



Environment

Prepared for:

Superfund Standby Program
NYSDEC
Albany, NY

Prepared by:

AECOM
Chestnut Ridge, NY
60277021
April 2014

Periodic Review Report
Review Period: October 30, 2009 through
January 30, 2014
Liberty Industrial Finishing Site
Site #1-52-108
Work Assignment No. D007626-17

Final



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Engineering Certification

I, Scott A. Underhill, certify that I am currently a NYS registered professional engineer and that this Periodic Review Report for the Liberty Industrial Finishing Site (Site Number # 1-52-108) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Respectfully submitted,

AECOM Technical Services Northeast, Inc.



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Registered Professional Engineer
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April 2, 2014

Date

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Executive Summary

The Periodic Review Report (PRR) of the Liberty Industrial Finishing Site (the “Site”) was prepared for the New York State Department of Environmental Conservation (NYSDEC), Division of Environmental Remediation (DER) by AECOM Technical Services Northeast, Inc. (AECOM). The PRR was conducted in general conformance with NYSDEC guidance (DER-10). The purpose of the PRR is to evaluate the effectiveness of historical remedial actions at achieving the remedial goals specified for the Site in the Record of Decision (ROD) dated March 1999. The period of review for this report is October 30, 2009 through January 30, 2014.

The ROD specified the site related contaminants of concern (COCs) to include metals (cadmium, chromium, copper, nickel, and zinc) in all site media and semivolatile organic compounds (SVOCs) [phenol, benzo(k)anthracene, chrysene, and benzo(a)pyrene] in sediment/sludge from the stormwater dry wells. All of the remedial work specified in the ROD was completed in September 2001. The results of these remedial actions were reported in the Final Remediation Report dated July 2002. The remedial actions performed at the site have effectively achieved the goals of the ROD with respect to mitigation of potential impacts to human health and the environment from on-site soil and sediment. The remedial measures excavated and removed impacted soil and sediment to concentrations below applicable cleanup criteria or prevented the infiltration of precipitation through impacted media where excavation was deemed impractical. The six former underground storage tanks (USTs) were properly abandoned in place. Due to the close proximity of the Long Island Railroad tracks the USTs could not be removed. In April 2004, NYSDEC issued a declaration that the remedial measures were achieved with respect to soils and sediment. The Site was proposed to be reclassified from Class 2 to Class 4. However, the reclassification was never completed.

Long-term monitoring of the groundwater would be conducted to demonstrate natural attenuation of the residual dissolved phase COCs. The asphalt cap placed over the former USTs would be monitored periodically to verify its integrity.

The natural attenuation of Site related COCs would be evaluated by the periodic sampling and analysis of eight groundwater monitoring wells. Two of the wells (MW-5 and MW-6) are located on site, two of the wells (MW-18 and MW-19) are located in the Brentwood Water District well field, two wells (MW-12 and MW-14) are located immediately downgradient of the COC source area plume, and two wells (MW-21 and MW-20) are located near the leading edge of the dissolved COC plume. The direction of the contaminant plume was defined during the RI as emanating from the former UST area (MW-04) and moving south-southeast towards wells MW-12 and MW-14. The western extent of the plume was defined by shallow monitoring well MW-8, to the east by shallow monitoring well MW-13 and to the south by shallow monitoring well MW-12. The vertical extent of the plume was defined by deep monitoring wells MW-16 and MW-14. Well cluster MW-20/MW-21 was installed downgradient of the leading edge of the plume to act as sentinel wells.

The Final Sampling and Analysis Plan (Earth Tech, June 2007b) for the site includes: groundwater sample collection from eight monitoring wells on a five quarter basis; maintenance of the perimeter fencing and posted environmental warnings to restrict access; and, additional maintenance activities, as necessary, to maintain site conditions. In May 2011 the NYSDEC added five monitoring wells to the sampling program: MW-2, MW-3, MW-4 (shallow monitoring wells) located immediately downgradient of the former USTs), and MW-10 (shallow monitoring well) and MW-16 (deep well) located approximately 130 ft downgradient (southeast) of the former USTs.

Results from the groundwater monitoring indicate that COCs are still present in groundwater at the Site. Cadmium and chromium concentrations in MW-2, MW-3, MW-4, MW-10, MW-16, MW-12 and MW-14 continue to exceed the criterion. Data from the other six monitoring wells are below criteria, indicating a stable plume. Since water quality standards have not been demonstrated at all sampling locations continued monitoring is necessary.

The following recommendations are proposed for the Liberty Industrial Finishing Site:

- Continue monitoring of groundwater on a five quarter sampling basis. The next sampling event is scheduled for February 2015.
- Inspect the condition of the former building slab and asphalt cap on a five-quarter basis (will be performed in conjunction with the groundwater sampling events) and repair as necessary.
- In-situ treatment such as Regenesis Metals Remediation Compound (MRC) should be considered for the Site. MRC is a controlled release product that immobilizes dissolved-phase metals by stabilizing the metals onto soil.
- Surficial soil contamination areas documented by NYSDEC in June 2013 require treatment either through removal or capping. Further vertical delineation is necessary to determine the volume of contaminated soil.
- Finalize the Site Management Plan and record a deed restriction or environmental notice with Suffolk County once the SMP is completed.

1.0 Introduction

1.1 Site History and Remedial Program

The Liberty Industrial Finishing Site, Site Registry# 1-52-108, is located at 550 Suffolk Avenue, Brentwood (Town of Islip), Suffolk County, New York. A Site location map is included as Figure 1.

The Site is approximately 3.9 acres in total area of which 1.3 acres are historically undeveloped. The remainder of the site consists of previously developed areas with remnants of the former building (concrete floor slab), walkways, parking lots, and driveway areas. The Site is located in an area that is primarily residential and light commercial. The Site is zoned for non-residential commercial/industrial use. A current aerial photograph of the Site and surrounding area is included as Figure 1A.

The Site is bound to the north by Suffolk Avenue, to the east by commercial properties, to the south by the Long Island Rail Road (LIRR), and to the west by a gasoline retailer and a shopping plaza. The parcels immediately north of Suffolk Avenue are undeveloped. Immediately south of the LIRR are the Town of Islip Athletic fields and the water supply wells for the Brentwood Water District. The Brentwood municipal water supply wells are less than 500 feet south of the Site.

Liberty Industrial Finishing Products was a metal finishing facility engaged in finishing and plating of components used primarily in the aircraft industry. Metal finishing activities included passivation, phosphotization, electroplating, conversion coating, anodizing, painting, and non-destructive testing. Industrial operation of the facility spanned the period from 1978 through 1997. When active, the industrial operation at the Site included a 30,000-square foot factory building, six underground storage tanks (USTs) for plating process and wastewater, sanitary leaching pools, and stormwater drywells. The USTs were equipped with “emergency” overflow pipes that discharged to the on-site leaching pools.

1.2 Remedy Evaluation and Recommendations Summary

This Periodic Review Report is intended to evaluate the ongoing management of the selected remedial program for the Site as detailed in the March 1999 ROD (appendix B). A review of the March 1999 ROD found no mention of institutional controls for the Site. Further review of the NYSDEC project archives also found no mention of institutional controls for the Site. A NYSDEC Memorandum dated August 30, 2004, indicated that a deed restriction document was started by NYSDEC. However, the document was not signed. In addition, a handwritten note in the document indicated the process was terminated as there was no property owner or property title on which to impose a deed restriction (Appendix B). Implementation of investigation and maintenance activities is

required in order to verify that the remedy is performing properly and effectively, and is protective of human health and the environment.

In order to maintain compliance with the requirements presented in the ROD, a summary of recommended investigation and maintenance activities is provided below. Details with regard to these recommendations are also provided in Section 5.0 of this Report.

- Groundwater sample collection from thirteen monitoring wells (MW-2, MW-3, MW-4, MW-5, MW-6, MW-10, MW-12, MW-14, MW-16, MW-18, MW-19, MW-20, and MW-21) on a five quarter basis;
- Inspection of the asphalt cap placed over the former USTs to verify that the engineering control continues to be effective;
- Maintenance of the perimeter fencing and posted environmental warnings to restrict site access; and,
- Additional maintenance activities, as necessary, to maintain site conditions.

A Site Management Plan (SMP) is currently in review at NYSDEC. Once approved, the requirements of the SMP will be implemented.

2.0 Site Overview

AECOM has prepared this PRR for the Liberty Industrial Finishing Site, located in the Town of Brentwood, Suffolk County, New York. This PRR covers the period of October 30, 2009 through January 30, 2014. This work was performed for the New York State Department of Environmental Conservation (NYSDEC) under Work Assignments D004445-14.3 and D007626-17. The NYSDEC has assigned the Site ID No. 1-52-108 in the NYSDEC's registry of inactive hazardous waste sites. Liberty Industrial Finishing is a Class 2 site.

2.1 Objectives of the Periodic Review

The periodic review process is used for determining if a remedy continues to be properly managed as set forth in the guidance documents for the Site, and is protective of human health and the environment. The objectives of the periodic review for sites in the State Superfund Program are as follows:

- Determine if the remedy remains in place, is performing properly and effectively, and is protective of public health and the environment;
- Evaluate compliance with the decision document(s) and the SMP;
- Evaluate the condition of the remedy;
- Verify, if appropriate, that the intent of Institutional Controls (IC) continues to be met, and that Engineering Controls (EC) remain in place, are effective and protective of public health and the environment;
- Evaluate the implemented remedies' effectiveness towards moving the Site to closure; and,
- Evaluate costs.

2.2 Remedial History

Shortly after operations began at the Site, concerns for public health and the environment resulting from operational and waste handling practices at the Site were investigated by the Suffolk County Department of Health Services (SCDHS). In 1982, surface and subsurface discharges of waste water were addressed in an Order of Consent between Liberty and the SCDHS. Corrective actions were implemented to eliminate the discharge of industrial waste water to the environment and the order was reportedly satisfied.

An inspection conducted by NYSDEC in 1984 identified deficiencies in Site hygiene and waste handling practices. Samples were collected of the liquids in the sanitary leaching pool, the storm water dry well, and a soil sample was collected near the northeast corner of the building. These samples reportedly contained elevated concentrations of 1,1,1-trichloroethane, cadmium, chromium,

and lead. The sanitary system and the storm water dry well were subsequently pumped out and cleaned (July 1985).

A Phase II Site Investigation was performed in 1987. The results of the investigation reported concentrations of chromium in the onsite groundwater at concentrations exceeding the Class GA groundwater criterion (NYSDEC Technical and Operational Guidance Series). The Site was subsequently classified as a Class “2a” site on the Registry of Inactive Hazardous Waste Disposal Sites on December 12, 1987. Class “2a” was a temporary listing pending further investigation into the effects the site has on health and the environment.

A Phase II Supplemental Site Investigation was performed in 1991. Chromium was reported in the on-site groundwater at concentrations ranging from 2,300 µg/l to 5,800 µg/L. Additionally, sediment/soil in the leaching pool contained elevated concentrations of cyanide (11,500 µg/L). An emergency remedial measure removed a total of 45 inches of sediment/soil from the bottom of the leaching pool (1992). As a result of the Phase II supplemental site investigation, the Site was reclassified as a Class “2” site on the Registry of Inactive Hazardous Waste Disposal Sites in February of 1994.

A Consent Order (March 1996) required that the facility conduct a Focused Remedial Investigation (FRI) to determine the extent of contamination within the six USTs and the emergency leaching pool. FRI activities were never implemented by Liberty Industrial Finishing due to financial constraints.

In 1997, Liberty Industrial Finishing removed waste materials from the on-site building. Wastes removed and disposed of include:

- cyanide plating waste;
- phosphates;
- copper strips;
- copper strip sludge;
- metal hydroxide sludge;
- cyanide salts;
- solutions containing chromium and cadmium;
- chromic acid;
- paint waste containing methyl ethyl ketone; and
- vapor degreaser waste containing trichloroethene.

Floors were swept and the material was drummed and disposed of as hazardous waste. Wood floors were removed from the factory building and stored onsite. Flooring was later disposed of by the USEPA as part of an Interim Remedial Action.

A Remedial Investigation (RI) was performed in 1997-1998 for NYSDEC by Dvirka and Bartilucci. Based on the RI, the NYSDEC conducted a supplemental Remedial Investigation/Feasibility Study (RI/FS) of the Site in 1997-1998. The results and conclusions of the supplemental RI/FS were documented in a report published in 1999. Elevated concentrations of regulated metals, specifically chromium, were reported in excess of the applicable cleanup criteria in surface and subsurface soils, drainage structures, and on-site and off-site groundwater.

A ROD for the Site was published by NYSDEC in March 1999. The ROD specified the site related contaminants of concern to include semivolatile organic compounds (phenol, benzo(k)anthracene, chrysene, and benzo(a)pyrene) in the sediment/sludge from the stormwater dry wells, and metals (cadmium, chromium, copper, nickel, and zinc) in all media.

The ROD specified the following remedial goals for the Site:

- Eliminate sources of contamination that exceed cleanup criteria: such as, surface soil, subsurface soil, and stormwater drywell or sanitary leaching pool sediments;
- Eliminate, to the extent practicable, ingestion of Groundwater affected by the Site that does not meet the NYSDEC Class GA Ambient Water Quality Criteria;
- Mitigate potential impacts to the environment from contaminated groundwater by natural attenuation; and,
- Eliminate the potential for direct human contact with contaminated soil onsite.

To achieve the goals of the ROD remedial measures were performed. These measures included:

- Clean-out of sediments in the stormwater and sanitary leaching galleries;
- Removal of on-site hazardous wastes;
- Delineation, excavation and disposal of on-site and off-site impacted soils;
- Cleaning and closure in place of USTs and associated piping;
- Placement of impermeable asphalt cap over USTs and associate piping;
- Demolition and removal of the building;
- Installation of perimeter security fence; and,
- Installation and periodic sampling of groundwater monitoring wells to assess groundwater quality.

The USEPA conducted an emergency removal action including the removal of waste materials stored in the on-site factory building and the in-place closure of six USTs. Each tank was cleaned and sandblasted, filled to one foot below top with clean soil, and the remaining space (including fill pipes) was plugged with concrete. The tanks were not removed due to the close proximity of the Long Island Rail Road; however, UST in-place closure was determined to be equally protective of human health

and the environment. A non-porous asphalt cap was constructed over the UST area to mitigate infiltration of precipitation into the contaminant source area (Figure 2).

All of the removal and in-place closure measures specified in the ROD were completed in September 2001. The results of these remedial actions were reported in the Final Remediation Report (Dvirka and Bartilucci, July 2002). The remedial actions performed at the site have effectively achieved the goals of the ROD with respect to mitigation of potential impacts to human health and the environment from on-site soils and sediment. These measures excavated and removed impacted soil and sediments to concentrations below applicable cleanup criteria or prevented the infiltration of precipitation through impacted media where excavation was deemed impractical.

In April 2004, NYSDEC issued a declaration that the remedial measures were achieved with respect to soils and sediment. The Site was proposed to be reclassified from Class 2 to Class 4; however the reclassification was not completed (Appendix A). Long-term monitoring of the groundwater would be conducted to demonstrate natural attenuation of the residual dissolved phase COCs.

The natural attenuation of site related dissolved phase COCs would be evaluated by the periodic sampling and analysis of eight groundwater monitoring wells (Figure 2). Two of the wells (MW-5 and MW-6) are located on site, two of the wells (MW-18 and MW-19) are located in the Brentwood Water District well field, two wells (MW-12 and MW-14) are located immediately downgradient of the COC source area plume, and two wells (MW-21 and MW-20) are located near the leading edge of the dissolved COC plume. In 2011, NYSDEC added five monitoring wells to the long term sampling program: MW-2, MW-3 and MW-4, located along the southern property boundary and well cluster MW-10/MW-16 located approximately 130 ft south of the former USTs (Figure 2).

3.0 Evaluate Remedy Performance, Effectiveness, and Protectiveness

A SAP (Earth Tech, 2007b) and Project Management Plan (Earth Tech, 2007a) were developed under a previous work assignment (D004445-14). The SAP outlines the following activities on a five-quarter basis:

- Monitoring well inspection: Inspect the eight (five additional wells were added by NYSDEC in 2011) monitoring wells designated for groundwater sampling and complete the NYSDEC Monitoring Well Field Inspection Log for each. Obsolete and damaged wells need to be properly abandoned (no wells have been abandoned at the Site since completion of the remedial action in 2001).
- Groundwater monitoring: 13 wells are designated for periodic groundwater sampling and analysis of target analyte list (TAL) metals (Figure 2).

3.1 Operation and Maintenance Plan Compliance Report

The current operation and monitoring (O&M) program at the Site consists of groundwater monitoring well inspection and repair, and asphalt cap inspection and maintenance.

3.1.1 O&M Plan Compliance

The following summarizes operation and maintenance activities undertaken at the Site from October 2009 through January 2014:

Activity	Required Frequency (X)			Compliance Dates
	Annually	Five-Quarter	As needed	
Asphalt Cap Inspection		X		
Groundwater Monitoring Well Inspection and Maintenance		X		2006, 2007, 2008, 2010, 2011, 2012 and 2013

3.1.2 Evaluation of O&M Activities

Logs of monitoring well inspections have been submitted to NYSDEC as part of periodic groundwater sampling reports (Earth Tech, 2006, 2007, 2009 and AECOM, 2010, 2011, 2012 and 2013).

3.2 Monitoring Plan Compliance Report

The Final Project Management Plan (Earth Tech, February 2007a) and Final SAP (Earth Tech, 2007b) are referenced as the Site guidance documents. A SMP is currently in review and will be implemented at the Site upon final approval by NYSDEC, replacing the Project Management Plan and SAP.

This PRR assesses whether the site has been managed as set forth in these documents. To date, seven groundwater sampling events have been conducted at the Site. Analysis performed during each sampling event included TAL metal analysis for groundwater. Data reports were finalized in 2006, 2007, 2009, 2010, 2011 and 2012. The November 2013 sampling event report is currently being prepared.

The current monitoring program is as follows:

- Water levels measurements are collected from all Site monitoring wells on a five quarter basis;
- Groundwater sampling is conducted from 13 monitoring wells on a five-quarter basis and analyzed for TAL metals. During the 2011, 2012 and 2013 sampling events, both filtered and unfiltered metals samples were collected; however, this is not part of the long-term monitoring program. The 13 monitoring wells are MW-2, MW-3, MW-4, MW-5, MW-6, MW-10, MW-12, MW-14, MW-16, MW-18, MW-19, MW-20, and MW-21. Field measurements of temperature, pH, conductivity, oxidation reduction potential, dissolved oxygen and turbidity are recorded during each sampling event; and
- Preparation of sampling reports that summarize analytical results of each sampling round.

The first four rounds of groundwater sampling occurred in June 2006, August 2007, November 2008, and March 2010. Eight wells were sampled: MW-5, MW-6, MW-12, MW-14, MW-18, MW-19, MW-20 and MW-21. A summary of well construction data is presented in Table 1. Groundwater samples were analyzed for TAL metals. Prior to sampling, a synoptic round of water level measurements was collected from the eight selected monitoring wells. The locations of the wells are shown on Figure 2.

The fifth round of groundwater sampling occurred in May 2011. At the request of NYSDEC, six additional wells were added to the sampling program: MW-1, MW-2, MW-3, MW-4, MW-10 and MW-16, bringing the total number of wells sampled to 14. However, MW-1 was dry and could not be sampled. In an effort to better understand the metals data collected from monitoring well samples, Round 5 groundwater samples were filtered in the field using 0.45 micron filters and both total and dissolved samples were analyzed for TAL metals. All sampling was conducted in accordance with the June 2007 SAP.

The sixth and seventh round of groundwater sampling occurred in August 2012 and November 2013. Thirteen monitoring wells were included in the sampling program. As during Round 5,

groundwater samples were also filtered in the field using 0.45 micron filters and both total and dissolved samples were analyzed for TAL metals. All sampling was conducted in accordance with the June 2007 SAP. For these groundwater sampling rounds, NYSDEC requested that all groundwater samples be collected using low-flow techniques. Previous sampling was performed using the volumetric method. A peristaltic pump with dedicated poly tubing was used to purge each well prior to sampling. The flow rate was set to between 200 to 500 milliliters per minute (mL/min). Field measurements of pH, temperature, specific conductivity, dissolved oxygen (DO), and oxidation reduction potential (ORP) were collected at five-minute intervals until all parameters were stabilized.

