AECOM Environment

Prepared for:

Superfund Standby Program
NYSDEC
Albany, NY

Prepared by:

AECOM
Clifton, NJ
60631032
February 2021

Periodic Review Report
Review Period: January 30, 2017 through January 30, 2020
Liberty Industrial Finishing Site
Site #1-52-108

Final

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Engineering Certification

I, Michael L. Spera, certify that I am currently a NYS registered professional engineer and that this Periodic Review Report 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) and that all activities were performed in full accordance with the DER-approved scope of work and any DER-approved modifications.

Respectfully submitted,

AECOM USA, Inc.

2/22/2021

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Registered Professional Engineer
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Date

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Executive Summary

The Periodic Review Report (PRR) for 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 USA, 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 January 30, 2017 through January 30, 2020.

The ROD specified that the Site-related contaminants of concern (COCs) 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 (Dvirka and Bartilucci, 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 Rail Road 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 reclassified from Class 2 to Class 4 in March 2017.

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

The natural attenuation of Site-related COCs is being 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 Remedial Investigation (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.

Monitoring wells MW-2, MW-3, MW-4, MW-10 and MW-16 were added to the sampling list in 2011. Monitoring wells MW-2, MW-3 and MW-4 are located adjacent to the former USTs and are considered source area monitoring wells. Monitoring wells MW-10 (shallow) and MW-16 (deep) are located approximately 200 ft hydraulically downgradient of the USTs.

The Final Site Management Plan (SMP) (AECOM, September 2014c) specifies groundwater sample collection from 13 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.

Upgradient monitoring wells MW-7 (shallow) and MW-17 (deep) were added to the sampling program in November 2018.

Source area monitoring well MW-1 was dry during the sampling events from 2011 through 2018. The well was properly abandoned and replaced in October 2019. New flush mount boxes were also installed on MW-7 and MW-17. Monitoring well MW-1R was added to the sampling program in December 2019.

Results from the December 2019 groundwater monitoring event indicate that COCs are still present in groundwater at the Site. Cadmium and chromium concentrations in MW-17, MW-3, MW-4, MW-10, MW-16, and MW-14 continue to exceed the criteria in filtered groundwater samples. Data from the other ten monitoring wells are below criteria, indicating a stable plume. Since groundwater quality standards have not been met at all sampling locations, continued monitoring is necessary.

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

- The deed notice should be finalized.
- The fence should be repaired to prevent access.
- Continue monitoring of groundwater on a five-quarter sampling basis. The next sampling event is scheduled for May 2021.
- Continue to inspect the condition of the former building slab and asphalt cap on a five-quarter basis (performed in conjunction with the groundwater sampling events). Repair cracks and/or potential leak points observed in December 2019 to prevent infiltration through residually impacted soil around former USTs. The next inspection is scheduled for May 2021.
- Surficial soil contamination areas documented by NYSDEC in June 2013 require remediation either through removal or capping to meet the unrestricted soil cleanup criteria. Further vertical delineation is necessary to determine the volume of contaminated soil.
- A Corrective Measures Work Plan should be implemented by the property owner for potential site redevelopment.

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. An aerial photograph of the Site and surrounding area is included as Figure 1A.

The Site is bounded 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 (Figure 2).

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, phosphatizing, 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 Site Geology

The Site is located in the Atlantic Coastal Plain Physiographic Province. The geology of Long Island is characterized by a southward-thickening wedge of unconsolidated Cretaceous and Cenozoic sediments unconformably overlying a gently dipping Pre-Cambrian bedrock surface. The Site is underlain by the Upper Glacial Aquifer. The Upper Glacial Aquifer is an unconfined aquifer approximately 250 to 260 feet thick with 200 to 210 feet of saturated thickness consisting of mostly Pliocene and Pleistocene glacial deposits: poorly sorted clay, sand, gravel and boulders. The Upper Glacial Aquifer rests unconformably on the Cretaceous Magothy Formation. The Magothy formation is an upward fining sequence consisting of fine to medium quartz sand, silt, clay and gravel.

1.3 Site Hydrogeology

The water table beneath the Site is approximately 43 feet below ground surface (ft bgs). Groundwater elevations at the Site are shown on Figure 3 and are based on the reported depth to water on December 9, 2019. Based on these elevations, the groundwater flow direction in the Upper Glacial Aquifer is to the south-southeast. Well construction data are provided in Table 1. Groundwater elevations measured at the Site since June 2006 are presented in Table 2.

The Upper Glacial Aquifer is underlain by the Magothy Aquifer. The Magothy Aquifer is the largest of Long Island's aquifers. The aquifer consists of sand deposits alternating with clay and attains a maximum thickness of approximately 1,100 feet. The Magothy Aquifer is the source of water for most of Nassau County and about half of Suffolk County. According to information in the Remedial Investigation Report, a semi-confining clay layer acts as an aquitard between the Upper Glacial Aquifer and the Magothy Aquifer and controls the downward vertical migration of impacted groundwater from the Site.

1.4 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 A). 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 Public Notice dated March 2017 stated that the Site has been reclassified from a Class 2 to a Class 4 Site on the Registry of Inactive Hazardous Waste Sites (Appendix A). 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 sixteen monitoring wells (MW-1R, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-10, MW-12, MW-14, MW-16, MW-17, MW-18, MW-19, MW-20, and MW-21) on a five- quarter basis;
- Inspection of the concrete slab and 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.

