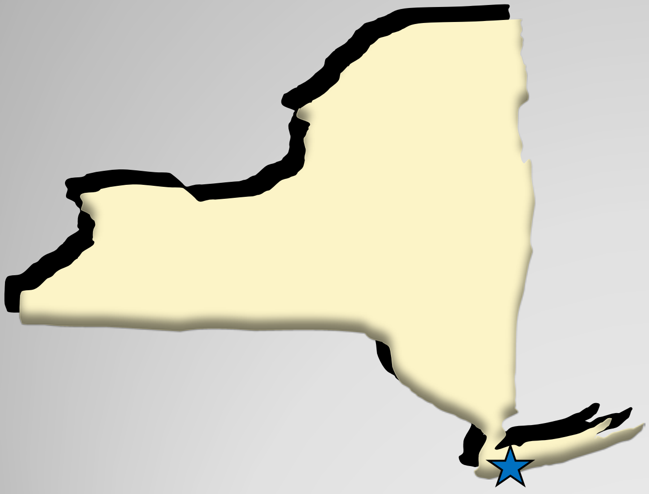
PERIODIC REVIEW REPORT No. 5
November 2016 – November 2017

Metal Etching Co. Site (130110)
Freeport, Nassau County, New York



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January 2018

Periodic Review Report No. 4
November 12, 2016 – November 12, 2017
Metal Etching Co., Inc. Site (130110)

Freeport
Nassau County, New York

Prepared for

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Version: FINAL
EA Project No. 14907.09

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LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
AWQS	Ambient water quality standard
bgs	Below ground surface
btoc	Below top of casing
CVOC	Chlorinated volatile organic compound
DCE	Dichloroethene
DO	Dissolved oxygen
EA	EA Engineering, P.C. and Its Affiliate EA Science and Technology
EC	Engineering controls
EPA	United States Environmental Protection Agency
ft	Feet (foot)
ft^2	Square feet (foot)
hr	Hour(s)
IC	Institutional controls
in.	Inch(es)
Metal Etching	Metal Etching, Co., Inc.
mg/L	Milligrams per liter
MNA	Monitored natural attenuation
MTBE	Methyl tert-butyl ether
mV	Millivolts
No.	Number
NTU	Nephelometric turbidity units
NYSDEC	New York State Department of Environmental of Conservation
NYSDOH	New York State Department of Health
O&M	Operation and maintenance
ORP	Oxidation-reduction potential
PCE	Tetrachloroethene
PFAS	Poly fluorinated alkyl substances
ppt	Parts per trillion
PRR	Periodic review report
RA	Remedial action

RI	Remedial investigation
ROD	Record of Decision
SCG	Standards, criteria, and guidance
SCO	Soil cleanup objectives
SMP	Site management plan
SSDS	Sub-slab depressurization system
SVI	Soil vapor intrusion
TAL	Target analyte list
TCE	Trichloroethene
UST	Underground storage tank
VC	Vinyl chloride
VOC	Volatile organic compound
WC	Water column
yd^3	Cubic yard(s)

ES. EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation (NYSDEC) tasked EA Engineering, P.C. and its Affiliate EA Science and Technology (EA) to provide site management services from August 21, 2012 to January 25, 2018 at the Metal Etching Co., Inc. (Metal Etching) site (Site Number [No.] 130110) in Freeport, Nassau County, New York (Figure 1). This Work Assignment is being conducted under NYSDEC Standby Engineering Services Contract No. D007624-09.1.

Post-closure monitoring and facility maintenance program activities were conducted at the Metal Etching site in April 2017 in accordance with the New York State Inactive Hazardous Waste Disposal Site Remedial Program and as stipulated in the Record of Decision (NYSDEC 2007) and Site Management Plan (EA 2014a).

ES.1 REMEDY EVALUATION

Groundwater Monitoring

Concentrations of primary chlorinated volatile organic compounds (CVOCs) were consistently detected in groundwater samples collected from the deep wells within the former source area (MW-09D and MW-08DR) during the monitoring period. Concentrations of *cis*-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride were detected exceeding the respective NYSDEC Ambient Water Quality Standard (AWQS) in samples collected in April 2017 in shallow and deep wells at the site.

Based upon monitored natural attenuation (MNA) parameter data generated during this monitoring period, there is continued potential for natural attenuation to occur within the aquifer. Water quality parameters (dissolved oxygen and oxidation reduction potential), and concentrations of total organic carbon, dissolved oxygen, nitrate, and chloride provide moderately favorable conditions for reductive dechlorination of CVOCs to occur.

Soil Vapor Intrusion Monitoring

The sub-slab depressurization system at the site office building was operational for the monitoring period. Indoor and outdoor air of the office building was monitored during the April 2017 event and will continue to be monitored on an annual basis. No detections of site-related CVOCs were identified in the indoor air samples collected as part of the monitoring program.

Site Inspection and Maintenance

A site inspection was completed on April 27, 2017. Site cover material was observed to be in fair condition with some disturbance. There is some evidence of disintegration of the porous pavement cover south of the main office building.

The site cover materials continue to provide protection to human health and the environment from contaminants of concern at this time. In addition, infiltration of the permeable pavement was observed to be slow in high traffic areas due to the accumulation of sediment and debris within the pavement system.

ES.2 RECOMMENDATIONS

- Site management tasks should continue during the next period. This includes semi-annual site inspections, maintenance (as needed), semi-annual groundwater monitoring and sampling with annual collection of MNA parameters, and annual indoor air monitoring.

- Sweeping/vacuuming of permeable pavement should be completed annually.

1. INTRODUCTION

A periodic review process is commonly implemented at environmental remediation sites to evaluate the effectiveness of the selected remedy and to determine if the remedy continues to be protective of human health and the environment, as set forth in the Site Management Plan (SMP) (EA Engineering, P.C. and its affiliate EA Science and Technology [EA] 2014a). The objectives of the periodic review for sites in the State Superfund Program are as follows:

- Evaluate if chosen remedy is performing properly and effectively, and is protective of public health and the environment.
- Determine compliance with the Record of Decision (ROD) (New York State Department of Environmental Conservation [NYSDEC] 2007) and the SMP (EA 2014a).
- Evaluate treatment system and recommend repairs, if necessary.
- Evaluate the current state and condition of the remedy.
- Determine that the intent of the institutional controls continues to be met, the engineering controls remain in-place, and both are effective and protect public health and the environment.
- Evaluate the operation and maintenance (O&M) costs of the remedy.

1.1 SITE BACKGROUND

The site is located adjacent to Freeport Creek at 435 South Main Street, Freeport, Nassau County, New York. The Metal Etching Co., Inc. (Metal Etching) site is a Class 4 site that was reclassified in April 2014, and is listed on the NYSDEC Registry of Inactive Hazardous Waste Sites (Site No. 130110).

The Metal Etching property is a 2.25-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). The site is currently owned by Freeport Creek Associates, Apache Realty Corporation, and BWM High & Dry; it is 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 24, 54, 144, 145, 155, 157, and 158 on the tax maps. The site is currently used as a boat dealership, marina, and boat storage yard. Boat maintenance operations at the site are conducted in a single 2,400 square foot (ft^2) warehouse building located on the northeast corner of the property. A smaller, 1,200 ft^2 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 warehouse building, as well as a sprung structure that was installed west of the warehouse building; activities include engine rebuilds, sanding, and painting/varnishing.

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^2 of the property (approximately 60 percent of the Metal Etching portion of the site). Aside from the warehouse building, which was originally 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-inch thick concrete slab covering an approximate area of 7,750 ft^2 was the foundation of the Metal Etching plating slab and is visible to the west of the warehouse building.

Historical site operations consisted of handbag manufacturing which involved decorative plating with nickel, chromium, and cadmium; followed by the manufacturing of other metal products including 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. All operations terminated in 1999, and facility buildings were demolished around 2001.

1.2 REMEDIAL HISTORY

A remedial investigation (RI) was performed to characterize the nature and extent of contamination at the site. The RI/Feasibility Study report prepared by Environmental Resource Management (2007) for the Metal Etching site is summarized below:

- The top 7 feet (ft) of soil in three separate areas across the site contained concentrations of metals exceeding the standards, criteria, and guidance (SCGs) used for the site.

- Concentrations of volatile organic compounds (VOCs) in soil varied across the site.

- Groundwater contained concentrations of VOCs exceeding the SCGs across the site; the highest concentrations were detected in samples collected above the clay layer west and south of the 2,400 ft^2 warehouse building. Both tetrachloroethene (PCE) and breakdown contaminants trichloroethene (TCE), dichloroethene (DCE), and vinyl chloride (VC) were detected in site groundwater samples, indicating that degradation was occurring at the site.

- Soil vapor intrusion (SVI) sampling completed in 2004 indicated that both PCE and TCE were present beneath the slabs of the 1,200 ft^2 office building and the warehouse building. A sub-slab depressurization system (SSDS) was installed in each building to address the potential SVI.

- One underground storage tank (UST) was removed from the western area of the site in 1990, prior to the RI. Two additional potential USTs were identified during the RI; the first was identified east of the office building, and the second was identified south of the warehouse building.

- Sediment samples collected from south of the southeast bulkhead in Freeport Creek contained concentrations of chromium and nickel at concentrations exceeding their SCGs.

- Sediment samples collected from within an existing storm drain contained metals exceeding their respective SCGs.

NYSDEC issued a ROD for the Metal Etching site in March 2007. The specific elements of this alternative (as presented in the ROD [NYSDEC 2007]) are identified below:

- A remedial design program to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. This program included delineating the boundaries of sediment excavation within Freeport Creek.

- Hot spot excavation, to the extent practicable, of VOC and metals contaminated soil to the depth of groundwater table.

- Removal of sediment from the onsite stormwater system and disposal at an approved offsite facility.

- Determination of the presence, closure, and removal of USTs onsite in accordance with NYSDEC regulations.

- Areas not previously covered, and where excavation was not practicable, were to receive a cover of asphalt or ballast underlain by a demarcation layer.

- Limited sediment removal from Freeport Creek upon completion of the additional Freeport Creek Study and delineation of site-related contamination in the area of SED-04.

- A long-term groundwater monitoring program to confirm the effectiveness of the remedy.

- Establishment of an institutional control that requires: (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning, (b) compliance with the approved SMP (EA 2014a), (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by New York State Department of Health (NYSDOH), and (d) submission of a periodic certification of institutional controls (ICs) and engineering controls (ECs) to the NYSDEC by the property owner.

- Development of a SMP.

- Requirement of the property owner to submit a periodic certification of ICs and ECs prepared and submitted by a professional engineer, or such other expert acceptable to the NYSDEC, until the NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal will: (a) contain certification that the ICs and ECs put in place are still in place, and are either unchanged from the previous certification or are compliant with NYSDEC-approved modifications, (b) allow the NYSDEC access to the site, and (c) state that nothing has occurred that will impair the ability of the controls to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the NYSDEC.

1.2.1 Summary of Remedial Actions

The remedial action (RA) selected by the ROD (NYSDEC 2007) included excavation and disposal of soil/fill exceeding soil cleanup objectives (SCOs), construction of a soil cover system of asphalt or permeable pavement to prevent human exposure to contaminated soil/fill remaining, removal and disposal of contaminated sediment from the onsite stormwater system, and from a limited area within Freeport Creek.

The site was remediated in accordance with the NYSDEC-approved remedial design, which was part of 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 RAs performed at the site:

1. Excavation of 2,684 cubic yards (yd^3) of soil/fill exceeding SCOs within identified excavation limits, to low-tide groundwater elevation, approximately 5 ft below ground surface (bgs).

2. 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.

3. Execution and recording of three Environmental Notices to restrict land use to commercial or industrial uses, and prevent future exposure to any contamination remaining at the site.

4. Removal of approximately 2 yd^3 of sediment from the onsite stormwater system and disposal at an approved offsite facility.

5. Closure and removal of four USTs onsite in accordance with NYSDEC regulations.

6. Limited removal of approximately 183 yd^3 of sediment from delineated area within Freeport Creek and disposal at an approved offsite facility.

7. Development and implementation of a SMP for long-term management of remaining contamination as required by the Environmental Notices, which include plans for: (1) ICs/ECs, (2) monitoring, (3) O&M, and (4) reporting.

8. Remedial activities were completed at the site in January 2012.

1.2.1.1 Remaining Contamination

Per the ROD (NYSDEC 2007), excavation depth was limited by the low-tide groundwater elevation; therefore, known contamination remains at the site. Mirafi® 180N/O non-woven geotextile was installed over the footprints of all excavations to demarcate the extent of removal and remaining contamination. The majority of the excavations were completed at a depth of 5 ft; two small excavations were completed at a depth of 1 ft.

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 to 8 ft bgs and 12 ft bgs. A confining clay layer was identified 31 to 38 ft bgs across the site.

Endpoint soil samples were collected at the excavation bottom and sidewall boundaries during the remedial action. VOCs detected in endpoint soil samples with concentrations exceeding the site-specific SCOs included xylenes, 1,2-DCE as a combination of *cis*- and *trans*-1,2-DCE, and toluene (south of the warehouse building).

Metals detected in endpoint soil samples collected near the warehouse building with concentrations exceeding the site-specific SCOs include chromium, copper, nickel, and zinc.

Near the office building, zinc was detected in endpoint samples exceeding the site-specific SCO.

Many of the endpoint samples collected northeast and east of the warehouse building contained copper, nickel, and zinc exceeding the site-specific SCOs. One sample directly east of the warehouse building contained chromium at a concentration exceeding the site-specific SCOs.

Sediment was removed from a 2 ft excavation within Freeport Creek directly adjacent to the easternmost portion of the southern bulkhead. Endpoint samples collected following dredging activities contained arsenic, copper, and mercury at concentrations exceeding their respective SCGs.

A full discussion of remaining contamination including tables and figures can be found in the Final Engineering Report (EA 2014b).

1.2.1.2 Final Engineering Report

The Final Engineering Report (EA 2014b) was completed in October 2012 following the RA, and updated in April 2014 to include the Environmental Notices. The Final Engineering Report details the remedial activities conducted at the Metal Etching site.

1.2.1.3 Site Management Plan

The SMP was originally completed by EA in August 2012 and provided direction for maintenance and monitoring of the remedy selected by the ROD (NYSDEC 2007) for the Metal Etching site. The SMP (EA 2014a) was revised in April 2014 to include the Environmental Notices as an appendix and to update the groundwater monitoring well network based on field changes. A full copy of the SMP is provided in Appendix A.

1.3 SITE GEOLOGY AND HYDROGEOLOGY

The site is located adjacent to Freeport Creek at an elevation of 5 ft above mean sea level (AMSL). Freeport Creek and site groundwater is tidally influenced and ranges from 5 to 2.5 ft bgs at the site.

The top 3 to 4 ft of soil at the site consists of compacted fill material which includes sand, gravel, brick and wood debris. Fill is underlain by organics and shells to approximately 11 ft bgs. Some fill was excavated, disposed offsite, and replaced with clean granular fill during the 2011 RA. Glacial outwash sediments including sand and silt form the layer beneath the fill to a layer of clay at approximately 31 to 38 ft bgs. The glacial outwash is underlain by the Magothy formation, which consists of sand and gravel with some clayey sands.

Depth to groundwater ranges from 3 to 5 ft bgs and is highly influenced by tides, as discussed in the RI Report (Environmental Resource Management 2007). Groundwater flow is to the southeast across the site during low tide, and to the northwest during high tide. Groundwater flow as observed during the April 2017 monitoring event is shown in Figure 2, respectively.

1.4 SITE MANAGEMENT OBJECTIVES

Environmental monitoring points at the Metal Etching site have been maintained and sampled during the monitoring period in accordance with the SMP (EA 2014a). This included collection of groundwater samples at various locations across the site, inspection of the site cover material, and site maintenance. Indoor air and outdoor air samples were collected in April 2017. Sampling locations, sampling methodology, list of analytes, analytical methods, cover material inspection methodology, and site maintenance objectives are documented in the SMP.

The following are objectives of the monitoring and maintenance program:

- Collect representative groundwater samples and evaluate the data to confirm the remedy continues to be effective in protecting public health and the environment.

- Collect indoor air samples and evaluate the data to monitor effectiveness of the existing SSDS and determine necessity.

- Periodically inspect the site and provide routine maintenance, as necessary.

- Document and report this information to the NYSDEC.

1.5 PERIODIC REVIEW REPORT

The purpose of this Periodic Review Report (PRR) is to summarize the results of the April 2017 groundwater monitoring and site inspection event; and to provide sufficient documentation that the remedy remains in place, is performing properly and effectively, and is protective of public health and the environment. Specifically, this report provides the following information:

- Results of groundwater and indoor air monitoring
- Evaluation of the current groundwater quality conditions
- Results of site inspections
- Maintenance activities performed to date.

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2. EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

2.1 SITE INSPECTION

Inspection of the site and its appurtenances was conducted on April 27, 2017. Findings and observations were recorded on the site-specific inspection forms, which are provided in Appendix B.

2.1.1 Site Cover

Overall, the site was in good condition. There were several spots that appeared to show settling/rutting of the porous pavement to the south of the site's office building and around the warehouse. There is also evidence of some disintegration of the porous pavement cover south of the main office building.

The storm drain located at the sites entry way shows damage due to heavy use, and should be replaced. There is some evidence of ponding on the porous pavement that was noticeable due to recent rain.

2.1.2 Site Security

The site was generally found to be in good condition during the April 2017 inspection. There was no evidence of vandalism. The front fence along Ray Street East and Main Street was fully intact. The gate is operational but should be repaired or replaced. The concrete around the entrance storm drain shows considerable damage, storm water is ponding at this location and the area appeared to be backed up. There was no obvious evidence of any spilled liquids onsite. Monitoring wells are in generally good condition and serving the intended purpose.

2.1.3 Sub-Slab Depressurization Systems

The sub-slab depressurization system on the office building was in operation at the time of the site inspections. The manometer read 4.6 inches (in.) of water column (WC) in April 2017. The exhaust pipe was observed to be cracked at the exhaust end of the pipe near the elbow during the April 2017 inspection; damage is not affecting system operation. The system on the warehouse was decommissioned in 2014 and is not currently in operation due to building use.

2.2 MONITORING PLAN COMPLIANCE REPORT

This PRR assesses whether the Metal Etching site has been remediated and managed as set forth in the SMP (EA 2014a) and ROD (NYSDEC 2007). The Monitoring Plan includes a description of the methods and rationale to be used for assessing the remedy effectiveness, including the following elements:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air).

- Assessing compliance with applicable NYSDEC SCGs, particularly Ambient Water Quality Standard (AWQS).

- 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.

2.3 CONFIRM COMPLIANCE WITH MONITORING PLAN

The following table identifies the SMP monitoring plan requirements on an annual and semi-annual basis for the first year of the plan, and demonstrates compliance with the monitoring plan has been achieved prior to the end of the reporting period.

Monitoring Program Activity	Required Frequency		Compliance Dates
	Semi-Annually	Annually	
Groundwater Monitoring/Sampling	X		April 2017
Site Cover Inspection	X		April 2017
Indoor Air Monitoring		X	April 2017

2.4 GROUNDWATER MONITORING

2.4.1 Groundwater Monitoring and Sampling

Semi-annual groundwater monitoring including gauging and sampling has been continuously performed at the site since completion of the RA in 2012. During the reporting period (November 2016 through November 2017), one groundwater monitoring and gauging event was completed at the site in April 2017.

The site monitoring well network has changed since the completion of the RA. Monitoring wells MW-01 and MW-05, which were originally included in the SMP (EA 2014a) monitoring well network, have not been located onsite since the completion of the RA. A records review indicates these monitoring wells had not been sampled since before the RA, and were likely either paved over or decommissioned. In addition, a concrete pad was poured by the property owner to the west of the warehouse building between Fall 2012 and Spring 2013, which covered monitoring well cluster MW-8. In July 2013, monitoring wells MW-08SR and MW-08DR were installed off the southwest corner of the warehouse, and MW-05R was installed to the southeast of the warehouse. In April 2014, two monitoring wells, MW-11S and MW-11D, were installed along Ray Street behind the warehouse to serve as high tide down-gradient monitoring points. Monitoring well locations are shown on Figures 2 and 3.

The Metal Etching site is located directly adjacent to Freeport Creek, which connects to the Atlantic Ocean through a series of salt marshes; and therefore, is tidally influenced. Due to the proximity of the site to these waters, site groundwater elevation is tidally influenced, and typically ranges between 3 to 5 ft bgs. A groundwater gauging event in April 2017 took place during low tide conditions. Water elevation data for the April 2017 gauging event are summarized in the following table.

Well Identification	Well Casing Elevation (ft AMSL)	Depth to Water (ft btoc) April 28, 2017	Water Elevation (ft AMSL) April 28, 2017
MW-06	4.34	3.80	0.54
MW-05R	4.02	5.50	-1.48
MW-04	6.02	5.45	0.57
MW-08DR	5.24	5.49	-0.25
MW-08SR	5.41	4.80	0.61
MW-9D	4.16	4.96	-0.80
MW-9S	4.27	4.96	-0.69
MW-10D	5.30	5.91	-0.61
MW-10M	5.37	6.02	-0.65
MW-10S	5.09	5.37	-0.28
MW-11S	4.05	—	—
MW-11D	3.96	—	—

NOTE: btoc = Below top of casing
AMSL = Above mean sea level

Interpreted groundwater potentiometric surface flow patterns for the April 2017 gauging event is presented in Figure 2. Groundwater fluctuates with the tides, and typically flows from northwest to southeast across the site during low tides and southeast to northwest during high tides. The April 2017 gauging event took place at low tide, with groundwater flowing in a southeast direction.

Groundwater monitoring wells were sampled in April 2017 during this monitoring period. Each well was purged using low-flow techniques (submersible pumps), and water quality readings were allowed to stabilize prior to sample collection. Purge forms are provided in Appendix C, and daily field reports are provided in Appendix D. Samples were submitted to Con-Test Analytical Laboratory, in East Longmeadow, Massachusetts for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260C, and metals/mercury by EPA Method 6010B/7470A, and monitored natural attenuation parameters including chloride, nitrate, sulfate, sulfide, total organic carbon (TOC), and dissolved gasses; methane, ethane and ethane, per the Site Management Plan and recommendations from previous monitoring events. In addition, per NYSDEC request, groundwater samples were analyzed for per/poly fluorinated alkyl substances (PFAS) by USEPA Method E537, and 1,4-Dioxane by EPA Method 8270D select ion monitoring (SIM) for an isolated sampling event. Groundwater sampling results were compared to NYSDEC AWQS for Class GA waters (NYSDEC 1998). Analytical results are summarized in Tables 1 through 4. Figure 3 shows the interpreted PCE isopleths from April 2017. Data usability summary reports are provided in Appendix E.

2.4.2 Volatile Organic Compounds

Seventeen VOCs were detected during the April 2017 groundwater sampling event; 5 of the 17

VOCs, including Acetone, *cis*-1,2-DCE, PCE, TCE, *trans*-1,2-DCE and VC were detected at concentrations exceeding the NYSDEC AWQS. The groundwater exceedances were detected at monitoring wells MW-08DR and MW-09D. Historically the majority of groundwater exceedances were detected at monitoring wells MW-08DR, MW-09D, MW-09S, MW-10M, and MW-10S. CVOCs have typically exceeded the AWQS in MW-09S during high tide events; this may be evidence of the residual soil source (e.g., sorbed or diffused CVOCs in soil) known to remain in the area of monitoring well sets MW-08R, MW-09 and MW-10 that historically impacted shallow groundwater during high tide.

2.4.3 Inorganic Compounds

Prior to collecting groundwater samples, monitoring wells were purged until the turbidity readings as measured using a Horiba U-52 were less than 50 nephelometric turbidity units (NTU). Based on the unfiltered analyses, six organic compounds (arsenic, copper, iron, magnesium, manganese, and sodium) were detected at concentrations greater than their applicable NYSDEC AWQS during the April 2017 groundwater sampling event. Aluminum, barium, calcium, copper, iron, magnesium, manganese, nickel, potassium, sodium, and zinc were detected in all twelve monitoring wells and remained consistent compared to historical events.

2.4.4 Monitored Natural Attenuation Parameters

As part of the groundwater monitoring program, groundwater samples collected in April 2017 were submitted for MNA parameter analysis including chloride, sulfate, sulfide, nitrate, and total organic carbon and are summarized along with prior sampling results in Table 3.

Discussed are the notable monitored natural attenuation parameters:

- A total organic carbon concentration less than 20 milligrams per liter (mg/L) is a limiting factor in the availability of electron donors required for reductive dechlorination of chlorinated VOCs. Total organic carbon was detected at concentrations greater than 20 mg/L in MW-05R (21.9 mg/L) in April 2017.

- If nitrate concentrations are less than 1 mg/L, along with dissolved oxygen (DO) concentrations less than 0.5 mg/L and increased sulfide concentrations, it can be concluded that anaerobic conditions exist at the site. Nitrate concentrations were less than 1 mg/L at all but one, MW-11D (4.55mg/L) of the monitoring wells at the site. DO was less than 0.5 mg/L in all but one, MW-04 (6.2mg/L). Sulfide was non-detect at all sampling locations.

- Sulfate concentrations greater than 20 mg/L can cause competitive exclusion of reductive dechlorination. *Sulfate concentrations were less than 20 mg/L in MW-04, MW-05R, MW-08SR, MW-09S, MW-10D, and MW-11S.*

- Chloride was detected above 250 mg/L in five of the twelve site monitoring wells; however, it is a major contributor to the ion composition of natural seawater, typically found at concentrations of roughly 19,000 mg/L. Therefore, it is not a reliable metric for measuring MNA in sites influenced by tides.

- Natural attenuation of the CVOCs present in the groundwater at the site primarily occurs under anaerobic conditions that are reflected by DO concentrations below 0.5 mg/L and oxidation-reduction potential (ORP) less than 0.0 millivolts (mV). ORP was less than 0.0 mV along with DO detected at less than 0.5 mg/L in MW-05R, MW-06, MW-08DR, MW-09S, MW-09D, MW-10M, MW-10S, and MW-11S.

2.4.5 Per/Poly Fluorinated Alkyl Substances and 1,4-Dioxane

Analytical results associated with groundwater samples that were collected in April 2017 and submitted for PFAS analysis are summarized in **Table 4**.

Presented are exceedances of applicable criteria:

- 1,4-dioxane was detected in MW-10S at a concentration of 0.45 parts per billion (ppb), which exceeds the EPA's Integrated Risk Information System 2013 for drinking water of 0.35 ppb.

- PFAS were detected above the EPA health advisory level of 70 parts per trillion (ppt) combined concentrations of PFOA and PFOS for drinking water in 7 of the 12 site monitoring wells: MW-04, MW-05R, MW-06, MW-10M, MW-10S, MW-11D, and MW-11S.

2.5 INDOOR AIR MONITORING

The SMP (EA 2014a) required annual indoor air sampling in both the office and warehouse buildings during the heating season to monitor the effectiveness of the SSDSs; however, both systems were damaged during Superstorm Sandy in 2012. A SVI evaluation was conducted in November 2013 and March 2014 to determine the continued necessity of the SSDSs in both buildings. Indoor air, outdoor air, and sub-slab vapor samples were collected in November 2013 from both buildings and again in March 2014 from the warehouse building to confirm results, and it was determined the warehouse SSDS could be shut down with no further monitoring unless building use changes.

In April 2017, indoor air and outdoor air samples were collected from the office building. Samples were collected using laboratory clean-certified Summa® canisters regulated for a 24-hr sample collection. Samples were submitted to Con-Test Analytical Laboratory, of East Longmeadow, Massachusetts for analysis of VOCs using EPA Method TO-15. Air sampling forms are provided in Appendix F.

Results were compared to NYSDOH Air Guidance Values (2006). Analytical results are summarized in Table 5. Data usability summary reports are provided in Appendix E.

During the April 2017 sampling event, various VOCs were detected, but none were detected above NYSDOH Air Guidelines, and no detections of site-related CVOCs were observed.

2.6 CONFIRM THAT PERFORMANCE STANDARDS ARE BEING MET

Tables 1 through 4 provide a summary of groundwater results for the reporting period. Natural attenuation of primary CVOC compounds (PCE/TCE) is a long-term process and will continue to be monitored. Previous soil vapor intrusion monitoring indicated the presence of TCE and PCE beneath the slab in the office building, which is regularly occupied during business hours, indicated the office SSDS needed to be returned to operation. PCE concentrations in the indoor air were non-detect during the April 2017 sampling event, and TCE ranged from 0.23 microgram per cubic meter (µg/m3) to 0.25 µg/m3, indicating that the SSDS is serving its purpose.

3. INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION PLAN REPORT

As previously noted, the SMP is included in Appendix A of this PRR and includes the ICs/ECs Plan. The SMP was revised in April 2014 to include the environmental notices and the updated groundwater monitoring well network. ICs and ECs at the Metal Etching site currently include the following:

- EC—Cover system that includes permeable and standard asphalt pavement areas, rip rap, and concrete building slabs/foundations that prevent incidental contact or ingestion of remaining contaminated subsurface soil at the majority of the site. An excavation work plan included as an appendix to the SMP, identifies the procedures and protocols required to be implemented should the cover system be breached, penetrated, or temporarily removed, and any underlying remaining contamination is disturbed.

- EC—O&M of the SSDSs in the site buildings.

- IC—Establishment of Environmental Notices and compliance with the SMP.

3.1 INSTITUTIONAL CONTROL/ENGINEERING CONTROL REQUIREMENTS AND COMPLIANCE

Determination of compliance with the ICs and ECs at the Metal Etching site is made on the following criteria:

- The ICs and ECs applied at the site are in place and unchanged since completion of the remedial activities and issuance of the SMP.

- No changes or occurrences of activity have impaired or impacted the ability of such controls to protect human health and the environment, or constitute a violation or failure to comply with any element of the SMP for such controls.

- Access to the Metal Etching site will continue to be provided to the NYSDEC for evaluation of the remedy, including access to the site monitoring network and other controls (e.g., SSDS) for continued monitoring and/or maintenance.

3.2 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION FORM

The IC/EC certification forms from the owner and EA are included as Appendix G of this PRR.

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4. COST EVALUATION

4.1 SUMMARY OF COSTS

Costs for EA site management services, including groundwater monitoring and sampling, site inspection, and air sampling was $47,836 for this reporting period. A breakdown of major costs for November 2016 to November 2017 is provided in the following table.

Site Management Activity	EA Cost Incurred for the period of November 2016 – November 2017
Monitoring, Sampling, Inspection, Oversight, Supplies/Equipment, Travel, and Reporting (EA)	$34,005
Analytical Laboratory (Con-Test Analytical)	$12,384
Data Validation (EDS, Inc.)	$1,447

The monitoring, sampling, inspection, oversight, and reporting costs, which are billed by EA, include costs associated with project management, quality assurance, and periodic reporting throughout the reporting period. These monitoring and reporting costs are based on fiscal data generated and tracked by an EA internal financial management system, and includes travel expenses, equipment/supply costs, and other direct charges.

The analytical costs, billed by Con-Test Analytical of East Longmeadow, Massachusetts covered semi-annual groundwater analyses and annual air analyses. Under the next performance monitoring period Con-Test Analytical will again be providing analytical services for the groundwater monitoring and sampling program. Data generated during the reporting period was validated by Environmental Data Services, Inc. of Williamsburg, Virginia.

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5. RECOMMENDATIONS

5.1 GROUNDWATER MONITORING

Semi-annual groundwater monitoring should continue during the next monitoring period. VOCs, such as PCE, TCE, and *cis*-1,2-DCE, are consistently detected in monitoring wells located near the former source area (MW-09S, MW-09D, MW-08SR, and MW-08DR). Inorganics, such as copper, iron, magnesium, manganese, and sodium are consistently detected at concentrations greater than respective NYSDEC AWQS across the site monitoring well network, although sodium is expected to be due to the salinity of the groundwater in this area.

Further sampling is necessary to identify consistent trends during both high and low tides, and to identify an effective long-term management strategy for residual contaminants. In addition, chloride concentrations may not be indicative of groundwater quality as related to the natural attenuation process due to the natural salinity of the groundwater. The MNA parameters analyte list should be supplemented with methane, ethane, and ethene to better understand natural attenuation at the site.

Groundwater monitoring for CVOCs at the site has been completed twice annually for the last four years; groundwater samples from the site monitoring wells have been analyzed for MNA parameters four times up to the end of this reporting period. It is recommended that biannual monitoring for VOCs and annual monitoring for MNA parameters be completed for an additional year before evaluating for the need for additional groundwater treatment.

5.2 INDOOR AIR MONITORING

Onsite indoor and outdoor air monitoring was completed in April 2017 and should continue during the next monitoring period to support continued operation of the SSDS at the site office building, and ensure the system is providing adequate mitigation for vapor intrusion.

5.3 SITE INSPECTION AND MAINTENANCE

5.3.1 Site Cover

The site cover system and surrounding areas were observed to be in good condition with minimal damage during the inspections. Although some minor areas exist where the cover material has been punctured due to ongoing site activities, the damage does not pose a threat to human health.

5.3.2 Sub-Slab Depressurization Systems

The warehouse’s SSDS system will remain out of operation as long as building use does not change. Despite a crack in the exhaust pipe, the office system is fully functioning and is to remain in operation.

5.4 SUMMARY

The following actions are recommended:

- Site management tasks should continue at a reduced frequency. Site inspections and groundwater sampling should be conducted annually. The first site inspection and groundwater sampling event of the next reporting period (November 2017 – November 2018) will be completed in early 2018.

- Groundwater samples should also be submitted for PFAS analysis.

- Sweeping of permeable pavement should be completed annually.

6. REFERENCES

EA Engineering, P.C., and Its Affiliate EA Science and Technology. 2014a. *SMP*. *Final.* Metal Etching Site, Nassau County, Freeport, New York. April.

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New York State Department of Environmental Conservation (NYSDEC). 1998. *Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.* June.

——. 2007. *Record of Decision, Metal Etching Site, Freeport, Nassau County, Site Number 130110.* March.

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

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Figures

VICINITY MAP

Legend

- Site Boundary
- PropertyParcels
- Existing Buildings
- ★ Site Location

Map Date: 1/12/2017
Projection: NAD 1983 State Plane New York Long Isl FIPS 3104 Feet

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

Figure 1
Site Location and Boundary Map
Freeport Metal Etching Periodic Review Report
Freeport, New York

G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.09 - Metal Etching SM\GIS\Projects\PRR_2017\Figure1_SiteLocationAndBoundaryMap.mxd

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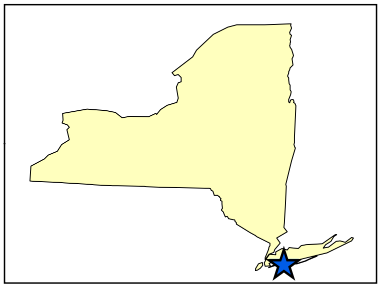
G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.09 - Metal Etching SM\GIS\Projects\MonRpt\April 2017\Figure 2 Shallow Groundwater Contours.mxd



1 inch = 75 feet

Legend

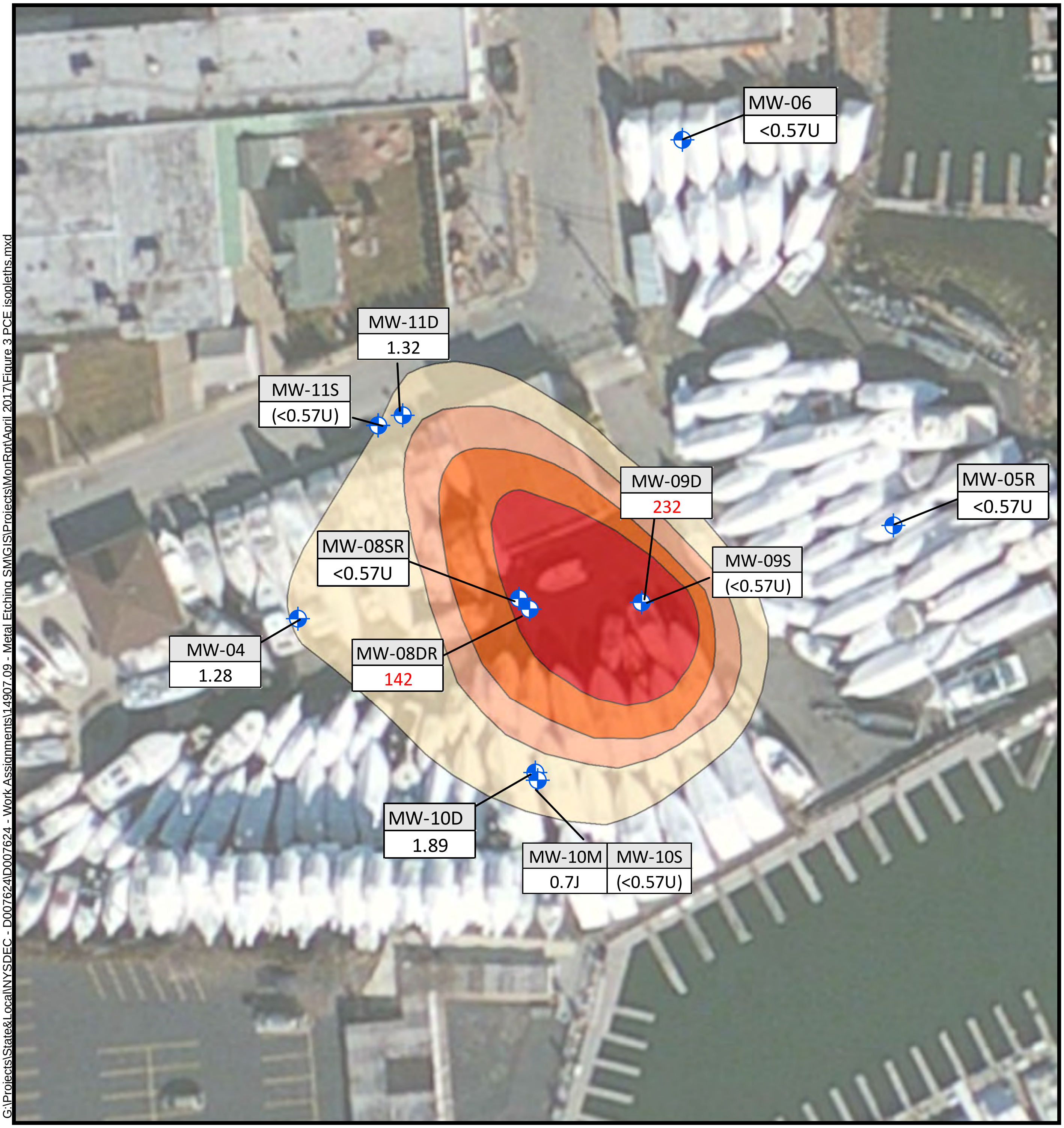
- ⌖ Existing Monitoring Well
- ━ Shallow Groundwater Contours
- (0.5) Groundwater Elevation in ft amsl
- → Groundwater Flow Direction

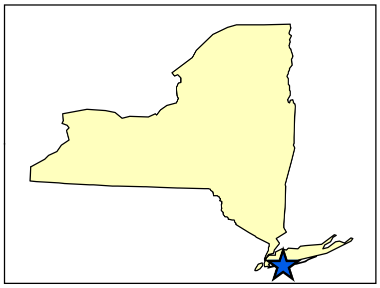
Note: MW-11S and MW-11D were gauged approximately one hour after the other monitoring wells due to access issue and therefore, are not included in the contour map.

Figure 2
Shallow Groundwater Contours
Low Tide Conditions April 2017
Metal Etching Site (130110)
Freeport, New York

Map Date: 11/14/2017
Projection: NAD 1983 State Plane New York Long Island FIPS 3104 Feet

G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.09 - Metal Etching SMGIS\Projects\MonRpt\April 2017\Figure 3 PCE isopleths.mxd





0 37.5 75 150
Feet

1 inch = 75 feet

N

Legend

⌖ Monitoring Wells

Well ID
Tetrachloroethene µg/L
Red value indicates exceedance of NYSDEC AWQS

▨	1 - 5 ug/L
▨	5 - 10 ug/L
🟧	10 - 100 ug/L
🟥	100 - 1,000 ug/L

Figure 3
Tetrachloroethene Isopleths
26-28 April, 2017
Metal Etching Site (130110)
Freeport, New York

Map Date: 10/31/2017
Projection: NAD 1983 State Plane New York Long Island FIPS 3104 Feet

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Tables

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-04																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-02		13E0755-07		13K0947-02		14F0194-07		14K0664-04		15E0606-07		15K0954-03		16E0858-06		SC34122-01		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.3)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.4)	U	5 (s)
Acetone	µg/l	(<50)	U	(<50)	U	(<50)	UJ	(<50)	U	(<50)	U	(<50)	U	(<4.9)	U	(<4.9)	U	(<0.8)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	R	(<20)	R	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	(<2.2)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.4)	U	---
cis-1,2-dichloroethene	µg/l	(<1.0)	U	1.1		1.1		2.4		(<1.0)	U	1.1	U	(<0.15)	U	(<0.15)	U	0.64	J	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.6)	U	---
Di-isopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<31)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.12)	U	(<0.4)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.4)	U	5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		--		--		(<1.1)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--		(<0.63)	U	--		---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.09)	U	(<0.09)	U	(<0.24)	U	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.4)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.4)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.3)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.3)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	(<0.3)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	2		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.17)	U	1.28		5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.4)	U	5(s)
Trichloroethene	µg/l	1		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.2)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0.5)	U	2 (s)

(a) 6 NYCRR Part 703.5 Class GA Groundwater Quality Regulations, as presented in the Division of Water Technical and Operational Guidance Series 1.1.1, 1998, as amended.

NOTE:
EPA = U.S. Environmental Protection Agency.
Identification
-- '= Not analyzed
NYSDEC = New York State Department of Environmental Conservation.
µg/l = micrograms per liter = parts per billion (ppb).
U = The analyte was analyzed for, but was not detected above the sample reporting limit.
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
R = Non-detect result rejected due to exceedence of 20% deviation and/or average RRF values <0.05 in the initial or continuing calibration. The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.
Data provided by Con-Test Analytical Laboratory from 2016-2016. Only analytes that were detected in at least one sample are shown.
2017 Data is provided by Eurofins Spectrum Analytical.
Concentration values in **BOLD** indicate that analyte was detected above the NYSDEC Ambient Water Quality Standards (s) or Guidance Values (g).

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-05R															NYSDEC Ambient Water Quality Standard Class GA(a) (µg/l)
	Lab ID	13K0947-03		14F0194-02		14K0664-01		15E0606-01		15K0954-02		16E0858-01		SC34122-11			
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
	Sample Date	11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/18/2016		4/28/2017			
	Tidal Phase	High/Ebb		Flood/High		Ebb		Low		High		Low		Low			
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.3)	U		5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	1		(<1.0)	U	1.2		1.1		1		(<0.36)	U		5 (s)
Acetone	µg/l	(<50)	UJ	(<50)	U	(<50)	U	(<50)	U	(<4.9)	U	(<4.9)	U	(<0.80)	U		50 (g)
Benzene	µg/l	--		--		--		--		--		--		0.38	J		1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	(<2.2)	UJ	--			5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		0.41	J		---
cis-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.3)	U		5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	2.7		(<0.18)	U	(<0.18)	U	(<0.6)	U		---
Diisopropyl ether	µg/l	0.88		(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U		5 (s)
Ethanol	µg/l	--		--		--		--		--		--		(<31)	U		---
Isopropylbenzene	µg/l	2.7		2.9		1.9		1.9		(<0.12)	U	(<0.12)	U	0.82	J		5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		0.53	J		5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		3.89			50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		1.1		--			---
Methyl tert-butyl ether	µg/l	4.3		3.4		2		2.6		1.4		1.3		1.28			5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		(<0.35)	U		10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	0.61	J		5 (s)
N-propylbenzene	µg/l	1		1.3		(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U		5 (s)
O-xylene	µg/l	--		--		--		--		--		--		0.61	J		5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	1.1		(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	0.55	J		---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	0.61	J		10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		(<5.9)	U		---
Tetrachloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.17)	U	(<0.6)	U		5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.4)	U		5(s)
Trichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.2)	U	(<0.5)	U		5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0..5)	U		2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-06																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-01		13E0755-01		13K0947-01		14F0194-01		14K0664-07		15E0606-02		15K0954-01		16E0858-02		SC34122-06		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/18/2016		4/26/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.42)	U	(<0.32)	U	(<0.3)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.36)	U	(<0.36)	U	(<0.4)	U	5 (s)
Acetone	µg/l	(<50)	U	(<100)	U	(<100)	UJ	(<100)	U	(<100)	U	(<100)	U	(<9.7)	U	(<9.7)	U	(<0.8)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		0.34	J	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	U	(<40)	UJ	(<40)	R	(<40)	R	(<40)	U	(<40)	U	(<4.3)	U	(<4.3)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.4)	U	---
cis-1,2-dichloroethene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.29)	U	(<0.29)	U	(<0.3)	U	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<4.0)	U	(<4.0)	U	(<4.0)	UJ	(<4.0)	U	(<4.0)	U	(<0.36)	U	(<0.36)	U	(<0.6)	U	---
Diisopropyl ether	µg/l	< 0.5	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.36)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<31)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	2.8		2.1		3		2.2		4.4	D	2.2		2.4	D	2.32		5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		1.88	J	5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		--		--		(<1.1)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--		3.4	D	--		---
Methyl tert-butyl ether	µg/l	1.5		3		(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.34)	U	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.5)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.3)	U	0.81	J	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.22)	U	(<0.26)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		0.47	J	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.22)	U	(<0.26)	U	0.87	J	---
Tert-butylbenzene	µg/l	1.1		(<2.0)	U	2.2		3.6		3		3.7	D	3.8		2.6	D	1.98		10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.34)	U	(<0.34)	U	(<0.6)	U	5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		0.87	J	5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.3)	U	(<0.3)	U	(<0.4)	U	5(s)
Trichloroethene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.4)	U	(<0.4)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<4.0)	U	(<4.0)	U	(<4.0)	U	(<4.0)	U	(<4.0)	U	(0.27)	U	(0.27)	U	(<0.5)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	**Location ID**	**MW-08D**		**MW-08DR**														**MW-08S**		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-06		13K0947-10		14F0194-11		14K0664-11		15E0606-13		15K1033-02		16E0858-10		SC34122-13		12K0749-07		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		11/21/2013		6/4/2014		11/11/2014		5/13/2015		11/20/2015		5/18/2016		4/28/2017		11/20/2012		
	Tidal Phase	Flood		High/Ebb		Flood/High		Ebb		Ebb		High		Low		Low		Flood		
1,1-dichloroethene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<5.2)	U	(<1.6)	U	(<1.62)	U	(<1.0)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<4.5)	U	(<1.8)	U	(<1.78)	U	(<1.0)	U	5 (s)
Acetone	µg/l	(<50)	U	(<1,000)	UJ	(<500)	U	(<1,000)	U	(<250)	U	(<120)	UJ	(<49)	U	(<4.02)	U	**74**		50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		(<1.42)	U	--		1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<400)	R	(<200)	R	(<400)	U	(<100)	U	(<54)	U	(<22)	UJ	--		(<20)	R	5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		7.95	J	--		---
cis-1,2-dichloroethene	µg/l	**52**		**220**		(<10)	U	**450**		**97**	D	**250**		**24**	**D**	**15.7**		**85**		5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<40)	U	(<20)	UJ	(<40)	U	(<10)	U	(<4.5)	U	(<1.8)	U	(<2.92)	U	(<2.0)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<10)	U	(<5.0)	U	(<10)	U	(<2.5)	U	(<12.0)	U	(<1.8)	U	(<1.43)	U	(<0.5)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		571	J	--		---
Isopropylbenzene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<3.0)	U	(<1.2)	U	(<1.8)	U	(<1.0)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		(<1.9)	U	--		5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		--		(<5.35)	U	--		50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		(<6.3)	U			--		---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<2.2)	U	(<0.9)	U	(<1.18)	U	1.5		5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		(<1.76)	U	--		10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<25)	U	(<1.5)	U	(<2.06)	U	(<1.0)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<2.8)	U	(<1.3)	U	(<1.72)	U	(<1.0)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		(<1.42)	U	--		5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<2.8)	U	(<1.3)	U	(<1.63)	U	(<1.0)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<2.8)	U	(<1.1)	U	(<1.58)	U	(<1.0)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		(<29.5)	U	--		---
Tetrachloroethene	µg/l	**1,900**		**750**		**1,900**		**530**		**93**	D	**970**		**400**	**D**	**142**		**100**		5(s)
Toluene	µg/l	--		--		--		--		--		--		--		(<1.5)	U	--		5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<20)	U	(<10)	U	(<20)	U	(<5.0)	U	(<3.8)	U	(<1.5)	U	(<1.88)	U	(<1.0)	U	5(s)
Trichloroethene	µg/l	**70**		**630**		**73**		**200**		**12**	D	**150**		**15**	**D**	**10.8**		**140**		5 (s)
Vinyl chloride	µg/l	**3.3**		(<40)	U	(<20)	U	(<40)	U	(<10)	U	(<3.3)	U	(<1.3)	U	3.7	J	(<2.0)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	**Location ID**	**MW-08SR**														NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	13K0947-09		14F0194-10		14K0664-10		15E0606-12		15K1033-01		16E0858-09		SC34122-12		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/21/2013		6/4/2014		11/11/2014		5/13/2015		11/19/2015		5/18/2016		4/28/2017		
	Tidal Phase	High/Ebb		Flood/High		Ebb		Ebb		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.36)	U	5 (s)
Acetone	µg/l	(<50)	U	(<50)	U	(<50)	U	(<50)	U	(<4.9)	UJ	(<4.9)	U	(<0.80)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	**130**	J	(<20)	R	(<20)	U	**44**		(<2.2)	U	(<2.2)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		(<0.37)	U	---
cis-1,2-dichloroethene	µg/l	**6.3**		**5.4**		2.4		2.5		1.4		2.2		1.46		5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		(<30.9)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.12)	U	(<0.36)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl ketone	µg/l	--		--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		(<0.63)	U	--		---
Methyl tert-butyl ether	µg/l	**8.3**		3.8		2.2		**7.6**		1.4		1.5		0.56	J	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.41)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		(<0.28)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.33)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	(<0.32)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	2.4		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.17)	U	(<0.57)	U	5(s)
Toluene	µg/l	--		--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	**5.2**		1.6		1.4		1		2.3		1.1		0.92	J	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0.47)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	**Location ID**	**MW-09D**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-08		13E0755-02		13K0947-08		14F0194-09		14K0664-09		15E0606-11		15K0954-08		16E0858-08		SC34122-08		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		5/20/2013		11/21/2013		6/4/2014		11/11/2014		5/13/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Flood		Low/Flood		High/Ebb		Flood/High		Ebb		Ebb		High		Low		Low		
1,1-dichloroethene	µg/l	2		(<2.0)	U	(<2.0)	U	(<5.0)	U	(<25)	U	(<5.0)	U	(<2.1)	U	(<0.63)	U	(<1.62)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<5.0)	U	(<25)	U	(<5.0)	U	(<1.8)	U	(<0.72)	U	(<1.78)	U	5 (s)
Acetone	µg/l	**250**		(<100)	U	(< 100)	UJ	(<250)	U	(<1,200)	U	(<250)	U	(<49)	U	(<19)	U	(<4.02)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<1.42)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<40)	R	(<40)	R	(<100)	R	(<500)	U	(<100)	U	(<22)	U	(<8.7)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		5.9	J	---
cis-1,2-dichloroethene	µg/l	**530**		**12**		**260**		**72**		**160**		**190**	D	**180**		**110**	**D**	**241**		5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(4.0)	U	(<4.0)	U	(<10)	UJ	(<50)	U	(<10)	U	(<1.8)	U	(<0.72)	U	(<2.92)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<1.0)	U	(<1.0)	U	(<2.5)	U	(<12)	U	(<2.5)	U	(<5.0)	U	(<0.72)	U	(<1.43)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		342	J	---
Isopropylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<5.0)	U	(<25)	U	<5.0)	U	(<1.2)	U	(<0.48)	U	(<1.8)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<1.9)	U	5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		--		--		(<5.35)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--	U	(<2.5)	U	--		---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	<5.0)	U	(<25)	U	<5.0)	U	(<0.9)	U	(<0.36)	U	(<1.18)	U	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<1.76)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)		(<2.0)	U	(<2.0)	U	<5.0)	U	(<25)	U	<5.0)	U	(<10)	U	(<0.6)	U	(<2.06)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	<5.0)	U	(<25)	U	<5.0)	U	(<1.1)	U	(<0.52)	U	(<1.72)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<1.42)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	<5.0)	U	(<25)	U	<5.0)	U	(<1.1)	U	(<0.52)	U	(<1.63)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<2.0)	U	(<2.0)	U	(<5.0)	U	(<25)	U	(<5.0)	U	(<1.1)	U	(<0.44)	U	(<1.58)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		46.6	J	---
Tetrachloroethene	µg/l	**89**		**160**		**430**		**2,300**		**510**		**340**	D	**320**		**3,300**	**D**	**232**		5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		(<1.5)	U	5(s)
trans-1,2-dichloroethene	µg/l	2.3		(<2.0)	U	3.5		(<5.0)	U	(<25)	U	(<5.0)	U	(<1.5)	U	(<0.6)	U	3.3	J	5(s)
Trichloroethene	µg/l	**180**		**27**		**240**		**220**		**250**		**220**	D	**180**		**41**	**D**	**118**		5 (s)
Vinyl chloride	µg/l	**48**		(<4.0)	U	**7.3**		(<10)	U	(<50)	U	(<10)	U	(<1.3)	U	**10**	**D**	**7.2**		2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-09S																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-10		13E0755-03		13K0947-07		14F0194-08		14K0664-08		15E0606-08		15K0954-07		16E0858-07		SC34122-07		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/4/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	1.8		(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	4.5		(<0.32)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.36)	U	(<0.36)	U	5 (s)
Acetone	µg/l	**1,700**		(<50)	U	**58**	J	(< 200)	U	(<50)	U	**150**		(<4.9)	U	(<9.7)	U	(<0.80)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	R	(< 20)	R	(< 80)	R	(<20)	U	(< 20)	U	(<2.2)	U	(<4.3)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.37)	U)	---
cis-1,2-dichloroethene	µg/l	**1,300**		(<1.0)	U	**220**	J	**86**		(<1.0)	U	(<1.0)	U	**1,600**		(<0.29)	U	0.53	J	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	U	(<1.0)	U	(< 8.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.36)	U	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(< 0.5)	U	(< 2.0)	U	(< 0.5)	U	(< 0.5)	U	(<0.5)	U	(<0.36)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<30.9)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.24)	U	(<0.36)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--		(<1.3)	U	--		---
Methyl tert-butyl ether	µg/l	1.1		(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.09)	U	(<0.18)	U	(<0.24)	U	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.3)	U	(<0.41)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.26)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.33)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.26)	U	(<0.33)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.22)	U	(<0.34)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.34)	U	(<0.57)	U	5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	4.7		(<1.0)	U	1.3		(< 4.0)	U	(<1.0)	U	(<1.0)	U	**8.6**		(<0.3)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	**5.2**		(<1.0)	U	(<1.0)	U	(< 4.0)	U	(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.4)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	**290**		(< 2.0)	U	**100**	J	**94**		(< 2.0)	U	(< 2.0)	U	**250**	J	(<0.27)	U	1.35		2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	**Location ID**	**MW-10D**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-03		13E0755-04		13K0947-06		14F0194-05		14K0664-02		15E0606-05		15K0954-04		16E0858-04		SC34122-05		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.36)	U	5 (s)
Acetone	µg/l	(<50)	U	(<50)	U	(<50)	UJ	(<50)	U	(<50)	U	(<50)	U	(<4.9)	U	(<4.9)	U	(<0.80)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	R	(<20)	R	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	(<2.2)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.37)	U	---
cis-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.33)	U	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	(<2.0)	UJ	(<2.0)	UJ	(<2.0)	U	(<0.18)	U	(<0.18)	UJ	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<30.9)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.12)	U	(<0.36)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl keytone	µg/l	--		--		--		--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--		(<0.63)	U	--		---
Methyl tert-butyl ether	µg/l	1.1		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.09)	U	(<0.09)	U	(<0.24)	U	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.41)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.33)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	(<0.32)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	(<1.0)	U	(<1.0)	U	**15**		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.17)	U	1.89		5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	(<1.0)	U	(<1.0)	U	3.3		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.2)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0.47)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	**Location ID**	**MW-10M**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	12K0749-04		13E0755-06		13K0947-05		14F0194-06		14K0664-05		15E0606-06		15K0954-05		16E0858-05		SC34122-04		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Flood		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.36)	U	5 (s)
Acetone	µg/l	(<50)	U	(<50)	U	(<50)	UJ	(<50)	U	(<50)	U	(<50)	U	(<4.9)	U	(<4.9)	U	(<0.8)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	**32**	J	(<20)	R	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	(<2.2)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.37)	U	---
cis-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	**1.2**		(<1.0)	U	(<0.15)	U	(<0.15)	U	0.43	J	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	UJ	(<2.0)	U	(<2.0)	UJ	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<30.9)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.12)	U	(<0.36)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl ketone	µg/l	--		--		--		--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--	U	(<0.63)	U	--		---
Methyl tert-butyl ether	µg/l	2.9		3		(<1.0)	U	1.1		(<1.0)	U	1		(<0.09)	U	(<0.09)	U	0.67	J	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	UJ	(<1.0)	U	(<0.15)	U	(<0.41)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.33)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	(<0.32)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	2.5		(<1.0)	U	**5.8**		**9.2**		**7.2**	J	**7.9**		4.7		**5.2**		0.7	J	5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	(<1.0)	U	(<1.0)	U	1.6		(<1.0)		(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.2)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<2.0)	UJ	(<0.13)	U	(<0.13)	U	(<0.47)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-10S																		NYSDEC Ambient Water Quality Standard Class GA(a) (µg/l)
	Lab ID	12K0749-05		13E0755-05		13K0947-04		14F0194-03		14K0664-03		15E0606-03		15K0954-06		16E0858-03		SC34122-03		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/26/2017		
	Tidal Phase	Flood		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.36)	U	5 (s)
Acetone	µg/l	**190**		(<50)	U	(<50)	UJ	(<50)	U	(<50)	U	(<50)	U	(<4.9)	U	(<4.9)	U	(<0.80)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	R	(<20)	R	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	**29**	**J**	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.37)	U	---
cis-1,2-dichloroethene	µg/l	1.4		(<1.0)	U	(<1.0)	U	4.7		(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.33)	U	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<30.9)	U	---
Ethylbenzene	µg/l	--		--		--		--		--		--		--		--		(<0.33)	U	5 (s)
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.12)	U	(<0.36)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl ketone	µg/l	--		--		--		--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--		(<0.63)	U	--		---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<1.0)	U	2.5		3.8		(<1.0)	U	2.3		1		**11**		1.26		5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	--		--		--		--		--		--		(<1.0)	U	(<0.15)	U	(<0.41)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.33)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	(<0.32)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.17)	U	(<0.57)	U	5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.2)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	**2.1**		(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0.47)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-11D													NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	14F0194-13		14K0664-12		15E0606-09		15K1033-04		16E0858-12		SC34122-09			
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
	Sample Date	6/4/2014		11/11/2014		5/13/2015		11/20/2015		5/17/2016		4/28/2017			
	Tidal Phase	Flood/High		Ebb		Ebb		High		Low		Low			
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.32)	U		5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.36)	U		5 (s)
Acetone	µg/l	(<50)	U	(<50)	U	(<50)	U	(<4.9)	UJ	(<4.9)	U	(<0.80)	U		50 (g)
Benzene	µg/l	--		--		--		--		--		(<0.28)			1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	(<2.2)	UJ	--			5 (s)
Chloromethane	µg/l	--		--		--		--		--		(<0.37)	U		---
cis-1,2-dichloroethene	µg/l	1.6		2		1.2		(<0.15)	U	1.6		0.98	J		5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.58)	U		---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U		5 (s)
Ethanol	µg/l	--		--		--		--		--		(<30.9)	U		---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.12)	U	(<0.12)	U	(<0.36)	U		5 (s)
M,P-xylene	µg/l	--		--		--		--		--		(<0.338)	U		5 (s)
methyl ethyl ketone	µg/l	--		--		--		--		--		(<1.07)	U		50 (g)
Methylcyclohexane	µg/l	--		--		--		--		(<0.63)	U	--			---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.09)	U	(<0.09)	U	(<0.24)	U		5 (s)
Naphthalene	µg/l	--		--		--		--		--		(<0.35)	U		10 (g)
N-Butylbenzene	µg/l	--		--		--		(<1.0)	U	(<0.15)	U	(<0.41)	U		5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U		5 (s)
O-xylene	µg/l	--		--		--		--		--		(<0.28)	U		5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.33)	U		---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	(<0.32)	U		10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		(<5.9)	U		---
Tetrachloroethene	µg/l	**22**		**9.6**		4.3		1.5		2.8		1.32			5(s)
Toluene	µg/l	--		--		--		--		--		(<0.3)	U		5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.38)	U		5(s)
Trichloroethene	µg/l	1.3		1.9		1.1		(<0.2)	U	1.3		0.8	J		5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0.47)	U		2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