3.2.1 Monitoring Plan Compliance Report

The following summarizes monitoring activities at the Site conducted to-date in accordance with the SAP. AECOM conducted sampling events at the Liberty Industrial Finishing Site in June 2006, August 2007, November 2008, March 2010, May 2011, August 2012 and November 2013:

Activity	Required Frequency (X)	Compliance Dates
	Five Quarter	
Groundwater Monitoring	X	2006-2013
Water Level Monitoring	X	2006-2013

Groundwater Level Measurement

Groundwater level measurements from 2006 through 2013 in the 13 monitoring wells (8 in 2006 through 2010) are presented in Table 2. Comparison of the groundwater elevations in the monitoring wells shows that the general groundwater flow direction is towards the south-southwest. A groundwater contour map is presented in Figure 3 using data from the November 2013 sampling event. A groundwater hydrograph is shown in Figure 4.

3.2.2 Confirm that Performance Standards are Being Met

The sections below discuss the results of the groundwater sampling conducted in accordance with the guidance documents and provide a summary of the results.

Groundwater

Thirteen monitoring wells are included in the long term monitoring plan: MW-2, MW-3, MW-4, MW-5, MW-6, MW-10, MW-12, MW-14, MW-16, MW-18, MW-19, MW-20, and MW-21 and are shown on Figure 2. Laboratory analytical results for the TAL metal analyses have been provided in the groundwater monitoring reports in for the seven sampling events that occurred in June 2006, August 2007, November 2008, March 2010, May 2011, August 2012 and November 2013. The summary of

groundwater results for these sampling events is presented in Table 3. A summary of groundwater results is presented in Figure 5.

Concentrations of ten metals have been detected above the Class GA criterion in monitoring wells at the Site at least once during the six sampling events. These metals include antimony, cadmium, chromium, copper, iron, lead, manganese, selenium, sodium and thallium.

Antimony – Class GA criterion of 3 µg/L

June 2006 – Detected in six of eight monitoring wells, two exceedances, maximum concentration of 3.7 µg/L in MW-5.

August 2007 – Detected in five of eight monitoring wells, five exceedances, maximum concentration of 11.2 µg/L in MW-12.

November 2009 – Detected in one of eight monitoring wells, MW-18, which exceeded the criterion at 9 µg/L.

March 2010 – Detected in three of eight monitoring wells, three exceedances, maximum concentration of 13.9 µg/L in MW-12.

May 2011 – Not detected in any of the 13 monitoring well samples (filtered or unfiltered samples).

August 2012 – Detected in one of 13 monitoring wells, one exceedance, 11.9 µg/L in MW-21D.

November 2013 – Detected in one of 13 monitoring wells, no exceedances (filtered or unfiltered samples).

Cadmium – Class GA criterion of 5 µg/L

June 2006 – Detected in six of eight monitoring wells, no exceedances.

August 2007 – Detected in all eight monitoring wells, three exceedances, maximum concentration of 12.6 µg/L in MW-6.

November 2008 – Detected in six of eight monitoring wells, two exceedances, maximum concentration of 59.1 µg/L in MW-14.

March 2010 – Detected in four of eight monitoring wells, two exceedances, maximum concentration of 205 µg/L in MW-12.

May 2011 – Detected in nine of 13 unfiltered samples, seven exceedances, maximum concentration of 54.8 µg/L in MW-12. Detected in nine of 13 filtered samples, four exceedances, maximum concentration of 19.8 in MW-4.

August 2012 – Detected in eight of 13 unfiltered samples, four exceedances, maximum concentration of 36.1 µg/L in MW-10. Detected in six of 13 filtered samples, three exceedances, maximum concentration of 34.9 µg/L in MW-10.

November 2013 – Detected in six of 13 unfiltered samples, three exceedances, maximum concentration of 49.0 µg/L in MW-10. Detected in five of 13 filtered samples, two exceedances, maximum concentration of 50.0 µg/L in MW-10.

Chromium – Class GA criterion of 50 µg/L

June 2006 – Detected in all eight monitoring wells, one exceedance, 95.8 µg/L in MW-14.

August 2007 – Detected in all eight monitoring wells, one exceedance, 248 µg/L in MW-14.

November 2008 – Detected in six of eight monitoring wells, one exceedance, 69.6 µg/L in MW-14.

March 2010 – Detected in all eight monitoring wells, two exceedances, maximum concentration of 251 µg/L in MW-12.

May 2011 – Detected in all 13 unfiltered samples, six exceedances, maximum concentration of 176 µg/L in MW-4. Detected in 11 of 13 filtered samples, two exceedances, maximum concentration of 142 µg/L in MW-4.

August 2012 – Detected in all 13 unfiltered samples, maximum concentration of 152 µg/L in MW-10. Detected in ten of 13 filtered samples, maximum concentration of 155 µg/L in MW-10.

November 2013 – Detected in five of 13 unfiltered samples, maximum concentration of 170 µg/L in MW-14. Detected in three of 13 filtered samples, maximum concentration of 140 µg/L in MW-10.

Copper – Class GA criterion of 200 µg/L

June 2006 – Detected in five of eight monitoring wells, no exceedances.

August 2007 – Detected in all eight monitoring wells, no exceedances.

November 2008 – Detected in four of eight monitoring wells, no exceedances.

March 2010 – Detected in six of eight monitoring wells, one exceedance, 377 µg/L in MW-12.

May 2011 – Detected in nine of 13 unfiltered samples, no exceedances. Detected in three of 13 filtered samples, no exceedances.

August 2012 – Detected in nine of 13 unfiltered samples, no exceedances. Detected in three of 13 filtered samples, no exceedances.

November 2013 – Not detected in any of the 13 samples (unfiltered or filtered).

Iron – Class GA criterion of 300 µg/L

June 2006 – Detected in all eight monitoring wells, three exceedances, maximum concentration of 1,710 µg/L in MW-20.

August 2007 – Detected in all eight monitoring wells, six exceedances, maximum concentration of 10,900 µg/L in MW-12.

November 2008 – Detected in six of eight monitoring wells, three exceedances, maximum concentration of 9,320 µg/L in MW-14.

March 2010 – Detected in all eight monitoring wells, five exceedances, maximum concentration of 38,100 µg/L in MW-12.

May 2011 – Detected in 12 of 13 unfiltered samples, six exceedances, maximum concentration of 11,300 µg/L in MW-12. Detected in six of 13 filtered samples, two exceedances, maximum concentration of 1,620 in MW-12.

August 2012 – Detected in 12 of 13 unfiltered samples, nine exceedances, maximum concentration of 2,000 µg/L in MW-4. Detected in six of 13 filtered samples. Maximum concentration of 1,180 µg/L in MW-14.

November 2013 – Detected in seven of 13 unfiltered samples, seven exceedances, maximum concentration of 6,000 µg/L in MW-14. Detected in one of 13 filtered samples, maximum concentration of 930 µg/L in MW-14.

Lead – Class GA criterion of 25 µg/L

June 2006 – Detected in four of eight monitoring wells, no exceedances.

August 2007 – Detected in all eight monitoring wells, one exceedance, 106 µg/L in MW-12.

November 2008 – Detected in four of eight monitoring wells, two exceedances, 221 µg/L in MW-14.

March 2010 – Detected in five of eight monitoring wells, two exceedances, maximum concentration of 553 µg/L in MW-12.

May 2011 – Detected in four of 13 unfiltered samples, two exceedances, maximum concentration of 230 µg/L in MW-12. Not detected in any of the 13 filtered samples.

August 2012 – Detected in two of 13 unfiltered samples, no exceedances. Detected in two of 13 filtered samples, no exceedances.

November 2013 – Detected in three of 13 unfiltered samples, one exceedance, 53 µg/L in MW-14. Detected in one of 13 filtered samples, no exceedances.

Manganese – Class GA criterion of 300 µg/L

June 2006 – Detected in all eight monitoring wells, no exceedances.

August 2007 – Detected in all eight monitoring wells, one exceedance, 547 µg/L in MW-18.

November 2008 – Detected in six of eight monitoring wells, one exceedance, 627 µg/L in MW-21.

March 2010 – Detected in all eight monitoring wells, one exceedance, 312 µg/L in MW-18.

May 2011 – Detected in ten of 13 unfiltered samples, two exceedances, maximum concentration of 597 µg/L in MW-16. Detected in six of 13 filtered samples, two exceedances, maximum concentration of 623 µg/L in MW-12.

August 2012 – Detected in ten of 13 unfiltered samples, one exceedance, 661 µg/L in MW-16. Detected in six of 13 filtered samples, two exceedances, maximum concentration of 632 µg/L in MW-16.

November 2013 – Detected in four of 13 unfiltered samples, two exceedances, maximum concentration of 1,200 µg/L in MW-18. Detected in three of 13 filtered samples, two exceedances, maximum concentration of 530 µg/L in MW-16.

Selenium – Class GA criterion of 10 µg/L

June 2006 – Detected in four of eight monitoring wells, no exceedances.

August 2007 – Detected in two of eight monitoring wells, no exceedances.

November 2008 – Not detected in any of the eight monitoring wells.

March 2010 – Detected in one of eight monitoring wells, one exceedance, 13.4 µg/L in MW-12.

May 2011 – Not detected in any of the 13 unfiltered or filtered samples.

August 2012 – Not detected in any of the 13 unfiltered or filtered samples.

November 2013 – Not detected in any of the 13 unfiltered or filtered samples.

Sodium – Class GA criterion of 20,000 µg/L

June 2006 – Detected in all eight monitoring wells, four exceedances, maximum concentration of 31,900 in MW-14.

August 2007 – Detected in all eight monitoring wells, four exceedances, maximum concentration of 31,100 µg/L in MW-20.

November 2008 – Detected in all eight monitoring wells, four exceedances, maximum concentration of 561,000 µg/L in MW-14.

March 2010 – Detected in all eight monitoring wells, two exceedances, maximum concentration of 39,600 µg/L in MW-2.

May 2011 – Detected in all 13 unfiltered samples, six exceedances, maximum concentration of 38,400 µg/L in MW-20. Detected in all 13 filtered samples, six exceedances, maximum concentration of 40,300 µg/L in MW-20.

August 2012 – detected in all 13 unfiltered samples, four exceedances, maximum concentration of 30,800 in MW-3. Detected in all 13 filtered samples, four exceedances, maximum concentration of 31,000 in MW-3.

November 2013 – detected in all 13 unfiltered samples, four exceedances, maximum concentration of 38,000 in MW-3. Detected in all 13 filtered samples, four exceedances, maximum concentration of 35,000 in MW-3.

Thallium – Class GA criterion of 0.50 µg/L

June 2006 – Not detected in any of the eight monitoring wells.

August 2007 – Detected in two of eight monitoring wells, two exceedances, maximum concentration of 3.4 µg/L in MW-14.

November 2008 – Not detected in any of the eight monitoring wells.

March 2010 – Not detected in any of the eight monitoring wells.

May 2011 – Not detected in any of the 13 unfiltered or filtered samples.

August 2012 – Not detected in any of the 13 unfiltered or filtered samples.

November 2013 – Not detected in any of the 13 unfiltered or filtered samples.

Filtered versus Unfiltered Metals Groundwater Samples

Concentrations of total metals in groundwater samples at the Site tended to be highly variable between different sampling events, as did field measurements of turbidity at time of sample collection. Turbidity is correlated with the presence of suspended matter (e.g., entrained soil particles in the sample). Therefore in Round 5 (May 2011), Round 6 (August 2012) and Round 7 (November 2013) total metals (unfiltered) and dissolved metals (field filtered) groundwater samples were collected to evaluate the effect of turbidity on the metals concentrations.

The NYSDEC turbidity criterion is 50 nephelometric turbidity units (NTU) or less for well development and groundwater sampling (TAGM 4015; NYSDEC, 1988). At the Liberty Industrial Finishing Site, the turbidity was below 50 NTU at the time of sampling in all 13 samples during Round 7, ranging from 0 to 38.5 NTU (see the bottom row of Table 4). The turbidity was less than 20 NTU in ten samples and above 30 NTU in three samples. The total metals concentrations was expected to be higher in the more turbid samples with only small differences between the total metals and dissolved metals concentrations in samples with low turbidity. As all the Round 7 samples at the Site could be considered 'low turbidity' (i.e., all samples met the NYSDEC criterion of 50 NTU or less), it is somewhat difficult to evaluate differences among the samples although an apparent relationship between turbidity as measured in the field, and metals concentrations (e.g., aluminum) in the unfiltered samples.

Table 4 presents a comparison of the total metals and the dissolved metals data for the 13 filtered/unfiltered sample pairs collected at the Liberty Site. The "percent dissolved" shown on the table is the ratio of the filtered sample concentration to the total (unfiltered) sample concentration.

Concentrations of metals primarily in the dissolved phase (sodium, potassium, and calcium) are not expected to be affected by filtering. Note also that depending on the redox conditions, magnesium may also be generally found in only the dissolved form. Hence the two samples (filtered and unfiltered) should essentially act as field duplicate samples for these parameters, and the concentrations in the filtered/unfiltered pairs would be expected to be very similar (e.g., the filtered/unfiltered ratio is close 100% +/- 10%). The filtered/unfiltered pairs for these four compounds were generally similar in the filtered and unfiltered samples indicating good reproducibility in the sampling/analytic process, with one exception. In the MW-5 pairings the concentration of sodium in the filtered sample was 120.9 percent than the unfiltered, although the calcium ratio was only 112.5 percent.

Most of the other metals are expected to be generally associated with solid particles. Therefore the concentration in the filtered samples would range from similar to the unfiltered samples (for those wells with very low turbidity) to significantly lower for those wells with high turbidity (as long as the concentration are sufficiently higher than the detection for an accurate comparison). This is the case for all well samples.

Surficial Soil Sampling – June 2013

In June 2013, NYSDEC personnel collected 25 soil samples from 14 locations around the Site. The locations are shown on Figure 6. At 11 locations, both surface (0 to 2 inches below ground surface) and subsurface (2 to 6 inches below ground surface) soil samples were collected. At two locations, only surface soil samples were collected and at one location, only a subsurface soil sample was collected. Samples were analyzed for TAL Metals. The results were compared to the NYSDEC restricted use categories as shown on Table 5.

Three locations were sampled from the wooded area west of the Site (SS-01, SS-02 and SS-03). Metals concentrations indicate that surficial lead exceeded the unrestricted use criterion but were below the restricted residential criterion. Subsurface samples from these three locations were all below the unrestricted use criteria.

Two locations (SS-06 and SS-07) were sampled in the wooded area east of the Site. All metals results for surface and subsurface soil samples were below the unrestricted use criteria.

Two sample locations (SS-04 and SS-05) were along the northern property boundary near Suffolk Avenue. In the two surficial soil samples, concentrations of lead and zinc exceeded the unrestricted residential use criterion but were below the restricted residential criterion. Surficial cadmium concentrations at SS-04 exceeded the residential criterion but were below the restricted residential criterion. The two subsurface samples were below the unrestricted criteria.

Five locations were sampled off the western side of the former concrete building slab (SS-08 through SS-12). At SS-08, the surficial chromium concentration was above unrestricted use criteria but below the residential criteria. The subsurface sample had an arsenic concentration above the unrestricted use criteria but below the residential use criteria. All other concentrations were in the unrestricted use criteria. At SS-09, only a subsurface soil sample was collected and all metals were below the unrestricted use criteria. Samples from SS-10, SS-11 and SS-12 had cadmium concentrations that grouped these samples into the commercial or industrial use criteria. The surficial soil sample at SS-11 exceeded the industrial criterion. Concentrations of chromium at three locations placed the samples in the restricted residential criteria. Concentrations of copper, nickel and zinc were below the residential use criteria.

Three samples were collected off the eastern side of the former building concrete slab (SS-13, SS-14 and SS-15). Metals concentrations for the surface and subsurface sample at SS-13 were all below the unrestricted sue criteria. The surficial soil cadmium concentration at SS-14 placed it in the industrial category and chromium in the residential category. Sampling location SS-15 was proposed but field conditions prevented NYSDEC personnel from collecting a sample.

3.3 IC/EC Certification Plan Report

The Institutional and Engineering Controls Certification Form generated by NYSDEC indicates that the following controls are applicable to the Site:

- Access to off-site monitoring wells on Brentwood Water District and Suffolk County property;
- Groundwater use restriction;
- Adherence to the Site Management Plan;
- Any future development of the Site must be hooked in to the public water supply; and
- Any future development must not disturb the slab which is serving as a cap cover system.

Engineering controls at the Site consist of:

- Engineered Asphalt Cap;
- Fencing/Access Control; and
- Signage and Notification.

Comparison of DER-10, Unified Information System and Actual Site Conditions

DER-10	Unified Information System	Actual Site Conditions
Closure of underground storage tanks	IRM completed in October 1990, removed approximately 1,960 cubic yards of contaminated soils	Contaminated soil removed from area of former oil/water separator and former dry wells
Closure of dry wells	Not mentioned	Area was paved over after the remediation work was completed
Containment / Isolation	Not mentioned	Asphalt cap over the closed-in-place USTs

3.3.1 IC/EC Requirements and Compliance

Determination of compliance with the IC/EC at the Site is made based on the following criteria:

- The IC(s)/EC(s) applied at the site are in place and unchanged from the previous certification;
- Nothing has occurred that would impair the ability of such controls to protect the public health and the environment, or constitute a violation or failure to comply with any element of the SMP for such controls; and

- Access to the Site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of such controls (*future access cannot be guaranteed, but access for maintenance and inspections has not been an issue to date, and is not anticipated to become one*).

Currently, certification that the site ICs/ECs are in compliance with the requirements stated above, cannot be completed because of the following deficiencies:

- Deed restrictions have not been placed on the parcels of concern.
- The asphalt cap has not been properly inspected.
- The security fence surrounding the property is not secured and local teenagers have accessed the site and are using the former building concrete slab as a skateboard park.

Detailed descriptions of the deficiencies identified at the Site and the severity presented is included in Section 5.0, including a proposed schedule to utilize in bringing the Site into compliance with the EC Certification requirements.

3.3.2 IC/EC Certification Forms

See Appendix A.

4.0 Evaluate Costs

The timeframe for this PRR spanned two work assignments. The costs are summarized below.

PRR costs from 10/30/09 through 1/30/14

Cost incurred during the PRR timeframe: \$126,000

<u>Budget Breakdown</u>	<u>Cost</u>	<u>Comments</u>	<u>Average Cost</u>
Field Work			
Groundwater Sampling & OM&M	\$42,000	Four sampling events	\$10,500
Laboratory	\$10,500	Four sampling events	\$2,600
Reports			
Groundwater Reports	\$36,600	Four reports	\$9,100
SMP	\$10,400	Draft	
PRR	\$19,600	One completed, one draft	
MRC Work Plan	\$6,900	Draft	

Note:

Sampling in 2010 included 8 wells, increased in 2011 to include 13 wells

5.0 Conclusions and Recommendations

5.1 Conclusions

The ROD specified four remedial goals. Each of these remedial goals and results from the remedial efforts for the Site are discussed below.

1. Elimination of constituents that exceed NYSDEC Commercial-use soil cleanup objectives (SCOs):

This goal has been effectively achieved through excavation and removal of impacted soil and sediments and permanent closure of the USTs. Residually impacted soils associated with the source areas have been isolated by capping with an impermeable barrier; though the June 2013 soil data indicates additional impacts above Commercial-use SCOs.

2. Elimination, to the extent practicable, of the migration of groundwater affected by the Site that does not meet the NYSDEC Class GA Ambient Water Quality Criteria (Class GA):

Groundwater at the Site is still impacted with COCs above the Class GA criteria. The plume will continue to migrate until the COCs are diluted and dispersed to a concentration below the Class GA criteria. The selected remedy of natural attenuation in conjunction with the appropriate monitoring is currently being implemented. The asphalt cap will be inspected and monitored periodically. The asphalt will be repaired as needed.

3. Mitigation of potential impacts to the environment from contaminated groundwater by natural attenuation.

This goal has not yet been achieved, as documented by the following:

- Several metals have been detected above their respective Class GA criterion including: antimony, copper, lead, selenium, and thallium. However, the exceedances are sporadic and do not appear related to the Site. However, two COCs, cadmium and chromium, have been consistently detected at concentrations exceeding applicable criteria in numerous monitoring wells during the previous seven long term monitoring sampling events (2006 through 2013).
- Cadmium has been detected in all 13 monitoring wells sampled during the long term monitoring (Figures 7 and 8). Concentrations have exceeded the Class GA criterion in nine of the 13 monitoring wells at least once during the seven long term monitoring events and has been above the criterion during every sampling event at MW-4 and MW-10 (Figure 7).
- Chromium has been detected in a majority of groundwater samples collected at the Site and has exceeded the criterion at least twice in six monitoring wells (Figures 9 and 10).

