JUNE 4, 1921 FILED IN NASSAU COUNTY CLERK'S OFFICE AS MAP NUMBER 179.



DATE	REVISIONS
5-21-13	ADDED OVERALL EASEMENT AREA, ADDED TITLE TO DESCRIPTION OF ENVIRONMENTAL EASEMENT



JOSEPH G. MALINOWSKI 05031A

**OVERALL SITE PLAN**  
NYSDEC SITE: METAL ETCHING SITE No. 130110  
SITUATE AT INTERSECTION OF SOUTH MAIN STREET AND RAY STREET  
TOWN OF FREEPORT  
COUNTY OF NASSAU STATE OF NEW YORK

PREPARED FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
SCALE: 1" = 20'-0"  
MAY 15, 2013

Engineering and Land Surveying, P.C.  
1533 Crescent Road - Oyster Bay, NY 11091

JOB NO. 632.2 SHEET 1 OF 4



Metal Etching  
Owner: Freeport Creek Associates  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 144, 145 and 158

## ENVIRONMENTAL NOTICE

**THIS ENVIRONMENTAL NOTICE** is made the 5<sup>th</sup> day of March 2017, by the New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233.

**WHEREAS**, a parcel of real property located at the address of 435 Main Street; 325 Main Street and Ray Street in the Town of Hempstead, County of Nassau and State of New York, known and designated on the tax map of the County Clerk of Nassau as tax map parcel numbers: Section 62. Block 45 Lot(s) 144, 145 and 158, being the same as that property conveyed to Grantor by deed dated February 2, 1987 and recorded in the Nassau County Clerk's Office in Liber 9804 at Page 549, comprising approximately 1.08 +/- acres, and hereinafter more fully described in the Property Description and attached hereto as Appendix "A," attached to this notice and made a part hereof, and hereinafter referred to as "the Property" is the subject of a remedial program performed by the Department; and

**WHEREAS**, the Department approved a cleanup to address contamination disposed at the Property and such cleanup was conditioned upon certain limitations.

**NOW, THEREFORE**, the Department provides notice that:

**FIRST**, the part of lands subject to this Environmental Notice is as shown on a survey map dated April 12, 2013 prepared by M J Engineering and Land Surveying, P.C., attached to this Notice as Appendix "B" and made a part hereof.

**SECOND**, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. A violation of this provision is a violation of 6 NYCRR 375-1.1 1(b)(2).

**THIRD**, no person shall disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the Remedy, including but not limited to those engineering controls described in the SMP and listed below, unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

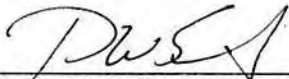
**FOURTH**, the remedy was designed to be protective for Commercial or Industrial uses. Therefore, any use for purposes other than Commercial or Industrial uses without the express written waiver of such prohibition by the Relevant Agency may result in a significantly increased threat of harm or damage at any site.

Metal Etching  
Owner: Freeport Creek Associates  
Site No. 130110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 144,145 and 158

**FIFTH**, the no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency. Use of the groundwater without appropriate treatment may result in a significantly increased threat of harm or damage at any site.

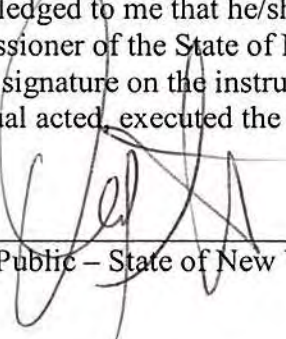
**SIXTH**, it is a violation of 6 NYCRR 375-1.11(b) to use the Property in a manner inconsistent with this environmental notice.

**IN WITNESS WHEREOF**, the undersigned has executed this instrument the day written below.

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

STATE OF NEW YORK ) ss:  
COUNTY OF ALBANY )

On the 5<sup>th</sup> day of March, in the year 2014, before me, Robert W. Schick, the undersigned, personally appeared, and is 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

**David J. Onofusano**  
Notary Public, State of New York  
No. 01CH5032146  
Qualified in Schenectady County  
Commission Expires August 22, 2014



Metal Etching  
Owner: Freeport Creek Associates  
Site No. 130,110  
435 South Main Street  
Nassau County, NY  
Tax Map ID: Section 62, Block 45, Lots 144, 145 and 158

## Appendix A

### METES AND BOUNDS DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE FROM SAID POINT OF BEGINNING EASTERLY, ALONG THE SOUTHERLY SIDE OF RAY STREET, N 77°45' E, 285.71' TO A POINT AT THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE WEST AND LANDS NOW OR FORMERLY OF APACHE REALTY CORP TO THE EAST;

THENCE ALONG SAID DIVISION LINE S 12°15'00" E, 199.17' TO A POINT;

THENCE CONTINUING ALONG SAID DIVISION LINE N 86°19'00" W, 331.25' TO A POINT ON THE EASTERLY BOUNDS OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET, N 04°35'45" E, 113.10' TO THE POINT AND PLACE OF BEGINNING;

CONTAINING 1.08 ACRES OF LAND MORE OR LESS.

BEING AND INTENDING TO DESCRIBE THE SAME PARCEL CONVEYIED TO FREEPORT CREEK ASSOCIATES FROM GLORIA STERN AND MIRIAM SOMMERFIELD BY DEED DATED FEBRUARY 2, 1987 AND RECORDED IN LIBER 9804 AT PAGE 549 AT THE NASSAU COUNTY CLERK'S OFFICE.

# **APPENDIX B**

## **SURVEY**



**GENERAL NOTES:**

- 1) MAP PREPARED FROM A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING P.C., DATED JUNE 2008 AND UPDATED OCTOBER 2012.
- 2) PARCELS SURVEYED IS FURTHER REFERENCED TO THE TOWN OF FREEPORT SECTION 62, BLOCK 45, LOTS 144, 145, AND 148.
- 3) UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE ONLY, AND SUBJECT TO VERIFICATION BY EXCAVATION.
- 4) SUBJECT TO ANY AND ALL RIGHTS, EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- 5) VERTICAL DATUM BASED UPON NAVD 88 TRANSFERRED TO THE SITE BY CONVENTIONAL METHODS.
- 6) BUILDING HEIGHTS SHOWN ARE MEASURED FROM GRADE.
- 7) SITE IS LOCATED 480'± SOUTH OF THE INTERSECTION OF ATLANTIC AVE AT THE INTERSECTION OF MAIN ST. AND RAY ST. EAST.
- 8) NORTH REFERENCE SHOWN HEREON PER DEED REFERENCE ONE.
- 9) THIS SURVEY HAS BEEN REVISED WITH THE BENEFIT OF TITLE REPORT PREPARED BY FRONTIER ABSTRACT & RESEARCH SERVICES AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 5031802 DATED SEPTEMBER 28, 2012.

**DEED REFERENCES:**

- 1) CONVEYANCE FROM GLORIA STERN AND MIRIAM SOMMERFIELD TO FREEPORT CREEK ASSOCIATES, DATED FEBRUARY 2, 1987 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9804 OF DEEDS, PAGE 549 AS FILED APRIL 14, 1987.

**MAP REFERENCES:**

- 1) MAP ENTITLED "DESCRIPTIVE PROPERTY", PREPARED BY VITO A. VALENTI, DATED APRIL 1, 1999.
- 2) MAP ENTITLED "MAP OF PROPERTY SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY-N.Y.", PREPARED BY BALDWIN & CORNELIUS, P.C. DATED AUGUST 2, 1985 LAST REVISED NOVEMBER 21, 1988.
- 3) MAP ENTITLED "MAP OF SUNSHINE PARK AT FREEPORT, NEW YORK" DATED JUNE 4, 1921 FILED IN NASSAU COUNTY CLERK'S OFFICE AS MAP NUMBER 179.

**DESCRIPTION OF ENVIRONMENTAL EASEMENT**

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE FROM SAID POINT OF BEGINNING EASTERLY, ALONG THE SOUTHERLY SIDE OF RAY STREET, N 77°45' E, 285.71' TO A POINT AT THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE WEST AND LANDS NOW OR FORMERLY OF APACHE REALTY CORP. TO THE EAST;

THENCE ALONG SAID DIVISION LINE S 12°15'00" E, 199.17' TO A POINT;

THENCE CONTINUING ALONG SAID DIVISION LINE N 86°19'00" W, 331.25' TO A POINT ON THE EASTERLY BOUNDS OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET, N 04°35'45" E, 113.10' TO THE POINT AND PLACE OF BEGINNING;

CONTAINING 1.08 ACRES OF LAND MORE OR LESS.

BEING AND INTENDING TO DESCRIBE THE SAME PARCEL CONVEYED TO FREEPORT CREEK ASSOCIATES FROM GLORIA STERN AND MIRIAM SOMMERFIELD BY DEED DATED FEBRUARY 2, 1987 AND RECORDED IN LIBER 9804 AT PAGE 549 AT THE NASSAU COUNTY CLERK'S OFFICE.

**ENGINEERING / INSTITUTIONAL CONTROLS**

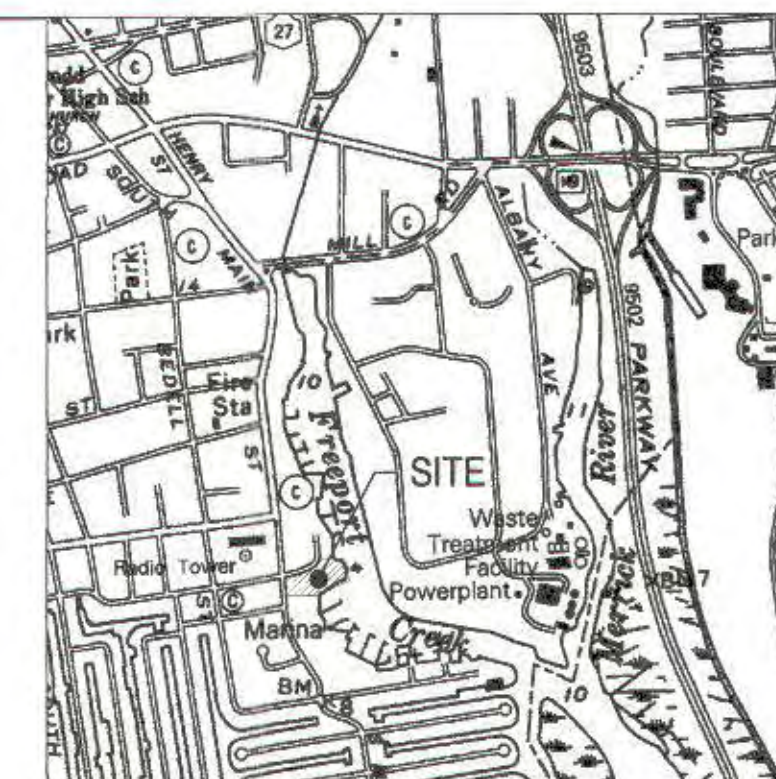
- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the purposes of construction or utilities work, must be replaced or repaired according to the SMP. Site soil excavated or removed from the property must be managed, characterized, and properly disposed of in accordance with the NYSDEC regulations and directives. Guidelines for management of subsurface soils/fill and long-term maintenance of the natural site cover is provided in the SMP.
- Groundwater monitoring and other environmental or public health monitoring must be performed as defined in the SMP.
- The use of Groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site, and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- Land Use - The use and development of the site is limited to Commercial and Industrial uses only as defined in 6 NYCRR Part 375-1.8(g)(2) (iii) & (iv).

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail in the Site Management Plan ("SMP"), a copy of the SMP may be obtained by any party with an interest in the property. The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.