Parameter List USEPA Method 8260C	Location ID	MW-11S												NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (µg/l)
	Lab ID	14F0194-12		14K0664-13		15E0606-10		15K1033-03		16E0858-11		SC34122-10		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	6/4/2014		11/11/2014		5/13/2015		11/20/2015		5/17/2016		4/28/2017		
	Tidal Phase	Flood/High		Ebb		Ebb		High		Low		Low		
1,1-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.21)	U	(<0.16)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.18)	U	(<0.18)	U	(<0.36)	U	5 (s)
Acetone	µg/l	(<50)	U	(<50)	U	(<50)	U	(<4.9)	UJ	(<4.9)	U	(<0.80)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	U	(<20)	U	(<2.2)	U	(<2.2)	UJ	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		(<0.37)	U	---
cis-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.33)	U	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<0.18)	U	(<0.18)	U	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		(<30.9)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	1.1		(<0.12)	U	1		0.8	J	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl ketone	µg/l	--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		2.1		--		---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.09)	U	(<0.09)	U	--		5 (s)
Naphthalene	µg/l	--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	--		--		--		(<1.0)	U	1.7		1.08		5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.13)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		(<0.28)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	1.2		(<0.11)	U	2		1.04		---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.11)	U	(<0.11)	U	0.54	J	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.17)	U	(<0.17)	U	(<0.57)	U	5(s)
Toluene	µg/l	--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.15)	U	(<0.15)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<0.2)	U	(<0.2)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<0.13)	U	(<0.13)	U	(<0.47)	U	2 (s)

Table 1 Summary of Detected Volatile Organic Compounds in Groundwater

		DUPLICATE SAMPLES																		
Parameter List USEPA Method 8260C	**Lab ID**	12K0749-09		13E0755-08		13K0947-11		14F0194-04		14K0664-06		15E0606-04		15K0954-10		16E0858-14		SC34122-02		NYSDEC Ambient Water Quality Standard Class $GA^{(a)}$ (µg/l)
	Sample Name	130110-DUP-1112		0110-MW-DUP01-05		130110-DUP-1113		130110-DUP-0614		130110-DUP-1114		DUP-051215		130110-DUP		DUP-0516		DUP-1-0517		
	Parent Sample ID	30110-MW-09D-111		30110-MW-09S-051		30110-MW-09S-111		30110-MW-10S-061		30110-MW-10M-111		MW-04-0515		130110-MW-09S		MW-10S-0516		MW-04-0517		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
1,1-dichloroethene	µg/l	2		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<2.1)	U	(<0.16)	U	(<0.32)	U	5 (s)
1,2,4-trimethylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.8)	U	(<0.18)	U	(<0.36)	U	5 (s)
Acetone	µg/l	**310**		(<50)	U	(<50)	UJ	(<50)	U	(<50)	U	(<50)	U	(<49)	U	(<4.9)	U	(<0.80)	U	50 (g)
Benzene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	1 (s)
Butyl alcohol, tert-	µg/l	(<20)	R	(<20)	R	(<20)	R	(<20)	R	(<20)	U	(<20)	U	(<22)	U	**30**	**J**	--		5 (s)
Chloromethane	µg/l	--		--		--		--		--		--		--		--		(<0.37)	U	---
cis-1,2-dichloroethene	µg/l	**470**		(<1.0)	U	**36**	J	**5.8**		(<1.0)	U	(<1.0)	U	**1,300**		(<0.15)	U	0.7	J	5 (s)
Dichlorodifluoromethane	µg/l	(<2.0)	U	(<2.0)	U	(<2.0)	U	(<2.0)	UJ	(<2.0)	U	(<2.0)	U	(<1.8)	U	(<0.18)	U	(<0.58)	U	---
Diisopropyl ether	µg/l	(<0.5)	U	(< 0.5)	U	(< 0.5)	U	(<0.5)	U	(<0.5)	U	(<0.5)	U	(<5.0)	U	(<0.18)	U	(<0.29)	U	5 (s)
Ethanol	µg/l	--		--		--		--		--		--		--		--		(<30.9)	U	---
Isopropylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.2)	U	(<0.12)	U	(<0.36)	U	5 (s)
M,P-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.38)	U	5 (s)
methyl ethyl ketone	µg/l	--		--		--		--		--		--		--		--		(<1.07)	U	50 (g)
Methylcyclohexane	µg/l	--		--		--		--		--		--		--		(<0.63)	U	--		---
Methyl tert-butyl ether	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	4.9	U	(<1.0)	U	2.1	U	(<0.9)	U	**12**		(<0.24)	U	5 (s)
Naphthalene	µg/l	--		--		--		--		--		--		--		--		(<0.35)	U	10 (g)
N-Butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U		U	(<10)	U	(<0.15)	U	(<0.41)	U	5 (s)
N-propylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.1)	U	(<0.13)	U	(<0.34)	U	5 (s)
O-xylene	µg/l	--		--		--		--		--		--		--		--		(<0.28)	U	5 (s)
Sec-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.1)	U	(<0.13)	U	(<0.33)	U	---
Tert-butylbenzene	µg/l	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.1)	U	(<0.11)	U	(<0.32)	U	10 (g)
Tert-butyl alcohol	µg/l	--		--		--		--		--		--		--		--		(<5.9)	U	---
Tetrachloroethene	µg/l	**79**		(<1.0)	U	(<1.0)	U	(<1.0)	U	2.4	J	(<1.0)	U	(<1.7)	U	(<0.17)	U	1.02		5(s)
Toluene	µg/l	--		--		--		--		--		--		--		--		(<0.3)	U	5(s)
trans-1,2-dichloroethene	µg/l	2.3		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.5)	U	(<0.15)	U	(<0.38)	U	5(s)
Trichloroethene	µg/l	**170**		(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<1.0)	U	(<2)	U	(<0.2)	U	(<0.5)	U	5 (s)
Vinyl chloride	µg/l	**49**		(< 2.0)	U	**16**	J	**2.7**		(<2.0)	U	(<2.0)	U	**180**	J	(<0.13)	U	(0.47)	U	2 (s)

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Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	**Location ID**	**MW-04**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-02		13E0755-07		13K0947-02		14F0194-07		14K0664-04		15E0606-07		15K0954-03		16E0858-06		SC34122-01		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
Aluminum	mg/l	0.1		0.78		0.35		0.95		2.5		0.86		0.23		0.091		0.509		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	0.0022	J	0.003 (s)
Arsenic	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0023	J	0.005 (s)
Barium	mg/l	0.27		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.0063)	U	(<0.0063)	U	0.0047	J	1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	**0.0051**		< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		69		27		18		12		14		13		19		22.6		---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.03		0.011		(<0.0008)	U	(<0.0008)	U	0.0095		0.05 (s)
Cobolt	mg/l	--		--		--		--		--		--		--		--		0.0023	J	0.005 (s)
Copper	mg/l	**0.29**		0.047		0.015		0.012		0.039		0.019		(<0.0047)	U	(<0.0047)	U	0.0064		0.2 (s)
Iron	mg/l	NA		**13**		**1.6**		**1.5**		**7.8**		**1.9**		**0.43**		0.23		**1.21**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.015		< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		22		6.6		3.9		2.7		2.6	B	2.1		3.4		4.36		35 (s)
Manganese	mg/l	**3.5**		**0.44**		0.18		0.13		0.27		0.14		0.076		0.068		0.295		0.3 (s)
Nickel	mg/l	**0.17**		0.011		< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.0052		0.1 (s)
Potassium	mg/l	NA		11		8		4.9		4.3		4		4.5		3.8		4.35		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	0.0014	J	0.0006 (s)
Sodium	mg/l	NA		**320**		**150**		**140**		**97**		**77**		**57**		**59**		**48.5**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0038)	U	(<0.0038)	U	(<0.0011)	U	---
Zinc	mg/l	0.24		0.059		< 0.02	U	< 0.02	U	0.049		< 0.02	U	(<0.0094)	U	(<0.0094)	U	0.0092		2 (s)

(a) 6 NYCRR Part 703.5 Class GA Groundwater Quality Regulations, as presented in the Division of Water Technical and Operational Guidance Series 1.1.1, 1998, as amended.

NOTE:
EPA = U.S. Environmental Protection Agency.
ID = Identification
-- '= Not analyzed
NYSDEC = New York State Department of Environmental Conservation.
mg/l = milligrams per liter = parts per million (ppm).
U = Non-detect, detection below the method detection limit. Analyte included in the analysis, but not detected at or above the MDL.
R06 = MRL raised to correlate to batch QC reporting limits.
J = Detected above the Method Detection Limit but below the Reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
B = Analyte is found in the associated blank as well as in the sample
NA = Analyte not analyzed for during this sampling event.
Data provided by Con-Test Analytical Laboratory from 2012-2016. Only analytes that were detected in at least one sample are shown.
2017 data is provided by Eurofins Spectrum Analytical.
Concentration values in **BOLD** indicate that analyte was detected above the NYSDEC Ambient Water Quality Standards (s) or Guidance Values (g).

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-05R															NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	13K0947-03		14F0194-02		14K0664-01		15E0606-01		15K0954-02		16E0858-01		SC34122-11			
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
	Sample Date	11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/18/2016		4/28/2017			
	Tidal Phase	High/Ebb		Flood/High		Ebb		Low		High		Low		Low			
Aluminum	mg/l	< 0.05	U	0.098		< 0.05	U	0.11		(<0.043)	U	0.093		0.135			---
Antimony	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	**0.059**		(<0.045)	U	(<0.045)	U	0.0022	J		0.003 (s)
Arsenic	mg/l	0.012		< 0.01	U	0.035		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0038	J		0.005 (s)
Barium	mg/l	0.3		0.15		0.19		0.19		0.19		0.26		0.252			1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U		0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	0.0018	J		0.005 (s)
Calcium	mg/l	130		87		94		93		73		100		117			---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0047	J		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		0.0036	J		0.005 (s)
Copper	mg/l	< 0.01	U	0.019		0.015		0.017		0.018		(<0.0047)	U	0.0218			0.2 (s)
Iron	mg/l	**6.7**		**5.8**		**8.6**		**13**		**10**		**17**		**20.6**	R06		0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U		0.025 (s)
Magnesium	mg/l	**36**		22		20		19	B	17		23		24.9			35 (s)
Manganese	mg/l	**0.51**		0.3		**0.49**		**0.61**		**0.45**		**0.82**		**0.929**			0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.012		(<0.0036)	U	0.0058			0.1 (s)
Potassium	mg/l	38		23		20		18		26		17		18			---
Selenium	mg/l	--		--		--		--		--		--		0.005	J		0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	0.0006	J		0.0006 (s)
Sodium	mg/l	**300**		**280**		**260**		**230**		**200**		**240**		**221**			20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U		0.001 (s)
Vanadium	mg/l	0.017		0.012		< 0.01	U	< 0.01	U	0.018		(<0.0038)	U	0.0035	J		---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	0.053		0.061		0.0191			2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-06																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-01		13E0755-01		13K0947-01		14F0194-01		14K0664-07		15E0606-02		15K0954-01		16E0858-02		SC34122-06		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/18/2016		4/26/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
Aluminum	mg/l	0.06		1.5		< 0.05	U	0.31		< 0.05	U	0.11		0.057		0.13		0.113		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	**0.037**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	(<0.0014)	U	0.005 (s)
Barium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.0063)	U	(<0.0063)	U	0.0082		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		86		110		110		80		70		71		70		130		---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0013	J	0.05 (s)
Cobolt	mg/l	--		--		--		--		--		--		--		--		(<0.0008)	U	0.005 (s)
Copper	mg/l	< 0.01	U	0.032		< 0.01	U	0.017		0.017		0.039		(<0.0047)	U	(<0.0047)	U	0.0035	J	0.2 (s)
Iron	mg/l	NA		**20**		**6.8**		**9.5**		**5**		**5.7**		**4.3**		**4.5**		**6.16**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		20		**38**		30		23		20	B	20		20		**36.6**		35 (s)
Manganese	mg/l	0.24		0.21		**0.41**		**0.38**		0.29		0.24		0.24		0.25		**0.335**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.0014	J	0.1 (s)
Potassium	mg/l	NA		11		29		16		20		11		20		11		15.7		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**250**		**310**		**310**		**220**		**210**		**220**		**200**		**233**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	< 0.01	U	0.012		< 0.01	U	< 0.01	U	< 0.01	U	0.017		(<0.0038)	U	0.002	J	---
Zinc	mg/l	< 0.02	U	0.042		< 0.02	U	0.022		0.023		0.022		(<0.0094)	U	0.05		0.0042	J	2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	**Location ID**	**MW-08D**		**MW-08DR**														**MW-08S**		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-06		13K0947-10		14F0194-11		14K0664-11		15E0606-13		15K1033-02		16E0858-10		SC34122-13		12K0749-07		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		11/21/2013		6/4/2014		11/11/2014		5/13/2015		11/20/2015		5/18/2016		4/28/2017		11/20/2012		
	Tidal Phase	Flood		High/Ebb		Flood/High		Ebb		Ebb		High		Low		Low		Flood		
Aluminum	mg/l	0.32		< 0.05	U	0.073		< 0.05	U	0.13		(<0.043)	U	0.12		0.0355		2.2		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	(<0.0016)	U	NA		0.003 (s)
Arsenic	mg/l	< 0.01	U	0.011		< 0.01	U	0.024		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0018	J	< 0.01	U	0.005 (s)
Barium	mg/l	0.1		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.0063)	U	(<0.0063)	U	0.0173		0.2		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	< 0.004	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	< 0.004	U	0.005 (s)
Calcium	mg/l	NA		98		95		49		50		43		70		52.4		NA		---
Chromium	mg/l	0.041		< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0019	J	**0.21**		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		0.0021	J	--		0.005 (s)
Copper	mg/l	0.015		< 0.01	U	0.014		0.017		0.019		(<0.0047)	U	(<0.0047)	U	0.0113		0.064		0.2 (s)
Iron	mg/l	NA		**9.5**		**12**		**6**		**12**		**5.1**		**11**		**5.36**	R06	NA		0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.01		0.025 (s)
Magnesium	mg/l	NA		26		35		18		12	B	14		18		12.2		NA		35 (s)
Manganese	mg/l	**2.1**		**1.1**		**1.4**		**0.79**		**0.74**		**0.73**		**0.93**		**0.447**		**0.73**		0.3 (s)
Nickel	mg/l	0.022		< 0.01	U	0.011		< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.01		0.032		0.1 (s)
Potassium	mg/l	NA		12		12		8.8		6.5		6		9.4		7.75		NA		---
Selenium	mg/l	--		--		--		--		--		--		--		(<0.0042)	U	--		0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	< 0.005	U	0.0006 (s)
Sodium	mg/l	NA		**220**		**390**		**170**		**140**		**140**		**220**		**141**		NA		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	< 0.05	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0038)	U	(<0.0038)	U	(<0.0011)	U	0.032		---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	0.028		< 0.02	U	(<0.0094)	U	(<0.0094)	U	0.0024	J	< 0.02	U	2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-08SR															NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	13K0947-09		14F0194-10		14K0664-10		15E0606-12		15K1033-01		16E0858-09		SC34122-12			
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
	Sample Date	11/21/2013		6/4/2014		11/11/2014		5/13/2015		11/19/2015		5/18/2016		4/28/2017			
	Tidal Phase	High/Ebb		Flood/High		Ebb		Ebb		High		Low		Low			
Aluminum	mg/l	0.11		1.1		0.24		0.83		(<0.043)	U	0.079		0.0174	J		---
Antimony	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	**0.059**		(<0.045)	U	(<0.045)	U	(<0.0016)	U		0.003 (s)
Arsenic	mg/l	**0.023**		**0.023**		**0.037**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0024	J		0.005 (s)
Barium	mg/l	0.14		0.23		0.14		0.19		0.11		0.17		0.127			1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U		0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U		0.005 (s)
Calcium	mg/l	110		92		60		94		48		70		56.2			---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	(<0.0009)	U		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		(<0.0008)	U		0.005 (s)
Copper	mg/l	< 0.01	U	0.053		0.042		0.069		0.014		(<0.0047)	U	0.026			0.2 (s)
Iron	mg/l	**4.1**		**6.9**		**1.9**		**3.5**		0.19		0.19		0.0698	R06,J		0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U		0.025 (s)
Magnesium	mg/l	23		18		11		16	B	8.1		12		8.57			35 (s)
Manganese	mg/l	**0.62**		**1.2**		0.24		**1.6**		0.22		0.05		0.0112			0.3 (s)
Nickel	mg/l	0.073		0.08		0.023		0.069		(<0.0036)	U	(<0.0036)	U	0.0051			0.1 (s)
Potassium	mg/l	18		11		9.6		7.6		6		6.5		5.82			---
Selenium	mg/l	--		--		--		--		--		--		(<0.0042)	U		0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U		0.0006 (s)
Sodium	mg/l	**160**		**130**		**89**		**79**		**70**		**81**		**65.8**			20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U		0.001 (s)
Vanadium	mg/l	< 0.01	U	0.02		0.012		0.014		(<0.0038)	U	(<0.0038)	U	0.006			---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	(<0.0094)	U	(<0.0094)	U	0.0032	J		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	**Location ID**	**MW-09D**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-08		13E0755-02		13K0947-08		14F0194-09		14K0664-09		15E0606-11		15K0954-08		16E0858-08		SC34122-08		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		5/20/2013		11/21/2013		6/4/2014		11/11/2014		5/13/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Flood		Low/Flood		High/Ebb		Flood/High		Ebb		Ebb		High		Low		Low		
Aluminum	mg/l	0.74		0.64		< 0.05	U	0.34		1.5		0.33		0.17		0.17		0.286		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.031**		**0.014**		< 0.01	U	< 0.01	U	< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0044		0.005 (s)
Barium	mg/l	0.086		< 0.05	U	0.18		0.066		0.11		< 0.05	U	0.082		(<0.0063)	U	0.295		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		28		140		96		81		43		33		75		42.3		---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.018		< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0022	J	0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		--		0.0025	J	0.005 (s)
Copper	mg/l	< 0.01	U	0.19		**0.25**		0.17		**0.65**		0.18		0.16		0.019		**0.379**		0.2 (s)
Iron	mg/l	NA		**26**		**78**		**31**		**45**		**22**		**14**		**15**		**11.4**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	**0.042**		< 0.01	U	0.016		< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		8.5		**66**		**42**		**46**		16	B	14		26		17.6		35 (s)
Manganese	mg/l	**1.3**		**0.98**		**5.9**		**2.7**		**3.6**		**1.4**		**1.2**		**0.93**		**0.986**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	0.032		0.011		0.017		< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.004	J	0.1 (s)
Potassium	mg/l	NA		4.7		14		8.3		9.8		4.7		4.9		7.4		5.39		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	**0.0051**		< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**110**		**300**		**440**		**300**		**190**		**140**		**240**		**160**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	0.015		0.017		< 0.01	U	0.023		< 0.01	U	0.012		(<0.0038)	U	0.0014	J	---
Zinc	mg/l	< 0.02	U	0.22		0.69		0.066		0.26		0.059		0.18		(<0.0094)	U	0.686		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-09S																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-10		13E0755-03		13K0947-07		14F0194-08		14K0664-08		15E0606-08		15K0954-07		16E0858-07		SC34122-07		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/4/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
Aluminum	mg/l	0.55		0.86		1.5		0.069		0.27		0.48		0.16		0.29		1.11		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.013**		**0.022**		< 0.01	U	**0.021**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0032	J	0.005 (s)
Barium	mg/l	0.38		0.14		0.061		0.24		0.21		0.25		0.5		0.26		0.861		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	0.0006	J	0.005 (s)
Calcium	mg/l	NA		33		44		56		33		43		70		44		34.2		---
Chromium	mg/l	< 0.01	U	< 0.01	U	0.025		< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0104		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		--		0.0022	J	0.005 (s)
Copper	mg/l	< 0.01	U	< 0.01	U	**0.28**		0.016		0.085		**0.45**		0.12		**0.26**		**1.32**		0.2 (s)
Iron	mg/l	NA		**6.8**		**11**		**7.2**		**4**		**5.3**		**13**		**2.4**		**3.67**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	0.012		0.025 (s)
Magnesium	mg/l	NA		8.3		10		16		5.7		7.7	B	13		7.6		6.34		35 (s)
Manganese	mg/l	**2.2**		**0.31**		**0.46**		**0.62**		0.3		**0.49**		**0.74**		**0.44**		**0.388**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.0037	J	0.1 (s)
Potassium	mg/l	NA		9.4		15		13		9.4		6.5		16		7.2		5.32		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**250**		**150**		**190**		**91**		**88**		**130**		**90**		**60**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	< 0.01	U	0.013		0.012		< 0.01	U	< 0.01	U	0.012		(<0.0038)	U	0.0046	J	---
Zinc	mg/l	< 0.02	U	0.059		0.43		0.022		0.12		0.31		0.18		0.24		0.618		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-10D																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-03		13E0755-04		13K0947-06		14F0194-05		14K0664-02		15E0606-05		15K0954-04		16E0858-04		SC34122-05		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Ebb		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
Aluminum	mg/l	0.64		0.13		< 0.05	U	0.21		0.18		0.76		(<0.043)	U	0.15		0.0262		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	**0.012**		**0.024**		(<0.0078)	U	(<0.0078)	U	0.0024	J	0.005 (s)
Barium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.0063)	U	(<0.0063)	U	0.0158		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		9.8		24		12		11		27		11		34		60.6		---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.035		(<0.0008)	U	(<0.0008)	U	(<0.0009)	U	0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		--		0.0016	J	0.005 (s)
Copper	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.073		(<0.0047)	U	(<0.0047)	U	0.003	J	0.2 (s)
Iron	mg/l	NA		**6.7**		**8.7**		**4.7**		**8.5**		**44**		**6**		**9.5**		**14.3**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		4.6		13		5.7		4.6		10	B	4.9		20		34.7		35 (s)
Manganese	mg/l	**0.31**		**0.47**		**0.7**		**0.34**		**0.33**		**1.4**		**0.34**		**0.75**		**1.7**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.019		(<0.0036)	U	(<0.0036)	U	0.0048	J	0.1 (s)
Potassium	mg/l	NA		2.5		5.3		3.1		2.6		5.2		3.1		6.2		11.4		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**44**		**96**		**71**		**62**		**130**		**52**		**130**		**302**	GS1,	20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0038)	U	(<0.0038)	U	(<0.0011)	U	---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	0.023		0.078		0.033		0.094		0.007		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-10M																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-04		13E0755-06		13K0947-05		14F0194-06		14K0664-05		15E0606-06		15K0954-05		16E0858-05		SC34122-04		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Flood		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
Aluminum	mg/l	0.82		0.23		0.72		0.18		0.7		0.69		0.76		0.21		0.589		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	**0.06**		(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.035**		**0.01**		< 0.01	U	**0.041**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0017	J	0.005 (s)
Barium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.0063)	U	(<0.0063)	U	0.0092		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		75		72		110		93		59		57		59		46.2		---
Chromium	mg/l	0.01		< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.01		(<0.0008)	U	0.0058		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		--		(<0.0008)	U	0.005 (s)
Copper	mg/l	< 0.01	U	0.01		< 0.01	U	0.016		0.077		0.027		0.013		(<0.0047)	U	0.0136		0.2 (s)
Iron	mg/l	NA		**53**		**3.5**		**2**		**6.6**		**3**		**3**		**0.93**		**2.96**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		14		18		27		23		18	B	19		20		14.8		35 (s)
Manganese	mg/l	**0.34**		0.24		**0.8**		**0.43**		**0.34**		0.22		0.22		0.28		**0.321**		0.3 (s)
Nickel	mg/l	< 0.01	U	0.012		< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.004	J	0.1 (s)
Potassium	mg/l	NA		12		10		14		12		9.9		9.6		10		9.08		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**210**		**170**		**390**		**320**		**240**		**230**		**240**		**168**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	0.015		(<0.0038)	U	0.0024	J	---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	0.052		< 0.02	U	0.024		(<0.0094)	U	0.0036	J	2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	**Location ID**	**MW-10S**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-05		13E0755-05		13K0947-04		14F0194-03		14K0664-03		15E0606-03		15K0954-06		16E0858-03		SC34122-03		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	11/20/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/26/2017		
	Tidal Phase	Flood		Low/Flood		High/Ebb		Flood/High		Ebb		Low		High		Low		Low		
Aluminum	mg/l	1		0.078		< 0.05	U	0.35		0.085		0.22		0.12		0.13		0.148		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	**0.056**		(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.014**		**0.019**		< 0.01	U	**0.037**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	**0.0054**		0.005 (s)
Barium	mg/l	0.35		0.13		0.24		0.25		0.24		0.71		0.46		0.58		0.292		1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		39		100		80		53		110		72		120		72.2		---
Chromium	mg/l	0.014		< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0016	J	0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		--		(<0.0008)	U	0.005 (s)
Copper	mg/l	0.02		< 0.01	U	< 0.01	U	0.011		0.061		0.027		0.011		(<0.0047)	U	0.0076		0.2 (s)
Iron	mg/l	NA		**1.6**		**5.7**		**5.9**		**5.2**		**11**		**2.4**		**3.2**		**5.17**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		6		16		12		7.5		15	B	9.6		19		11.3		35 (s)
Manganese	mg/l	**1.1**		0.14		**0.46**		**0.59**		**0.33**		**1.1**		**0.35**		**0.62**		**0.396**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	0.044		0.001	J	0.1 (s)
Potassium	mg/l	NA		7.9		23		12		8.7		12		15		14		11.5		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**220**		**210**		**190**		**160**		**220**		**180**		**150**		**120**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U		U	0.001 (s)
Vanadium	mg/l	0.013		< 0.01	U	< 0.01	U	0.011		< 0.01	U	< 0.01	U	0.012		(<0.0038)	U	0.0032	J	---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	< 0.02	U	0.064		0.046		0.037		(<0.0094)	U	0.0185		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-11D												NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	14F0194-13		14K0664-12		15E0606-09		15K1033-04		16E0858-12		SC34122-09		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	6/4/2014		11/11/2014		5/13/2015		11/20/2015		5/17/2016		4/28/2017		
	Tidal Phase	Flood/High		Ebb		Ebb		High		Low		Low		
Aluminum	mg/l	0.6		< 0.05	U	0.18		(<0.043)	U	0.082		1.1		---
Antimony	mg/l	< 0.05	U	< 0.05	U	**0.056**		(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.04**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0039	J	0.005 (s)
Barium	mg/l	< 0.05	U	0.058		0.053		0.061		0.058		0.0411		1 (s)
Beryllium	mg/l	< 0.004	U	**0.0044**		< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	110		110		130		110		150		78		---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0123		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		0.0024	J	0.005 (s)
Copper	mg/l	0.017		0.021		0.027		(<0.0047)	U	(<0.0047)	U	0.0154		0.2 (s)
Iron	mg/l	**7.8**		**13**		**2.8**		**0.55**		**0.4**		**8.98**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	**40**		35		33	B	29		**36**		17.9		35 (s)
Manganese	mg/l	**4.1**		**3.6**		**3.2**		**1.8**		**2.5**		**2.28**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.0031	J	0.1 (s)
Potassium	mg/l	15		21		12		10		14		10.8		---
Selenium	mg/l	--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	**430**		**290**		**340**		**300**		**440**		**387**	GS1,D	20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	0.011		< 0.01	U	(<0.0038)	U	(<0.0038)	U	0.0034	J	---
Zinc	mg/l	< 0.02	U	0.038		< 0.02	U	(<0.0094)	U	0.024		0.0136		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	Location ID	MW-11S													NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	14F0194-12		14K0664-13		15E0606-10		15K1033-03		16E0858-11		SC34122-10			
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
	Sample Date	6/4/2014		11/11/2014		5/13/2015		11/20/2015		5/17/2016		4/28/2017			
	Tidal Phase	Flood/High		Ebb		Ebb		High		Low		Low			
Aluminum	mg/l	1.3		1.1		0.74		0.77		0.23		0.0579			---
Antimony	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	(<0.045)	U	(<0.045)	U	(<0.0016)	U		0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.049**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0026	J		0.005 (s)
Barium	mg/l	0.097		0.11		0.061		0.083		(<0.0063)	U	0.0253			1 (s)
Beryllium	mg/l	< 0.004	U	**0.0054**		< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U		0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U		0.005 (s)
Calcium	mg/l	95		94		59		85		57		50			---
Chromium	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	(<0.0009)	U		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		0.0018	J		0.005 (s)
Copper	mg/l	< 0.01	U	0.014		0.018		(<0.0047)	U	(<0.0047)	U	(<0.0023)	U		0.2 (s)
Iron	mg/l	**50**		**30**		**34**		**31**		**38**		**31**	R06		0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U		0.025 (s)
Magnesium	mg/l	23		**36**		20	B	**36**		13		15.1			35 (s)
Manganese	mg/l	**1.6**		**1**		**0.8**		**0.86**		**0.85**		**0.755**			0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.0022	J		0.1 (s)
Potassium	mg/l	8.9		23		8		15		6.4		7.5			---
Selenium	mg/l	--		--		--		--		--		(<0.0042)	U		0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U		0.0006 (s)
Sodium	mg/l	**280**		**480**	D	**200**		**350**		**140**		**141**			20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U		0.001 (s)
Vanadium	mg/l	< 0.01	U	0.013		< 0.01	U	(<0.0038)	U	(<0.0038)	U	(<0.0011)	U		---
Zinc	mg/l	< 0.02	U	< 0.02	U	< 0.02	U	(<0.0094)	U	(<0.0094)	U	(<0.0016)	U		2 (s)

Table 2 Summary of Detected Inorganic Compounds in Groundwater

Parameter List USEPA Method 6010C	**Location ID**	**DUPLICATE SAMPLES**																		NYSDEC Ambient Water Quality Standard Class GA$^{(a)}$ (mg/l)
	Lab ID	12K0749-09		13E0755-08		13K0947-11		14F0194-04		14K0664-06		15E0606-04		15K0954-10		16E0858-14		SC34122-02		
	Sample Type	130110-DUP-1112		0110-MW-DUP01-0		130110-DUP-1113		130110-DUP-0614		130110-DUP-1114		DUP-051215		130110-DUP		DUP-0516		DUP-1-0517		
	Sample Date	30110-MW-09D-11		30110-MW-09S-051		30110-MW-09S-111		30110-MW-10S-061		30110-MW-10M-11		MW-04		130110-MW-09S		MW-10S-0516		MW-04-0517		
	Tidal Phase	11/19/2012		5/20/2013		11/21/2013		6/3/2014		11/11/2014		5/12/2015		11/19/2015		5/17/2016		4/27/2017		
	Tidal Phase	Flood/High		Ebb		Flood/High		Ebb		Ebb		Ebb		High		Low		Low		
Aluminum	mg/l	1.6		2.7		2		0.29		0.55		0.22		0.1		0.14		0.516		---
Antimony	mg/l	NA		< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	0.055		(<0.045)	U	(<0.045)	U	(<0.0016)	U	0.003 (s)
Arsenic	mg/l	< 0.01	U	**0.015**		**0.033**		< 0.01	U	**0.041**		< 0.01	U	(<0.0078)	U	(<0.0078)	U	0.0014	J	0.005 (s)
Barium	mg/l	0.096		0.17		0.1		0.25		< 0.05	U	0.72		0.49		0.58		0.0045	J	1 (s)
Beryllium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.001)	U	(<0.001)	U	(<0.0003)	U	0.003 (s)
Cadmium	mg/l	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	< 0.004	U	(<0.0007)	U	(<0.0007)	U	(<0.0004)	U	0.005 (s)
Calcium	mg/l	NA		36		40		79		92		110		70		120		21.7		---
Chromium	mg/l	0.013		0.015		**0.15**		< 0.01	U	< 0.01	U	< 0.01	U	(<0.0008)	U	(<0.0008)	U	0.0083		0.05 (s)
Cobalt	mg/l	--		--		--		--		--		--		--		--		(<0.0008)	U	0.005 (s)
Copper	mg/l	0.012		0.014		**0.88**		< 0.01	U	0.043		0.025		0.072		(<0.0047)	U	0.0077		0.2 (s)
Iron	mg/l	NA		**12**		**19**		**5.9**		**4.3**		**11**		**13**		**3.1**		**1.24**	R06	0.3 (s)
Lead	mg/l	< 0.01	U	< 0.01	U	0.014		< 0.01	U	< 0.01	U	< 0.01	U	(<0.0025)	U	(<0.0025)	U	(<0.0062)	U	0.025 (s)
Magnesium	mg/l	NA		9.6		9.4		11		23		15	B	13		19		4.15		35 (s)
Manganese	mg/l	**1.4**		**0.35**		**0.42**		**0.59**		**0.33**		**1.1**		**0.74**		**0.63**		**0.306**		0.3 (s)
Nickel	mg/l	< 0.01	U	< 0.01	U	0.098		< 0.01	U	< 0.01	U	< 0.01	U	(<0.0036)	U	(<0.0036)	U	0.0035	J	0.1 (s)
Potassium	mg/l	NA		10		15		11		13		12		17		14		4.16		---
Selenium	mg/l	--		--		--		--		--		--		--		--		(<0.0042)	U	0.010 (s)
Silver	mg/l	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	< 0.005	U	(<0.0029)	U	(<0.0029)	U	(<0.0006)	U	0.0006 (s)
Sodium	mg/l	NA		**260**		**130**		**180**		**320**		**220**		**130**		**150**		**47.5**		20 (s)
Thallium	mg/l	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	< 0.05	U	(<0.022)	U	(<0.022)	U	(<0.0021)	U	0.001 (s)
Vanadium	mg/l	< 0.01	U	0.011		0.016		0.011		< 0.01	U	< 0.01	U	0.014		(<0.0038)	U	0.0011	J	---
Zinc	mg/l	< 0.02	U	0.088		0.87		< 0.02	U	0.026		0.034		0.12		(<0.0094)	U	0.0087		2 (s)

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Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

USEPA Parameters List	**Well ID**	**MW-04**									
	Lab ID	12K0749-02		13K0947-02		14K0664-04		15K0954-03		SC34122-01	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/19/2012		11/21/2013		11/11/2014		11/19/2015		4/27/2017	
	Tidal Phase	Ebb		High/Ebb		Ebb		High		Low	
ORP	mV	23		45		-88		-27		23	
Dissolved Oxygen	mg/l	1.01		2.34		0		1.99		6.2	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	3400		170		58		8.81		13.3	
Nitrate	mg/l	0.54		(< 0.05)	U	0.13		0.06		0.435	O09
Sulfate	mg/l	330		39		11		13.1		17.9	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	5.2		3.2		3.2		2		2.66	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		--		(<3.48)	U
Ethene	µg/l	--		--		--		--		(<4.58)	U
Methane	µg/l	--		--		--		--		3	

NOTE:

USEPA = United States Environmental Protection Agency.
ID = Identification
NYSDEC = New York State Department of Environmental Conservation.
ORP = Oxidation-Reduction Potential
mg/l = milligrams per Liter = parts per billion (ppb).
mV = millivolts
-- = Not analyzed.
GS1 = Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
O09 = Sample was analyzed outside the EPA recommended holding time as per client request.
J = Detected above the method detection limit but below th reporting limit; therefore, result is an estimated concentration (CLP J-flag).
U = Non-detect, detection below the method detection limit.
D = Dilution sample

Data provided by Con-Test Analytical Laboratory from 2012-2016. Only analytes that were detected in at least one sample are shown.

2017 data is provided by Eurofins Spectrum Analytical.

Concentration values in BOLD identify parameters indicative of probable MNA conditions.

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-05R**							
	Lab ID	13K0947-03		14K0664-01		15K0954-02		SC34122-11	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/21/2013		11/11/2014		11/19/2015		4/28/2017	
USEPA Parameters List	**Tidal Phase**	High/Ebb		Ebb		High		Low	
ORP	mV	-112		-120		-145		-139	
Dissolved Oxygen	mg/l	2.01		0		0.63		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0									
Chloride	mg/l	510		380		260		312	GS1,D
Nitrate	mg/l	(< 0.05)	U	(< 0.05)	U	0.15		(<0.009)	O09,U
Sulfate	mg/l	(< 2)	U	(< 2)	U	(<3.0)	U	0.615	J
Sulfide by USEPA SM4500									
Sulfide	mg/l	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B									
Total organic carbon	mg/l	12		12		11		**21.9**	
Ethane, Ethene, and Methane by USEPA Method EC3									
Ethane	µg/l	--		--		--		469	
Ethene	µg/l	--		--		--		36	
Methane	µg/l	--		--		--		31	

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-06**									
	Lab ID	12K0749-01		13K0947-01		14K0664-07		15K0954-01		SC34122-06	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/19/2012		11/21/2013		11/11/2014		11/19/2015		4/26/2017	
USEPA Parameters List	**Tidal Phase**	Ebb		High/Ebb		Ebb		High		Low	
ORP	mV	-66		-133		-119		-125		-107	
Dissolved Oxygen	mg/l	0		0.94		0		3.17		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	810		320		340		248		348	GS1,D
Nitrate	mg/l	(< 0.05)	U	(< 0.05)	U	(< 0.05)	U	0.057		0.029	O09,J
Sulfate	mg/l	75		44		(< 2)	U	66		5.5	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	**22**		11		13		12		13.6	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		--		252	
Ethene	µg/l	--		--		--		--		28	
Methane	µg/l	--		--		--		--		27	

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-08DR**								**MW-08D**	
	Lab ID	13K0947-10		14K0664-11		15K1033-02		SC34122-13		12K0749-06	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/21/2013		11/11/2014		11/20/2015		4/28/2017		11/20/2012	
USEPA Parameters List	**Tidal Phase**	High/Ebb		Ebb		High		Low		Flood	
ORP	mV	-9		70		-52		-45		-69	
Dissolved Oxygen	mg/l	0		0		3.38		0		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	350		310		251		217	GS1,D	1200	
Nitrate	mg/l	(< 0.05)	U	(< 0.05)	U	0.1		0.109	O09	(< 0.05)	U
Sulfate	mg/l	63		34		41.7		43.8		180	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	--		(<0.066)	U	(< 2)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	2.1		2.6		2		4.78		8.1	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		3		--	
Ethene	µg/l	--		--		--		22		--	
Methane	µg/l	--		--		--		31		--	

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-08SR**								**MW-08S**	
	Lab ID	13K0947-09		14K0664-10		15K1033-01		SC34122-12		12K0749-07	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/21/2013		11/11/2014		11/19/2015		4/28/2017		11/20/2012	
USEPA Parameters List	**Tidal Phase**	High/Ebb		Ebb		High		Low		Flood	
ORP	mV	-57		-52		-18		90		-136	
Dissolved Oxygen	mg/l	0		0		3.06		0		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	240		55		32.5		41.1		2100	
Nitrate	mg/l	(< 0.05)	U	0.18		(<0.049)	U	0.204	O09	(< 0.05)	U
Sulfate	mg/l	92		46		28.3		10.7		220	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	--		(<0.066)	U	(< 2)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	9.9		4.5		3.9		4.4		11	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		(<2.16)	U	--	
Ethene	µg/l	--		--		--		(<3.48)	U	--	
Methane	µg/l	--		--		--		(<4.58)	U	--	

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

USEPA Parameters List	**Well ID**	**MW-09S**									
	Lab ID	12K0749-10		13K0947-07		14K0664-08		15K0954-07		SC34122-07	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/19/2012		11/21/2013		11/11/2014		11/19/2015		4/27/2017	
	Tidal Phase	Ebb		High/Ebb		Ebb		High		Low	
ORP	mV	-286		-111		-108		-103		-41	
Dissolved Oxygen	mg/l	0		0.90		0		2.59		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	2000		160		51		109		42.1	
Nitrate	mg/l	(< 0.05)	U	(< 0.05)	U	(< 0.05)	U	0.071		(<0.009)	O09,U
Sulfate	mg/l	41		20		(< 2)	U	4.89		(<0.307)	U
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	**49**		21		9		6.1		9.13	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		--		(<2.16)	U
Ethene	µg/l	--		--		--		--		(<3.48)	U
Methane	µg/l	--		--		--		--		(<4.58)	U

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

USEPA Parameters List	Well ID	MW-09D									
	Lab ID	12K0749-08		13K0947-08		14K0664-09		15K0954-08		SC34122-08	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/20/2012		11/21/2013		11/11/2014		11/19/2015		4/27/2017	
	Tidal Phase	Flood		High/Ebb		Ebb		High		Low	
ORP	mV	-120		-15		-9		-46		-35	
Dissolved Oxygen	mg/l	0		3.34		0.18		1.6		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	730		750		890		292		310	GS1,D
Nitrate	mg/l	(< 0.05)	U	(< 0.05)	U	(< 0.05)	U	0.075		(<0.009)	O09,U
Sulfate	mg/l	57		120		100	D	42.7		36.6	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	13		13		0.78		0.69		4.33	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		--		(<2.16)	U
Ethene	µg/l	--		--		--		--		(<3.48)	U
Methane	µg/l	--		--		--		--		(<4.58)	U

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-10D**									
	Lab ID	12K0749-03		13K0947-06		14K0664-02		15K0954-04		SC34122-05	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/19/2012		11/21/2013		11/11/2014		11/19/2015		4/27/2017	
USEPA Parameters List	**Tidal Phase**	Ebb		High/Ebb		Ebb		High		Low	
ORP	mV	13		-36		96		-35		15	
Dissolved Oxygen	mg/l	0		0.90		0		0.51		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	180		230		110		93.6		610	GS1,D
Nitrate	mg/l	0.075		(< 0.05)	U	(< 0.05)	U	0.072		0.846	O09
Sulfate	mg/l	23		14		2		5.73		61.4	GS1,D
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	1.7		(< 0.5)	U	(< 0.5)	U	(<0.16)	U	1.09	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		--		(<2.16)	U
Ethene	µg/l	--		--		--		--		(<3.48)	U
Methane	µg/l	--		--		--		--		(<4.58)	U

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-10M**									
	Lab ID	12K0749-04		13K0947-05		14K0664-05		15K0954-05		SC34122-04	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/20/2012		11/21/2013		11/11/2014		11/19/2015		4/27/2017	
USEPA Parameters List	**Tidal Phase**	Flood		High/Ebb		Ebb		High		Low	
ORP	mV	8		87		8		27		-9	
Dissolved Oxygen	mg/l	0		0		0		0.28		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	380		330		630		378		170	GS1,D
Nitrate	mg/l	0.31		(< 0.05)	U	0.55		0.43		0.252	O09
Sulfate	mg/l	120		59		65	D	64.2		34.6	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	4.6		1.2		3.1		2.1		3.42	
Ethane, Ethene, and Methane by USEPA Method EC3											
Methane	µg/l	--		--		--		--		(<2.16)	U
Ethane	µg/l	--		--		--		--		(<3.48)	U
Ethene	µg/l	--		--		--		--		(<4.58)	U

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

USEPA Parameters List	Well ID	MW-10S									
	Lab ID	12K0749-05		13K0947-04		14K0664-03		15K0954-06		SC34122-03	
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
	Sample Date	11/20/2012		11/21/2013		11/11/2014		11/19/2015		4/26/2017	
	Tidal Phase	Flood		High/Ebb		Ebb		High		Low	
ORP	mV	-123		-124		-49		-118		-114	
Dissolved Oxygen	mg/l	0		0.94		0		0.25		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0											
Chloride	mg/l	1700		240		59		99.4		56.4	GS1,D
Nitrate	mg/l	(< 0.05)	U	(< 0.05)	U	(< 0.05)	U	(<0.049)	U	0.015	O09,J
Sulfate	mg/l	180		140		26		24.2		25.2	
Sulfide by USEPA SM4500											
Sulfide	mg/l	(< 2)	U	(< 2)	U	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B											
Total organic carbon	mg/l	6.5		7.2		5.3		2.4		8.18	
Ethane, Ethene, and Methane by USEPA Method EC3											
Ethane	µg/l	--		--		--		--		158	
Ethene	µg/l	--		--		--		--		(<3.48)	U
Methane	µg/l	--		--		--		--		(<4.58)	U

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-11D**					
	Lab ID	14K0664-12		15K1033-04		SC34122-09	
	Sample Type	Groundwater		Groundwater		Groundwater	
	Sample Date	11/11/2014		11/20/2015		4/28/2017	
USEPA Parameters List	**Tidal Phase**	Ebb		High		Low	
ORP	mV	48		86		138	
Dissolved Oxygen	mg/l	0		0.29		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0							
Chloride	mg/l	690		728		526	GS1,D
Nitrate	mg/l	1.4		3.4		4.55	O09
Sulfate	mg/l	80		80.5		104	GS1,D
Sulfide by USEPA SM4500							
Sulfide	mg/l	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B							
Total organic carbon	mg/l	2.3		1.1		4.23	
Ethane, Ethene, and Methane by USEPA Method EC3							
Ethane	µg/l	--		--		(<2.16)	U
Ethene	µg/l	--		--		14	
Methane	µg/l	--		--		29	

Table 3 Summary of Monitored Natural Attenuation Parameters In Groundwater

	Well ID	**MW-11S**					
	Lab ID	14K0664-13		15K1033-03		SC34122-10	
	Sample Type	Groundwater		Groundwater		Groundwater	
	Sample Date	11/11/2014		11/20/2015		4/28/2017	
USEPA Parameters List	**Tidal Phase**	Ebb		High		Low	
ORP	mV	-195		-187		-172	
Dissolved Oxygen	mg/l	0		0.62		0	
Chloride, Nitrate, Sulfate by USEPA Method E300.0							
Chloride	mg/l	870		670		217	GS1,D
Nitrate	mg/l	(< 0.05)	U	0.082		(<0.009)	O09,U
Sulfate	mg/l	63		64.9		13.4	
Sulfide by USEPA SM4500							
Sulfide	mg/l	(< 2)	U	--		(<0.066)	U
Total Organic Carbon by USEPA Method SM5310B							
Total organic carbon	mg/l	4.1		3.5		4.98	
Ethane, Ethene, and Methane by USEPA Method EC3							
Ethane	µg/l	--		--		(<2.16)	U
Ethene	µg/l	--		--		(<3.48)	U
Methane	µg/l	--		--		(<4.58)	U

Table 4 Summary of Detected Per/Poly Fluorinated Alkyl Substances (PFAS) Compounds in Groundwater

	Location ID	**MW-04**		**MW-05R**		**MW-06**		**MW-08DR**		**MW-08SR**		**MW-09D**		**Guidance Values**
	Lab ID	17E00076-01		17E0006-11		17E0006-06		17E0006-13		17E0006-12		17E0006-08		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	4/27/2017		4/28/2017		4/26/2017		4/28/2017		4/28/2017		4/27/2017		
Parameter List 8270D / E537	**Tidal Phase**	Low		Low		Low		Low		Low		Low		
1,4-Dioxane	ppb	(<0.033)	U	(<0.033)	U	(<0.033)	U	(<0.033)	U	(<0.033)	U	(<0.033)	U	0.35 [1]
Perfluorooctanesulfonic acid (PFOS)	ng/l	**7.6**		**18**		**24**		16		11		7.3		70 [2]
Perfluoroundecanoic Acid (PFUnA)	ng/l	--	U		U		U	2.5		4.7		3.3		---
Perfluoropentanoic Acid (PFPeA)	ng/l	16		11		10		8		6.7		4		---
Perfluorohexanoic acid (PFHxA)	ng/l	29			U	27			U		U		U	---
Perfluorododecanoic acid (PFDoA)	ng/l		U		U		U		U		U		U	---
Perfluorooctanoic acid (PFOA)	ng/l	**160**		**63**		**170**		26		26		9.3		70 [2]
Perfluorodecanoic acid (PFDA)	ng/l	34		22		4.3		7.3		11		4.9		---
Perfluorohexanesulfonic acid (PFHxS)	ng/l		U	3.9		5.2		4.4		9.4			U	---
Perfluorobutanesulfonic acid (PFBS)	ng/l	75		4.3		10		170		69		13		---
Perfluoroheptanoic acid (PFHpA)	ng/l	64			U	54			U		U		U	---
Perfluorononanoic acid (PFNA)	ng/l	92		28		16		5.9		9.2		2.9		---

	Location ID	**MW-09S**		**MW-10D**		**MW-10M**		**MW-10S**		**MW-11D**		**MW-11S**		**Guidance Values**
	Lab ID	17E0006-07		17E0006-05		17E0006-04		17E0006-03		17E0006-09		17E0006-10		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
	Sample Date	4/27/2017		4/27/2017		4/27/2017		4/26/2017		4/28/2017		4/28/2017		
Parameter List 8270D / E537	**Tidal Phase**	Low		Low		Low		Low		Low		Low		
1,4-Dioxane	ppb	(<0.033)	U	(<0.032)	U	(<0.033)	U	**0.45**		(<0.033)	U	(<0.033)	U	0.35 [1]
Perfluorooctanesulfonic acid (PFOS)	ng/l	9.8		5.8		**18**		**26**		**77**		**63**	J	70 [2]
Perfluoroundecanoic Acid (PFUnA)	ng/l	3.9			U		U	2.1			U		U	---
Perfluoropentanoic Acid (PFPeA)	ng/l	7.6		3.9		9.2		9.8		7.1		4.3		---
Perfluorohexanoic acid (PFHxA)	ng/l		U		U		U		U		U		U	---
Perfluorododecanoic acid (PFDoA)	ng/l	2.5			U		U		U		U		U	---
Perfluorooctanoic acid (PFOA)	ng/l	15		17		**86**		**52**		**32**		**9.7**		70 [2]
Perfluorodecanoic acid (PFDA)	ng/l	15			U	35		16			U		U	---
Perfluorohexanesulfonic acid (PFHxS)	ng/l		U		U	2.2		7.1		4.8		22	J	---
Perfluorobutanesulfonic acid (PFBS)	ng/l	15		2.7		23		5		3.5		3.7		---
Perfluoroheptanoic acid (PFHpA)	ng/l		U		U	26			U		U		U	---
Perfluorononanoic acid (PFNA)	ng/l	8.2		2.6		32		18		3.3			U	---

	Location ID	**DUP-01**		**Guidance Values**
	Lab ID	17E0006-02		
	Sample Type	Groundwater		
	Sample Date	4/27/2017		
Parameter List 8270D / E537	**Tidal Phase**	Low		
1,4-Dioxane	ppb	(<0.033)	U	0.35 [1]
Perfluorooctanesulfonic acid (PFOS)	ng/l	**8.3**		70 [2]
Perfluoroundecanoic Acid (PFUnA)	ng/l		U	---
Perfluoropentanoic Acid (PFPeA)	ng/l	16		---
Perfluorohexanoic acid (PFHxA)	ng/l	28		---
Perfluorododecanoic acid (PFDoA)	ng/l		U	---
Perfluorooctanoic acid (PFOA)	ng/l	**160**		70 [2]
Perfluorodecanoic acid (PFDA)	ng/l	30		---
Perfluorohexanesulfonic acid (PFHxS)	ng/l		U	---
Perfluorobutanesulfonic acid (PFBS)	ng/l	90		---
Perfluoroheptanoic acid (PFHpA)	ng/l	64		---
Perfluorononanoic acid (PFNA)	ng/l	95		---

Note:

[1] Environmental Protection Agency (EPA)'s Integrated Risk Information System (IRIS) 2013 for drinking water representing a 1 x 10-6 cancer risk level

[2] EPA health advisory level for drinking water - combined concentrations of PFOA and PFAS

Values shown in bold exceed the guidance value indicated.
Data provided by Con-Test Analytical.
-- = Not analyzed.
U = The analyte was analyzed for, but was not detected above the sample reporting limit.
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
ppb = parts per billion
ng/l = nanograms per liter = parts per trillion (ppt)

Table 5 Summary of Detected Volatile Organic Compounds in Soil Vapor

	Sample ID	**130110-IA-111915**		**130110-DUP-111915**		**130110-OA-111915**		**NYSDOH Indoor Air Guidance Values$^{(a)}$ ($\mu g/m^3$)**
	Lab ID	**17E0096-01**		**17E0096-02**		**17E0096-03**		
	Sample Type	**Indoor Air**		**Indoor Air Duplicate**		**Outdoor Air**		
Parameter List EPA Method TO-15	**Sample Date**	**4/27/2017**		**4/27/2017**		**4/27/2017**		
Acetone	$\mu g/m^3$	14		6.4		12		---
Benzene	$\mu g/m^3$	0.23		0.19		0.23		---
1,3-Butadiene	$\mu g/m^3$	0.13		<0.035		0.12		---
2-Butanone (MEK)	$\mu g/m^3$	2		<1.4		1.6		---
Carbon Tetrachloride	$\mu g/m^3$	0.06		0.064		0.062		---
Chloroethane	$\mu g/m^3$	0.051		<0.035		0.051		---
Chloroform	$\mu g/m^3$	0.067		<0.035		0.067		---
Chloromethane	$\mu g/m^3$	0.95		0.57		0.91		---
Cyclohexane	$\mu g/m^3$	0.16		<0.035		0.15		---
Dichlorodifluoromethane (Freon 12)	$\mu g/m^3$	0.18		0.16		0.17		---
Ethanol	$\mu g/m^3$	40		4.9		43		---
Ethyl Acetate	$\mu g/m^3$	0.64		<0.035		0.7		---
Ethylbenzene	$\mu g/m^3$	0.17		0.15		0.15		---
4-Ethyltoluene	$\mu g/m^3$	0.051		<0.035		0.074		---
Heptane	$\mu g/m^3$	0.21		0.081		0.22		---
Hexane	$\mu g/m^3$	<1.4		<1.4		2.5		---
2-Hexanone (MBK)	$\mu g/m^3$	0.11		<0.035		0.053		---
Isopropanol	$\mu g/m^3$	14		5		7.7		---
Naphthalene	$\mu g/m^3$	0.054		<0.035		<0.035		---
Propylene	$\mu g/m^3$	0.25		<0.035		0.18		---
1,1,2,2-Tetrachloroethane	$\mu g/m^3$	0.079		<0.035		0.074		
Tetrachloroethylene	$\mu g/m^3$	0.036		<0.035		<0.035		30
Tetrahydrofuran	$\mu g/m^3$	3.9		0.7		3.7		---
Trichloroethylene	$\mu g/m^3$	0.25		0.23		0.23		5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	$\mu g/m^3$	0.21		0.088		0.17		---
1,2,4-Trimethylbenzene	$\mu g/m^3$	0.063		<0.035		0.055		---
Vinyl Chloride	$\mu g/m^3$	0.65		0.7		0.59		---
m&p-Xylene	$\mu g/m^3$	0.25		0.2		0.23		---
o-Xylene	$\mu g/m^3$	0.47		0.51		0.38		---

(a) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. August 2015. Table 3.1 Indoor Air guideline values derived by the NYSDOH.