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 January 30, 2017 through January 30, 2020. This work was performed for the New York State Department of Environmental Conservation (NYSDEC) under Work Assignments D007626-17 and D009803-18. The NYSDEC has assigned the Site ID No. 1-52-108 in the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites. Liberty Industrial Finishing is a Class 4 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 Industrial Finishing 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 on-site 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 (11.5 milligrams per kilograms). 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 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 on-site. 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 on-site.

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 reclassified from Class 2 to Class 4, as documented in a State Superfund Program Public Notice dated March 2017 (included in Appendix A). Long-term monitoring of the groundwater is being conducted to demonstrate natural attenuation of the residual dissolved phase COCs.

The natural attenuation of Site-related dissolved phase COCs is being 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). A sixth well (MW-1) was inspected but was dry and could not be sampled. For Round 11 (November 2018), upgradient monitoring wells MW-7 and MW-17 were added to the list of wells. In October 2019, MW-1 was properly abandoned and replaced (MW-1R). New flushmount protective casings were also installed on monitoring wells MW-7 and MW-17 in October 2019.

3.0 Evaluate Remedy Performance, Effectiveness, and Protectiveness

A SMP (AECOM, 2014c) was developed for the Site. The SMP outlines the following activities on a five-quarter basis:

- Monitoring well inspection: Inspect the eight monitoring wells designated for groundwater sampling and complete the NYSDEC Monitoring Well Field Inspection Log for each. An additional eight wells have been added to the inspection list.
- Groundwater monitoring: eight wells are designated for periodic groundwater sampling and analysis of target analyte list (TAL) metals. An additional eight monitoring wells have been added to the sampling list (Figure 2).
- Site-wide inspections, including the cap and security fencing, will be performed concurrently with the groundwater sampling and after all severe weather conditions that may affect ECs or ICs.

3.1 Operation and Maintenance Plan Compliance Report

The current operation and maintenance (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 January 2017 through January 2020:

Activity	Required Frequency (X)			Compliance Dates
	Annually	Five-Quarter	As needed	
Asphalt Cap Inspection		X		September 2017, November 2018 and December 2019
Groundwater Monitoring Well Inspection and Maintenance		X		September 2017, November 2018 and December 2019

3.1.2 Evaluation of O&M Activities

As detailed in the SMP, the asphalt cap is inspected during each five-quarter sampling event. Three Site inspections were conducted during this review period: September 2017, November 2018 and December 2019. The Site inspection forms and photos taken during the inspection are included as Appendix C. The Site conditions were very similar during the three inspections; the inspections found the Site to be in generally good condition. The following conditions were noted during the inspections:

- A few cracks were noted in the asphalt cover;
- The lock on the main gate along Suffolk Avenue is missing and the gate is damaged;
- The fence installed by the LIRR has been breached;
- Local teenagers were using the Site as a skate park;
- Vagrants were noticed at the Site;
- Trash was strewn across the Site; and
- Site investigation work was performed by AD Real Estate Investors, Inc., in 2019.

Logs of monitoring well inspections have been submitted to NYSDEC as part of periodic groundwater sampling reports.

3.2 Monitoring Plan Compliance Report

The SMP is referenced as the Site guidance document.

This PRR assesses whether the Site has been managed as set forth in the SMP. To date, twelve 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, 2012, 2013, 2015, 2016, 2017, 2018 and 2020.

The current monitoring program is as follows:

- Water level measurements are collected from 16 Site monitoring wells on a five-quarter basis;
- Groundwater sampling is conducted from 16 monitoring wells on a five-quarter basis and analyzed for TAL metals. During the 2011 through 2019 sampling events, both filtered and unfiltered metals samples were collected; however, this is not part of the long-term monitoring program. The 16 monitoring wells are MW-1R, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-10, MW-12, MW-14, MW-16, MW-17, MW-18, MW-19, MW-20, and MW-21. Field measurements of temperature, pH, conductivity, oxidation reduction potential (ORP), dissolved oxygen (DO) 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 Sampling and Analysis Plan ([SAP], Earth Tech, 2007b).

The sixth, seventh, eighth, ninth and tenth rounds of groundwater sampling occurred in August 2012, November 2013, March 2015, May 2016 and September 2017. Thirteen monitoring wells were included in the sampling program and analyzed for both total and dissolved TAL Metals. All sampling was conducted in accordance with the SMP (AECOM, 2014c). 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, DO, and ORP were collected at five-minute intervals until all parameters were stabilized. During the September 2017 (Round 10) sampling event, the thirteen monitoring wells were also analyzed for emerging contaminants (20 perfluorinated compounds and 1,4-dioxane).

The eleventh round of groundwater sampling occurred in November 2018. Monitoring wells MW-7 and MW-17 were added to the sampling event bringing the number of wells to 15. The samples were analyzed for both total and dissolved TAL Metals. All sampling was conducted in accordance with the SMP. As with previous rounds, all groundwater samples were collected using low-flow techniques. 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 mL/min. Field measurements of pH, temperature, specific conductivity, DO, and ORP were collected at five-minute intervals until all parameters were stabilized.

The twelfth round of groundwater sampling occurred in December 2019. Monitoring well MW-1R was added to the sampling event bringing the number of wells to 16. The samples were analyzed for both total and dissolved TAL Metals. All sampling was conducted in accordance with the SMP. As with previous rounds, all groundwater samples were collected using low-flow techniques. 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 mL/min. Field measurements of pH, temperature, specific conductivity, DO, and ORP were collected at five-minute intervals until all parameters were stabilized.