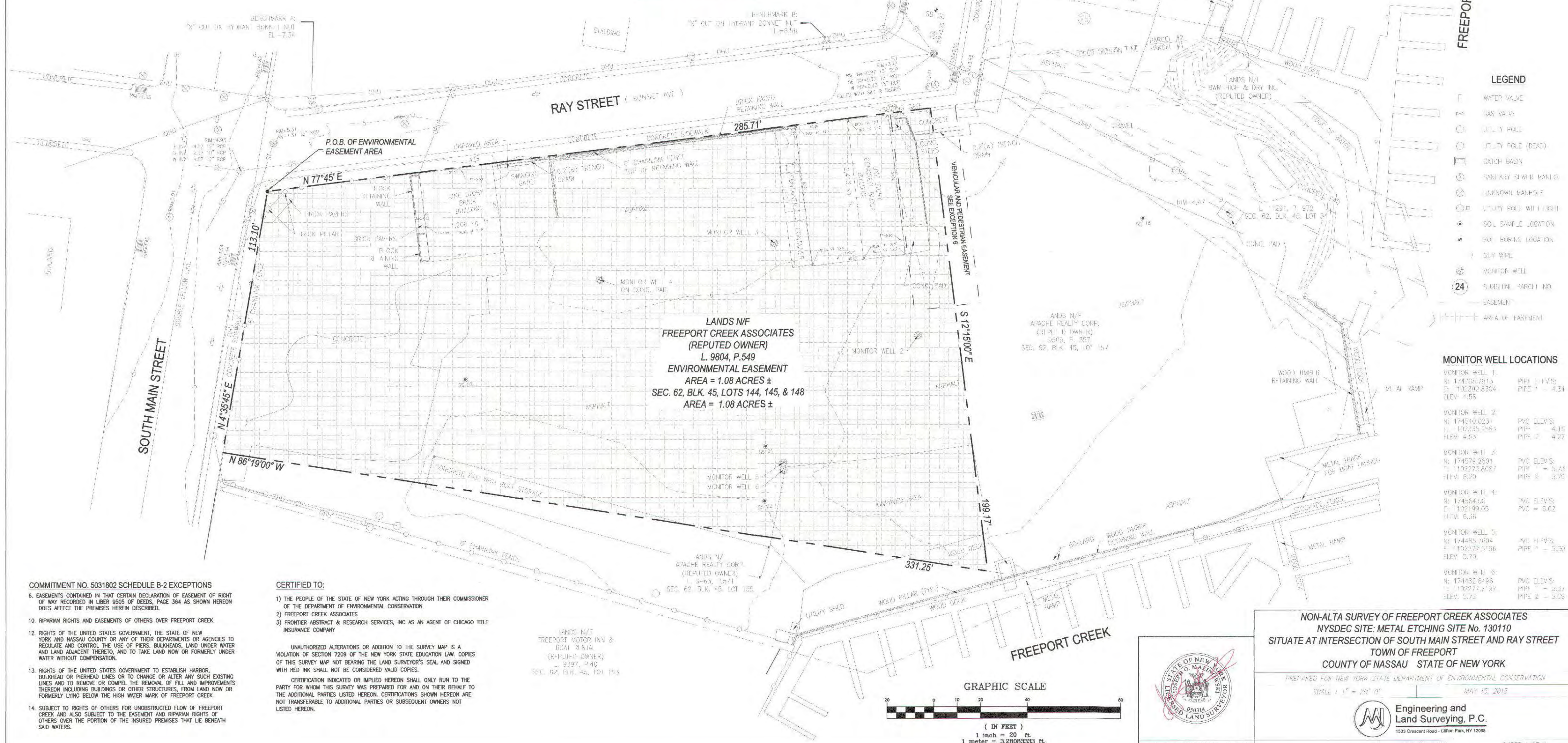
This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

**ENVIRONMENTAL EASEMENT AREA ACCESS**

THE DEC OR THEIR AGENT MAY ACCESS THE ENVIRONMENTAL EASEMENT AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS OR BUILDING INGRESS/EGRESS ACCESS POINT



**SITE LOCATION MAP**  
SCALE: N.T.S.



**COMMITMENT NO. 5031802 SCHEDULE B-2 EXCEPTIONS**

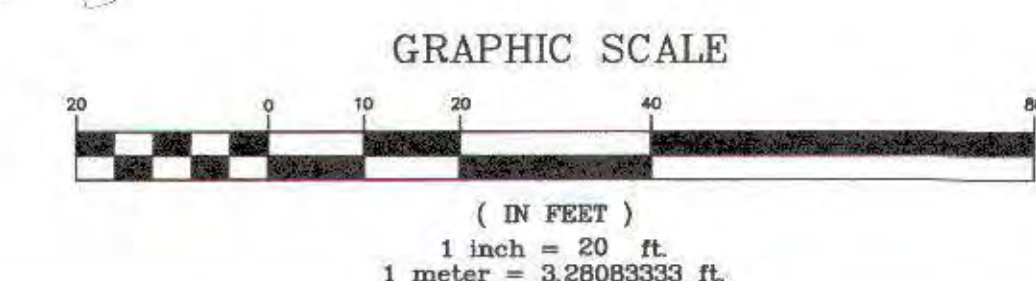
6. EASEMENTS CONTAINED IN THAT CERTAIN DECLARATION OF EASEMENT OF RIGHT OF WAY RECORDED IN LIBER 9505 OF DEEDS, PAGE 364 AS SHOWN HEREON DOES AFFECT THE PREMISES HEREIN DESCRIBED.
10. RIPARIAN RIGHTS AND EASEMENTS OF OTHERS OVER FREEPORT CREEK.
12. RIGHTS OF THE UNITED STATES GOVERNMENT, THE STATE OF NEW YORK AND NASSAU COUNTY OR ANY OF THEIR DEPARTMENTS OR AGENCIES TO REGULATE AND CONTROL THE USE OF PIERS, BULKHEADS, LAND UNDER WATER AND LAND ADJACENT THERETO, AND TO TAKE LAND NOW OR FORMERLY UNDER WATER WITHOUT COMPENSATION.
13. RIGHTS OF THE UNITED STATES GOVERNMENT TO ESTABLISH HARBOR, BULKHEAD OR PIERHEAD LINES OR TO CHANGE OR ALTER ANY SUCH EXISTING LINES AND TO REMOVE OR COMPEL THE REMOVAL OF FILL AND IMPROVEMENTS THEREON INCLUDING BUILDINGS OR OTHER STRUCTURES, FROM LAND NOW OR FORMERLY LYING BELOW THE HIGH WATER MARK OF FREEPORT CREEK.
14. SUBJECT TO RIGHTS OF OTHERS FOR UNOBSTRUCTED FLOW OF FREEPORT CREEK AND ALSO SUBJECT TO THE EASEMENT AND RIPARIAN RIGHTS OF OTHERS OVER THE PORTION OF THE INSURED PREMISES THAT LIE BENEATH SAID WATERS.

**CERTIFIED TO:**

- 1) THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- 2) FREEPORT CREEK ASSOCIATES
- 3) FRONTIER ABSTRACT & RESEARCH SERVICES, INC AS AN AGENT OF CHICAGO TITLE INSURANCE COMPANY

UNAUTHORIZED ALTERATIONS OR ADDITION TO THE SURVEY MAP IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S SEAL AND SIGNED WITH RED INK SHALL NOT BE CONSIDERED VALID COPIES.

CERTIFICATION INDICATED OR IMPLIED HEREON SHALL ONLY RUN TO THE PARTY FOR WHOM THIS SURVEY WAS PREPARED FOR AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATIONS SHOWN HEREON ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES OR SUBSEQUENT OWNERS NOT LISTED HEREON.



**NON-ALTA SURVEY OF FREEPORT CREEK ASSOCIATES**  
NYSDEC SITE: METAL ETCHING SITE No. 130110  
SITUATE AT INTERSECTION OF SOUTH MAIN STREET AND RAY STREET  
TOWN OF FREEPORT  
COUNTY OF NASSAU STATE OF NEW YORK

PREPARED FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
SCALE: 1" = 20' 0"  
MAY 15, 2013





**DESCRIPTION OF ENVIRONMENTAL EASEMENT**

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE LYING AND BEING IN THE INCORPORATED VILLAGE OF FREEPORT, COUNTY OF NASSAU AND STATE OF NEW YORK MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF SOUTH MAIN STREET AND THE SOUTHERLY SIDE OF RAY STREET;

RUNNING THENCE FROM SAID POINT OF BEGINNING EASTERLY, ALONG THE SOUTHERLY SIDE OF RAY STREET, N 77°45' E, 306.01' TO A POINT ON THE EAST SIDE OF SOUTH END PLACE;

THENCE NORTHERLY ALONG SAID EAST SIDE OF SOUTH END PLACE N 52°40' E, 74.86' TO A POINT;

THENCE S 84°57'20" E, 102' +/- TO A POINT AT THE WESTERLY EDGE OF FREEPORT CREEK;

THENCE RUNNING ALONG FREEPORT CREEK THE FOLLOWING EIGHTEEN (18) COURSES:

- 1) S 13°22'30" W, 29.69' TO A POINT;
- 2) S 59°50'30" E, 71.88' TO A POINT;
- 3) S 27°46'50" E, 71.86' TO A POINT;
- 4) S 41°03'10" W, 29.19' TO A POINT;
- 5) N 80°06' W, 35.49' TO A POINT;
- 6) S 27°30'08" E, 3.52' TO A POINT;
- 7) S 46°43'34" E, 19.95' TO A POINT;
- 8) S 54°48'18" E, 13.53' TO A POINT;
- 9) S 13°15'20" E, 12.03' TO A POINT;
- 10) S 06°14'04" W, 20.87' TO A POINT;
- 11) S 31°12'03" W, 13.01' TO A POINT;
- 12) S 35°49'59" W, 17.03' TO A POINT;
- 13) S 47°18'43" W, 23.33' TO A POINT;
- 14) S 62°36'32" W, 23.33' TO A POINT;
- 15) S 71°43'13" W, 27.02' TO A POINT;
- 16) S 70°16'31" W, 40.11' TO A POINT;
- 17) S 86°19'00" E, 9.70' TO A POINT;
- 18) S 61°16'43" W, 95.3' TO A POINT ON THE DIVISION LINE BETWEEN THE HEREIN DESCRIBED PARCEL TO THE NORTH AND LANDS NOW OR FORMERLY OF FREEPORT MOTOR INN & BOAT RENTAL TO THE SOUTH; THENCE ALONG SAID DIVISION LINE N 77°43'08" W, 289.63' TO A POINT AT THE EASTERLY SIDE OF SOUTH MAIN STREET;

THENCE NORTHERLY ALONG THE EAST SIDE OF SOUTH MAIN STREET, N 4°35'45" E, 128.05' TO THE POINT AND PLACE OF BEGINNING CONTAINING 2.25 ACRES OF LAND, MORE OR LESS.

**GENERAL NOTES:**

- 1) MAP PREPARED FROM A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING P.C., DATED JUNE 2008 AND UPDATED OCTOBER 2012.
- 2) PARCELS SURVEYED IS FURTHER REFERENCED TO THE TOWN OF FREEPORT SECTION 62, BLOCK 45, LOTS 144, 145, 148, 155, AND 157.
- 3) UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE IN NATURE ONLY, AND SUBJECT TO VERIFICATION BY EXCAVATION.
- 4) SUBJECT TO ANY AND ALL RIGHTS, EASEMENTS, RESTRICTIONS, OR COVENANTS OF RECORD.
- 5) VERTICAL DATUM BASED UPON NAVD 88 TRANSFERRED TO THE SITE BY CONVENTIONAL METHODS.
- 6) BUILDING HEIGHTS SHOWN ARE MEASURED FROM GRADE.
- 7) SITE IS LOCATED 480± SOUTH OF THE INTERSECTION OF ATLANTIC AVE. AT THE INTERSECTION OF SOUTH MAIN ST. AND RAY ST. EAST.
- 8) NORTH REFERENCE SHOWN HEREON PER DEED REFERENCE ONE, TWO, AND FOUR.

**CERTIFIED TO:**

- 1) THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
- 2) FREEPORT CREEK ASSOCIATES.
- 3) BWM HIGH & DRY, INC.
- 4) APACHE REALTY CORP.
- 5) FRONTIER ABSTRACT & RESEARCH SERVICES, INC. AS AN AGENT OF CHICAGO TITLE INSURANCE COMPANY
- 6) FRONTIER ABSTRACT & RESEARCH SERVICES, INC. AS AN AGENT OF STEWART TITLE INSURANCE COMPANY

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**ENGINEERING / INSTITUTIONAL CONTROLS**

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- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
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- The use of Groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site; and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- Land Use - The use and development of the site is limited to Commercial and Industrial uses only as defined in 6 NYCRR Part 375-1.8(g)(2) (iii) & (iv).

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail 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 may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.

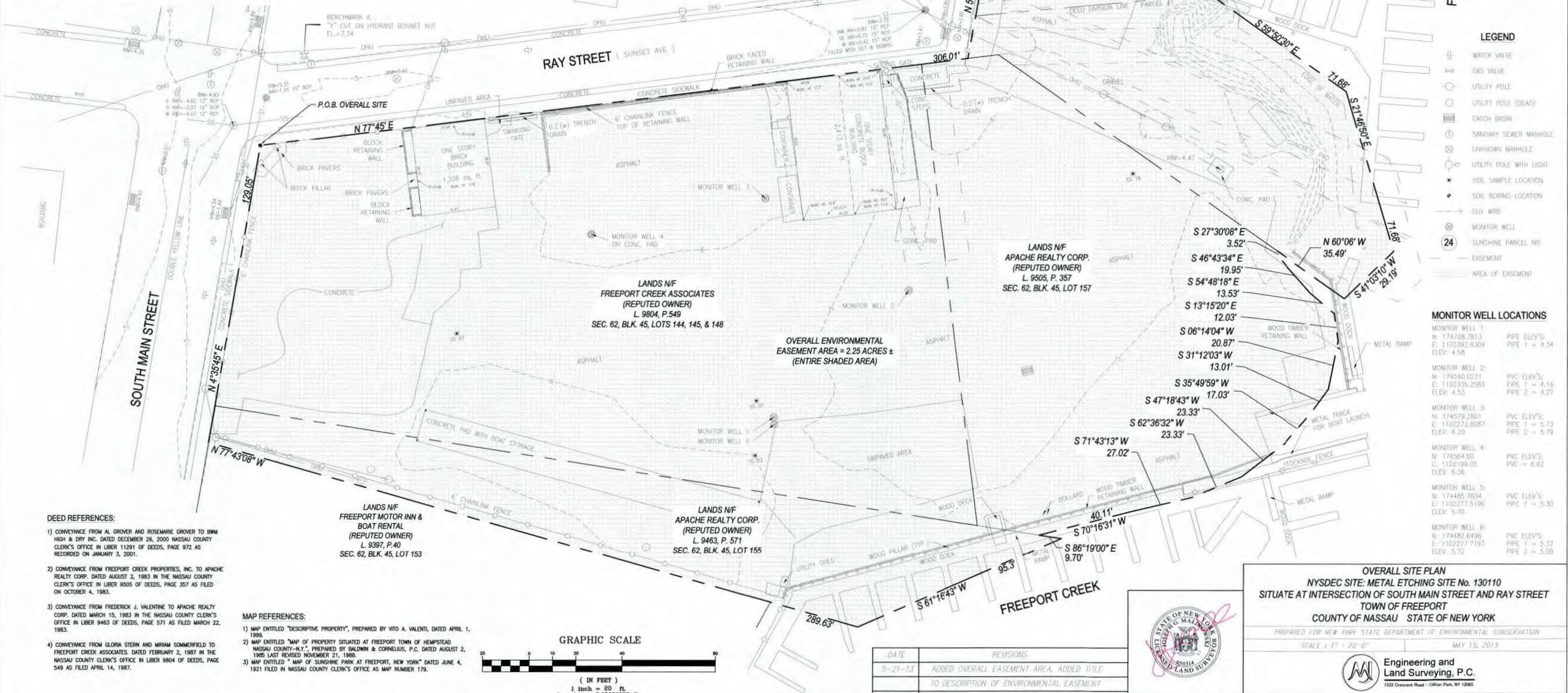
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**ENVIRONMENTAL EASEMENT AREA ACCESS**

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**SITE LOCATION MAP**  
SCALE: N.T.S.