NOTE:

ID = Identification
NYSDOH = New York State Department of Health
$\mu g/m^3$ = microgram per cubic meter
--- = No applicable guideline value.
D = The analyte was diluted.
U = The analyte was analyzed for, but was not detected above the sample reporting limit.

The duplicate sample was collected at 130110-DUP-111915.

Table includes only those volatile organic compounds detected in one or more samples.

Analytical data results reported by Con-Test Analytical, Inc. using EPA Method TO-15.

Appendix A

Site Management Plan

Metal Etching Site

NASSAU COUNTY, FREEPORT, NEW YORK

Site Management Plan

NYSDEC Site Number: 130110

Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E
625 Broadway
Albany, New York 12233-7017

Prepared by:

EA Engineering, P.C. and its Affiliate
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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date
1	04/11/14	Incorporation of Environmental Notices	

APRIL 2014

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SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at 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)[1].

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)[2] 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^2 building located on the northeast corner of the property. A smaller 1,200 ft^2 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^2 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^2 of the property (approximately 60 percent of the Metal Etching portion of the site). Aside for the 2,400 ft^2 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^2 was the foundation of the Metal Etching plating slab and is visible to the west of the 2,400 ft^2 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)[3]. 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)[3].

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 µg/L, while concentrations of PCE from samples collected at the water table interface ranged from ND to 250 µg/L. The highest concentrations of PCE and breakdown contaminants were detected in monitoring wells located west and south of the 2,400 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 µg/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 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 $\mu g/m^3$ and TCE at a concentration of 187 $\mu g/m^3$. The subslab vapor sample from the larger warehouse building contained PCE at a concentration of 5,772 $\mu g/m^3$ and TCE at a concentration of 16,014 $\mu g/m^3$. 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 10th 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 50th 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^3 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^3 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^3 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)[3] 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 November2013 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® 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)[4]. 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
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

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

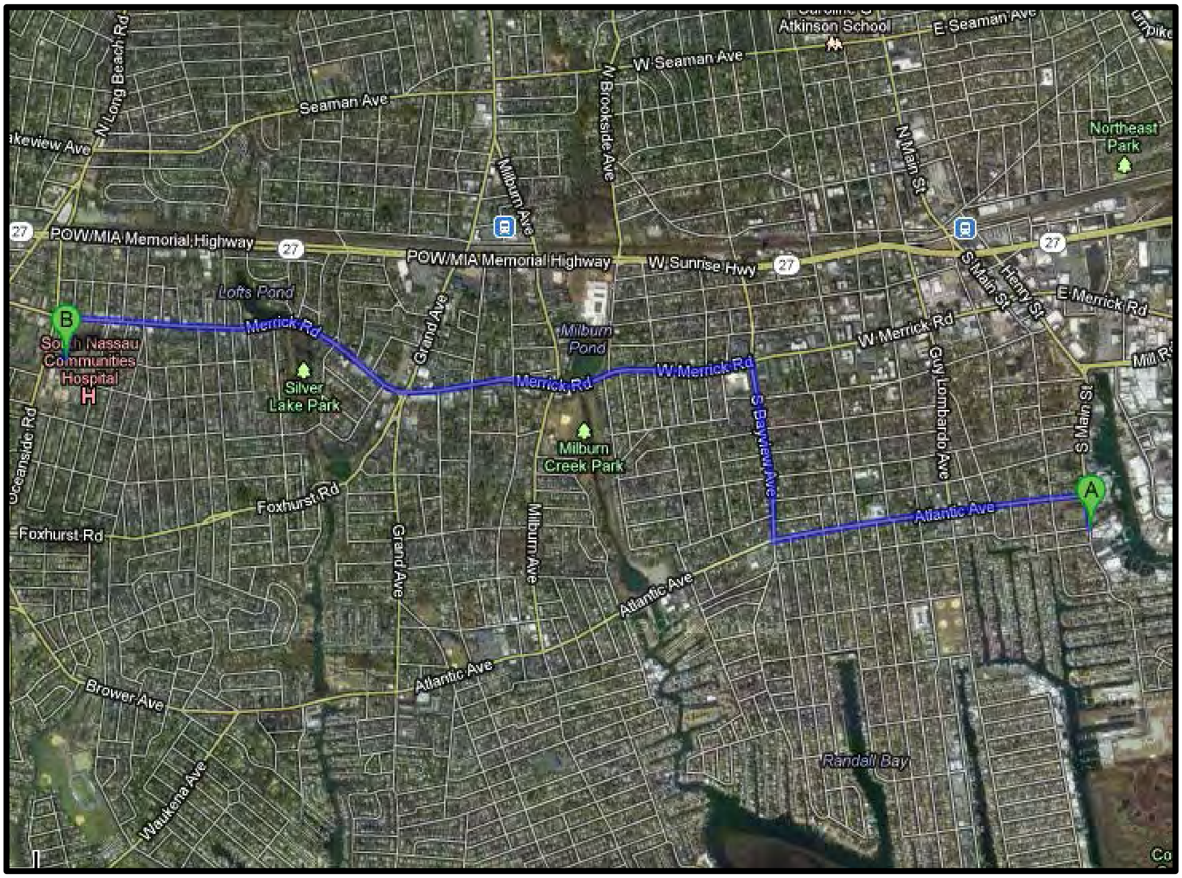
Site Location: Metal Etching Site
Nearest Hospital Name: South Nassau Communities Hospital
Hospital Location: 1 Healthy Way, Oceanside, New York 11572
Hospital Telephone: 516-632-3000

Directions to the Hospital:

1. Go north on S Main Street.
2. Take 1st 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.

Monitoring/Inspection Schedule			
Monitoring Program	**Frequency$^{(1)}$**	**Matrix**	**Analysis**
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.

Monitoring Wells at the Metal Etching Site	
On-site Monitoring Wells	**Well Depth (ft bgs)**
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
Off-site Monitoring Wells	**Well Depth (ft bgs)**
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 ±0.1 pH units of each other
    - Consecutive dissolved oxygen readings are ±10 percent of each other
    - Consecutive Redox readings are ±0.10 units of each other
    - Consecutive measured specific conductance is ±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)[5]. 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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[5] 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 $\mu g/m^3$ 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)[4]. 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.

Schedule of Monitoring/Inspection Reports	
Task	**Reporting Frequency**(1)
Letter Inspection and Monitoring Report	Twice a year for the first year only
Periodic Review Report	January 2014 (first), annually after (1)
(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 ⅜-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 (¼-in. inside diameter × ⅜-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 $\mu g/m^3$. The analysis for sub-slab soil vapor samples will achieve minimum reporting limit of 5 $\mu g/m^3$ for structures with full slab foundations, and a minimum 1 $\mu g/m^3$ 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 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

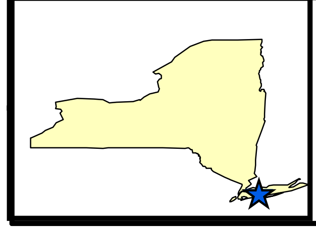
- A site evaluation, which includes the following:

    - 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.



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

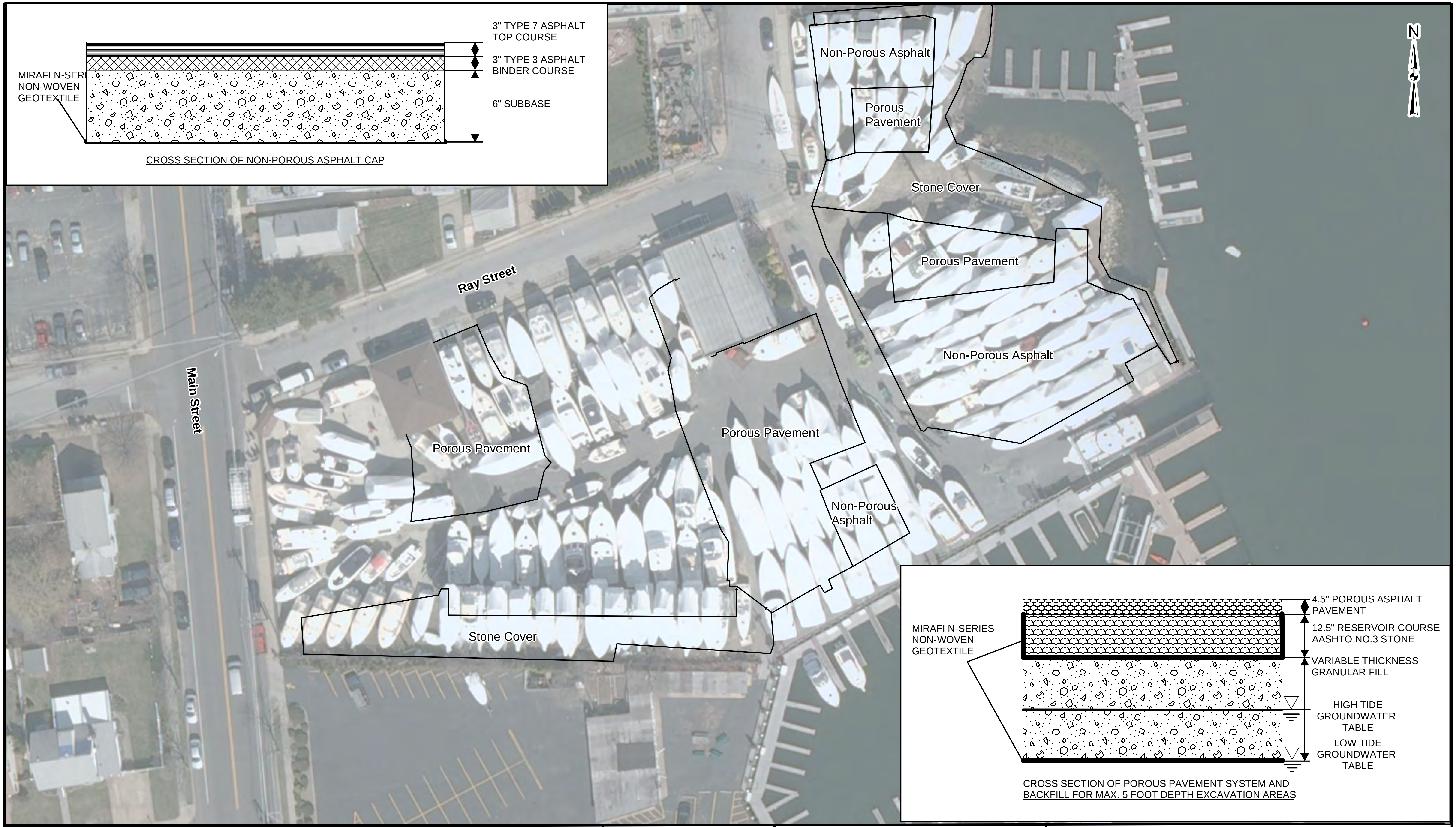
FIGURE 1
Site Location and Boundary Map

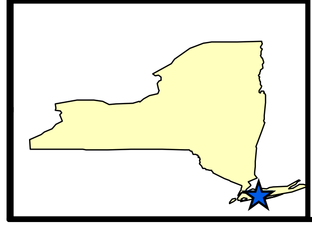
0 25 50 100 Feet

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

Source: NYS GIS Clearing House

🟥	Site Boundary
—	PropertyParcels
★	Site Location
▬	Existing Buildings
-·-·	Approximate Locations of Former Buildings



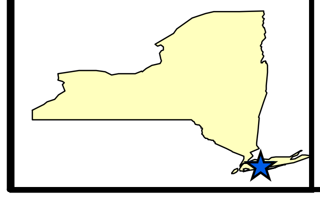


FREEPORT METAL ETCHING
SITE MONITORING PLAN
FREEPORT, NEW YORK

FIGURE 2
Cross Sections

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\Fig2



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 3
Remedial Investigation Soil
and Sediment Sample Locations

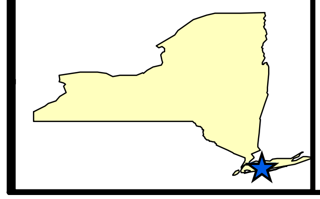
0 12.525 50 75 100
Feet

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\FIG3

Legend

Source: NYS GIS Clearing House

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



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

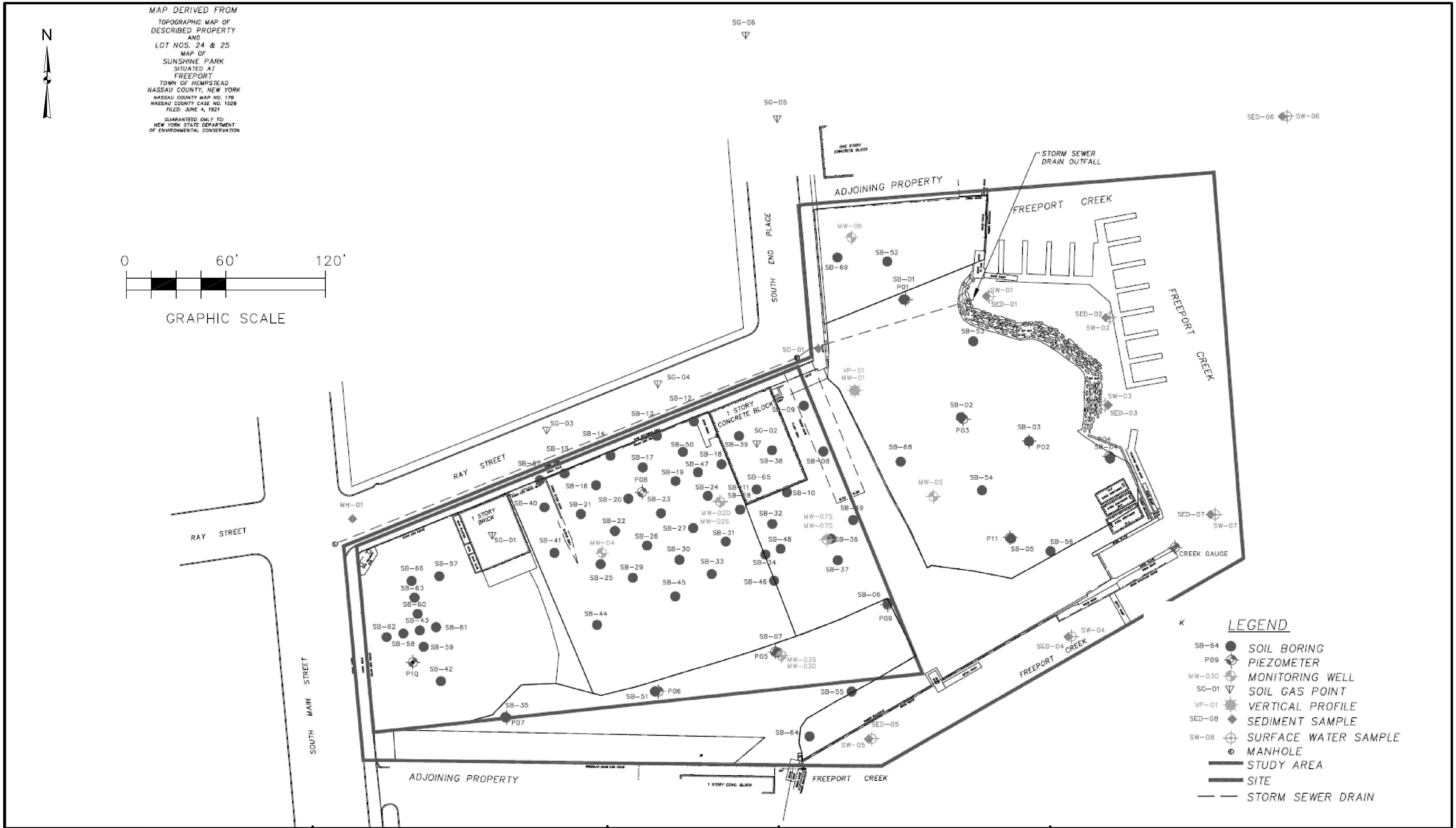
FIGURE 4
Groundwater Contours
June 2008

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:\MegalEtching\ SMP\Fig4

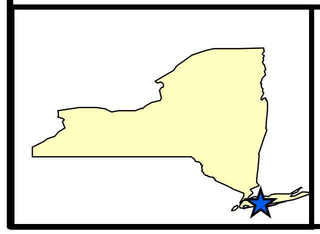
Source: NYS GIS Clearing House

Legend

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



Source: ERM Remedial Investigation (2007) Figure 2-2



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 5
Remedial Investigation Soil and Sediment Sample Locations

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

SB-23 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	3.9	[52]	[1500]	[120]
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	4	4.3	[130]	10
Nickel	13	4.5 U	4.5 U	[33]	4.4 U
Zinc	20	7.3	4.5 U	[40]	4.4 U

SB-20 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	39	4.7	23	[98]
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	16	3.6	4.3	6.9
Nickel	13	8.5	7.3	5.3 U	12
Zinc	20	18	6.8	6.6	5.1

SB-16 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00	16.00	20.00	37.00
Chromium	50	[120]	[1100]	[180]	[80]	48	37	2
Chromium(Hexavalent)	NA	4.26 U	19.4	5.94	NA	NA	NA	NA
Copper	25	[40]	[49]	13	3	5.2	7	<2.6 U
Nickel	13	2.3 U	2.2 U	5	4.3	4.5 U	<3.9 U	<4.4 U
Zinc	20	4.9	2.2	7.3	2.9	4.5 U	6.4	<4.4 U

SB-67 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[310]	[68]	10	[76]
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[890]	[31]	10	13
Nickel	13	[280]	8.4	5.5	4.1
Zinc	20	[160]	7.1	14	9.1

SB-15 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	9.7	4.7	38	36
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[110]	9.5	3.5	2.7
Nickel	13	[13]	2.8	2.2	2.2 U
Zinc	20	[58]	[44]	3.9	3

SB-40 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	5.6	35	36	25
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	20	9.6	3.8	5.3
Nickel	13	5.5	10	5.2	4.7 U
Zinc	20	[81]	[26]	4.8 U	5.1

SB-21 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4.3	[170]	[59]	[73]
Chromium(Hexavalent)	NA	NA	NA	7.21	NA
Copper	25	5.6	[110]	7.5	3.4
Nickel	13	5 U	9.8	8.7	5
Zinc	20	6.8	[32]	7.6	4.8 U

SB-26 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	9	12	[82]	[120]
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[210]	[310]	7.5	9.6
Nickel	13	11	[13]	4.4 U	4.5 U
Zinc	20	[640]	[810]	4.5	4.9

SB-22 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4	3.5	36	2.4
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	3	4.1	10	3
Nickel	13	4.7 U	4.7 U	4.8	4.2 U
Zinc	20	6.7	9.3	4.5 U	9.8

SB-41 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	6.4	6.9	3	3.3
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[31]	[29]	6.9	3.6
Nickel	13	[220]	9.8	5.7	3.8 U
Zinc	20	[46]	[320]	13	6

SB-25 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	43	11	5.3	3
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[960]	[290]	6.9	12
Nickel	13	[240]	[32]	[13]	5 U
Zinc	20	[3600]	[910]	[24]	7.9

SB-57 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	8.5	7.3	2.5	7.9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	14	5.3	4	5.5
Nickel	13	4.7 U	4.3	4.9 U	5 U
Zinc	20	[34]	11	4.9 U	12

SB-24 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00	16.00	20.00	24.00	33.00
Chromium	50	29	29	[190]	[140]	43	35	[58]	38
Chromium(Hexavalent)	NA	NA	NA	6.52	NA	NA	NA	NA	NA
Copper	25	2.8 U	2.7 U	[25]	13	7.4	7.1	5.1	[25]
Nickel	13	4.6 U	4.5 U	4.1 U	5.1 U	5.2 U	<4.7 U	<4.9 U	[19]
Zinc	20	4.6 U	4.5 U	4.7	5.1 U	5.2 U	<4.7 U	<4.9 U	[51]

SB-19 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	5.7	2.9	[51]	[85]
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	5	3.9	12	14
Nickel	13	5.2 U	4.5 U	4.4 U	6.2
Zinc	20	8	5.4	7.4	12

SB-17 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00	0.50
Chromium	50	[470]	[160]	17	20	
Chromium(Hexavalent)	NA	NA	NA	NA	NA	4.58 U
Copper	25	16	12	5.1	5.8	
Nickel	13	4.5 U	5.2 U	4.6 U	3.7 U	
Zinc	20	4.5 U	5.2 U	4.6 U	3.7 U	

SB-14 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	13	4.4	9.1	15
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[64]	4.6	3.1	3.3
Nickel	13	[170]	2.4	3.2	2.4 U
Zinc	20	[67]	[21]	8.9	4

SB-31 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[150]	21	3.9	4.1
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[330]	24	2.7 U	5.3
Nickel	13	[13]	[15]	4.5 U	4.4 U
Zinc	20	[140]	[140]	9.5	12

SB-27 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	6.7	8.3	3.1	5.5
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[58]	[43]	[92]	5.3
Nickel	13	4.8 U	4.7 U	9.3	11
Zinc	20	[100]	[120]	9.6	[24]

SB-18 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[120]	3.3	33	23
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[30]	2.8 U	[37]	6.6
Nickel	13	[46]	4.6 U	[16]	3.7 U
Zinc	20	[81]	6.4	[77]	4.9

SB-12 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[220]	[640]	[500]	28
Chromium(Hexavalent)	NA	88.9	NA	218	NA
Copper	25	3.2	2.8	2.7	4.1
Nickel	13	4.2	3.6	8.1	[25]
Zinc	20	3.6	4.1	3.7	3.6

SB-11 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	6.9	36	5.2	2.8
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[100]	[130]	6.3	2.9
Nickel	13	[440]	[1300]	9.6	4.2 U
Zinc	20	[180]	[290]	7.3	4.2 U

SB-47 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	31	2.5	[57]	22
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[55]	3.5	7.6	7.9
Nickel	13	[24]	3.5 U	5.4 U	4.4 U
Zinc	20	[25]	4.5	5.4 U	4.4 U

SB-50 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[50]	18	[75]	49
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	9.5	[110]	8.4	2.6
Nickel	13	4.5 U	[320]	4.5 U	3.6 U
Zinc	20	5.8	[78]	4.5 U	3.6 U

SB-13 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	15	10	9.5	8
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[310]	6.2	[44]	3.3
Nickel	13	[140]	[53]	[380]	2.4 U
Zinc	20	[310]	8.8	[47]	2.9

SB-39 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	3.5	10	3.1	2 U
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	5.6	20	2.8 U	2.9 U
Nickel	13	4.8 U	7.6	4.6 U	4.9 U
Zinc	20	8.2	[41]	19	4.9 U

SB-65 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	3.9	9.9	2.5	6
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	3.6	[65]	2	20
Nickel	13	2.2 U	11	2 U	3.8
Zinc	20	6.2	[29]	3.1	[20]

SB-32 Constituent	NYSDEC RSCOs	7.00	12.00
Chromium	50	4.3	2.1
Chromium(Hexavalent)	NA	NA	NA
Copper	25	6.6	2.9 U
Nickel	13	11	4.8 U
Zinc	20	8.4	4.8 U

SB-38 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	9.5	3.7	1.7	1.8
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	4.9	7.1	2.5 U	2.5
Nickel	13	4.2 U	5.2 U	4.2 U	3.8 U
Zinc	20	6	[33]	4.2 U	3.8 U

SB-09 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	10	2.5	2.3	2.1
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	18	2.8 U	3.4	3.3
Nickel	13	6	4.7 U	4.7 U	9.9
Zinc	20	[37]	[27]	[33]	[31]

SB-69 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	6.7	3	2.8	3.5
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	9.7	3.6	3.5	4.1
Nickel	13	4.5	2.2 U	2.3 U	2.2 U
Zinc	20	[23]	4.8	4.5	3.2

SB-52 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[100]	34	7	7
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[100]	[180]	5.3	[45]
Nickel	13	6.2	[21]	3.7 U	4.1 U
Zinc	20	[48]	[1200]	[350]	[150]

SB-01 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	14	13	14	3.4
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[530]	[5700]	[220]	15
Nickel	13	9	9.3	6.9	5 U
Zinc	20	[140]	[790]	[170]	5 U

SB-53 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	27	18	6.1	6.6
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[85]	[66]	12	5
Nickel	13	[15]	[14]	4.7 U	4.9 U
Zinc	20	[130]	[95]	[26]	13

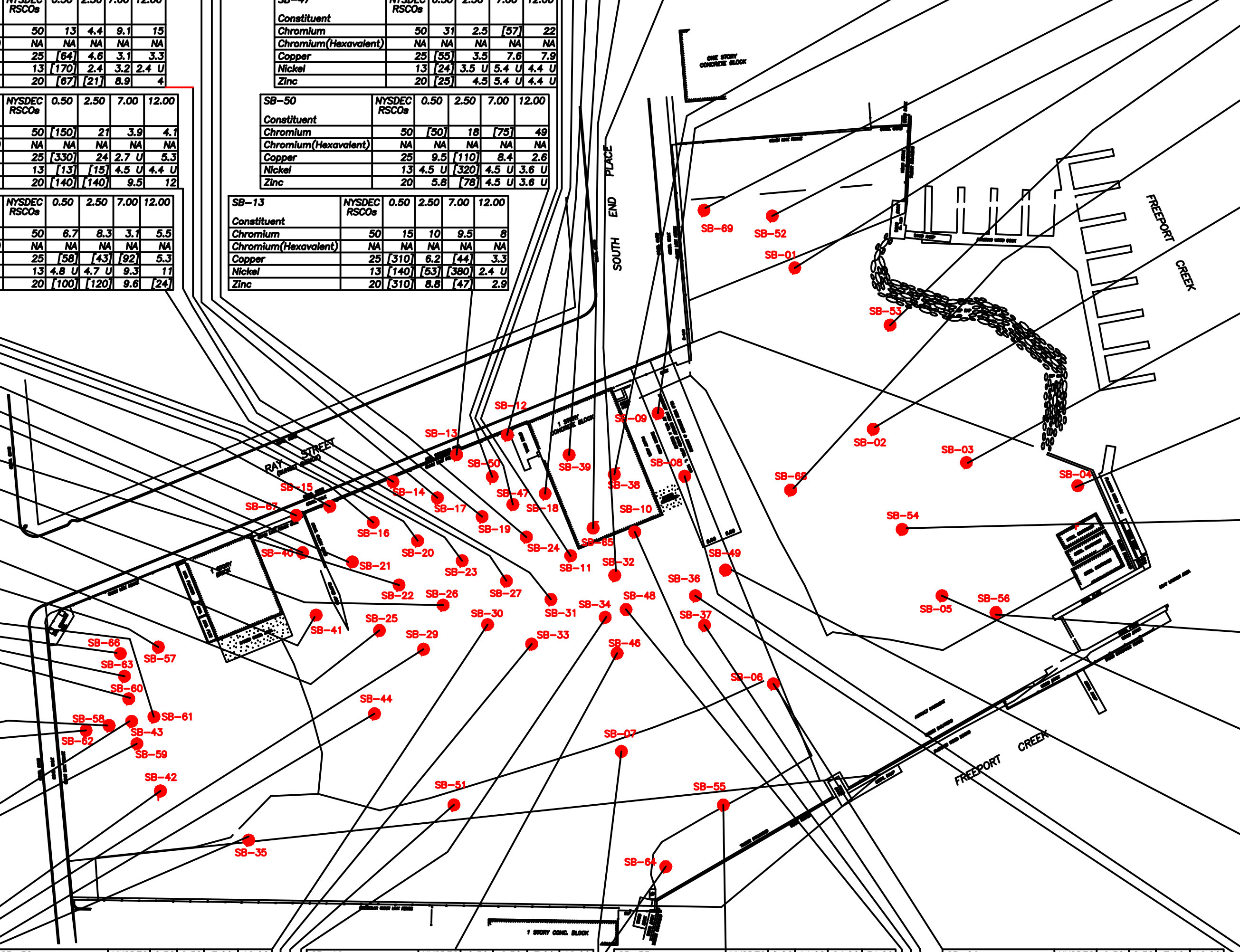
SB-68 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	42	7.3	3.4	5.5
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[540]	[35]	[160]	24
Nickel	13	10	4.4	2.2 U	3
Zinc	20	[200]	[110]	[31]	[160]

SB-02 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	7	[1200]	13	9.5
Chromium(Hexavalent)	NA	NA	24.3	NA	NA
Copper	25	[30]	[1600]	[93]	[44]
Nickel	13	9.1	[19]	[24]	7.8
Zinc	20	[110]	[1200]	[130]	[42]

SB-03 Constituent	NYSDEC RSCOs	7.00	0.50	2.50	12.00
Chromium	50	22	[57]	13	15
Chromium(Hexavalent)	NA	NA	4.56 U	NA	NA
Copper	25	[640]	[2000]	[180]	11
Nickel	13	[20]	[71]	[13]	5.2 U
Zinc	20	[360]	[1600]	[240]	13

SB-04 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	14	5.7	22	22
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[39]	[40]	[100]	10
Nickel	13	5 U	5 U	[15]	9.9
Zinc	20	[22]	[20]	[160]	[31]

SB-54 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	3.9	9.9	24	14
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	16	15	[170]	4.4
Nickel	13	5.1 U	9.9	[15]	4.7
Zinc	20	14	[94]	[260]	17



SB-61 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	5.1	8.4	3.2	2.7
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	14	4.9	3.1 U	2.9 U
Nickel	13	4.8 U	5.4	5.2 U	4.8 U
Zinc	20	[69]	14	5.2 U	4.8 U

SB-60 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4.6	6.1	1.9	4.9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	8	5.3	2.4	4.3
Nickel	13	4.2 U	4.8 U	3.8 U	5.4 U
Zinc	20	[63]	13	3.8 U	5.4 U

SB-56 Constituent	NYSDEC RSCOs	8.00	14.00	24.00	38.00
Chromium	50	14	2.2 U	31	5.9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[57]	3.3 U	[69]	3.5
Nickel	13	[16]	5.6 U	5 U	4.3
Zinc	20	[150]	5.6 U	5 U	13

SB-66 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	13	6.4	1.8	6.6
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[26]	6.4	2.5	3.2
Nickel	13	6.4	4.3	2.7	2.3 U
Zinc	20	[110]	11	6.5	10

SB-62 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	6.7	8.6	3.8	3.5
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	2.5 U	4.2	2.8	3.2 U
Nickel	13	4.2	5.2 U	4 U	5.3 U
Zinc	20	13	13	6.2	5.3 U

SB-05 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	30	11	8.8	1.9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[87]	[69]	9.6	2.9
Nickel	13	9.3	7.7	5 U	4.2 U
Zinc	20	[70]	[87]	[34]	4.2 U

SB-63 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	34	5.8	2.6	2.8
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[68]	6.3	2.9	3
Nickel	13	[18]	3.1	2.4 U	2.2 U
Zinc	20	[210]	[24]	2.7	2.5

SB-59 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	3.5	5.8	2.2	6.6
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	11	4.1	3.6	3.5
Nickel	13	4.5 U	4.2 U	4 U	4.5 U
Zinc	20	[46]	11	5.3	4.5 U

SB-49 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	14	9.5	16	11
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[32]	17	[25]	[37]
Nickel	13	7	4.9	9.8	5.5
Zinc	20	[73]	[160]	[84]	[54]

SB-58 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	15	7.4	4.9	2.1 U
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	21	6.3	4.7	3.1 U
Nickel	13	4.2 U	5.2 U	3.6 U	5.2 U
Zinc	20	[70]	13	6	5.2 U

SB-29 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4.6	5.4	2.2 U	4.9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	9.6	8.7	3.3 U	6.8
Nickel	13	5.4 U	5.1 U	5.6 U	5 U
Zinc	20	[22]	[37]	13	[67]

SB-30 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	12	13	2.4	1.7
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[31]	[48]	2.7 U	2.1 U
Nickel	13	11	6.1	4.5 U	3.5
Zinc	20	[62]	[49]	4.5 U	4.6

SB-46 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	44	6.9	20	5.8
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[140]	15	[130]	5.3
Nickel	13	[18]	4.9 U	6.1	4.5 U
Zinc	20	[100]	[23]	[52]	5.6

SB-55 Constituent	NYSDEC RSCOs	8.00	14.00	24.00	34.00
Chromium	50	12	13	32	19
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	21	[140]	7.7	7.9
Nickel	13	5 U	4.7	4.2 U	4.7 U
Zinc	20	[59]	[87]	4.2 U	4.7 U

SB-06 Constituent	NYSDEC RSCOs	2.50	0.50	7.00	12.00
Chromium	50	7.1	35	3.6	9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[90]	[31]	9.1	2.7 U
Nickel	13	9.4	6	4.7 U	4.5 U
Zinc	20	[130]	[83]	[50]	4.5 U

SB-08 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	18	12	3.1	3.4
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[81]	13	3.1 U	2.7
Nickel	13	[34]	6.7	5.2 U	4.5 U
Zinc	20	[110]	[46]	5.2 U	4.5 U

SB-43 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4	8.6	2.9	5.9
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	8.9	3.8	3.4	2.9
Nickel	13	4.3 U	5.6	3.9 U	4.8 U
Zinc	20	[36]	17	5	8.8

SB-44 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	27	6	2	3.1
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[240]	14	3.5	4.1
Nickel	13	11	4.6	4.2 U	5.4 U
Zinc	20	[81]	[39]	18	5.4 U

SB-33 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4.4	10	3.4	2.7
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[25]	5.4	2.9 U	3
Nickel	13	4.5 U	6.5	4.8 U	4.5 U
Zinc	20	15	15	9	4.5 U

SB-07 Constituent	NYSDEC RSCOs	0.50	7.00	12.00	2.50	0.50
Chromium	50	[740]	[690]	3.9	[320]	
Chromium(Hexavalent)	NA	NA	9.93	NA	13.6	4.39 U
Copper	25	[260]	[84]	2.4 U	[130]	
Nickel	13	[37]	[240]	4 U	[45]	
Zinc	20	[280]	[99]	4 U	[180]	

SB-48 Constituent	NYSDEC RSCOs	12.00	0.50	2.50	7.00
Chromium	50	8.1	26	5.3	24
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	5.3	[180]	[43]	[150]
Nickel	13	6.2	[99]	[21]	[49]
Zinc	20	10	[240]	[26]	[85]

SB-37 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[74]	8.5	3.6	7.7
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[3600]	[110]	22	[83]
Nickel	13	[23]	[20]	4.6 U	5 U
Zinc	20	[470]	[79]	[24]	[130]

SB-36 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	23	6	12	3.1
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[65]	9.6	[64]	2.2 U
Nickel	13	[20]	4.9 U	9.9	3.7 U
Zinc	20	[420]	[32]	[140]	3.7 U

SB-42 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	1.8 U	3.9	2.3	2 U
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	6.2	10	2.9	2.9 U
Nickel	13	4.5 U	5.3 U	4.8 U	4.9 U
Zinc	20	7.6	[28]	5.6	4.9 U

SB-35 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	4.6	9.8	2.9	3.7
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	13	[35]	3.6	3.1
Nickel	13	5 U	4.8 U	4.9 U	4.7 U
Zinc	20	[32]	[55]	13	4.7 U

SB-51 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	15	18	29	3.4
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[35]	[47]	[1300]	12
Nickel	13	10	5.8	7.5	5 U
Zinc	20	[170]	[38]	[69]	7.3

SB-34 Constituent	NYSDEC RSCOs	0.50	7.00	12.00	0.50	8.00
Chromium	50	[230]	14	2.7		44
Chromium(Hexavalent)	NA	NA	NA	NA	7.09	NA
Copper	25	[290]	[28]	3.3		[51]
Nickel	13	[48]	4.7 U	5.4		[16]
Zinc	20	[140]	17	[35]		[27]

SB-10 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	[390]	[2200]	16	3.2
Chromium(Hexavalent)	NA	19.2	14.3	NA	NA
Copper	25	[500]	[370]	15	21
Nickel	13	[40]	[13]	[50]	4.7 U
Zinc	20	[150]	[69]	[500]	[20]

SB-64 Constituent	NYSDEC RSCOs	0.50	2.50	7.00	12.00
Chromium	50	13	44	16	0.92 U
Chromium(Hexavalent)	NA	NA	NA	NA	NA
Copper	25	[1300]	[77]	[44]	4
Nickel	13	[17]	[28]	9.4	2.3 U
Zinc	20	[600]	[250]	[57]	2.3 U

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. 179
NASSAU COUNTY CASE NO. 1528
FILED: JUNE 4, 1921

GUARANTEED ONLY TO:
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

Figure 5A
Remedial Investigation
Soil Sample Results - Metals

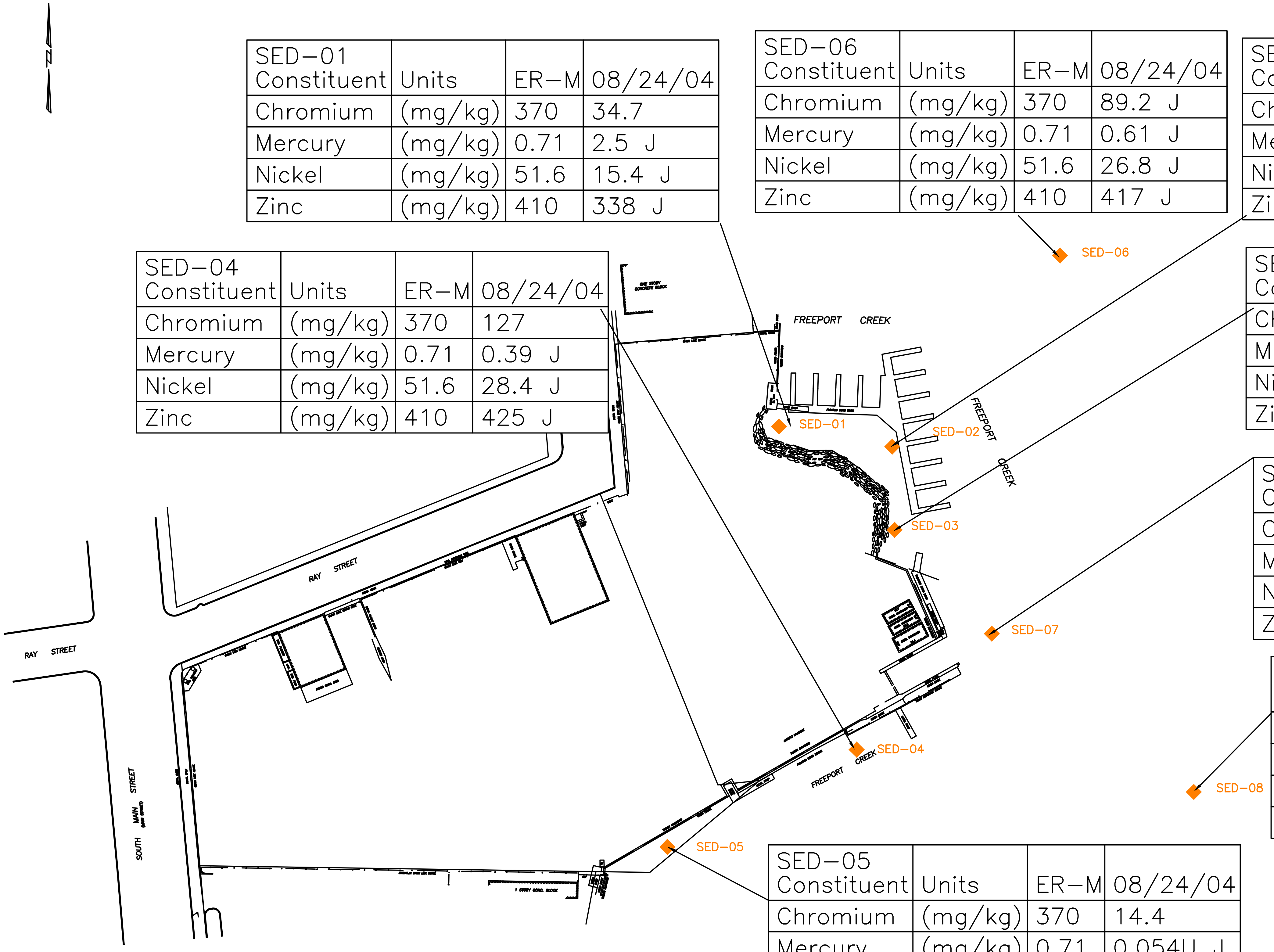
0 50' 100'

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

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	1447437	APRIL 2014	AS SHOWN	G:\Projects\SMP\FIG5A

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



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

GUARANTEED ONLY TO:
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

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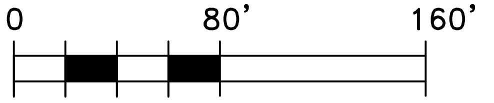
FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

Figure 5B
Remedial Investigation
Sediment Sample Results - Metals



PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	1447437	APRIL 2014	AS SHOWN	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)

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

SB-31 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	240 U	240 U	260 U	270 U
Toluene	1500	240 U	60 J	260 U	70 J
Ethylbenzene	5500	240 U	240 U	260 U	270 U
Xylenes (total)	1200	240 U	240 U	260 U	270 U
Methyl-tert-butyl-ether	120	240 U	240 U	[280]	70 J
Naphthalene	13000	240 U	240 U	260 U	270 U
Tetrachloroethene	1400	710	240 U	260 U	60 J
Trichloroethene	700	240 U	240 U	260 U	270 U
trans-1,2-Dichloroethene	300	240 U	240 U	260 U	270 U
cis-1,2-Dichloroethene		240 U	240 U	260 U	270 U
Vinyl chloride	200	240 U	240 U	260 U	270 U
Chlorobenzene	1700	240 U	240 U	260 U	270 U

SB-11 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	260 U	250 U	270 U	250 U
Toluene	1500	80 J	870	270 U	250 U
Ethylbenzene	5500	260 U	250 U	270 U	250 U
Xylenes (total)	1200	260 U	620	270 U	250 U
Methyl-tert-butyl-ether	120	260 U	[200] J	270 U	250 U
Naphthalene	13000	260 U	250 U	270 U	250 U
Tetrachloroethene	1400	520	[3700]	270 U	250 U
Trichloroethene	700	100 J	580	270 U	250 U
trans-1,2-Dichloroethene	300	260 U	250 U	270 U	250 U
cis-1,2-Dichloroethene		270	990	270 U	250 U
Vinyl chloride	200	260 U	100 J	270 U	250 U
Chlorobenzene	1700	260 U	250 U	270 U	250 U

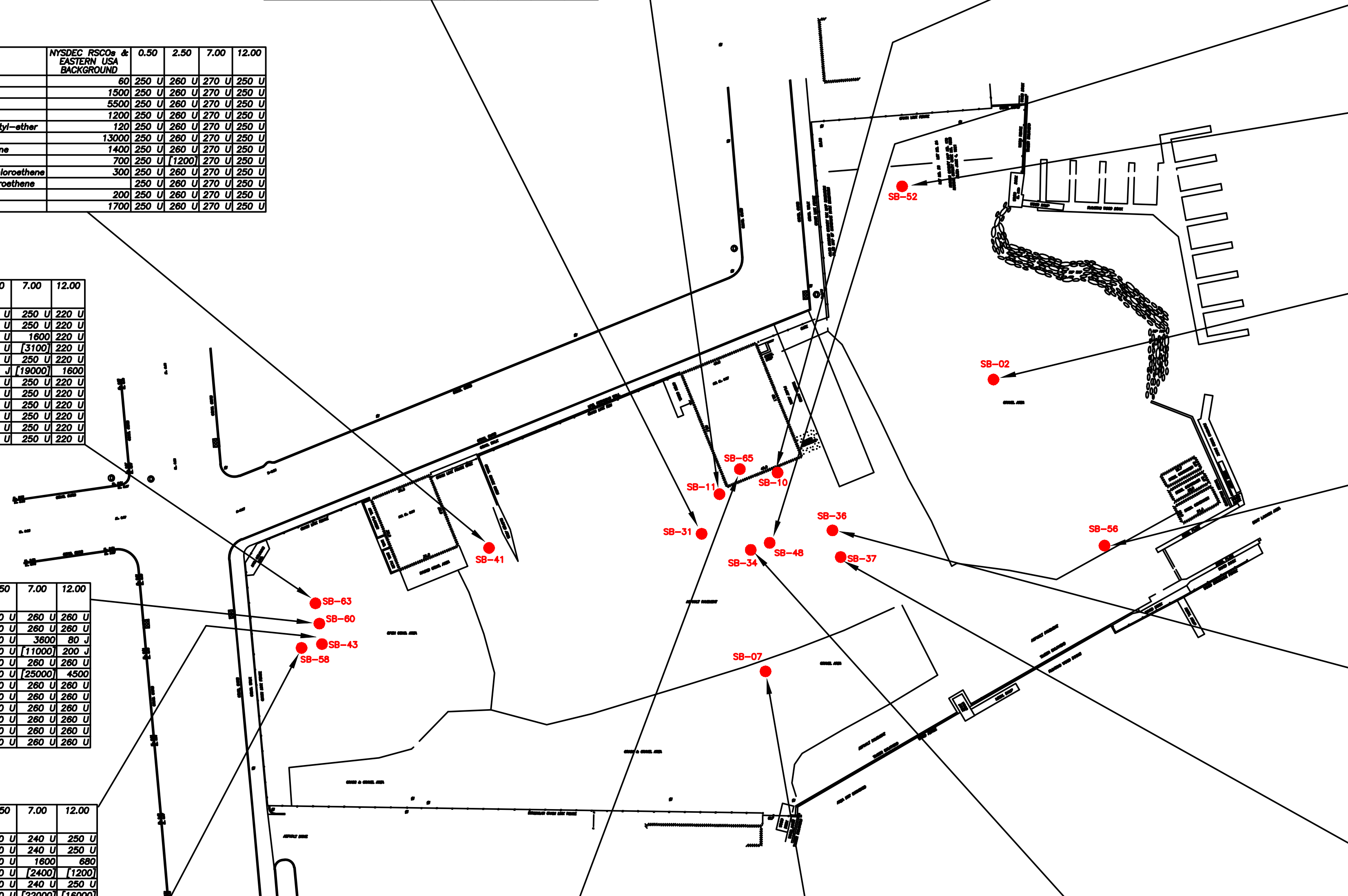
SB-10 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	250 U	240 U	270 U	240 U
Toluene	1500	60 J	240 U	90 J	240 U
Ethylbenzene	5500	250 U	240 U	270 U	240 U
Xylenes (total)	1200	250 U	240 U	270 U	240 U
Methyl-tert-butyl-ether	120	250 U	240 U	270 U	240 U
Naphthalene	13000	250 U	240 U	270 U	240 U
Tetrachloroethene	1400	250 U	200 J	270 U	240 U
Trichloroethene	700	100 J	[1700]	270 U	240 U
trans-1,2-Dichloroethene	300	250 U	240 U	270 U	240 U
cis-1,2-Dichloroethene		70 J	200 J	70 J	240 U
Vinyl chloride	200	250 U	240 U	270 U	240 U
Chlorobenzene	1700	250 U	240 U	270 U	240 U

SB-41 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	250 U	260 U	270 U	250 U
Toluene	1500	250 U	260 U	270 U	250 U
Ethylbenzene	5500	250 U	260 U	270 U	250 U
Xylenes (total)	1200	250 U	260 U	270 U	250 U
Methyl-tert-butyl-ether	120	250 U	260 U	270 U	250 U
Naphthalene	13000	250 U	260 U	270 U	250 U
Tetrachloroethene	1400	250 U	260 U	270 U	250 U
Trichloroethene	700	250 U	[1200]	270 U	250 U
trans-1,2-Dichloroethene	300	250 U	260 U	270 U	250 U
cis-1,2-Dichloroethene		250 U	260 U	270 U	250 U
Vinyl chloride	200	250 U	260 U	270 U	250 U
Chlorobenzene	1700	250 U	260 U	270 U	250 U

SB-63 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	250 U	230 U	250 U	220 U
Toluene	1500	250 U	230 U	250 U	220 U
Ethylbenzene	5500	250 U	230 U	1600	220 U
Xylenes (total)	1200	250 U	230 U	[3100]	220 U
Methyl-tert-butyl-ether	120	250 U	230 U	250 U	220 U
Naphthalene	13000	200 J	80 J	[19000]	1600
Tetrachloroethene	1400	250 U	230 U	250 U	220 U
Trichloroethene	700	250 U	230 U	250 U	220 U
trans-1,2-Dichloroethene	300	250 U	230 U	250 U	220 U
cis-1,2-Dichloroethene		250 U	230 U	250 U	220 U
Vinyl chloride	200	250 U	230 U	250 U	220 U
Chlorobenzene	1700	250 U	230 U	250 U	220 U

SB-60 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	260 U	270 U	260 U	260 U
Toluene	1500	260 U	270 U	260 U	260 U
Ethylbenzene	5500	260 U	270 U	3600	80 J
Xylenes (total)	1200	260 U	270 U	[11000]	200 J
Methyl-tert-butyl-ether	120	260 U	270 U	260 U	260 U
Naphthalene	13000	260 U	270 U	[25000]	4500
Tetrachloroethene	1400	260 U	270 U	260 U	260 U
Trichloroethene	700	260 U	270 U	260 U	260 U
trans-1,2-Dichloroethene	300	260 U	270 U	260 U	260 U
cis-1,2-Dichloroethene		260 U	270 U	260 U	260 U
Vinyl chloride	200	260 U	270 U	260 U	260 U
Chlorobenzene	1700	260 U	270 U	260 U	260 U

SB-43 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	260 U	250 U	240 U	250 U
Toluene	1500	260 U	250 U	240 U	250 U
Ethylbenzene	5500	260 U	250 U	1600	680
Xylenes (total)	1200	260 U	250 U	[2400]	[1200]
Methyl-tert-butyl-ether	120	260 U	250 U	240 U	250 U
Naphthalene	13000	260 U	250 U	[22000]	[16000]
Tetrachloroethene	1400	260 U	250 U	240 U	250 U
Trichloroethene	700	260 U	250 U	240 U	250 U
trans-1,2-Dichloroethene	300	260 U	250 U	240 U	250 U
cis-1,2-Dichloroethene		260 U	250 U	240 U	250 U
Vinyl chloride	200	260 U	250 U	240 U	250 U
Chlorobenzene	1700	260 U	250 U	240 U	250 U



SB-48 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	12.00	0.50	2.50	7.00
Benzene	60	270 U	260 U	270 U	250 U
Toluene	1500	270 U	260 U	270 U	60 J
Ethylbenzene	5500	270 U	260 U	270 U	250 U
Xylenes (total)	1200	270 U	260 U	270 U	80 J
Methyl-tert-butyl-ether	120	[450]	260 U	60 J	250 U
Naphthalene	13000	100 J	260 U	200 J	640
Tetrachloroethene	1400	270 U	260 U	270 U	200 J
Trichloroethene	700	200 J	260 U	80 J	[730]
trans-1,2-Dichloroethene	300	270 U	260 U	270 U	250 U
cis-1,2-Dichloroethene		60 J	260 U	270 U	70 J
Vinyl chloride	200	270 U	260 U	270 U	250 U
Chlorobenzene	1700	270 U	260 U	270 U	250 U

SB-52 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	240 U	250 U	250 U	260 U
Toluene	1500	240 U	250 U	360	80 J
Ethylbenzene	5500	240 U	250 U	5200	1500
Xylenes (total)	1200	240 U	250 U	[4000]	[1700]
Methyl-tert-butyl-ether	120	240 U	250 U	250 U	260 U
Naphthalene	13000	240 U	250 U	6700	2800
Tetrachloroethene	1400	240 U	250 U	250 U	260 U
Trichloroethene	700	240 U	250 U	250 U	260 U
trans-1,2-Dichloroethene	300	240 U	250 U	250 U	260 U
cis-1,2-Dichloroethene		240 U	250 U	250 U	260 U
Vinyl chloride	200	240 U	250 U	250 U	260 U
Chlorobenzene	1700	240 U	250 U	250 U	260 U

SB-02 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	250 U	260 U	250 U	260 U
Toluene	1500	250 U	260 U	250 U	260 U
Ethylbenzene	5500	250 U	1600	200 J	260 U
Xylenes (total)	1200	250 U	[2000]	60 J	260 U
Methyl-tert-butyl-ether	120	250 U	260 U	250 U	260 U
Naphthalene	13000	250 U	1200	3800	350
Tetrachloroethene	1400	250 U	260 U	250 U	260 U
Trichloroethene	700	250 U	260 U	250 U	260 U
trans-1,2-Dichloroethene	300	250 U	260 U	250 U	260 U
cis-1,2-Dichloroethene		250 U	260 U	250 U	260 U
Vinyl chloride	200	250 U	260 U	250 U	260 U
Chlorobenzene	1700	250 U	260 U	250 U	260 U

SB-56 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	8.00	14.00	24.00	38.00
Benzene	60	260 U	260 U	250 U	230 U
Toluene	1500	270	260 U	250 U	230 U
Ethylbenzene	5500	[14000]	280	250 U	230 U
Xylenes (total)	1200	[15000]	320	250 U	230 U
Methyl-tert-butyl-ether	120	260 U	260 U	250 U	230 U
Naphthalene	13000	11000	1200	60 J	230 U
Tetrachloroethene	1400	260 U	260 U	250 U	230 U
Trichloroethene	700	260 U	260 U	250 U	230 U
trans-1,2-Dichloroethene	300	260 U	260 U	250 U	230 U
cis-1,2-Dichloroethene		260 U	260 U	250 U	230 U
Vinyl chloride	200	260 U	260 U	250 U	230 U
Chlorobenzene	1700	[3700]	90 J	250 U	230 U

SB-36 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	250 U	250 U	250 U	230 U
Toluene	1500	[2800]	250 U	250 U	230 U
Ethylbenzene	5500	250 U	250 U	250 U	230 U
Xylenes (total)	1200	250 U	250 U	250 U	230 U
Methyl-tert-butyl-ether	120	250 U	250 U	250 U	230 U
Naphthalene	13000	250 U	250 U	250 U	230 U
Tetrachloroethene	1400	80 J	250 U	100 J	230 U
Trichloroethene	700	560	250 U	[1000]	230 U
trans-1,2-Dichloroethene	300	250 U	250 U	250 U	230 U
cis-1,2-Dichloroethene		470	200 J	300	230 U
Vinyl chloride	200	250 U	250 U	250 U	230 U
Chlorobenzene	1700	250 U	250 U	250 U	230 U

SB-37 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	270 U	260 U	250 U	250 U
Toluene	1500	80 J	260 U	250 U	250 U
Ethylbenzene	5500	270 U	260 U	250 U	250 U
Xylenes (total)	1200	270 U	260 U	250 U	250 U
Methyl-tert-butyl-ether	120	270 U	260 U	250 U	250 U
Naphthalene	13000	270 U	260 U	250 U	250 U
Tetrachloroethene	1400	[4300]	200 J	100 J	100 J
Trichloroethene	700	[2700]	80 J	250 U	70 J
trans-1,2-Dichloroethene	300	[300]	260 U	250 U	250 U
cis-1,2-Dichloroethene		12000	300 J	100 J	100 J
Vinyl chloride	200	[1800]	260 U	250 U	250 U
Chlorobenzene	1700	270 U	260 U	250 U	250 U

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

GUARANTEED ONLY TO:
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

NOTES: ELEVATIONS SHOWN ESTABLISHED FROM BENCHMARK 22011 EL. 9.642 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 11E06N AND 11E06NAZ.

BEARINGS SHOWN TAKEN FROM RECORD DESCRIPTIONS. ABSTRACT OF TITLE AND EASEMENTS FOR SUBJECT PARCEL AND ADJOINING PARCELS NOT PROVIDED FOR THE PREPERATION OF THIS SURVEY. ABSENCE OF EASEMENTS DOES NOT DENY THE EXISTENCE OF SAME.