- The available data set is insufficient to evaluate trends and predict future sampling results other than to show exceedances of cadmium and chromium in several monitoring wells have been fairly consistent over the past few sampling rounds. The data indicate that the remedial actions performed to date have removed and/or isolated impacted soils that could act as a sustaining source, though the June 2013 data shows exceedances of cadmium and chromium in the surface soils. The potential exists for cadmium and chromium impacted soils to exist at depth at the site – further investigation is required to determine the impacts to deeper soils. The cadmium and chromium groundwater plumes do not appear to be migrating south of the MW-12/MW-14 cluster.
 - Based on the currently available data, additional monitoring, performed on a 5-quarter rotation, is required to increase the data set so that the effects of natural attenuation can be evaluated and achievement of this goal evaluated.
4. Elimination of the potential for direct human contact with contaminated soil onsite.
- On-site soil sampling conducted in June 2013 by NYSDEC personnel indicates that two areas require remedial measures to prevent human contact with contaminated surficial soils (Figure 6).
 - A fence has been installed to prevent unauthorized entry onto the site. However, local teenagers have entered the Site and are using the former building concrete slab for a skate park.
 - Inspection and maintenance of the asphalt cap covering the residually impacted soils associated with the former USTs will be included in future long term monitoring.
5. Site Management Plan.
- A Site Management Plan will be prepared for use during the continued long term monitoring at the Site.

5.2 Recommendations

The following recommendations are proposed for the Liberty Industrial Finishing Site:

- Continue monitoring of groundwater on a five quarter sampling basis. The next sampling event is scheduled for February 2015.
- Inspect the condition of the former building slab and asphalt cap on a five-quarter basis (will be performed in conjunction with the groundwater sampling events). Repair cracks and/or potential leak points as needed to prevent infiltration through residually impacted soil around former USTs. The next inspection is scheduled for February 2015.
- In-situ treatment of the metals: Regeneration Metals Remediation Compound (MRC) should be considered for the Site. MRC is a controlled release product that immobilizes dissolved-phase metals by stabilizing the metals onto soil. A pilot test should be completed to

evaluate the effectiveness of MRC. Immobilization of COCs would greatly reduce the monitoring time for the site as required by the current natural attenuation remedy.

- Evaluate treatment options of two surficial soil contamination areas documented by NYSDEC in June 2013. Option one is to extend the current asphalt cap over the two contaminated soil areas. Option two is excavation and off-site disposal of the contaminated soils. To install an asphalt cap over the two contaminated soil areas, approximately 6-inches of soil would need to be removed to allow for the installation of an asphalt cap that would be flush with the current cap and concrete slab. If the contamination does not extend much beyond six inches, complete removal of the contamination would be preferable to capping. Further vertical delineation is necessary to determine the volume of contaminated soil in these two areas.
- Finalize the Site Management Plan. Upon completion of the Site Management Plan, record a deed restriction or environmental notice with Suffolk County.

6.0 References

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NYSDEC, 1999. Record of Decision, Liberty Industrial Finishing Site, Town of Islip, Suffolk County, Site Number 1-52-108. March 1999.

NYSDEC, 2004. Memorandum to initiate the reclassification of the Liberty Industrial Finishing Site (Site No. 1-52-108) from Class 2 to Class 4 (never completed). August 30, 2004.

Tables

TABLE 1
LIBERTY INDUSTRIAL FINISHING SITE (1-25-108)
WELL CONSTRUCTION DATA

Well Number	Northing	Easting	Ground Elevation	Top of Riser Elevation	Top of Casing Elevation	Total Depth of Well
MW-1	202,384.57	2,206,633.80	92.92	91.57	92.92	42.5
MW-2	202,371.27	2,206,596.31	92.87	91.27	92.87	54.2
MW-3	202,360.99	2,206,568.43	93.08	91.25	93.08	53.9
MW-4	202,344.02	2,206,522.24	93.09	91.61	93.09	53.4
MW-5	202,308.86	2,206,350.98	92.19	93.32	93.60	50.0
MW-6	202,306.77	2,206,341.15	92.09	92.71	92.79	265.0
MW-10	202,243.14	2,206,590.12	91.84	90.40	91.84	50.0
MW-12	201,973.43	2,206,863.98	91.08	89.59	89.79	49.3
MW-14	201,966.33	2,206,866.03	91.12	89.55	89.77	100.0
MW-16	202,243.14	2,206,611.76	91.97	90.48	91.97	99.2
MW-18	202,101.70	2,206,373.86	93.14	91.55	92.03	150.0
MW-19	202,102.30	2,206,386.65	93.32	91.98	92.19	248.0
MW-20	201,798.92	2,206,946.09	90.27	88.59	89.08	149.5
MW-21	201,798.35	2,206,950.31	90.33	88.66	89.15	110.5

All elevations and depths in feet

Field survey performed by YEC, Inc., on March 23, 2007

(monitoring wells MW-1, 2, 3, 10 and 16 were not surveyed in 2007 as these wells were not included in the sampling at that time, these coordinates are estimated)

Horizontal datum: NAD 1927 State Plan

Vertical datum: NAVD 88, for NGVD 29, add 1.13 feet

TABLE 2
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
GROUNDWATER ELEVATIONS

Well # (screen interval)	Reference Elevation (ft, NGVD)	Total Depth of Well (ft)	Date	Depth To Water (ft)	Water Table Elevation (ft, NGVD)	Comments
MW-1 (shallow)	91.57		5/24/11 8/21/12 11/5/13	dry dry dry	NA NA NA	No water was observed in the well No water was observed in the well No water was observed in the well
MW-2 (shallow)	91.27	54.2	5/24/11 8/21/12 11/5/13	42.91 44.05 43.21	48.36 47.22 48.06	
MW-3 (shallow)	91.25	53.9	5/24/11 8/21/12 11/5/13	42.90 44.00 45.21	48.35 47.25 46.04	
MW-4 (shallow)	91.61	53.4	5/24/11 8/21/12 11/5/13	43.25 44.36 46.60	48.36 47.25 45.01	
MW-5 (shallow)	93.23	50.0	6/12/06 8/21/07 11/13/08 3/10/10 5/23/11 8/21/12 11/5/13	42.24 43.11 45.40 43.37 44.92 45.99 47.19	50.99 50.12 47.83 49.86 48.31 47.24 46.04	
MW-6 (Magothy)	92.71	265.0	6/12/06 8/21/07 11/13/08 3/10/10 5/23/11 8/21/12 11/5/13	42.19 43.15 45.23 43.12 44.76 45.70 45.95	50.52 49.56 47.48 49.59 47.95 47.01 46.76	
MW-10 (shallow)	90.40	50.0	5/24/11 8/21/12 11/5/13	42.12 43.18 43.10	48.28 47.22 47.30	
MW-12 (shallow)	89.59	49.3	6/14/06 8/24/07 11/13/08 12/23/08 3/10/10 5/24/11 8/21/12 11/5/13	39.09 39.95 42.25 41.81 40.07 41.69 42.75 43.00	50.50 49.64 47.34 47.78 49.52 47.90 46.84 46.59	

TABLE 2
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
GROUNDWATER ELEVATIONS

Well # (screen interval)	Reference Elevation (ft, NGVD)	Total Depth of Well (ft)	Date	Depth To Water (ft)	Water Table Elevation (ft, NGVD)	Comments
MW-14 (deep)	89.55	100.0	6/14/06	39.13	50.42	
			8/24/07	40.00	49.55	
			11/13/08	42.35	47.20	
			12/23/08	41.98	47.57	
			3/10/10	40.18	49.37	
			5/24/11	41.82	47.73	
			8/21/12	42.86	46.69	
			11/5/13	43.02	46.53	
MW-16 (deep)	90.48	99.2	5/24/11	42.03	48.45	
			8/21/12	43.41	47.07	
			11/5/13	44.63	45.85	
MW-18 (very deep)	91.55	150.0	6/22/06	40.76	50.79	
			8/21/07	41.25	50.30	
			11/13/08	43.80	47.75	
			3/10/10	41.82	49.73	
			5/24/11	43.41	48.14	
			8/21/12	44.47	47.08	
			11/5/13	45.69	45.86	
MW-19 (Magothy)	91.98	265.0	6/22/06	41.95	50.03	
			8/21/07	41.60	50.38	
			11/13/08	43.90	48.08	
			3/10/10	42.78	49.20	
			5/24/11	44.39	47.59	
			8/21/12	45.51	46.47	
			11/5/13	44.52	47.46	
MW-20 (very deep)	88.59	149.5	6/14/06	38.29	50.30	
			8/21/07	39.18	49.41	
			11/13/08	41.20	47.39	
			3/10/10	39.30	49.29	
			5/24/11	40.95	47.64	
			8/21/12	41.99	46.60	
			11/5/13	43.24	45.35	

TABLE 2
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
GROUNDWATER ELEVATIONS

Well # (screen interval)	Reference Elevation (ft, NGVD)	Total Depth of Well (ft)	Date	Depth To Water (ft)	Water Table Elevation (ft, NGVD)	Comments
MW-21 (deep)	88.66	110.5	6/14/06	38.30	50.36	
			8/21/07	39.20	49.46	
			11/13/08	41.47	47.19	
			3/10/10	39.31	49.35	
			5/24/11	40.94	47.72	
			8/21/12	41.97	46.69	
			11/5/13	43.20	45.46	

All measurements were taken from the top of PVC casing

Well Screen Interval

Shallow - 50 ft bgs

Deep - 100 ft bgs

Very deep - 150 ft bgs

Magothy - 250 ft bgs

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sample ID	Class GA	LMW-2	LMW-2	LMW-2	LMW-2F	LMW-2	LMW-2F
Laboratory ID	Ground	K0943-11	K0943-12	L1807-12	L1808-12	AC75576-029	AC75576-030
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/6/13	11/6/13
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	118 B	ND	602	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	44.6 B	44.9 B	39.5 B	31.9 B	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	8.5	5.5	3.5 B	2.7 B	ND	ND
Calcium	NC	16,300	16,700	20,400	21,500	30,000	29,000
Chromium	50	51.9	48.2	26.7	12.0 B	62.0	59.0
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	24 B	ND	14.4 B	4.2 B	ND	ND
Iron	300	205	ND	853	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	3,180	3,250	3,720	3,870	ND	ND
Manganese	300	ND	ND	17.7 B	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	5.5 B	2.7 B	4.6 B	3.3 B	ND	ND
Potassium	NC	2,720	2,610	1,710 E	1,660	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	21,300	22,400	21,400	22,900	15,000	16,000
Thallium	0.50	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	1.4 B	ND	ND	ND
Zinc	2,000	29.2 B	24.8 B	51.0	26.1 B	ND	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
Sample ID	Class GA	LMW-3	LMW-3	LMW-3	LMW-3F	LMW-3	LMW-3F
Laboratory ID	Ground	K0943-13	K0943-14	L1807-13	L1808-13	AC75576-001	AC75576-002
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	346	ND	360	ND	470	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	19.1 B	18.1 B	28.9 B	27.9 B	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	6.6	4.6 B	3.0 B	2.8 B	4.7	3.5
Calcium	NC	16,900	16,800	28,600	29,400	29,000	27,000
Chromium	50	59.6	32.6	118	103	140	95.0
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	45.5	11.7 B	14.2 B	6.5 B	ND	ND
Iron	300	462	ND	414	45.4 B	650	ND
Lead	25	14.1	ND	ND	ND	8.5	ND
Magnesium	35,000	2710	2,760	5,100	5,180	ND	ND
Manganese	300	11.8 B	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	6.7 B	4.3 B	3.8 B	3.4 B	ND	ND
Potassium	NC	1,950	1,770	2,560 E	2,480	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	12,400	13,200	30,800	31,000	38,000	35,000
Thallium	0.50	ND	ND	ND	ND	ND	ND
Vanadium	NC	1.4 B	ND	1.1 B	ND	ND	ND
Zinc	2,000	54.9	40.4 B	19.6 B	19.3 B	ND	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID	Class GA	LMW-4	LMW-4	LMW-4	LMW-4F	LMW-4	LMW-4F
Laboratory ID	Ground	K0943-15	K0943-16	L1807-14	L1808-14	AC75576-003	AC75576-004
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	2,560	ND	1,980	1,130	310	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	4.8 B	ND	6.4 B	ND	ND	ND
Barium	1,000	27.1 B	13.2 B	22.8 B	21.6 B	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	54.2	19.8	28.2	27.3	26.0	21.0
Calcium	NC	14,200	12,300	18,700	19,600	33,000	30,000
Chromium	50	176	142	74.9	58.7	ND	ND
Cobalt	NC	3.3 B	2.6 B	0.73 B	ND	ND	ND
Copper	200	137	43.5	69.7	58.9	ND	ND
Iron	300	2,660	109 B	2,000	1,110	320	ND
Lead	25	43.2	ND	15.5	9.8 B	ND	ND
Magnesium	35,000	1,710	1,270	2,770	2,870	ND	ND
Manganese	300	47.1 B	12.3 B	18.4 B	14.4 B	ND	ND
Mercury	0.7	0.036 B	ND	ND	ND	ND	ND
Nickel	100	43.5 B	12.8 B	17.5 B	15.8 B	ND	ND
Potassium	NC	6,600	6,790	2,340 E	2,460	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	26,100	29,100	13,400	14,400	21,000	21,000
Thallium	0.50	ND	ND	ND	ND	ND	ND
Vanadium	NC	7.0 B	1.2 B	4.9 B	3.2 B	ND	ND
Zinc	2,000	630	109	257	220	160	130

Notes:

All values in µg/L

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B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
Sample ID	Class GA	LMW-5	LMW-5	LMW-5	LMW-5	LMW-5	LMW-5	LMW-5	LMW-5F	LMW-5	LMW-5F
Laboratory ID	Ground	E0833-01A	F1192-04A	G2136-07A	J0429-01A	K0919-02	K0919-01	L1807-01	L1808-01	AC75576-009	AC75576-010
Sample Date	Water	6/12/06	8/23/07	11/14/08	3/8/10	5/23/11	5/23/11	8/20/12	8/20/12	11/5/13	11/5/13
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	238	157 B	ND	87.5 BE	ND	ND	245	157 B	ND	ND
Antimony	3	3.7 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	2.2 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	49.3 B	50.0 B	45.7 B	49.4 B	9 B	8.3 B	56.9 B	60.4 B	ND	ND
Beryllium	3	ND	ND	ND	0.089 B	ND	ND	ND	ND	ND	ND
Cadmium	5	0.13 B	0.51 B	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	19,000	15,000	16,900	14,100	6,280	5400	17,800	18,600	16,000	18,000
Chromium	50	18.2 B	42.2	7.3 B	29.0	1.8 B	0.88 B	1.7 B	1.5 B	ND	ND
Cobalt	NC	0.67 B	1.4 B	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	23.8 B	10.9 B	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	198 B	122 B	ND	107 BN	151 BN	54.3 BN	52.4 B	ND	ND	ND
Lead	25	1.3 B	3.4 B	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	2,040 E	1,870	2,040	1,830	2,370	2,140	3,210	3,390	ND	ND
Manganese	300	15.1 B	13.7 B	6.8 B	16.5 B	10.4 B	ND	68.2	67.4	ND	ND
Mercury	0.7	ND	ND	ND	0.056 B	ND	ND	ND	ND	ND	ND
Nickel	100	3.3 B	1.1 B	ND	1.2 B	2.5 B	1.3 B	2.3 B	2.9 B	ND	ND
Potassium	NC	4,330	4,500	4,380	4,740	627 B	613 B	5,410 E	5,440	ND	ND
Selenium	10	ND	7.4 B	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	4.0 B	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	4,460	7,800	7,570	6,570	8,000	7,420	18,100	19,000	9,100	11,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	0.59 B	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	29.1 B	18.4 B	13.7 B	15.2 B	27.9 B	24.5 B	10.5 B	10.3 B	ND	ND

Notes:

All values in µg/L

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B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location Sample ID Laboratory ID Sample Date Filtered/Unfiltered	NYSDEC Class GA Ground Water Criteria	MW-6 LMW-6 E0833-02A 6/12/06 Unfiltered conc. Q	MW-6 LMW-6 F1192-09A 8/24/07 Unfiltered conc. Q	MW-6 LMW-6 G2136-06A 11/14/08 Unfiltered conc. Q	MW-6 LMW-6 J0429-03A 3/8/10 Unfiltered conc. Q	MW-6 LMW-6 K0919-04 5/23/11 Unfiltered conc. Q	MW-6 LMW-6 K0919-03 5/23/11 Filtered conc. Q	MW-6 LMW-6 L1807-03 8/20/12 Unfiltered conc. Q	MW-6 LMW-6F L1808-03 8/20/12 Filtered conc. Q	MW-6 LMW-6 AC75576-011 11/5/13 Unfiltered conc. Q	MW-6 LMW-6F AC75576-012 11/5/13 Filtered conc. Q
Aluminum	NC	ND	398	ND	50.2 BE	ND	ND	488	ND	ND	ND
Antimony	3	3.1 B	8.0 B	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	24.9 B	29.6 B	15.7 B	11.3 B	34.4 B	33.9 B	14.4 B	2.7 B	ND	ND
Beryllium	3	ND	ND	ND	0.062 B	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	12.6	0.55 B	0.62 B	ND	ND	ND	ND	ND	ND
Calcium	NC	9,880	10,000	8,300	6,120	19,500	20,000	7,700	7,750	5,800	6,100
Chromium	50	0.79 B	28.7	ND	1.9 B	15.7 B	14.7 B	2.1 B	ND	ND	ND
Cobalt	NC	0.31 B	2.2 B	ND	ND	ND	ND	0.86 B	ND	ND	ND
Copper	200	15.6 B	31.3	ND	5.6 B	ND	ND	4.0 B	ND	ND	ND
Iron	300	45.2 B	3,120	147 B	137 BN	ND	ND	338	39.8 B	ND	ND
Lead	25	ND	15.8	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	2,980 E	2,630	2,590	1,970	2,190	2,240	3,180	3,180	ND	ND
Manganese	300	5.9 B	60.9	40.8 B	11.4 B	ND	ND	21.8 B	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	3.6 B	12.3 B	2.2 B	1.9 B	ND	ND	2.4 B	2.0 B	ND	ND
Potassium	NC	759 B	1,390	2,060	1,180	3,500	3,530	753 B	552 B	ND	ND
Selenium	10	1.6 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	10,100	9,950	11,600	7,660	7,760	7,890	10,000	10,300	7,600	7,700
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	2.0 B	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	24.8 B	118	21.9 B	25.4 B	16.6 B	18.8 B	12.4 B	7.9 B	ND	ND

Notes:

All values in µg/L

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B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
Sample ID	Class GA	LMW-10	LMW-10	LMW-10	LMW-10F	LMW-10	LMW-10F
Laboratory ID	Ground	K0943-03	K0943-04	L1807-10	L1808-10	AC75576-005	AC75576-006
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	101 B	ND	159 B	ND	210	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	35.0 B	32.5 B	28.7 B	28.1 B	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	10.3	11.3	36.1	34.9	49.0	50.0
Calcium	NC	18,700	18,700	25,900	26,000	28,000	28,000
Chromium	50	72.7	89.3	152	155	140	140
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND
Iron	300	245	ND	391	ND	420	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	3,700	3,590	3,640	3,650	ND	ND
Manganese	300	16.8 B	ND	18.9 B	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	1.6 B	0.91 B	3.5 B	3.5 B	ND	ND
Potassium	NC	2,380	2,530	4,810 E	4,770	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	17,100	19,300	14,800	14,900	9,200	9,300
Thallium	0.50	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	27.1 B	21.7 B	ND	ND	ND	ND

Notes:

All values in µg/L

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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16
Sample ID	Class GA	LMW-16	LMW-16	LMW-16	LMW-16F	LMW-16	LMW-16F
Laboratory ID	Ground	K0943-09	K0943-10	L1807-11	L1808-11	AC75576-007	AC75576-008
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,150	586	340	322	1,400	440
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	299	351	339	339	230	240
Beryllium	3	2.0 B	1.8 B	0.7 B	0.72 B	1.5	1.2
Cadmium	5	5.3	4.9 B	4.2 B	4.3 B	4.4	3.9
Calcium	NC	9,240	9,890	12,100	11,700	9,800	10,000
Chromium	50	11.7 B	8.9 B	2.8 B	2.3 B	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	9.4 B	11.3 B	66.6	63.0	ND	ND
Iron	300	115 B	ND	49.9 B	ND	1,800	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	35,000	2,350	2,570	3,740	3,680	ND	ND
Manganese	300	597	623	661	632	570	530
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	13.9 B	14.1 B	11.8 B	12.0 B	ND	ND
Potassium	NC	4,930	4,880	6,010 E	5,860	5,100	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	14,700	14,500	13,900	13,500	11,000	11,000
Thallium	0.50	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	67.5	69	34.2 B	33.2 B	ND	ND

Notes:

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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12
Sample ID	Class GA	LMW-12	LMW-12	LMW-12	LMW-12	LMW-12	LMW-12	LMW-12	LMW-12F	LMW-12	LMW-12F
Laboratory ID	Ground	E0833-03A	F1192-05A	G2415-01	J0429-04A	K0919-06	K0919-05	L1807-06	L1808-06	AC75576-023	AC75576-024
Sample Date	Water	6/14/06	8/24/07	12/23/08	3/9/10	5/24/11	5/24/11	8/21/12	8/21/12	11/5/13	11/5/13
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	445	9,070	2,260	33,600 E	12,000	ND	1,560	ND	810	ND
Antimony	3	1.8 B	11.2 B	ND	13.9 B	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	3.3 B	ND	14.2 B	5.1 B	ND	ND	ND	ND	ND
Barium	1,000	45.2 B	75.4 B	60.5 B	188 B	88.9 B	28.1 B	44.6 B	48.2 B	ND	51
Beryllium	3	0.38 B	0.24 B	0.19 B	2.1 B	0.79 B	ND	ND	ND	ND	ND
Cadmium	5	0.52 B	5.6	25.5	205	54.8	4.5 B	4.4 B	9.3	2.9	ND
Calcium	NC	13,100	26,900	19,700	29,900	23,300	18,700	10,900	28,900	40,000	44,000
Chromium	50	2.5 B	37.5	18.9 B	251	72.8	ND	103	ND	ND	ND
Cobalt	NC	0.63 B	5.5 B	2.6 B	12.8 B	4.1 B	ND	ND	ND	ND	ND
Copper	200	14.9 B	85.3	63.5	377	147	ND	10.6 B	ND	ND	ND
Iron	300	467	10,900	4,080	38,100 N	11,300 N	1,620 N	1,740	39.0 B	740	ND
Lead	25	7.7 B	106	83.7	553	230	ND	19.4	ND	9.9	ND
Magnesium	35,000	3,710 E	6,830	4,330	10,900	5,760	3,310	2,540	5,600	6,400	7,200
Manganese	300	77.3	96.9	82.7	253	77.6	37.3 B	211	ND	ND	ND
Mercury	0.7	ND	ND	ND	0.54	ND	ND	ND	ND	ND	ND
Nickel	100	3.4 B	12.4 B	14.9 B	57.1	18.5 B	1.9 B	6.4 B	2.0 B	ND	ND
Potassium	NC	2,280	2,700	2,540	3,810	3,670	2,870	4,350 E	2,970	ND	ND
Selenium	10	2.6 B	ND	ND	13.4 B	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	7.6 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	11,700	13,400	27,100	33,600	8,250	7,660	15,400	16,200	12,000	14,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	0.77 B	28.8 B	8.6 B	89.7	33 B	1.5 B	3.9 B	ND	ND	ND
Zinc	2,000	26.1 B	246	220	1,280	488	52.1	32.5 B	55.9	ND	ND

Notes:

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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14
Sample ID	Class GA	LMW-14	LMW-14	LMW-14	LMW-14	LMW-14	LMW-14	LMW-14	LMW-14F	LMW-14	LMW-14F
Laboratory ID	Ground	E0833-04A	F1192-06A	G2415-02	J0429-05A	K0919-08	K0919-07	L1807-07	L1808-07	AC75576-021	AC75576-022
Sample Date	Water	6/14/06	8/24/07	12/23/08	3/9/10	5/24/11	5/24/11	8/21/12	8/21/12	11/5/13	11/5/13
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	780	314	7,090	4,830 E	652	ND	314	954	5,300	ND
Antimony	3	1.5 B	ND	ND	ND	ND	ND	ND	ND	2.2	ND
Arsenic	25	ND	ND	5.6 B	6.0 B	5.6 B	ND	ND	ND	3.2	ND
Barium	1,000	40.5 B	31.5 B	162 B	107 B	57.1 B	50.4 B	47.2 B	43.3 B	56.0	ND
Beryllium	3	ND	ND	0.38 B	0.28 B	ND	ND	ND	ND	ND	ND
Cadmium	5	4.9 B	1.5 B	59.1	26	9.2	7.6	9.3	3.7 B	6.6	2.4
Calcium	NC	13,100	12,900	35,800	18,700	18,300	18,400	28,100	10,900	11,000	12,000
Chromium	50	95.8	248	69.6	68.6	51.3	29.6	2.4 B	88.2	170	ND
Cobalt	NC	2.0 B	1.2 B	5.1 B	2.7 B	0.72 B	ND	ND	ND	ND	ND
Copper	200	22.2 B	8.9 B	110	42.8	13.6 B	ND	5.0 B	7.2 B	ND	ND
Iron	300	728	389	9,320	14,000 N	1,780 N	1,430 N	279	1,180	6,000	930
Lead	25	2.9 B	3.4 B	221	76.5	18.8	ND	ND	13.2	53.0	3.7
Magnesium	35,000	1,610 E	3,000	6,340	2,910	3,840	3,700	5,450	2,470	ND	ND
Manganese	300	35.3 B	21.2 B	231	186	260	235	ND	211	290	300
Mercury	0.7	ND	ND	ND	0.1 B	ND	ND	ND	ND	ND	ND
Nickel	100	7.5 B	4.4 B	53.2	18.3 B	11.8 B	8.7 B	1.1 B	6.1 B	ND	ND
Potassium	NC	3,320	4,140	7,090	1,670	4,430	4,570	2,990 E	4,170	5,000	ND
Selenium	10	ND	6.7 B	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	3.2 B	4.3 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	31,900	28,900	561,000	25,400	20,400	20,300	15,400	15,400	10,000	12,000
Thallium	0.50	ND	3.4 B	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	0.58 B	0.51 B	22.5 B	12.6 B	2.4 B	ND	1.9 B	2.3 B	ND	ND
Zinc	2,000	40.1 B	27.5 B	520	279	99.1	70.1	56.3	25.5 B	94.0	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18
Sample ID	Class GA	LMW-18	LMW-18	LMW-18	LMW-18	LMW-18	LMW-18	LMW-18	LMW-18F	LMW-18	LMW-18F
Laboratory ID	Ground	E0868-14A	F1192-08A	G2136-02A	J0429-06A	K0919-10	K0919-09	L1807-04	L1808-04	AC75576-013	AC75576-014
Sample Date	Water	6/22/06	8/24/07	11/13/08	3/10/10	5/24/11	5/24/11	8/21/12	8/21/12	11/5/13	11/5/13
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	135 B	252	196 B	716 E	193 B	ND	ND	164 B	ND	ND
Antimony	3	ND	ND	9.0 B	5.2 B	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	74.8 B	92.5 B	86.4 B	103 B	101 B	104 B	61.3 B	64.8 B	62.0	61.0
Beryllium	3	ND	ND	ND	0.12 B	ND	ND	ND	ND	ND	ND
Cadmium	5	0.33 B	1.3 B	0.92 B	0.86 B	3.0 B	2.9 B	ND	ND	ND	ND
Calcium	NC	12,800	15,500	13,500	18,900	21,100	21,900	15,800	15,700	19,000	20,000
Chromium	50	3.3 B	2.1 B	5.4 B	6.5 B	3.1 B	2.3 B	1.9 B	3.1 B	ND	ND
Cobalt	NC	0.48 B	1.3 B	ND	1.0 B	ND	ND	ND	ND	ND	ND
Copper	200	ND	8.1 B	11.0 B	9.8 B	6.9 B	ND	ND	ND	ND	ND
Iron	300	212	308	307	731 N	327 N	ND	ND	277	ND	ND
Lead	25	ND	3.0 B	2.5 B	3.9 B	ND	ND	ND	ND	ND	ND
Magnesium	35,000	5,440	5,430	4,960	4,460	4,380	4,560	3,720	3,650	ND	ND
Manganese	300	169	547	122	312	521	421	39.1 B	539	1,200	ND
Mercury	0.7	ND	ND	ND	0.057 B	ND	ND	ND	ND	ND	ND
Nickel	100	1.4 B	3.1 B	3.2 B	6.5 B	3.4 B	2.4 B	ND	1.5 B	ND	ND
Potassium	NC	10,800	7,290	10,200	13,500	11,500	12,500	9,220 E	8,720	8,200	7,800
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	4.0 B	1.6 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	30,000	26,700	29,600	30,000	28,400	30,200	26,600	26,000	25,000	26,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	0.66 B	ND	0.63 B	ND	ND	ND	ND	ND	ND
Zinc	2,000	25.0 B	34.8 B	86.7	57.8	37.2 B	33.8 B	16.0 B	8.0 B	ND	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location Sample ID Laboratory ID Sample Date Filtered/Unfiltered	NYSDEC Class GA Ground Water Criteria	MW-19 LMW-19 E0868-15A 6/22/06 Unfiltered conc. Q	MW-19 LMW-19 F1192-07A 8/24/07 Unfiltered conc. Q	MW-19 LMW-19 G2136-01A 11/13/08 Unfiltered conc. Q	MW-19 LMW-19 J0429-07A 3/10/10 Unfiltered conc. Q	MW-19 LMW-19 K0919-12 5/24/11 Unfiltered conc.	MW-19 LMW-19 K0919-11 5/24/11 Filtered conc. Q	MW-19 LMW-19 L1807-05 8/21/12 Unfiltered conc. Q	MW-19 LMW-19F L1808-05 8/21/12 Filtered conc. Q	MW-19 LMW-19 AC75576-015 11/5/13 Unfiltered conc.	MW-19 LMW-19F AC75576-016 11/5/13 Filtered conc. Q
Aluminum	NC	53.4 B	74.9 B	ND	69.9 B E	ND	ND	ND	ND	ND	ND
Antimony	3	ND	6.7 B	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	14.2 B	21.5 B	20.0 B	18.7 B	13.0 B	12.6 B	11.5 B	9.5 B	ND	ND
Beryllium	3	ND	ND	ND	0.046 B	ND	ND	ND	ND	ND	ND
Cadmium	5	1.1 B	8.0	ND	2.7 B	ND	2.4 B	ND	ND	ND	ND
Calcium	NC	9,900	13,000	9,700	11,500	11,600	11,700	10,600	10,100	11,000	11,000
Chromium	50	1 B	2.0 B	ND	1.8 B	0.94 B	ND	0.81 B	ND	ND	ND
Cobalt	NC	ND	1.2 B	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	11.7 B	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	54.2 B	221	ND	234 N	40.1 B N	ND	32.8 B	ND	ND	ND
Lead	25	ND	4.1 B	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	3,180	4,600	3,970	4,350	4,460	4,480	4,130	3,920	ND	ND
Manganese	300	3.5 B	9.3 B	14.9 B	8.0 B	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	2.9 B	ND	0.96 B	ND	ND	ND	ND	ND	ND
Potassium	NC	816 B	949 B	947 B	1,070	993 B	1,120	890 B	867 B	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	3.3 B	1.1 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	10,200	14,400	13,400	14,900	14,600	14,600	14,500	13,700	14,000	14,000
Thallium	0.50	ND	2.9 B	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	42.8 B	48.1 B	30.5 B	47.0 B	28.0 B	28.2 B	ND	ND	ND	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20
Sample ID	Class GA	LMW-20	LMW-20	LMW-20	LMW-20	LMW-20	LMW-20	LMW-20	LMW-20F	LMW-20	LMW-20F
Laboratory ID	Ground	E0833-05A	F1192-03A	G2136-04A	J0429-08A	K0943-05	K0943-06	L1807-09	L1808-09	AC75576-025	AC75576-026
Sample Date	Water	6/14/06	8/22/07	11/13/08	3/9/10	5/26/11	5/26/11	8/21/12	8/21/12	11/5/13	11/5/13
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc.	conc. Q
Aluminum	NC	223	299	81.6 B	404 E	303	ND	411	ND	ND	ND
Antimony	3	1.7 B	9.5 B	ND	4.4 B	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	38.9 B	57.8 B	48.8 B	35.0 B	27.0 B	25.4 B	42.1 B	40 B	ND	ND
Beryllium	3	ND	ND	ND	0.057 B	ND	ND	ND	ND	ND	ND
Cadmium	5	1 B	0.45 B	0.74 B	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	13,200	20,600	4,420	9,050	7,700	7,870	17,400	16,900	19,000	18,000
Chromium	50	4.6 B	3.1 B	2.1 B	5.1 B	5.1 B	1.1 B	2.0 B	0.91 B	ND	ND
Cobalt	NC	0.92 B	2.5 B	ND	1.1 B	1.2 B	0.93 B	ND	ND	ND	ND
Copper	200	13.6 B	8.7 B	ND	5.7 B	6.0 B	ND	ND	ND	ND	ND
Iron	300	1,710	624	164 B	1,370 N	879	71.7 B	398	ND	ND	ND
Lead	25	1.5 B	3.7 B	ND	4.9 B	ND	ND	ND	ND	ND	ND
Magnesium	35,000	6,050 E	9,820	3,400	4,400	3,790	3,870	8,990	8,870	9,000	9,200
Manganese	300	27.8 B	60.5	35.0 B	27.1 B	17.5 B	ND	23.2 B	ND	ND	ND
Mercury	0.7	ND	ND	ND	0.064 B	ND	ND	ND	ND	ND	ND
Nickel	100	4.6 B	2.4 B	1.8 B	3.5 B	1.8 B	ND	ND	1.0 B	ND	ND
Potassium	NC	2,050	2,220	8,190	1,970	2,430	2,060	1,840 E	1,710	ND	ND
Selenium	10	1.1 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	5.2 B	0.6 B	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	21,800	31,100	29,700	39,600	38,400	40,300	21,700	21,400	21,000	22,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	0.48 B	1.6 B	ND	1.2 B	ND	ND	ND	ND	ND	ND
Zinc	2,000	48.7 B	32.8 B	28.5 B	187	52.5	29.7 B	ND	ND	ND	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH NOVEMBER 2013 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
Sample ID	Class GA	LMW-21	LMW-21	LMW-21	LMW-21	LMW-21	LMW-21	LMW-21	LMW-21	LMW-21	LMW-21F
Laboratory ID	Ground	E0833-06A	F1192-01A	G2136-05A	J0429-09A	K0943-07	K0943-08	L1807-08	L1808-08	AC75576-027	AC75576-028
Sample Date	Water	6/14/06	8/22/07	11/14/08	3/9/10	5/26/11	5/26/11	8/21/12	8/21/12	11/5/13	11/5/13
Filtered/Unfiltered	Criteria	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	197 B	457	793 E	319	ND	746	ND	410	ND
Antimony	3	1.9 B	6.7 B	ND	ND	ND	ND	ND	11.9 B	ND	ND
Arsenic	25	2.2 B	ND	ND	ND	4.3 B	ND	ND	ND	ND	ND
Barium	1,000	79.3 B	60.9 B	58.2 B	119 B	78.8 B	76.2 B	92.6 B	85.9 B	67.0	67.0
Beryllium	3	ND	ND	ND	0.16 B	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	1.5 B	4.8 B	1.1 B	1.2 B	ND	ND	ND	ND	ND
Calcium	NC	7,520	5,190	11,900	12,600	17,000	16,900	14,300	14,200	14,000	14,000
Chromium	50	0.94 B	3.0 B	2.3 B	9.0 B	6.2 B	3.3 B	13.2 B	10.6 B	ND	ND
Cobalt	NC	0.48 B	1.5 B	ND	1.5 B	ND	ND	ND	ND	ND	ND
Copper	200	ND	13.7 B	6.6 B	8.2 B	8.5 B	ND	3.9 B	ND	ND	ND
Iron	300	31.4 B	503	198 B	1,840 N	694	32 B	1,330	ND	760	ND
Lead	25	ND	4.5 B	2.6 B	8.2 B	ND	ND	ND	ND	ND	ND
Magnesium	35,000	5,440 E	3,320	2,960	8,380	6,960	7,240	6,050	5,820	6,100	6,100
Manganese	300	26.4 B	51.8	627	57.7	36.1 B	19.7 B	96.1	56.7	100	64.0
Mercury	0.7	ND	ND	ND	0.058 B	ND	ND	ND	ND	ND	ND
Nickel	100	1.9 B	2.4 B	6.9 B	4.9 B	3.3 B	1.3 B	2.8 B	2.4 B	ND	ND
Potassium	NC	5,670	6,350	6,250	12,700	12,500	9,270	7,500 E	7,050	6,200	5,800
Selenium	10	4.1 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	24,500	27,200	19,200	31,800	24,300	21,700	19,700	19,400	17,000	18,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	0.063 B	ND	2.1 B	1.5 B	ND	1.8 B	ND	ND	ND
Zinc	2,000	14.2 B	40.5 B	69.1	67.6	65.1	30.5 B	15.5 B	6.0 B	ND	ND

Notes:

All values in µg/L

NC - No NYSDEC criterion

ND - Not Detected

B - Estimated value

BOLD/Italics - Exceeds criterion

E - Estimated value due to interference

N - Spike recovery outside control limits

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
NOVEMBER 2013 SAMPLING EVENT

COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-2	MW-2	MW-2	MW-3	MW-3	MW-3	MW-4	MW-4	MW-4
Sample ID	Class GA	LMW-2	LMW-2F		LMW-3	LMW-3F		LMW-4	LMW-4F	
Laboratory ID	Ground	AC75576-029	AC75576-030		AC75576-001	AC75576-002		AC75576-003	AC75576-004	
Sample Date	Water	11/6/13	11/6/13		11/4/13	11/4/13		11/4/13	11/4/13	
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Dissolved	Unfiltered	Filtered	Dissolved	Unfiltered	Filtered	Dissolved
		conc. Q	conc. Q		conc. Q	conc. Q		conc. Q	conc. Q	
Aluminum	NC	ND	ND	NC	470	ND	NC	310	ND	NC
Antimony	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Arsenic	25	ND	ND	NC	ND	ND	NC	ND	ND	NC
Barium	1,000	ND	ND	NC	ND	ND	NC	ND	ND	NC
Beryllium	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Cadmium	5	ND	ND	NC	4.7	3.5	74.5%	26	21	80.8%
Calcium	NC	30,000	29,000	96.7%	29,000	27,000	93.1%	33,000	30,000	90.9%
Chromium	50	62	59	95.2%	140	95	67.9%	ND	ND	NC
Cobalt	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC	ND	ND	NC
Iron	300	ND	ND	NC	650	ND	NC	320	ND	NC
Lead	25	ND	ND	NC	8.5	ND	NC	ND	ND	NC
Magnesium	35,000	ND	ND	NC	ND	ND	NC	ND	ND	NC
Manganese	300	ND	ND	NC	ND	ND	NC	ND	ND	NC
Mercury	0.7	ND	ND	NC	ND	ND	NC	ND	ND	NC
Nickel	100	ND	ND	NC	ND	ND	NC	ND	ND	NC
Potassium	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Selenium	10	ND	ND	NC	ND	ND	NC	ND	ND	NC
Silver	50	ND	ND	NC	ND	ND	NC	ND	ND	NC
Sodium	20,000	15,000	16,000	106.7%	38,000	35,000	92.1%	21,000	21,000	100.0%
Thallium	0.50	ND	ND	NC	ND	ND	NC	ND	ND	NC
Vanadium	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Zinc	2,000	ND	ND	NC	ND	ND	NC	160	130	81.3%
Turbidity (NTU)		11.1			31.7			9.7		

Notes: E - Estimated value due to interference
B - Estimated value
ND - Not Detected
BOLD/Italics - Exceeds criterion

All values except turbidity are in micrograms per liter (µg/L)
% Dissolved = filtered conc. / unfiltered conc.
NC - No NYSDEC criterion or Not Calculable

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
NOVEMBER 2013 SAMPLING EVENT

COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location Sample ID Laboratory ID Sample Date Filtered/Unfiltered	NYSDEC Class GA Ground Water Criteria	MW-5 LMW-5 AC75576-009 11/5/13 Unfiltered conc. Q	MW-5 LMW-5F AC75576-010 11/5/13 Filtered conc. Q	MW-5 Dissolved	MW-6 LMW-6 AC75576-011 11/5/13 Unfiltered conc. Q	MW-6 LMW-6F AC75576-012 11/5/13 Filtered conc. Q	MW-6 Dissolved	MW-10 LMW-10 AC75576-005 11/4/13 Unfiltered conc. Q	MW-10 LMW-10F AC75576-006 11/4/13 Filtered conc. Q	MW-10 Dissolved
Aluminum	NC	ND	ND	NC	ND	ND	NC	210	ND	NC
Antimony	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Arsenic	25	ND	ND	NC	ND	ND	NC	ND	ND	NC
Barium	1,000	ND	ND	NC	ND	ND	NC	ND	ND	NC
Beryllium	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Cadmium	5	ND	ND	NC	ND	ND	NC	49	50	102.0%
Calcium	NC	16,000	18000	112.5%	5,800	6,100	105.2%	28,000	28,000	100.0%
Chromium	50	ND	ND	NC	ND	ND	NC	140	140	100.0%
Cobalt	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC	ND	ND	NC
Iron	300	ND	ND	NC	ND	ND	NC	420	ND	NC
Lead	25	ND	ND	NC	ND	ND	NC	ND	ND	NC
Magnesium	35,000	ND	ND	NC	ND	ND	NC	ND	ND	NC
Manganese	300	ND	ND	NC	ND	ND	NC	ND	ND	NC
Mercury	0.7	ND	ND	NC	ND	ND	NC	ND	ND	NC
Nickel	100	ND	ND	NC	ND	ND	NC	ND	ND	NC
Potassium	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Selenium	10	ND	ND	NC	ND	ND	NC	ND	ND	NC
Silver	50	ND	ND	NC	ND	ND	NC	ND	ND	NC
Sodium	20,000	9,100	11,000	120.9%	7,600	7,700	101.3%	9,200	9,300	101.1%
Thallium	0.50	ND	ND	NC	ND	ND	NC	ND	ND	NC
Vanadium	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Zinc	2,000	ND	ND	NC	ND	ND	NC	ND	ND	NC
Turbidity (NTU)		15.3			17.3			11.9		

Notes: E - Estimated value due to interference
B - Estimated value
ND - Not Detected
BOLD/Italics - Exceeds criterion

All values except turbidity are in micrograms per liter (µg/L)
% Dissolved = filtered conc. / unfiltered conc.
NC - No NYSDEC criterion or Not Calculable

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
NOVEMBER 2013 SAMPLING EVENT

COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location Sample ID Laboratory ID Sample Date Filtered/Unfiltered	NYSDEC Class GA Ground Water Criteria	MW-12 LMW-12 AC75576-023 11/5/13 Unfiltered conc. Q	MW-12 LMW-12F AC75576-024 11/5/13 Filtered conc. Q	MW-12 Dissolved	MW-14 LMW-14 AC75576-021 11/5/13 Unfiltered conc. Q	MW-14 LMW-14F AC75576-022 11/5/13 Filtered conc. Q	MW-14 Dissolved	MW-16 LMW-16 AC75576-007 11/4/13 Unfiltered conc. Q	MW-16 LMW-16F AC75576-008 11/4/13 Filtered conc. Q	MW-16 Dissolved
Aluminum	NC	810	ND	NC	5,300	ND	NC	1,400	440	31.4%
Antimony	3	ND	ND	NC	2.2	ND	NC	ND	ND	NC
Arsenic	25	ND	ND	NC	3.2	ND	NC	ND	ND	NC
Barium	1,000	ND	51	NC	56	ND	NC	230	240	104.3%
Beryllium	3	ND	ND	NC	ND	ND	NC	1.5	1.2	80.0%
Cadmium	5	2.9	ND	NC	6.6	2.4	36.4%	4.4	3.9	88.6%
Calcium	NC	40,000	44,000	110.0%	11,000	12,000	109.1%	9,800	10,000	102.0%
Chromium	50	ND	ND	NC	170	ND	NC	ND	ND	NC
Cobalt	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC	ND	ND	NC
Iron	300	740	ND	NC	6,000	930	15.5%	1,800	ND	NC
Lead	25	9.9	ND	NC	53	3.7	7.0%	ND	ND	NC
Magnesium	35,000	6,400	7,200	112.5%	ND	ND	NC	ND	ND	NC
Manganese	300	ND	ND	NC	290	300	103.4%	570	530	93.0%
Mercury	0.7	ND	ND	NC	ND	ND	NC	ND	ND	NC
Nickel	100	ND	ND	NC	ND	ND	NC	ND	ND	NC
Potassium	NC	ND	ND	NC	5,000	ND	NC	5,100	ND	NC
Selenium	10	ND	ND	NC	ND	ND	NC	ND	ND	NC
Silver	50	ND	ND	NC	ND	ND	NC	ND	ND	NC
Sodium	20,000	12,000	14,000	116.7%	10,000	12,000	120.0%	11,000	11,000	100.0%
Thallium	0.50	ND	ND	NC	ND	ND	NC	ND	ND	NC
Vanadium	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Zinc	2,000	ND	ND	NC	94	ND	NC	ND	ND	NC
Turbidity (NTU)		33.7			16.9			38.5		

Notes: E - Estimated value due to interference
B - Estimated value
ND - Not Detected
BOLD/Italics - Exceeds criterion

All values except turbidity are in micrograms per liter (µg/L)
% Dissolved = filtered conc. / unfiltered conc.
NC - No NYSDEC criterion or Not Calculable

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
NOVEMBER 2013 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-18	MW-18	MW-18	MW-19	MW-19	MW-19
Sample ID	Class GA	LMW-18	LMW-18F		LMW-19	LMW-19F	
Laboratory ID	Ground	AC75576-013	AC75576-014		AC75576-015	AC75576-016	
Sample Date	Water	11/5/13	11/5/13		11/5/13	11/5/13	
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Dissolved	Unfiltered	Filtered	Dissolved
		conc. Q	conc. Q		conc. Q	conc. Q	
Aluminum	NC	ND	ND	NC	ND	ND	NC
Antimony	3	ND	ND	NC	ND	ND	NC
Arsenic	25	ND	ND	NC	ND	ND	NC
Barium	1,000	62	61	98.4%	ND	ND	NC
Beryllium	3	ND	ND	NC	ND	ND	NC
Cadmium	5	ND	ND	NC	ND	ND	NC
Calcium	NC	19,000	20,000	105.3%	11,000	11,000	100.0%
Chromium	50	ND	ND	NC	ND	ND	NC
Cobalt	NC	ND	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC
Iron	300	ND	ND	NC	ND	ND	NC
Lead	25	ND	ND	NC	ND	ND	NC
Magnesium	35,000	ND	ND	NC	ND	ND	NC
Manganese	300	1,200	ND	NC	ND	ND	NC
Mercury	0.7	ND	ND	NC	ND	ND	NC
Nickel	100	ND	ND	NC	ND	ND	NC
Potassium	NC	8,200	7,800	95.1%	ND	ND	NC
Selenium	10	ND	ND	NC	ND	ND	NC
Silver	50	ND	ND	NC	ND	ND	NC
Sodium	20,000	25,000	26,000	104.0%	14,000	14,000	100.0%
Thallium	0.50	ND	ND	NC	ND	ND	NC
Vanadium	NC	ND	ND	NC	ND	ND	NC
Zinc	2,000	ND	ND	NC	ND	ND	NC
Turbidity (NTU)		2.8			7.9		

Notes:

E - Estimated value due to interference

B - Estimated value

ND - Not Detected

BOLD/Italics - Exceeds criterion

All values except turbidity are in micrograms per liter (µg/L)

% Dissolved = filtered conc. / unfiltered conc.

NC - No NYSDEC criterion or Not Calculable

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
NOVEMBER 2013 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-20	MW-20	MW-20	MW-21	MW-21	MW-21
Sample ID	Class GA	LMW-20	LMW-20F		LMW-21	LMW-21F	
Laboratory ID	Ground	AC75576-025	AC75576-026		AC75576-027	AC75576-028	
Sample Date	Water	11/5/13	11/5/13		11/5/13	11/5/13	
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Dissolved	Unfiltered	Filtered	Dissolved
		conc. Q	conc. Q		conc. Q	conc. Q	
Aluminum	NC	ND	ND	NC	410	ND	NC
Antimony	3	ND	ND	NC	ND	ND	NC
Arsenic	25	ND	ND	NC	ND	ND	NC
Barium	1,000	ND	ND	NC	67	67	100.0%
Beryllium	3	ND	ND	NC	ND	ND	NC
Cadmium	5	ND	ND	NC	ND	ND	NC
Calcium	NC	19,000	18,000	94.7%	14,000	14,000	100.0%
Chromium	50	ND	ND	NC	ND	ND	NC
Cobalt	NC	ND	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC
Iron	300	ND	ND	NC	760	ND	NC
Lead	25	ND	ND	NC	ND	ND	NC
Magnesium	35,000	9,000	9,200	102.2%	6,100	6,100	100.0%
Manganese	300	ND	ND	NC	100	64	64.0%
Mercury	0.7	ND	ND	NC	ND	ND	NC
Nickel	100	ND	ND	NC	ND	ND	NC
Potassium	NC	ND	ND	NC	6,200	5,800	93.5%
Selenium	10	ND	ND	NC	ND	ND	NC
Silver	50	ND	ND	NC	ND	ND	NC
Sodium	20,000	21,000	22,000	104.8%	17,000	18,000	105.9%
Thallium	0.50	ND	ND	NC	ND	ND	NC
Vanadium	NC	ND	ND	NC	ND	ND	NC
Zinc	2,000	ND	ND	NC	ND	ND	NC
Turbidity (NTU)		0.0			17.7		

Notes:

E - Estimated value due to interference
B - Estimated value
ND - Not Detected
BOLD/Italics - Exceeds criterion

All values except turbidity are in micrograms per liter (µg/L)
% Dissolved = filtered conc. / unfiltered conc.
NC - No NYSDEC criterion or Not Calculable

TABLE 5
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SOIL SAMPLE RESULTS - JUNE 2013

	ROD March 1991	Unrestricted	Restricted Use Category			
			Residential	Restricted Residential	Commercial	Industrial
Arsenic	-	13	16	16	16	16
Cadmium	10	2.5	2.5	4.3	9.3	60
Chromium-6	50	1	22	110	400	800
Chromium-3	-	30	36	180	1500	6800
Copper	25	50	270	270	270	10000
Lead	-	63	400	400	1000	3900
Nickel	13	30	140	310	310	10000
Zinc	47	109	2200	10000	10000	10000
Cyanide	NC	27	27	27	27	10000
Mercury	-	0.18	0.81	0.81	2.8	5.7

Off-Site Locations

	SS-01	HA-01	SS-02	HA-02	SS-03	HA-03	SS-06	HA-06	SS-07	HA-07
Arsenic	3.6	1.3	4.1	3.9	5.9	4.6	5.5	4.1	3.6	4.2
Cadmium	0.36	-	0.19	0.052	0.64	0.098	0.37	0.075	0.53	0.16
Chromium	12.6	3.9	11	12	20.7	19.7	10.7	12.6	8.3	12.9
Copper	18.4	1.3	8.7	2.6	20	8.6	22.1	13.9	14.3	6
Lead	102	2.9	66.2	7.4	81.5	12.6	35.9	9.1	35.5	19.5
Nickel	6.6	1.9	4.9	6.1	8.1	10.9	5.5	5.3	5.5	6.4
Zinc	60.9	6.2	20	18.2	43.1	31.1	47.2	18.4	48.6	24.5
Mercury	0.16	0.0092	0.11	0.013	0.098	0.034	0.057	0.018	0.039	0.026

Suffolk Avenue

	SS-04	HA-04	SS-05	HA-05
Arsenic	8.8	3.3	5.3	2.9
Cadmium	2.9	0.1	1.5	0.23
Chromium	26.1	11.9	23.8	9.5
Copper	45.1	4	24.4	7.6
Lead	290	14.7	126	36.1
Nickel	18.9	5.2	7.8	3.9
Zinc	228	18.2	143	31.5
Mercury	0.15	0.015	0.11	0.027

SS - Surface soil
HA - Hand auger (0 - 0.5 ft bgs)

**TABLE 5
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SOIL SAMPLE RESULTS - JUNE 2013**

	ROD March 1991	Unrestricted	Restricted Use Category			
			Residential	Restricted Residential	Commercial	Industrial
Arsenic	-	13	16	16	16	16
Cadmium	10	2.5	2.5	4.3	9.3	60
Chromium-6	50	1	22	110	400	800
Chromium-3	-	30	36	180	1500	6800
Copper	25	50	270	270	270	10000
Lead	-	63	400	400	1000	3900
Nickel	13	30	140	310	310	10000
Zinc	47	109	2200	10000	10000	10000
Cyanide	NC	27	27	27	27	10000
Mercury	-	0.18	0.81	0.81	2.8	5.7

Western Side of the Former Building Slab

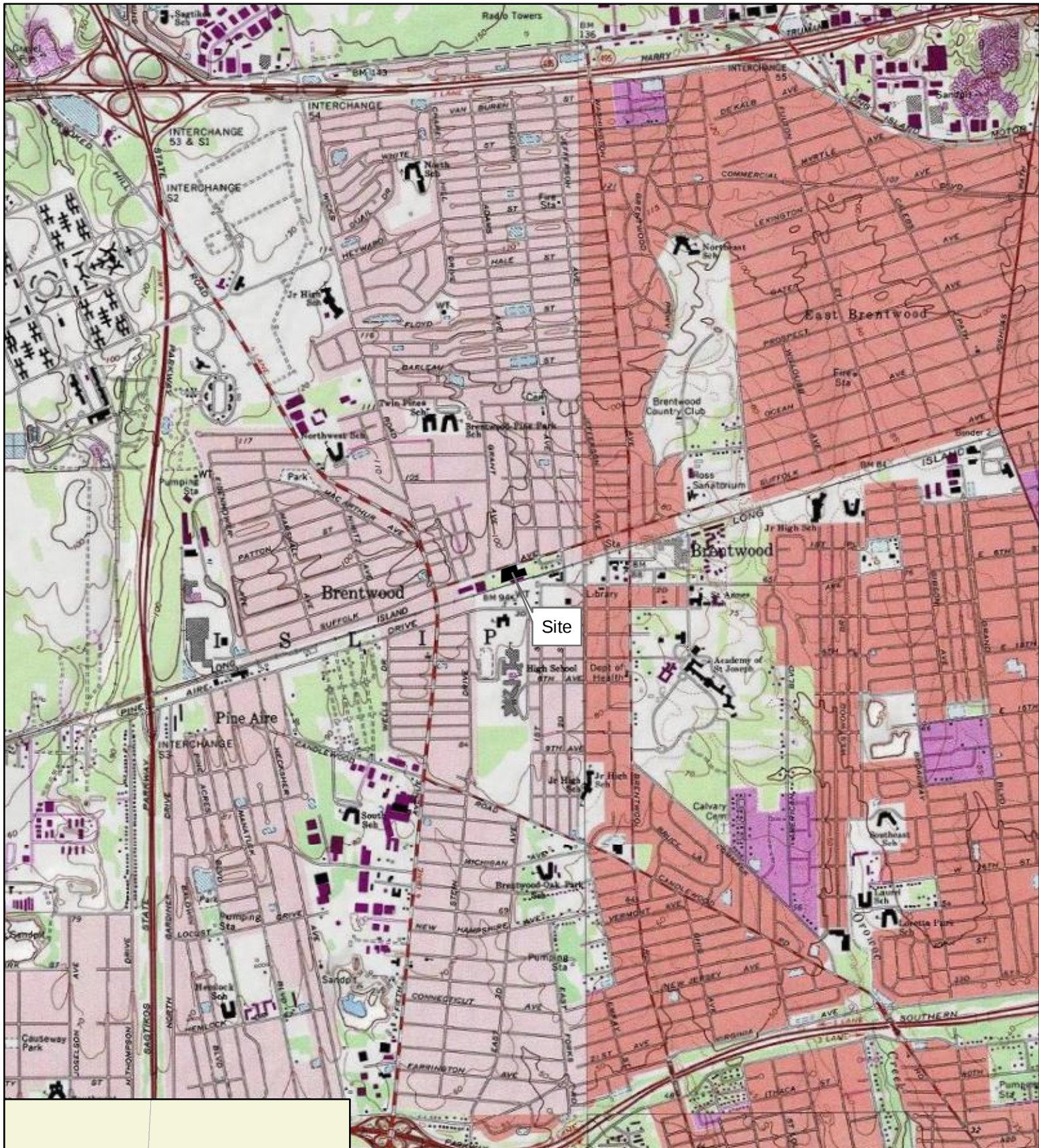
	SS-08	HA-08	SS-09	HA-09	SS-10	HA-10	SS-11	HA-11	SS-12	HA-12
Arsenic	5.1	14.2		1.3	2.9		3.4	2.8	-	3.5
Cadmium	2.5	0.4		0.5	32.8		125	1.7	28.4	5
Chromium	31.8	19.2		5.7	67.9		83.9	11	164	45.5
Copper	26.7	15.6		3.7	30.2		65.6	5.5	32.7	9.2
Lead	62.2	15.4		7.8	52.8		47.7	10.5	38	18.9
Nickel	10.8	16.3		2.3	24		31.9	5.9	23.9	9.1
Zinc	81.6	36.8		18	157		619	25.6	232	118
Mercury	0.062	0.11		0.017	0.065		0.037	0.018	0.025	0.026

Eastern Side of the Former Building Slab

	SS-13	HA-13	SS-14	HA-14	SS-15	HA-15
Arsenic	1.9	1.3	3			
Cadmium	1.3	0.063	20.2			
Chromium	7.9	5.9	31.1			
Copper	3.9	2	37.1			
Lead	9.3	2.8	27			
Nickel	3.2	2.5	15.7			
Zinc	24.1	7.8	95.1			
Mercury	0.012	-	0.033			

SS - Surface soil
HA - Hand auger (0 - 0.5 ft bgs)

Figures



Prepared by: 		Prepared for: 	
Multi Site G Operation, Maintenance & Monitoring Site Location Liberty Industrial Finishing Site			
Date: January 2013	Scale: 1 inch = 2,500 feet	Figure No. : 1	



Legend:



Wells Sampled for Long Term Monitoring



Site-Boundary



Reference:
2010 Half Foot 4 Band Long Island Zone
New York Statewide Digital Orthoimagery Program

Prepared by:

AECOM

Prepared for:



Multi Site G
Operation, Maintenance & Monitoring
Liberty Industrial Finishing Site