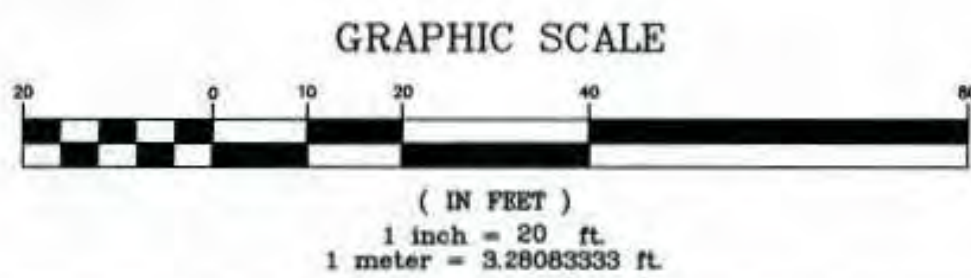


**DEED REFERENCES:**

- 1) CONVEYANCE FROM AL GROVER AND ROSEMARIE GROVER TO BWM HIGH & DRY INC. DATED DECEMBER 26, 2000 NASSAU COUNTY CLERK'S OFFICE IN LIBER 11291 OF DEEDS, PAGE 972 AS RECORDED ON JANUARY 3, 2001.
- 2) CONVEYANCE FROM FREEPORT CREEK PROPERTIES, INC. TO APACHE REALTY CORP. DATED AUGUST 2, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9505 OF DEEDS, PAGE 357 AS FILED ON OCTOBER 4, 1983.
- 3) CONVEYANCE FROM FREDERICK J. VALENTINE TO APACHE REALTY CORP. DATED MARCH 15, 1983 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9463 OF DEEDS, PAGE 571 AS FILED MARCH 22, 1983.
- 4) COVENANTS FROM GLORIA STERN AND MIRIAM SOMMERFELD TO FREEPORT CREEK ASSOCIATES. DATED FEBRUARY 2, 1987 IN THE NASSAU COUNTY CLERK'S OFFICE IN LIBER 9804 OF DEEDS, PAGE 549 AS FILED APRIL 14, 1987.

**MAP REFERENCES:**

- 1) MAP ENTITLED "DESCRIPTIVE PROPERTY", PREPARED BY VITO A. VALENTI, DATED APRIL 1, 1998.
- 2) MAP ENTITLED "MAP OF PROPERTY SITUATED AT FREEPORT TOWN OF HEMPSTEAD NASSAU COUNTY-N.Y.", PREPARED BY BALDWIN & CORNELIUS, P.C. DATED AUGUST 2, 1985 LAST REVISED NOVEMBER 21, 1988.
- 3) MAP ENTITLED "MAP OF SUNSHINE PARK AT FREEPORT, NEW YORK" DATED JUNE 4, 1921 FILED IN NASSAU COUNTY CLERK'S OFFICE AS MAP NUMBER 179.



DATE	REVISIONS
5-21-13	ADDED OVERALL EASEMENT AREA, ADDED TITLE TO DESCRIPTION OF ENVIRONMENTAL EASEMENT



**OVERALL SITE PLAN**  
**NYSDEC SITE: METAL ETCHING SITE No. 130110**  
 SITUATE AT INTERSECTION OF SOUTH MAIN STREET AND RAY STREET  
 TOWN OF FREEPORT  
 COUNTY OF NASSAU STATE OF NEW YORK

PREPARED FOR NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
 SCALE: 1" = 20'-0"  
 MAY 15, 2013

Engineering and Land Surveying, P.C.  
 1533 Crescent Road - Oyster Bay, NY 11776  
 JOE NO. 6322 SHEET 1 OF 4

- LEGEND**
- WATER VALVE
  - GAS VALVE
  - UTILITY POLE
  - UTILITY POLE (DEAD)
  - CATCH BASIN
  - SANITARY SEWER MANHOLE
  - UNKNOWN MANHOLE
  - UTILITY POLE WITH LIGHT
  - SOIL SAMPLE LOCATION
  - SOIL BORING LOCATION
  - GUY WIRE
  - MONITOR WELL
  - SUNSHINE PARCEL NO. 24
  - EASEMENT
  - AREA OF EASEMENT

**MONITOR WELL LOCATIONS**

MONITOR WELL #	N	E	ELEV.	PVC ELEV'S	PIPE 1	PIPE 2
MONITOR WELL 1	174708.7913	1102392.8304	4.58		4.34	
MONITOR WELL 2	174540.0231	1102335.2983	4.53		4.16	4.27
MONITOR WELL 3	174579.2801	1102271.8087	6.20		5.73	5.79
MONITOR WELL 4	174564.90	1102199.05	6.36		6.02	
MONITOR WELL 5	174485.7604	1102277.5195	5.70		5.30	
MONITOR WELL 6	174482.6496	1102277.7197	5.72		5.37	5.09



**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:

David Chiusano, Project Manager  
Site Remediation Engineer  
New York State Department of Conservation  
625 Broadway 12<sup>th</sup> Floor  
Albany, New York 12233-7017

Email: [djchiusa@gw.dec.state.ny.us](mailto:djchiusa@gw.dec.state.ny.us)

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 soil 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 B-1 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**

Prior to intrusive soil screening, on-site utilities shall be field located. Soil screening is to take place prior to any excavation or disposal of soil from within the site boundaries. Soil boring methods are recommended for soil screening at the site, due to asphalt/porous pavement cover; however, depending on the extent of the planned excavation, test pit methods may be used, following saw-cutting of asphalt. Soil samples shall be collected at a minimum of one per 500 cubic yards of planned soil excavation, and analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, and TAL Metals and mercury by EPA Method 6010/7470, or per the disposal facility's requirements, if applicable.

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.

## **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**

Asphalt, porous pavement, or concrete shall be saw-cut, removed and stockpiled prior to excavation of underlying soil. Excavated soil shall be stockpiled separate from asphalt or concrete debris prior to load out. Excavations left open overnight or longer shall be surrounded by temporary construction fencing. 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 property 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, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

If site conditions during excavation activities require that trucks drive over bare soil, a truck wash will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash 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.

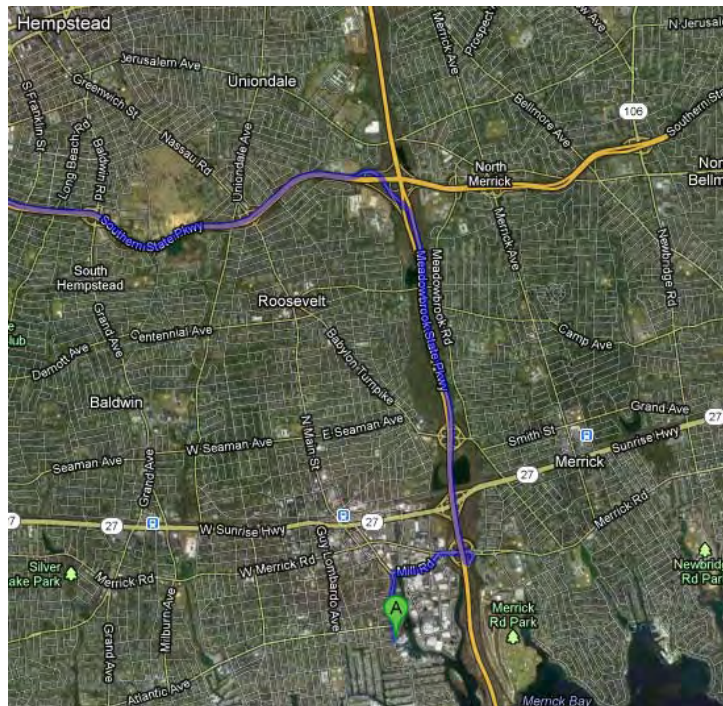
#### **B-5 MATERIALS TRANSPORT OFF-SITE**

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 prior to leaving the site if necessary. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Trucks leaving the site shall go north on S Main Street and turn right on Mill Road. Continue right onto East Avenue, and then straight onto Guy Lombardo Avenue. Turn onto Sunrise Highway in either direction, depending on destination.



Map courtesy of maps.google.com

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.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development. Trucks will be prohibited from stopping and idling in the neighborhood outside the project site. 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**

Analytical results from soil screening activities which are completed in accordance with section B-2 of this EWP will be used to determine if reuse is appropriate. Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in Table 4 of the SMP. The qualified environmental professional will ensure that procedures defined for materials reuse in the SMP are followed and that unacceptable material does not remain on-site. Soil slated for reuse is to be stockpiled distinctly separate from soil to be disposed off-site.

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 Contract Documents. The demarcation layer, consisting of non-woven geotextile 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. The source of backfill supply shall be approved by the NYSDEC. The facility shall be operating under a valid NYSDEC Mining Permit or other applicable regulatory authority for the duration of the site work.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site. Material shall not contain man-made fills, trash, refuse, backfills from previous construction, root or other organic matter, frozen material, or any other deleterious materials. Material shall not contain free liquids when delivered, or placed and compacted.

All materials shall be sampled for Target Compound List (TCL) VOCs by USEPA Method 8260, TCL SVOCs by USEPA Method 8270, polychlorinated biphenyls (PCBs) by USEPA Method 8082, and TAL Metals by USEPA Method 6010/7000 series. All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.8(d) included as Table B-1. 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 1 of the SMP. 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.

All UST removal work shall be performed in accordance with Section 5.5 of the NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation (May 2010). All UST removal work shall also comply with applicable local, county, state, and federal regulations. Ten days' notice must be provided to the NYSDEC DER prior to the closure of a regulated UST.

The contractor shall monitor the site with an explosimeter and an organic vapor detector to indicate the presence and concentration of flammable vapors and gas. The atmosphere in the bottom, middle, and top of the excavation shall be monitored with the explosimeter regularly until the tank is removed from the site. If unsafe working conditions exist at any point during removal, work shall be suspended immediately until it is determined that conditions are acceptable for resuming work.

During excavation, extreme caution shall be exercised in order to maintain the integrity of the UST. The contractor shall provide shoring and bracing where necessary to support existing structures. Excavated material shall be placed in a separate stockpile, sampled, and submitted for acceptance by an approved disposal facility.

Removal of each tank shall consist of opening the tank, cleaning the interior, removal of tank from the site, and disposal. This includes removal and disposal of all



service lines associated with each UST back to their source. Disposal shall be in strict accordance with NYSDEC and applicable local, county, state, and federal regulations. The contractor shall remove all liquid and sludge from the tank using explosion proof pumps. All equipment must be bonded to the tank and the tank must be grounded to a separate ground when purging the tank with compressed air or inert gas under pressure. The contractor shall avoid leakage from the tanks onto the surrounding soil by properly pumping the contents of the tanks into permitted transport vehicles. Transport vehicles for tank contents shall not remain on-site for more than 24 hours. The removed contents shall be disposed of according to appropriate federal, state, and local laws. If leakage or spillage occurs, the contractor shall immediately notify the NYSDEC Spill Case Hotline, and the Nassau County health department within 15 minutes.

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**

Community air monitoring will be implemented to monitor for VOC and particulate levels at the perimeter of the work area. Total VOCs will be monitored continuously at the downwind perimeter of the work area daily using approved instrumentation. If total VOC levels exceed 5 parts per million (ppm) above background at the work area perimeter, work activities will be halted and monitoring continued. All

readings will be recorded and available to the NYSDEC and New York State Department of Health (NYSDOH) personnel to review.