SB-58 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	240 U	220 U	240 U	230 U
Toluene	1500	240 U	220 U	240 U	230 U
Ethylbenzene	5500	240 U	220 U	420	230 U
Xylenes (total)	1200	240 U	220 U	[4000]	230 U
Methyl-tert-butyl-ether	120	240 U	220 U	240 U	230 U
Naphthalene	13000	240 U	220 U	10000	1300
Tetrachloroethene	1400	240 U	220 U	240 U	230 U
Trichloroethene	700	240 U	220 U	240 U	230 U
trans-1,2-Dichloroethene	300	240 U	220 U	240 U	230 U
cis-1,2-Dichloroethene		240 U	220 U	240 U	230 U
Vinyl chloride	200	240 U	220 U	240 U	230 U
Chlorobenzene	1700	240 U	220 U	240 U	230 U

SB-65 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	2.50	7.00	12.00
Benzene	60	250 U	250 U	250 U	260 U
Toluene	1500	250 U	250 U	250 U	260 U
Ethylbenzene	5500	250 U	250 U	250 U	260 U
Xylenes (total)	1200	250 U	250 U	250 U	260 U
Methyl-tert-butyl-ether	120	250 U	250 U	250 U	260 U
Naphthalene	13000	250 U	250 U	250 U	260 U
Tetrachloroethene	1400	200 J	250 U	250 U	260 U
Trichloroethene	700	[10000]	100 J	250 U	[1100]
trans-1,2-Dichloroethene	300	250 U	250 U	250 U	260 U
cis-1,2-Dichloroethene		1700	250 U	250 U	200 J
Vinyl chloride	200	250 U	250 U	250 U	260 U
Chlorobenzene	1700	250 U	250 U	250 U	260 U

SB-07 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	7.00	12.00	2.50
Benzene	60	250 U	[480]	250 U	[1400]
Toluene	1500	250 U	350	250 U	1100
Ethylbenzene	5500	250 U	70 J	250 U	200 J
Xylenes (total)	1200	80 J	370	250 U	1000
Methyl-tert-butyl-ether	120	250 U	230 U	250 U	270 U
Naphthalene	13000	200 J	2600	310	8300
Tetrachloroethene	1400	250 U	230 U	250 U	270 U
Trichloroethene	700	250 U	230 U	250 U	270 U
trans-1,2-Dichloroethene	300	250 U	230 U	250 U	270 U
cis-1,2-Dichloroethene		250 U	230 U	250 U	270 U
Vinyl chloride	200	250 U	230 U	250 U	270 U
Chlorobenzene	1700	250 U	230 U	250 U	270 U

SB-34 Constituent	NYSDEC RSCOs & EASTERN USA BACKGROUND	0.50	7.00	12.00	8.00
Benzene	60	260 U	230 U	220 U	260 U
Toluene	1500	100 J	[35000]	200 J	[78000]
Ethylbenzene	5500	260 U	200 J	220 U	200 J
Xylenes (total)	1200	260 U	410	220 U	470
Methyl-tert-butyl-ether	120	[370]	[1500]	220 U	260 U
Naphthalene	13000	370	1300	220 U	680
Tetrachloroethene	1400	260 U	230 U	220 U	260 U
Trichloroethene	700	260 U	230 U	220 U	260 U
trans-1,2-Dichloroethene	300	260 U	230 U	220 U	260 U
cis-1,2-Dichloroethene		260 U	230 U	220 U	260 U
Vinyl chloride	200	260 U	230 U	220 U	260 U
Chlorobenzene	1700	260 U	230 U	220 U	260 U

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FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

Figure 5C
Remedial Investigation
Soil Sample Results - VOCs

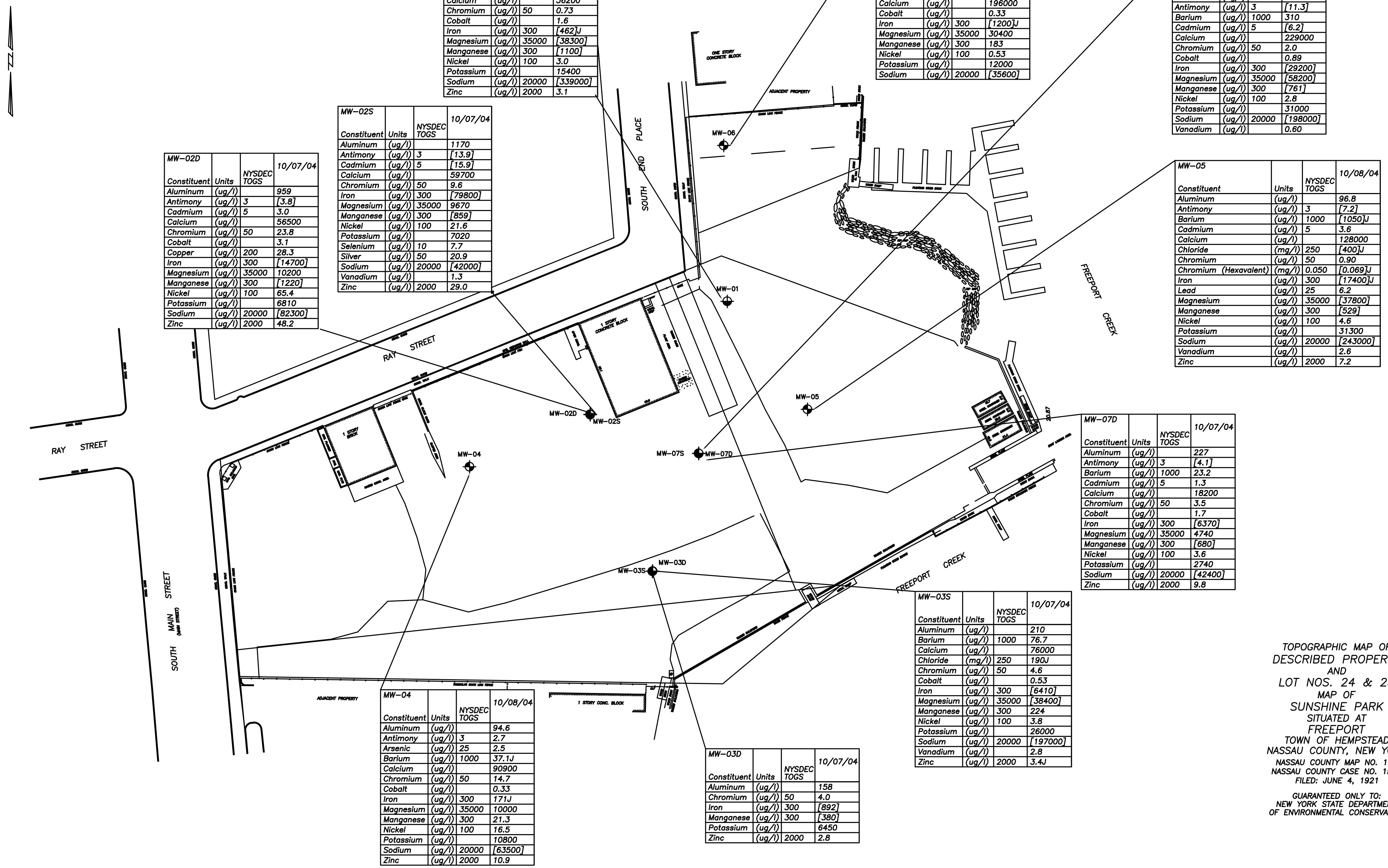
0 30' 60'
GRAPHIC SCALE

Legend

SB-56 ●	Soil Boring location exceeding the NYSDEC RSCO (Recomended Soil Cleanup Objective per TAGM 4046)
	Concentrations reported in micrograms per kilogram (ug/mg)

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	1447437	APRIL 2014	AS SHOWN	G:\Projects\SMP\FIG5C

Note: Map was developed for the 2007 Remedial Investigation by Environmental Remedial 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	2.8
Potassium	(ug/l)		31000
Sodium	(ug/l)	20000	[198000]
Vanadium	(ug/l)		0.60

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	[79800]
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-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-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-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-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-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
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 6A
Remedial Investigation
Groundwater Sample Results - Metals

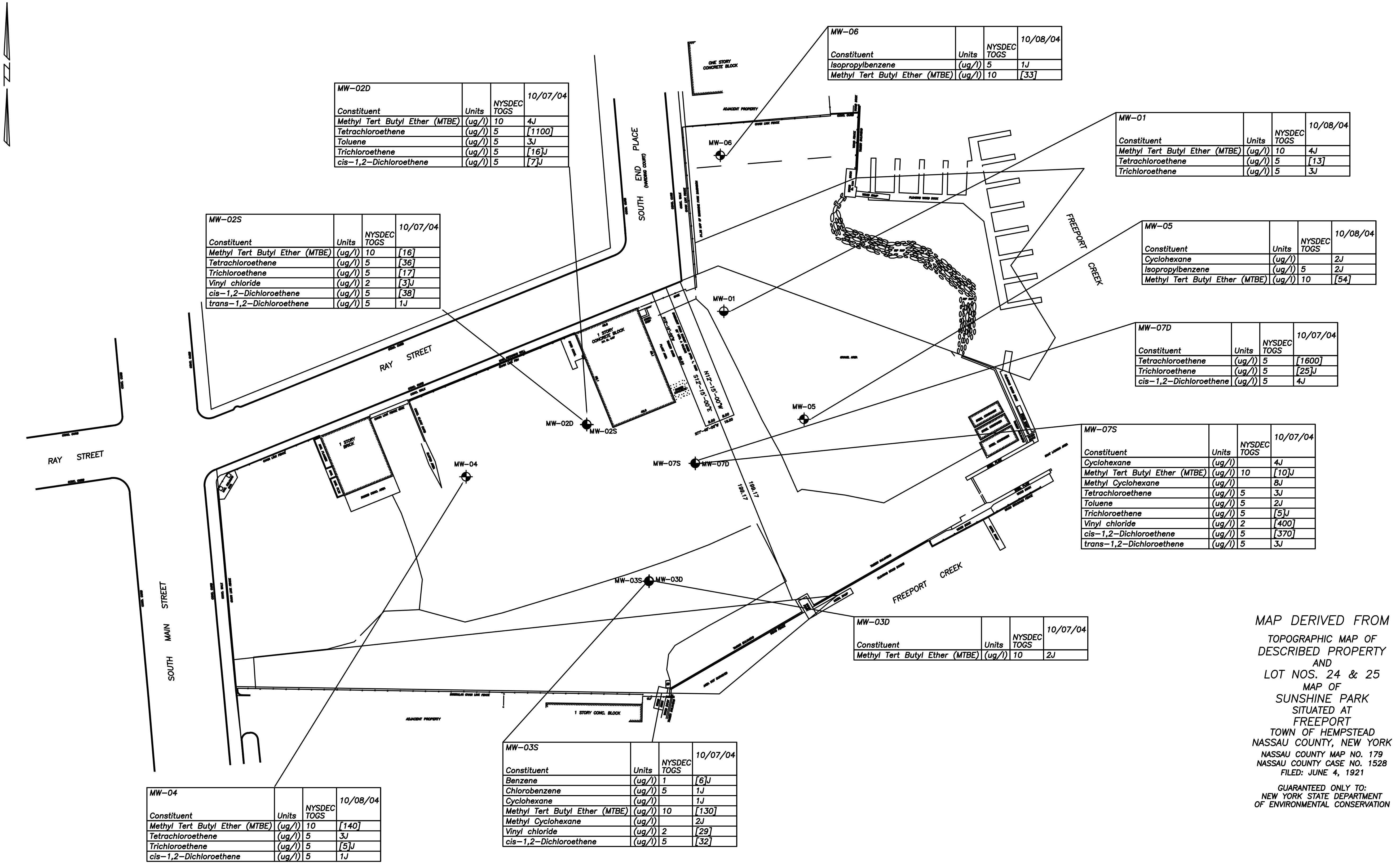
0 60' 120'

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	1447437	APRIL 2014	AS SHOWN	G:\Projects\SMP\FIG6A

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 Remedial Management, Inc.



MW-06 Constituent	Units	NYSDEC TOGS	10/08/04
Isopropylbenzene	(ug/l)	5	1J
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	[33]

MW-02D Constituent	Units	NYSDEC TOGS	10/07/04
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	4J
Tetrachloroethene	(ug/l)	5	[1100]
Toluene	(ug/l)	5	3J
Trichloroethene	(ug/l)	5	[16]J
cis-1,2-Dichloroethene	(ug/l)	5	[7]J

MW-01 Constituent	Units	NYSDEC TOGS	10/08/04
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	4J
Tetrachloroethene	(ug/l)	5	[13]
Trichloroethene	(ug/l)	5	3J

MW-02S Constituent	Units	NYSDEC TOGS	10/07/04
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	[16]
Tetrachloroethene	(ug/l)	5	[36]
Trichloroethene	(ug/l)	5	[17]
Vinyl chloride	(ug/l)	2	[3]J
cis-1,2-Dichloroethene	(ug/l)	5	[38]
trans-1,2-Dichloroethene	(ug/l)	5	1J

MW-05 Constituent	Units	NYSDEC TOGS	10/08/04
Cyclohexane	(ug/l)		2J
Isopropylbenzene	(ug/l)	5	2J
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	[54]

MW-07D Constituent	Units	NYSDEC TOGS	10/07/04
Tetrachloroethene	(ug/l)	5	[1600]
Trichloroethene	(ug/l)	5	[25]J
cis-1,2-Dichloroethene	(ug/l)	5	4J

MW-07S Constituent	Units	NYSDEC TOGS	10/07/04
Cyclohexane	(ug/l)		4J
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	[10]J
Methyl Cyclohexane	(ug/l)		8J
Tetrachloroethene	(ug/l)	5	3J
Toluene	(ug/l)	5	2J
Trichloroethene	(ug/l)	5	[5]J
Vinyl chloride	(ug/l)	2	[400]
cis-1,2-Dichloroethene	(ug/l)	5	[370]
trans-1,2-Dichloroethene	(ug/l)	5	3J

MW-03D Constituent	Units	NYSDEC TOGS	10/07/04
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	2J

MW-03S Constituent	Units	NYSDEC TOGS	10/07/04
Benzene	(ug/l)	1	[6]J
Chlorobenzene	(ug/l)	5	1J
Cyclohexane	(ug/l)		1J
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	[130]
Methyl Cyclohexane	(ug/l)		2J
Vinyl chloride	(ug/l)	2	[29]
cis-1,2-Dichloroethene	(ug/l)	5	[32]

MW-04 Constituent	Units	NYSDEC TOGS	10/08/04
Methyl Tert Butyl Ether (MTBE)	(ug/l)	10	[140]
Tetrachloroethene	(ug/l)	5	3J
Trichloroethene	(ug/l)	5	[5]J
cis-1,2-Dichloroethene	(ug/l)	5	1J

MAP DERIVED FROM
TOPOGRAPHIC MAP OF
DESCRIBED PROPERTY
AND
LOT NOS. 24 & 25
MAP OF
SUNSHINE PARK
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FREEPORT
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NASSAU COUNTY, NEW YORK
NASSAU COUNTY MAP NO. 179
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FILED: JUNE 4, 1921

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EA

FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

Figure 6B
Remedial Investigation
Groundwater Sample Results - VOCs

0 60' 120'

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	1447437	APRIL 2014	AS SHOWN	G:\Projects\SMP\FIG6B

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 Remedial Management, Inc.

433-SM-FF Constituent	Units	03/31/05
Acetone	(ug/m3)	19J
Benzene	(ug/m3)	1.3
Benzene, 1,2,4-trimethyl	(ug/m3)	0.78
Chloromethane	(ug/m3)	0.84
Dichlorodifluoromethane	(ug/m3)	2.6
Ethanol	(ug/m3)	3.6J
Ethylbenzene	(ug/m3)	4.4
m+p-Xylene	(ug/m3)	15
o-Xylene	(ug/m3)	3.2
Toluene	(ug/m3)	3.6
Trichlorofluoromethane	(ug/m3)	2.1

SG-03 Constituent	Units	08/26/04
1,1,1-Trichloroethane	(ug/m3)	13.37J
2-Butanone	(ug/m3)	35.98
Acetone	(ug/m3)	189.56
Benzene	(ug/m3)	9.07J
Benzene, 1,2,4-trimethyl	(ug/m3)	16.27J
Benzene, 1,3,5-trimethyl-	(ug/m3)	5.01J
Carbon disulfide	(ug/m3)	6.76J
Cyclohexane	(ug/m3)	9.22J
Ethylbenzene	(ug/m3)	7.90J
Isooctane	(ug/m3)	20.88
m+p-Xylene	(ug/m3)	32.44J
Methyl Tertiary Butyl Ether	(ug/m3)	5.30J
n-Heptane	(ug/m3)	11.72J
n-Hexane	(ug/m3)	14.73
o-Xylene	(ug/m3)	12.03J
p-Ethyltoluene	(ug/m3)	7.91J
Propylene	(ug/m3)	15.58
Tetrachloroethene	(ug/m3)	318.10
Toluene	(ug/m3)	33.28
Xylene (total)	(ug/m3)	44.29J

433-4-ER-AA Constituent	Units	03/31/05
Acetone	(ug/m3)	15
Benzene	(ug/m3)	1.2
Benzene, 1,2,4-trimethyl	(ug/m3)	3
Benzene, 1,3,5-trimethyl-	(ug/m3)	1.1
Chloromethane	(ug/m3)	1.2J
Dichlorodifluoromethane	(ug/m3)	3
Ethanol	(ug/m3)	4.1
Ethylbenzene	(ug/m3)	1.9
m+p-Xylene	(ug/m3)	8.5
o-Xylene	(ug/m3)	2.6
Tetrahydrofuran	(ug/m3)	4.5
Toluene	(ug/m3)	6.7
Trichlorofluoromethane	(ug/m3)	1.6

4-ER-FF Constituent	Units	03/31/05
Acetone	(ug/m3)	13J
Benzene	(ug/m3)	1.5
Benzene, 1,2,4-trimethyl	(ug/m3)	2
Benzene, 1,3,5-trimethyl-	(ug/m3)	0.77
Chloroform	(ug/m3)	1.1
Chloromethane	(ug/m3)	0.72
Dichlorodifluoromethane	(ug/m3)	2.7
Ethanol	(ug/m3)	88J
Ethylbenzene	(ug/m3)	1.2
Isopropanol	(ug/m3)	11
m+p-Xylene	(ug/m3)	4.7
Methylene chloride	(ug/m3)	1.2
o-Xylene	(ug/m3)	1.4
Styrene	(ug/m3)	0.66
Toluene	(ug/m3)	24
Trichlorofluoromethane	(ug/m3)	2

SG-05 Constituent	Units	08/27/04
1,1,1-Trichloroethane	(ug/m3)	4550.33
1,1-Dichloroethane	(ug/m3)	890.44
2-Butanone	(ug/m3)	26.93J
Acetone	(ug/m3)	185.29
Chloroethane	(ug/m3)	77.57
cis-1,2-Dichloroethene	(ug/m3)	27.48J
Cyclohexane	(ug/m3)	74.35
Isooctane	(ug/m3)	320.03
Methyl Tertiary Butyl Ether	(ug/m3)	44.71J
n-Heptane	(ug/m3)	25.86J
n-Hexane	(ug/m3)	58.86J
Propylene	(ug/m3)	148.18
Tetrachloroethene	(ug/m3)	40.76J
Trichloroethene	(ug/m3)	34.98J

4-ER-CS Constituent	Units	03/31/05
Acetone	(ug/m3)	3.6J
Benzene	(ug/m3)	1
Benzene, 1,2,4-trimethyl	(ug/m3)	1.1
Chloromethane	(ug/m3)	0.57
Dichlorodifluoromethane	(ug/m3)	2.2
Ethanol	(ug/m3)	2.3J
Ethylbenzene	(ug/m3)	0.65
m+p-Xylene	(ug/m3)	2.3
o-Xylene	(ug/m3)	0.88
Toluene	(ug/m3)	3.1
Trichlorofluoromethane	(ug/m3)	1.7

4-ER-B Constituent	Units	03/31/05
Acetone	(ug/m3)	4.4J
Benzene	(ug/m3)	1.1
Benzene, 1,2,4-trimethyl	(ug/m3)	1.2
Chloromethane	(ug/m3)	0.73
Dichlorodifluoromethane	(ug/m3)	2.8
Ethanol	(ug/m3)	3.4J
Ethylbenzene	(ug/m3)	0.75
m+p-Xylene	(ug/m3)	2.4
o-Xylene	(ug/m3)	0.7
Toluene	(ug/m3)	3.3
Trichlorofluoromethane	(ug/m3)	2

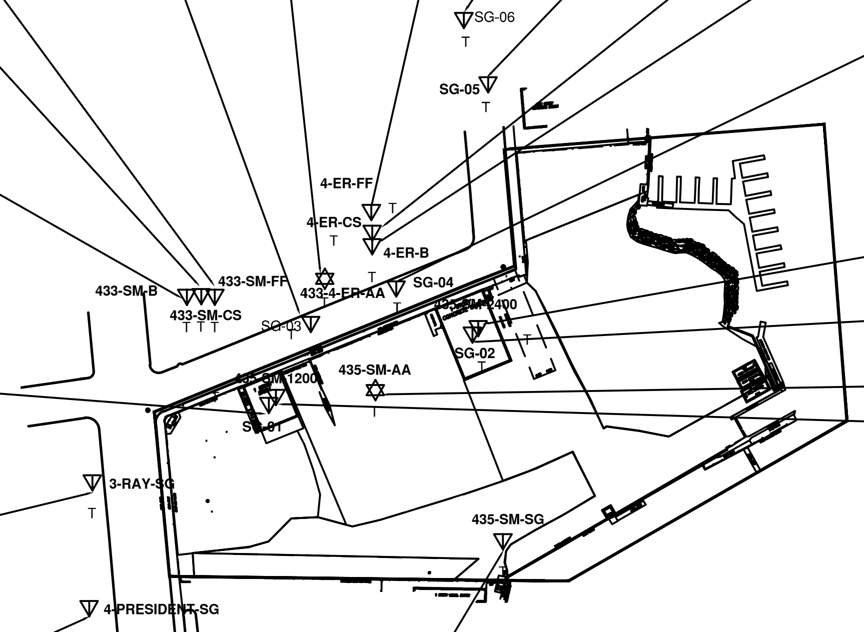
433-SM-CS Constituent	Units	03/31/05
Acetone	(ug/m3)	4.9J
Benzene	(ug/m3)	1.2
Benzene, 1,2,4-trimethyl	(ug/m3)	1
Chloromethane	(ug/m3)	0.65
Dichlorodifluoromethane	(ug/m3)	2.2
Ethanol	(ug/m3)	1.9J
Ethylbenzene	(ug/m3)	0.72
m+p-Xylene	(ug/m3)	2.8
o-Xylene	(ug/m3)	0.84
Toluene	(ug/m3)	3.6
Trichlorofluoromethane	(ug/m3)	1.7

SG-06 Constituent	Units	08/27/04
Acetone	(ug/m3)	6.32
Dichlorodifluoromethane	(ug/m3)	3.41J
Isopropanol	(ug/m3)	2.65J
Propylene	(ug/m3)	1.25J

SG-04 Constituent	Units	08/27/04
1,1,1-Trichloroethane	(ug/m3)	136.95
2-Butanone	(ug/m3)	11.94
Acetone	(ug/m3)	89.55
Benzene	(ug/m3)	11.37
Benzene, 1,2,4-trimethyl	(ug/m3)	15.29
Benzene, 1,3,5-trimethyl-	(ug/m3)	4.12J
Carbon disulfide	(ug/m3)	10.25
Cyclohexane	(ug/m3)	4.47J
Dichlorodifluoromethane	(ug/m3)	4.83J
Ethylbenzene	(ug/m3)	6.60J
m+p-Xylene	(ug/m3)	20.50
Methylene chloride	(ug/m3)	1.97J
n-Heptane	(ug/m3)	5.37J
n-Hexane	(ug/m3)	8.07
o-Xylene	(ug/m3)	7.34J
p-Ethyltoluene	(ug/m3)	6.10J
Propylene	(ug/m3)	38.72
Tetrachloroethene	(ug/m3)	219.75
Toluene	(ug/m3)	21.56
Trichlorofluoromethane	(ug/m3)	3.76J
Xylene (total)	(ug/m3)	27.83

435-SM-2400 Constituent	Units	03/31/05
2-Butanone	(ug/m3)	12
Acetone	(ug/m3)	1800E
Benzene	(ug/m3)	30
Benzene, 1,2,4-trimethyl	(ug/m3)	320
Benzene, 1,3,5-trimethyl-	(ug/m3)	110
Cyclohexane	(ug/m3)	14
Dichlorodifluoromethane	(ug/m3)	13
Ethanol	(ug/m3)	120J
Ethylbenzene	(ug/m3)	290
Isopropanol	(ug/m3)	10
m+p-Xylene	(ug/m3)	1200
Methyl Tertiary Butyl Ether	(ug/m3)	390
n-Heptane	(ug/m3)	30
n-Hexane	(ug/m3)	64
n-Propylbenzene	(ug/m3)	87
o-Xylene	(ug/m3)	320
p-Ethyltoluene	(ug/m3)	410
Styrene	(ug/m3)	400
Tetrachloroethene	(ug/m3)	1
Toluene	(ug/m3)	370
Trichloroethene	(ug/m3)	2
Trichlorofluoromethane	(ug/m3)	21

433-SM-B Constituent	Units	03/31/05
Acetone	(ug/m3)	6.8J
Benzene	(ug/m3)	1.7
Benzene, 1,2,4-trimethyl	(ug/m3)	0.83
Chloromethane	(ug/m3)	0.63
Dichlorodifluoromethane	(ug/m3)	2.4
Ethanol	(ug/m3)	1.8J
Ethylbenzene	(ug/m3)	1.1
m+p-Xylene	(ug/m3)	3.1
o-Xylene	(ug/m3)	0.84
Toluene	(ug/m3)	3.4
Trichlorofluoromethane	(ug/m3)	1.9



SG-02 Constituent	Units	07/15/04
1,1,1-Trichloroethane	(ug/m3)	35.19J
2-Butanone	(ug/m3)	56.92J
Acetone	(ug/m3)	84.80
Benzene	(ug/m3)	4.79J
Benzene, 1,2,4-trimethyl	(ug/m3)	634.13
Benzene, 1,3,5-trimethyl-	(ug/m3)	321.00
Carbon disulfide	(ug/m3)	129.24
cis-1,2-Dichloroethene	(ug/m3)	283.88
n-Heptane	(ug/m3)	29.14J
o-Xylene	(ug/m3)	28.75J
p-Ethyltoluene	(ug/m3)	702.95
Propylene	(ug/m3)	10.46J
Tetrachloroethene	(ug/m3)	5771.83
Toluene	(ug/m3)	14.66J
trans-1,2-Dichloroethene	(ug/m3)	33.46J
Trichloroethene	(ug/m3)	16014.00
Trichlorofluoromethane	(ug/m3)	10.84J
Xylene (total)	(ug/m3)	63.40J

SG-01 Constituent	Units	07/15/04
1,1,1-Trichloroethane	(ug/m3)	22.97J
2-Butanone	(ug/m3)	57.81J
Acetone	(ug/m3)	736.39
Benzene	(ug/m3)	7.00J
Benzene, 1,2,4-trimethyl	(ug/m3)	66.36J
Benzene, 1,3,5-trimethyl-	(ug/m3)	42.77J
Carbon disulfide	(ug/m3)	106.50
Methyl Tertiary Butyl Ether	(ug/m3)	28.09J
n-Heptane	(ug/m3)	22.99J
p-Ethyltoluene	(ug/m3)	93.89J
Propylene	(ug/m3)	13.42J
Tetrachloroethene	(ug/m3)	292.32
Toluene	(ug/m3)	32.52J
Trichloroethene	(ug/m3)	187.01
Trichlorofluoromethane	(ug/m3)	16.29J

435-SM-AA Constituent	Units	03/31/05
Acetone	(ug/m3)	24
Benzene	(ug/m3)	0.83
Benzene, 1,2,4-trimethyl	(ug/m3)	2.7
Benzene, 1,3,5-trimethyl-	(ug/m3)	1.1
Bromomethane	(ug/m3)	0.72
Chloromethane	(ug/m3)	1.2J
Dichlorodifluoromethane	(ug/m3)	3.1
Ethanol	(ug/m3)	1.5
Ethylbenzene	(ug/m3)	2.2
m+p-Xylene	(ug/m3)	9.3
o-Xylene	(ug/m3)	2.6
Toluene	(ug/m3)	11
Trichlorofluoromethane	(ug/m3)	1.5

3-RAY-SG Constituent	Units	03/31/05
Acetone	(ug/m3)	2.5
Benzene	(ug/m3)	0.54
Chloromethane	(ug/m3)	0.57J
Dichlorodifluoromethane	(ug/m3)	1.4
Ethanol	(ug/m3)	2.6
m+p-Xylene	(ug/m3)	1.5
Toluene	(ug/m3)	1.1

4-PRESIDENT-SG Constituent	Units	03/31/05
Acetone	(ug/m3)	240
n-Heptane	(ug/m3)	760
Tetrachloroethene	(ug/m3)	0.64
Toluene	(ug/m3)	76
Trichloroethene	(ug/m3)	0.36

435-SM-SG Constituent	Units	03/31/05
Acetone	(ug/m3)	30
Dichlorodifluoromethane	(ug/m3)	8.2
Tetrachloroethene	(ug/m3)	15
Toluene	(ug/m3)	5.6
Trichloroethene	(ug/m3)	2.5
Trichlorofluoromethane	(ug/m3)	500

435-SM-1200 Constituent	Units	03/31/05
2-Butanone	(ug/m3)	8.7
Acetone	(ug/m3)	20J
Benzene	(ug/m3)	1.2
Benzene, 1,2,4-trimethyl	(ug/m3)	2.5
Benzene, 1,3,5-trimethyl-	(ug/m3)	0.81
Chloromethane	(ug/m3)	0.62
Dichlorodifluoromethane	(ug/m3)	2.4
Ethanol	(ug/m3)	9.4J
Ethylbenzene	(ug/m3)	1.3
Isopropanol	(ug/m3)	3.4
m+p-Xylene	(ug/m3)	4.2
o-Xylene	(ug/m3)	1.5
Styrene	(ug/m3)	6.8
Tetrahydrofuran	(ug/m3)	5
Toluene	(ug/m3)	12
Trichloroethene	(ug/m3)	1
Trichlorofluoromethane	(ug/m3)	1.8

MAP DERIVED FROM
TOPOGRAPHIC MAP OF
AND
MAP OF
SITUATED AT
TOWN OF HEMPSTEAD
NASSAU COUNTY, NEW YORK
NASSAU COUNTY MAP NO. 179
NASSAU COUNTY CASE NO. 1528
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LEGEND

AMBIENT AIR T

SG-01 = 1200 Square Foot Building Sub-Slab Sample
SG-02 = 2400 Square Foot Building Sub-Slab Sample
SG-03 = Subsurface Soil Gas
SG-04 = Subsurface Soil Gas
SG-05 = Subsurface Soil Gas
SG-06 = Subsurface Soil Gas
433-SM-CS = 433 South Main-Crawl Space
433-SM-B = 433 South Main-Basement
433-SM-First Floor= 433 South Main-First Floor
4-ER-CS = 4-East Ray-Crawl Space
4-ER-B = 4 East Ray-Basement
4-ER-First Floor = 4 East Ray-First Floor
435-SM-1200 = 435 South Main-1200 (Small Show Room Building Indoor Air)
435-SM-2400 = 435 South Main-2400 (Larger Garage/Maintenance Building Indoor Air)
433-4-ER-AA = 433 South Main & 4 East Ray-Ambient Air
435-SM-AA = 435 South Main-Ambient Air
4-President-SG = 4 President-Soil Gas
435-SM-SG = 435 South Main-Soil Gas
3-Ray-SG = 3 Ray-Soil Gas

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FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

Figure 7
Remedial Investigation
Soil Vapor Data

0 75' 150'

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

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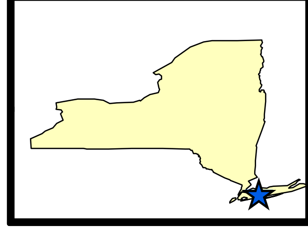


FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 8
Documentation Soil &
Sediment Sample Locations

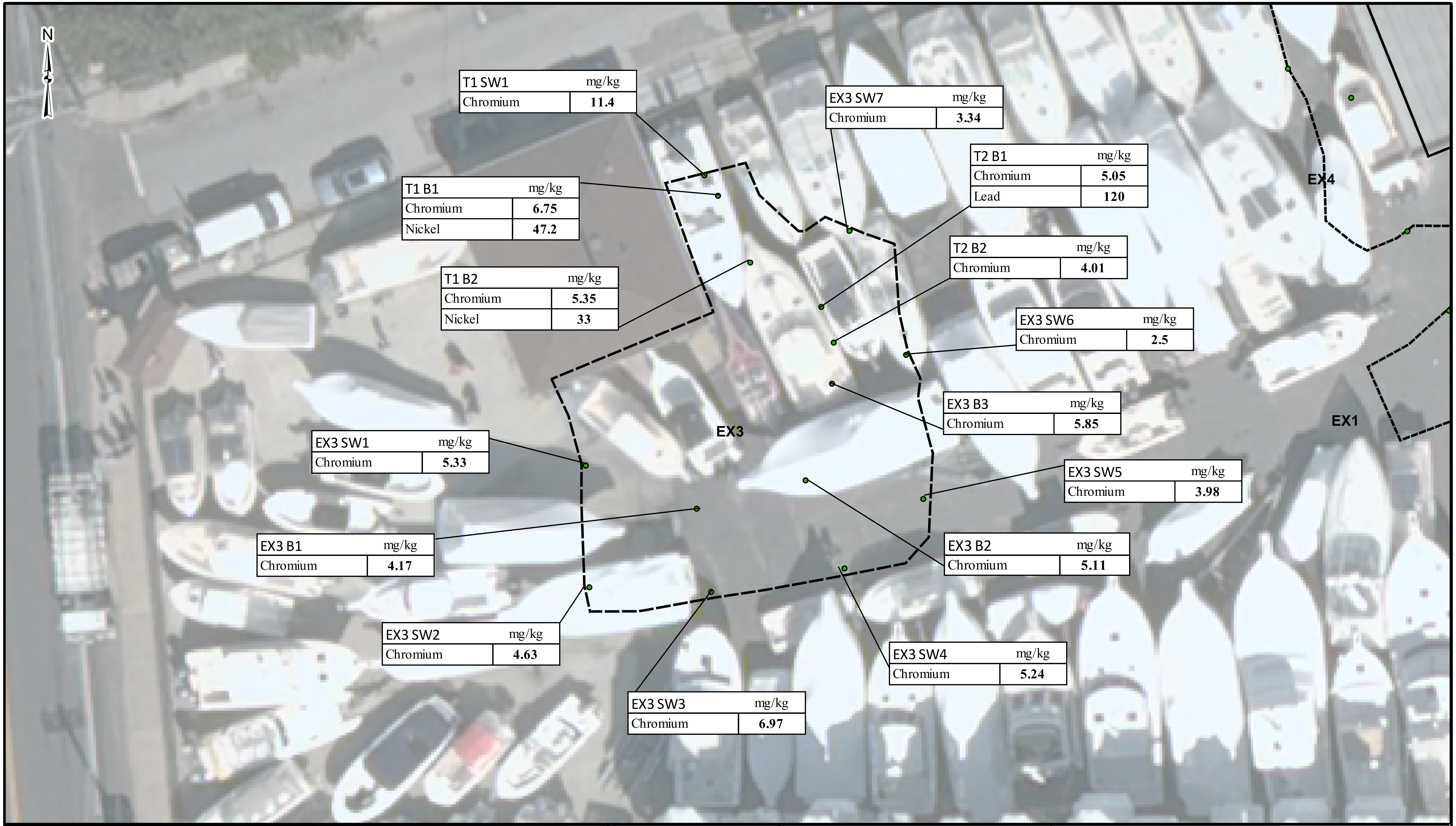
Feet
0 20 40 80

Source: NYS GIS Clearing House

Legend

---- Excavation Area Boundaries

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig8



T1 SW1	mg/kg
Chromium	11.4

EX3 SW7	mg/kg
Chromium	3.34

T2 B1	mg/kg
Chromium	5.05
Lead	120

T1 B1	mg/kg
Chromium	6.75
Nickel	47.2

T2 B2	mg/kg
Chromium	4.01

T1 B2	mg/kg
Chromium	5.35
Nickel	33

EX3 SW6	mg/kg
Chromium	2.5

EX3 B3	mg/kg
Chromium	5.85

EX3 SW1	mg/kg
Chromium	5.33

EX3 SW5	mg/kg
Chromium	3.98

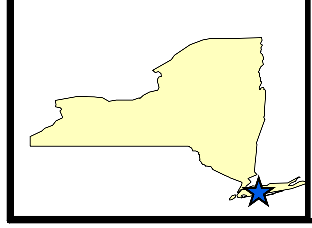
EX3 B1	mg/kg
Chromium	4.17

EX3 B2	mg/kg
Chromium	5.11

EX3 SW2	mg/kg
Chromium	4.63

EX3 SW4	mg/kg
Chromium	5.24

EX3 SW3	mg/kg
Chromium	6.97



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

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

Feet
0 5 10 20

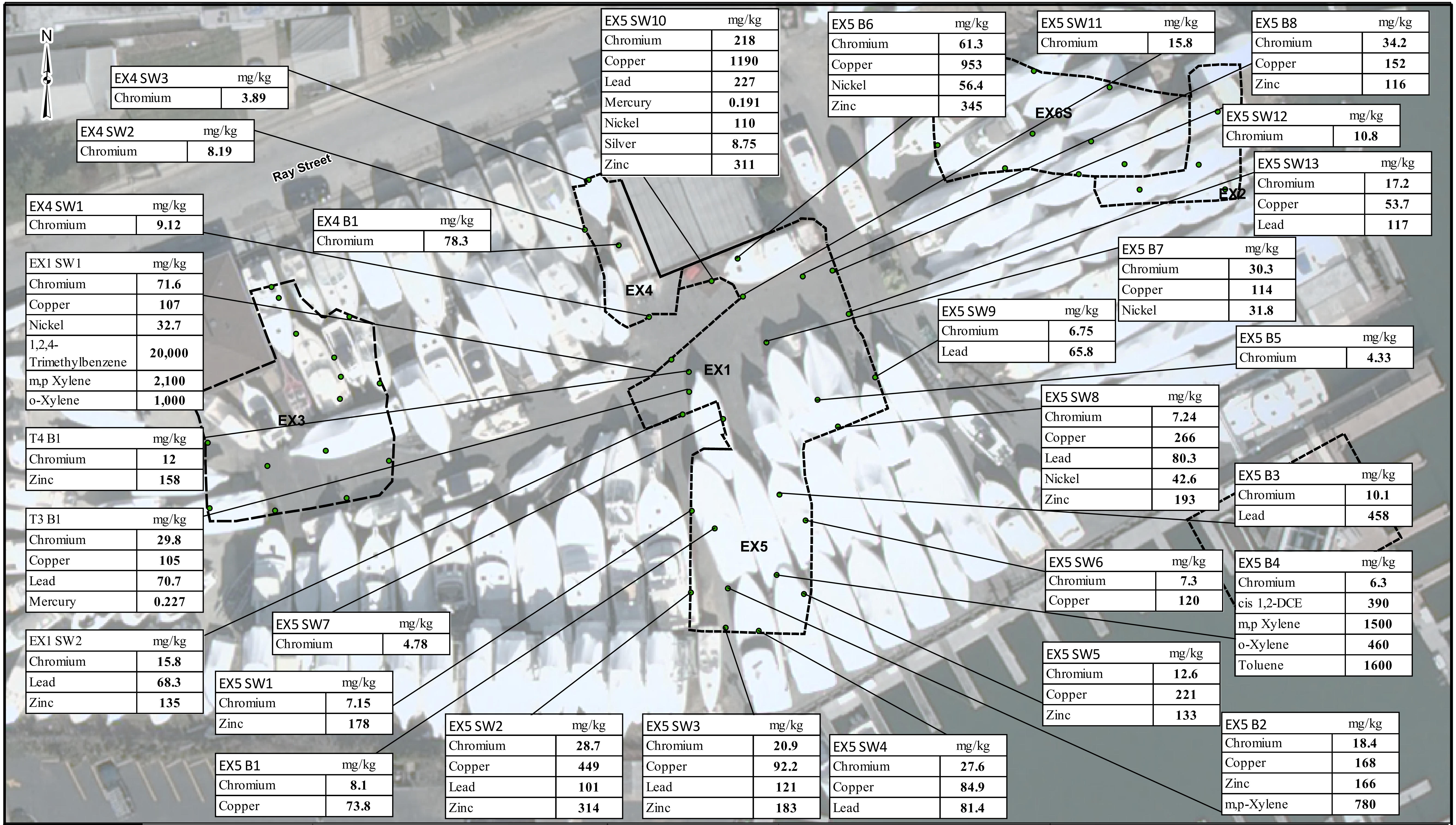
Legend

● Documentation Sample Location

---- Excavation Area Boundaries

Source: NYS GIS Clearing House

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig8



EX4 SW3	mg/kg
Chromium	3.89

EX4 SW2	mg/kg
Chromium	8.19

EX4 SW1	mg/kg
Chromium	9.12

EX4 B1	mg/kg
Chromium	78.3

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

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

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

EX5 SW11	mg/kg
Chromium	15.8

EX5 B8	mg/kg
Chromium	34.2
Copper	152
Zinc	116

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 SW7	mg/kg
Chromium	4.78

EX5 SW5	mg/kg
Chromium	12.6
Copper	221
Zinc	133

EX5 SW1	mg/kg
Chromium	7.15
Zinc	178

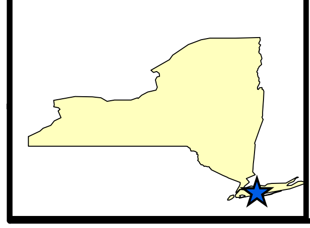
EX5 B1	mg/kg
Chromium	8.1
Copper	73.8

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



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

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

Feet
0 15 30 60

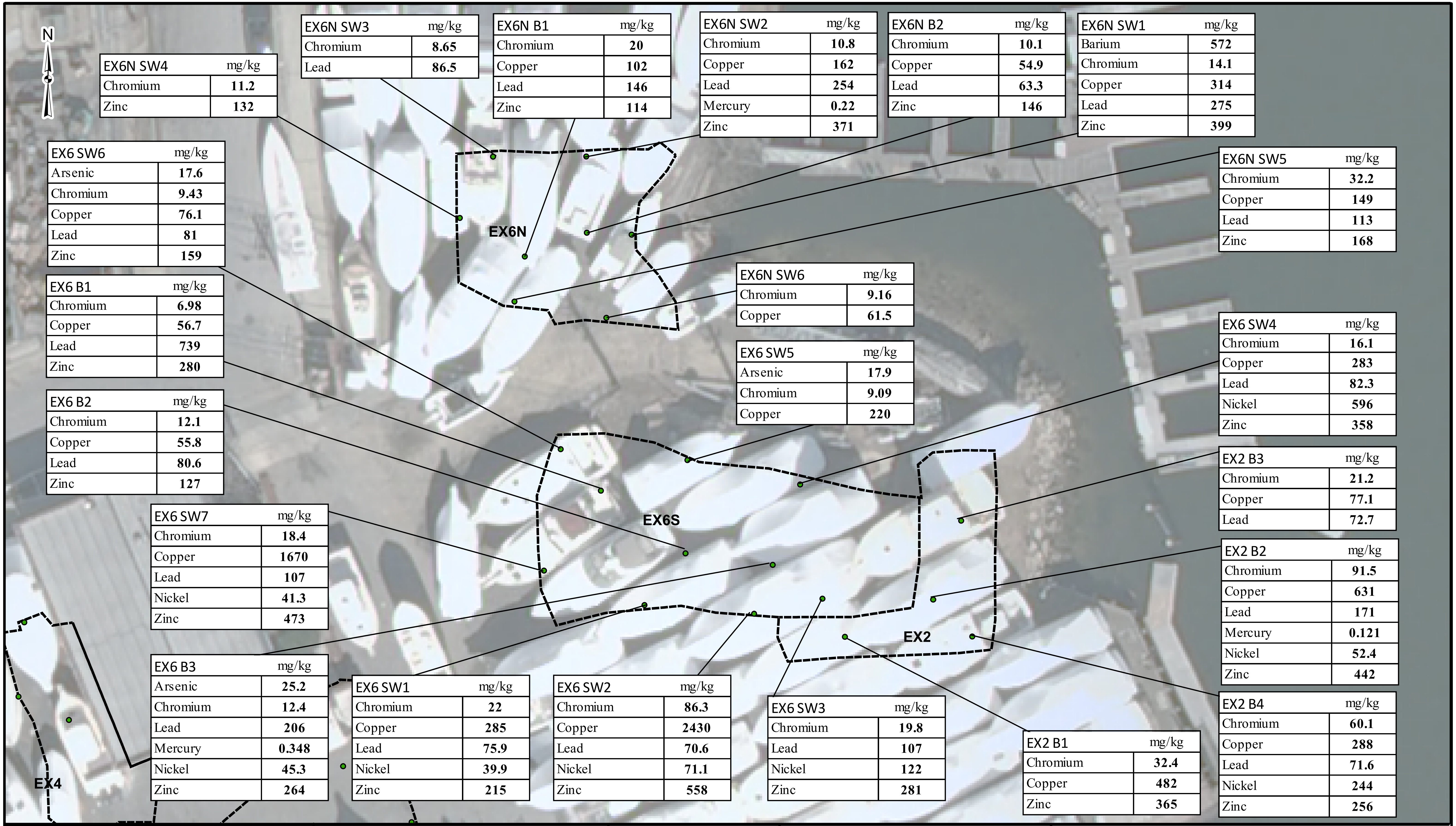
Legend

● Documentation Sample Location

---- Excavation Area Boundaries

Source: NYS GIS Clearing House

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig8B



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 SW5	mg/kg
Arsenic	17.9
Chromium	9.09
Copper	220

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

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

EX2 B3	mg/kg
Chromium	21.2
Copper	77.1
Lead	72.7

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

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

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

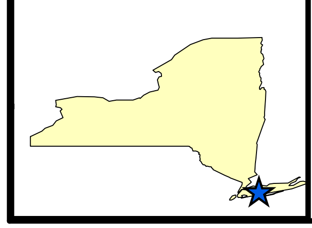
EX6 SW1	mg/kg
Chromium	22
Copper	285
Lead	75.9
Nickel	39.9
Zinc	215

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



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 8C
Documentation Sample
Locations with Exceedences of
Unrestricted Levels in EX-2 & -6

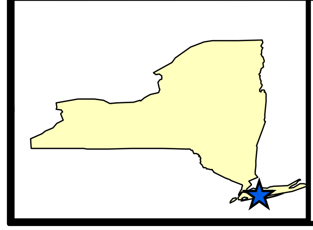
Legend

● Documentation Sample Location

---- Excavation Area Boundaries

Source: NYS GIS Clearing House

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig8C



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 9
Documentation Soil &
Sediment Sample Locations

Feet
0 15 30 60

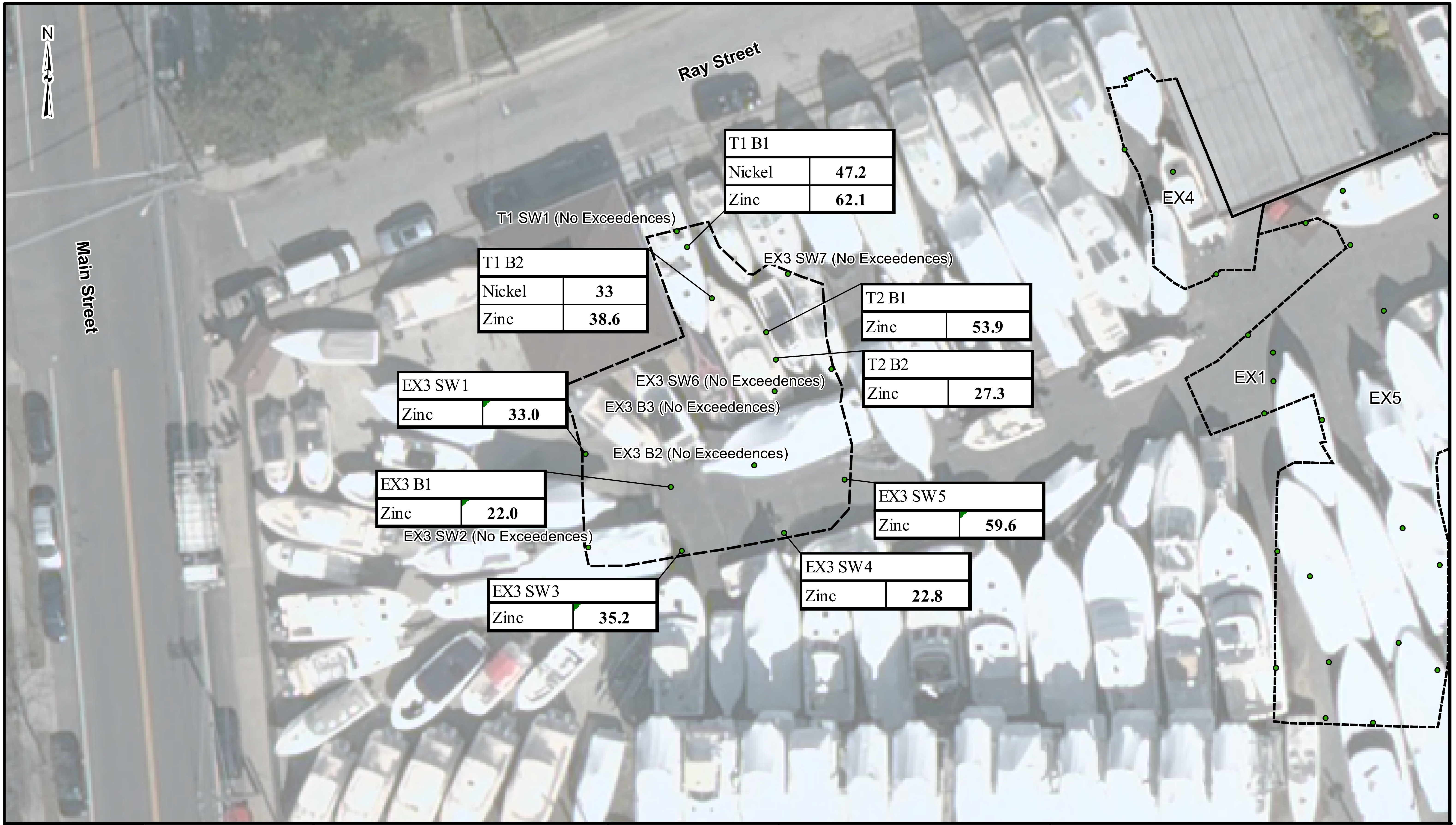
PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 14474.37	DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\Fig9

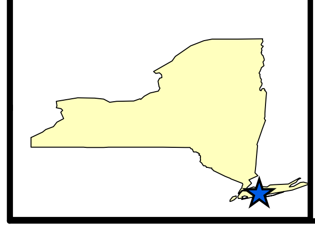
Legend

● Documentation Sample Locations

---- Excavation Area Boundaries

Source: NYS GIS Clearing House





FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

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

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

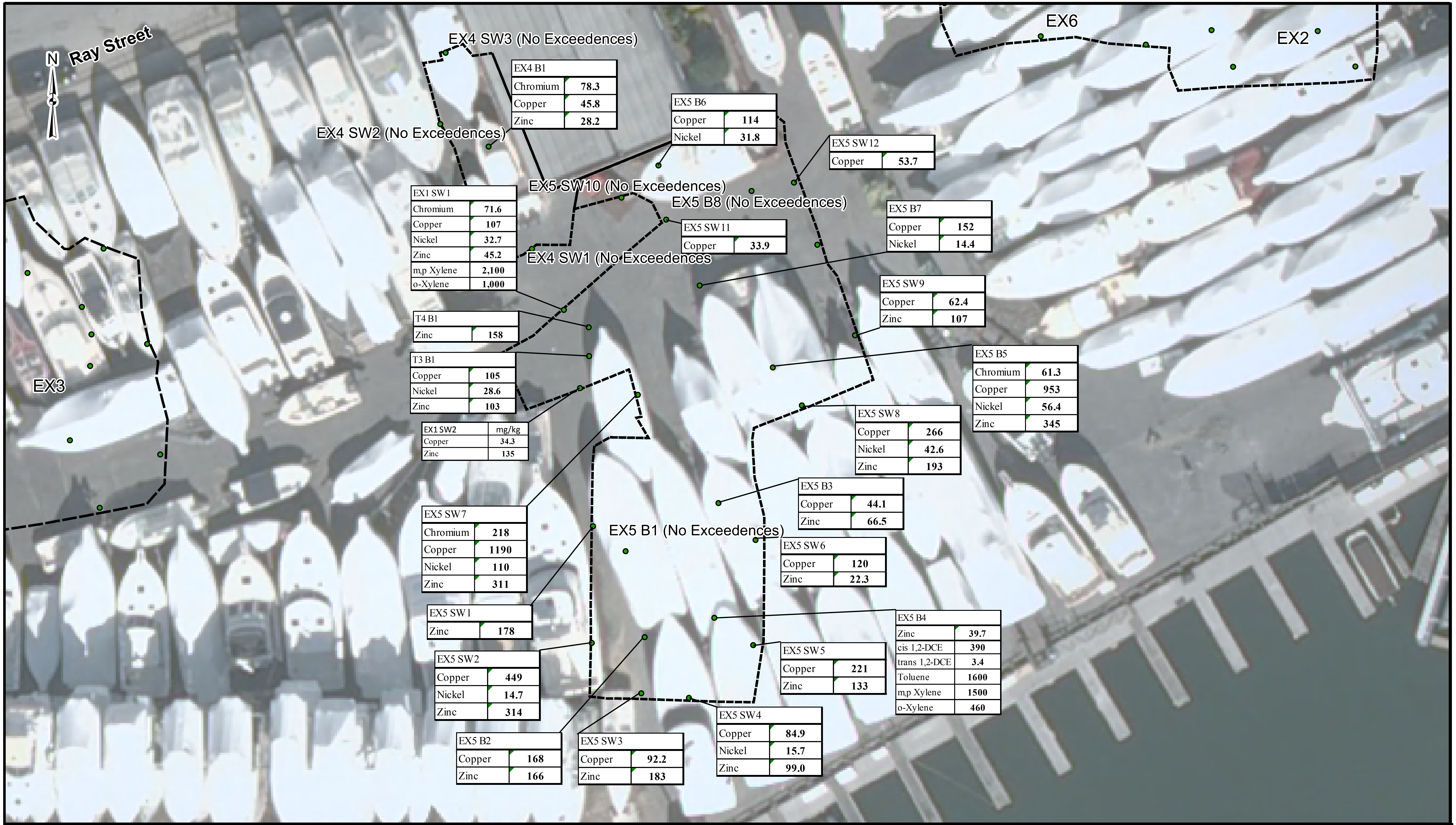
Feet
0 12.5 25 50

Source: NYS GIS Clearing House

Legend

- ● Documentation Sample Locations
- ---- Excavation Area Boundaries

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



EX4 B1	
Chromium	78.3
Copper	45.8
Zinc	28.2

EX5 B6	
Copper	114
Nickel	31.8

EX5 SW12	
Copper	53.7

EX1 SW1	
Chromium	71.6
Copper	107
Nickel	32.7
Zinc	45.2
m,p Xylene	2,100
o-Xylene	1,000

EX5 SW11	
Copper	33.9

EX5 B7	
Copper	152
Nickel	14.4

EX5 SW9	
Copper	62.4
Zinc	107

T4 B1	
Zinc	158

T3 B1	
Copper	105
Nickel	28.6
Zinc	103

EX5 B5	
Chromium	61.3
Copper	953
Nickel	56.4
Zinc	345

EX1 SW2	mg/kg
Copper	34.3
Zinc	135

EX5 SW8	
Copper	266
Nickel	42.6
Zinc	193

EX5 B3	
Copper	44.1
Zinc	66.5

EX5 SW7	
Chromium	218
Copper	1190
Nickel	110
Zinc	311

EX5 SW6	
Copper	120
Zinc	22.3

EX5 SW1	
Zinc	178

EX5 B4	
Zinc	39.7
cis 1,2-DCE	390
trans 1,2-DCE	3.4
Toluene	1600
m,p Xylene	1500
o-Xylene	460

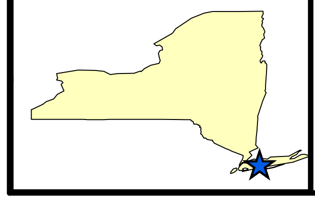
EX5 SW5	
Copper	221
Zinc	133

EX5 SW2	
Copper	449
Nickel	14.7
Zinc	314

EX5 SW4	
Copper	84.9
Nickel	15.7
Zinc	99.0

EX5 B2	
Copper	168
Zinc	166

EX5 SW3	
Copper	92.2
Zinc	183



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

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

0 10 20 40 Feet

Legend

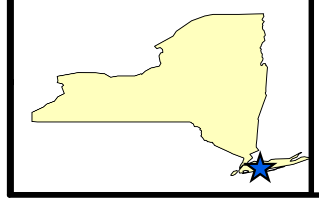
Source: NYS GIS Clearing House

● Documentation Sample Locations

- - - Excavation Area Boundaries

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

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig9B



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 9C
Documentation Sample Locations
with Exceedances of
Site-Specific SCO's
EX2 and EX6