3.2.1 Confirm Compliance with Monitoring Plan

The following summarizes monitoring activities at the Site conducted to date in accordance with the SMP. AECOM conducted sampling events at the Liberty Industrial Finishing Site in June 2006, August 2007, November 2008, March 2010, May 2011, August 2012, November 2013, March 2015 May 2016, September 2017, November 2018 and December 2019:

Activity	Required Frequency (X)	Compliance Dates
	Five Quarter	
Groundwater Monitoring	X	2006-2019
Water Level Monitoring	X	2006-2019

Groundwater Level Measurement

Groundwater level measurements from 2006 through 2019 in the 16 monitoring wells (eight wells from 2006 through 2010, 13 wells from 2011 through 2017, 15 wells for 2018, and 16 wells for 2019) 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 elevation map is presented in Figure 3 using data from the December 2019 sampling event. Groundwater hydrographs are shown in Figures 4, 4A, 4B, and 4C.

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

Sixteen monitoring wells are included in the long-term monitoring plan: MW-1R, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-10, MW-12, MW-14, MW-16, MW-17, 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 for the 12 sampling events that occurred in June 2006, August 2007, November 2008, March 2010, May 2011, August 2012, November 2013, March 2015, May 2016, September 2017, November 2018 and December 2019. The groundwater results for these 12 sampling events are presented in Table 3. A summary of groundwater results from the most recent event (December 2019) for detected compounds with exceedances is presented in Figure 5 and summarized below.

Concentrations of ten metals have been detected above the Class GA criteria in monitoring wells at the Site at least once during the 12 sampling events. These metals include antimony, cadmium,

chromium, copper, iron, lead, manganese, selenium, sodium and thallium. The groundwater COCs and criteria noted in the ROD are as follows:

Contaminants of Concern and Cleanup Criteria

Groundwater (µg/L)		
Cadmium	10	* (5)
Chromium	50	
Copper	200	
Nickel	100	
Zinc	300	* (2,000)
Cyanide	100	

Notes:

Contaminants of concern and cleanup criteria taken from the March 1991 ROD, Section 4.4.1
* - Indicates NYSDEC criteria has changed since 1991 ROD was issued
µg/L - micrograms per liter

Monitoring well locations are shown on Figure 2. Two wells (MW-7 and MW-17) are located upgradient of the source area. Four wells (MW-1R, MW-2, MW-3 and MW-4) at the Site are located immediately south of the former USTs and are considered source area wells. Four wells (MW-5, MW-6, MW-18 and MW-19) are located sidegradient of the main contamination plume. Four wells (MW-10, MW-16, MW-12 and MW-14) are located downgradient of the former USTs. Two wells (MW-20 and MW-21) are sentinel wells.

3.2.3 Upgradient Monitoring Wells

The two upgradient monitoring wells, MW-7 and MW-17, were added to the sampling program in November 2018.

Exceedances of iron and sodium, in both unfiltered and filtered samples, were noted in shallow well MW-7.

Exceedances of cadmium, chromium, iron, manganese and sodium were noted in the unfiltered sample from deep well MW-17 (Figure 5). The filtered sample had exceedances of cadmium, manganese and sodium (Figure 5).

3.2.4 Source Area Monitoring Wells

Three source area monitoring wells (MW-2, MW-3, and MW-4) were added to the long-term monitoring program in May 2011 (Round 5). Replacement monitoring well MW-1R was added to the Round 12 sampling event.

During Round 12, cadmium concentrations exceeded the 5 µg/L criterion in the unfiltered and filtered samples from MW-4 at concentrations of 47 µg/L and 46 µg/L, respectively (Figure 5). Historically, cadmium concentrations in MW-2 and MW-3 have mostly been below the criterion or not detected. At MW-4, cadmium concentrations have exceeded the criterion during all eight sampling rounds (Figure 6A).

Chromium concentrations in the unfiltered and filtered sample from MW-3 and MW-4 exceeded the criterion in the December 2019 sampling round. Historically, chromium concentrations in all eight unfiltered samples from MW-3 exceeded the criterion while only four filtered samples exceeded the criterion. At MW-4, six of eight unfiltered samples have exceeded the criterion while only four of eight filtered samples have exceeded the criterion (Figure 8A).

Iron concentrations in the unfiltered sample from MW-3 exceeded the 300 µg/L criterion. Historically, all eight unfiltered samples have exceeded the criterion while only the Round 12 filtered sample exceeded the criterion. Iron concentrations exceeded the criterion in MW-1R for both filtered and unfiltered samples.

Sodium concentrations in unfiltered samples exceeded the criterion in MW-3 but were below the criterion in MW-2 and MW-4. Sodium exceeded the criterion in the filtered sample at MW-3. Sodium exceeded the criterion in MW-1R in both the filtered and unfiltered samples.

3.2.5 Sidegradient Monitoring Wells

The four sidegradient monitoring wells include MW-5, MW-6, MW-18 and MW-19.

Chromium was detected at a concentration of 110 µg/L in the unfiltered sample from MW-5, which exceeded the 50 µg/L criterion. No other COC metals were detected in any of the sidegradient monitoring wells during the December 2019 sampling round.