Because the site is in a densely populated area, with active commercial buildings adjacent to the site, a fixed monitoring station shall be located at the site perimeter, regardless of wind direction.

Exceedances of action levels listed in the Community Air Monitoring Plan 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 as necessary will include odor masking agents. 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 property 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 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.

## **APPENDIX C**

# **MONITORING WELL CONSTRUCTION DETAILS**



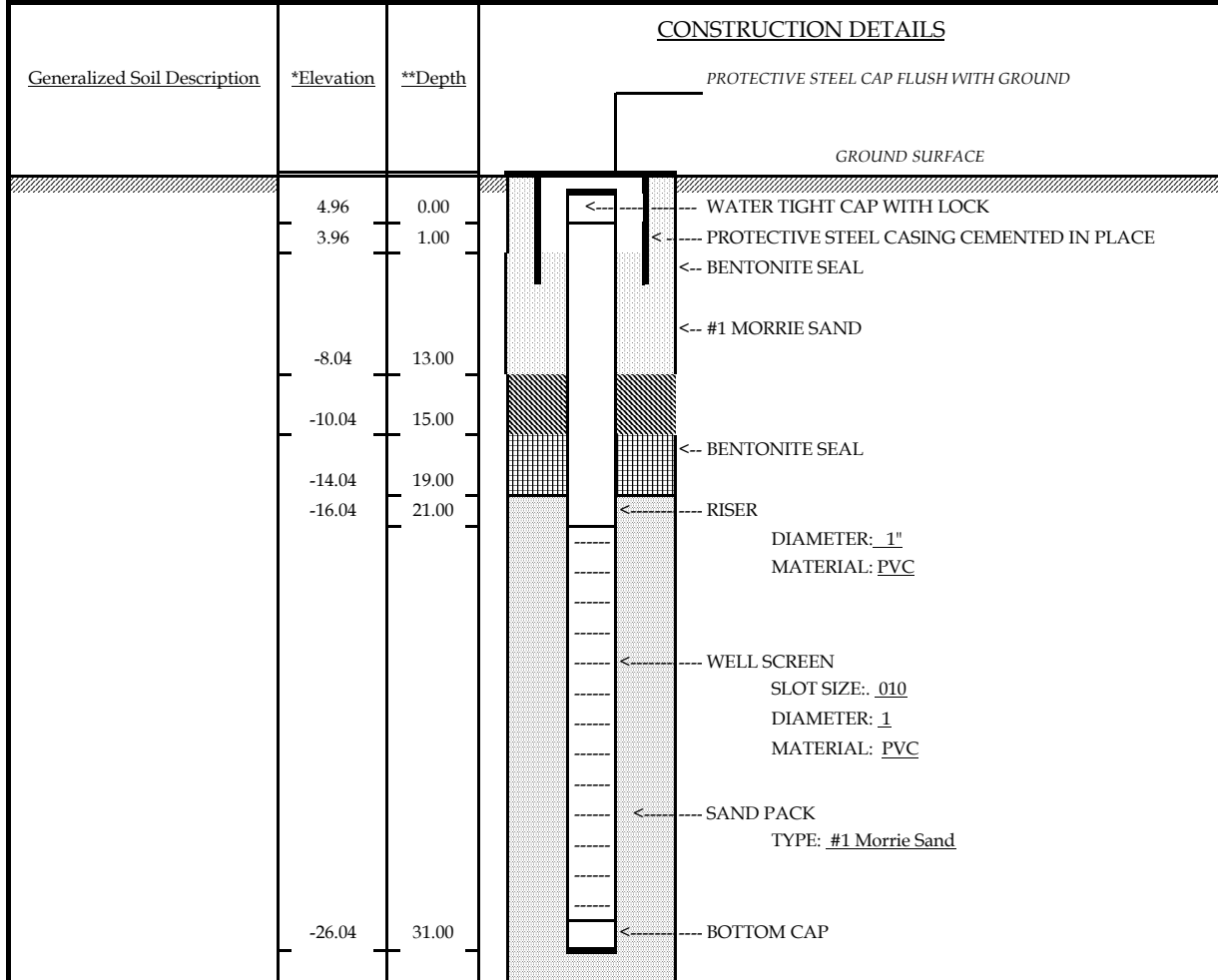
# ERM-Northeast

WELL :     MW-01    

520 Broadhallow Road, Melville, NY 11747

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Metal Etching</b>	Project No. <b>0011475.2</b>	Water Level(s) <i>(ft below top of PVC casing)</i>		Site Elevation Datum (feet) <b>5</b>
Drilling Company <b>Delta Well And Pump</b>	Foreman	Date	Time	Level (feet) <b>5</b>
Surveyor <b>Donald G. Dekenipp</b>				Ground Elevation (feet) <b>5</b>
Date and Time of Completion <b>7/14/2004</b>	Geologist <b>Mike Mattern</b>	<b>7/16/2004</b>	<b>7:00</b>	Top of Protective Steel Cap Elevation (feet) <b>4.96</b>
				Top of Riser Pipe Elevation (feet) <b>4.96</b>



REMARKS     This well is one in a cluster of two installed in the same bore hole.    

\_\_\_\_\_

\_\_\_\_\_

\* Elevation (feet) above mean sea level unless noted

\*\* Depth in feet below ground surface

# ERM-Northeast

WELL : MW-04

520 Broadhallow Road, Melville, NY 11747

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Metal Etching</b>		Project No. <b>0011475.2</b>	Water Level(s) (ft below top of PVC casing)		Site Elevation Datum (feet)
Drilling Company <b>Delta Well And Pump</b>		Foreman	Date	Time	Level (feet)
Date and Time of Completion <b>9/13/04 \ 13:54</b>		Geologist <b>Mike Mendes</b>	10/7/2004	7:53	5.49
Surveoyor <b>Donald G. Dekenipp</b>					Ground Elevation (feet) <b>7.41</b>
					Top of Protective Steel Cap Elevation (feet) <b>7.07</b>
					Top of Riser Pipe Elevation (feet) <b>7.07</b>
Generalized Soil Description	*Elevation	**Depth	<u>CONSTRUCTION DETAILS</u>		
	7.07	0.00			
	6.07	1.00			
	5.07	2.00			
	4.07	3.00			
	-5.93	13.00			
BOTTOM OF BOREHOLE					
REMARKS _____					
_____					
_____					

\* Elevation (feet) above mean sea level unless noted

\*\* Depth in feet below ground surface



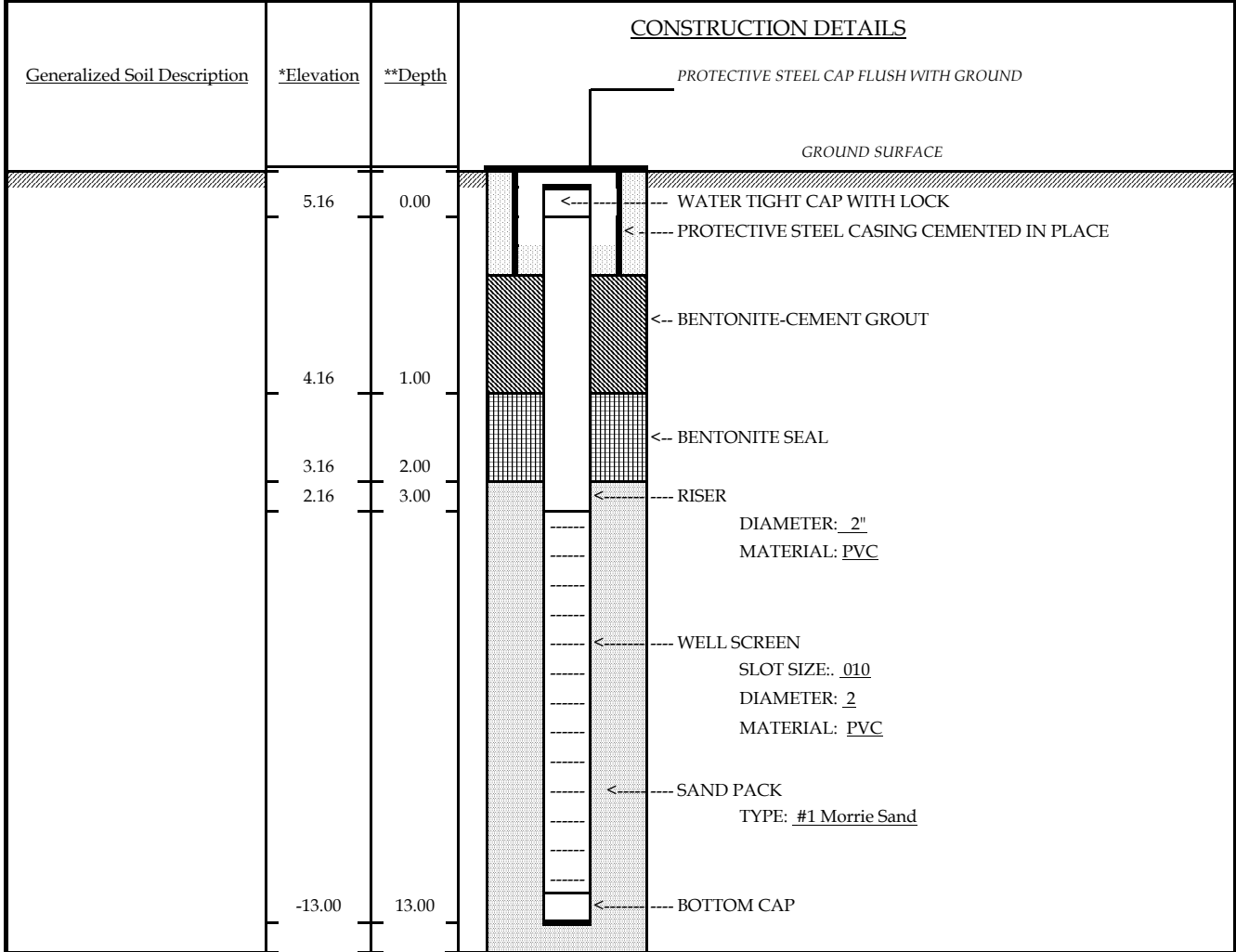
# ERM-Northeast

WELL :            MW-05

520 Broadhallow Road, Melville, NY 11747

## MONITORING WELL CONSTRUCTION LOG

<i>Project Name &amp; Location</i> <b>Metal Etching</b>		<i>Project No.</i> <b>0011475.2</b>		<i>Water Level(s)</i> (ft below top of PVC casing)		<i>Site Elevation Datum (feet)</i>	
<i>Drilling Company</i> <b>Delta Well And Pump</b>		<i>Foreman</i>		<i>Date</i>	<i>Time</i>	<i>Level (feet)</i>	<i>Ground Elevation (feet)</i>
<i>Surveyor</i> <b>Donald G. Dekenipp</b>							<i>Top of Protective Steel Cap Elevation (feet)</i> <b>5.48</b>
<i>Date and Time of Completion</i> <b>9/13/04 \ 14:59</b>		<i>Geologist</i> <b>Mike Mendes</b>		10/7/2004	7:44	3.92	<i>Top of Riser Pipe Elevation (feet)</i> <b>5.16</b>



REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\* Elevation (feet) above mean sea level unless noted