Feet
0 10 20 40

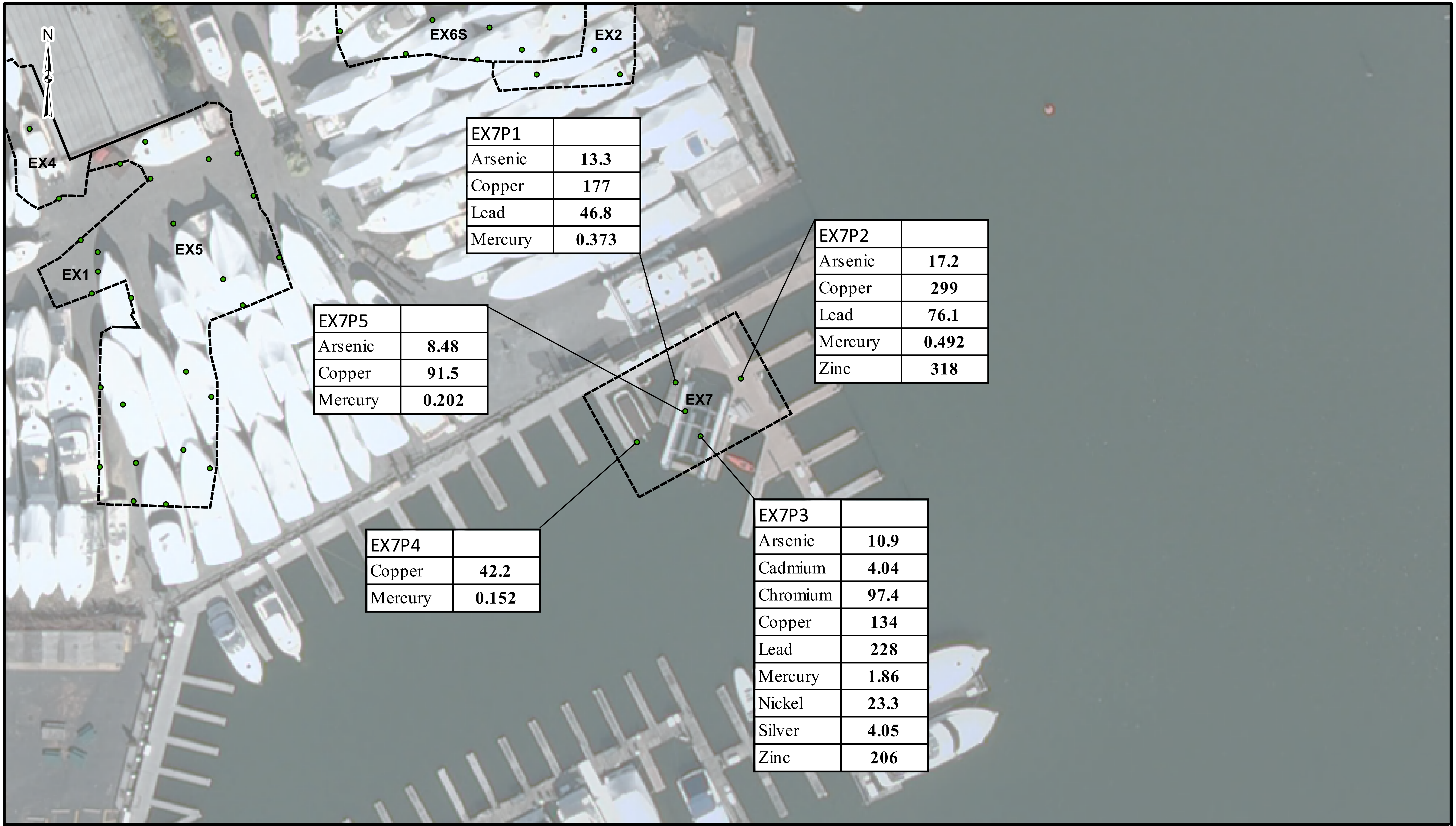
Legend

Source: NYS GIS Clearing House

● Documentation Sample Location
---- Excavation Area Boundaries

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

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig9C



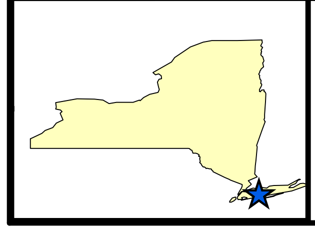
EX7P1	
Arsenic	13.3
Copper	177
Lead	46.8
Mercury	0.373

EX7P2	
Arsenic	17.2
Copper	299
Lead	76.1
Mercury	0.492
Zinc	318

EX7P5	
Arsenic	8.48
Copper	91.5
Mercury	0.202

EX7P4	
Copper	42.2
Mercury	0.152

EX7P3	
Arsenic	10.9
Cadmium	4.04
Chromium	97.4
Copper	134
Lead	228
Mercury	1.86
Nickel	23.3
Silver	4.05
Zinc	206



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

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

Feet
0 15 30 60

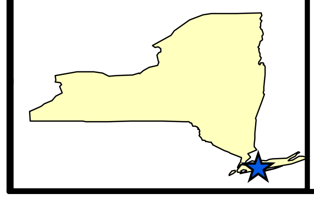
PROJECT MGR: RSC	DESIGNED BY: RSC	CREATED BY: MEM	CHECKED BY: RSC	PROJECT NO: 14474.37	DATE: APRIL 2014	SCALE: AS SHOWN	FILE NO: G:\Projects\Fig9D

Legend

Source: NYS GIS Clearing House

● Documentation Sample Locations

---- Excavation Area Boundaries



FREEPORT METAL ETCHING
SITE MONITORING PLAN
FREEPORT, NEW YORK

FIGURE 10
Location of Cover System Types

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	PROJECT NO:	DATE:	SCALE:	FILE NO:
RSC	RSC	MEM	RSC	14474.37	APRIL 2014	AS SHOWN	G:\Projects\Fig10

Legend

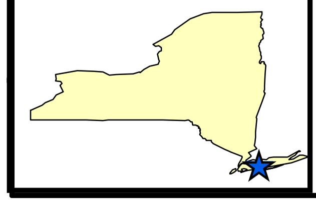
Source: NYS GIS Clearing House

⊕ New Monitoring Wells

▨ Asphalt Cover

⁙ Porous Pavement Cover

▧ Stone Cover



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 11
Area of Soil Vapor Concern

0 25 50 100 Feet

Legend

— Area of Soil Vapor Intrusion Concern

Source: NYS GIS Clearing House

PROJECT MGR: RSC

DESIGNED BY: RSC

CREATED BY: MEM

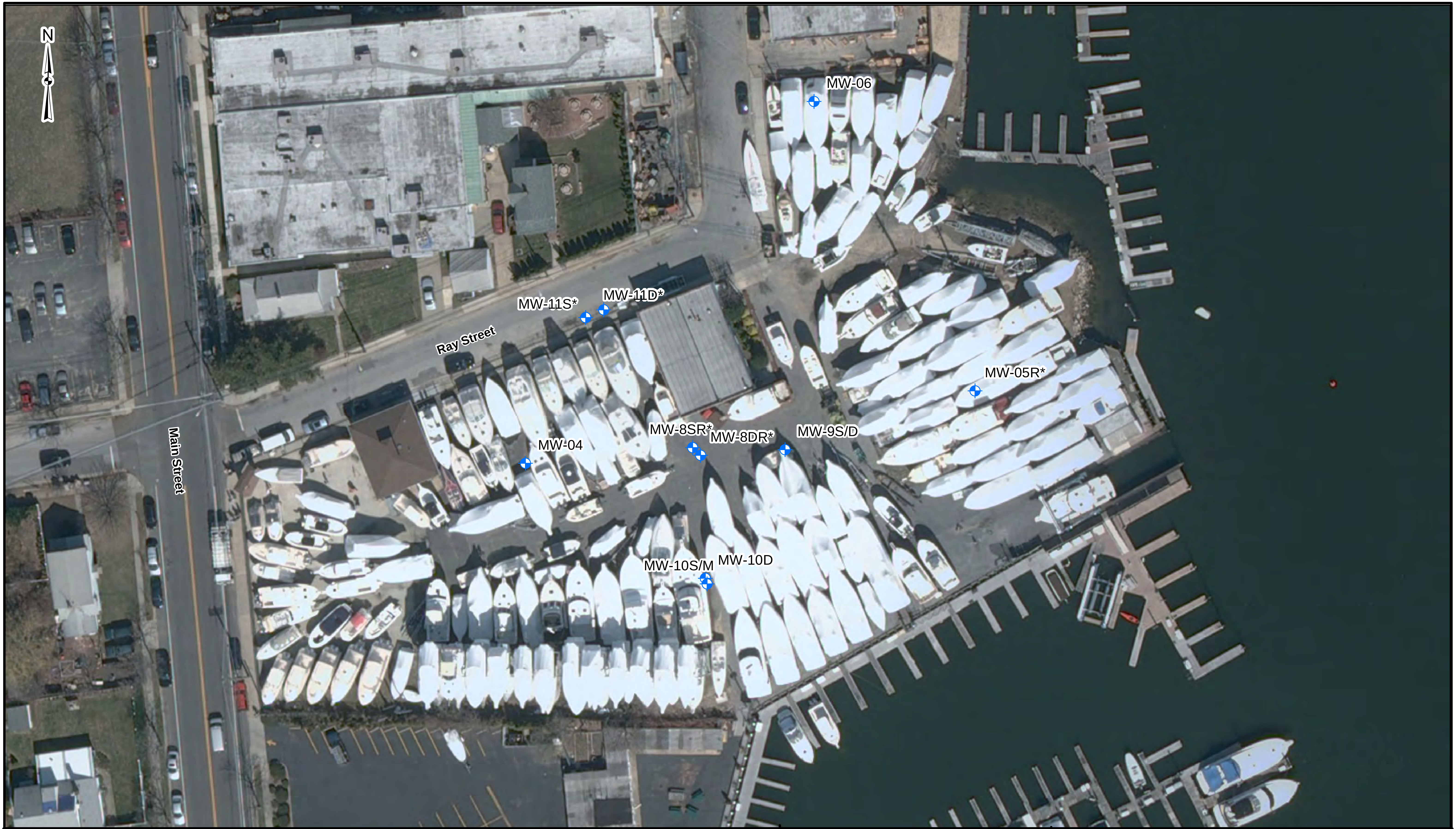
CHECKED BY: RSC

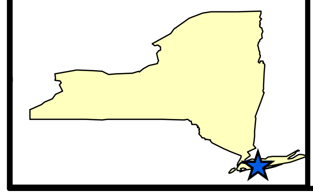
PROJECT NO: 14474.37

DATE: APRIL 2014

SCALE: AS SHOWN

FILE NO: G:\Projects\SMP\FIG11





FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 12
Groundwater Monitoring
Well Network

Feet
0 25 50 100

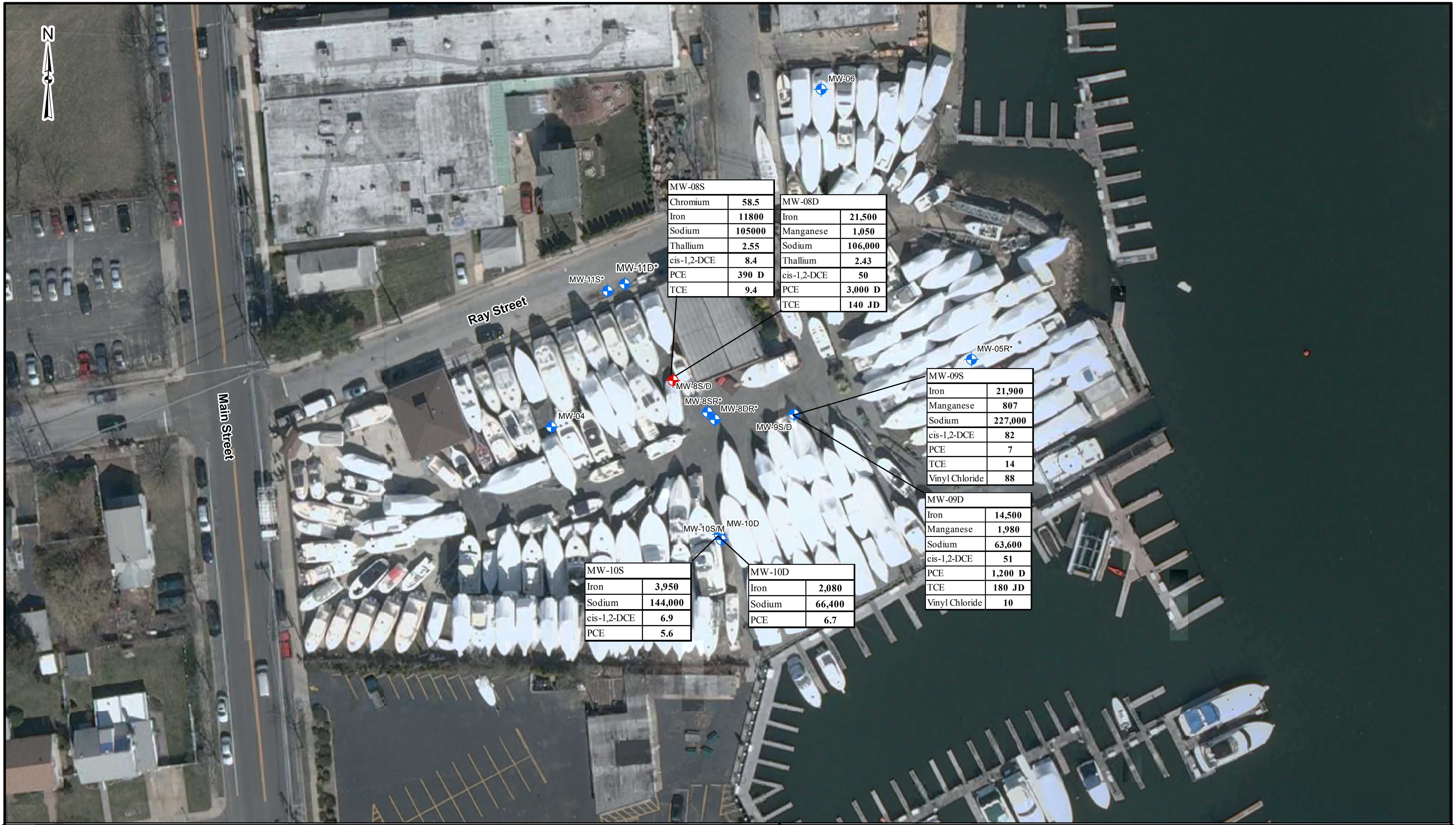
Legend

⊕ Existing Monitoring Wells

*Wells not surveyed; locations approximate

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:\MegalEtching\ SMP\Fig12



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

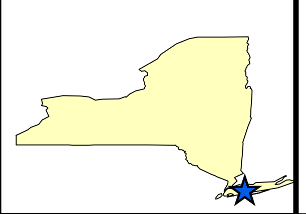
MW-08D	
Iron	**21,500**
Manganese	**1,050**
Sodium	**106,000**
Thallium	**2.43**
cis-1,2-DCE	**50**
PCE	**3,000 D**
TCE	**140 JD**

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

FIGURE 13
Baseline Post-Remediation
Groundwater Quality

Feet
0 25 50 100

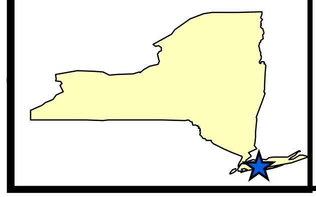
Legend

Source: NYS GIS Clearing House

🔵 Existing Monitoring Wells
🔴 Monitoring wells covered by concrete slab

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

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:\MegalEtching\SMP\Fig13



FREEPORT METAL ETCHING
SITE MANAGEMENT PLAN
FREEPORT, NEW YORK

FIGURE 14
Location of Remedial
Treatment Systems

Feet
0 20 40 80

Source: NYS GIS Clearing House

Legend

···· Location of Sub Slab Depressurization System

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

TABLE 1 REMEDIAL INVESTIGATION SOIL CONTAMINATION SUMMARY

Chemical	Maximum Detected Concentration	TAGM RSCO Level	Direct Contact Criteria	Protection of Groundwater Criteria
VOCs (µg/kg)				
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

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.

Constituent	Maximum Detected Concentration (mg/kg)	Eastern US Background[1] (mg/kg)	New York Region[2] (mg/kg)	NYSDEC RSCO (mg/kg)	Frequency of Detection Above RSCOs
METALS					
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

1. Shacklette, HT and JG Boerngen, 1984. Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, USGS Professional Paper 1270

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.

NOTE: NYSDEC = New York State Department of Environmental Conservation
mg/kg = Milligram per kilogram
SB = Site Background
Shaded cells represent chemicals detected above both Eastern US Background and New York Region Background.

TABLE 2 REMEDIAL INVESTIGATION GROUNDWATER CONTAMINATION SUMMARY

Constituents	Screening Levels[1]	MW-01 C1292-03 10/8/2004	MW-02D C1282-03 10/7/2004	MW-02S C1282-02 10/7/2004	MW-03D C1282-05 10/7/2004	MW-03S C1282-04 10/7/2004	MW-04 C1292-04 10/8/2004	MW-05 C1292-01 10/8/2004	MW-06 C1292-02 10/8/2004	MW-07D C1282-07 10/7/2004	MW-07S C1282-06 10/7/2004
VOLATILE ORGANIC COMPOUNDS (µg/L)											
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		32	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
SEMIVOLATILE ORGANIC COMPOUNDS (µg/L)											
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
METALS (µg/L)											
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	
PESTICIDES (µg/L)											
Endrin ketone	na										0.079 J

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.

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

TABLE 3 REMEDIAL INVESTIGATION SOIL VAPOR DATA SUMMARY

Soil Gas Survey Sample Point Identification	Sample Serial Number	Installation Date/Time	Initial Reading	Sustained Reading
Gore Sorbers				
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

										Background Locations	
	ER-L mg/kg (Metals); ug/kg (PCBs, VOCs, SVOCs)	ER-M mg/kg (Metals); ug/kg (PCBs, VOCs, SVOCs)	SED-01 C1024-01 8/24/2004 Primary	SED-01 C1024-09 8/24/2004 Duplicate	SED-02 C1024-02 8/24/2004 Primary	SED-03 C1024-03 8/24/2004 Primary	SED-04 C1024-04 8/24/2004 Primary	SED-05 C1024-05 8/24/2004 Primary	SED-07 C1024-07 8/24/2004 Primary	SED-06 C1024-06 8/24/2004 Primary	SED-08 C1024-08 8/24/2004 Primary
VOCs (ug/kg)											
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
Sum of Constituents			**24**	**17**	**28**	**0**	**43**	**3**	**7**	**751**	**27**
SVOCs (ug/kg)											
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
Sum of Constituents			**23316**	**15471**	**5452**	**809**	**6170**	**33780**	**245**	**5880**	**510**
Pest/PCBs (ug/kg)											
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
Metals (mg/kg)											
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[1]	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[1]	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 Managament 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
VOLATILE ORGANIC COMPOUNDS - SOIL		
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
INORGANICS (METALS) - SOIL		
Chromium	50	mg/Kg
Copper	25	mg/Kg
Nickel	13	mg/Kg
Zinc	20	mg/Kg
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER		
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
INORGANICS (METALS) - GROUNDWATER		
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
INORGANICS (METALS)			
Arsenic	8.2	70	mg/Kg
Cadmium	1.2	9.6	mg/Kg
Chromium	81	370	mg/Kg
Copper	34	270	mg/Kg
Iron(a)	2%	4%	mg/Kg
Lead	46.7	218	mg/Kg
Manganese(a)	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 Managament 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)	**20,000**	D	3.2	D		U		U		U		U		U	3,600
cis-1,2-Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	250
m,p-Xylene	(µg/kg)	**2,100**	D		D		U		U		U		U		U	260$^{(a)}$
o-Xylene	(µg/kg)	**1,000**	D		D		U		U		U		U		U	260$^{(a)}$
Toluene	(µg/kg)	13					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	3,600
cis-1,2-Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	250
m,p-Xylene	(µg/kg)		U		U		U		U		U		U		U	260$^{(a)}$
o-Xylene	(µg/kg)		U		U		U		U		U		U		U	260$^{(a)}$
Toluene	(µg/kg)		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	3,600
cis-1,2-Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	250
m,p-Xylene	(µg/kg)		U		U		U		U		U		U		U	260$^{(a)}$
o-Xylene	(µg/kg)		U		U		U		U		U		U		U	260$^{(a)}$
Toluene	(µg/kg)		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$^{(a)}$
o-Xylene	(µg/kg)		U	1.4	J		U	1.0	J		U		U		U	260$^{(a)}$
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	**390**	JD		U	22		1.9	J		U	250
m,p-Xylene	(µg/kg)	**780**	JD		U	**1,500**	D		U		U		U		U	260$^{(a)}$
o-Xylene	(µg/kg)		U		U	**460**	JD		U		U		U		U	260$^{(a)}$
Toluene	(µg/kg)	2	J		U	**1,600**	D		U	2.3	J	1.6	J		U	700

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

NOTE:
EPA = U.S. Enivronmental 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		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	$260^{(a)}$
o-Xylene	(µg/kg)		U		U		U		U		U		U		U	$260^{(a)}$
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		U		U	4.5	J		U	3,600
cis-1,2-Dichloroethylene	(µg/kg)		U		U	33		3.4	J		U		U		U	250
m,p-Xylene	(µg/kg)		U		U	5.9	J		U		U		U		U	$260^{(a)}$
o-Xylene	(µg/kg)		U		U	2.5	J		U		U		U		U	$260^{(a)}$
Toluene	(µg/kg)		U		U	13		2.6	J		U		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	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		
1,2,4-Trimethylbenzene	(µg/kg)		U		U			33			U		U		U	3,600
cis-1,2-Dichloroethylene	(µg/kg)		U		U				U		U		U		U	250
m,p-Xylene	(µg/kg)		U	3.1	J				U		U		U		U	$260^{(a)}$
o-Xylene	(µg/kg)		U		U				U		U		U		U	$260^{(a)}$
Toluene	(µg/kg)	3.2	J		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		3,600
cis-1,2-Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	250
m,p-Xylene	(µg/kg)		U		U		U		U		U		U	20		$260^{(a)}$
o-Xylene	(µg/kg)		U		U		U		U		U		U	2.1	J	$260^{(a)}$
Toluene	(µg/kg)		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	$260^{(a)}$
o-Xylene	(µg/kg)		U		U		U	$260^{(a)}$
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)	***71.6***		**15.8**		**29.8**		**12.0**		***32.4***		***91.5***		**21.2**		$1^{(a)}$, $30^{(b)}$
Copper	(mg/kg)	**107**		34.3		**105**		3.700		**482**		**631**		**77.1**		50
Lead	(mg/kg)	22.2		**68.3**		**70.7**		2.440		61.6		**171**		**72.7**		63
Mercury	(mg/kg)	0.056		0.105		**0.227**			U	0.058		**0.121**		0.077		0.18
Nickel	(mg/kg)	**32.7**		12.3		28.6		8.520		21.2		**52.4**		12.4		30
Silver	(mg/kg)	0.433	J	0.437		0.542			U	0.272	J	0.263	J	0.201	J	2
Zinc	(mg/kg)	45.2		**135**		103		**158**		**365**		**442**		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)	***60.1***		**4.170**		**5.110**		**5.850**		**5.330**		**4.630**		**6.970**		$1^{(a)}$, $30^{(b)}$
Copper	(mg/kg)	**288**		4.100		2.960		3.810		2.850		5.460		11.4		50
Lead	(mg/kg)	**71.6**		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	*	0.031	*	0.18
Nickel	(mg/kg)	**244**		3.690		3.510		3.740		3.120		3.230		4.670		30
Silver	(mg/kg)		U	0.155	J	0.159	J		U		U	0.146	J	0.259	J	2
Zinc	(mg/kg)	**256**		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		13
Barium	(mg/kg)	16.6		13.7		8.180		7.410		16.4		18.6		20.2		350
Chromium (Total)	(mg/kg)	**5.240**		**3.980**		**2.500**		**3.340**		**6.750**		**5.350**		**11.4**		$1^{(a)}$, $30^{(b)}$
Copper	(mg/kg)	3.900		6.600		6.870		2.880		10.1		13.6		4.770		50
Lead	(mg/kg)	8.780		31.0		2.620		2.720		26.1		18.6		5.580		63
Mercury	(mg/kg)	0.018	*	0.064	*	0.004	J	0.005	J	0.049		0.072		0.013		0.18
Nickel	(mg/kg)	3.490		3.430		3.850		3.730		**47.2**		**33.0**		6.420		30
Silver	(mg/kg)	0.216	J	0.178	J		U		U		U		U		U	2
Zinc	(mg/kg)	22.8		59.6		11.7		10.7	*	62.1	*	38.6	*	17.2	*	109

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

NOTE: EPA = U.S. Enivronmental Protection Agency.
Identification
mg/kg = Millirgrams 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)	**5.050**		**4.010**		***78.3***		**9.120**		**8.190**		**3.890**		**8.1**	*	$1^{(a)}$, $30^{(b)}$
Copper	(mg/kg)	14.1		5.950		45.8		22.5		3.100		3.770		**73.8**		50
Lead	(mg/kg)	**120**		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)	**18.4**	*	**10.1**		**6.300**		**4.330**		***61.3***		***30.3***		***34.2***		1(a), 30(b)
Copper	(mg/kg)	**168**		44.1		18.4		4.240		**953**		**114**		**152**		50
Lead	(mg/kg)	48.6		**458**		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		**56.4**		**31.8**		14.4		30
Silver	(mg/kg)		U		U	0.18	J		U	0.84			U		U	2
Zinc	(mg/kg)	**166**		66.5		39.7		10.6		**345**		88.6	N	**116**	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)	**7.15**	*	**28.7**	*	**20.9**	*	**27.6**		**12.6**		**7.300**		**4.780**		$1^{(a)}$, $30^{(b)}$
Copper	(mg/kg)	8.230		**449**		**92.2**		**84.9**		**221**		**120**		11.2		50
Lead	(mg/kg)	31.7		**101**		**121**		**81.4**		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)	**178**		**314**		**183**		99.0		**133**		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)	**7.240**		**6.750**		***218***		**15.8**		**10.8**		**17.2**		**6.980**		$1^{(a)}$, $30^{(b)}$
Copper	(mg/kg)	**266**		62.4		**1190**		20.1		33.9		**53.7**		**56.7**		50
Lead	(mg/kg)	**80.3**		**65.8**		**227**	*	36.0		53.5		**117**		**739**		63
Mercury	(mg/kg)	0.079		0.068		**0.191**		0.024		0.070		0.081		0.109		0.18
Nickel	(mg/kg)	**42.6**		10.7		**110**		9.550		12.8		11.7		6.450		30
Silver	(mg/kg)		U		U	**8.750**			U		U		U		U	2
Zinc	(mg/kg)	**193**		107		**311**		67.1	N	51.3	N	95.7	N	**280**		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**		$1^{(a)}$, $30^{(b)}$
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**	*	$1^{(a)}$, $30^{(b)}$
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		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$^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	300$^{(a)}$
Ethylbenzene	(µg/kg)	570	D		U		U		U		U		U		U	5,500
Methyl tert-butyl ether	(µg/kg)	2	J		U		U	4	J		U		U		U	120
Naphthalene	(µg/kg)	13,000	D		U		U		U		U		U		U	13,000
Tetrachloroethylene (PCE)	(µg/kg)		U		U		U		U		U		U		U	1,400
Toluene	(µg/kg)	13			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)	**2,100**	D		U		U		U		U		U		U	1,200$^{(b)}$
o- Xylene	(µg/kg)	**1,000**	D		U		U		U		U		U		U	1,200$^{(b)}$

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		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$^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	300$^{(a)}$
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	J		U		U		U		U		U		U	13,000
Tetrachloroethylene (PCE)	(µg/kg)		U		U		U		U		U		U	6		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$^{(b)}$
o- Xylene	(µg/kg)		U		U		U		U		U		U		U	1,200$^{(b)}$

(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. Enivronmental 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	$300^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	$300^{(a)}$
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	$1,200^{(b)}$
o- Xylene	(µg/kg)		U		U		U		U		U		U		U	$1,200^{(b)}$

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		U	$300^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	$300^{(a)}$
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		U	13,000
Tetrachloroethylene (PCE)	(µg/kg)		U		U	96	D	3	J		U		U		U	1,400
Toluene	(µg/kg)		U		U		U	1.1	J		U		U		U	1,500
Trichloroethylene (TCE)	(µg/kg)	5.2	J	3.4	J	12			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	7.2	J		U		U		U	$1,200^{(b)}$
o- Xylene	(µg/kg)		U	1.4	J		U	1	J		U		U		U	$1,200^{(b)}$

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		U		U	$300^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U	**3.4**	J		U		U		U		U	$300^{(a)}$
Ethylbenzene	(µg/kg)	430	JD		U	340	JD		U		U		U		U	5,500
Methyl tert-butyl ether	(µg/kg)		U		U		U		U		U		U		U	120
Naphthalene	(µg/kg)	470	JD		U	31	U		U	1.9	J		U		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		U		U	1,500
Trichloroethylene (TCE)	(µg/kg)		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		U	$1,200^{(b)}$
o- Xylene	(µg/kg)		U		U	**460**	JD		U		U		U		U	$1,200^{(b)}$

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$^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U	1.9	J		U	300$^{(a)}$
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		U	13,000
Tetrachloroethylene (PCE)	(µg/kg)		U		U		U		U		U	2.1	J		U	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		U	1,200$^{(b)}$
o- Xylene	(µg/kg)		U		U		U		U		U	2.5	J		U	1,200$^{(b)}$

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		U	300$^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	300$^{(a)}$
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		U	2.4	J		U		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		U	3.2	J		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	3.1	J	1,200$^{(b)}$
o- Xylene	(µg/kg)		U		U		U		U		U		U		U	1,200$^{(b)}$

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$^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	300$^{(a)}$
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$^{(b)}$
o- Xylene	(µg/kg)		U		U		U		U		U		U		U	1,200$^{(b)}$

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	$300^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U		U		U		U		U		U		U	$300^{(a)}$
Ethylbenzene	(µg/kg)		U		U		U		U	1.8	J		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	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	$1,200^{(b)}$
o- Xylene	(µg/kg)		U		U		U		U	2.1	J		U		U	$1,200^{(b)}$

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	$300^{(a)}$
trans 1,2- Dichloroethylene	(µg/kg)		U	$300^{(a)}$
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	$1,200^{(b)}$
o- Xylene	(µg/kg)		U	$1,200^{(b)}$

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)	**71.6**		15.8		29.8		12.0		32.4		**91.5**		21.2		50
Copper	(mg/kg)	**107**		**34.3**		**105**		3.700		**482**		**631**		**77.1**		25
Nickel	(mg/kg)	**32.7**		12.3		**28.6**		8.520		**21.2**		**52.4**		12.4		13
Zinc	(mg/kg)	**45.2**		**135**		**103**		**158**		**365**		**442**		**96.5**		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)	**60.1**		4.170		5.110		5.850		5.330		4.630		6.970		50
Copper	(mg/kg)	**288**		4.100		2.960		3.810		2.850		5.460		11.4		25
Nickel	(mg/kg)	**244**		3.690		3.510		3.740		3.120		3.230		4.670		13
Zinc	(mg/kg)	**256**		**22.0**		11.8		14.8		**33.0**		16.5		**35.2**		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		**47.2**		**33**		6.42		13
Zinc	(mg/kg)	**22.8**		**59.6**		11.7			U	**62.1**		**38.6**		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		**78.3**		9.120		8.190		3.890			U	50
Copper	(mg/kg)	14.1		5.95		**45.8**		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)	**53.9**		**27.3**		**28.2**		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)	**168**		25
Nickel	(mg/kg)	11.0		13
Zinc	(mg/kg)	**166**		20

NOTE: EPA = U.S. Enivronmental Protection Agency.
Identification
mg/kg = Millirgrams 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**BOLD** 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		**953**		**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		C3100-01		
	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)	**13.3**		**17.2**		**10.9**		3.81		**8.48**		8.2	70
Cadmium	(mg/kg)	0.512		0.981		**4.04**		0.123	J	0.309	J	1.2	9.6
Chromium	(mg/kg)	40.7		55.2		**97.4**		17.4		42.6		81	370
Copper	(mg/kg)	**177**		***299***		**134**		**42.2**		**91.5**		34	270
Iron[(a)]	(mg/kg)	14000		21100		21900		5630		11900		2%	4%
Lead	(mg/kg)	**46.8**		**76.1**		***228***		24.5		40.9		46.7	218
Mercury	(mg/kg)	**0.373**		**0.492**		***1.86***	D	**0.152**		**0.202**		0.15	0.71
Nickel	(mg/kg)	15.8		16.7		**23.3**		5.28		15.3		20.9	51.6
Silver	(mg/kg)		U		U	***4.05***			U		U	1	3.7
Zinc	(mg/kg)	141		**318**		**206**		44.8		100		150	410

NOTE:
EPA = U.S. Enivronmental Protection Agency.
mg/kg = Millirgrams 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)	**8.4**		**50**		**82**		**51**		**6.9**		(<5.0)	U	**67**		(<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)	**390**	**D**	**3,000**	**D**	**7**		**1,200**	**D**	**5.6**		**6.7**		**7**		(<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)	**9.4**		**140**	**JD**	**14**		**180**	**JD**	(<5.0)	U	(<5.0)	U	**7**		(<5)	U	5 (s)
Vinyl chloride	(µg/L)	(<5.0)	U	(<5.0)	U	**88**		**10**		(<5.0)	U	(<5.0)	U	**75**		(<5)	U	2 (s)

NOTE: EPA = U.S. Enivronmental 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 **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.

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

	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		
Parameter List	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
EPA Method 6010/7470	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)	**58.5**		5.69		11.9		12.5		12.5		6.57		**68.8**		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)	**11,800**		**21,500**		**21,900**		**14,500**		**3,950**		**2,080**		**22,000**		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		**1,050**		**807**		**1,980**		106		227		**778**		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)	**105,000**		**106,000**		**227,000**		**63,600**		**144,000**		**66,400**		**225,000**		20,000 (s)
Thallium	(µg/L)	**2.55**	**J**	**2.43**	**J**	(<20)	U	(<20)	U	(<20)	U	(<20)	U	**2.73**	**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	J	15.7	J	18.3	J	17.3	J	2,000 (g)

NOTE:
EPA = U.S. Enivronmental 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 5th 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 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 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 5th 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, 2014

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 NOWOR 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 DMSION UNE 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:

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 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 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 AND RESEARCH SERVICES AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 5032264, DATED OCTOBER 2, 2012.

DEED REFERENCES:

1) 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.

2) 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:

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 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 BWM HIGH & 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 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 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 derweb@gw.dec.state.ny.us.

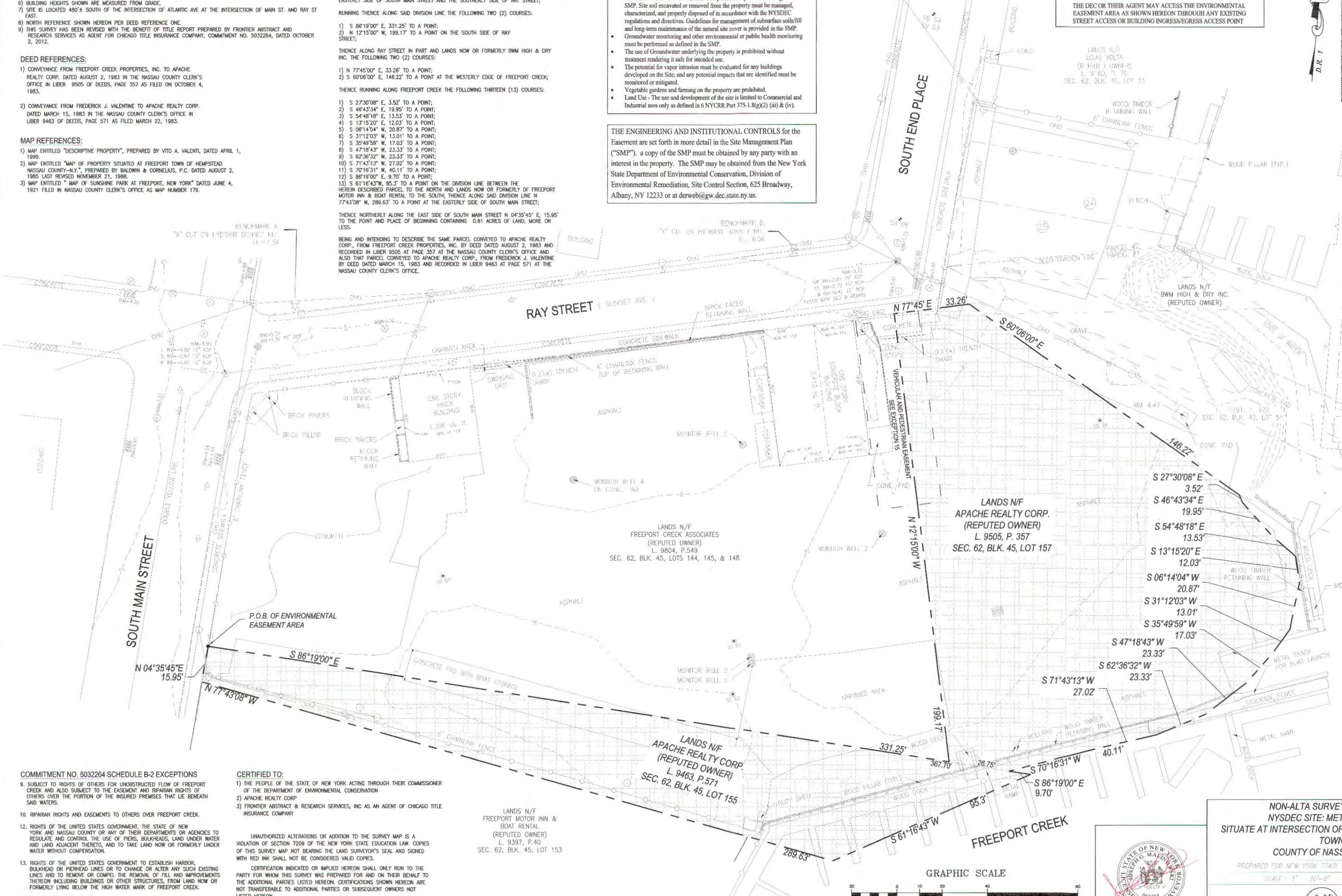
TOTAL ENVIRONMENTAL EASEMENT AREA = 0.81 ACRES ±
(INCLUDES SEC. 62, BLK. 45, LOT 157 AREA = 0.54 ACRES ±
AND SEC. 62, BLK,. 45, LOT 155 AREA = 0.27 ACRES ±)

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)
▭	CATCH BASIN
Ⓢ	SANITARY SEWER MANHOLE
⊗	UNKNOWN MANHOLE
○□	UTILITY POLE WITH LIGHT
◉	SOIL SAMPLE LOCATION
●	SOIL BORING LOCATION
—→	GUY WIRE
Ⓦ	MONITOR WELL
㉔	SUNSHINE PARCEL NO.
— —	EASEMENT
╪	AREA OF EASEMENT

MONITOR WELL LOCATIONS

MONITOR WELL 1:	
N: 174708.7813	PIPE ELEV'S:
E: 1102392.5304	PIPE 1 = 4.34
ELEV: 4.58	
MONITOR WELL 2:	
N: 174540.0231	PVC ELEV'S:
E: 1102335.2583	PIPE 1 = 4.16
ELEV: 4.54	PIPE 2 = 4.27
MONITOR WELL 3:	
N: 174579.2801	PVC ELEV'S:
E: 1102273.5087	PIPE 1 = 5.75
ELEV: 6.20	PIPE 2 = 5.79
MONITOR WELL 4:	
N: 174564.06	PVC ELEV'S:
E: 11022[illegible]	PVC = 6.02
ELEV: 6.35	
MONITOR WELL 5:	
N: 174485.7604	PVC ELEV'S:
E: 1102277.5195	PIPE 1 = 5.30
ELEV: 5.70	
MONITOR WELL 6:	
N: 174482.6496	PVC ELEV'S:
E: 1102277.7197	PIPE 1 = 5.37
ELEV: 5.72	PIPE 2 = 5.09

COMMITMENT NO. 5032264 SCHEDULE B-2 EXCEPTIONS

9. 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.

10. RIPARIAN RIGHTS AND EASEMENTS TO 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.

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:

1) THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
2) APACHE REALTY CORP
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.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
1 meter = 3.28083333 ft.

JOSEPH G. MALINOWSKI 050314

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

JOB NO. 632.2
SHEET 2 OF 3

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 5°02'40" 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, 71.68' 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;
5) N 60°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, 129.05' 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 54, 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

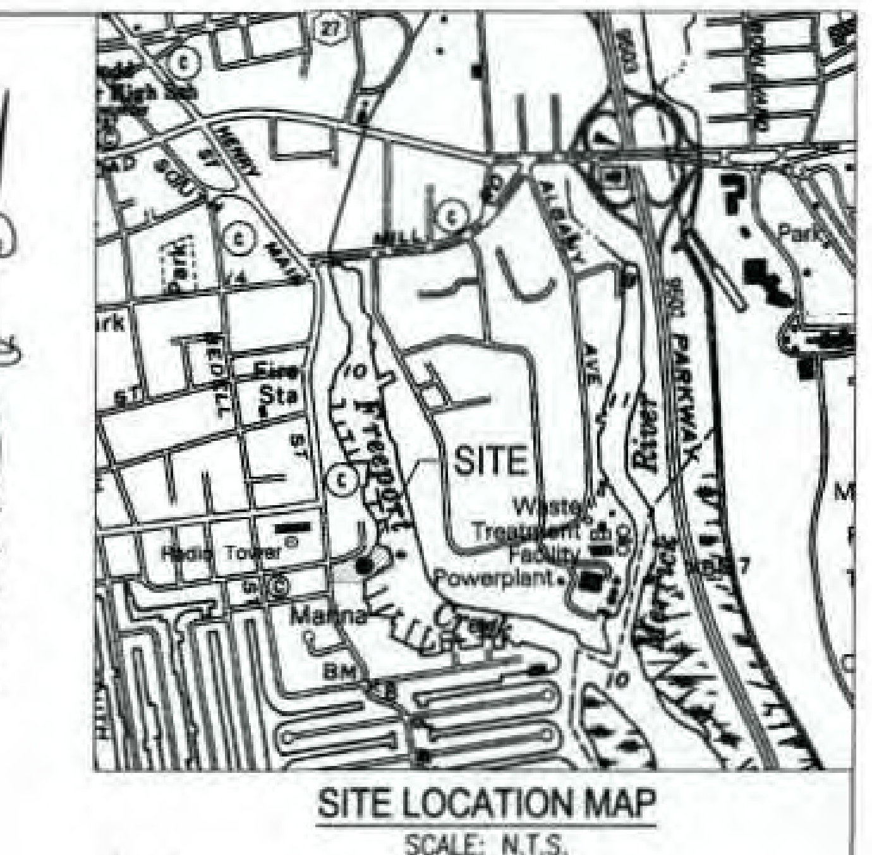
- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the 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.

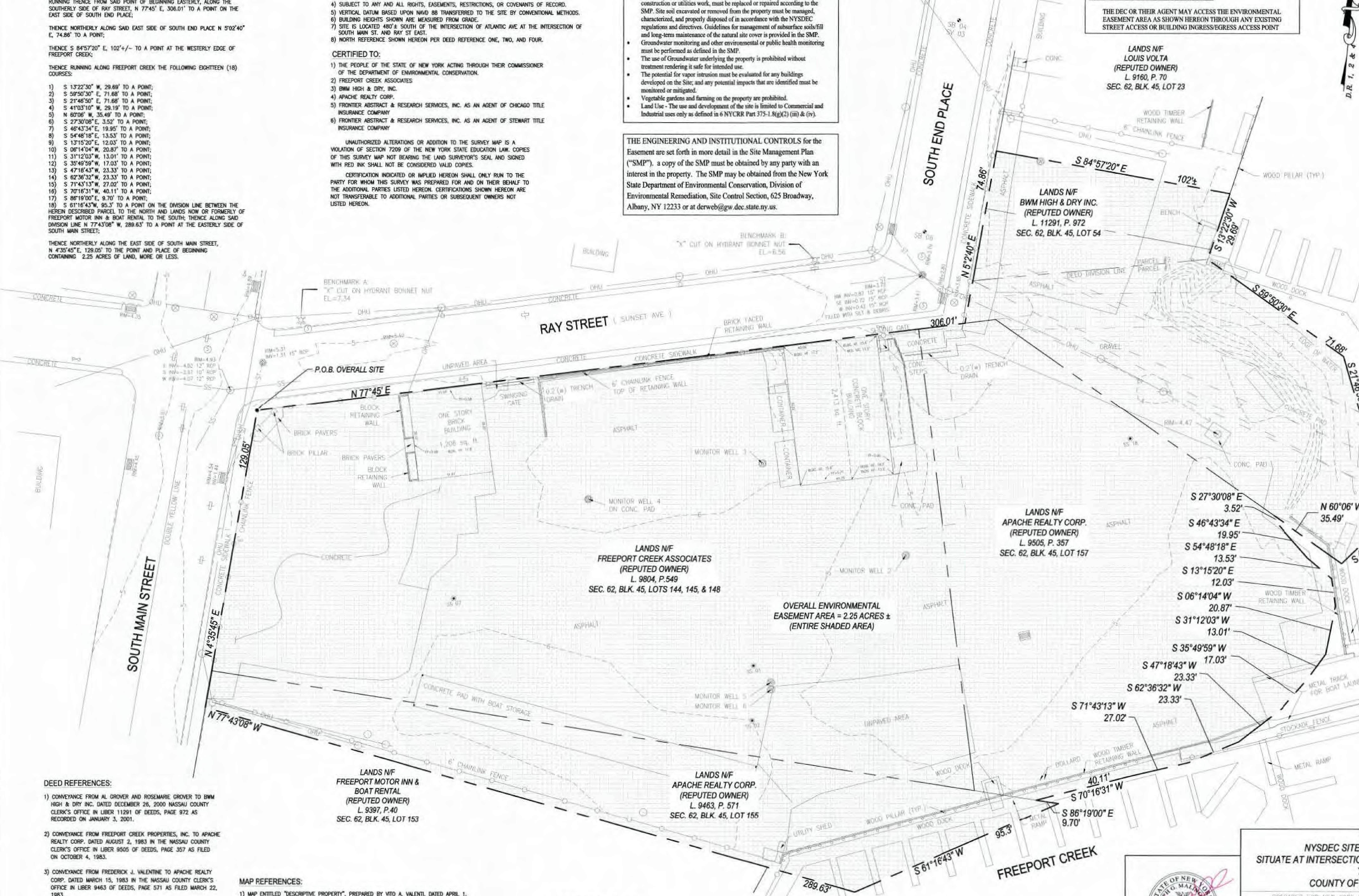
ENVIRONMENTAL EASEMENT AREA ACCESS

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.



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
- 24 SUNSHINE PARCEL NO
- EASEMENT
- AREA OF EASEMENT

MONITOR WELL LOCATIONS

MONITOR WELL 1: N: 174708.7913 E: 1102392.8304 ELEV: 4.58	PIPE ELEV'S: PIPE 1 = 4.34
MONITOR WELL 2: N: 174540.0231 E: 1102335.2583 ELEV: 4.53	PVC ELEV'S: PIPE 1 = 4.16 PIPE 2 = 4.27
MONITOR WELL 3: N: 174579.2801 E: 1102273.8087 ELEV: 6.20	PVC ELEV'S: PIPE 1 = 5.73 PIPE 2 = 5.79
MONITOR WELL 4: N: 174564.00 E: 1102199.05 ELEV: 6.36	PVC ELEV'S: PVC = 6.02
MONITOR WELL 5: N: 174485.7604 E: 1102277.5196 ELEV: 5.70	PVC ELEV'S: PIPE 1 = 5.30
MONITOR WELL 6: N: 174482.6496 E: 1102277.7197 ELEV: 5.72	PVC ELEV'S: PIPE 1 = 5.37 PIPE 2 = 5.09

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) 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.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
1 meter = 3.28083333 ft.

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

JOSEPH G. MALINOWSKI 050314

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 – Clifton Park, NY 12065

JOB NO. 6322 SHEET 1 OF 4

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 5th 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.

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 5th 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 AND 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 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.

ENGINEERING / INSTITUTIONAL CONTROLS

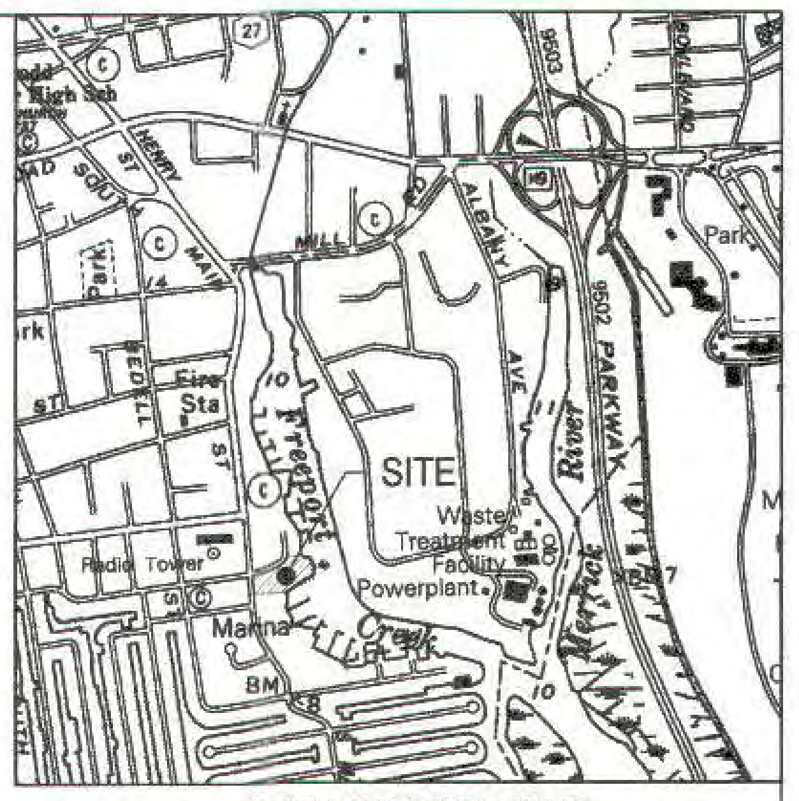
- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the 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.

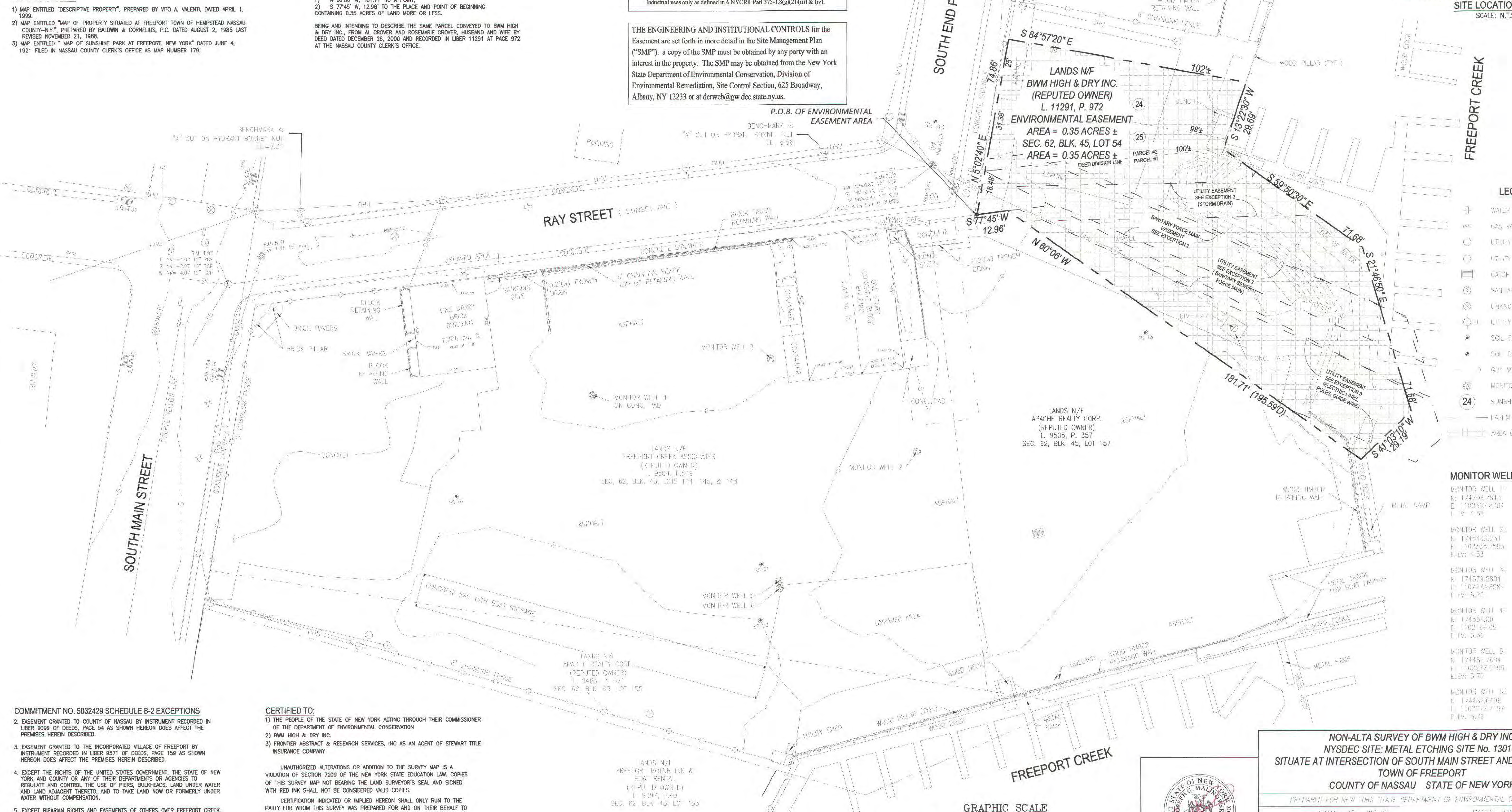
ENVIRONMENTAL EASEMENT AREA ACCESS

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.



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
- (24) SUNSHINE PARCEL NO
- EASEMENT
- AREA OF EASEMENT

MONITOR WELL LOCATIONS

MONITOR WELL 1:
N: 174706.7813 PIPE ELEV'S
E: 1102392.8304 PIPE 1 = 4.34
ELEV: 7.58

MONITOR WELL 2:
N: 171510.0231 PVC ELEV'S:
E: 1102235.2586 PIPE 1 = 4.16
ELEV: 4.53 PIPE 2 = 1.27

MONITOR WELL 3:
N: 171579.2501 PVC ELEV'S:
E: 1102274.8087 PIPE 1 = 5.73
ELEV: 6.20 PIPE 2 = 5.78

MONITOR WELL 4:
N: 174564.00 PVC ELEV'S:
E: 1102169.05 PVC = 6.02
ELEV: 6.56

MONITOR WELL 5:
N: 174456.7604 PVC ELEV'S:
E: 1102277.5196 PIPE 1 = 5.30
ELEV: 5.70

MONITOR WELL 6:
N: 174452.6496 PVC ELEV'S:
E: 1102272.7197 PIPE 1 = 5.37
ELEV: 5.72 PIPE 2 = 5.09

COMMITMENT NO. 5032429 SCHEDULE B-2 EXCEPTIONS

2. EASEMENT GRANTED TO COUNTY OF NASSAU BY INSTRUMENT RECORDED IN LIBER 9099 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 9571 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.
12. 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.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
1 meter = 3.28083333 ft.

JOSEPH G. MALINOWSKI 050314

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' 0" MAY 15, 2013

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

JOB NO. 6022 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 5°02'40" 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, 71.68' 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;
5) N 60°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, 129.05' 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 54, 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

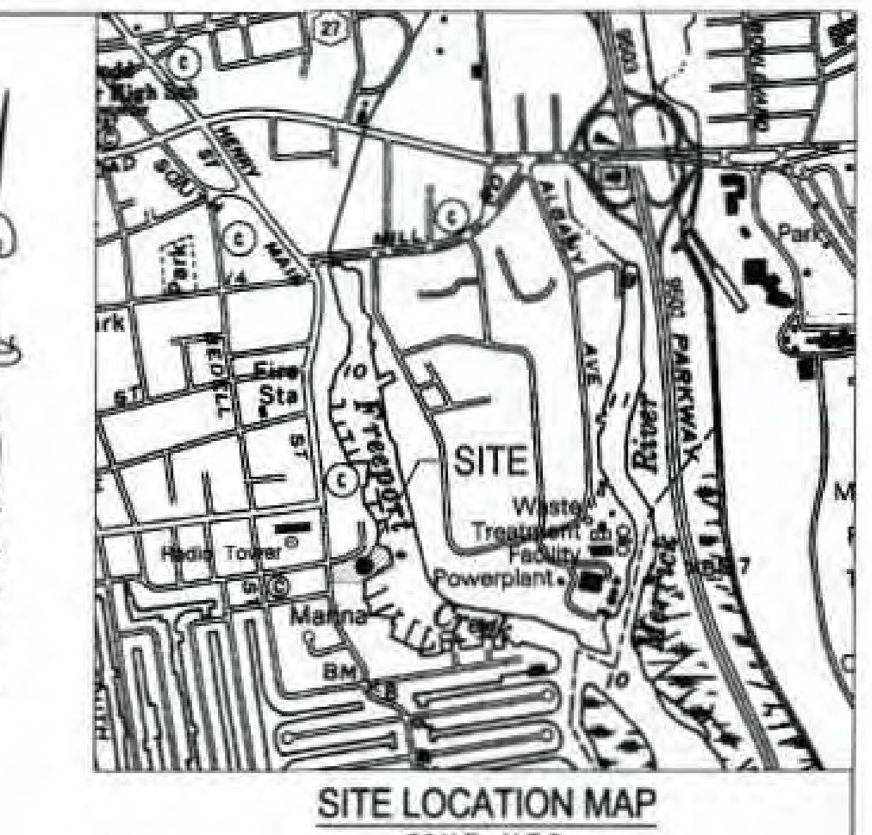
- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the 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.