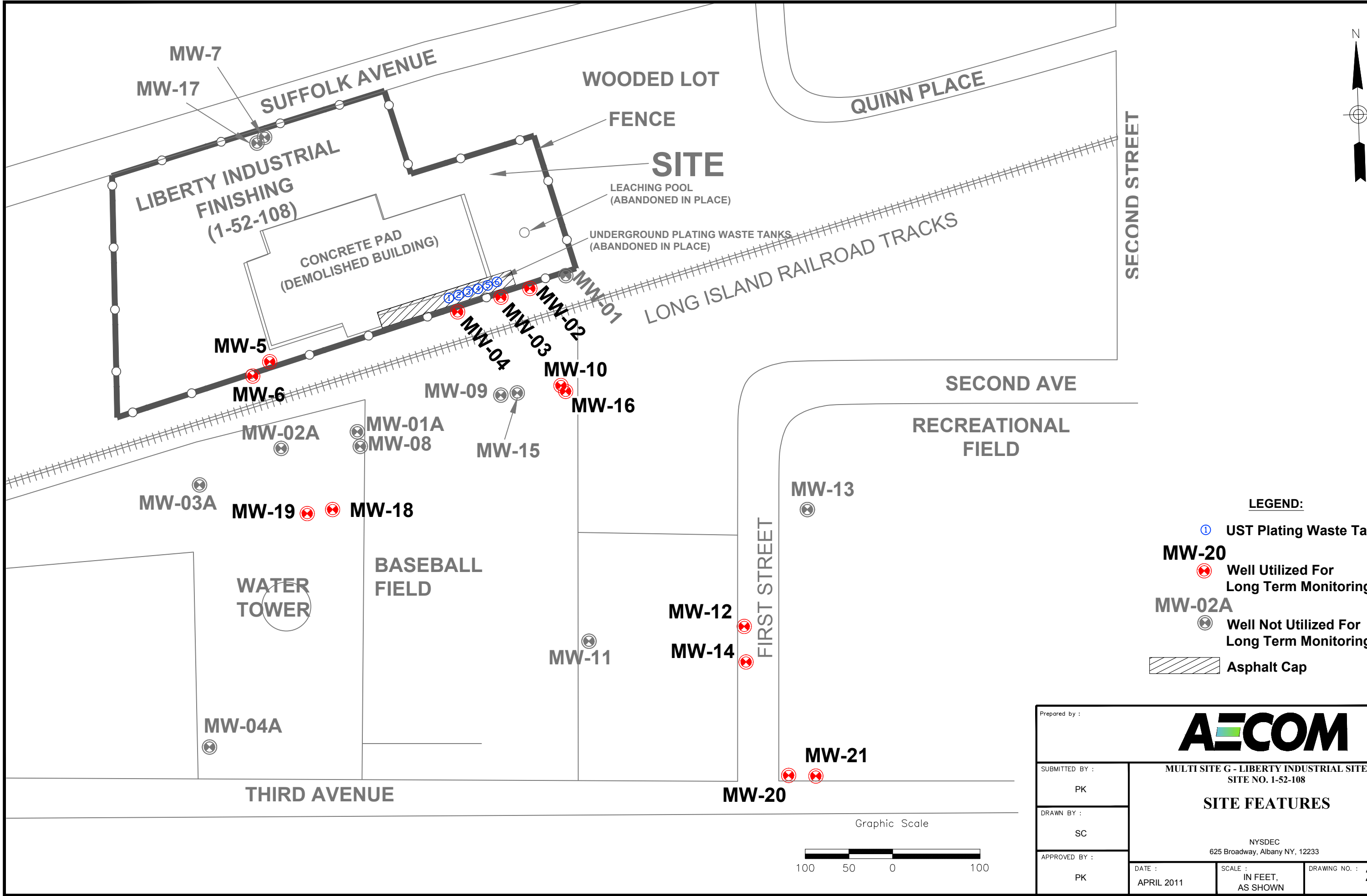
Aerial Photograph

Date:
June 2013

Scale:
1 inch = 167 feet

Figure No. :
1A

Piscataway on uspsw2\fp001\Data_uspsw2\fp001\Environment\J
File: J:\Project\Liberty\Industrial\Cadd\Drawings\liberty prr Figures_2014-01-29.dwg Layout: Site Features Fig 2 User: karchj1 Plotted: Jan 29, 2014 - 12:57pm



Prepared by :		AECOM	
SUBMITTED BY :	PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108	
DRAWN BY :	SC	SITE FEATURES	
APPROVED BY :	PK	NYSDEC 625 Broadway, Albany NY, 12233	
DATE :		SCALE :	DRAWING NO. :
APRIL 2011		IN FEET, AS SHOWN	2

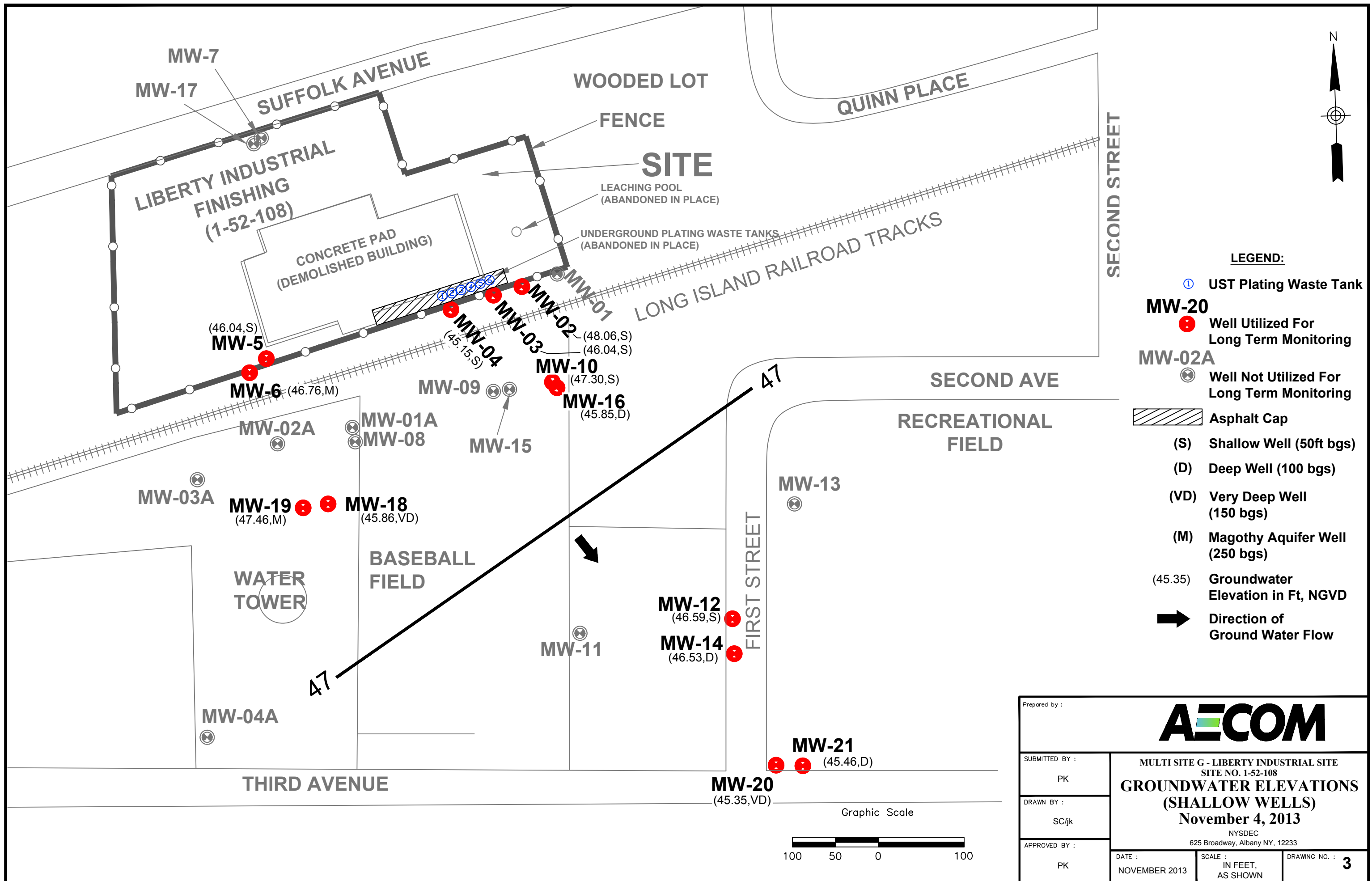
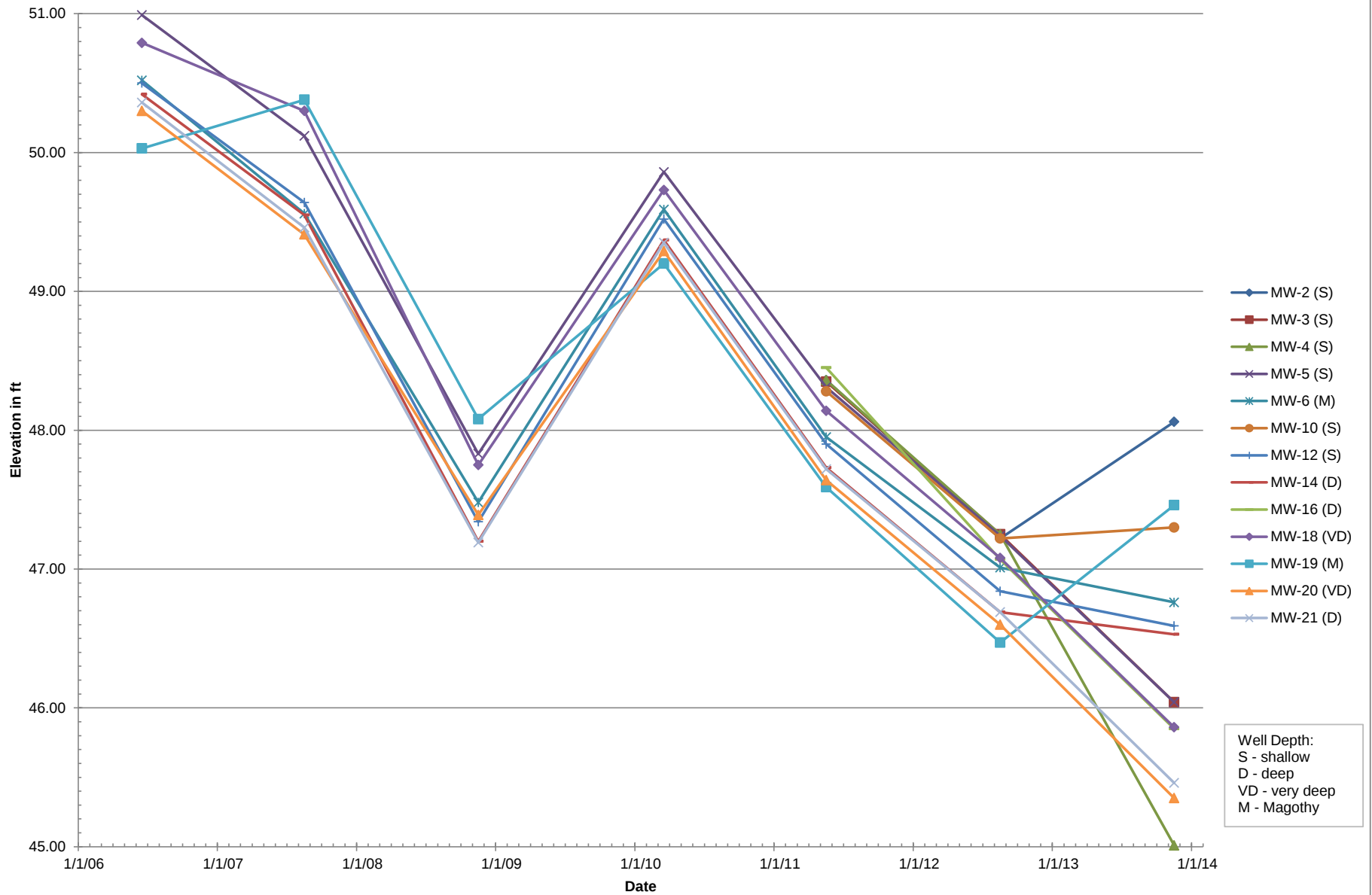


FIGURE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
GROUNDWATER HYDROGRAPH



Compound	MW-6 (M)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
Antimony	U	U	U	U	U	F	U	F	U	F
Cadmium	3.1 B	8.0 B	ND	ND	ND	ND	ND	ND	ND	ND
Iron	45.2 B	3,120	0.55 B	0.62 B	ND	ND	ND	ND	ND	ND
Sodium			147 B	137 BN	ND	ND	338	39.8 B	ND	ND

Compound	MW-5 (S)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
Antimony	U	U	U	U	U	F	U	F	U	F
Antimony	3.7 B	ND	ND	ND	ND	ND	ND	ND	ND	ND

Compound	MW-3 (S)					
	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	F	U	F	U	F	
Cadmium	6.6	4.6 B	3 B	2.8 B	4.7	3.5
Chromium	59.6	32.6	118	103	140	95.0
Iron	462	ND	414	45.4 B	650	ND
Sodium	12,400	13,200	30,800	31,000	38,000	35,000

Compound	MW-4 (S)					
	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	F	U	F	U	F	
Cadmium	54.2	19.8	28.2	27.3	26.0	21.0
Chromium	176	142	74.9	58.7	ND	ND
Iron	2,660	109 B	2,000	1,110	320	ND
Lead	43.2	ND	15.5	9.8 B	ND	ND
Sodium	26,100	29,100	13,400	14,400	21,000	21,000

Compound	MW-2 (S)					
	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	F	U	F	U	F	
Cadmium	8.5	5.5	3.5 B	2.7 B	ND	ND
Chromium	51.9	48.2	26.7	12.0 B	62.0	59.0
Iron	205	ND	853	ND	ND	ND
Sodium	21,300	22,400	21,400	22,900	15,000	16,000

Compound	MW-10 (S)					
	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	F	U	F	U	F	
Cadmium	10.3	11.3	36.1	34.9	49.0	50.0
Chromium	72.7	89.3	152	155	140	140
Iron	245	ND	391	ND	420	ND

Compound	MW-16 (D)					
	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	F	U	F	U	F	
Cadmium	5.3	4.9 B	4.2 B	4.3 B	4.4	3.9
Manganese	597	623	661	632	570	530

Compound	MW-12 (S)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	U	U	U	U	F	U	F	U	F	
Antimony	1.8 B	11.2 B	ND	13.9 B	ND	ND	ND	ND	ND	ND
Cadmium	0.52 B	5.6	25.5	205	54.8	4.5 B	4.4 B	9.3	2.9	ND
Chromium	2.5 B	37.5	18.9 B	251	72.8	ND	103	ND	ND	ND
Copper	14.9 B	85.3	63.5	377	147	ND	10.6 B	ND	ND	ND
Iron	467	10,900	4,080	38,100 N	11,300 N	1,620 N	1,740	39.0 B	740	ND
Lead	7.7 B	106	83.7	553	230	ND	19.4	ND	9.9	ND
Selenium	2.6 B	ND	ND	13.4 B	ND	ND	ND	ND	ND	ND
Sodium	11,700	13,400	27,100	33,600	8,250	7,660	15,400	16,200	12,000	14,000

Compound	MW-14 (D)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	U	U	U	U	U	F	U	F	U	F
Cadmium	4.9 B	1.5 B	59.1	26	9.2	7.6	9.3	3.7 B	6.6	2.4
Chromium	95.8	248	69.6	68.6	51.3	29.6	2.4 B	88.2	170	ND
Iron	728	389	9,320	14,000 N	1,780 N	1,430 N	279	1,180	6,000	930
Lead	2.9 B	3.4 B	221	76.5	18.8	ND	ND	13.2	53.0	3.7
Sodium	31,900	28,900	561,000	25,400	20,400	20,300	15,400	15,400	10,000	12,000
Thallium	ND	3.4 B	ND	ND	ND	ND	ND	ND	ND	ND

Compound	MW-21 (D)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	U	U	U	U	U	F	U	F	U	F
Antimony	1.9 B	6.7 B	ND	ND	ND	ND	ND	ND	11.9 B	ND
Iron	31.4 B	503	198 B	1,840 N	694	32.4 B	1,330	ND	760	ND
Manganese	26.4 B	51.8	627	57.7	36.1 B	19.7 B	96.1	56.7	100	64.0
Sodium	24,500	27,200	19,200	31,800	24,300	21,700	19,700	19,400	17,000	18,000

Compound	MW-20 (VD)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	U	U	U	U	U	F	U	F	U	F
Antimony	1.7 B	9.5 B	ND	4.4 B	ND	ND	ND	ND	ND	ND
Iron	1,710	624	164 B	1,370 N	879	71.7 B	398	ND	ND	ND
Sodium	21,800	31,100	29,700	39,600	38,400	40,300	21,700	21,400	21,000	22,000

Compound	MW-19 (M)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	U	U	U	U	U	F	U	F	U	F
Antimony	ND	6.7 B	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	1.1 B	8	ND	2.7 B	ND	2.4 B	ND	ND	ND	ND
Thallium	ND	2.9 B	ND	ND	ND	ND	ND	ND	ND	ND

Compound	MW-18 (VD)									
	Jun-06	Aug-07	Nov-08	Mar-10	May-11	May-11	Aug-12	Aug-12	Nov-13	Nov-13
U	U	U	U	U	U	F	U	F	U	F
Antimony	ND	ND	9.0 B	5.2 B	ND	ND	ND	ND	ND	ND
Iron	212	308	307	731 N	327 N	ND	ND	277	ND	ND
Manganese	169	547	122	312	521	39.1 B	539	1,200	ND	ND
Sodium	30,000	26,700	29,600	30,000	28,400	30,200	26,600	26,000	25,000	26,000

Compound	NYSDEC Criteria
Antimony	3
Cadmium	5
Chromium	50
Copper	200
Iron	300
Lead	25
Manganese	300
Selenium	10
Sodium	20,000
Thallium	0.50

- LEGEND:**
- MW-20
 - Well Utilized For Long Term Monitoring
 - Well Not Utilized For Long Term Monitoring
 - (S) Shallow Well (50ft bgs)
 - (D) Deep Well (100 bgs)
 - (VD) Very Deep Well (150 bgs)
 - (M) Magothy Aquifer Well (250 bgs)

Asphalt Cap

B Estimated Concentration (Less than the Instrument Reporting Limit)

F Filtered

N Spike Recovery Outside Control Limit

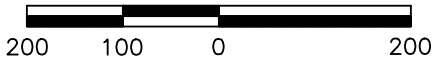
ND Not Detected

U Not Filtered

8.5 Concentration Exceeds the Class GA Criteria

All Values are in ug/L

Graphic Scale



Prepared by :

AECOM

SUBMITTED BY :

PK

DRAWN BY :

SC/jk

APPROVED BY :

PK

MULTI SITE G - LIBERTY INDUSTRIAL SITE
SITE NO. 1-52-108

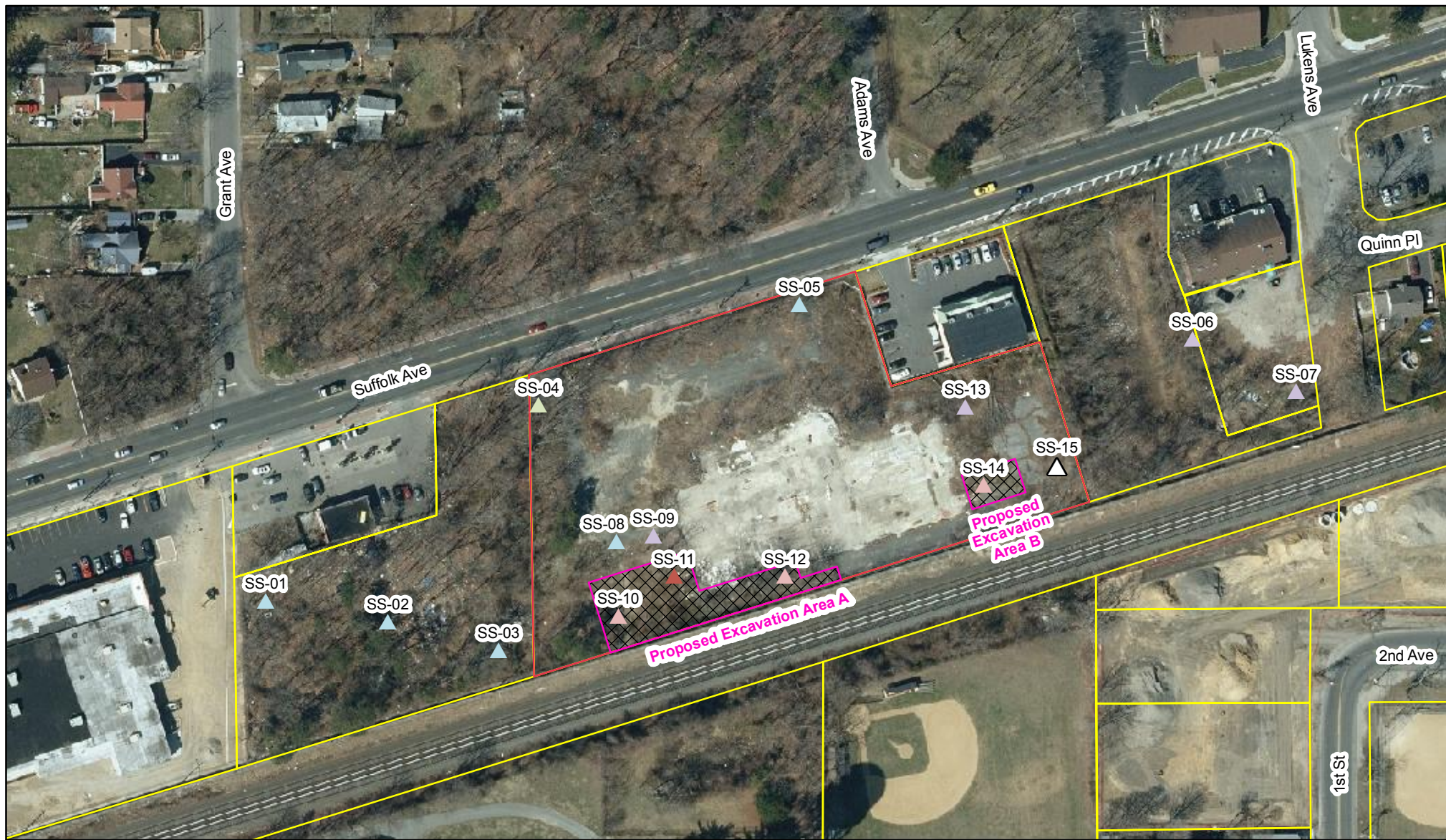
**SUMMARY OF TAL METALS
IN GROUNDWATER
NOVEMBER 2013**

NYSDEC
625 Broadway, Albany NY, 12233

DATE :
NOVEMBER 2013

SCALE :
IN FEET,
AS SHOWN

DRAWING NO. :
5



Legend:

- Proposed Excavation Areas
- Site-Boundary
- TaxParcels

Metals Concentrations

- Unrestricted
- >Unrestricted SCO
- >Residential SCO
- >Commercial SCO
- >Industrial SCO
- Not Analyzed

0 25 50 100 150 200
 Feet

Reference:
 2013 Half Foot 4 Band Long Island Zone
 New York Statewide Digital Orthoimagery Program

Prepared by:

AECOM

Prepared for:



Multi Site G
 Operation, Maintenance & Monitoring
 Liberty Industrial Finishing Site

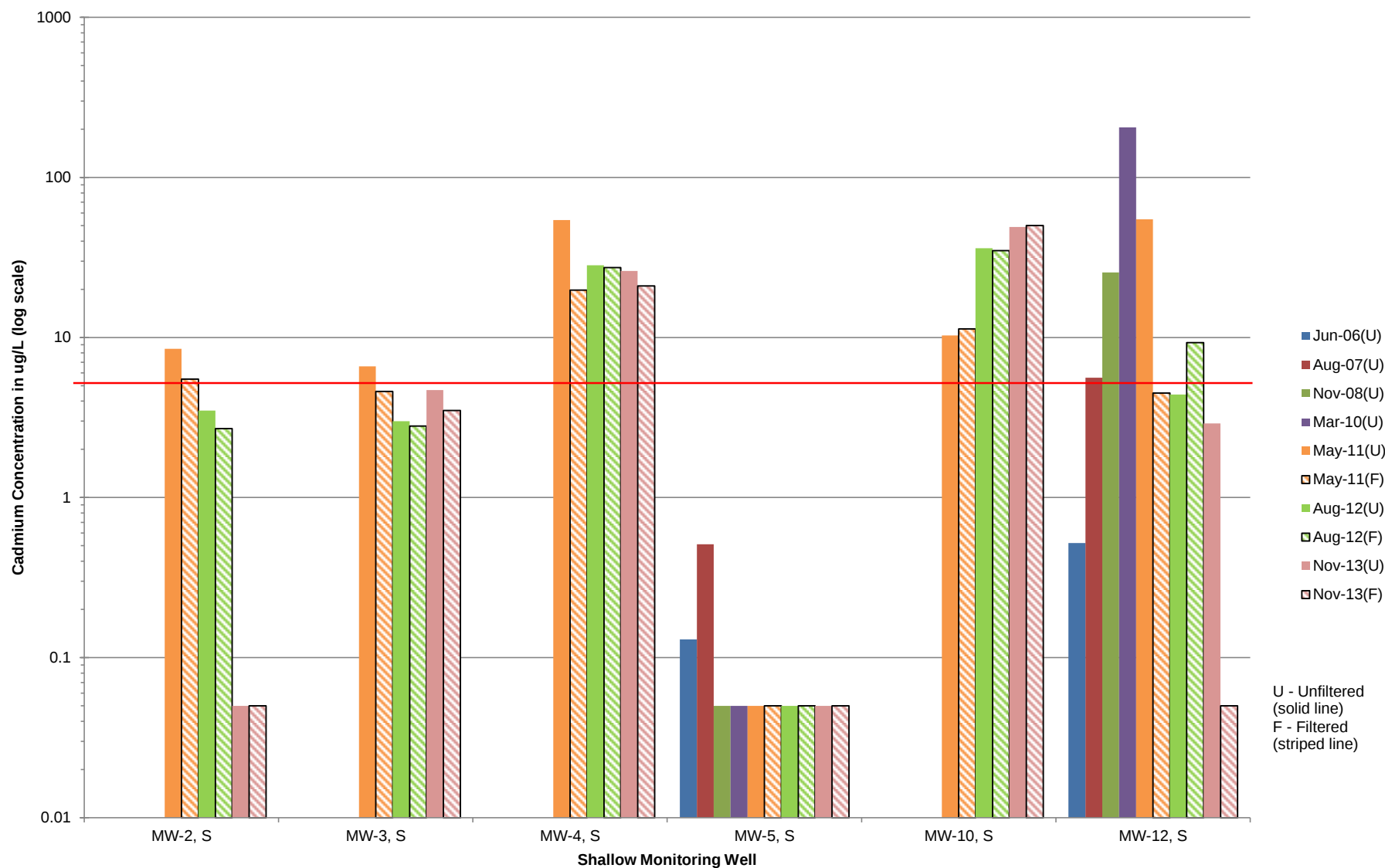
Soil Sample Location Map - June 2013

Date:
 February 2014

Scale:
 1 inch = 125 feet

Figure No. :
 6

FIGURE 7
CADMIUM CONCENTRATIONS IN SHALLOW MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)



Cadmium Class GA criterion is 5 ug/L
 ND values shown as 0.05 ug/L for plotting purposes

FIGURE 8
CADMIUM CONCENTRATIONS IN SELECTED MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)

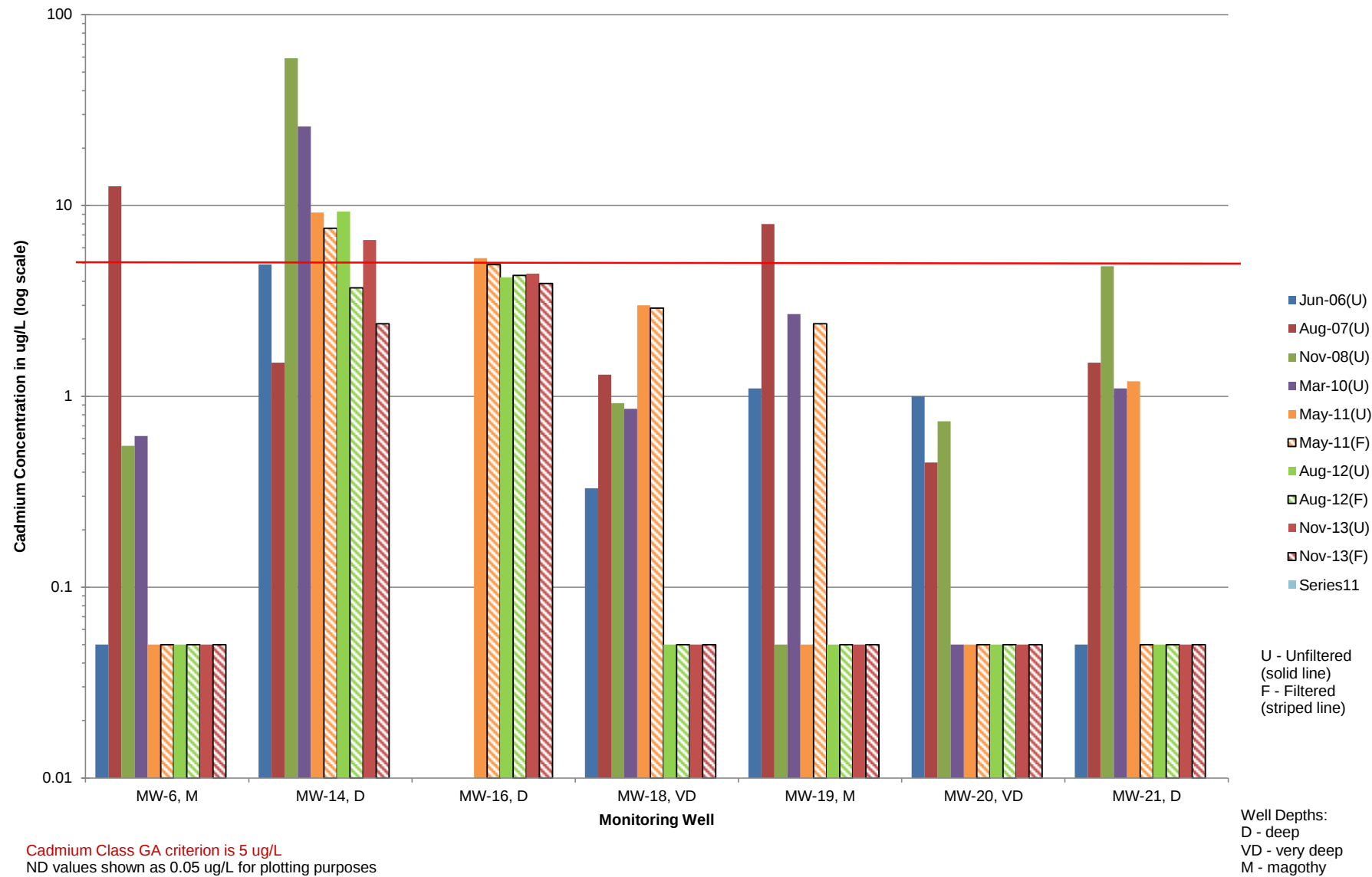
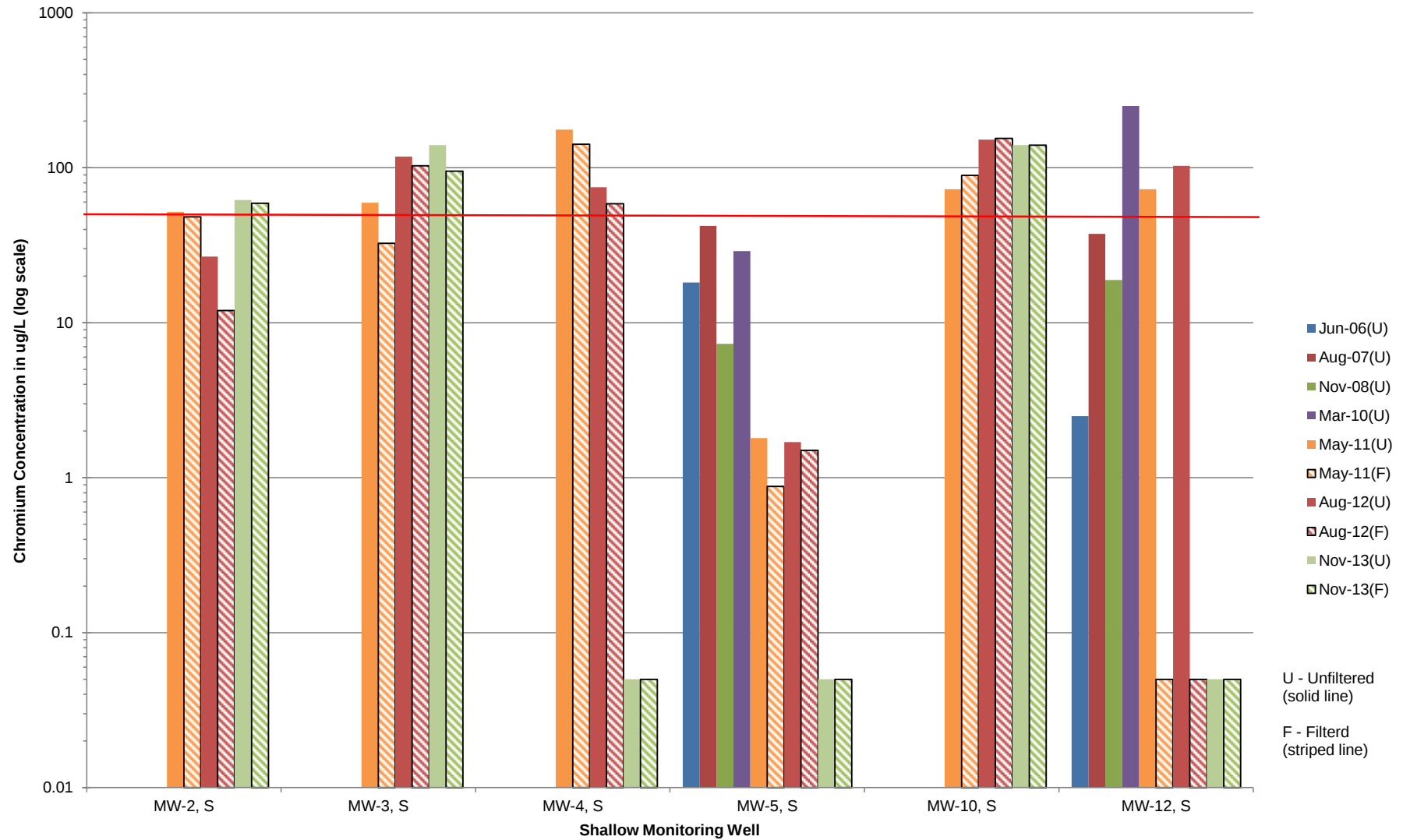
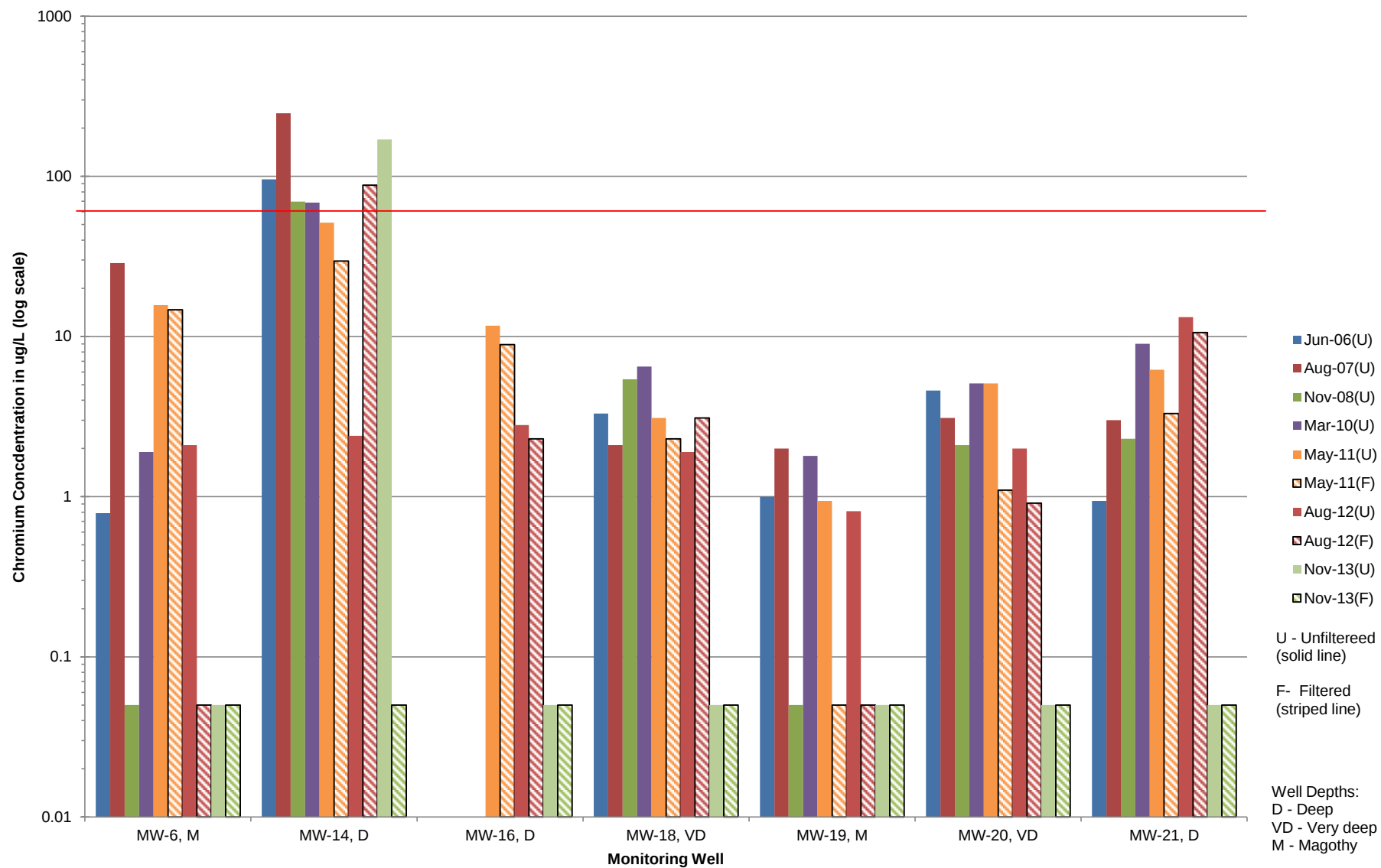


FIGURE 9
CHROMIUM CONCENTRATIONS IN SELECTED SHALLOW MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)



Chromium Class GA criterion is 50 ug/L
 ND show as 0.05 ug/L for plotting purposes

FIGURE 10
CHROMIUM CONCENTRATIONS IN SELECTED MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)



Chromium Class GA criterion is 50 ug/L
 ND shown as 0.05 ug/L for plotting

Appendix A

IC/EC Certification Forms NYSDEC



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No. 152108	Site Details	Box 1
Site Name Liberty Industrial Finishing Products		
Site Address: 550 Suffolk Avenue Zip Code: 11717		
City/Town: Brentwood		
County: Suffolk		
Site Acreage: 3.9		
Reporting Period: October 30, 2009 to January 30, 2014		
		YES NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. 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.		
5. Is the site currently undergoing development?	☐	☒

	Box 2
	YES NO
6. Is the current site use consistent with the use(s) listed below? 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
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcelOwnerInstitutional Control**136000300008000**

LEEMILTS PETROLEUM INC

Soil Management Plan
Monitoring Plan

Deed restriction is not yet in place (2013) Restrictions to be included in the DR are: are a Groundwater use restriction and adherence to a Site Management plan. Any development of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cap cover system.

136000300009000

LIBERTY INDUSTRIAL PRODUCTS, II

Soil Management Plan
Monitoring Plan

ICs to be included for the site are a Groundwater use restriction and adherence to a Site Management plan. Any development of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cap cover system.

136000300010001

LIBERTY INDUSTRIAL PRODUCTS, II

Monitoring Plan
Soil Management Plan

ICs to be in place for this site are a Groundwater use restriction and adherence to a Site Management plan. Any development of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cap cover system.

Description of Engineering ControlsParcelEngineering Control**136000300008000**Fencing/Access Control
Cover System

EC for the site is Cap Cover system-Cap must remain in place and be inspected for degradation and repaired if necessary. Also, Fencing/Access Control. Must ensure the perimeter fence is intact.

136000300009000Cover System
Fencing/Access Control

EC for the site is Cap Cover system-Cap must remain in place and be inspected for degradation and repaired if necessary. Also, Fencing/Access Control. Must ensure the perimeter fence is intact.

136000300010001Cover System
Fencing/Access Control

EC for the site is Cap Cover system-Cap must remain in place and be inspected for degradation and repaired if necessary. Also, Fencing/Access Control. Must ensure the perimeter fence is intact.

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;

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 complete.