Manganese concentrations exceeded the 300 µg/L criterion in both the filtered and unfiltered samples from MW-18. Iron concentrations exceeded the 300 µg/L criterion in unfiltered samples from MW-5 and MW-6 (Figure 5).

3.2.6 Downgradient Monitoring Wells

The four downgradient monitoring wells include MW-10, MW-16, MW-12 and MW-14.

Cadmium exceeded the 5 µg/L criterion in both unfiltered and filtered samples from MW-10, MW-16 and MW-14 (Figure 6B). Historically, cadmium concentrations have exceeded the criterion in every sample from MW-10, ranging in concentration from 10.3 µg/L to 80 µg/L. At MW-16, four of eight unfiltered samples have exceeded the criterion, while only two filtered samples exceeded the criterion. Six of twelve unfiltered samples from MW-12 have exceeded the criterion while only one filtered

sample has exceeded the criterion. Eight of twelve unfiltered samples from MW-14 have exceeded the criterion while only three of eight filtered samples have exceeded the criterion.

Chromium concentrations in both unfiltered and filtered samples from MW-10 and MW-14 exceeded the 50 µg/L criterion during Round 12 (Figure 5). Historically, chromium concentrations in these two monitoring wells have exceeded the criterion in both unfiltered and filtered samples (Figure 8B).

Lead was not detected above the 25 µg/L criterion in any of the unfiltered or filtered samples from downgradient monitoring wells during Round 12 (Figure 10A).

During Round 12, iron exceeded the criterion in unfiltered samples from all four downgradient wells. Manganese concentrations exceeded the criterion in MW-16 in both filtered and unfiltered samples. Sodium concentrations in both filtered and unfiltered samples exceeded the criterion in MW-12.

3.2.7 Sentinel Monitoring Wells

The sentinel wells include MW-20 and MW-21, located approximately 670 ft southeast of the Site.

The unfiltered and filtered sample from MW-20 exceeded the criterion for iron. No other exceedances were noted (Figure 5).

Iron and sodium concentrations exceeded the criterion in MW-21 while only sodium exceeded the criterion in the filtered sample (Figure 5).

Historically, the only other exceedances noted in the sentinel wells have been a few isolated exceedances of antimony and chromium.

3.2.8 Filtered versus Unfiltered Metals Groundwater Samples

Concentrations of total metals in groundwater samples at the Site tended to be highly variable between sampling events, as did field measurements of turbidity at the time of sample collection. Turbidity is typically correlated with the presence of suspended matter (e.g., entrained soil particles in the sample). Therefore, in Rounds 5 through 12, 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 during Round 12 in 14 of 16 samples, ranging from 2.8 to 877.3 NTU (see the bottom row of Table 4).

Table 4 presents a comparison of the total metals and the dissolved metals data for the 16 filtered/ unfiltered sample pairs collected at the Liberty Site during Round 12 (December 2019). The “percent

dissolved" shown on the table is the ratio of the filtered sample concentration to the total (unfiltered) sample concentration.

Concentrations of metals that typically exist primarily in the dissolved phase (e.g., sodium and calcium) are not expected to be affected by filtering. 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 two compounds were generally similar in the filtered and unfiltered samples indicating good reproducibility in the sampling/analytic process. Most of the other metals are expected to be generally associated with solid particles. Therefore, it would be expected that 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 is sufficiently higher than the detection for an accurate comparison). This is the case for all well samples. However, an important distinction in the data is that most of the "particle associated" metals (e.g., iron) were not detected in the filtered samples (i.e. are not soluble) except for cadmium, which was 80% soluble or greater in five out of eight samples with detectable levels in the unfiltered samples. Thus, in samples where cadmium is detected, it is also often detected in the filtered (dissolved) samples.

3.2.9 1,4-Dioxane and Perfluorinated Compounds Sampling Results

At the request of NYSDEC, all 13 monitoring wells sampled during Round 10 were analyzed for 1,4-dioxane (November 2017) and perfluorinated compounds (September 2017). At the time of sampling, there were 20 perfluorinated compounds reported. The results have been compared to the recent NYSDEC Drinking Water Advisory Council criteria (NYSDEC, October 2020).

1,4-Dioxane was not detected in any of the 13 monitoring wells (Table 5).

Groundwater samples from all 13 monitoring wells were analyzed for 20 perfluorinated compounds. Perfluorinated compounds were detected in all 13 monitoring wells. Concentrations of individual compounds ranged from not detected to 305 ng/L. None of the wells exceeded the total perfluorinated compounds criterion of 500 ng/L. PFOA exceeded the 10 ng/L criterion in three of 13 monitoring wells at concentrations ranging from 11.1 ng/L to 12.9 ng/L (Table 5). PFOS exceeded the criterion in eight of 13 wells at concentration ranging from 15.8 ng/L to 305 ng/L (Table 5); the highest concentration was found in MW-3.

3.3 IC/EC Certification Plan Report

The Institutional and Engineering Controls Certification Form generated by NYSDEC indicates that the following institutional 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;
- Concrete Slab;
- 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. Concrete slab was removed after the date of the last site inspection (12/9/19) during this reporting period.

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 as of January 2020;
- 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 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.

In addition, in April 2020 (after the review period of this PRR), the property owner removed the concrete building pad, removing one of the ECs for the Site. A Corrective Measures Plan is included in Appendix B. Detailed descriptions of the deficiencies identified at the Site and the severity presented are included in Section 5.0, including a proposed schedule for bringing the Site into compliance with the EC Certification requirements.