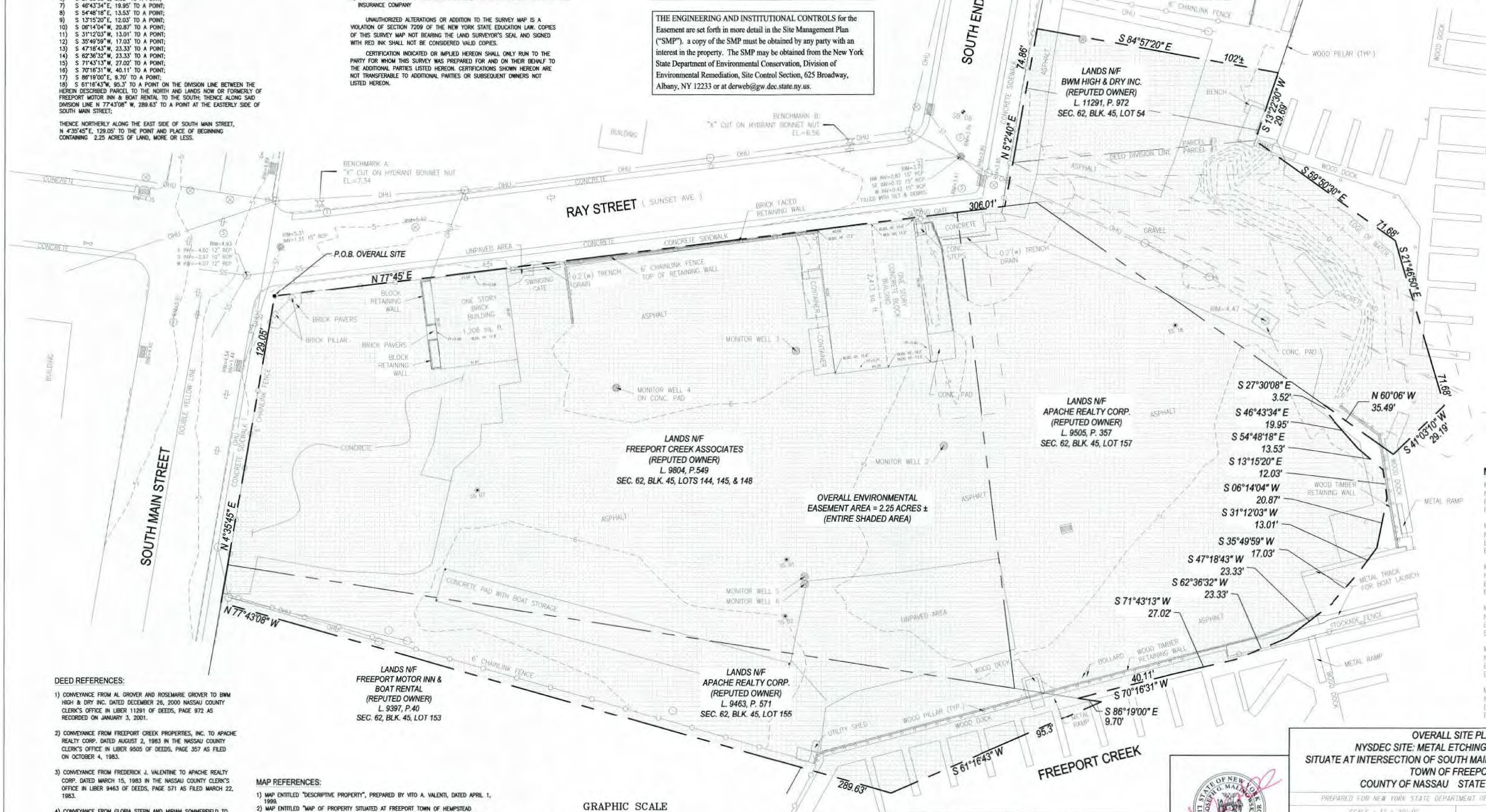
This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

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.



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
(24)	SUNSHINE PARCEL NO.
— —	EASEMENT
▨	AREA OF EASEMENT

MONITOR WELL LOCATIONS

MONITOR WELL 1: N: 174708.7913 E: 1102392.8304 ELEV: 4.58	PIPE ELEV'S: PIPE 1 = 4.34
MONITOR WELL 2: N: 174540.0231 E: 1102335.2583 ELEV: 4.53	PVC ELEV'S: PIPE 1 = 4.16 PIPE 2 = 4.27
MONITOR WELL 3: N: 174579.2801 E: 1102273.8087 ELEV: 6.20	PVC ELEV'S: PIPE 1 = 5.73 PIPE 2 = 5.79
MONITOR WELL 4: N: 174564.00 E: 1102199.05 ELEV: 6.36	PVC ELEV'S: PVC = 6.02
MONITOR WELL 5: N: 174485.7604 E: 1102277.5196 ELEV: 5.70	PVC ELEV'S: PIPE 1 = 5.30
MONITOR WELL 6: N: 174482.6496 E: 1102277.7197 ELEV: 5.72	PVC ELEV'S: PIPE 1 = 5.37 PIPE 2 = 5.09

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) 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.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.
1 meter = 3.28083333 ft.

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

JOSEPH G. MALINOWSKI 050314

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

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

JOB NO. 6322
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 5th day of March 2019, 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.

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 5th 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: 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

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 DMSION 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 BENFIT OF TITLE REPORT PREPARED BY FRONTIER ABSTRACT AND 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).

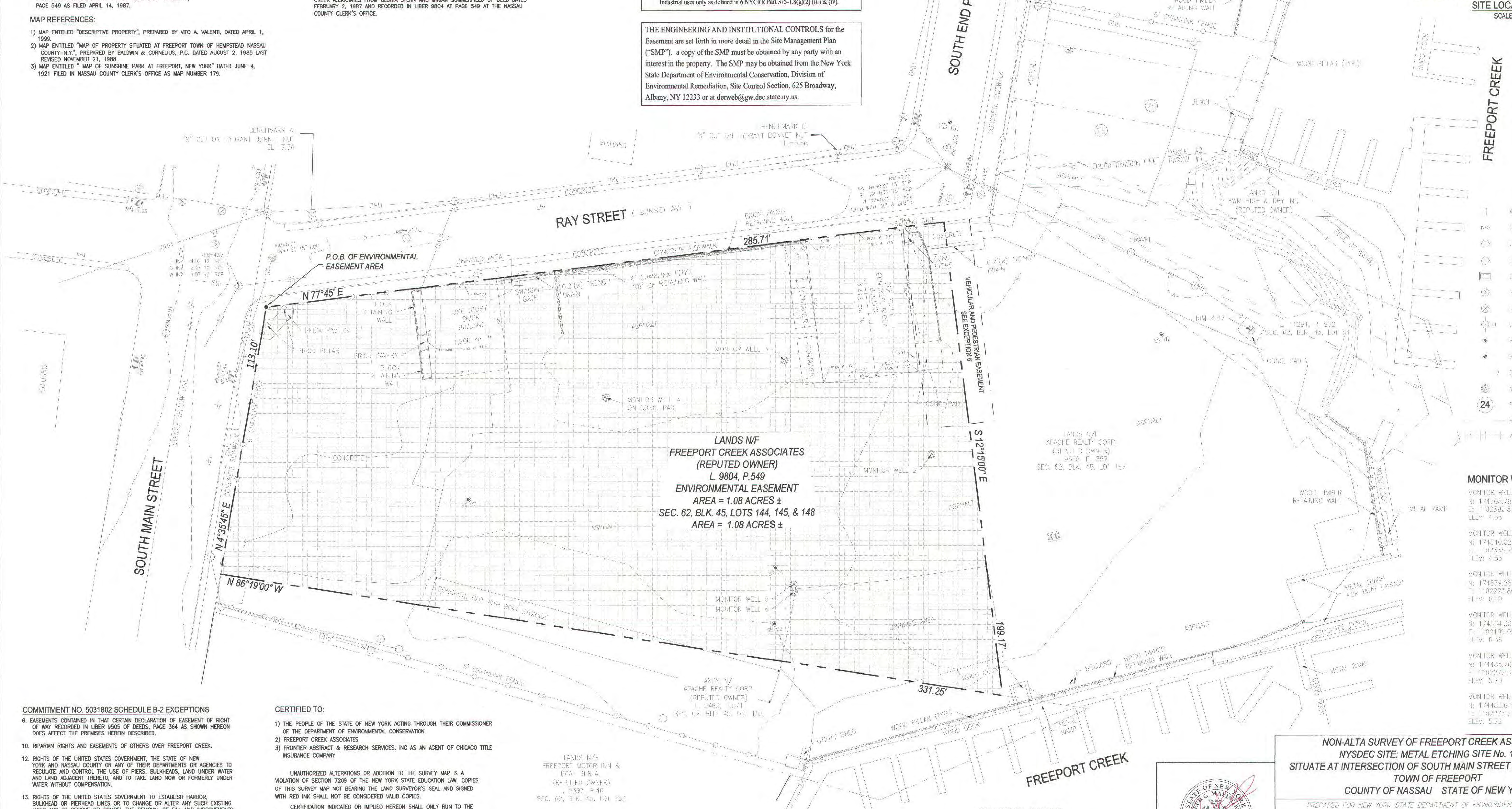
THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail in the Site Management Plan ("SMP"). a copy of the SMP must be obtained by any party with an interest in the property. The SMP may be obtained from the New York State Department of Environmental Conservation, Division 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.



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
24 SUNSHINE PARCEL NO.
EASEMENT
AREA OF EASEMENT

MONITOR WELL LOCATIONS

MONITOR WELL 1: N: 174708.7813 E: 1102392.8304 ELEV: 4.58	PIPE ELEV'S: PIPE 1 - 4.34
MONITOR WELL 2: N: 174510.0231 E: 1102335.2563 ELEV: 4.53	PVC ELEV'S: PIPE 1 - 4.15 PIPE 2 4.27
MONITOR WELL 3: N: 174579.2501 E: 1102273.8087 ELEV: 6.20	PVC ELEV'S: PIPE 1 = 5.73 PIPE 2 5.79
MONITOR WELL 4: N: 174564.00 E: 1102199.05 ELEV: 6.36	PVC ELEV'S: PVC = 6.02
MONITOR WELL 5: N: 174485.7604 E: 1102272.5186 ELEV: 5.70	PVC ELEV'S: PIPE 1 - 5.30
MONITOR WELL 6: N: 174482.6496 E: [illegible] ELEV: 5.72	PVC ELEV'S: PIPE 1 - 5.37 PIPE 2 - 5.09

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.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
1 meter = 3.28083333 ft.

JOSEPH G. MALINOWSKI 050314
LICENSED LAND SURVEYOR

JOSEPH G. MALINOWSKI 050314

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

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

JOB NO. [illegible]
SHEET 4 OF 4

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 5°02'40" 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, 71.68' 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;
5) N 60°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, 129.05' 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 54, 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

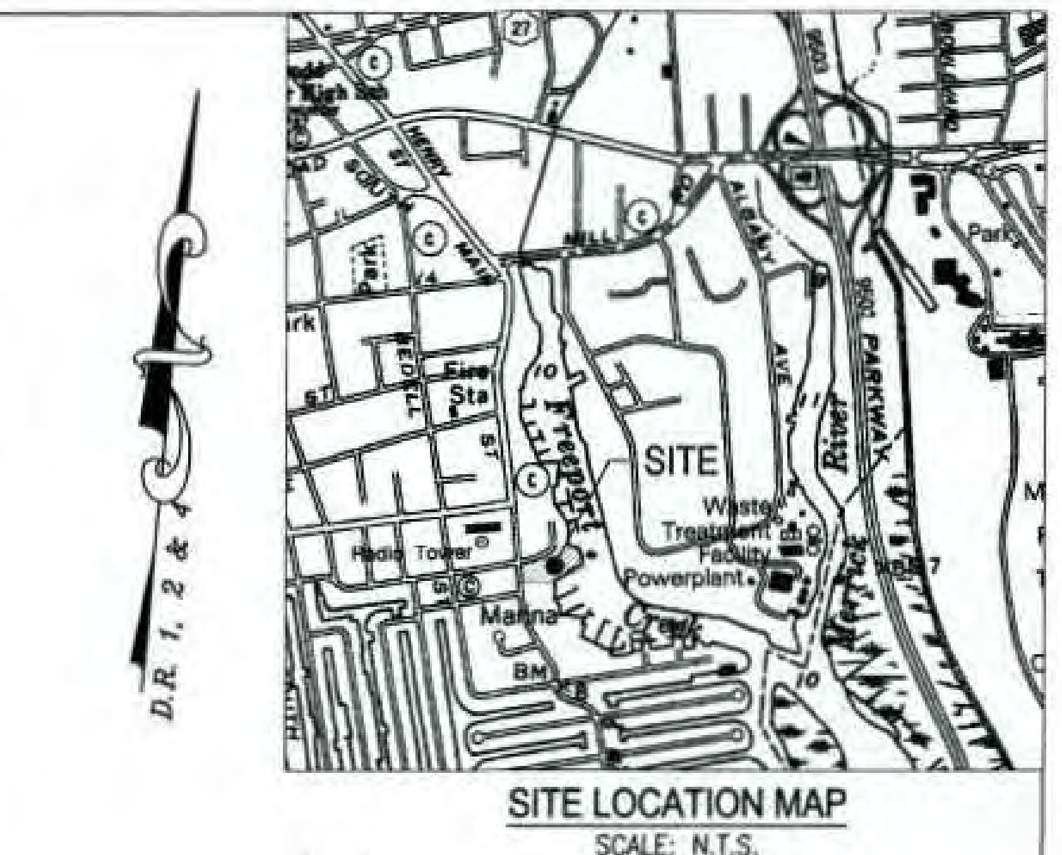
- All Engineering Controls - must be operated and maintained as specified in the Site Management Plan(SMP)
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Soil Cover - Any breach of the natural site cover, including for the 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.

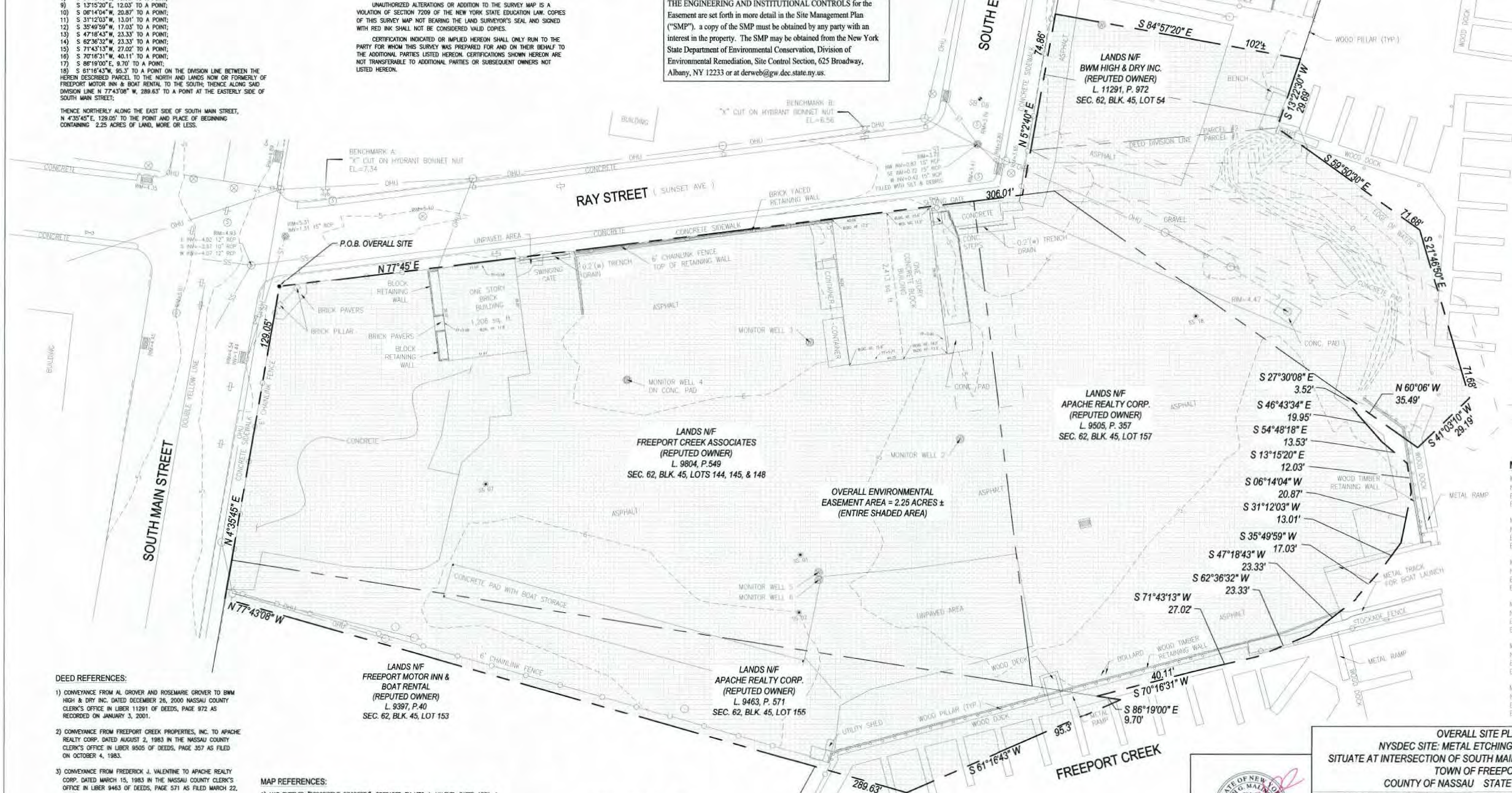
ENVIRONMENTAL EASEMENT AREA ACCESS

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.



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
(24)	SUNSHINE PARCEL NO.
— —	EASEMENT
▨	AREA OF EASEMENT

MONITOR WELL LOCATIONS

MONITOR WELL 1:
N: 174708.7813 PIPE ELEV'S:
E: 1102392.8304 PIPE 1 = 4.34
ELEV: 4.58

MONITOR WELL 2:
N: 174540.0231 PVC ELEV'S:
E: 1102335.2583 PIPE 1 = 4.16
ELEV: 4.53 PIPE 2 = 4.27

MONITOR WELL 3:
N: 174579.2801 PVC ELEV'S:
E: 1102273.8087 PIPE 1 = 5.73
ELEV: 6.20 PIPE 2 = 5.79

MONITOR WELL 4:
N: 174564.00 PVC ELEV'S:
E: 1102199.05 PVC = 6.02
ELEV: 6.36

MONITOR WELL 5:
N: 174485.7604 PVC ELEV'S:
E: 1102277.5196 PIPE 1 = 5.30
ELEV: 5.70

MONITOR WELL 6:
N: 174482.6496 PVC ELEV'S:
E: 1102277.7197 PIPE 1 = 5.37
ELEV: 5.72 PIPE 2 = 5.09

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) 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.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
1 meter = 3.28083333 ft.

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

JOSEPH G. MALINOWSKI 050314

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 – Clifton Park, NY 12065

JOB NO. 6322 SHEET 1 OF 4

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 12th Floor
Albany, New York 12233-7017

Email: 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.

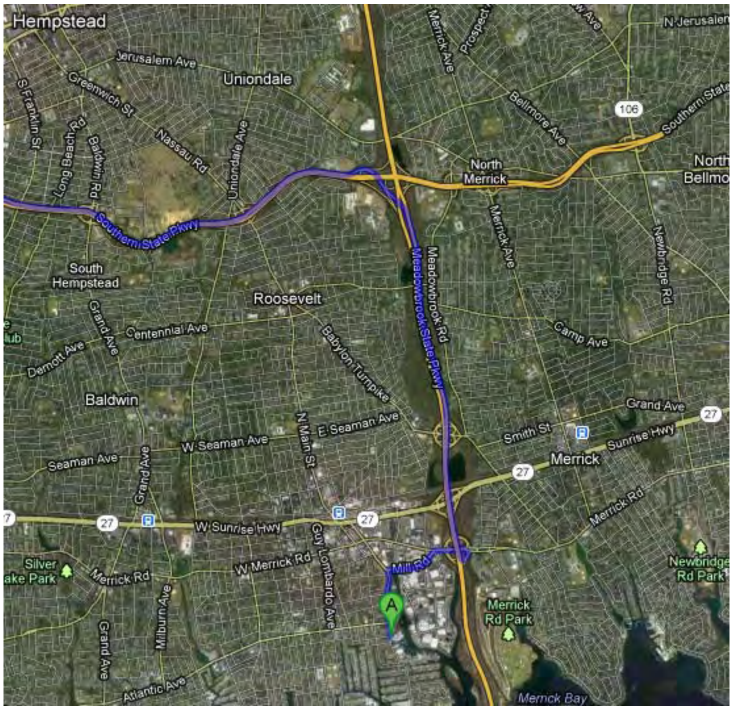
B-5 MATERIALS TRANSPORT OFF-SITE

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

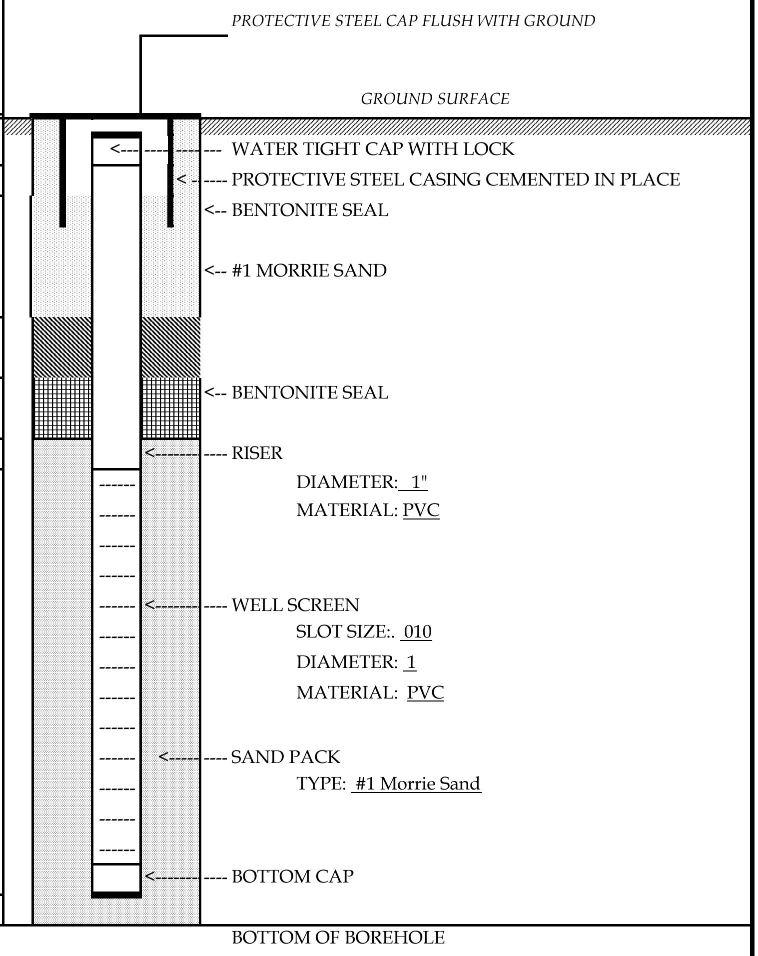
520 Broadhallow Road, Melville, NY 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location **Metal Etching**	*Project No.* **0011475.2**	*Water Level(s)* *(ft below top of PVC casing)*			*Site Elevation Datum (feet)* 5
Drilling Company **Delta Well And Pump**	*Foreman*	Date	Time	Level (feet)	*Ground Elevation (feet)* 5
Surveyor **Donald G. Dekenipp**					*Top of Protective Steel Cap Elevation (feet)*
Date and Time of Completion **7/14/2004**	*Geologist* **Mike Mattern**	7/16/2004	7:00	3.95	*Top of Riser Pipe Elevation (feet)* **4.96**

Generalized Soil Description	*Elevation	**Depth
	4.96	0.00
	3.96	1.00
	-8.04	13.00
	-10.04	15.00
	-14.04	19.00
	-16.04	21.00
	-26.04	31.00

CONSTRUCTION DETAILS



RISER
DIAMETER: 1"
MATERIAL: PVC

WELL SCREEN
SLOT SIZE:. 010
DIAMETER: 1
MATERIAL: PVC

SAND PACK
TYPE: #1 Morrie Sand

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

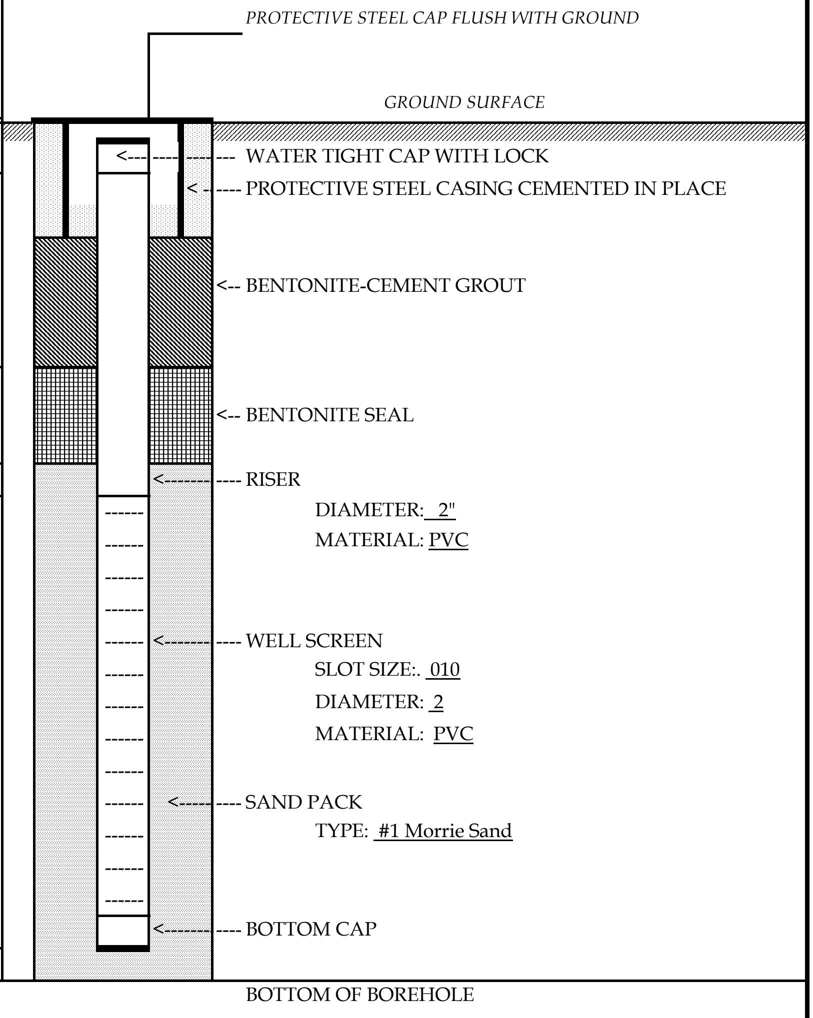
520 Broadhallow Road, Melville, NY 11747

MONITORING WELL CONSTRUCTION LOG

Project Name & Location **Metal Etching**	*Project No.* **0011475.2**	*Water Level(s)* *(ft below top of PVC casing)*			*Site Elevation Datum (feet)*
Drilling Company **Delta Well And Pump**	*Foreman*	Date	Time	Level (feet)	*Ground Elevation (feet)*
Surveyor **Donald G. Dekenipp**					*Top of Protective Steel Cap Elevation (feet)* **7.41**
Date and Time of Completion **9/13/04 \ 13:54**	*Geologist* **Mike Mendes**	10/7/2004	7:53	5.49	*Top of Riser Pipe Elevation (feet)* **7.07**

CONSTRUCTION DETAILS

Generalized Soil Description	*Elevation	**Depth
	7.07	0.00
	6.07	1.00
	5.07	2.00
	4.07	3.00
	-5.93	13.00



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-05

MONITORING WELL CONSTRUCTION LOG

Project Name & Location **Metal Etching**

Project No. **0011475.2**

Drilling Company **Delta Well And Pump**

Foreman

Surveyor **Donald G. Dekenipp**

Date and Time of Completion **9/13/04 \ 14:59**

Geologist **Mike Mendes**

Water Level(s)
(ft below top of PVC casing)

Date	Time	Level (feet)
10/7/2004	7:44	3.92

Site Elevation Datum (feet)

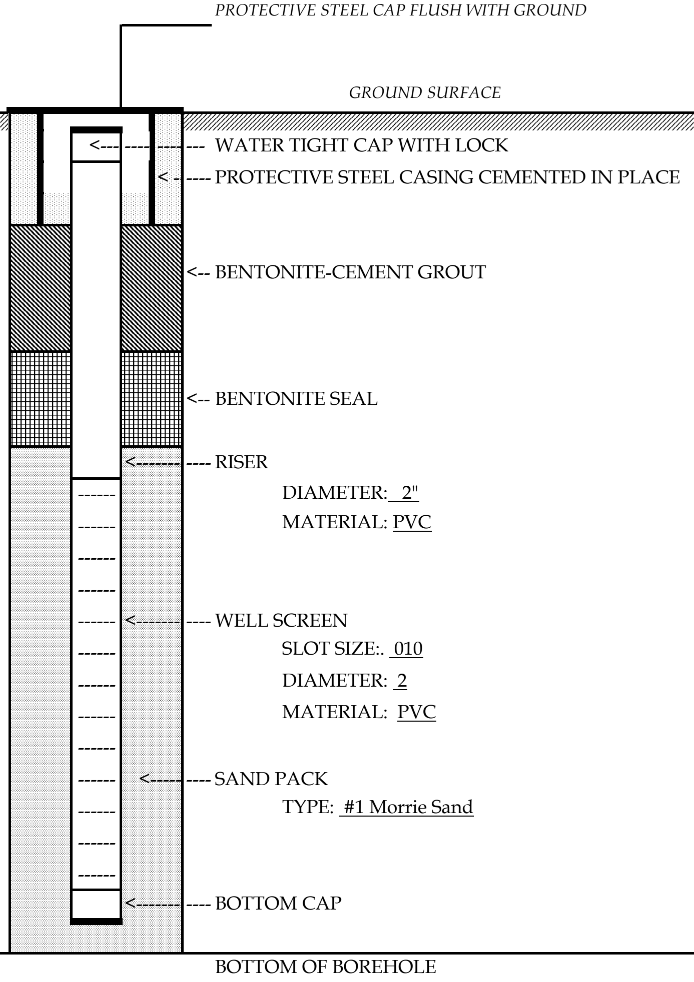
Ground Elevation (feet)

Top of Protective Steel Cap Elevation (feet) **5.48**

Top of Riser Pipe Elevation (feet) **5.16**

CONSTRUCTION DETAILS

Generalized Soil Description	*Elevation	**Depth
	5.16	0.00
	4.16	1.00
	3.16	2.00
	2.16	3.00
	-13.00	13.00



REMARKS

* Elevation (feet) above mean sea level unless noted

** Depth in feet below ground surface

ERM-Northeast

WELL : MW-06

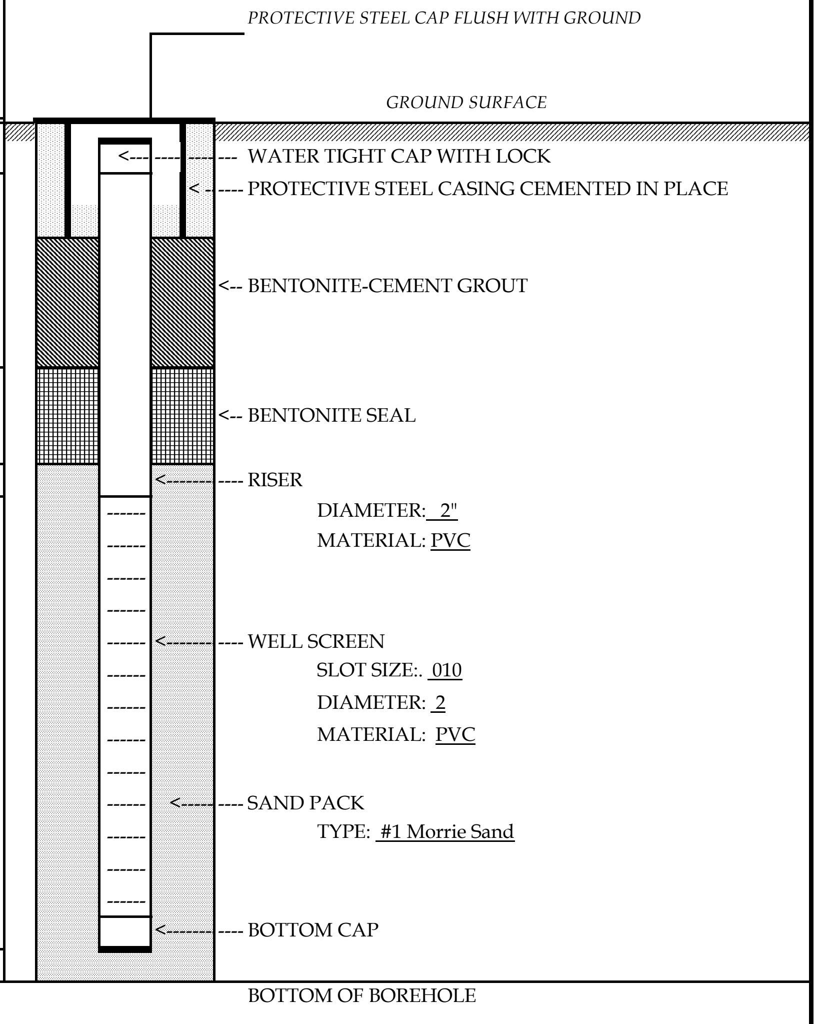
520 Broadhallow Road, Melville, NY 11747

MONITORING WELL CONSTRUCTION LOG

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

CONSTRUCTION DETAILS

Generalized Soil Description	*Elevation	**Depth
	5.37	0.00
	4.37	1.00
	3.37	2.00
	2.37	3.00
	-7.63	13.00



RISER

DIAMETER: 2"

MATERIAL: PVC

WELL SCREEN

SLOT SIZE:. 010

DIAMETER: 2

MATERIAL: PVC

SAND PACK

TYPE: #1 Morrie Sand

REMARKS

* Elevation (feet) above mean sea level unless noted ** Depth in feet below ground surface

Geologic Log and Well Construction Details

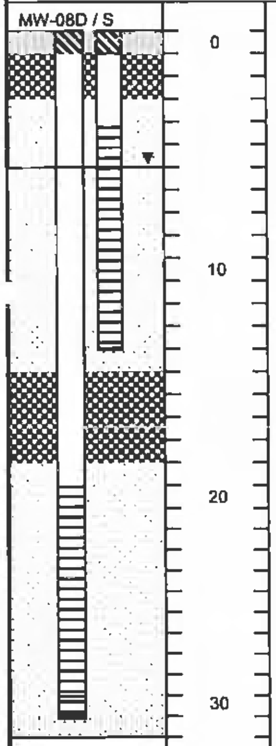
MW-08 D/S

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 Freeport Metal Etching	Address: 435 South Main Street, Freeport, NY	Date	DTW	
Drilling Company: AARCO	Method Geoprobe equiped w/ rotary auger			Measuring Point Elevation
Date Started 11/10/2011	Date Completed. 11/10/11			
Completion Depth: 31	ENVIROTRAC Geologist Michael Rose			

WELL CONSTRUCTION (NTS)	DEPTH (feet below grade)	SAMPLES Reco-very (inches)	SAMPLES Blows per 6 inches	SAMPLES PID (ppm)	SOIL DESCRIPTION
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
		NA	NA	313.2	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wet at 6'
	10	NA	NA	NM	
	20				
	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:	Mone #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

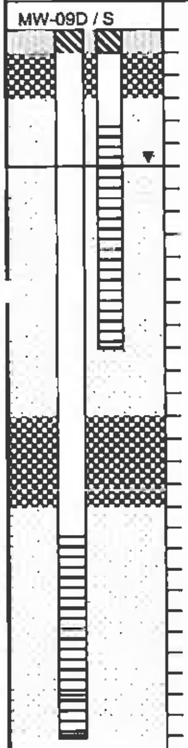
Geologic Log and Well Construction Details

MW-09 S/D

EnviroTrac Ltd.

5 Old Dock Road, Yaphank, New York 11980

		Depth to Water (ft. from measuring pt.)		Site Elevation
Client: NYSDEC Haz Waste		Date	DTW	
Site Name: Freeport Metal Etching	Address: 435 South Main Street, Freeport, NY			
Drilling Company: AARCO	Method: Geoprobe equiped w/ rotary auger			Measuring Point Elevation
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
		Reco-very (inches)	Blows per 6 inches	PID (ppm)	
	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
		NA	NA	313.2	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wet at 6'
	10				
		NA	NA	NM	
	20				
	30				

LEGEND:

▥ Concrete
▩ Bentonite Seal
☐ Gravel Pack
☰ Screen
☰ End Cap

Well Construction Details:

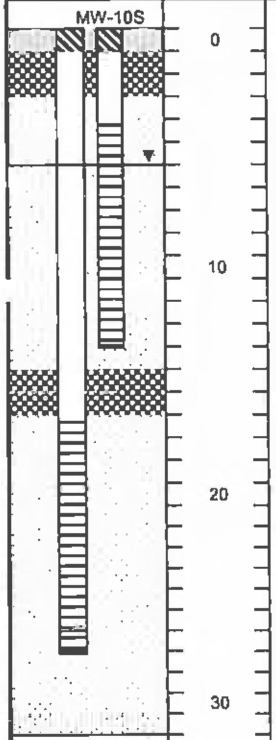
Bottom of Well:	32', 14'
Screen material:	2", 10-slot schedule 40 PVC
Casing material:	2" schedule 40 PVC
Sand Pack:	Morie #1
Bentonite Seal:	1'-4'
Surface Seal:	10" bolt-down manhole

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

EnviroTrac
Environmental Services

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		
Drilling Company AARCO	Method. Geoprobe equiped w/ rotary auger			Measuring Point Elevation	
Date Started: 11/10/2011	Date Completed: 11/10/11				
Completion Depth 15'	ENVIROTRAC Geologist: Michael Rose				



SAMPLES Reco-very (inches)	SAMPLES Blows per 6 inches	SAMPLES PID (ppm)	SOIL DESCRIPTION
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
NA	NA	313 2	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wet at 6'
NA	NA	NM	

LEGEND

▥	Concrete
▩	Bentonite Seal
⬚	Gravel Pack
☰	Screen
☰	End Cap

Well Construction Details:

Bottom of Well:	14'
Screen material:	2", 10-slot schedule 40 PVC
Casing material:	2" schedule 40 PVC
Sand Pack:	Morie #1
Bentonite Seal	1'-4'
Surface Seal:	10" bolt-down manhole
Special Note*:	Deep Well Not Utilized

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

EnviroTrac
Environmental Services

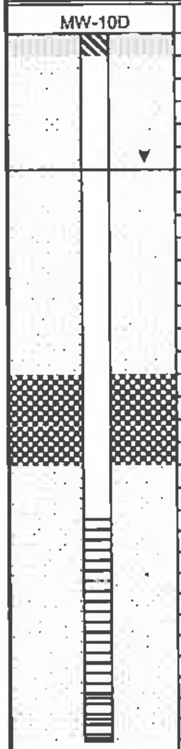
Geologic Log and Well Construction Details

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	
Drilling Company: AARCO	Method Geoprobe equiped w/ rotary auger			Measuring Point Elevation
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 Recovery (inches)	 Blows per 6 inches	 PID (ppm)	SOIL DESCRIPTION
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.
		NA	NA	NM	6'-30' Fill material, brown to black medium to fine grained sand with some gravel. Wet at 6'
	10				
		NA	NA	NM	
	20				
	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:	Morie #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

EnviroTrac Environmental Services

APPENDIX D

FIELD FORMS

SITE-WIDE INSPECTION **Day:** _______________ **Date:** ________________

NYSDEC		Temperature: (F)		(am)		(pm)
		Wind Direction:		(am)		(pm)
METAL ETCHING SITE		Weather:	(am) (pm)			
NYSDEC Site # 130110						
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:

SITE-WIDE INSPECTION **Day: ________________Date: _________________**

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

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

Purge Date:	**Purge Time:**
Purge Method:	**Field Technician:**

Well Volume

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

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (Gal)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}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
Industrial
School
Church
Commercial/Multi-use
Other: ________________

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

Ranch
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
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 ____
1st Floor ____
2nd Floor ____
3rd Floor ____
4th 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? ______________

m. Is there a kitchen exhaust fan? Y / N If yes, where vented? ____________________________

n. Is there a bathroom exhaust fan? Y / N If yes, where vented? ____________________________

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:

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 #:
	Project Name:
Address	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 (inches) *[if present]*		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
Total No. of Analyses		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
cis-1,2-dichloroethene	0.06
cis-1,3-dichloropropene	0.04
Dibromochloromethane	0.07
Dibromomethane	0.01
Dichlorodifluoromethane	0.11
Ethylbenzene	0.03
Isopropylbenzene	0.10
Methlyene chloride	0.08
n-Propylbenzene	0.10
Styrene	0.27
Tetrachloroethene	0.05
Toluene	0.08
trans-1,2-dichloroethene	0.04
trans-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

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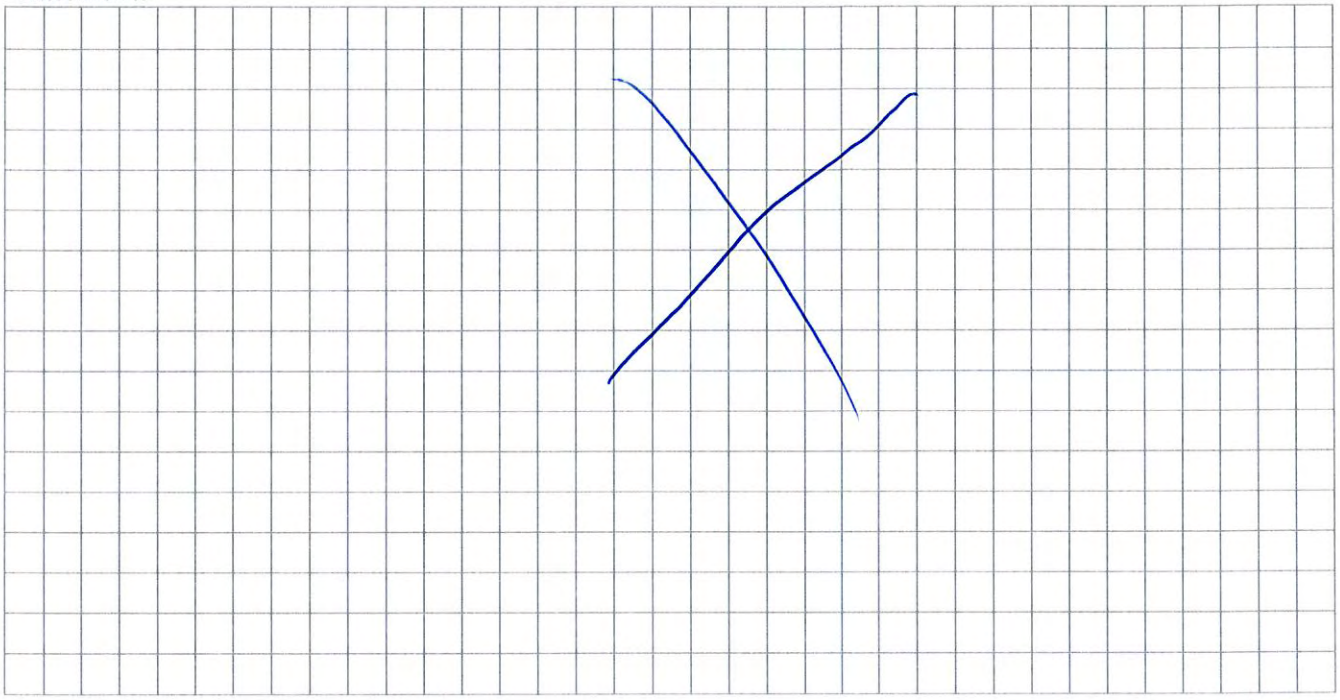
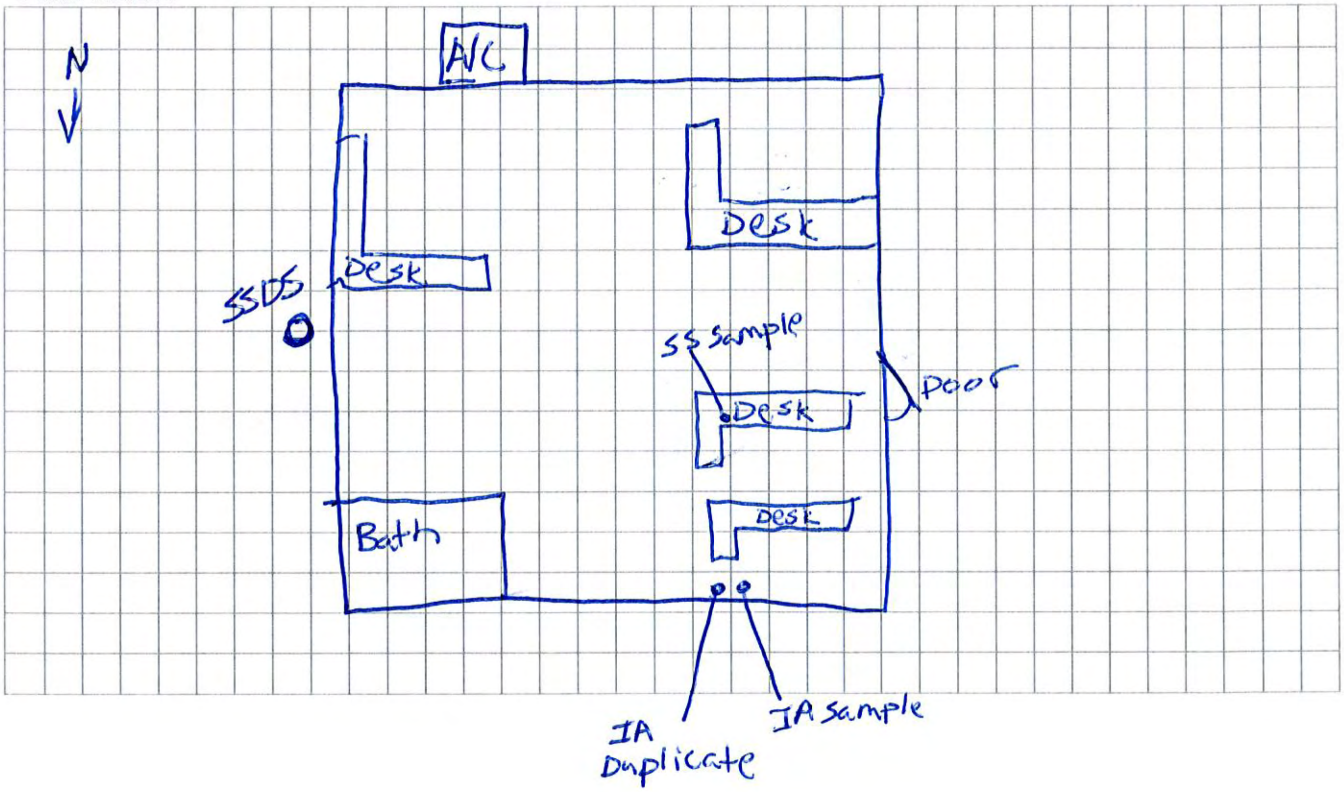
11. FLOOR PLANS

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:

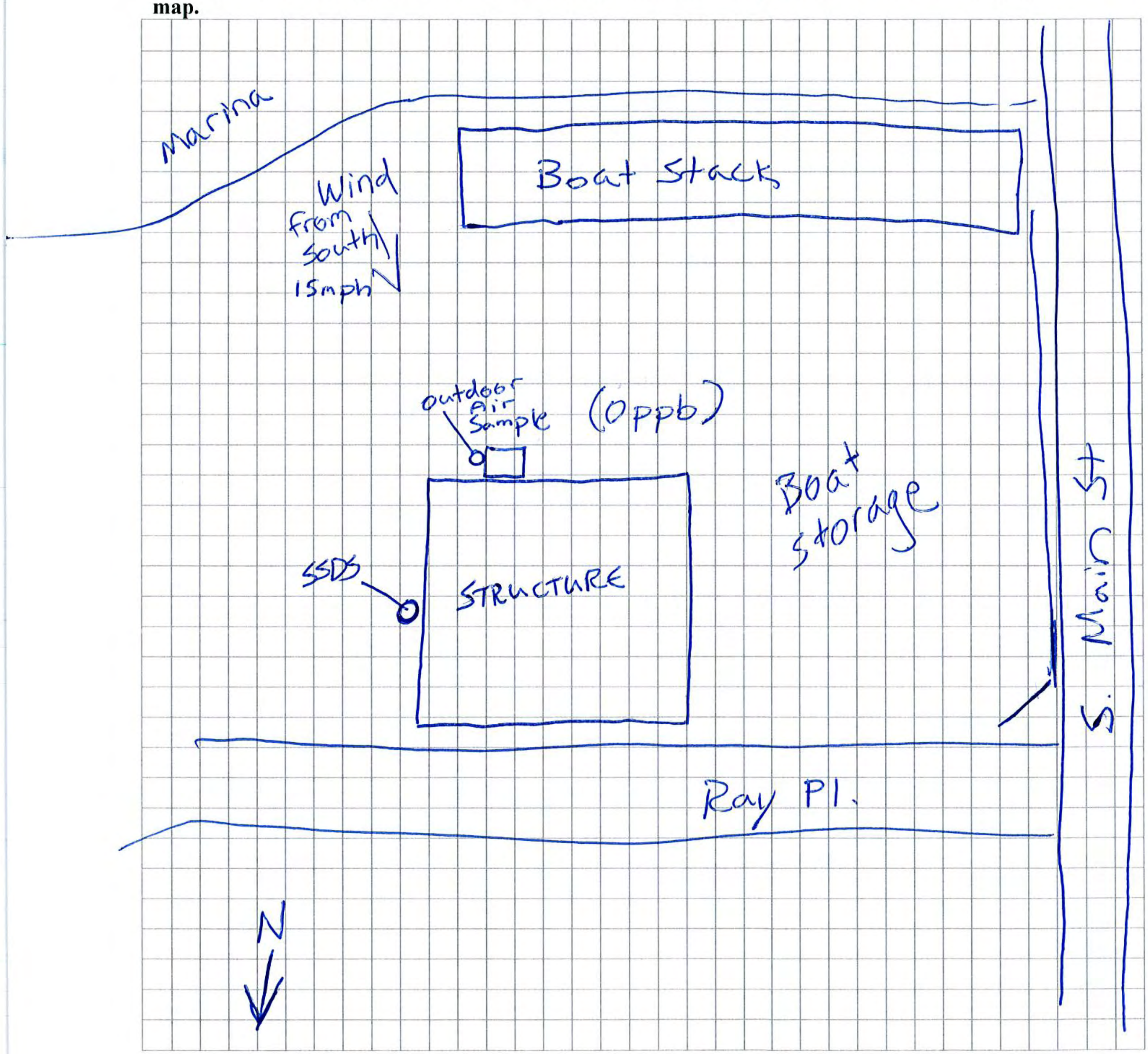


First Floor:



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.



Appendix B

Site Wide Inspection Forms

SITE-WIDE INSPECTION **Day: _Thursday_ Date: _4.27.17_**

NYSDEC		Temperature: (F)	55	(am)	65	(pm)
		Wind Direction:		(am)		(pm)
METAL ETCHING SITE		Weather:	(am) overcast / mist & fog (pm) overcast			
NYSDEC Site # 130110						
Contract # D-007624.09		Arrive at site	1130	(am)		
Freeport, New York		Leave site:		(pm)		

Site Security

Evidence of vandalism (wells, protective cover damage):

No, wells are in good condition.

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

Rutting and depressions in cover.

Evidence of penetrations (poles, posts, stakes):

Yes, but not in a permeable pavement area.

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

The gate is operational but needs repairs or to be replaced. The concrete around the entrance storm drains is severely broken. There is stormwater ponding and becomes backed up.

Additional Comments:

Should repair the site entry way storm drain.

SITE-WIDE INSPECTION **Day: _Thursday_ Date: _4.27.17_**

Asphalt Cover

Evidence of settlement, rutting, potholes:

Yes, rutting in high traffic areas around painting shop.

Evidence of cracking, distortion, or disintegration:

Some breakdown on pad in front of the painting tent and to the left of the office, toward the boat racks.

Additional Comments:

Drainage System

Evidence of damage to storm drains:

Yes, the entry way is damaged due to heavy use.

Evidence of stockpiles on porous pavement areas:

No.

Evidence of ponding on porous pavement areas:

Yes, several places where ponding is occurring, noticeable with recent rains.

Evidence of spilled liquids:

No.

Additional Comments:

Sub-Slab Depressurization Systems

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

No.

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

No.

SITE-WIDE INSPECTION **Day: _Thursday_ Date: _4.27.17_**

Does system PVC pipe appear to be compromised in any way? If so, describe:

Near the top effluent, some cracking at the elbow.

Does manometer read within range marked?

No color left in manometer.

Is fan making any abnormal noises?

No.

Is contact information on SSDS up to date?

Yes.

Has the building use changed since the last inspection?

No.

Has building heating, ventilation and air conditioning changed since the last inspection?

No.