\*\* Depth in feet below ground surface

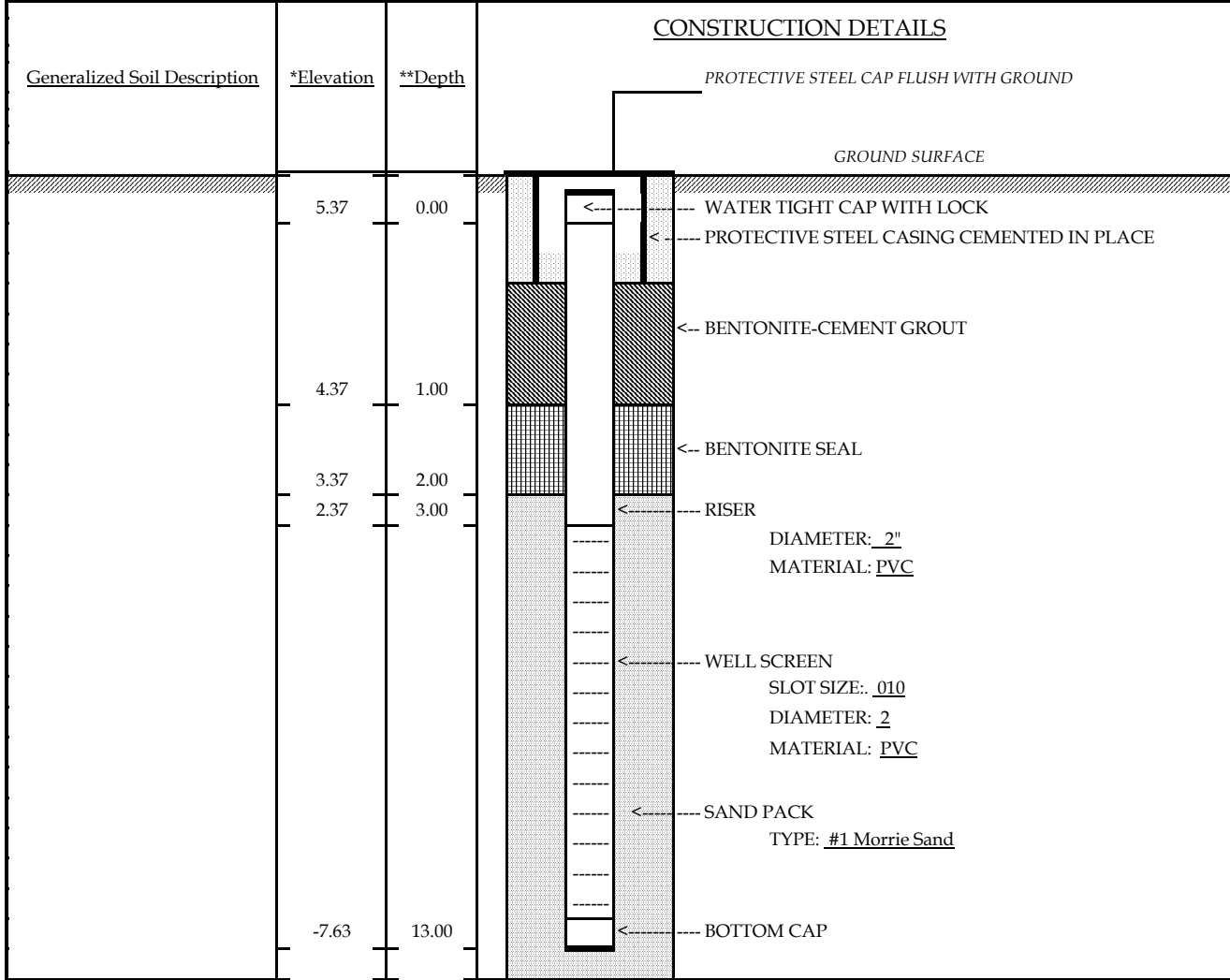
# ERM-Northeast

520 Broadhallow Road, Melville, NY 11747

WELL :     MW-06    

## MONITORING WELL CONSTRUCTION LOG

<i>Project Name &amp; Location</i> <b>Metal Etching</b>		<i>Project No.</i> <b>0011475.2</b>		<i>Water Level(s)</i> (ft below top of PVC casing)		<i>Site Elevation Datum (feet)</i>	
<i>Drilling Company</i> <b>Delta Well And Pump</b>		<i>Foreman</i> <b>Donald G. Dekenipp</b>		<i>Date</i>	<i>Time</i>	<i>Level (feet)</i>	<i>Ground Elevation (feet)</i>
<i>Surveiyor</i> <b>Donald G. Dekenipp</b>							<i>Top of Protective Steel Cap Elevation (feet)</i> <b>5.65</b>
<i>Date and Time of Completion</i> <b>9/14/04 \ 11:40</b>		<i>Geologist</i> <b>Mike Mendes</b>		10/7/2004	7:49	3.87	<i>Top of Riser Pipe Elevation (feet)</i> <b>5.37</b>



REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\* Elevation (feet) above mean sea level unless noted

\*\* Depth in feet below ground surface



# Geologic Log and Well Construction Details

**MW-08 D/S**

**EnviroTrac Ltd.**

5 Old Dock Road, Yaphank, New York 11980

Client: NYSDEC Haz Waste		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name	Address:	Date	DTW	
Freeport Metal Etching	435 South Main Street, Freeport, NY			
Drilling Company:	Method			
AARCO	Geoprobe equipped w/ rotary auger			
Date Started	Date Completed:			
11/10/2011	11/10/11			
Completion Depth:	ENVIROTRAC Geologist			
31	Michael Rose			

WELL CONSTRUCTION (NTS)	DEPTH (feet below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (inches)	Blows per 6 inches	PID (ppm)	
MW-08D / S	0	NA	NA	NA	0'-5' (Pre-cleared) Fill material, concrete and brick intermixed with brown to black coarse to medium grained sand. Dry to moist, petroleum odor
	10	NA	NA	313.2	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wel at 6'
	20	NA	NA	NM	
	30				

**LEGEND:**

- Concrete
- Bentonite Seal
- Gravel Pack
- Screen
- End Cap

**Well Construction Details:**

- Bottom of Well: 31', 14'
- Screen material: 2", 10-slot schedule 40 PVC
- Casing material: 2" schedule 40 PVC
- Sand Pack: None #1
- Bentonite Seal: 1'-4"
- Surface Seal: 10" bolt-down manhole

NTS - Not to Scale

NA - Not Applicable

NM - Not Measured

DTW - Depth to Water

DTP - Depth to Product



# Geologic Log and Well Construction Details

## MW-09 S/D

### EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

Client: NYSDEC Haz Waste		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: Freeport Metal Etching	Address: 435 South Main Street, Freeport, NY	Date	DTW	Measuring Point Elevation
Drilling Company: AARCO	Method: Geoprobe equiped w/ rotary auger			
Date Started: 11/11/2011	Date Completed: 11/11/11			
Completion Depth: 31	ENVIROTRAC Geologist: Michael Rose			

WELL CONSTRUCTION (NTS)	DEPTH (feet below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (inches)	Blows per 6 inches	PID (ppm)	
MW-09D / S	0	NA	NA	NA	0'-5' (Pre-cleared) Fill material, concrete and brick intermixed with brown to black coarse to medium grained sand Dry to moist, petroleum odor
	10	NA	NA	313.2	6'-30' Fill material, brown to black medium to fine grained sand with some gravel Wet at 6'
	20	NA	NA	NM	
	30				

**LEGEND**

- Concrete
- Bentonite Seal
- Gravel Pack
- Screen
- End Cap

Well Construction Details:

Bottom of Well: 32', 14'

Screen material: 2", 10-slot schedule 40 PVC

Casing material: 2" schedule 40 PVC

Sand Pack: None #1

Bentonite Seal: 1'-4'

Surface Seal: 10" boll-down manhole

NTS - Not to Scale      NA - Not Applicable      NM - Not Measured      DTW - Depth to Water      DTP - Depth to Product





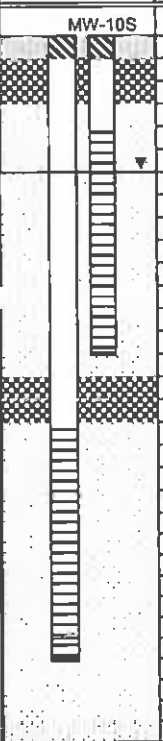
# Geologic Log and Well Construction Details

## MW-10S

**EnviroTrac Ltd.**

5 Old Dock Road, Yaphank, New York 11980

Client: NYSDEC Haz Waste		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: Freeport Metal Etching	Address: 435 South Main Street, Freeport, NY	Date	DTW	Measuring Point Elevation
Drilling Company: AARCO	Method: Geoprobe equipped w/ rotary auger			
Date Started: 11/10/2011	Date Completed: 11/10/11			
Completion Depth: 15'	ENVIROTRAC Geologist: Michael Rose			

WELL CONSTRUCTION (NTS)	DEPTH (feet below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (inches)	Blows per 6 inches	PID (ppm)	
MW-10S 	0	NA	NA	NA	0'-5' (Pre-cleared) Fill material, concrete and brick intermixed with brown to black coarse to medium grained sand. Dry to moist, petroleum odor
	10	NA	NA	313.2	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wet at 6'
	20	NA	NA	NM	
	30				
<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li> Concrete</li> <li> Bentonite Seal</li> <li> Gravel Pack</li> <li> Screen</li> <li> End Cap</li> </ul> <p><b>Well Construction Details:</b></p> <ul style="list-style-type: none"> <li>Bottom of Well: 14'</li> <li>Screen material: 2", 10-slot schedule 40 PVC</li> <li>Casing material: 2" schedule 40 PVC</li> <li>Sand Pack: Morie #1</li> <li>Bentonite Seal: 1'-4"</li> <li>Surface Seal: 10" bolt-down manhole</li> <li>Special Note*: Deep Well Not Utilized</li> </ul>					

NTS - Not to Scale      NA - Not Applicable      NM - Not Measured      DTW - Depth to Water      DTP - Depth to Product



# Geologic Log and Well Construction Details

## MW-10D

**EnviroTrac Ltd.**

5 Old Dock Road, Yaphank, New York 11980

Client: NYSDEC Haz Waste		Depth to Water (ft. from measuring pt.)		Site Elevation
Site Name: Freeport Metal Etching	Address: 435 South Main Street, Freeport, NY	Date	DTW	Measuring Point Elevation
Drilling Company: AARCO	Method: Geoprobe equipped w/ rotary auger			
Date Started: 11/11/2011	Date Completed: 11/11/11			
Completion Depth: 32	ENVIROTRAC Geologist: Michael Rose			

WELL CONSTRUCTION (NTS)	DEPTH (feet below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (inches)	Blows per 6 inches	PID (ppm)	
MW-10D	0	NA	NA	NM	0'-5' (Pre-cleared) Fill material, concrete and brick intermixed with brown to black coarse to medium grained sand. Dry to moist, petroleum odor.
	10	NA	NA	NM	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wet at 6'
	20	NA	NA	NM	
	30				

**LEGEND**

- Concrete
- Bentonite Seal
- Gravel Pack
- Screen
- End/Top Cap

Well Construction Details

Bottom of Well: 32'

Screen material: 2", 10-slot schedule 40 PVC

Casing material: 2" schedule 40 PVC

Sand Pack: None #1

Bentonite Seal: 1'-4'

Surface Seal: 10" bolt-down manhole

NTS - Not to Scale      NA - Not Applicable      NM - Not Measured      DTW - Depth to Water      DTP - Depth to Product





**APPENDIX D**

**FIELD FORMS**

**SITE-WIDE INSPECTION**

Day: \_\_\_\_\_ Date: \_\_\_\_\_

NYSDEC		Temperature: (F)	(am)	(pm)
		Wind Direction:	(am)	(pm)
<b>METAL ETCHING SITE</b>		Weather:	(am)	
NYSDEC Site # 130110			(pm)	
Contract #		Arrive at site	(am)	
Freeport, New York		Leave site:	(pm)	

**Site Security**

Evidence of vandalism (wells, protective cover damage):

Evidence of cover system intrusion (ruts, burrows, excavations):

Evidence of penetrations (poles, posts, stakes):

General site condition (gates, access, storm drains):

Additional Comments:



**Asphalt Cover**

Evidence of settlement, rutting, potholes:

Evidence of cracking, distortion, or disintegration:

Additional Comments:

**Drainage System**

Evidence of damage to storm drains:

Evidence of stockpiles on porous pavement areas:

Evidence of ponding on porous pavement areas:

Evidence of spilled liquids (well tampering/vent blowout):

Additional Comments:

**Sub-Slab Depressurization Systems**

Are there any new cracks in the slab that have not been sealed? If so, describe:

Are there any new cracks in structure walls? If so, describe:

**SITE-WIDE INSPECTION**

**Day:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Does system PVC pipe appear to be compromised in any way? If so, describe:
Does manometer read within range marked?
Is fan making any abnormal noises?
Is contact information on SSDS up to date?
Has the building use changed since the last inspection?
Has building heating, ventilation and air conditioning changed since the last inspection?

**Inspection Photolog**





**Metal Etching Co., Inc. Site No. 130110**  
**GROUNDWATER SAMPLING**  
**PURGE FORM**

<b>Well I.D.:</b>	<b>Personnel:</b>	<b>Client:</b> NYSDEC
<b>Location:</b> Metal Etching Co., Inc. Site	<b>Well Condition:</b>	<b>Weather:</b>
<b>Sounding Method:</b>	<b>Gauge Date:</b>	<b>Measurement Ref:</b>
<b>Stick Up/Down (ft):</b>	<b>Gauge Time:</b>	<b>Well Diameter (in):</b>

<b>Purge Date:</b>	<b>Purge Time:</b>
<b>Purge Method:</b>	<b>Field Technician:</b>

Well Volume		
<b>A. Well Depth (ft):</b>	<b>D. Well Volume (ft):</b>	<b>Depth/Height of Top of PVC:</b>
<b>B. Depth to Water (ft):</b>	<b>E. Well Volume (gal) C*D):</b>	<b>Pump Type:</b>
<b>C. Liquid Depth (ft) (A-B):</b>	<b>F. Three Well Volumes (gal) (E3):</b>	<b>Pump Designation:</b>

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (Gal)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (°C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)

**Total Quantity of Water Removed (gal):** \_\_\_\_\_

**Samplers:** \_\_\_\_\_

**Sampling Date:** \_\_\_\_\_

**Sampling Time:** \_\_\_\_\_

**Split Sample With:** \_\_\_\_\_

**Sample Type:** \_\_\_\_\_

**COMMENTS AND OBSERVATIONS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**NEW YORK STATE DEPARTMENT OF HEALTH INDOOR AIR QUALITY  
QUESTIONNAIRE AND BUILDING INVENTORY  
CENTER FOR ENVIRONMENTAL HEALTH**

This form must be completed for each residence involved in indoor air testing.