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) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO



**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS

SITE NO. 152108

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 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 Paul Kareth at AECON Technical Services Northeast, Inc.
print name 100 Red Schoolhouse Road
Chestnut Ridge, NY 10977
print business address

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Paul Kareth
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

3/26/14
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 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 SCOTT A. UNDERHILL at 40 BRITISH AMERICAN, LATHAM, NY 12180.
print name print business address

am certifying as a Professional Engineer for the NYSDEC
(Owner or Remedial Party)

Scott A. Underhill
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

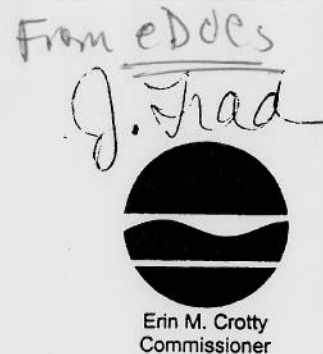


4-1-14
Date

Appendix B

NYSDEC Memorandum dated August 24, 2004: Proposed Site Reclassification, and Draft Deed Restriction

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E, 12th Floor
625 Broadway, Albany, New York 12233-7013
Phone: (518) 402-9814 • FAX: (518) 402-9819
Website: www.dec.state.ny.us



MEMORANDUM

TO: Kelly Lewandowski, Site Control Section
THRU: Robert Marino, Chief, Bureau of Technical Support

FROM: Jeffrey Trad, Remedial Section A
THRU: Robert Knizek, Chief, Remedial Bureau E

SUBJECT: Site No. 1-52-108, Liberty Industrial Finishing Site, Suffolk County

DATE: AUG 30 2004

The NYSDEC has successfully completed the Remedial Action at the Liberty Industrial Finishing Site in accordance with the March 1999 ROD (attached) and approved design documents and is now in the O&M phase. This work included the following:

- Excavated the two areas containing contaminated soil;
- Applied a minimum of two feet of clean fill over residual metals contaminated soils;
- Installed an asphalt cap over the UST and pipe gallery area;
- Installation of groundwater monitoring wells;
- Excavation and offsite disposal of contaminated soil/sediment from two sanitary leaching polls, two storm water dry wells and two catch basins.

The attached "Final Remediation Report" describes the project in detail.

At this time, it is proposed to reclassify the site from a Class 2 - "Significant threat to the public health or environment - action required" to a Class 4 - "Site has been properly closed, requires continued management."

Supporting documentation is attached as justification for the proposed reclassification:

1. Site Investigation Information forms;
2. Registry of Inactive Hazardous Waste Site Information Sheets;
3. March 1999 Record of Decision;
4. Site Maps;
5. Final Remediation Report;
6. Draft Deed Restrictions;
7. October 2001 NYSDEC Groundwater Monitoring Results and the 2003 NYSDEC Groundwater Monitoring Results.

If you have any questions, please call Jeff Trad at 2-9814.

Attachments

cc: w/o Att.: S. Ervolina
P. Scully - NYSDEC, Region 1
W. Parish - NYSDEC, Region 1
C. Vasudevan

JET/ts

bcc: R. Knizek
J. Trad ✓
Dayfile

F:\Liberty Industrial Finishing\reclass.lib.wpd

1.0 Site Investigation Forms

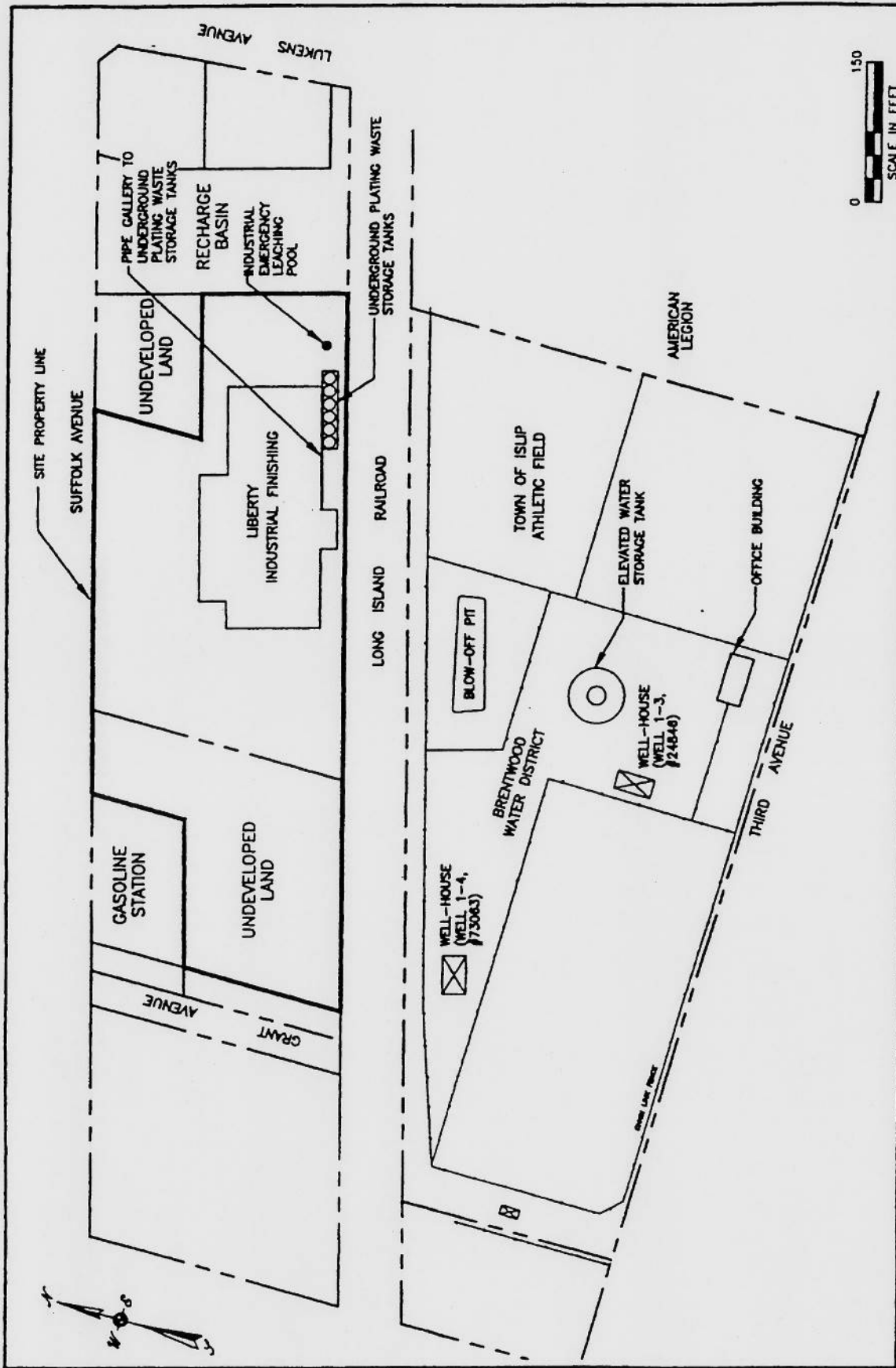


SITE INVESTIGATION INFORMATION

1. SITE NAME Liberty Industrial Finishing Products		2. SITE NUMBER 152108	3. TOWN/CITY/VILLAGE Brentwood	4. COUNTY Suffolk
5. REGION 1	6. PROGRAM TYPE BCP ☐ ERP ☐ SPILL ☐ SUPERFUND ☒ If Superfund: Current <u>2</u> Proposed <u>4</u> Modification X			
7. LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location) a. Quadrangle b. Site Latitude 4° 46'40" Site Longitude 73° 15' 15" c. Tax Map Number(s) d. Site Street Address: 550 Suffolk Avenue, Brentwood, NY 11717				
8. BRIEFLY DESCRIBE THE SITE (Attach site map showing disposal/sampling locations) Liberty Industrial Finishing Products was a metal finishing facility engaged in the finishing and plating of parts and components used primarily in the aircraft industry. Metal finishing activities included passivation, phosphatization, electroplating, conversion coating, anodizing, painting and non-destructive testing. The Town demolished the building in 2002 leaving the slab and foundations intact. a. Area <u>3.9</u> acres b. Completed: () Env. Property Assessment (X) Site Characterization () SI () ESI (x) IRM (x) RI (x) Construction (x) OM&M () Spill Response () Other _____				
9. CONTAMINANTS DISPOSED (Hazardous Waste, Petroleum, Other. Includes EPA Hazardous Waste Numbers) 1,1,1 - trichloroethane(TCA) - F001, cadmium - D006, chromium - D007, spent cyanide plating bath solutions and sludges - F007, F008 An inspection in 1983 discovered potential leaks in two of the underground tanks containing cyanide and other compounds. Unauthorized discharges into cesspools and directly into the ground occurred in 1984. These wastewater discharges were contaminated with manganese phosphate, zinc phosphate, chromic acid and other compounds.				
10. ANALYTICAL DATA AVAILABLE a. () Air (X) Groundwater () Surface Water (x) Sediment (x) Soil () Waste () Leachate () EPTox () TCLP b. Contravention of Standards or Guidance Values A Phase II was performed in 1987 and groundwater exceedences for chromium were found. A supplemental Phase II was performed in 1991. High levels of cyanide was found in a leaching pool as well as chromium exceedences in groundwater. The DEC completed a State-funded RI/FS at the site. The 1999 RI Report confirmed contamination in the surface and subsurface soil, storm-water drywell/leaching pool, sediment and groundwater. The contaminated groundwater plume extends approximately 150 feet from the site in a SSE direction with chromium as the primary site-related contaminant.				
11. CONCLUSION The USEPA completed an IRM between August 1998 and January 1999 and removed waste materials from the interior of the industrial building and capped six underground storage tanks. The Town of Islip also excavated contaminated surface soil at the Town of Islip Athletic Field and the Brentwood Water District property under an IRM. The DEC issued a ROD in March 1999 that called for the removal of contaminated sediment from four drywells and one leaching pool; the excavation of contaminated soil; and the construction of an asphalt cap above the on-site underground storage tanks as the selected remedy. All of the remedial work specified in the ROD was completed on September 18, 2001. a. Institutional Controls (IC) Required? (X) Y () N b. If yes, identify: Restrict use of groundwater; long term groundwater monitoring; maintain asphalt cap c. Are these ICs in place and verified? () Y () N some are/ No property owner exists to apply a deed restriction for use of groundwater. Longterm GW monitoring has been performed; the asphalt cap has been inspected and maintained.				
12. SITE IMPACT DATA a. Nearest Surface Water: Distance 7500 ft. Direction: ESE Class: Orowac Creek - Class C b. Groundwater: Depth 50 ft. Flow Direction: SSE (x) Sole Source () Primary () Other High-Yield Aquifer c. Water Supply: Distance 100 ft. Direction: South Active (X) Yes () No d. Nearest Building: Distance 150 ft. Direction: WNW Use: Gas Station e. Documented fish or wildlife mortality? () Y (x) N h. Exposed hazardous waste? () Y (x) N f. Impact on special status fish or wildlife resource? () Y (x) N i. Site Priority Ranking Sheet -----Impact <u>N/A</u> Score g. Controlled Site Access? (X) Y () N j. EPA ID# NYD013563390 HRS <u>N/A</u> Score				
13. SITE OWNER'S NAME Liberty Industrial Finishing		14. ADDRESS 550 Suffolk Avenue, Brentwood, NY 11717		15. TELEPHONE NUMBER n/a
16. PREPARER Jeffrey Trad, EEII Signature Date <i>Jeffrey Trad</i> 8/30/04 Name, Title, Organization		17. APPROVED Robert C. Knizek, Director, Remedial Bureau E Signature Date Name, Title, Organization		

SITE INVESTIGATION INFORMATION

1. SITE NAME Liberty Industrial Finishing Products		2. SITE NUMBER 152108	3. TOWN/CITY/VILLAGE Brentwood	4. COUNTY Suffolk
5. REGION 1	6. PROGRAM TYPE BCP ☐ ERP ☐ SPILL ☐ SUPERFUND ☒ If Superfund: Current <u>2</u> Proposed <u>4</u> Modification X			
7. LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location) a. Quadrange b. Site Latitude 4° 46'40" Site Longitude 73° 15' 15" c. Tax Map Number(s) d. Site Street Address: 550 Suffolk Avenue, Brentwood, NY 11717				
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9. CONTAMINANTS DISPOSED (Hazardous Waste, Petroleum, Other. Includes EPA Hazardous Waste Numbers) 1,1,1 - trichloroethane(TCA) - F001, cadmium - D006, chromium - D007, spent cyanide plating bath solutions and sludges - F007, F008 An inspection in 1983 discovered potential leaks in two of the underground tanks containing cyanide and other compounds. Unauthorized discharges into cesspools and directly into the ground occurred in 1984. These wastewater discharges were contaminated with manganese phosphate, zinc phosphate, chromic acid and other compounds.				
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12. SITE IMPACT DATA a. Nearest Surface Water: Distance 7500 ft. Direction: ESE Class: Orowac Creek - Class C b. Groundwater: Depth 50 ft. Flow Direction: SSE (x) Sole Source () Primary () Other High-Yield Aquifer c. Water Supply: Distance 100 ft. Direction: South Active (X) Yes () No d. Nearest Building: Distance 150 ft. Direction: WNW Use: Gas Station e. Documented fish or wildlife mortality? () Y (x) N h. Exposed hazardous waste? () Y (x) N f. Impact on special status fish or wildlife resource? () Y (x) N i. Site Priority Ranking Sheet -----Impact _____ N/A _____ g. Controlled Site Access? (X) Y () N j. EPA ID# NYD013563390 HRS _____ N/A _____ Score _____				
13. SITE OWNER'S NAME Liberty Industrial Finishing		14. ADDRESS 550 Suffolk Avenue, Brentwood, NY 11717		15. TELEPHONE NUMBER n/a
16. PREPARER Jeffrey Trad, EEII Signature _____ Date <u>5/30/04</u> Name, Title, Organization _____		17. APPROVED Robert Marino, Director, Technical Support Bureau Signature _____ Date _____ Name, Title, Organization _____		



LIBERTY INDUSTRIAL FINISHING SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
BRENTWOOD, NEW YORK

STUDY AREA MAP

db
Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Gosulich Associates, P.C.

Deed Restriction Forthcoming

Now a SSF Site.

No Property Owner to put IC/EC on
the property title.

DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT, made the ___ day of _____ 200x, by Liberty Industrial Finishing, Inc., a corporation organized and existing under the laws of the State of xxxxxxxxx and having an office for the transaction of business at

WHEREAS, Liberty Industrial Finishing, Inc. is the owner of an inactive hazardous waste disposal Site which is listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 1-52-108, located at 550 Suffolk Avenue, Hamlet of Brentwood Town of Islip, NY 11551, consisting of approximately 3.9 acres, Tax Map Number xx-xx, Block Number xx-xx and Lot Number xx-xx as filed (**Date**), File No. **Xxxx** in the Office of the County Clerk at the County of Suffolk and more particularly described in Appendix A attached to this Covenant and made a part hereof, and hereinafter referred to as the "Property"; and

WHEREAS, the Property is the subject of a consent order issued by the New York State Department of Environmental Conservation to Liberty Industrial Finishing, Inc.; and

WHEREAS, the New York State Department of Environmental Conservation set forth a remedy to eliminate or mitigate all significant threats to the environment presented by hazardous waste disposal on the Site in a Record of Decision ("ROD") dated March 1999, and such ROD or the Work Plan for the implementation of the ROD required that the Property be subject to restrictive covenants.

NOW, THEREFORE, Liberty Industrial Finishing, Inc., for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on a map attached to this declaration as Appendix "B" and made a part hereof, and consists of **[insert metes and bounds description]**

Second, unless prior written approval by the New York State Department of Environmental Conservation 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, no person shall engage in any activity that will, or that reasonably is anticipated to, prevent or interfere significantly with any proposed, ongoing or completed program at the Property or that will, or is reasonably foreseeable to, expose the public health or the environment to a significantly increased threat of harm or damage.

Third, the owner of the Property shall protect and maintain the asphalt cap covering the excavation area and the groundwater monitoring wells installed on the Property. Any damage to the asphalt cap or groundwater monitoring wells must immediately be brought to the attention of the Department. Any work, action or change of use altering or effecting the asphalt cap or groundwater monitoring wells must be brought to the attention of the Department. No work,

action or change of use altering or effecting the asphalt cap or groundwater monitoring wells may occur without obtaining prior written approval of the Department or Relevant Agency.

Fourth, the owner of the Property shall prohibit any excavation or disturbance of the excavation area as delineated in Appendix "B" by crosshatch, unless the owner of the Property first obtains permission to do so from the Relevant Agency.

Fifth, the owner of the Property shall prohibit the Property from ever being used for purposes other than for non-residential commercial/industrial uses, excluding day-care and health care facilities, without the express written waiver of such prohibition by the Relevant Agency.

Sixth, the owner of the Property shall prohibit the use of 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 Relevant Agency.

Seventh, the owner of the Property shall continue in full force and effect any institutional and engineering controls the Department required Respondent to put into place and maintain unless the owner first obtains permission to discontinue such controls from the Relevant Agency.

Eight, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property and shall provide that the owner, and its successors and assigns, consents to the enforcement by the Relevant Agency of the prohibitions and restrictions recorded by this Declaration of Covenants and Restrictions, and hereby covenants not to contest the authority of the Department to seek enforcement.

Ninth, the owner of the Property may petition the Department to modify or terminate this Declaration of Covenants and Restrictions at such time as it can certify that reliance upon such covenants and restrictions is no longer required to meet the goals of the Remedial Program. Such certification shall be made by a Professional Engineer. The Department shall not unreasonably withhold its consent to such petition.

Tenth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

Eleventh, the owner of the property must allow the Relevant Department, its Agent, employees or other representatives of the State to enter and inspect the Property and sample the groundwater monitoring wells on the Property at reasonable times in a reasonable manner.

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

[acknowledgment]

IN WITNESS WHEREOF, the parties have signed this Agreement on the day and year indicated beneath their respective signatures. The signatory for the Department provides the following Agency Certification: "In addition to the acceptance of this contract, I also certify that original copies of this signature page will be attached to all other exact copies of this contract."

Acknowledgment

State of New York)

County of Nassau)

On this Fifteenth day of March, 2000, before me personally came _____, to me known, who being duly sworn, did depose and say that he is the Supervisor of the Town of _____, the political subdivision or agency thereof described in and which executed the within instrument; that he knows the seal of said political subdivision; that the seal affixed to said instrument is such seal; that it was so affixed by order, resolution or authority of the Town Board of said political subdivision and that he signed his name by that authority.

By: _____
Notary Public

Date: _____

Appendix C

Well Sampling Forms

[illegible]



WELL SAMPLING FORM	PROJECT	PROJECT No.	SHEET	SHEETS
	MULTI SITE-G	87616 / 05	1	1
LOCATION		DATE WELL STARTED	DATE WELL COMPLETED	
Liberty Industrial Finishing, Brentwood, NY #1-52-108		6/12/06	6/12/06	
CLIENT		NAME OF INSPECTOR		
New York State Department of Environmental Conservation		Kevin Seise, Jason Klein		
DRILLING COMPANY		SIGNATURE OF INSPECTOR		

[illegible]

Analytical Parameters: TAL Metals

[illegible]

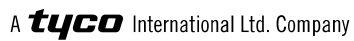
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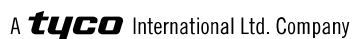


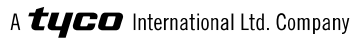


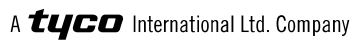


[illegible]

[illegible]

[illegible]

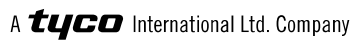
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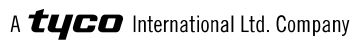


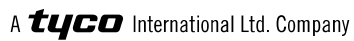
WELL SAMPLING FORM	PROJECT	PROJECT No.	SHEET	SHEETS
	MULTI SITE-G	95900 - 50	1 OF	1
LOCATION		DATE WELL STARTED	DATE WELL COMPLETED	
Liberty Industrial Finishing, Brentwood, NY #1-52-108		8/24/07	8/24/07	
CLIENT	NAME OF INSPECTOR			
New York State Department of Environmental Conservation	Mihir Chokshi, Saby Chatterjee			
DRILLING COMPANY	SIGNATURE OF INSPECTOR			

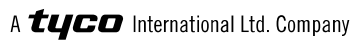
PUMP INTAKE DEPTH: 48 ft

Analytical Parameters: TAL Metals

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

AECOM

WELL NO. MW- 5

[illegible]

AECOM

WELL NO. MW- 6

[illegible]

AECOM

WELL NO. MW- 12

[illegible]

AECOM

WELL NO. MW- 14

[illegible]

AECOM

WELL NO. MW- 18

[illegible]

AECOM



MW-6

[illegible]



WELL NO.

MW-10

[illegible]



WELL NO.

MW-12

[illegible]



WELL NO.

MW-14

[illegible]



WELL NO.

MW-16

[illegible]



WELL NO. MW-18

[illegible]



WELL NO.

MW-19

[illegible]



WELL NO.

MW-20

[illegible]



WELL NO.

MW-21

[illegible]