3.3.2 IC/EC Certification Forms

See Appendix B.

4.0 Evaluate Costs

4.1 Summary of Costs

The timeframe for this PRR spanned three years. The costs are summarized below.

Liberty Industrial Finishing Cost Breakdown January 30, 2017 through January 30, 2020		
Task	**Period Cost**	**Comments**
Task 03.01: 5-Quarter Sampling		
AECOM Labor & ODCs	$41,770	Three groundwater sampling events: September 2017, November 2018 and December 2019
Lab Fees (Hampton-Clarke)	$11,286	
Total for Task 03.01	**$53,056**	
Task 03.02: Reporting		Three groundwater sampling reports: May 2018, May 2019 and June 2020
AECOM Labor	$44,473	
Total for Task 03.02	**$44,473**	
Task 03.03: Site Management Plan		Completed during the previous review Period
AECOM Labor	$6,523	
Total for Task 03.03	**$6,523**	
Task 03.04: MRC RSO		
AECOM Labor	$0	No work was performed during the review period.
Total for Task 03.04	**$0**	
Task 03.05: Well Rehabilitation		Abandoned and replaced MW-1, new flushmounts for MW-7 and MW-17
AECOM labor & ODCs	$7,551	
Subcontractors (Parratt-Wolff & Clean Harbors)	$9,586	
Total for Task 03.05	**$17,138**	

Liberty Industrial Finishing Cost Breakdown January 30, 2017 through January 30, 2020 (Continued)		
Task	**Period Cost**	**Comments**
Task 03.06: PRRs		Completion of the May 2017 PRR
AECOM Labor	$12,695	
Total for Task 03.06	**$12,695**	
Total cost for the 3-year period	**$133,885**	

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 indicate 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 criteria including: antimony, copper, lead, selenium, and thallium. However, the exceedances are sporadic and do not appear related to the Site.
   - Two COCs, cadmium and chromium, have been consistently detected at concentrations exceeding applicable criteria in numerous monitoring wells during the previous 12 long-term monitoring sampling events (2006 through 2019).
   - Cadmium has been detected in all 16 monitoring wells sampled during the long-term monitoring (Figures 6, 6A and 6B). Concentrations have exceeded the Class GA criterion in 10 of the 16 monitoring wells at least once during the twelve long-term monitoring events and has been above the criterion during every sampling event at MW-4 and MW-10 (Figures 6A and 6B).

- 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 8, 8A and 8B).
- There are no discernable trends in the groundwater data 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, The cadmium (Figures 7, 7A, 7B, 7C, 7D, 7E and 7F) and chromium (Figures 9, 9A, 9B, 9C, 9D, 9E and 9F) 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 five-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 on-site.
   - 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.

5.2 Recommendations

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

- The deed notice should be finalized.
- The fence should be repaired to prevent access.
- Continue monitoring of groundwater on a five-quarter sampling basis. The next sampling event is scheduled for May 2021.
- Continue inspection of the condition of the asphalt cap on a five-quarter basis (will be performed in conjunction with the groundwater sampling events). Repair cracks and/or potential leak points observed in previous inspections to prevent infiltration through residually impacted soil around former USTs. The next inspection is scheduled for May 2021.
- Assist NYSDEC in addressing issues concerning the modifications made to the engineering controls at the Site by the property owner. Property owner to implement corrective measures as specified in Appendix B.

6.0 References

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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-1R	202,384.57	2,206,633.80	92.92	91.57	92.92	55.0
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-7	202,542.57	2,206,322.39	92.23	92.18	92.36	54.7
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-17	202,536.52	2,206,310.29	92.22	91.91	92.22	100.0
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 and June 5, 1998.
(monitoring wells MW-1, 2, 3, 7, 10, 16 and 17 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	42.5	5/24/11	dry	NA	No water was observed in the well
			8/21/12	dry	NA	No water was observed in the well
			11/5/13	dry	NA	No water was observed in the well
			3/18/15	dry	NA	No water was observed in the well
			5/9/16	dry	NA	No water was observed in the well
			9/13/17	dry	NA	No water was observed in the well
			11/12/18	dry	NA	No water was observed in the well
MW-1R (shallow)	91.57	55.0	12/9/19	43.64	47.93	
MW-2 (shallow)	91.27	54.2	5/24/11	42.91	48.36	
			8/21/12	44.05	47.22	
			11/5/13	43.21	48.06	
			3/18/15	43.84	47.43	
			5/9/16	45.30	45.97	
			9/13/17	47.30	43.97	
			11/14/18	45.10	46.17	
			12/9/19	43.60	47.67	
MW-3 (shallow)	91.25	53.9	5/24/11	42.90	48.35	
			8/21/12	44.00	47.25	
			11/5/13	45.21	46.04	
			3/18/15	44.10	47.15	
			5/9/16	45.31	45.94	
			9/13/17	47.26	43.99	
			11/14/18	45.14	46.11	
			12/9/19	43.61	47.64	
MW-4 (shallow)	91.61	53.4	5/24/11	43.25	48.36	
			8/21/12	44.36	47.25	
			11/5/13	46.60	45.01	
			3/18/15	44.18	47.43	
			5/9/16	45.65	45.96	
			9/13/17	47.61	44.00	
			11/14/18	45.48	46.13	
			12/9/19	44.05	47.56	