Preparer's Name \_\_\_\_\_ Date/Time Prepared \_\_\_\_\_

Preparer's Affiliation \_\_\_\_\_ Phone No. \_\_\_\_\_

Purpose of Investigation \_\_\_\_\_

**1. OCCUPANT: Interviewed: Y / N**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Number of Occupants/persons at this location \_\_\_\_\_ Age of Occupants \_\_\_\_\_

**2. OWNER OR LANDLORD: (Check if same as occupant \_\_\_\_ )**

**Interviewed: Y / N**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_



### 3. BUILDING CHARACTERISTICS Type of

**Building:** (Circle appropriate response)

Residential      School      Commercial/Multi-use  
Industrial      Church      Other: \_\_\_\_\_

**If the property is residential, type?** (Circle appropriate response)

Ranch  
Raised Ranch      2-Family      3-Family  
                         Split Level      Colonial  
Cape Cod      Contemporary      Mobile Home  
Duplex      Apartment House      Townhouses/Condos  
Modular      Log Home      Other: \_\_\_\_\_

**If multiple units, how many?**

\_\_\_\_\_ **If the property is commercial, type?**

Business Type(s) \_\_\_\_\_

Does it include residences (i.e., multi-use)? Y / N If yes, how many? \_\_\_\_\_

**Other characteristics:**

Number of floors \_\_\_\_\_ Building age \_\_\_\_\_

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

### 4. AIRFLOW

**Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:**

Airflow between floors  
Airflow near source  
Outdoor air infiltration  
Infiltration into air ducts

**5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)**

- a. Above grade construction:** wood frame concrete stone brick
- b. Basement type:** full crawlspace slab other \_\_\_\_\_
- c. Basement floor:** concrete dirt stone other \_\_\_\_\_
- d. Basement floor:** uncovered covered covered with \_\_\_\_\_
- e. Concrete floor:** unsealed sealed sealed with \_\_\_\_\_
- f. Foundation walls:** poured block stone other \_\_\_\_\_
- g. Foundation walls:** unsealed sealed sealed with \_\_\_\_\_
- h. The basement is:** wet damp dry moldy
- i. The basement is:** finished unfinished partially finished
- j. Sump present?** Y / N
- k. Water in sump?** Y / N / not applicable

**Basement/Lowest level depth below grade:** \_\_\_\_\_(feet)

**Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)**

**6. HEATING, VENTING and AIR CONDITIONING**

**Type of heating system(s) used in this building: (circle all that apply –note primary)**

Hot air circulation - Heat pump - Hot water baseboard - Space Heaters -  
Stream radiation - Radiant floor - Electric baseboard - Wood stove -  
Outdoor wood boiler - Other \_\_\_\_\_

**The primary type of fuel used is:**

Natural Gas - Fuel Oil - Kerosene - Electric - Propane - Solar - Wood - Coal

**Domestic hot water tank fueled by:** \_\_\_\_\_

**Boiler/furnace located in:** Basement - Outdoors - Main Floor - Other \_\_\_\_\_

**Air conditioning:** Central Air - Window units - Open Windows - None

**Are there air distribution ducts present?** Y / N

**Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.**



## 7. OCCUPANCY

Is basement/lowest level occupied? Full-time - Occasionally - Seldom - Almost Never

### Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement \_\_\_\_\_  
1<sup>st</sup> Floor \_\_\_\_\_  
2<sup>nd</sup> Floor \_\_\_\_\_  
3<sup>rd</sup> Floor \_\_\_\_\_  
4<sup>th</sup> Floor \_\_\_\_\_

## 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

- a. Is there an attached garage? Y / N
- b. Does the garage have a separate heating unit? Y / N / NA
- c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA  
Please specify \_\_\_\_\_
- d. Has the building ever had a fire? Y / N When? \_\_\_\_\_
- e. Is a kerosene or unvented gas space heater present? Y / N Where? \_\_\_\_\_
- f. Is there a workshop or hobby/craft area? Y / N Where & Type? \_\_\_\_\_
- g. Is there smoking in the building? Y / N How frequently? \_\_\_\_\_
- h. Have cleaning products been used recently? Y / N When & Type? \_\_\_\_\_
- i. Have cosmetic products been used recently? Y / N When & Type? \_\_\_\_\_
- j. Has painting/staining been done in the last 6 months? Y / N When & Type? \_\_\_\_\_
- k. Is there new carpet, drapes or other textiles? Y / N Where & When? \_\_\_\_\_
- l. Have air fresheners been used recently? Y / N When & Type? \_\_\_\_\_  
If yes, where vented? \_\_\_\_\_
- m. Is there a kitchen exhaust fan? Y / N \_\_\_\_\_  
If yes, where vented? \_\_\_\_\_
- n. Is there a bathroom exhaust fan? Y / N \_\_\_\_\_
- o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N
- p. Has there been a pesticide application? Y / N When & Type? \_\_\_\_\_

Are there odors in the building? Y / N

If yes, please describe:

---

**Do any of the building occupants use solvents at work?** Y / N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? \_\_\_\_\_

If yes, are their clothes washed at work? Y / N

**Do any of the building occupants regularly use or work at a dry-cleaning service?** (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No

Yes, use dry-cleaning infrequently (monthly or less) Unknown

Yes, work at a dry-cleaning service

**Is there a radon mitigation system for the building/structure?** Y / N Date of Installation:

**Is the system active or passive?** Active/Passive

## 9. WATER AND SEWAGE

**Water Supply:** Public Water Drilled Well Driven Well Dug Well Other: \_\_\_\_\_

**Sewage Disposal:** Public Sewer Septic Tank Leach Field Dry Well Other: \_\_\_\_\_

**.10. RELOCATION INFORMATION (for oil spill residential emergency)**

**.a. Provide reasons why relocation is recommended:** \_\_\_\_\_

**.b. Residents choose to:** remain in home relocate to friends/family relocate to hotel/motel

**.c. Responsibility for costs associated with reimbursement explained?** Y / N

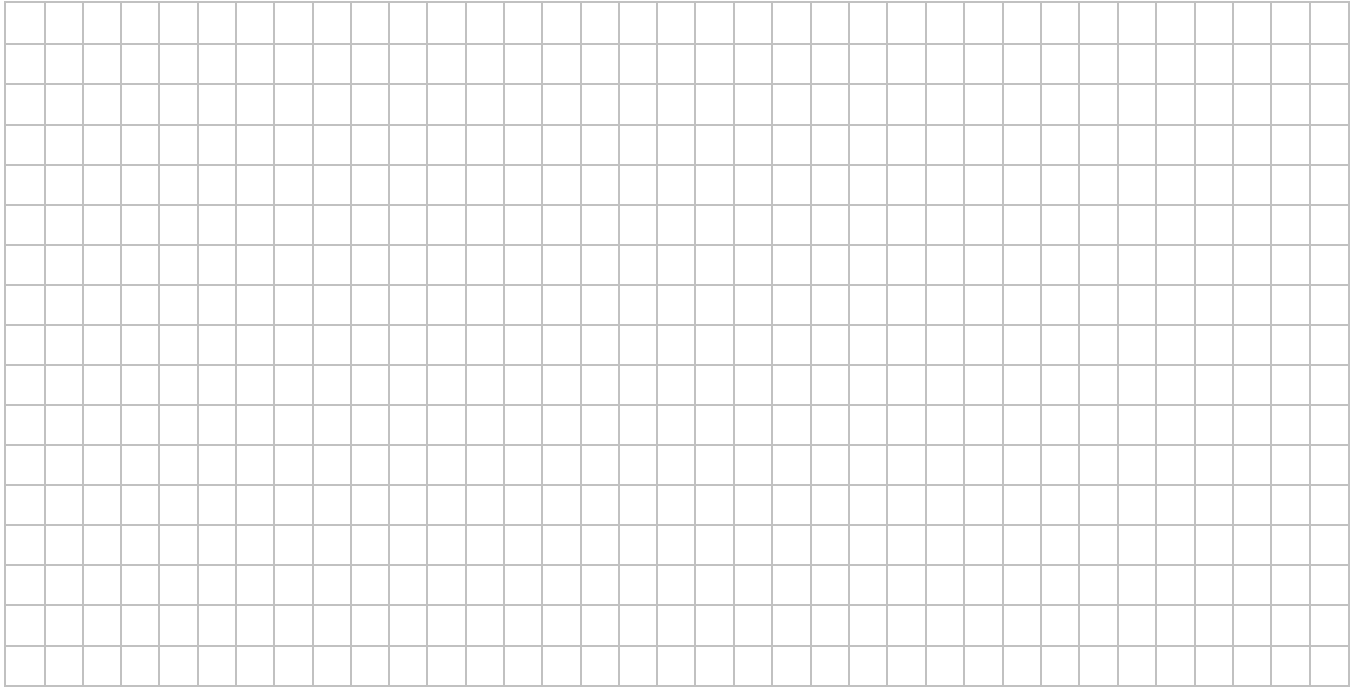
**.d. Relocation package provided and explained to residents?** Y / N



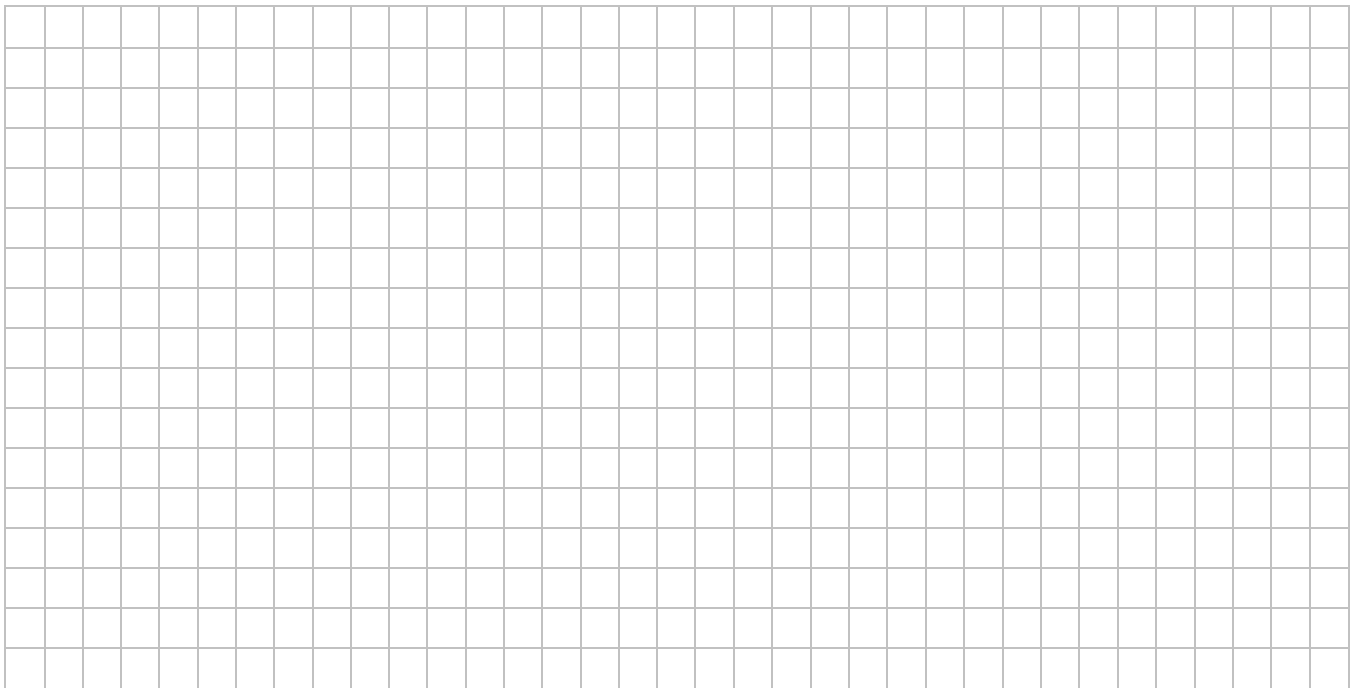
**11. FLOOR PLANS**

**Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.**

**Basement:**

A large grid for drawing the basement floor plan. The grid is 20 columns wide and 20 rows high, providing a space for a plan view sketch of the basement.