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Appendix C

Monitoring Well Purge Logs

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

Well I.D.: MW-4	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** stripped screws	**Weather:** Overcast / 60F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 27-Apr-17	**Purge Time:** 1520
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1523	--	--	0.3	6.80	-21	15.40	0.322	11.97	569.0
1526	--	0.9	0.3	6.71	19	14.45	0.319	9.10	316.0
1529	--	1.8	0.3						
1532	--	2.7	0.3	6.64	38	15.47	0.314	7.24	122.0
1535	--	3.6	0.3	6.63	40	14.17	0.314	7.30	65.5
1538	--	4.5	0.3	6.63	35	13.17	0.319	6.91	35.5
1541	--	5.4	0.3	6.62	32	13.13	0.320	6.77	4.4
1544	--	6.3	0.3	6.60	28	12.47	0.321	6.38	3.4
1547	--	7.2	0.3	6.59	26	12.71	0.321	6.22	2.7
1550	--	8.1	0.3	6.58	23	12.62	0.321	6.23	2.4
1553	--	9.0	0.3	6.57	23	12.48	0.321	6.2	2.2

Total Quantity of Water Removed (L):	9.0	**Sampling Time:**	1553
Samplers:	EC/KT	**Split Sample With:**	DUP1-0517
Sampling Date:	4/27/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS 0.2 ppt Salinity; DUP1-0517 Collected here

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-5R	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Fog, Cloudy / 55F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 28-Apr-17	**Purge Time:** 0534
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
538	--	--	0.3	6.42	-136	10.41	1.58	0.00	17.4
541	--	0.9	0.3	6.40	-137	10.35	1.60	0.00	16.3
544	--	1.8	0.3	6.40	-137	10.34	1.61	0.00	14.9
547	--	2.7	0.3	6.37	-138	10.30	1.62	0.00	13.9
550	--	3.6	0.3	6.36	-138	10.26	1.63	0.00	11.1
553	--	4.5	0.3	6.36	-138	10.24	1.63	0.00	11.9
556	--	5.4	0.3	6.35	-139	10.22	1.64	0.00	10.9
559	--	6.3	0.3	6.35	-139	10.20	1.65	0.00	9.6

Total Quantity of Water Removed (L):	6	**Sampling Time:**	559
Samplers:	EC/KT	**Split Sample With:**	N/A
Sampling Date:	4/28/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS: 4 cycles/min 0.075 L/Cycle

Sailinity 0.8 ppt @ 0546

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-06	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** No Bolts	**Weather:** Overcast / 60F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 26-Apr-17	**Purge Time:** 1458
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^oC)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1458	--	--	0.3	6.3	-99	12.77	--	7.58	125.0
1506	--	0.9	0.3	6.02	-104	12.24	--	0.00	52.2
1509	--	1.8	0.3	5.97	-103	12.21	1.960	0.00	50.2
1512	--	2.7	0.3	5.95	-102	12.12	1.970	0.00	43.3
1515	--	3.6	0.3	5.95	-102	12.15	1.960	0.00	39.1
1518	--	4.5	0.3	5.93	-101	11.97	1.970	0.00	34.1
1521	--	5.4	0.3	5.92	-102	11.92	1.960	0.00	30.1
1524	--	6.3	0.3	5.94	-101	11.96	1.950	0.00	27.4
1527	--	7.2	0.3	5.94	-102	11.95	1.940	0.00	25.2
1530	--	8.1	0.3	5.94	-104	11.86	1.940	0.00	22.5
1533	--	9.0	0.3	5.95	-105	11.82	1.930	0.00	19.5
1536	--	9.9	0.3	5.98	-106	11.81	1.930	0.00	19.4
1539	--	10.8	0.3	5.98	-107	11.77	1.920	0.00	17.9

Total Quantity of Water Removed (L):	10.80	**Sampling Time:**	1539
Samplers:	EC/KT	**Split Sample With:**	N/A
Sampling Date:	4/26/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS: 230'/100 Flow

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-08SR	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Sunny / 75 F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 28-Apr-17	**Purge Time:** 1400
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1412	--	--	0.3	7.35	78	16.90	0.525	0.00	116.0
1415	--	0.9	0.3	7.27	76	16.25	0.532	0.00	94.9
1418	--	1.8	0.3	7.24	74	15.80	0.534	0.00	82.1
1421	--	2.7	0.3	7.22	74	15.59	0.535	0.00	57.4
1426	--	3.6	0.3	7.23	73	15.47	0.534	0.00	25.5
1429	--	4.5	0.3	7.18	77	15.42	0.534	0.00	15.2
1432	--	5.4	0.3	7.23	78	15.30	0.534	0.00	11.4
1436	--	6.3	0.3	7.21	80	15.27	0.534	0.00	8.0
1442	--	7.2	0.3	7.30	76	16.21	0.524	0.00	7.4
1448	--	8.1	0.3	7.20	83	17.61	0.528	0.00	9.9
1451	--	9	0.3	7.20	86	15.65	0.529	0.00	8.2
1454	--	9.9	0.3	7.18	88	15.44	0.530	0.00	5.6
1457	--	10.8	0.3	7.18	89	15.44	0.530	0.00	4.6
1500	--	11.7	0.3	7.18	88	15.35	0.530	0.00	4.8
1503	--	12.6	0.3	7.18	88	15.32	0.530	0.00	4.5
1506	--	13.5	0.3	7.18	89	15.32	0.531	0.00	3.8
1516		15.3	0.3	7.18	90	15.16	0.53	0.00	3.6

Total Quantity of Water Removed (L):	15.3	**Sampling Time:**	1516
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/28/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS Pump stopped at 1445

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.:	**Personnel:**	**Client:**
MW-08DR	EC/KT	NYSDEC
Location:	**Well Condition:**	**Weather:**
Metal Etching Co., Inc. Site	Good	Sunny / 75F
Sounding Method:	**Gauge Date:**	**Measurement Ref:**
Solinist Tape	See Comments	TOC
Stick Up/Down (ft):	**Gauge Time:**	**Well Diameter (in):**
flush	See Comments	2"

Purge Date:	**Purge Time:**
28-Apr-17	1410
Purge Method:	**Field Technician:**
Low Flow Bladder Pump	EC/KT

Well Volume

A. Well Depth (ft):	**D. Well Volume (ft):**	**Depth/Height of Top of PVC:**
See Comments	0.16	flush
B. Depth to Water (ft):	**E. Well Volume (gal) C*D):**	**Pump Type:**
See Comments	#VALUE!	Submersible
C. Liquid Depth (ft) (A-B):	**F. Three Well Volumes (gal) (E3):**	**Pump Designation:**
#VALUE!	#VALUE!	Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (°C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1417	--	--	0.3	6.13	41	20.76	1.33	2.06	76.3
1418	--	0.9	0.3	6.05	21	21.18	1.25	0.00	74.0
1421	--	1.8	0.3	5.97	7	21.37	1.22	0.00	74.2
1423	--	2.7	0.3	5.95	-2	20.75	1.18	0.00	65.8
1426	--	3.6	0.3	5.93	-5	20.62	1.16	0.00	61.6
1429	--	4.5	0.3	5.92	-8	20.44	1.12	0.00	61.5
1432	--	5.4	0.3	5.93	-18	20.11	1.06	0.00	51.1
1435	--	6.3	0.3	5.93	-19	19.99	1.05	0.00	47.1
1438	--	7.2	0.3	5.93	-23	19.59	1.02	0.00	42.4
1441	--	8.1	0.3	5.94	-28	19.14	0.928	0.00	35.5
1444	--	--	--	--	--	--	--	--	--
1448	--	9.0	0.3	5.98	-32	19.81	0.928	0.00	22.1
1451	--	9.9	0.3	5.96	-30	19.75	0.864	0.00	20.7
1454	--	10.8	0.3	5.96	-32	19.70	0.875	0.00	16.0
1457	--	11.7	0.3	6.00	-34	19.64	0.883	0.00	13.2
1500	--	12.6	0.3	5.97	-36	19.83	0.880	0.00	10.3
1503	--	13.5	0.3	5.98	-38	19.62	0.870	0.00	9.5
1506	--	14.4	0.3	5.98	-40	19.59	0.864	0.00	9.4
1509	--	15.3	0.3	5.99	-42	19.59	0.861	0.00	7.5
1512	--	16.2	0.3	6.00	-43	19.61	0.859	0.00	7.6
1515	--	17.1	0.3	6.01	-45	19.59	0.857	0.00	7.8

Total Quantity of Water Removed (L):	17.10	**Sampling Time:**	1515
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/28/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS: ID-113 CPM - 4 0.075L/Cycle

Salinity - 0.6 ppt @ 1430 Changed battery at 1443

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-09S	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Overcast / 60F

Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 27-Apr-17	**Purge Time:** 1715
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1732	--	--	0.3	6.26	3	14.50	0.536	0.00	0
1735	--	0.9	0.3	6.28	-3	14.29	0.525	0.00	0
1738	--	1.8	0.3	6.3	-8	14.25	0.473	0.00	1000
1741	--	2.7	0.3	6.3	-12	14.23	0.450	0.00	735
1744	--	3.6	0.3	6.31	-14	14.25	0.441	0.00	594
1747	--	4.5	0.3	6.33	-19	14.23	0.428	0.00	358
1750	--	5.4	0.3	6.34	-23	14.22	0.420	0.00	264
1753	--	6.3	0.3	6.34	-25	14.23	0.417	0.00	226
1756	--	7.2	0.3	6.34	-29	14.22	0.420	0.00	180
1759	--	--	0.3	--	--	--	--	0.00	--
1800	--	8.1	0.3	6.47	-19	14.41	0.405	0.00	220
1803	--	9.0	0.3	6.45	-15	14.28	0.448	0.00	341
1806	--	9.9	0.3	6.32	-22	14.21	0.439	0.00	287
1809	--	10.8	0.3	6.35	-26	14.17	0.437	0.00	196
1812	--	11.7	0.3	6.35	-30	14.16	0.440	0.00	135
1815	--	12.6	0.3	6.36	-32	14.16	0.439	0.00	95.0
1818	--	13.5	0.3	6.37	-34	14.14	0.439	0.00	82.3
1821	--	14.4	0.3	6.36	-37	14.15	0.444	0.00	60.6
1824	--	15.3	0.3	6.36	-38	14.15	0.449	0.00	62.1
1827	--	16.2	0.3	6.36	-40	14.15	0.454	0.00	51.2
1830	--	17.1	0.3	6.38	-41	14.16	0.457	0.00	49.7

Total Quantity of Water Removed (L):	17.10	**Sampling Time:**	1830
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/27/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS: Cleaned Horiba Water Parameter Monitor at 1759 and 1802

Unable to gauge wells due to PFOA sampling protocol

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

Well I.D.: MW-9D	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Overcast / 50F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 27-Apr-17	**Purge Time:** 1725
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1731	--	--	0.3	6.37	1	16.22	0.792	12.90	573
1734	--	0.9	0.3	6.23	9	16.23	0.755	9.21	538
1737	--	1.8	0.3	6.1	13	16.23	0.761	6.27	484
1740	--	2.7	0.3	6.02	15	16.06	0.776	0.00	683
1747	--	3.6	0.3	6.05	8	15.89	0.753	0.00	448
1750	--	4.5	0.3	6.02	-1	15.83	0.795	0.00	291
1753	--	5.4	0.3	6.02	-7	15.81	0.819	0.00	236
1756	--	6.3	0.3	6.03	-11	15.78	0.833	0.00	231
1759	--	7.2	0.3	6.05	-9	15.82	0.865	0.00	146
1802	--	8.1	0.3	6.05	-22	15.72	0.892	0.00	137
1805	--	9	0.3	6.06	-28	15.7	0.907	0.00	129
1808	--	9.9	0.3	6.06	-28	15.69	0.911	0.00	130
1811	--	10.8	0.3	6.07	-29	15.67	0.922	0.00	128
1814	--	11.7	0.3	6.1	-20	15.74	0.947	0.00	76.5
1817	--	12.6	0.3	6.09	-30	15.66	0.969	0.00	43.3
1820	--	13.5	0.3	6.10	-34	15.66	0.972	0.00	41.9
1823	--	14.4	0.3	6.10	-35	15.61	0.973	0.00	47.9

Total Quantity of Water Removed (L):	14.4	**Sampling Time:**	1823
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/27/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS Dark grey water to start with sheen

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-10S	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Sunny / 60F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 26-Apr-17	**Purge Time:** 1630
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1637	--	--	0.3	6.63	-73	13.22	0.798	0.00	108.0
1640	--	0.9	0.3	6.59	-90	12.76	0.796	0.00	34.8
1643	--	1.8	0.3	6.55	-97	12.64	0.803	0.00	13.5
1646	--	2.7	0.3	6.52	-101	12.54	0.811	0.00	10.4
1649	--	3.6	0.3	6.50	-105	12.52	0.814	0.00	13.6
1652	--	4.5	0.3	6.49	-107	12.51	0.814	0.00	13.6
1655	--	5.4	0.3	6.49	-110	12.50	0.814	0.00	15.0
1658	--	6.3	0.3	6.49	-112	12.53	0.815	0.00	15.2
1701	--	7.2	0.3	6.50	-114	12.53	0.816	0.00	14.0

Total Quantity of Water Removed (L):	7.2	**Sampling Time:**	1701
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/26/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS 0.4 ppt - Salinity @ 1652

Unable to gauge wells due to PFOA sampling protocol

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

Well I.D.: MW-10M	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Overcast / 60F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 27-Apr-17	**Purge Time:** 1315
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^oC)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1334	--	--	0.3	6.17	63	15.61	1.440	16.10	253.0
--	--	--	--	--	--	--	--	--	--
1341	--	0.9	0.3	6.29	40	15.63	0.967	0.00	171.0
1344	--	1.8	0.3	6.25	24	15.65	0.963	0.00	101.0
1347	--	2.7	0.3	6.2	22	15.78	1.06	0.00	97.6
1350	--	3.6	0.3	6.19	17	15.80	1.08	0.00	95.2
1353	--	4.5	0.3	6.17	11	15.79	1.11	0.00	95
1356	--	5.4	0.3	6.17	8	15.72	1.14	0.00	93.0
1359	--	6.3	0.3	6.16	4	15.65	1.17	0.00	86.2
1402	--	7.2	0.3	6.16	2	15.62	1.19	0.00	85.8
1405	--	8.1	0.3	6.16	3	15.65	1.37	0.00	85.9
1408	--	9	0.3	6.16	-2	15.52	1.39	0.00	81.0
1411	--	9.9	0.3	6.15	-4	15.51	1.40	0.00	81.9
1414	--	10.8	0.3	6.25	-9	15.38	1.44	0.00	16.3
1417	--	11.7	0.3	6.19	3	15.28	1.43	0.00	18.8
1420	--	12.6	0.3	6.19	-2	15.23	1.43	0.00	18.9
1423	--	13.5	0.3	6.16	-5	15.21	1.43	0.00	15.7
1426	--	14.4	0.3	6.16	-6	15.22	1.42	0.00	13.0
1429	--	15.3	0.3	6.15	-8	15.23	1.42	0.00	12.4
1432	--	16.2	0.3	6.15	-9	15.18	1.43	0.00	12.2

Total Quantity of Water Removed (L):	16.2	**Sampling Time:**	1432
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/27/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS Cleaned Horiba at 1334 Salinity 0.7 ppt at 1411

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-10D	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:**
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date:	**Purge Time:**
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^{o}C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
1340	--	--	0.3	6.65	-67	15.28	0.588	1.01	700
1343	--	0.9	0.3	6.49	-58	15.05	0.588	0.00	580
1346	--	1.8	0.3	6.27	-46	14.96	0.585	0.00	536
1349	--	2.7	0.3	6.13	-36	14.94	0.580	0.00	513
1352	--	3.6	0.3	6.05	-30	14.94	0.575	0.00	475
1355	--	4.5	0.3	5.96	-25	14.96	0.571	0.00	441
1358	--	5.4	0.3	5.92	-21	14.94	0.566	0.00	432
1401	--	6.3	0.3	5.91	-18	14.97	0.567	0.00	434
1404	--	7.2	0.3	5.68	38	15.52	0.566	0.00	393
1407	--	8.1	0.3	5.85	-1	15.04	0.572	0.00	320
1410	--	9.0	0.3	5.84	-4	15.08	0.574	0.00	308
1413	--	9.9	0.3	5.85	-3	15.07	0.576	0.00	291
1416	--	10.8	0.3	5.90	22	15.23	0.578	0.00	283
1419	--	11.7	0.3	5.81	9	15.10	0.586	0.00	325
1422	--	12.6	0.3	5.80	6	15.07	0.588	0.00	251
1425	--	13.5	0.3	5.81	4	15.10	0.593	0.00	222
1428	--	14.4	0.3	5.8	3	15.10	0.595	0.00	215
1431	--	15.3	0.3	5.79	2	15.08	0.600	0.00	207
1434	--	16.2	0.3	5.8	2	15.11	0.606	0.00	196
1437	--	17.1	0.3	5.81	20	15.20	0.607	0.00	188
1440	--	18.0	0.3	5.78	13	15.11	0.615	0.00	180
1443	--	18.9	0.3	5.72	9	15.10	0.627	0.00	161
1446	--	19.8	0.3	5.77	7	15.13	0.635	0.00	156
1449	--	20.7	0.3	5.76	7	15.11	0.648	0.00	150
1452	--	21.6	0.3	5.76	7	15.10	0.667	0.00	149
1455	--	22.5	0.3	5.76	7	15.11	0.677	0.00	130
1458	--	23.4	0.3	5.75	6	15.10	0.691	0.00	136
1501	--	24.3	0.3	5.74	6	15.10	0.710	0.00	126
1504	--	25.2	0.3	5.81	24	15.21	0.713	0.00	115
1507	--	26.1	0.3	5.77	16	15.12	0.742	9.57	130
1510	--	27.0	0.3	5.76	14	15.07	0.766	9.05	116.0
1513	--	27.9	0.3	5.75	13	15.09	0.79	8.59	107
1516	--	28.8	0.3	5.75	12	15.07	0.800	8.12	107
1519	--	29.7	0.3	5.74	11	15.08	0.824	7.59	103.0
1522	--	30.6	0.3	5.73	10	15.07	0.849	7.11	96.8
1525	--	31.5	0.3	5.74	10	15.05	0.879	6.59	92.1
1528	--	32.4	0.3	5.74	10	15.08	0.897	6.24	89.8
1531	--	33.3	0.3	5.74	10	15.09	0.910	6.03	90.5
1534	--	34.2	0.3	5.73	10	15.13	0.964	5.39	83.2
1536	--	35.1	0.3	5.73	9	15.12	0.989	5.13	83
1539	--	36.0	0.3	5.73	10	15.14	1.030	4.76	78.3
1542	--	36.9	0.3	5.73	9	15.16	1.050	4.52	78.3
1545	--	37.8	0.3	5.73	10	15.19	1.07	4.35	77.9
1548	--	38.7	0.3	5.73	10	15.19	1.300	4.84	72.9
1551	--	39.6	0.3	5.72	10	15.19	1.360	3.56	70.4
1554	--	40.5	0.3	5.72	9	15.23	1.430	3.10	68
1557	--	41.4	0.3	5.72	9	15.20	1.500	2.71	64
1600	--	42.3	0.3	5.72	9	15.13	1.860	1.81	56
1603	--	43.2	0.3	5.72	9	15.12	1.820	1.82	55.3
1606	--	44.1	0.3	5.75	9	15.14	1.720	1.89	57.3
1619	--	45	0.3	5.71	20	15.25	1.960	0.00	53.1
1622	--	45.9	0.3	5.70	18	15.22	2.010	0.00	64.4
1625	--	46.8	0.3	5.70	18	15.20	2.020	0.00	58.3
1628	--	47.7	0.3	5.70	17	15.05	2.100	0.00	47.4
1631	--	48.6	0.3	5.70	16	15.04	2.150	0.00	45
1634	--	49.5	0.3	5.72	15	15.02	2.200	0.00	44.2

Total Quantity of Water Removed (L):	49.5	**Sampling Time:**	1634
Samplers:	EC/KT	**Split Sample With:**	None
Sampling Date:	4/27/2017	**Sample Type:**	Grab

COMMENTS AND OBSERVATIONS: 0.3 ppt salinity at purge start

Cleaned horiba at 1435 and 1501

Unable to gauge wells due to PFOA sampling protocol

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

Well I.D.: MW-11S	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Fog / 60F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 28-Apr-17	**Purge Time:** 320
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.16	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (^oC)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
0324	--	--	0.3	6.39	-149	14.99	1.21	6.21	>1000
0327	--	0.9	0.3	6.53	-186	14.40	1.05	0.00	>1000
0330	--	1.8	0.3	6.57	-186	14.42	1.03	0.00	>1000
0338	--	2.7	0.3	6.50	-113	14.49	1.06	0.00	>1000
0341	--	3.6	0.3	6.57	-189	14.28	1.04	0.00	>1000
0345	--	4.5	0.3	6.61	-200	14.24	1.02	0.00	>1000
0348	--	5.4	0.3	6.63	-205	14.04	1.01	0.00	900
0350	--	6.3	0.3	6.64	-208	13.99	1.01	0.00	>1000
0353	--	7.2	0.3	6.56	-139	13.88	1.01	0.00	745
0356	--	8.1	0.3	6.57	-188	13.87	1.01	0.00	589
0359	--	9.0	0.3	6.62	-204	13.80	1.00	0.00	415
0402	--	9.9	0.3	6.64	-208	13.77	1.00	0.00	312.0
0405	--	10.8	0.3	6.67	-212	13.7	1.00	0.00	256.0
0408	--	11.7	0.3	6.69	-212	13.66	1.00	0.00	194.0
0411	--	12.6	0.3	6.71	-212	13.62	0.997	0.00	155.0
0418	--	13.5	0.3	6.75	-212	13.57	0.996	0.00	152.0
0428	--	14.4	0.3	6.71	-113	13.41	1.06	0.00	253.0
0431	--	15.3	0.3	6.80	-128	13.32	1.06	0.00	223.0
0434	--	16.2	0.3	6.85	-136	13.25	1.06	0.00	254.0
0437	--	17.1	0.3	6.89	-143	13.20	1.06	0.00	217.0
0440	--	18.0	0.3	6.93	-153	13.2	1.06	0.00	182.0
0443	--	18.9	0.3	6.94	-155	13.18	1.06	0.00	144.0
0446	--	19.8	0.3	6.95	-157	13.18	1.06	0.00	130.0
0449	--	20.7	0.3	6.95	-159	13.17	1.06	0.00	118.0
0452	--	21.6	0.3	6.98	-160	13.2	1.05	0.00	96.2
0455	--	22.5	0.3	6.98	-163	13.13	1.03	0.00	87.2
0507	--	23.4	0.3	6.97	-167	13.17	1.05	0.00	64.8
0510	--	24.3	0.3	6.98	-168	13.11	1.04	0.00	54.6
0513	--	25.2	0.3	6.98	-170	13.10	1.05	0.00	49.7
0516	--	26.1	0.3	6.98	-170	13.08	1.06	0.00	46.6
0519	--	27.0	0.3	6.98	-172	13.09	1.05	0.00	48.4

Total Quantity of Water Removed (L):	27.0	**Sampling Time:**	0519
Samplers:	EC/KT	**Split Sample With:**	MS/MSD
Sampling Date:	4/28/2017	**Sample Type:**	

COMMENTS AND OBSERVATIONS 0.6 ppt salinity; emptied and cleaned Horiba at 333

turbid with red/brown tint to start

Unable to gauge wells due to PFOA sampling protocol

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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

Well I.D.: MW-11D	**Personnel:** EC/KT	**Client:** NYSDEC
Location: Metal Etching Co., Inc. Site	**Well Condition:** Good	**Weather:** Overcast/60F
Sounding Method: Solinist Tape	**Gauge Date:** See Comments	**Measurement Ref:** TOC
Stick Up/Down (ft): flush	**Gauge Time:** See Comments	**Well Diameter (in):** 2"

Purge Date: 28-Apr-17	**Purge Time:** 332
Purge Method: Low Flow Bladder Pump	**Field Technician:** EC/KT

Well Volume

A. Well Depth (ft): See Comments	**D. Well Volume (ft):** 0.163	**Depth/Height of Top of PVC:** flush
B. Depth to Water (ft): See Comments	**E. Well Volume (gal) C*D):** #VALUE!	**Pump Type:** Submersible
C. Liquid Depth (ft) (A-B): #VALUE!	**F. Three Well Volumes (gal) (E3):** #VALUE!	**Pump Designation:** Bladder Pump

Water Quality Parameters

Time (hrs)	DTW (ft btoc)	Volume (L)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temp. (°C)	Cond. (mS/cm)	DO (mg/L)	Turbidity (ntu)
0332	--	--	0.3	6.53	153	15.15	1.96	0.63	12.8
0335	--	0.9	0.3	6.40	156	14.76	1.99	0.00	14.4
0338	--	1.8	0.3	6.33	157	14.6	2.00	0.00	12.8
0341	--	2.7	0.3	6.25	156	14.41	2.02	0.00	12.2
0344	--	3.6	0.3	6.23	154	14.29	2.03	0.00	11.6
0347	--	4.5	0.3	6.22	149	14.24	2.04	0.00	11.6
0350	--	5.4	0.3	6.21	146	14.15	2.05	0.00	11.6
0353	--	6.3	0.3	6.20	141	14.16	2.06	0.00	11.5
0356	--	7.2	0.3	6.19	138	14.12	2.07	0.00	11.4

Total Quantity of Water Removed (L): 7.2

Samplers: EC/KT

Sampling Date: 4/28/2017

Sampling Time: 0356

Split Sample With: None

Sample Type: Grab

COMMENTS AND OBSERVATIONS: 4 cycles per minute 0.075 L/cycle

Unable to gauge wells due to PFOA sampling protocol

Appendix D

Daily Field Reports

DAILY FIELD REPORT

Day: **Wednesday** **Date:** **26 April 2017**

Temperature: (F) 52-62

Wind Direction: NE

Project Name: Metal Etching, Inc.

Weather: (am) overcast, rain
(pm) overcast, light rain

NYSDEC Site # 130110

Contract # D007624-09

Arrive at site: 1400 (pm)

Location: Freeport, New York

Leave site: 1800 (pm)

HEALTH & SAFETY:

Are there any changes to the Health & Safety Plan? Yes ( ) No (x)
(If yes, list the deviation under items for concern)

Are monitoring results at acceptable levels?

Soil	Yes ( )	n/a (x)	* No ( )
Waters	Yes ( )	n/a (x)	* No ( )
Air	Yes ( )	n/a (x)	* No ( )

- *If No, provide comments*

OTHER ITEMS:

Site Sketch Attached: Yes ( ) No (x)
Photos Taken: Yes ( ) No (x)

DESCRIPTION OF DAILY WORK PERFORMED:

K. Thapa and E. Cummings (EA) on site for groundwater sampling. Sampled 2 wells during low tide.

Sample ID	QA/QC	Description
MW-06-0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-10S-0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS

CONTRACTOR/SUBCONTRACTOR EQUIPMENT AND PERSONNEL ON SITE:

EA personnel: Kritika Thapa, Emily Cummings

VISITORS TO SITE:

None

PROJECT SCHEDULE ISSUES:

None

PROJECT BUDGET ISSUES:

None.

ITEMS OF CONCERN:

None

COMMENTS:

None

ATTACHMENT(S) TO THIS REPORT:

None

SITE REPRESENTATIVE:

Name: Emily Cummings

	
East side entrance	West side entrance

DAILY FIELD REPORT

Day: Thursday **Date:** 27 April 2017

Temperature: (F) 55-65

Wind Direction: SSE

Project Name: Metal Etching, Inc.

Weather: (am) overcast
(pm) overcast

NYSDEC Site # 130110

Contract # D007624-09

Location: Freeport, New York

Arrive at site: 1200 (am)

Leave site: 1800 (pm)

HEALTH & SAFETY:

Are there any changes to the Health & Safety Plan? Yes ( ) No (x)
(If yes, list the deviation under items for concern)

Are monitoring results at acceptable levels?	Soil	Yes ( )	n/a (x)	* No ( )
	Waters	Yes ( )	n/a (x)	* No ( )
	Air	Yes ( )	n/a (x)	* No ( )

- *If No, provide comments*

OTHER ITEMS:

Site Sketch Attached: Yes ( ) No (x)
Photos Taken: Yes ( ) No (x)

DESCRIPTION OF DAILY WORK PERFORMED:

K. Thapa and E. Cummings (EA) on site for groundwater sampling. Sampled 5 wells during low tide and conducted site wide inspection.

Sample ID	QA/QC	Description
MW-04 – 0517	DUP-01-0517	VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-09S – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-09D – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-10M – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-10D – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS

CONTRACTOR/SUBCONTRACTOR EQUIPMENT AND PERSONNEL ON SITE:

EA personnel: Kritika Thapa, Emily Cummings

VISITORS TO SITE:
None

PROJECT SCHEDULE ISSUES:

None

PROJECT BUDGET ISSUES:

None.

ITEMS OF CONCERN:
None

COMMENTS:

None
ATTACHMENT(S) TO THIS REPORT:

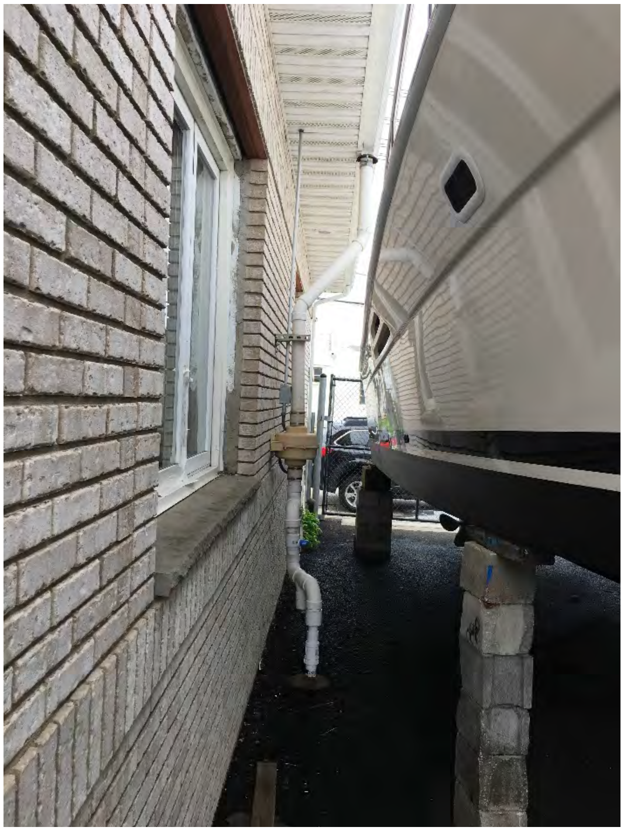
None

SITE REPRESENTATIVE:

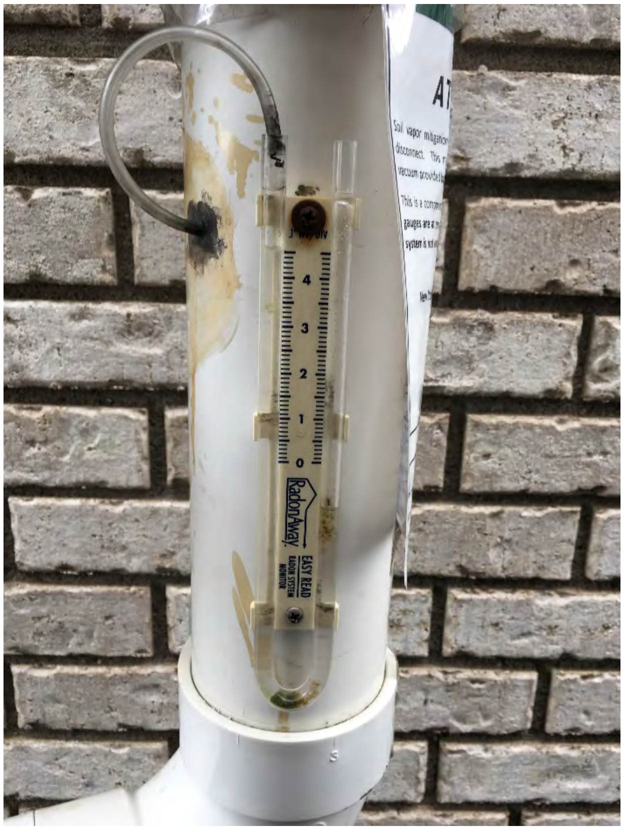
Name: Emily Cummings


Evidence of ponding water onsite.

Cracked pavement at site.



Onsite system.



Manometer from onsite system.

DAILY FIELD REPORT

Day: **Friday** **Date:** **28 April 2017**

Temperature: (F) 55-75

Wind Direction: SSW

Project Name: Metal Etching, Inc.

Weather: (am) overcast
(pm) clear, sun

NYSDEC Site # 130110

Contract # D007624-09

Arrive at site: 0300-0600 (am)

Location: Freeport, New York

Leave site: 1300-1700 (pm)

HEALTH & SAFETY:

Are there any changes to the Health & Safety Plan? Yes ( ) No (x)
(If yes, list the deviation under items for concern)

Are monitoring results at acceptable levels?	Soil	Yes ( )	n/a (x)	* No ( )
	Waters	Yes ( )	n/a (x)	* No ( )
	Air	Yes ( )	n/a (x)	* No ( )

- *If No, provide comments*

OTHER ITEMS:

Site Sketch Attached:	Yes ( )	No (x)
Photos Taken:	Yes ( )	No (x)

DESCRIPTION OF DAILY WORK PERFORMED:

K. Thapa and E. Cummings (EA) on site for groundwater sampling. Sampled 5 wells during low tide.

Sample ID	QA/QC	Description
MW-05R – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-08SR – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-08DR – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-11S – 0517	MS/MSD	VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS
MW-11D – 0517		VOCs / Metals / MNA – methane, ethane, ethene, chloride, sulfate, sulfide, TOC, nitrate, 1,4-dioxane, PFAS

CONTRACTOR/SUBCONTRACTOR EQUIPMENT AND PERSONNEL ON SITE:

EA personnel: Kritika Thapa, Emily Cummings

DAILY FIELD REPORT

Day: Friday Date: 28 April 2017

VISITORS TO SITE:
None

PROJECT SCHEDULE ISSUES:

None

PROJECT BUDGET ISSUES:

None.

ITEMS OF CONCERN:
None

COMMENTS:

None
ATTACHMENT(S) TO THIS REPORT:

None

SITE REPRESENTATIVE:

Name: Emily Cummings

Appendix E

Data Usability Summary Reports

ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
METAL ETCHING, FREEPORT, LONG ISLAND, NEW YORK

Client:	EA Engineering, Science & Technology, Inc., Syracuse, New York
SDG:	17E0006
Laboratory:	Con-Test Analytical Laboratory, East Longmeadow, Massachusetts
Site:	Metal Etching, Freeport, Long Island, New York
Date:	September 20, 2017

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-04-0517	17E0006-01	Water
2	DUP1-0517	17E0006-02	Water
3	MW-10S-0517	17E0006-03	Water
4	MW-10M-0517	17E0006-04	Water
5	MW-10D-0517	17E0006-05	Water
6	MW-06-0517	17E0006-06	Water
7	MW-9S-0517	17E0006-07	Water
8	MW-9D-0517	17E0006-08	Water
9	MW-11D-0517	17E0006-09	Water
10	MW-11S-0517	17E0006-10	Water
10MS	MW-11S-0517MS	17E0006-10MS	Water
10MSD	MW-11S-0517MSD	17E0006-10MSD	Water
11	MW-05R-0517	17E0006-11	Water
12	MW-8SR-0517	17E0006-12	Water
13	MW-8DR-0517	17E0006-13	Water
14	RB1	17E0006-14	Water
15	RB2	17E0006-15	Water
16*	TRIP BLANK 1	17E0006-16	Water
17†	FIELD BLANK 01	17E0006-17	Water
18†	FIELD BLANK 02	17E0006-18	Water

* - SVOC only † - PFC only

A Data Usability Summary Review was performed on the analytical data for thirteen water samples, two aqueous field blank samples, two aqueous equipment blank samples and on aqueous trip blank sample collected on April 26-28, 2017 by EA Engineering at the Metal Etching site in Freeport, Long Island, New York. The samples were analyzed under Environmental Protection Agency (USEPA) *'Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions" and the USEPA Method for PFCs.*

Specific method references are as follows:

Analysis	*Method References*
SVOCs (1,4-Dioxane)	USEPA SW-846 Method 8270D
PFCs	USEPA Method 537

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods and the USEPA Region II Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-35A, Revision 0, June 2015: Semivolatile Data Validation;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Data Completeness
- Holding times and sample preservation
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Target Compound Identification
- Internal standard area and retention time summary forms
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There was no rejection of data.

Overall the data is acceptable for the intended purposes as qualified for the following deficiencies.

- NEtFOSAA was qualified as estimated in one sample due to a low surrogate recovery.
- PFOS and PFHxS were qualified as estimated in one sample due to high MS/MSD recoveries.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.
- The cooler temperatures were 15.9°C and 13.1°C which is slightly high (>4°±2°C). No action was taken on this basis.

Semivolatile Organic Compounds (1,4-Dioxane)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- The initial calibration exhibited acceptable %RSD values and/or correlation coefficients and mean RRF values.

Continuing Calibration

- The continuing calibration exhibited acceptable %D values and RRF values.

Method Blank

- The method blanks were free of contamination.

Field Blank

- The field QC samples were free of contamination.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
RB1	None - ND	-	-	-
RB2	None - ND	-	-	-
TRIP BLANK 1	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

SVOC				
Compound	MW-04-0517 ug/L	DUP1-0517 ug/L	RPD	Qualifier
None	ND	ND	-	-

Perfluorinated Compounds (PFCs)

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

Initial Calibration

- All relative percent difference (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent difference (%D) criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- The field QC samples were free of contamination.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
RB1	None - ND	-	-	-
RB2	None - ND	-	-	-
FIELD BLANK 01	None - ND	-	-	-
FIELD BLANK 02	None - ND	-	-	-

Surrogate Spike Recoveries

- The following table presents surrogate percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). For severely low surrogate recoveries (<10%), non-detected results in the affected samples are rejected (R) and are unusable for project objectives.

Sample ID	Surrogate	%R	Qualifier
17	d5-NEtFOSAA	44.5%	UJ

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The following table presents MS/MSD samples that exhibited percent recoveries (%R) outside the QC limits and/or relative percent differences (RPD) above QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
10	PFOS	159%/136%/OK	J
	PFHxS	133%/OK/OK	

Laboratory Control Sample (LCS)

- The LCS samples exhibited acceptable percent recoveries (%R).

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Internal Standard (IS) Area Performance

- The following table presents samples that exceeded the -50%/+100% area criteria for internal standard areas. Non-detected results for the associated compounds are considered estimated and qualified (UJ). Positive results for the associated compounds are considered estimated and qualified (J). Non-detected compounds that exceed the lower limit by -25% area criteria are considered rejected (R) and unusable for project objectives.

Sample ID	Internal Standard	Area Count	Qualifier
6	d3-NMeFOSAA	High	None - Sample ND
9	d3-NMeFOSAA	High	None - Sample ND
13	d3-NMeFOSAA	High	None - Sample ND

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

PFCs				
Compound	MW-04-0517 ng/L	DUP1-0517 ng/L	RPD	Qualifier
PFOA	160	160	0%	None
PFOS	7.6	8.3	9%	
PFNA	92	95	3%	
PFHxA	29	28	4%	
PFHpA	64	64	0%	
PFDA	34	30	13%	
PFBS	75	90	18%	
PFPeA	16	16	0%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/21/17

Nancy Weaver
Senior Chemist

Data Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.

U = The analyte was analyzed for, but was not detected above the sample reporting limit.

R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

1 - FORM I
ANALYSIS DATA SHEET

MW-04-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-01	File ID:	F0508033.D
Sampled:	04/27/17 15:53	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 21:36
Solids:		Preparation:	SW-846 3510C	Dilution:	1
Initial/Final:	1000 mL / 1 mL				

Batch: B175818 Sequence: S014666 Calibration: 1700170 Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

NRW 9/20/17

1 - FORM I
ANALYSIS DATA SHEET

2

DUP1-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-02	File ID:	F0508034.D
Sampled:	04/27/17 00:00	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 21:55
Solids:		Preparation:	SW-846 3510C	Dilution:	1
Initial/Final:	1000 mL / 1 mL				

Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

MW 9/20/17

3

1 - FORM I
ANALYSIS DATA SHEET

MW-10S-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-03	File ID:	F0508035.D		
Sampled:	04/26/17 17:01	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 22:15		
Solids:		Preparation:	SW-846 3510C	Dilution:	1		
Initial/Final:	1010 mL / 1 mL						
Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane	0.45	0.032	0.20	

MW 9/20/17

4

1 - FORM I
ANALYSIS DATA SHEET

MW-10M-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-04	File ID:	F0508036.D		
Sampled:	04/27/17 14:32	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 22:34		
Solids:		Preparation:	SW-846 3510C	Dilution:	1		
Initial/Final:	1000 mL / 1 mL						
Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

new 9/20/17

5

1 - FORM I
ANALYSIS DATA SHEET

MW-10D-0517

Laboratory: Con-Test Analytical Laboratory

Work Order: 17E0006

Client: EA Engineering, Science & Tech. -

Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ground Water

Laboratory ID: 17E0006-05

File ID: F0508037.D

Sampled: 04/27/17 16:34

Prepared: 05/02/17 03:16

Analyzed: 05/08/17 22:53

Solids:

Preparation: SW-846 3510C

Dilution: 1

Initial/Final: 1010 mL / 1 mL

Batch: B175818

Sequence: S014666

Calibration: 1700170

Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.032	0.20	

MW 9/20/17

6

1 - FORM I
ANALYSIS DATA SHEET

MW-06-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-06	File ID:	F0508038.D		
Sampled:	04/26/17 15:39	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 23:12		
Solids:		Preparation:	SW-846 3510C	Dilution:	1		
Initial/Final:	1000 mL / 1 mL						
Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

MW 9/20/17

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1 - FORM I
ANALYSIS DATA SHEET

MW-9S-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-07	File ID:	F0508039.D
Sampled:	04/27/17 18:30	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 23:32
Solids:		Preparation:	SW-846 3510C	Dilution:	1
Initial/Final:	1000 mL / 1 mL				

Batch: B175818 Sequence: S014666 Calibration: 1700170 Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

MW 9 | 201.7

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1 - FORM I
ANALYSIS DATA SHEET

MW-9D-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-08	File ID:	F0508040.D		
Sampled:	04/27/17 18:23	Prepared:	05/02/17 03:16	Analyzed:	05/08/17 23:51		
Solids:		Preparation:	SW-846 3510C	Dilution:	1		
Initial/Final:	1000 mL / 1 mL						
Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

MW 9/20/17

9

1 - FORM I
ANALYSIS DATA SHEET

MW-11D-0517

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0006
Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water   Laboratory ID: 17E0006-09   File ID: F0508041.D
Sampled: 04/28/17 03:56   Prepared: 05/02/17 03:16   Analyzed: 05/09/17 00:10
Solids: Preparation: SW-846 3510C   Dilution: 1
Initial/Final: 1000 mL / 1 mL
Batch: B175818   Sequence: S014666   Calibration: 1700170   Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

NW 9/20/17

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1 - FORM I
ANALYSIS DATA SHEET

MW-11S-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-10	File ID:	F0508042.D
Sampled:	04/28/17 05:19	Prepared:	05/02/17 03:16	Analyzed:	05/09/17 00:29
Solids:		Preparation:	SW-846 3510C	Dilution:	1
Initial/Final:	1000 mL / 1 mL				

Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

MW 9/20/17

11

1 - FORM I
ANALYSIS DATA SHEET

MW-05R-0517

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0006

Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ground Water Laboratory ID: 17E0006-11 File ID: F0508043.D

Sampled: 04/28/17 05:59 Prepared: 05/02/17 03:16 Analyzed: 05/09/17 00:48

Solids: Preparation: SW-846 3510C Dilution: 1

Initial/Final: 1000 mL / 1 mL

Batch: B175818 Sequence: S014666 Calibration: 1700170 Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

mw 9/20/17

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1 - FORM I
ANALYSIS DATA SHEET

MW-8SR-0517

Laboratory: Con-Test Analytical Laboratory
Work Order: 17E0006
Client: EA Engineering, Science & Tech. -
Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water
Laboratory ID: 17E0006-12
File ID: F0508044.D
Sampled: 04/28/17 15:16
Prepared: 05/02/17 03:16
Analyzed: 05/09/17 01:07
Solids:
Preparation: SW-846 3510C
Dilution: 1
Initial/Final: 1000 mL / 1 mL
Batch: B175818
Sequence: S014666
Calibration: 1700170
Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

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ANALYSIS DATA SHEET

MW-8DR-0517

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0006

Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ground Water   Laboratory ID: 17E0006-13   File ID: F0508045.D

Sampled: 04/28/17 15:15   Prepared: 05/02/17 03:16   Analyzed: 05/09/17 01:27

Solids: Preparation: SW-846 3510C   Dilution: 1

Initial/Final: 1000 mL / 1 mL

Batch: B175818   Sequence: S014666   Calibration: 1700170   Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

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ANALYSIS DATA SHEET

RB1

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-14	File ID:	F0508046.D
Sampled:	04/28/17 13:00	Prepared:	05/02/17 03:16	Analyzed:	05/09/17 01:46
Solids:		Preparation:	SW-846 3510C	Dilution:	1
Initial/Final:	1000 mL / 1 mL				

Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

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ANALYSIS DATA SHEET

RB2

Laboratory: Con-Test Analytical Laboratory

Work Order: 17E0006

Client: EA Engineering, Science & Tech. -

Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ground Water

Laboratory ID: 17E0006-15

File ID: F0508047.D

Sampled: 04/28/17 12:00

Prepared: 05/02/17 03:16

Analyzed: 05/09/17 02:05

Solids:

Preparation: SW-846 3510C

Dilution: 1

Initial/Final: 1000 mL / 1 mL

Batch: B175818

Sequence: S014666

Calibration: 1700170

Instrument: GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

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ANALYSIS DATA SHEET

TRIP Blank 1

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Trip Blank Water	Laboratory ID:	17E0006-16	File ID:	F0508048.D		
Sampled:	04/28/17 15:00	Prepared:	05/02/17 03:16	Analyzed:	05/09/17 02:24		
Solids:		Preparation:	SW-846 3510C	Dilution:	1		
Initial/Final:	1000 mL / 1 mL						
Batch:	B175818	Sequence:	S014666	Calibration:	1700170	Instrument:	GCMSSV6

CAS NO.	COMPOUND	CONC. (µg/L)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.033	0.20	

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ANALYSIS DATA SHEET

MW-04-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-01	File ID:	lims export files full-015
Sampled:	04/27/17 15:53	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 02:23
Solids:		Preparation:	EPA 537	Dilution:	1
Initial/Final:	250 mL / 1 mL				

Batch: B176442 Sequence: S014095 Calibration: 1700165 Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	160		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	7.6		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	92		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)	29		20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)	64		20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	34		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	75		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	16		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

DUP1-0517

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0006

Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ground Water   Laboratory ID: 17E0006-02   File ID: lims export files full-001

Sampled: 04/27/17 00:00   Prepared: 05/09/17 14:56   Analyzed: 05/13/17 02:36

Solids: Preparation: EPA 537   Dilution: 1

Initial/Final: 250 mL / 1 mL

Batch: B176442   Sequence: S014095   Calibration: 1700165   Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	160		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	8.3		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	95		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)	28		20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)	64		20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	30		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	90		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	16		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

MW-10S-0517

Laboratory: Con-Test Analytical Laboratory
Work Order: 17E0006
Client: EA Engineering, Science & Tech. -
Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water
Laboratory ID: 17E0006-03
File ID: lims export files full-017
Sampled: 04/26/17 17:01
Prepared: 05/09/17 14:56
Analyzed: 05/13/17 02:48
Solids:
Preparation: EPA 537
Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442
Sequence: S014095
Calibration: 1700165
Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)	2.1		2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	52		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	26		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	18		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	7.1		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	16		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	5.0		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	9.8		2.0	

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ANALYSIS DATA SHEET

MW-10M-0517

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Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0006
Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water   Laboratory ID: 17E0006-04   File ID: lims export files full-018
Sampled: 04/27/17 14:32   Prepared: 05/09/17 14:56   Analyzed: 05/13/17 03:01
Solids: Preparation: EPA 537   Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442   Sequence: S014095   Calibration: 1700165   Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	86		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	18		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	32		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	2.2		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)	26		20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	35		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	23		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	9.2		2.0	

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ANALYSIS DATA SHEET

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MW-10D-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-05	File ID:	lims export files full-014		
Sampled:	04/27/17 16:34	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 02:10		
Solids:		Preparation:	EPA 537	Dilution:	1		
Initial/Final:	250 mL / 1 mL						
Batch:	B176442	Sequence:	S014095	Calibration:	1700165	Instrument:	HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	17		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	5.8		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	2.6		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	3.9		2.0	

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ANALYSIS DATA SHEET

MW-06-0517

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Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-06	File ID:	lims export files full-022
Sampled:	04/26/17 15:39	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 04:18
Solids:		Preparation:	EPA 537	Dilution:	1
Initial/Final:	250 mL / 1 mL				

Batch:	B176442	Sequence:	S014095	Calibration:	1700165	Instrument:	HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	170		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	24		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	16		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)	27		20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	5.2		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)	54		20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	4.3		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	10		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	10		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

MW-9S-0517

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0006
Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water Laboratory ID: 17E0006-07 File ID: lims export files full-013
Sampled: 04/27/17 18:30 Prepared: 05/09/17 14:56 Analyzed: 05/13/17 01:57
Solids: Preparation: EPA 537 Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442 Sequence: S014095 Calibration: 1700165 Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)	3.9		2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	15		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	9.8		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	8.2		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)	2.5		2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	15		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	15		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	7.6		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

MW-9D-0517

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0006
Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water Laboratory ID: 17E0006-08 File ID: lims export files full-020
Sampled: 04/27/17 18:23 Prepared: 05/09/17 14:56 Analyzed: 05/13/17 03:52
Solids: Preparation: EPA 537 Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442 Sequence: S014095 Calibration: 1700165 Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)	3.3		2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	9.3		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	7.3		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	2.9		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	4.9		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	13		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.0		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

MW-11D-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-09	File ID:	lims export files full-023
Sampled:	04/28/17 03:56	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 04:30
Solids:		Preparation:	EPA 537	Dilution:	1
Initial/Final:	250 mL / 1 mL				

Batch:	B176442	Sequence:	S014095	Calibration:	1700165	Instrument:	HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	32		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	77		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	3.3		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	4.8		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.5		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	7.1		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

MW-11S-0517

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0006

Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ground Water   Laboratory ID: 17E0006-10   File ID: lims export files full-026

Sampled: 04/28/17 05:19   Prepared: 05/09/17 14:56   Analyzed: 05/13/17 05:09

Solids: Preparation: EPA 537   Dilution: 1

Initial/Final: 250 mL / 1 mL

Batch: B176442   Sequence: S014095   Calibration: 1700165   Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	9.7		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	63 J		2.0	~~MS-24~~
375-95-1	Perfluorononanoic acid (PFNA)			2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	22 J		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.7		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.3		2.0	

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1 - FORM I
ANALYSIS DATA SHEET

MW-05R-0517

Laboratory: Con-Test Analytical Laboratory
Work Order: 17E0006
Client: EA Engineering, Science & Tech. -
Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water
Laboratory ID: 17E0006-11
File ID: lims export files full-024
Sampled: 04/28/17 05:59
Prepared: 05/09/17 14:56
Analyzed: 05/13/17 04:43
Solids:
Preparation: EPA 537
Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442
Sequence: S014095
Calibration: 1700165
Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	63		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	18		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	28		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	3.9		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	22		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	4.3		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	11		2.0	

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ANALYSIS DATA SHEET

MW-8SR-0517

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-12	File ID:	lims export files full-021		
Sampled:	04/28/17 15:16	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 04:05		
Solids:		Preparation:	EPA 537	Dilution:	1		
Initial/Final:	250 mL / 1 mL						
Batch:	B176442	Sequence:	S014095	Calibration:	1700165	Instrument:	HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)	4.7		2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	26		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	11		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	9.2		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	9.4		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	11		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	69		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	6.7		2.0	

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13

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0006
Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ground Water Laboratory ID: 17E0006-13 File ID: lims export files full-025
Sampled: 04/28/17 15:15 Prepared: 05/09/17 14:56 Analyzed: 05/13/17 04:56
Solids: Preparation: EPA 537 Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442 Sequence: S014095 Calibration: 1700165 Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)	2.5		2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)	26		2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	16		2.0	
375-95-1	Perfluorononanoic acid (PFNA)	5.9		2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	4.4		2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)	7.3		2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	170		2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)	8.0		2.0	

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RB1

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Ground Water	Laboratory ID:	17E0006-14	File ID:	lims export files full-011		
Sampled:	04/28/17 13:00	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 01:32		
Solids:		Preparation:	EPA 537	Dilution:	1		
Initial/Final:	250 mL / 1 mL						
Batch:	B176442	Sequence:	S014095	Calibration:	1700165	Instrument:	HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)			2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)			2.0	
375-95-1	Perfluorononanoic acid (PFNA)			2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)			2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)			2.0	

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RB2

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ground Water	Laboratory ID:	17E0006-15	File ID:	lims export files full-012
Sampled:	04/28/17 12:00	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 01:45
Solids:		Preparation:	EPA 537	Dilution:	1
Initial/Final:	250 mL / 1 mL				

Batch: B176442 Sequence: S014095 Calibration: 1700165 Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)			2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)			2.0	
375-95-1	Perfluorononanoic acid (PFNA)			2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)			2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)			2.0	

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ANALYSIS DATA SHEET
Field Blank 01

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0006		
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.		
Matrix:	Water	Laboratory ID:	17E0006-17	File ID:	lims export files full-009		
Sampled:	04/28/17 00:00	Prepared:	05/09/17 14:56	Analyzed:	05/13/17 01:07		
Solids:		Preparation:	EPA 537	Dilution:	1		
Initial/Final:	250 mL / 1 mL						
Batch:	B176442	Sequence:	S014095	Calibration:	1700165	Instrument:	HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)			2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)			2.0	
375-95-1	Perfluorononanoic acid (PFNA)			2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)			2.0	
	NEtFOSAA			2.0	UJ
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)			2.0	

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ANALYSIS DATA SHEET

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Field Blank 02

Laboratory: Con-Test Analytical Laboratory | Work Order: 17E0006
Client: EA Engineering, Science & Tech. - | Project: 1490709 - Metal Etching Co. Inc.
Matrix: Water | Laboratory ID: 17E0006-18 | File ID: lims export files full-010
Sampled: 04/28/17 00:00 | Prepared: 05/09/17 14:56 | Analyzed: 05/13/17 01:19
Solids: | Preparation: EPA 537 | Dilution: 1
Initial/Final: 250 mL / 1 mL
Batch: B176442 | Sequence: S014095 | Calibration: 1700165 | Instrument: HPLC1

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
2058-94-8	Perfluoroundecanoic acid (PFUnA)			2.0	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)			2.0	
376-06-7	Perfluorotetradecanoic acid (PFTA)			2.0	
335-67-1	Perfluorooctanoic acid (PFOA)			2.0	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)			2.0	
375-95-1	Perfluorononanoic acid (PFNA)			2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)			20	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)			2.0	
375-85-9	Perfluoroheptanoic acid (PFHpA)			20	
307-55-1	Perfluorododecanoic acid (PFDoA)			2.0	
335-76-2	Perfluorodecanoic acid (PFDA)			2.0	
375-73-5	Perfluorobutanesulfonic acid (PFBS)			2.0	
	NEtFOSAA			2.0	
	NMeFOSAA			2.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)			2.0	

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ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
METAL ETCHING, FREEPORT, LONG ISLAND, NEW YORK

Client:	EA Engineering, Science & Technology, Inc., Syracuse, New York
SDG:	17E0096
Laboratory:	Con-Test Analytical Laboratory, East Longmeadow, Massachusetts
Site:	Metal Etching, Freeport, Long Island, New York
Date:	September 20, 2016

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	IA-0417	17E0096-01	Air
2	OA-0417	17E0096-02	Air
3	DUP-0417	17E0096-03	Air

A Data Usability Summary Review was performed on the analytical data for three air samples collected on April 27, 2017 by EA Engineering at the Metal Etching site in Freeport, Long Island, New York. The samples were analyzed under the "*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition January 1999, EPA/625/R-96/010B", Compendium Method TO-15"*.

Specific method references are as follows:

Analysis	*Method References*
VOCs	USEPA Method TO-15

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods and the USEPA Region II Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-31, Revision 6, June 2014: Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Data Completeness
- Canister Certification Blanks
- Canister Certification Pressures Differences
- Chains-of-Custody and Traffic Reports
- Holding Times and sample preservation
- Laboratory Control Sample (LCS) recoveries

- Surrogate Recoveries
- GC/MS Tuning
- Method Blank Contamination
- Initial and Continuing Calibration Summaries
- Compound Quantitation
- Internal Standard (IS) Area Performance
- Field Duplicate Sample Precision

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the following deficiencies.

- Isopropanol was qualified as estimated in all samples due to low LCS recovery.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

Volatile Organic Compounds (VOCs)

Canister Certification Blanks

- The batch blank checks were non-detect or < RL.

Canister Certification Pressures Differences

- All criteria were met.

Chains-of-Custody and Traffic Reports

- All criteria were met

Holding Times

- All samples were analyzed within 30 days for air samples.

Laboratory Control Samples

- The following table presents LCS percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

LCS ID	Compound	%R	Qualifier	Affected Samples
B176681-BS1	Isopropanol	69.1%	J	1, 2, 3

Surrogate Recoveries

- All samples exhibited acceptable surrogate percent recoveries (%R).

GC/MS Tuning

- All criteria were met.

Method Blank

- The method blanks were free of contamination.

Initial Calibration

- The initial calibrations exhibited acceptable %RSD and/or correlation coefficients and mean RRF values.

Continuing Calibration

- The continuing calibrations exhibited acceptable %D and RRF values.