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-5 (shallow)	93.23	50.0	6/12/06	42.24	50.99	
			8/21/07	43.11	50.12	
			11/13/08	45.40	47.83	
			3/10/10	43.37	49.86	
			5/23/11	44.92	48.31	
			8/21/12	45.99	47.24	
			11/5/13	47.19	46.04	
			3/18/15	45.85	47.38	
			5/9/16	47.35	45.88	
			9/13/17	49.30	43.93	
			11/14/18	47.19	46.04	
			12/9/19	45.60	47.63	
MW-6 (Magothy)	92.71	265.0	6/12/06	42.19	50.52	
			8/21/07	43.15	49.56	
			11/13/08	45.23	47.48	
			3/10/10	43.12	49.59	
			5/23/11	44.76	47.95	
			8/21/12	45.70	47.01	
			11/5/13	45.95	46.76	
			3/18/15	48.30	44.41	
			5/9/16	47.15	45.56	
			9/13/17	49.16	43.55	
			11/14/18	45.98	46.73	
			12/9/19	45.45	47.26	
MW-7 (shallow)	92.18	54.7	11/12/18	45.99	46.19	
			12/9/19	44.27	47.91	
MW-10 (shallow)	90.40	50.0	5/24/11	42.12	48.28	
			8/21/12	43.18	47.22	
			11/5/13	43.10	47.30	
			3/18/15	43.30	47.10	
			5/9/16	44.50	45.90	
			9/14/17	46.49	43.91	
			11/12/18	44.40	46.00	
			12/10/19	42.67	47.73	

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-12 (shallow)	89.59	49.3	6/14/06	39.09	50.50	
			8/24/07	39.95	49.64	
			11/13/08	42.25	47.34	
			12/23/08	41.81	47.78	
			3/10/10	40.07	49.52	
			5/24/11	41.69	47.90	
			8/21/12	42.75	46.84	
			11/5/13	43.00	46.59	
			3/18/15	42.52	47.07	
			5/9/16	43.82	45.77	
			9/14/17	46.08	43.51	
			11/12/18	44.98	44.61	
			12/10/19	42.25	47.34	
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	
			3/18/15	42.77	46.78	
			5/9/16	44.21	45.34	
			9/14/17	46.21	43.34	
			11/12/18	44.14	45.41	
			12/10/19	42.33	47.22	
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	
			3/18/15	43.21	47.27	
			5/9/16	44.74	45.74	
			9/14/17	46.72	43.76	
			11/12/18	44.62	45.86	
			12/10/19	42.85	47.63	
MW-17 (deep)	91.91	100.0	11/12/18	45.49	46.42	
			12/11/19	44.55	47.36	

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-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	
			3/18/15	44.46	47.09	
			5/9/16	47.50	44.05	
			9/14/17	47.74	43.81	
			11/13/18	45.70	45.85	
			12/10/19	43.98	47.57	
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	
			3/18/15	45.20	46.78	
			5/9/16	46.61	45.37	
			9/14/17	48.71	43.27	
			11/13/18	46.55	45.43	
			12/10/19	44.92	47.06	
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	
			3/18/15	41.81	46.78	
			5/9/16	43.35	45.24	
			9/13/17	45.24	43.35	
			11/12/18	43.22	45.37	
			12/11/19	41.55	47.04	

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	
			3/18/15	41.79	46.87	
			5/9/16	43.30	45.36	
			9/13/17	45.16	43.50	
			11/12/18	43.20	45.46	
			12/11/19	41.57	47.09	

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 DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-7		MW-7		MW-17		MW-17		MW-17	
Sample ID	Class GA	LMW-7	LMW-7F	LMW-7	LMW-7F	LMW-17	LMW-17F	LMW-17	LMW-17F		
Laboratory ID	Ground	AD07749-011	AD07749-012	AD14614-017	AD14614-018	AD07749-027	AD07749-028	AD14614-027	AD14614-028		
Sample Date	Water	11/13/18	11/13/18	12/9/19	12/9/19	11/13/18	11/13/18	12/10/19	12/10/19		
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered		
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q		
Aluminum	NC	390	ND	660	250	5,700	ND	2,700	290		
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND		
Arsenic	25	ND	ND	ND	ND	2.9	ND	ND	ND		
Barium	1,000	ND	ND	63	59	75.0	53.0	210.0	200.0		
Beryllium	3	ND	ND	ND	ND	ND	ND	1.3	ND		
Cadmium	5	2.2	ND	2.9	ND	***25.0***	3.6	***13.0***	***11.0***		
Calcium	NC	13,000	11,000	31,000	31,000	31,000	32,000	48,000	49,000		
Chromium	50	ND	ND	ND	ND	ND	ND	***55.0***	ND		
Cobalt	NC	ND	ND	ND	ND	2.8	ND	3.00	ND		
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND		
Iron	300	ND	ND	***960***	***420***	***7,700***	***1,800***	***3,500***	ND		
Lead	25	ND	ND	4.4	ND	***49.0***	3.2	19.0	ND		
Magnesium	35,000	ND	ND	ND	ND	ND	ND	5,800	5,700		
Manganese	300	ND	ND	ND	ND	***930***	***940***	***1,100***	***1,100***		
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND		
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND		
Potassium	NC	ND	ND	ND	ND	6,500	6,400	7,300	7,400		
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND		
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND		
Sodium	20,000	18,000	16,000	***88,000***	***87,000***	***23,000***	***24,000***	***27,000***	***27,000***		
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND		
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND		
Zinc	2,000	ND	ND	ND	ND	600	260	480	350		