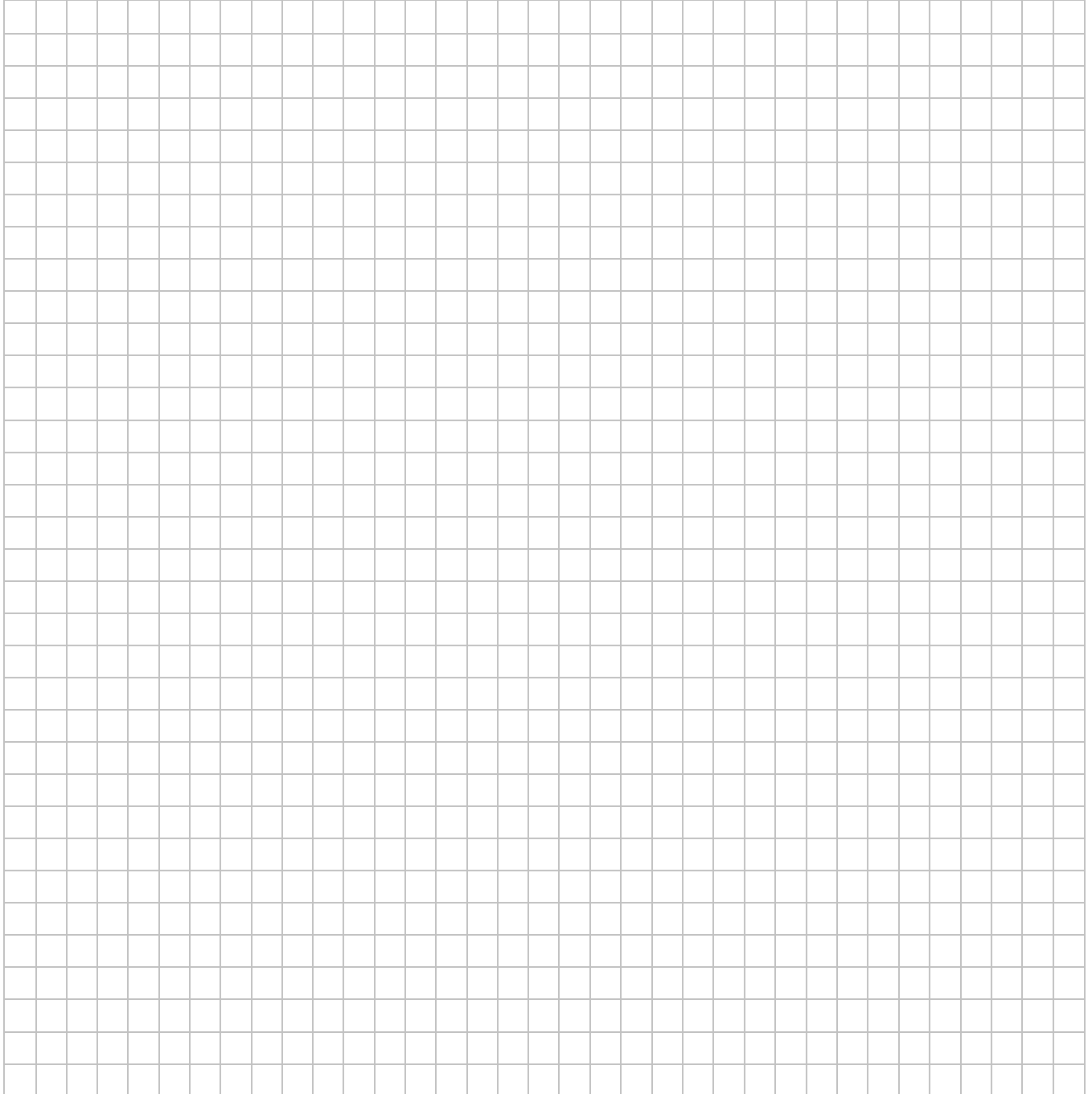
**First Floor:**

A large grid for drawing the first floor plan. The grid is 20 columns wide and 20 rows high, providing a space for a plan view sketch of the first floor.

## 12. OUTDOOR PLOT

**Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.**

**Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.**





**13. PRODUCT INVENTORY FORM**

Make & Model of field instrument used: \_\_\_\_\_

List specific products found in the residences that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

\*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

## FIELD AIR SAMPLING FORM

Consultant	Project #:
Address	Project Name:
Location	Location:
	Project Manager:

**Sample Location Information:**

Site ID Number:				Sampler(s):	
PID Meter Used: (Model, Serial #)				Building I.D. No.:	

**SUMMA Canister Record:**

INDOOR AIR - FIRST FLOOR		INDOOR AIR - BASEMENT		SUBSLAB SOIL GAS		OUTDOOR AIR	
Flow Regulator No.:		Flow Regulator No.:		Flow Regulator No.:		Flow Regulator No.:	
Canister Serial No.:		Canister Serial No.:		Canister Serial No.:		Canister Serial No.:	
Start Date/Time:		Start Date/Time:		Start Date/Time:		Start Date/Time:	
Start Pressure: (inches Hg)		Start Pressure: (inches Hg)		Start Pressure: (inches Hg)		Start Pressure: (inches Hg)	
Stop Date/Time:		Stop Date/Time:		Stop Date/Time:		Stop Date/Time:	
Stop Pressure: (inches Hg)		Stop Pressure: (inches Hg)		Stop Pressure: (inches Hg)		Stop Pressure: (inches Hg)	
Sample ID:		Sample ID:		Sample ID:		Sample ID:	

**Other Sampling Information:**

Story/Level	Story/Level	Basement or Crawl Space?	Direction from Building
Room	Room	Floor Slab Thickness <i>(inches) [if present]</i>	Distance from Building
Indoor Air Temp (°F)	Indoor Air Temp	Potential Vapor Entry Points Observed?	Intake Height Above Ground Level (ft.)
Barometric Pressure?	Barometric Pressure?	Ground Surface Condition (Crawl Space Only)	Intake Tubing Used?
Intake Height Above Floor Level (ft.)	Intake Height Above Floor Level (ft.)	If slab, intake Depth If Crawl Space, intake height	Distance to nearest Roadway
Noticeable Odor?	Noticeable Odor?	Noticeable Odor?	Noticeable Odor?
PID Reading (ppb)	PID Reading (ppb)	PID Reading (ppb)	PID Reading (ppb)
Duplicate Sample?	Duplicate Sample?	Duplicate Sample?	Duplicate Sample?

**Comments:**


Sampler Signature:



## **APPENDIX E**

# **QUALITY ASSURANCE PROJECT PLAN**

## **1. PURPOSE AND OBJECTIVES**

### **1.1 PURPOSE**

This Quality Assurance Project Plan (QAPP) is for the site management work done for the Metal Etching site in the city of Freeport, Nassau County, New York (New York State Department of Environmental Conservation [NYSDEC] Site No. 130110). This QAPP contains site-specific procedures for the collection, analysis, and evaluation of data that will be legally and scientifically defensible.

### **1.2 QUALITY ASSURANCE PROJECT PLAN OBJECTIVES**

This QAPP provides site-specific information and standard operating procedures applicable to all work performed at the site that. The information includes definitions and goals for data quality and required types and quantities of quality assurance (QA)/quality control (QC) samples. The procedures address sampling protocols; field documentation; sample handling, custody, and shipping; instrument calibration and maintenance; auditing; data reduction, validation, and reporting; corrective action requirements; and QA reporting. The Site Management Plan contains a site description and information on site field activities; such as, sample locations, sampling procedures, analytical methods, and reporting limits.

## 2. PROJECT ORGANIZATION AND RESPONSIBILITIES

While all personnel involved in an investigation and the generation of data are implicitly a part of the overall project management and QA/QC program, certain members of the Project Team have specifically designated responsibilities. Project responsibilities are summarized below.

### 2.1 CONSULTANT

The consultant responsible for site management will provide field support during groundwater sampling activities and evaluation of analytical data. The roles required in this project include:

- **Project QA/QC Officer**—The QA/QC Officer provides guidance on technical matters and reviews technical documents relating to the project. They assess the effectiveness of the QA/QC program and recommend modifications when applicable. Additionally, the QA/QC Officer may delegate technical guidance to specially trained individuals under his direction.
- **Project Manager**—The Project Manager provides overall coordination and preparation of the project activities. This includes coordination with NYSDEC, budget control, subcontractor performance, implementation of the QAPP, and allocation of resources and staffing to implement both the QA/QC program and the site Health and Safety Plan.
- **Site Manager**—The Site Manager will serve as the on-site contact person for field activities and tests. They will be responsible for coordinating the field activities, including inspecting and replacing equipment, preparing daily and interim reports, scheduling sampling and inspections, and coordinating shipment and receipt of samples and containers.

### 2.2 LABORATORY

Laboratory analyses for this project will be performed by an Environmental Laboratory Analytical Program (ELAP) certified laboratory. The laboratory will have its own provisions for conducting an internal QA/QC review of the data before they are released. The laboratories' contract supervisors will contact the consultant's Project Manager with any sample discrepancies or data concerns.

Electronic data deliverable formatted QA/QC reports will be filed by the analytical laboratories when data are submitted to the consultant. Corrective actions will be reported to the consultant's Project Manager along with the QA/QC report. The laboratories may be contacted directly by the consultant or NYSDEC personnel to discuss QA concerns. The consultant will act as laboratory coordinator on this project and all correspondence from the laboratories will be coordinated with the consultant's Project Manager.



### **3. SAMPLING RATIONALE, DESIGNATION, AND CONTAINERS**

#### **3.1 SAMPLING RATIONALE**

The sampling rationale is presented for groundwater monitoring in the Site Management Plan. Laboratory quality control samples including field duplicates, matrix spike, and matrix spike duplicates are to be collected at a frequency of 1 per 20 samples. Field duplicates are two samples of the same matrix, which are collected, to the extent possible, from the same location at the same time using the same techniques. Field duplicates provide information on the precision of the sampling and analysis process. Matrix spike and matrix spike duplicates are two additional samples of the same matrix fortified with the analyte(s) of interest and analyzed to monitor measurement bias associated with the sample matrix.

The remedial investigation laboratory program includes the number of samples for each sample location, as well as QA/QC samples (Table 1).

#### **3.2 SAMPLE DESIGNATION**

Field samples collected from the site will be assigned a unique sample tracking number. Sample/designation will be an alpha-numeric code, which will identify each sample by the site identification, matrix sampled, location number, and date of collection.

The following terminology will be used for the sample identification:

- **Groundwater Samples**  
— NYSDEC SITE ID-MW-XX

#### **3.3 SAMPLE CONTAINERS**

Types of sample containers and preservatives required for sample collection will be determined by the analyzing laboratory. Sample containers will be properly washed, decontaminated, and the appropriate preservative will be added by the analytical laboratory. Containers with preservative will be labeled accordingly.

#### **3.4 SAMPLE HOLDING TIMES**

Sample holding times will be in accordance with the NYSDEC Analytical Services Protocol (ASP) requirements. All samples shall be transferred to the analytical laboratory with enough time for the lab to process the samples before the holding time is expired.

### **3.5 SAMPLE TRACKING AND CUSTODY**

The laboratory must satisfy the sample chain-of-custody requirements by implementing the following Standard Operating Procedures for laboratory/sample security:

- Samples are stored in a secure area
- Access to the laboratory is through a monitored area
- Visitors sign a visitor's log and are escorted while in the laboratory
- Only the designated sample custodians have keys to sample storage area(s)
- Transfers of samples in and out of storage are documented.

## **4. ANALYTICAL LABORATORY**

The data collected during this investigation will be used to determine the presence and concentration of volatile organic compounds (VOCs) and metals in groundwater.

Groundwater samples collected during execution of the QAPP will be submitted to the approved analytical laboratory. The laboratory must be a New York State Department of Health ELAP-certified laboratory, meeting specifications for documentation, data reduction, and reporting. Preliminary analytical results will be provide within 14 days of sample receipt and full NYSDEC Analytical Services Protocol Category B deliverables and associated electronic data deliverables (EDDs) in Equis format will be provided to the consultant within 30 days of sample receipt.

### **4.1 CALIBRATION PROCEDURES AND FREQUENCY**

Instruments and equipment used in this investigation are controlled by a formal calibration program, which verifies that equipment is of the proper type, range, accuracy, and precision to provide data compatible with specified requirements. Instruments and equipment that measure a quantity, or whose performance is expected at a stated level, are subject to calibration. Calibration is performed using reference standards or externally by calibration agencies or equipment manufacturers.

#### **4.1.1 Calibration System**

The following sections contain a discussion of the elements comprising the calibration system.

##### **4.1.1.1 Calibration Procedures**

Written procedures are used for all instruments and equipment subject to calibration. Whenever possible, recognized procedures, such as those published by the American Society of Testing and Materials or United States Environmental Protection Agency (USEPA), or procedures provided by manufacturers, are adopted. If established procedures are not available, a procedure is developed considering the type of equipment, stability characteristics of the equipment, required accuracy, and the effect of operational error on the quantities measured.

##### **4.1.1.2 Calibration Frequency**

Calibration frequency is based on the type of equipment, inherent stability, manufacturer's recommendations, values provided in recognized standards, intended data use, specified analytical methods, effect of error upon the measurement process, and prior experience.

##### **4.1.1.3 Calibration Reference Standards**

Two types of reference standards will be used by the standby laboratories for calibration:



- **Physical standards**, such as weights for calibrating balances and certified thermometers for calibrating working thermometers, refrigerators and ovens, are generally used for periodic calibration.
- **Chemical standards**, such as Standard Reference Materials provided by the National Institute of Standards and Technology or USEPA. These may include vendor-certified materials traceable to National Institute of Standards and Technology or USEPA Standard Reference Materials. These are primarily used for operational calibration.

#### **4.1.1.4 Calibration Failure**

Equipment that cannot be calibrated or becomes inoperable is removed from service. Such equipment must be repaired and satisfactorily recalibrated before re-use. For laboratory equipment that fails calibration, analysis cannot proceed until appropriate corrective action is taken and the analyst achieves an acceptable calibration.