Compound Quantitation

- All criteria were met.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

Compound	IA-0417 ppbV	DUP-0417 ppbV	RPD	Qualifier
Acetone	14	12	15%	None
Benzene	0.23	0.23	0%	
1,3-Butadiene	0.13	0.12	8%	
2-Butanone	2.0	1.6	22%	
Carbon Tetrachloride	0.060	0.062	3%	
Chloroethane	0.051	0.051	0%	
Chloroform	0.067	0.067	0%	
Chloromethane	0.95	0.91	4%	
Cyclohexane	0.16	0.15	6%	
Dichlorodifluoromethane	0.18	0.17	6%	
Ethyl Acetate	0.64	0.70	9%	
Ethylbenzene	0.17	0.15	13%	
4-Ethyltoluene	0.051	0.074	37%	
Heptane	0.21	0.22	5%	
Hexane	1.4U	2.5	NC	
2-Hexanone	0.11	0.053	70%	None - <5X RL
Isopropanol	14	7.7	58%	None - See LCS
Naphthalene	0.054	0.035U	NC	None
Styrene	0.25	0.18	33%	
Tetrachloroethylene	0.079	0.074	7%	
Tetrahydrofuran	0.036	0.035U	NC	
Toluene	3.9	3.7	5%	
Trichlorofluoromethane	0.25	0.23	8%	
1,2,4-Trimethylbenzene	0.21	0.17	21%	
1,3,5-Trimethylbenzene	0.063	0.055	14%	
m,p-Xylene	0.65	0.59	10%	
o-Xylene	0.25	0.23	8%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/21/17

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1 - FORM I
ANALYSIS DATA SHEET

IA-0417

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0096
Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.
Matrix: indoor air   Laboratory ID: 17E0096-01   File ID: F050716.D
Sampled: 04/27/17 00:00   Prepared: 05/07/17 14:33   Analyzed: 05/08/17 00:45
Solids: Preparation: TO-15 Prep   Dilution: 0.702
Initial/Final: 400 mL / 400 mL
Batch: B176681   Sequence: S014082   Calibration: 1700016   Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
67-64-1	Acetone	14	0.49	1.4	
71-43-2	Benzene	0.23	0.018	0.035	
100-44-7	Benzyl chloride		0.0068	0.035	
75-27-4	Bromodichloromethane		0.0076	0.035	
75-25-2	Bromoform		0.0067	0.035	
74-83-9	Bromomethane		0.024	0.035	
106-99-0	1,3-Butadiene	0.13	0.018	0.035	
78-93-3	2-Butanone (MEK)	2.0	0.026	1.4	
75-15-0	Carbon Disulfide		0.012	0.35	
56-23-5	Carbon Tetrachloride	0.060	0.0085	0.035	
108-90-7	Chlorobenzene		0.012	0.035	
75-00-3	Chloroethane	0.051	0.013	0.035	
67-66-3	Chloroform	0.067	0.0082	0.035	
74-87-3	Chloromethane	0.95	0.015	0.070	
110-82-7	Cyclohexane	0.16	0.020	0.035	
124-48-1	Dibromochloromethane		0.0093	0.035	
106-93-4	1,2-Dibromoethane (EDB)		0.0079	0.035	
95-50-1	1,2-Dichlorobenzene		0.0093	0.035	
541-73-1	1,3-Dichlorobenzene		0.0078	0.035	
106-46-7	1,4-Dichlorobenzene		0.0088	0.035	
75-71-8	Dichlorodifluoromethane (Freon 12)	0.18	0.015	0.035	
75-34-3	1,1-Dichloroethane		0.0099	0.035	
107-06-2	1,2-Dichloroethane		0.0098	0.035	
75-35-4	1,1-Dichloroethylene		0.0086	0.035	
156-59-2	cis-1,2-Dichloroethylene		0.013	0.035	
156-60-5	trans-1,2-Dichloroethylene		0.0093	0.035	
78-87-5	1,2-Dichloropropane		0.012	0.035	
10061-01-5	cis-1,3-Dichloropropene		0.0093	0.035	
10061-02-6	trans-1,3-Dichloropropene		0.0094	0.035	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon		0.0084	0.035	

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IA-0417

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0096
Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.
Matrix: indoor air   Laboratory ID: 17E0096-01   File ID: F050716.D
Sampled: 04/27/17 00:00   Prepared: 05/07/17 14:33   Analyzed: 05/08/17 00:45
Solids: Preparation: TO-15 Prep   Dilution: 0.702
Initial/Final: 400 mL / 400 mL
Batch: B176681   Sequence: S014082   Calibration: 1700016   Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.23	0.35	
141-78-6	Ethyl Acetate	0.64	0.026	0.035	
100-41-4	Ethylbenzene	0.17	0.0097	0.035	
622-96-8	4-Ethyltoluene	0.051	0.0079	0.035	
142-82-5	Heptane	0.21	0.011	0.035	
87-68-3	Hexachlorobutadiene		0.013	0.035	
110-54-3	Hexane		0.062	1.4	
591-78-6	2-Hexanone (MBK)	0.11	0.0090	0.035	
67-63-0	Isopropanol	14 J	0.043	1.4	
1634-04-4	Methyl tert-Butyl Ether (MTBE)		0.011	0.035	
75-09-2	Methylene Chloride		0.043	0.35	
108-10-1	4-Methyl-2-pentanone (MIBK)		0.0084	0.035	
91-20-3	Naphthalene	0.054	0.019	0.035	
115-07-1	Propene		0.11	1.4	
100-42-5	Styrene	0.25	0.0068	0.035	
79-34-5	1,1,2,2-Tetrachloroethane		0.0084	0.035	
127-18-4	Tetrachloroethylene	0.079	0.010	0.035	
109-99-9	Tetrahydrofuran	0.036	0.015	0.035	
108-88-3	Toluene	3.9	0.011	0.035	
120-82-1	1,2,4-Trichlorobenzene		0.013	0.035	
71-55-6	1,1,1-Trichloroethane		0.0063	0.035	
79-00-5	1,1,2-Trichloroethane		0.011	0.035	
79-01-6	Trichloroethylene		0.010	0.035	
75-69-4	Trichlorofluoromethane (Freon 11)	0.25	0.012	0.14	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1		0.0098	0.14	
95-63-6	1,2,4-Trimethylbenzene	0.21	0.0086	0.035	
108-67-8	1,3,5-Trimethylbenzene	0.063	0.0070	0.035	
108-05-4	Vinyl Acetate		0.018	0.70	
75-01-4	Vinyl Chloride		0.015	0.035	
1330-20-7P/M	m&p-Xylene	0.65	0.018	0.070	

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1 - FORM I
ANALYSIS DATA SHEET

IA-0417

1

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0096
Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.
Matrix: indoor air Laboratory ID: 17E0096-01 File ID: F050716.D
Sampled: 04/27/17 00:00 Prepared: 05/07/17 14:33 Analyzed: 05/08/17 00:45
Solids: Preparation: TO-15 Prep Dilution: 0.702
Initial/Final: 400 mL / 400 mL
Batch: B176681 Sequence: S014082 Calibration: 1700016 Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
95-47-6	o-Xylene	0.25	0.010	0.035	

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1 - FORM I
ANALYSIS DATA SHEET

OA-0417

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0096
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Ambient Air	Laboratory ID:	17E0096-02	File ID:	F050715.D
Sampled:	04/27/17 00:00	Prepared:	05/07/17 14:33	Analyzed:	05/07/17 23:58
Solids:		Preparation:	TO-15 Prep	Dilution:	0.702
Initial/Final:	400 mL / 400 mL				

Batch: B176681 Sequence: S014082 Calibration: 1700016 Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
67-64-1	Acetone	6.4	0.49	1.4	
71-43-2	Benzene	0.19	0.018	0.035	
100-44-7	Benzyl chloride		0.0068	0.035	
75-27-4	Bromodichloromethane		0.0076	0.035	
75-25-2	Bromoform		0.0067	0.035	
74-83-9	Bromomethane		0.024	0.035	
106-99-0	1,3-Butadiene		0.018	0.035	
78-93-3	2-Butanone (MEK)		0.026	1.4	
75-15-0	Carbon Disulfide		0.012	0.35	
56-23-5	Carbon Tetrachloride	0.064	0.0085	0.035	
108-90-7	Chlorobenzene		0.012	0.035	
75-00-3	Chloroethane		0.013	0.035	
67-66-3	Chloroform		0.0082	0.035	
74-87-3	Chloromethane	0.57	0.015	0.070	
110-82-7	Cyclohexane		0.020	0.035	
124-48-1	Dibromochloromethane		0.0093	0.035	
106-93-4	1,2-Dibromoethane (EDB)		0.0079	0.035	
95-50-1	1,2-Dichlorobenzene		0.0093	0.035	
541-73-1	1,3-Dichlorobenzene		0.0078	0.035	
106-46-7	1,4-Dichlorobenzene		0.0088	0.035	
75-71-8	Dichlorodifluoromethane (Freon 12)	0.16	0.015	0.035	
75-34-3	1,1-Dichloroethane		0.0099	0.035	
107-06-2	1,2-Dichloroethane		0.0098	0.035	
75-35-4	1,1-Dichloroethylene		0.0086	0.035	
156-59-2	cis-1,2-Dichloroethylene		0.013	0.035	
156-60-5	trans-1,2-Dichloroethylene		0.0093	0.035	
78-87-5	1,2-Dichloropropane		0.012	0.035	
10061-01-5	cis-1,3-Dichloropropene		0.0093	0.035	
10061-02-6	trans-1,3-Dichloropropene		0.0094	0.035	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon		0.0084	0.035	

NW 9/20/17

1 - FORM I
ANALYSIS DATA SHEET

OA-0417

2

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0096
Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.
Matrix: Ambient Air   Laboratory ID: 17E0096-02   File ID: F050715.D
Sampled: 04/27/17 00:00   Prepared: 05/07/17 14:33   Analyzed: 05/07/17 23:58
Solids: Preparation: TO-15 Prep   Dilution: 0.702
Initial/Final: 400 mL / 400 mL
Batch: B176681   Sequence: S014082   Calibration: 1700016   Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.23	0.35	
64-17-5	Ethanol	4.9	0.63	1.4	
141-78-6	Ethyl Acetate		0.026	0.035	
100-41-4	Ethylbenzene	0.15	0.0097	0.035	
622-96-8	4-Ethyltoluene		0.0079	0.035	
142-82-5	Heptane	0.081	0.011	0.035	
87-68-3	Hexachlorobutadiene		0.013	0.035	
110-54-3	Hexane		0.062	1.4	
591-78-6	2-Hexanone (MBK)		0.0090	0.035	
67-63-0	Isopropanol	5.0 J	0.043	1.4	
1634-04-4	Methyl tert-Butyl Ether (MTBE)		0.011	0.035	
75-09-2	Methylene Chloride		0.043	0.35	
108-10-1	4-Methyl-2-pentanone (MIBK)		0.0084	0.035	
91-20-3	Naphthalene		0.019	0.035	
115-07-1	Propene		0.11	1.4	
100-42-5	Styrene		0.0068	0.035	
79-34-5	1,1,2,2-Tetrachloroethane		0.0084	0.035	
127-18-4	Tetrachloroethylene		0.010	0.035	
109-99-9	Tetrahydrofuran		0.015	0.035	
108-88-3	Toluene	0.70	0.011	0.035	
120-82-1	1,2,4-Trichlorobenzene		0.013	0.035	
71-55-6	1,1,1-Trichloroethane		0.0063	0.035	
79-00-5	1,1,2-Trichloroethane		0.011	0.035	
79-01-6	Trichloroethylene		0.010	0.035	
75-69-4	Trichlorofluoromethane (Freon 11)	0.23	0.012	0.14	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1		0.0098	0.14	
95-63-6	1,2,4-Trimethylbenzene	0.088	0.0086	0.035	
108-67-8	1,3,5-Trimethylbenzene		0.0070	0.035	
108-05-4	Vinyl Acetate		0.018	0.70	
75-01-4	Vinyl Chloride		0.015	0.035	

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1 - FORM I
ANALYSIS DATA SHEET

OA-0417

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0096

Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.

Matrix: Ambient Air Laboratory ID: 17E0096-02 File ID: F050715.D

Sampled: 04/27/17 00:00 Prepared: 05/07/17 14:33 Analyzed: 05/07/17 23:58

Solids: Preparation: TO-15 Prep Dilution: 0.702

Initial/Final: 400 mL / 400 mL

Batch: B176681 Sequence: S014082 Calibration: 1700016 Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
1330-20-7P/M	m&p-Xylene	0.70	0.018	0.070	
95-47-6	o-Xylene	0.20	0.010	0.035	

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1 - FORM I
ANALYSIS DATA SHEET

DUP-0417

Laboratory: Con-Test Analytical Laboratory Work Order: 17E0096
Client: EA Engineering, Science & Tech. - Project: 1490709 - Metal Etching Co. Inc.
Matrix: Air Laboratory ID: 17E0096-03 File ID: F050717.D
Sampled: 04/27/17 00:00 Prepared: 05/07/17 14:33 Analyzed: 05/08/17 01:33
Solids: Preparation: TO-15 Prep Dilution: 0.702
Initial/Final: 400 mL / 400 mL
Batch: B176681 Sequence: S014082 Calibration: 1700016 Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
67-64-1	Acetone	12	0.49	1.4	
71-43-2	Benzene	0.23	0.018	0.035	
100-44-7	Benzyl chloride		0.0068	0.035	
75-27-4	Bromodichloromethane		0.0076	0.035	
75-25-2	Bromoform		0.0067	0.035	
74-83-9	Bromomethane		0.024	0.035	
106-99-0	1,3-Butadiene	0.12	0.018	0.035	
78-93-3	2-Butanone (MEK)	1.6	0.026	1.4	
75-15-0	Carbon Disulfide		0.012	0.35	
56-23-5	Carbon Tetrachloride	0.062	0.0085	0.035	
108-90-7	Chlorobenzene		0.012	0.035	
75-00-3	Chloroethane	0.051	0.013	0.035	
67-66-3	Chloroform	0.067	0.0082	0.035	
74-87-3	Chloromethane	0.91	0.015	0.070	
110-82-7	Cyclohexane	0.15	0.020	0.035	
124-48-1	Dibromochloromethane		0.0093	0.035	
106-93-4	1,2-Dibromoethane (EDB)		0.0079	0.035	
95-50-1	1,2-Dichlorobenzene		0.0093	0.035	
541-73-1	1,3-Dichlorobenzene		0.0078	0.035	
106-46-7	1,4-Dichlorobenzene		0.0088	0.035	
75-71-8	Dichlorodifluoromethane (Freon 12)	0.17	0.015	0.035	
75-34-3	1,1-Dichloroethane		0.0099	0.035	
107-06-2	1,2-Dichloroethane		0.0098	0.035	
75-35-4	1,1-Dichloroethylene		0.0086	0.035	
156-59-2	cis-1,2-Dichloroethylene		0.013	0.035	
156-60-5	trans-1,2-Dichloroethylene		0.0093	0.035	
78-87-5	1,2-Dichloropropane		0.012	0.035	
10061-01-5	cis-1,3-Dichloropropene		0.0093	0.035	
10061-02-6	trans-1,3-Dichloropropene		0.0094	0.035	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon		0.0084	0.035	

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1 - FORM I
ANALYSIS DATA SHEET

DUP-0417

Laboratory: Con-Test Analytical Laboratory   Work Order: 17E0096
Client: EA Engineering, Science & Tech. -   Project: 1490709 - Metal Etching Co. Inc.
Matrix: Air   Laboratory ID: 17E0096-03   File ID: F050717.D
Sampled: 04/27/17 00:00   Prepared: 05/07/17 14:33   Analyzed: 05/08/17 01:33
Solids: Preparation: TO-15 Prep   Dilution: 0.702
Initial/Final: 400 mL / 400 mL
Batch: B176681   Sequence: S014082   Calibration: 1700016   Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
123-91-1	1,4-Dioxane		0.23	0.35	
141-78-6	Ethyl Acetate	0.70	0.026	0.035	
100-41-4	Ethylbenzene	0.15	0.0097	0.035	
622-96-8	4-Ethyltoluene	0.074	0.0079	0.035	
142-82-5	Heptane	0.22	0.011	0.035	
87-68-3	Hexachlorobutadiene		0.013	0.035	
110-54-3	Hexane	2.5	0.062	1.4	
591-78-6	2-Hexanone (MBK)	0.053	0.0090	0.035	
67-63-0	Isopropanol	7.7 J	0.043	1.4	
1634-04-4	Methyl tert-Butyl Ether (MTBE)		0.011	0.035	
75-09-2	Methylene Chloride		0.043	0.35	
108-10-1	4-Methyl-2-pentanone (MIBK)		0.0084	0.035	
91-20-3	Naphthalene		0.019	0.035	
115-07-1	Propene		0.11	1.4	
100-42-5	Styrene	0.18	0.0068	0.035	
79-34-5	1,1,2,2-Tetrachloroethane		0.0084	0.035	
127-18-4	Tetrachloroethylene	0.074	0.010	0.035	
109-99-9	Tetrahydrofuran		0.015	0.035	
108-88-3	Toluene	3.7	0.011	0.035	
120-82-1	1,2,4-Trichlorobenzene		0.013	0.035	
71-55-6	1,1,1-Trichloroethane		0.0063	0.035	
79-00-5	1,1,2-Trichloroethane		0.011	0.035	
79-01-6	Trichloroethylene		0.010	0.035	
75-69-4	Trichlorofluoromethane (Freon 11)	0.23	0.012	0.14	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1		0.0098	0.14	
95-63-6	1,2,4-Trimethylbenzene	0.17	0.0086	0.035	
108-67-8	1,3,5-Trimethylbenzene	0.055	0.0070	0.035	
108-05-4	Vinyl Acetate		0.018	0.70	
75-01-4	Vinyl Chloride		0.015	0.035	
1330-20-7P/M	m&p-Xylene	0.59	0.018	0.070	

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1 - FORM I
ANALYSIS DATA SHEET

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DUP-0417

Laboratory:	Con-Test Analytical Laboratory			Work Order:	17E0096
Client:	EA Engineering, Science & Tech. -			Project:	1490709 - Metal Etching Co. Inc.
Matrix:	Air	Laboratory ID:	17E0096-03	File ID:	F050717.D
Sampled:	04/27/17 00:00	Prepared:	05/07/17 14:33	Analyzed:	05/08/17 01:33
Solids:		Preparation:	TO-15 Prep	Dilution:	0.702
Initial/Final:	400 mL / 400 mL				

Batch: B176681 Sequence: S014082 Calibration: 1700016 Instrument: SYSF

CAS NO.	COMPOUND	CONC. (ppbv)	MDL	RL	Q
95-47-6	o-Xylene	0.23	0.010	0.035	

MW 9/20/17

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ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
METAL ETCHING, FREEPORT, LONG ISLAND, NEW YORK

Client:	EA Engineering, Science & Technology, Inc., Syracuse, New York
SDG:	SC34122
Laboratory:	Eurofins Spectrum Analytical, Agawam, Massachusetts
Site:	Metal Etching, Freeport, Long Island, New York
Date:	October 16, 2017

VOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-04-0517	SC34122-01	Water
2	DUP-1-0517	SC34122-02	Water
3	MW-10S-0517	SC34122-03	Water
4	MW-10M-0517	SC34122-04	Water
5	MW-10D-0517	SC34122-05	Water
6	MW-06-0517	SC34122-06	Water
7	MW-9S-0517	SC34122-07	Water
8	MW-9D-0517	SC34122-08	Water
9	MW-11D-0517	SC34122-09	Water
10	MW-11S-0517	SC34122-10	Water
10MS	MW-11S-0517MS	SC34122-10MS	Water
10MSD	MW-11S-0517MSD	SC34122-10MSD	Water
11	MW-05R-0517	SC34122-11	Water
12	MW-8SR-0517	SC34122-12	Water
13	MW-8DR-0517	SC34122-13	Water
14	RB-1	SC34122-14	Water
15	RB-2	SC34122-15	Water
16	TRIP BLANK	SC34122-16	Water

A Data Usability Summary Review was performed on the analytical data for thirteen water samples, two aqueous rinsate blank samples, and one aqueous trip blank sample collected on April 26-28, 2017 by EA Engineering at the Metal Etching site in Freeport, Long Island, New York. The samples were analyzed under Environmental Protection Agency (USEPA) *"Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions"* and the *Standard Methods for the Examination of Water and Wastewater.*

Specific method references are as follows:

Analysis	*Method References*
VOCs	USEPA SW-846 Method 8260C

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods and the USEPA Region II Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-33A, Revision 0, July 2015: Low/Medium Volatile Data Validation;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Data Usability Assessment

There was no rejection of data.

Overall the data is acceptable for the intended purposes as qualified for the following deficiencies.

- Four compounds were qualified as estimated in all samples due to high continuing calibration %D values.
- Several compounds were qualified as nondetected in several samples due to method blank contamination.
- Acetone was qualified as nondetected in eleven samples due to rinsate blank contamination.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

Volatile Organic Compounds (VOC)

Holding Times

- All samples were analyzed within 14 days for preserved water samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and/or correlation coefficients and mean RRF criteria were met.

Continuing Calibration

- The following table presents compounds that exceeded percent deviation (%D) criteria and/or RRF values <0.05 (0.01 for poor performers) in the continuing calibration (CCAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %D may indicate a potential high or low bias. All results for these compounds in affected samples are considered estimated and qualified (J/UJ).

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
5/8/17	2,2-Dichloropropane	79.4%	J/UJ	All Samples
	Trans-1,3-Dichloropropene	26.6%		
	Ethyl tert-Butyl Ether	22.9%		
	Trans-1,4-Dichloro-2-Butene	52.6%		

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
1707574-BLK1	Naphthalene	0.98	U	11
	n-Propylbenzene	0.44	U	6-7, 10, 11
	1,2,4-Trimethylbenzene	0.98	U	7, 11
	1,3,5-Trimethylbenzene	0.51	U	10

Field Blank

- Field QC results are summarized below.

VOCs				
Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
RB-1	Acetone	6.14	U	1-3, 5, 7-13
RB-2	Acetone	5.39	None	See RB-1
TRIP BLANK	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The following table presents MS/MSD samples that exhibited percent recoveries (%R) outside the QC limits and/or relative percent differences (RPD) above QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
10	2,2-Dichloropropane	33%/34%/OK	None - See CCAL

Laboratory Control Samples

- The following table presents LCS samples that exhibited percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

LCS ID	Compound	%R	Qualifier	Affected Samples
1707574-BS1	2,2-Dichloropropane	179%	None	All Associated ND
	Trans-1,4-Dichloro-2-Butene	153%		

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample 13 was analyzed at a 5X dilution due to high concentrations of target compounds. Reporting limits were adjusted accordingly. No action was required.

Tentatively Identified Compounds (TICs)

- TICs were not reported.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

VOC				
Compound	MW-04-0517 ug/L	DUP-1-0517 ug/L	RPD	Qualifier
cis-1,2-Dichloroethene	0.64	0.70	9%	None
Tetrachloroethene	1.28	1.02	23%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 10/17/17

Nancy Weaver
Senior Chemist

Data Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.

U = The analyte was analyzed for, but was not detected above the sample reporting limit.

R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-04-0517

1

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-01
File ID: 3412201.D
Sampled: 04/27/17 15:53
Prepared: 05/05/17 10:28
Analyzed: 05/08/17 23:06
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	2.06 u	0.80	10.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.64	0.33	1.00	J
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

NW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-04-0517

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-01	File ID:	3412201.D		
Sampled:	04/27/17 15:53	Prepared:	05/05/17 10:28	Analyzed:	05/08/17 23:06		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 uJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	1.28	0.57	1.00	
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 uJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 uJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

nw 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

DUP-1-0517

2

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-02
File ID: 3412202.D
Sampled: 04/27/17 00:00
Prepared: 05/05/17 10:28
Analyzed: 05/08/17 23:36
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	1.51 u	0.80	10.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.70	0.33	1.00	J
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

DUP-1-0517

2

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-02
File ID: 3412202.D
Sampled: 04/27/17 00:00
Prepared: 05/05/17 10:28
Analyzed: 05/08/17 23:36
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 uJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	1.02	0.57	1.00	
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 uJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 uJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-10S-0517

3

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-03
File ID: 3412203.D
Sampled: 04/26/17 17:01
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 00:06
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	12.7 u	0.80	15.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 uJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-10S-0517

3

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-03
File ID: 3412203.D
Sampled: 04/26/17 17:01
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 00:06
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	1.26	0.24	1.00	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-10M-0517

4

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-04
File ID: 3412204.D
Sampled: 04/27/17 14:32
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 00:36
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	0.80	0.80	10.0	U
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.43	0.33	1.00	J
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-10M-0517

4

Laboratory: Eurofins Spectrum Analytical, Inc. - MA

SDG: SC34122

Client: EA Engineering, Science, & Technology - Syracuse

Project: Metal Etching - Freeport, NY

Project Number: 1490709

Received: 04/29/17 09:30

Matrix: Ground Water

Laboratory ID: SC34122-04

File ID: 3412204.D

Sampled: 04/27/17 14:32

Prepared: 05/05/17 10:28

Analyzed: 05/09/17 00:36

% Solids:

Preparation: SW846 5030 Water MS

Initial/Final: 5 ml / 5 ml

Batch: 1707574

Sequence: S704321

Calibration: 1704041

Instrument: HPV1

Reported to: MDL

Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.67	0.24	1.00	J
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.70	0.57	1.00	J
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

AW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-10D-0517

5

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-05
File ID: 3412205.D
Sampled: 04/27/17 16:34
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 01:06
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	4.94 u	0.80	10.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 u J	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

AW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-10D-0517

5

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-05
File ID: 3412205.D
Sampled: 04/27/17 16:34
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 01:06
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 uJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	1.89	0.57	1.00	
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 uJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 uJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-06-0517

6

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-06
File ID: 3412206.D
Sampled: 04/26/17 15:39
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 01:37
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	0.80	0.80	10.0	U
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.34	0.28	1.00	J
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.81	0.41	1.00	J
135-98-8	sec-Butylbenzene	0.87	0.33	1.00	J
98-06-6	tert-Butylbenzene	1.98	0.32	1.00	
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

nw 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-06-0517

6

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-06
File ID: 3412206.D
Sampled: 04/26/17 15:39
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 01:37
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	2.32	0.36	1.00	
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.84	0.24	1.00	J
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.51	0.51	1.00	U
103-65-1	n-Propylbenzene	0.78 U	0.34	1.00	~~J~~
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.87	0.30	1.00	J
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	1.88	0.38	2.00	J
95-47-6	o-Xylene	0.47	0.28	1.00	J
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-9S-0517

7

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-07			File ID:	3412207.D
Sampled:	04/27/17 18:30	Prepared:	05/05/17 10:28			Analyzed:	05/09/17 02:07
% Solids:		Preparation:	SW846 5030 Water MS			Initial/Final:	5 ml / 5 ml
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	16.7 u	0.80	20.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.34	0.34	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.53	0.33	1.00	J
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 uJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-9S-0517

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-07	File ID:	3412207.D		
Sampled:	04/27/17 18:30	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 02:07		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.40	0.33	1.00	J
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.36 U	0.34	1.00	~~J~~
100-42-5	Styrene	1.46	0.40	1.00	
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.45 U	0.36	1.00	~~J~~
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	1.35	0.47	1.00	
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.33	0.33	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-9D-0517

8

Laboratory: Eurofins Spectrum Analytical, Inc. - MA SDG: SC34122

Client: EA Engineering, Science, & Technology - Syracuse Project: Metal Etching - Freeport, NY

Project Number: 1490709 Received: 04/29/17 09:30

Matrix: Ground Water Laboratory ID: SC34122-08 File ID: 3412208.D

Sampled: 04/27/17 18:23 Prepared: 05/05/17 10:28 Analyzed: 05/09/17 02:37

% Solids: Preparation: SW846 5030 Water MS Initial/Final: 5 ml / 5 ml

Batch: 1707574 Sequence: S704321 Calibration: 1704041 Instrument: HPV1

Reported to: MDL Dilution: 5

CAS NO.	COMPOUND	RESULT (μg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	2.66	2.66	5.00	U
67-64-1	Acetone	59.4 u	4.02	60.0	~~J~~
107-13-1	Acrylonitrile	2.33	2.33	2.50	U
71-43-2	Benzene	1.42	1.42	5.00	U
108-86-1	Bromobenzene	1.66	1.66	5.00	U
74-97-5	Bromochloromethane	1.69	1.69	5.00	U
75-27-4	Bromodichloromethane	2.08	2.08	2.50	U
75-25-2	Bromoform	2.12	2.12	5.00	U
74-83-9	Bromomethane	4.48	4.48	10.0	U
78-93-3	2-Butanone (MEK)	5.35	5.35	10.0	U
104-51-8	n-Butylbenzene	2.06	2.06	5.00	U
135-98-8	sec-Butylbenzene	1.63	1.63	5.00	U
98-06-6	tert-Butylbenzene	1.58	1.58	5.00	U
75-15-0	Carbon disulfide	2.06	2.06	10.0	U
56-23-5	Carbon tetrachloride	2.18	2.18	5.00	U
108-90-7	Chlorobenzene	1.24	1.24	5.00	U
75-00-3	Chloroethane	2.94	2.94	10.0	U
67-66-3	Chloroform	1.63	1.63	5.00	U
74-87-3	Chloromethane	5.90	1.84	10.0	J
95-49-8	2-Chlorotoluene	1.58	1.58	5.00	U
106-43-4	4-Chlorotoluene	1.58	1.58	5.00	U
96-12-8	1,2-Dibromo-3-chloropropane	4.32	4.32	10.0	U
124-48-1	Dibromochloromethane	1.58	1.58	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1.01	1.01	2.50	U
74-95-3	Dibromomethane	1.54	1.54	5.00	U
95-50-1	1,2-Dichlorobenzene	1.38	1.38	5.00	U
541-73-1	1,3-Dichlorobenzene	1.57	1.57	5.00	U
106-46-7	1,4-Dichlorobenzene	1.36	1.36	5.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	2.92	2.92	10.0	U
75-34-3	1,1-Dichloroethane	1.62	1.62	5.00	U
107-06-2	1,2-Dichloroethane	1.38	1.38	5.00	U
75-35-4	1,1-Dichloroethene	3.46	3.46	5.00	U
156-59-2	cis-1,2-Dichloroethene	241	1.64	5.00	
156-60-5	trans-1,2-Dichloroethene	3.30	1.88	5.00	J
78-87-5	1,2-Dichloropropane	1.46	1.46	5.00	U
142-28-9	1,3-Dichloropropane	1.07	1.07	5.00	U
594-20-7	2,2-Dichloropropane	2.09 u J	2.09	5.00	~~U~~
563-58-6	1,1-Dichloropropene	2.89	2.89	5.00	U
10061-01-5	cis-1,3-Dichloropropene	1.80	1.80	2.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-9D-0517

8

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-08
File ID: 3412208.D
Sampled: 04/27/17 18:23
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 02:37
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 5

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	1.74 uJ	1.74	2.50	~~U~~
100-41-4	Ethylbenzene	1.64	1.64	5.00	U
87-68-3	Hexachlorobutadiene	2.35	2.35	2.50	U
591-78-6	2-Hexanone (MBK)	2.64	2.64	10.0	U
98-82-8	Isopropylbenzene	1.80	1.80	5.00	U
99-87-6	4-Isopropyltoluene	1.40	1.40	5.00	U
1634-04-4	Methyl tert-butyl ether	1.18	1.18	5.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	2.58	2.58	10.0	U
75-09-2	Methylene chloride	3.30	3.30	10.0	U
91-20-3	Naphthalene	1.76	1.76	5.00	U
103-65-1	n-Propylbenzene	1.72	1.72	5.00	U
100-42-5	Styrene	2.02	2.02	5.00	U
630-20-6	1,1,1,2-Tetrachloroethane	1.89	1.89	5.00	U
79-34-5	1,1,2,2-Tetrachloroethane	1.65	1.65	2.50	U
127-18-4	Tetrachloroethene	232	2.85	5.00	
108-88-3	Toluene	1.50	1.50	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1.88	1.88	5.00	U
120-82-1	1,2,4-Trichlorobenzene	1.89	1.89	5.00	U
71-55-6	1,1,1-Trichloroethane	2.54	2.54	5.00	U
108-70-3	1,3,5-Trichlorobenzene	1.48	1.48	5.00	U
79-00-5	1,1,2-Trichloroethane	1.65	1.65	5.00	U
79-01-6	Trichloroethene	118	2.48	5.00	
75-69-4	Trichlorofluoromethane (Freon 11)	2.44	2.44	5.00	U
96-18-4	1,2,3-Trichloropropane	1.46	1.46	5.00	U
95-63-6	1,2,4-Trimethylbenzene	1.78	1.78	5.00	U
108-67-8	1,3,5-Trimethylbenzene	2.16	2.16	5.00	U
75-01-4	Vinyl chloride	7.20	2.36	5.00	
179601-23-1	m,p-Xylene	1.90	1.90	10.0	U
95-47-6	o-Xylene	1.42	1.42	5.00	U
109-99-9	Tetrahydrofuran	5.30	5.30	10.0	U
60-29-7	Ethyl ether	1.87	1.87	5.00	U
994-05-8	Tert-amyl methyl ether	2.46	2.46	5.00	U
637-92-3	Ethyl tert-butyl ether	1.66 uJ	1.66	5.00	~~U~~
108-20-3	Di-isopropyl ether	1.43	1.43	5.00	U
75-65-0	Tert-Butanol / butyl alcohol	46.6	29.5	50.0	J
110-57-6	trans-1,4-Dichloro-2-butene	4.10 uJ	4.10	25.0	~~U~~
123-91-1	1,4-Dioxane	57.0	57.0	100	U
64-17-5	Ethanol	342	154	1000	J

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-11D-0517

9

Laboratory: Eurofins Spectrum Analytical, Inc. - MA

SDG: SC34122

Client: EA Engineering, Science, & Technology - Syracuse

Project: Metal Etching - Freeport, NY

Project Number: 1490709

Received: 04/29/17 09:30

Matrix: Ground Water

Laboratory ID: SC34122-09

File ID: 3412209.D

Sampled: 04/28/17 03:56

Prepared: 05/05/17 10:28

Analyzed: 05/09/17 03:07

% Solids:

Preparation: SW846 5030 Water MS

Initial/Final: 5 ml / 5 ml

Batch: 1707574

Sequence: S704321

Calibration: 1704041

Instrument: HPV1

Reported to: MDL

Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	5.33 u	0.80	10.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.98	0.33	1.00	J
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 uJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-11D-0517

9

Laboratory: Eurofins Spectrum Analytical, Inc. - MA　SDG: SC34122

Client: EA Engineering, Science, & Technology - Syracuse　Project: Metal Etching - Freeport, NY

Project Number: 1490709　Received: 04/29/17 09:30

Matrix: Ground Water　Laboratory ID: SC34122-09　File ID: 3412209.D

Sampled: 04/28/17 03:56　Prepared: 05/05/17 10:28　Analyzed: 05/09/17 03:07

% Solids:　Preparation: SW846 5030 Water MS　Initial/Final: 5 ml / 5 ml

Batch: 1707574　Sequence: S704321　Calibration: 1704041　Instrument: HPV1

Reported to: MDL　Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	1.32	0.57	1.00	
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.80	0.50	1.00	J
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-11S-0517

10

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-10
File ID: 3412210.D
Sampled: 04/28/17 05:19
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 03:37
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	3.85 u	0.80	10.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	1.08	0.41	1.00	
135-98-8	sec-Butylbenzene	1.04	0.33	1.00	
98-06-6	tert-Butylbenzene	0.54	0.32	1.00	J
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

NW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-11S-0517

10

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-10
File ID: 3412210.D
Sampled: 04/28/17 05:19
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 03:37
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.80	0.36	1.00	J
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.39 U	0.34	1.00	~~J~~
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.57 U	0.43	1.00	~~J~~
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

NW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-05R-0517

11

Laboratory: Eurofins Spectrum Analytical, Inc. - MA SDG: SC34122

Client: EA Engineering, Science, & Technology - Syracuse Project: Metal Etching - Freeport, NY

Project Number: 1490709 Received: 04/29/17 09:30

Matrix: Ground Water Laboratory ID: SC34122-11 File ID: 3412211.D

Sampled: 04/28/17 05:59 Prepared: 05/05/17 10:28 Analyzed: 05/09/17 04:07

% Solids: Preparation: SW846 5030 Water MS Initial/Final: 5 ml / 5 ml

Batch: 1707574 Sequence: S704321 Calibration: 1704041 Instrument: HPV1

Reported to: MDL Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	39.4 u	0.80	40.0	~~J~~
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.38	0.28	1.00	J
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	3.89	1.07	2.00	
104-51-8	n-Butylbenzene	0.61	0.41	1.00	J
135-98-8	sec-Butylbenzene	0.55	0.33	1.00	J
98-06-6	tert-Butylbenzene	0.61	0.32	1.00	J
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.41	0.37	2.00	J
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 uJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-05R-0517

11

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-11	File ID:	3412211.D		
Sampled:	04/28/17 05:59	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 04:07		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 uJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.82	0.36	1.00	J
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	1.28	0.24	1.00	
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.61 u	0.35	1.00	~~J~~
103-65-1	n-Propylbenzene	0.72 u	0.34	1.00	~~J~~
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1.43 u	0.36	1.00	
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.53	0.38	2.00	J
95-47-6	o-Xylene	0.61	0.28	1.00	J
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 uJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 uJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-8SR-0517

12

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-12
File ID: 3412212.D
Sampled: 04/28/17 15:16
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 04:38
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	2.28 u	0.80	10.0	✓
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	1.46	0.33	1.00	
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 uJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

NW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-8SR-0517

12

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-12
File ID: 3412212.D
Sampled: 04/28/17 15:16
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 04:38
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.56	0.24	1.00	J
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.92	0.50	1.00	J
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

NW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

MW-8DR-0517

13

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-13	File ID:	3412213.D		
Sampled:	04/28/17 15:15	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 05:08		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	5				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	2.66	2.66	5.00	U
67-64-1	Acetone	82.0 u	4.02	100	~~J~~
107-13-1	Acrylonitrile	2.33	2.33	2.50	U
71-43-2	Benzene	1.42	1.42	5.00	U
108-86-1	Bromobenzene	1.66	1.66	5.00	U
74-97-5	Bromochloromethane	1.69	1.69	5.00	U
75-27-4	Bromodichloromethane	2.08	2.08	2.50	U
75-25-2	Bromoform	2.12	2.12	5.00	U
74-83-9	Bromomethane	4.48	4.48	10.0	U
78-93-3	2-Butanone (MEK)	5.35	5.35	10.0	U
104-51-8	n-Butylbenzene	2.06	2.06	5.00	U
135-98-8	sec-Butylbenzene	1.63	1.63	5.00	U
98-06-6	tert-Butylbenzene	1.58	1.58	5.00	U
75-15-0	Carbon disulfide	2.06	2.06	10.0	U
56-23-5	Carbon tetrachloride	2.18	2.18	5.00	U
108-90-7	Chlorobenzene	1.24	1.24	5.00	U
75-00-3	Chloroethane	2.94	2.94	10.0	U
67-66-3	Chloroform	1.63	1.63	5.00	U
74-87-3	Chloromethane	7.95	1.84	10.0	J
95-49-8	2-Chlorotoluene	1.58	1.58	5.00	U
106-43-4	4-Chlorotoluene	1.58	1.58	5.00	U
96-12-8	1,2-Dibromo-3-chloropropane	4.32	4.32	10.0	U
124-48-1	Dibromochloromethane	1.58	1.58	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1.01	1.01	2.50	U
74-95-3	Dibromomethane	1.54	1.54	5.00	U
95-50-1	1,2-Dichlorobenzene	1.38	1.38	5.00	U
541-73-1	1,3-Dichlorobenzene	1.57	1.57	5.00	U
106-46-7	1,4-Dichlorobenzene	1.36	1.36	5.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	2.92	2.92	10.0	U
75-34-3	1,1-Dichloroethane	1.62	1.62	5.00	U
107-06-2	1,2-Dichloroethane	1.38	1.38	5.00	U
75-35-4	1,1-Dichloroethene	3.46	3.46	5.00	U
156-59-2	cis-1,2-Dichloroethene	15.7	1.64	5.00	
156-60-5	trans-1,2-Dichloroethene	1.88	1.88	5.00	U
78-87-5	1,2-Dichloropropane	1.46	1.46	5.00	U
142-28-9	1,3-Dichloropropane	1.07	1.07	5.00	U
594-20-7	2,2-Dichloropropane	2.09 uJ	2.09	5.00	~~U~~
563-58-6	1,1-Dichloropropene	2.89	2.89	5.00	U
10061-01-5	cis-1,3-Dichloropropene	1.80	1.80	2.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

MW-8DR-0517

13

Laboratory: Eurofins Spectrum Analytical, Inc. - MA   SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse   Project: Metal Etching - Freeport, NY
Project Number: 1490709   Received: 04/29/17 09:30
Matrix: Ground Water   Laboratory ID: SC34122-13   File ID: 3412213.D
Sampled: 04/28/17 15:15   Prepared: 05/05/17 10:28   Analyzed: 05/09/17 05:08
% Solids: Preparation: SW846 5030 Water MS   Initial/Final: 5 ml / 5 ml
Batch: 1707574   Sequence: S704321   Calibration: 1704041   Instrument: HPV1
Reported to: MDL   Dilution: 5

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	1.74 UJ	1.74	2.50	~~U~~
100-41-4	Ethylbenzene	1.64	1.64	5.00	U
87-68-3	Hexachlorobutadiene	2.35	2.35	2.50	U
591-78-6	2-Hexanone (MBK)	2.64	2.64	10.0	U
98-82-8	Isopropylbenzene	1.80	1.80	5.00	U
99-87-6	4-Isopropyltoluene	1.40	1.40	5.00	U
1634-04-4	Methyl tert-butyl ether	1.18	1.18	5.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	2.58	2.58	10.0	U
75-09-2	Methylene chloride	3.30	3.30	10.0	U
91-20-3	Naphthalene	1.76	1.76	5.00	U
103-65-1	n-Propylbenzene	1.72	1.72	5.00	U
100-42-5	Styrene	2.02	2.02	5.00	U
630-20-6	1,1,1,2-Tetrachloroethane	1.89	1.89	5.00	U
79-34-5	1,1,2,2-Tetrachloroethane	1.65	1.65	2.50	U
127-18-4	Tetrachloroethene	142	2.85	5.00	
108-88-3	Toluene	1.50	1.50	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1.88	1.88	5.00	U
120-82-1	1,2,4-Trichlorobenzene	1.89	1.89	5.00	U
71-55-6	1,1,1-Trichloroethane	2.54	2.54	5.00	U
108-70-3	1,3,5-Trichlorobenzene	1.48	1.48	5.00	U
79-00-5	1,1,2-Trichloroethane	1.65	1.65	5.00	U
79-01-6	Trichloroethene	10.8	2.48	5.00	
75-69-4	Trichlorofluoromethane (Freon 11)	2.44	2.44	5.00	U
96-18-4	1,2,3-Trichloropropane	1.46	1.46	5.00	U
95-63-6	1,2,4-Trimethylbenzene	1.78	1.78	5.00	U
108-67-8	1,3,5-Trimethylbenzene	2.16	2.16	5.00	U
75-01-4	Vinyl chloride	3.70	2.36	5.00	J
179601-23-1	m,p-Xylene	1.90	1.90	10.0	U
95-47-6	o-Xylene	1.42	1.42	5.00	U
109-99-9	Tetrahydrofuran	5.30	5.30	10.0	U
60-29-7	Ethyl ether	1.87	1.87	5.00	U
994-05-8	Tert-amyl methyl ether	2.46	2.46	5.00	U
637-92-3	Ethyl tert-butyl ether	1.66 UJ	1.66	5.00	~~U~~
108-20-3	Di-isopropyl ether	1.43	1.43	5.00	U
75-65-0	Tert-Butanol / butyl alcohol	29.5	29.5	50.0	U
110-57-6	trans-1,4-Dichloro-2-butene	4.10 UJ	4.10	25.0	~~U~~
123-91-1	1,4-Dioxane	57.0	57.0	100	U
64-17-5	Ethanol	571	154	1000	J

mw 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

RB-1

14

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-14
File ID: 3412214.D
Sampled: 04/28/17 13:00
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 05:38
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	6.14	0.80	10.0	J
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

NW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

RB-1

14

Laboratory: Eurofins Spectrum Analytical, Inc. - MA
SDG: SC34122
Client: EA Engineering, Science, & Technology - Syracuse
Project: Metal Etching - Freeport, NY
Project Number: 1490709
Received: 04/29/17 09:30
Matrix: Ground Water
Laboratory ID: SC34122-14
File ID: 3412214.D
Sampled: 04/28/17 13:00
Prepared: 05/05/17 10:28
Analyzed: 05/09/17 05:38
% Solids:
Preparation: SW846 5030 Water MS
Initial/Final: 5 ml / 5 ml
Batch: 1707574
Sequence: S704321
Calibration: 1704041
Instrument: HPV1
Reported to: MDL
Dilution: 1

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 uJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 uJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 uJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

RB-2

15

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-15	File ID:	3412215.D		
Sampled:	04/28/17 12:00	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 06:08		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	5.39	0.80	10.0	J
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET
SW846 8260C

RB-2

15

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Ground Water	Laboratory ID:	SC34122-15	File ID:	3412215.D		
Sampled:	04/28/17 12:00	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 06:08		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 uJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 uJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 uJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

Trip Blank

16

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Aqueous	Laboratory ID:	SC34122-16	File ID:	3412216.D		
Sampled:	04/28/17 00:00	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 06:39		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	0.53	1.00	U
67-64-1	Acetone	0.80	0.80	10.0	U
107-13-1	Acrylonitrile	0.47	0.47	0.50	U
71-43-2	Benzene	0.28	0.28	1.00	U
108-86-1	Bromobenzene	0.33	0.33	1.00	U
74-97-5	Bromochloromethane	0.34	0.34	1.00	U
75-27-4	Bromodichloromethane	0.42	0.42	0.50	U
75-25-2	Bromoform	0.42	0.42	1.00	U
74-83-9	Bromomethane	0.90	0.90	2.00	U
78-93-3	2-Butanone (MEK)	1.07	1.07	2.00	U
104-51-8	n-Butylbenzene	0.41	0.41	1.00	U
135-98-8	sec-Butylbenzene	0.33	0.33	1.00	U
98-06-6	tert-Butylbenzene	0.32	0.32	1.00	U
75-15-0	Carbon disulfide	0.41	0.41	2.00	U
56-23-5	Carbon tetrachloride	0.44	0.44	1.00	U
108-90-7	Chlorobenzene	0.25	0.25	1.00	U
75-00-3	Chloroethane	0.59	0.59	2.00	U
67-66-3	Chloroform	0.33	0.33	1.00	U
74-87-3	Chloromethane	0.37	0.37	2.00	U
95-49-8	2-Chlorotoluene	0.32	0.32	1.00	U
106-43-4	4-Chlorotoluene	0.32	0.32	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	0.86	2.00	U
124-48-1	Dibromochloromethane	0.32	0.32	0.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.50	U
74-95-3	Dibromomethane	0.31	0.31	1.00	U
95-50-1	1,2-Dichlorobenzene	0.28	0.28	1.00	U
541-73-1	1,3-Dichlorobenzene	0.31	0.31	1.00	U
106-46-7	1,4-Dichlorobenzene	0.27	0.27	1.00	U
75-71-8	Dichlorodifluoromethane (Freon12)	0.58	0.58	2.00	U
75-34-3	1,1-Dichloroethane	0.32	0.32	1.00	U
107-06-2	1,2-Dichloroethane	0.28	0.28	1.00	U
75-35-4	1,1-Dichloroethene	0.69	0.69	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.33	0.33	1.00	U
156-60-5	trans-1,2-Dichloroethene	0.38	0.38	1.00	U
78-87-5	1,2-Dichloropropane	0.29	0.29	1.00	U
142-28-9	1,3-Dichloropropane	0.21	0.21	1.00	U
594-20-7	2,2-Dichloropropane	0.42 UJ	0.42	1.00	~~U~~
563-58-6	1,1-Dichloropropene	0.58	0.58	1.00	U
10061-01-5	cis-1,3-Dichloropropene	0.36	0.36	0.50	U

MW 10/16/17

FORM I - ORGANIC ANALYSIS DATA SHEET

SW846 8260C

Trip Blank

14

Laboratory:	Eurofins Spectrum Analytical, Inc. - MA			SDG:	SC34122		
Client:	EA Engineering, Science, & Technology - Syracuse			Project:	Metal Etching - Freeport, NY		
Project Number:	1490709			Received:	04/29/17 09:30		
Matrix:	Aqueous	Laboratory ID:	SC34122-16	File ID:	3412216.D		
Sampled:	04/28/17 00:00	Prepared:	05/05/17 10:28	Analyzed:	05/09/17 06:39		
% Solids:		Preparation:	SW846 5030 Water MS	Initial/Final:	5 ml / 5 ml		
Batch:	1707574	Sequence:	S704321	Calibration:	1704041	Instrument:	HPV1
Reported to:	MDL	Dilution:	1				

CAS NO.	COMPOUND	RESULT (µg/l)	MDL	MRL	Q
10061-02-6	trans-1,3-Dichloropropene	0.35 UJ	0.35	0.50	~~U~~
100-41-4	Ethylbenzene	0.33	0.33	1.00	U
87-68-3	Hexachlorobutadiene	0.47	0.47	0.50	U
591-78-6	2-Hexanone (MBK)	0.53	0.53	2.00	U
98-82-8	Isopropylbenzene	0.36	0.36	1.00	U
99-87-6	4-Isopropyltoluene	0.28	0.28	1.00	U
1634-04-4	Methyl tert-butyl ether	0.24	0.24	1.00	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.52	0.52	2.00	U
75-09-2	Methylene chloride	0.66	0.66	2.00	U
91-20-3	Naphthalene	0.35	0.35	1.00	U
103-65-1	n-Propylbenzene	0.34	0.34	1.00	U
100-42-5	Styrene	0.40	0.40	1.00	U
630-20-6	1,1,1,2-Tetrachloroethane	0.38	0.38	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	0.33	0.33	0.50	U
127-18-4	Tetrachloroethene	0.57	0.57	1.00	U
108-88-3	Toluene	0.30	0.30	1.00	U
87-61-6	1,2,3-Trichlorobenzene	0.38	0.38	1.00	U
120-82-1	1,2,4-Trichlorobenzene	0.38	0.38	1.00	U
71-55-6	1,1,1-Trichloroethane	0.51	0.51	1.00	U
108-70-3	1,3,5-Trichlorobenzene	0.30	0.30	1.00	U
79-00-5	1,1,2-Trichloroethane	0.33	0.33	1.00	U
79-01-6	Trichloroethene	0.50	0.50	1.00	U
75-69-4	Trichlorofluoromethane (Freon 11)	0.49	0.49	1.00	U
96-18-4	1,2,3-Trichloropropane	0.29	0.29	1.00	U
95-63-6	1,2,4-Trimethylbenzene	0.36	0.36	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.43	0.43	1.00	U
75-01-4	Vinyl chloride	0.47	0.47	1.00	U
179601-23-1	m,p-Xylene	0.38	0.38	2.00	U
95-47-6	o-Xylene	0.28	0.28	1.00	U
109-99-9	Tetrahydrofuran	1.06	1.06	2.00	U
60-29-7	Ethyl ether	0.37	0.37	1.00	U
994-05-8	Tert-amyl methyl ether	0.49	0.49	1.00	U
637-92-3	Ethyl tert-butyl ether	0.33 UJ	0.33	1.00	~~U~~
108-20-3	Di-isopropyl ether	0.29	0.29	1.00	U
75-65-0	Tert-Butanol / butyl alcohol	5.90	5.90	10.0	U
110-57-6	trans-1,4-Dichloro-2-butene	0.82 UJ	0.82	5.00	~~U~~
123-91-1	1,4-Dioxane	11.4	11.4	20.0	U
64-17-5	Ethanol	30.9	30.9	200	U

nw 10/16/17

Appendix F

Air Sampling Forms

FIELD AIR SAMPLING FORM

EA Engineering and Its Affiliate EA Science & Technology

6712 Brooklawn Parkway, Suite 104

Syracuse, NY 13211

Project #:	**1490709**
Project Name:	**NYSDEC Metal Etching Site**
Location:	**Freeport, NY**
Project Manager:	**Megan Miller**

Sample Location Information:

Site ID Number: **130110**				Sampler(s):	**EC/KT**
PID Meter Used: (Model, Serial #)				Building I.D. No.:	**01 (Office)**

SUMMA Canister Record:

INDOOR AIR		OUTDOOR AIR		DUPLICATE SAMPLE			
Flow Regulator No.:	**3015**	Flow Regulator No.:	**3495**	Flow Regulator No.:	**3489**	Flow Regulator No.:	
Canister Serial No.:	**2023**	Canister Serial No.:	**2221**	Canister Serial No.:	**1071**	Canister Serial No.:	
Start Date/Time:	**4/26/17 / 1444**	Start Date/Time:	**4/26/17 / 1440**	Start Date/Time:	**4/26/17 / 1440**	Start Date/Time:	
Start Pressure: (inches Hg)	**-30**	Start Pressure: (inches Hg)	**-30**	Start Pressure: (inches Hg)	**-30**	Start Pressure: (inches Hg)	
Stop Date/Time:	**4/27/17 / 1443**	Stop Date/Time:	**4/27/17 / 1439**	Stop Date/Time:	**4/27/17 / 1439**	Stop Date/Time:	
Stop Pressure: (inches Hg)	**-6**	Stop Pressure: (inches Hg)	**-7.5**	Stop Pressure: (inches Hg)	**-10**	Stop Pressure: (inches Hg)	
Sample ID: **IA-0417**		Sample ID: **OA-0417**		Sample ID: DUP-0417		Sample ID:	

Other Sampling Information:

Story/Level	**Ground level**	Direction from Building	**WEST**	Direction from Building	**WEST**	Direction from Building	
Room	**office**	Distance from Building	**3 ft**	Distance from Building	**3 ft**	Distance from Building	
Indoor Air Temp (°F)	**68 deg**	Intake Height Above Ground Level (ft.)	**3 ft**	Intake Height Above Ground Level (ft.)	**3 ft**	Intake Height Above Ground Level (ft.)	
Barometric Pressure?	**no**	Intake Tubing Used?	**no**	Intake Tubing Used?	**no**	Intake Tubing Used?	
Intake Height Above Floor Level (ft.)	**4 ft**	Distance to nearest Roadway	**15 ft**	Distance to nearest Roadway	**15 ft**	Distance to nearest Roadway	
Noticeable Odor?	**no**	Noticeable Odor?	**no**	Noticeable Odor?	**no**	Noticeable Odor?	
PID Reading (ppb)	**0**	PID Reading (ppb)	**0**	PID Reading (ppb)	**0**	PID Reading (ppb)	
Duplicate Sample?		Duplicate Sample?	**no**	Duplicate Sample?	**yes**	Duplicate Sample?	

Comments:

Sampler Signature:

Appendix G

Institutional Controls/Engineering Controls Certifications

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Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form

Site Details

Box 1

Site No. **130110**

Site Name **Metal Etching Co., Inc.**

Site Address: 435 South Main Street Zip Code: 11520
City/Town: Freeport
County: Nassau
Site Acreage: 2.3

Reporting Period: November 12, 2016 to November 12, 2017

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

	YES	NO
5. To your knowledge is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

Date

SITE NO. 130110 **Box 3**

Description of Institutional Controls

Parcel / Owner / Institutional Control

62-44-24 BWM High & Dry Inc.

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
Monitoring Plan

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting t use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

A site management plan (SMP)has been developed and includes the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil cover's demarcation layer, pavement, or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in manner acceptable to the Department; (b) continued evaluation of the potential for vapor intrusion for buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitori of soil vapor and groundwater; (d) identification of any use restrictions on the site; and (e) provisions f the continued proper operation and maintenance of the components of the remedy.

SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No. 01)to include recorded ENs.

62-44-25 BWM High & Dry Inc.

Site Management Plan
Monitoring Plan

Ground Water Use Restriction
Landuse Restriction

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting t use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

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SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No. 01)to include recorded ENs.

62-45-144 Freeport Creek Associates

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
Monitoring Plan

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting th use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

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SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No. 01)to include recorded ENs.

62-45-145 Freeport Creek Associates

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
Monitoring Plan

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting th use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

A site management plan (SMP)has been developed and includes the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil cover's demarcation layer, pavement, or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in a manner acceptable to the Department; (b) continued evaluation of the potential for vapor intrusion for a buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitori of soil vapor and groundwater; (d) identification of any use restrictions on the site; and (e) provisions fo the continued proper operation and maintenance of the components of the remedy.

SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No. 01)to include recorded ENs.

62-45-155 Apache Realty Corporation

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
Monitoring Plan

Imposition of an institutional control in the form of an environmental notice requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting tl use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

A site management plan (SMP)has been developed and includes the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil cover's demarcation layer, pavement, or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in a manner acceptable to the Department; (b) continued evaluation of the potential for vapor intrusion for buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitori of soil vapor and groundwater; (d) identification of any use restrictions on the site; and (e) provisions f the continued proper operation and maintenance of the components of the remedy.

SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No. 01)to include recorded ENs.

62-45-157 Apache Realty Corporation

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
Monitoring Plan

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting tl use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

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SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No.

01)to include recorded ENs.

62-45-158 Freeport Creek Associates

Site Management Plan
Monitoring Plan
Ground Water Use Restriction
Landuse Restriction

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting t use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apach Realty Corp.)

Site management plan (SMP)has been developed which includes the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil cover's demarcation layer, pavement, or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in manner acceptable to the Department; (b) continued evaluation of the potential for vapor intrusion for buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitori of soil vapor and groundwater; (d) identification of any use restrictions on the site; and (e) provisions f the continued proper operation and maintenance of the components of the remedy.

SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No. 01)to include recorded ENs.

62-45-54 BWM High & Dry Inc.

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
Monitoring Plan

Imposition of an institutional control in the form of an environmental notice that requires (a) limiting the use and development of the property to commercial use, which will also permit industrial use, in conformance of local zoning; (b) compliance with the approved site management plan; (c) restricting t use of groundwater as a source of potable or process water, without necessary water quality treatmen as determined by NYSDOH; and (d) submission of a periodic certification of institutional and engineering controls to the Department by the property owner. The required control, in the form of 3 environmental notices (EN)are in place.ENs were recorded in the Nassau County Clerk's Office on 3/25/14 and 3/28/14 as doc. ref Nos.:EL14000001(Freeport Creek Assoc.),EL14000002(BWM High&Dry),EL14000003(Apache Realty Corp.)

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SMP prepared by the Department and finalized in October 2012. SMP revised in April 2014 (Rev No.

01)to include recorded ENs.

Box 4

Description of Engineering Controls

Parcel Engineering Control

62-44-24

Cover System
Fencing/Access Control
Vapor Mitigation

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-44-25

Vapor Mitigation
Cover System
Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-45-144

Vapor Mitigation
Cover System
Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-45-145

Vapor Mitigation
Cover System
Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o

Parcel Engineering Control

geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-45-155

Vapor Mitigation
Cover System
Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-45-157

Vapor Mitigation
Cover System
Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-45-158

Vapor Mitigation
Cover System
Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

62-45-54

Parcel	Engineering Control
	Vapor Mitigation
	Cover System
	Fencing/Access Control

Final Cover System: Exposure to remaining contamination in soil/fill at the site is prevented by a demarcatio layer and asphalt and porous pavement cover system placed over the site. This cover system is comprised o geotextile demarcation layer, topped by a minimum of 12 in. of asphalt pavement, porous pavement, or rip-rap. The EWP that appears in the SMP 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 the SMP.

Sub-Slab Depressurization Systems: Exposure to indoor air impacted with VOCs within the site buildings is 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.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

   YES NO

   ☒ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

   YES NO

   ☒ ☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

Date

Box 6

IC/EC CERTIFICATIONS

Professional Engineer Signature

I certify that all information in Boxes 2 through 5 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 Donald Conan at EA Engineering, P.C.
print name

6712 Brooklawn Pkwy

Syracuse NY 13211,

(print business address)

am certifying as a Professional Engineer.

Donald Con

Signature of Professional Engineer

STATE OF NEW YORK
DONALD FRANCIS CONAN III
75666
LICENSED PROFESSIONAL ENGINEER

Stamp (Required for PE)

Date 12/20/17