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Upgradient Wells
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-1R		MW-2		MW-2		MW-2		MW-2		MW-2	
Sample ID	Class GA	LMW-1	LMW-1F	LMW-2	LMW-2F	LMW-2	LMW-2F	LMW-2	LMW-2F	LMW-2	LMW-2F	LMW-2	LMW-2F
Laboratory ID	Ground	AD14614-001	AD14614-002	K0943-11	K0943-12	L1807-12	L1808-12	AC75576-029	AC75576-030	AC83866-001	AC83866-002		
Sample Date	Water	12/9/19	12/9/19	5/26/11	5/26/11	8/23/12	8/23/12	11/6/13	11/6/13	3/18/15	3/18/15		
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered		
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q		
Aluminum	NC	680	320	118 B	ND	602	ND	ND	ND	1,200	ND		
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Barium	1,000	58.0	57.0	44.6 B	44.9 B	39.5 B	31.9 B	ND	ND	ND	ND		
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Cadmium	5	ND	ND	***8.5***	***5.5***	3.5 B	2.7 B	ND	ND	ND	ND		
Calcium	NC	27,000	27,000	16,300	16,700	20,400	21,500	30,000	29,000	16,000	15,000		
Chromium	50	ND	ND	***51.9***	48.2	26.7	12.0 B	***62.0***	***59.0***	ND	ND		
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Copper	200	ND	ND	24 B	ND	14.4 B	4.2 B	ND	ND	ND	ND		
Iron	300	***810***	***390***	205	ND	***853***	ND	ND	ND	***1,700***	ND		
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND	10.0	ND		
Magnesium	35,000	5,000	5,100	3,180	3,250	3,720	3,870	ND	ND	ND	ND		
Manganese	300	71.0	52.0	ND	ND	17.7 B	ND	ND	ND	ND	ND		
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Nickel	100	ND	ND	5.5 B	2.7 B	4.6 B	3.3 B	ND	ND	ND	ND		
Potassium	NC	ND	ND	2,720	2,610	1,710 E	1,660	ND	ND	ND	ND		
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Sodium	20,000	***32,000***	***32,000***	***21,300***	***22,400***	***21,400***	***22,900***	15,000	16,000	9,600	9,700		
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Vanadium	NC	ND	ND	ND	ND	1.4 B	ND	ND	ND	ND	ND		
Zinc	2,000	ND	ND	29.2 B	24.8 B	51.0	26.1 B	ND	ND	ND	ND		

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Upgradient Wells
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sample ID	Class GA	LMW-2	LMW-2F	LMW-2	LMW-2F	LMW-2	LMW-2F	LMW-2	LMW-2F
Laboratory ID	Ground	AC91321-008	AC91321-009	AD00074-001	AD00074-002	AD07749-001	AD07749-002	AD14614-003	AD14614-006
Sample Date	Water	5/11/16	5/11/16	9/13/17	9/13/17	11/14/18	11/14/18	12/9/19	12/9/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	2.9	3.2	ND	ND	ND	ND
Calcium	NC	29,000	30,000	32,000	34,000	22,000	21,000	23,000	25,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	ND	ND	ND	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	5,500	5,800	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	14,000	15,000	***25,000***	***26,000***	14,000	14,000	9,400	10,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Upgradient Wells
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
Sample ID	Class GA	LMW-3	LMW-3F	LMW-3	LMW-3F	LMW-3	LMW-3F	LMW-3	LMW-3F	LMW-3	LMW-3F
Laboratory ID	Ground	K0943-13	K0943-14	L1807-13	L1808-13	AC75576-001	AC75576-002	AC83866-003	AC83866-004	AC91321-006	AC91321-007
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13	3/18/15	3/18/15	5/11/16	5/11/16
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	346	ND	360	ND	470	ND	1,400	ND	330	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	19.1 B	18.1 B	28.9 B	27.9 B	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***6.6***	4.6 B	3.0 B	2.8 B	4.7	3.5	4.2	2.4	***7.9***	***5.8***
Calcium	NC	16,900	16,800	28,600	29,400	29,000	27,000	16,000	16000	26,000	25,000
Chromium	50	***59.6***	32.6	***118***	***103***	***140***	***95.0***	***170***	***61.0***	***97.0***	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	45.5	11.7 B	14.2 B	6.5 B	ND	ND	ND	ND	ND	ND
Iron	300	***462***	ND	***414***	45.4 B	***650***	ND	***1,800***	ND	***700***	ND
Lead	25	14.1	ND	ND	ND	8.5	ND	18.0	ND	7.2	ND
Magnesium	35,000	2710	2,760	5,100	5,180	ND	ND	ND	ND	ND	ND
Manganese	300	11.8 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	6.7 B	4.3 B	3.8 B	3.4 B	ND	ND	ND	ND	ND	ND
Potassium	NC	1,950	1,770	2,560 E	2,480	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	12,400	13,200	***30,800***	***31,000***	***38,000***	***35,000***	***24,000***	***26,000***	***26,000***	***25,000***
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	1.4 B	ND	1.1 B	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	54.9	40.4 B	19.6 B	19.3 B	ND	ND	61.0	ND	ND	ND