Laboratory managers are responsible for development and implementation of a contingency plan for major equipment failure. The plan includes guidelines on waiting for repairs, use of other instrumentation, subcontracting analyses, and evaluating scheduled priorities.

#### **4.1.1.5 Calibration Records**

Records are prepared and maintained for each piece of equipment subject to calibration. Records demonstrating accuracy of preparation, stability, and proof of continuity of reference standards are also maintained. Copies of the raw calibration data are kept with the analytical sample data.

### **4.1.2 Operational Calibration**

Operational calibration is generally performed as part of the analytical procedure and refers to those operations in which instrument response (in its broadest interpretation) is related to analyte concentration. Included is the preparation of a standard response (calibration) curve and often the analysis of blanks.

#### **4.1.2.1 Preparation of Calibration Curve**

Preparation of a standard calibration curve is accomplished by the analysis of calibration standards, which are prepared by adding the analyte(s) of interest to the solvent that is introduced into the instrument. The concentrations of the calibration standards are chosen to cover the working range of the instrument or method. Sample measurements are made within this working range. The calibration curve is prepared by plotting or regressing the instrument responses versus the analyte concentrations. Concentrations of the analyzed samples are back-calculated from the calibration curve.

#### 4.1.2.2 Blanks

Reagent and/or solvent blanks are analyzed to assess if the materials used to prepare the standards are free from interfering substances that could affect the analysis. A method blank is prepared whenever samples are processed through steps that are not applied to the calibration standards.

#### 4.1.3 Periodic Calibration

Periodic calibrations are performed for equipment (e.g., balances, thermometers) that is required in the analytical method, but that is not routinely calibrated as part of the analytical procedure.

### 4.2 FIELD EQUIPMENT CALIBRATION

The procedures and frequencies for the calibration of field equipment are provided below in the table below.

FIELD INSTRUMENTATION CALIBRATION FREQUENCY		
Instrument	Frequency of Calibration Check	Calibration Standard
pH Meter	Prior to use – daily	Commercially prepared pH buffer solutions (4.01, 7.00, 10.00)
Conductivity Meter	Prior to use – daily	Commercially prepared saline solution (12.9 mS/cm)
Water Level Meter	Prior to initiating field work	100-ft engineer's tape
Dissolved Oxygen Meter	Per sampling event	Saturation
Photoionization Detector	Prior to use – daily	100 ppm isobutylene
Turbidity	Prior to use – daily	10 NTU, 200 NTU
NOTE: NTU = Nephelometric turbidity units.		

## **5. ANALYTICAL TEST PARAMETERS**

This QAPP will require the analysis of aqueous samples using USEPA Method 8260B for VOCs, and USEPA Method 6010/7470 for metals. Compound lists for each analytical method are included in Table 2.



## **6. ANALYTICAL DATA VALIDATION**

The laboratory will review data prior to its release from the laboratory. Objectives for review are in accordance with the QA/QC objectives stated in the NYSDEC Division of Environmental Remediation-10 (DER-10). The laboratories are required to evaluate their ability to meet these objectives. Outlying data will be flagged in accordance with laboratory standard operating procedures and corrective action will be taken to rectify the problem.

In order to ensure the validity of analytical data generated by a project, it will be validated by an entity independent from the analysts and the project. The resumes of the personnel providing the data validation services shall be submitted for approval under a separate cover.

TABLE 1 SITE CHARACTERIZATION ANALYTICAL PROGRAM

	Sample Matrix	VOCs (USEPA 8260B) and Metals (USEPA 6010/7470)
No. of Samples	Aqueous	10
Field Duplicate		1
MS/MSD		2
<b>Total No. of Analyses</b>		13
NOTE: USEPA = U.S. Environmental Protection Agency. MS/MSD= Matrix spike/matrix spike duplicate. Laboratory quality control samples will be collected at a rate of 1 per 20 samples, per matrix.		

TABLE 2 ANALYTE LIST AND ANALYTICAL REPORTING LIMITS

USEPA METHOD 8260B (VOCs)	
Analyte	Reporting Limit µg/L
1,1,1,2-Tetrachloroethane	0.07
1,1,1-Trichloroethane	0.04
1,1,2,2-Tetrachloroethane	0.20
1,1,2-Trichloroethane	0.08
1,1-Dichloroethane	0.03
1,1-Dichloroethene	0.03
1,1-Dichloropropene	0.12
1,2,3-Trichloropropane	0.09
1,2-Dibromo-3-chloropropane	0.50
1,2-Dibromoethane	0.10
1,2-Dichlorobenzene	0.05
1,2-Dichloroethane	0.02
1,2-Dichloropropane	0.02
1,3-Dichlorobenzene	0.05
1,3-Dichloropropane	0.08
1,4-Dichlorobenzene	0.04
2,2-Dichloropropane	0.08
2-Butanone	0.70
2-Chlorotoulene	0.08
2-Hexanone	0.40
4-Chlorotoulene	0.06
4-Methyl-2-pentanone	1.2
Acetone	10
Benzene	0.03
Bromobenzene	0.11
Bromochloromethene	0.09
Bromodichloromethane	0.03
Bromoform	0.20
Bromomethane	0.03
Carbon disulfide	0.04
Carbon tetrachloride	0.02
Chlorobenzene	0.03
Chloroethane	0.09
Chloroform	0.04
Chloromethane	0.05
<i>cis</i> -1,2-dichloroethene	0.06
<i>cis</i> -1,3-dichloropropene	0.04
Dibromochloromethane	0.07
Dibromomethane	0.01
Dichlorodifluoromethane	0.11
Ethylbenzene	0.03
Isopropylbenzene	0.10
Methylene chloride	0.08
n-Propylbenzene	0.10
Styrene	0.27
Tetrachloroethene	0.05
Toluene	0.08
<i>trans</i> -1,2-dichloroethene	0.04
<i>trans</i> -1,3-dichloropropene	0.04
Trichloroethene	0.02
Vinyl chloride	0.04
Xylene (Total)	1.0



USEPA METHOD 6010/7470 (METALS)	
Analyte	Reporting Limit µg/L
Aluminum	0.0061
Antimony	0.0021
Arsenic	0.0025
Barium	0.00014
Beryllium	0.000053
Cadmium	0.00017
Calcium	0.017
Chromium	0.00055
Cobalt	0.00069
Copper	0.0013
Iron	0.0028
Lead	0.00088
Magnesium	0.0061
Manganese	0.00021
Mercury (Method 7470)	0.000012
Nickel	0.0012
Potassium	0.055
Selenium	0.0017
Silver	0.0008
Sodium	0.0054
Thallium	0.0026
Vanadium	0.0013
Zinc	0.0021

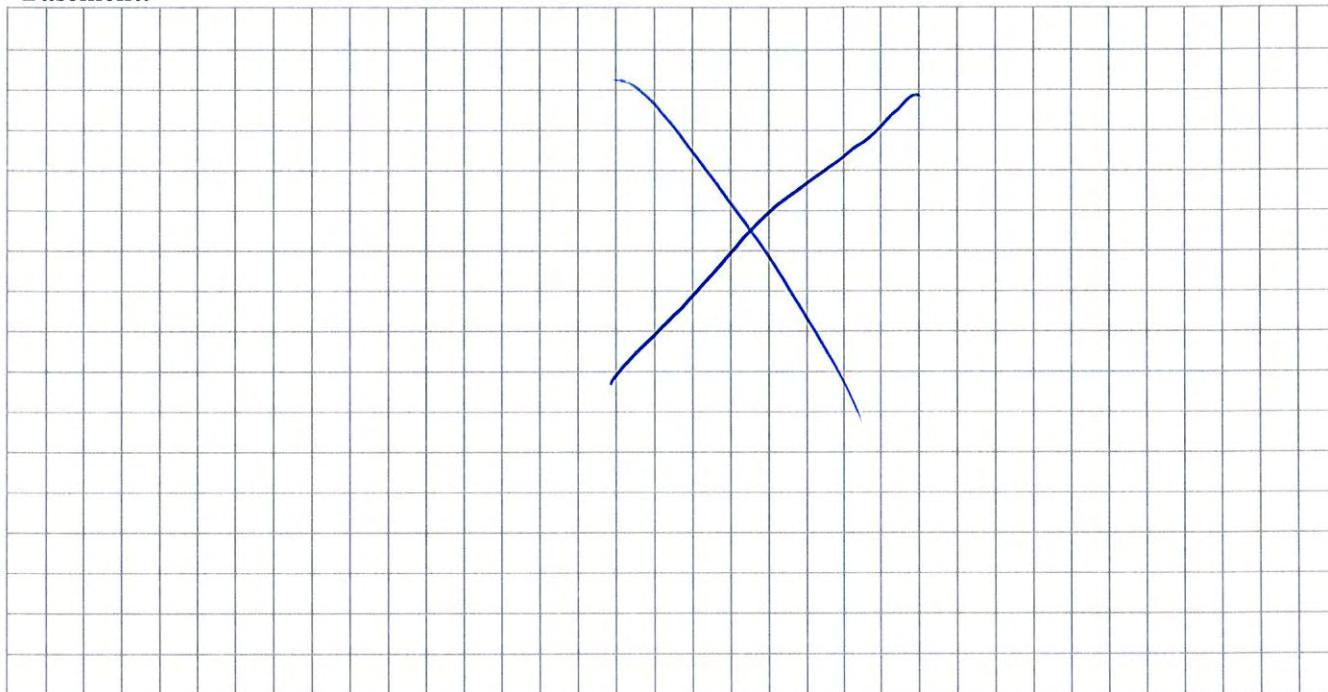
**APPENDIX F**

**HISTORICAL SOIL VAPOR INTRUSION AIR  
MONITORING FORMS**

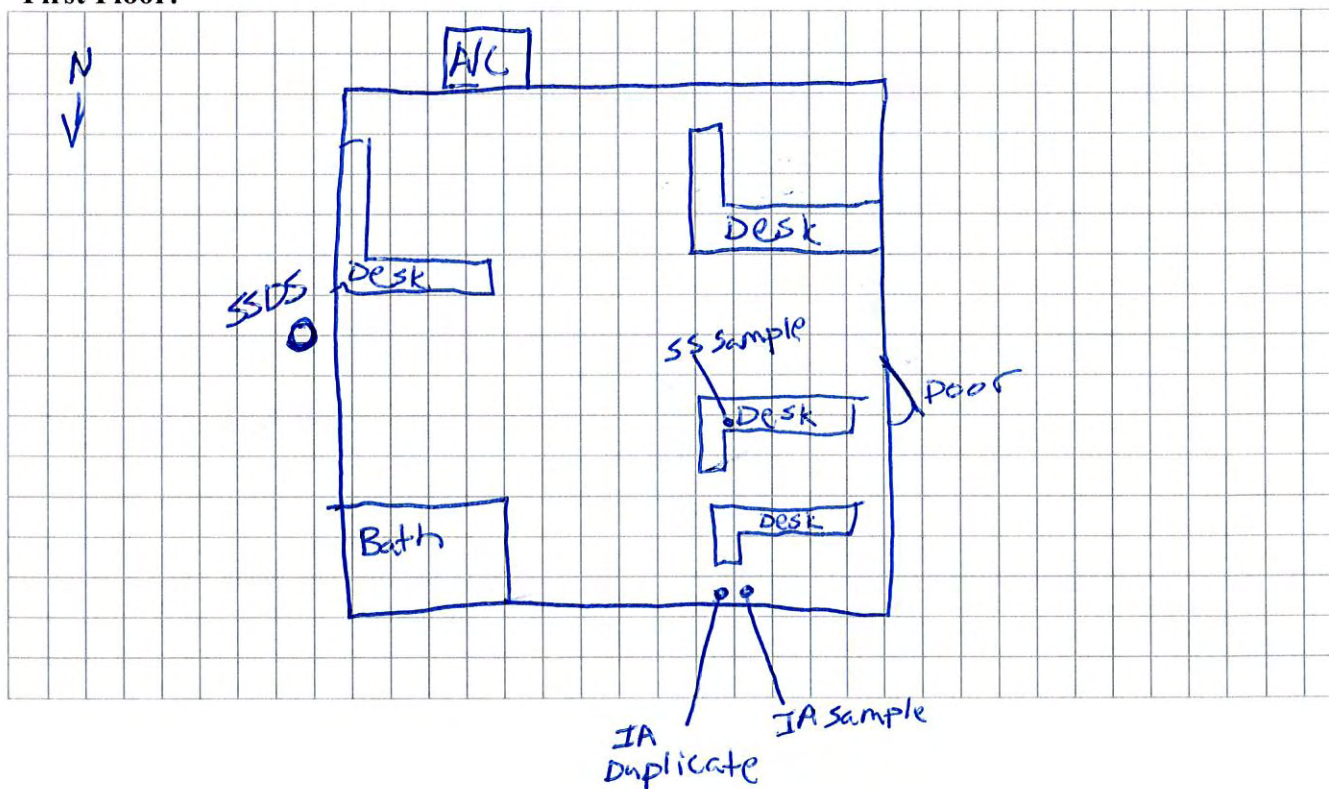
### 11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



First Floor:





## 12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