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
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N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-3F	LMW-3	LMW-3F	LMW-3	LMW-3F
Laboratory ID	Ground	AD00074-003	AD00074-004	AD07749-003	AD07749-004	AD14614-009	AD14614-010
Sample Date	Water	9/13/17	9/13/17	11/14/18	11/14/18	12/9/19	12/9/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	240	ND	730	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	65	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	***9.6***	***8.5***	***5.0***	3.8	2.7	ND
Calcium	NC	23,000	23,000	17,000	16,000	23,000	24,000
Chromium	50	***67.0***	ND	***52.0***	ND	***57.0***	***56.0***
Cobalt	NC	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	58.0	ND	ND	ND
Iron	300	***350***	ND	***1,000***	ND	***430***	***370***
Lead	25	3.9	ND	12.0	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Sodium	20,000	***32,000***	***33,000***	***25,000***	***23,000***	***35,000***	***36,000***
Thallium	0.50	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	88.0	63.0	ND	ND

Notes:
All values in µg/L
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID	Class GA	LMW-4	LMW-4F	LMW-4	LMW-4F	LMW-4	LMW-4F	LMW-4	LMW-4F
Laboratory ID	Ground	K0943-15	K0943-16	L1807-14	L1808-14	AC75576-003	AC75576-004	AC83866-005	AC83866-006
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13	3/18/15	3/18/15
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc.	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	2,560	ND	1,980	1,130	310	ND	2,200	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	4.8 B	ND	6.4 B	ND	ND	ND	ND	ND
Barium	1,000	27.1 B	13.2 B	22.8 B	21.6 B	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***54.2***	***19.8***	***28.2***	***27.3***	***26.0***	***21.0***	***20.0***	***11.0***
Calcium	NC	14,200	12,300	18,700	19,600	33,000	30,000	8,400	8,300
Chromium	50	***176***	***142***	***74.9***	***58.7***	ND	ND	***53.0***	ND
Cobalt	NC	3.3 B	2.6 B	0.73 B	ND	ND	ND	ND	ND
Copper	200	137	43.5	69.7	58.9	ND	ND	60.0	ND
Iron	300	***2,660***	109 B	***2,000***	***1,110***	***320***	ND	***2,200***	ND
Lead	25	***43.2***	ND	15.5	9.8 B	ND	ND	22.0	ND
Magnesium	35,000	1,710	1,270	2,770	2,870	ND	ND	ND	ND
Manganese	300	47.1 B	12.3 B	18.4 B	14.4 B	ND	ND	ND	ND
Mercury	0.7	0.036 B	ND	ND	ND	ND	ND	ND	ND
Nickel	100	43.5 B	12.8 B	17.5 B	15.8 B	ND	ND	ND	ND
Potassium	NC	6,600	6,790	2,340 E	2,460	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***26,100***	***29,100***	13,400	14,400	***21,000***	***21,000***	ND	ND
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	7.0 B	1.2 B	4.9 B	3.2 B	ND	ND	ND	ND
Zinc	2,000	630	109	257	220	160	130	220	97.0

Notes:
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID	Class GA	LMW-4	LMW-4F	LMW-4	LMW-4F	LMW-4	LMW-4F	LMW-4	LMW-4F
Laboratory ID	Ground	AC91321-010	AC91321-011	AD00074-005	AD00074-006	AD07749-005	AD07749-006	AD14614-011	AD14614-012
Sample Date	Water	5/11/16	5/11/16	9/13/17	9/13/17	11/14/18	11/14/18	12/9/19	12/9/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	360	ND	1,400	ND	940	330
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	2.1	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***24.0***	***23.0***	***95.0***	***80.0***	***98.0***	***83.0***	***47.0***	***46.0***
Calcium	NC	26,000	26,000	24,000	23,000	33,000	29,000	25,000	25,000
Chromium	50	ND	ND	***110***	***90.0***	***100***	ND	***110***	***85.0***
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	110	56.0	61.0	ND
Iron	300	ND	ND	***430***	ND	***1,400***	***340***	***1,100***	***380***
Lead	25	ND	ND	4.3	ND	15.0	3.1	11.0	4.5
Magnesium	35,000	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	5,000	6,300	5,100	6,600	6,700
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***26,000***	***26,000***	8,900 J	12,000 J	9,600	8,300	12,000	13,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	120	110	180	140	430	260	240	180

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-5F	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:
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B - Estimated value
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-5		MW-5		MW-5		MW-5		MW-5	
Sample ID	Class GA	LMW-5	LMW-5F	LMW-5	LMW-5F	LMW-5	LMW-5F	LMW-5	LMW-5F	LMW-5	LMW-5F
Laboratory ID	Ground	AC83866-007	AC83866-008	AC91268-015	AC91268-016	AD00074-007	AD00074-010	AD07749-007	AD07749-008	AD14614-013	AD14614-014
Sample Date	Water	3/19/15	3/19/15	5/10/16	5/10/16	9/13/17	9/13/17	11/14/18	11/14/18	12/9/19	12/9/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	500	ND	210	ND	220	ND	ND	ND	410	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	61.0	68.0	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	2.7	ND
Calcium	NC	16,000	17,000	18,000	20,000	17,000	16,000	20,000	20,000	23,000	21,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	***110***	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	ND	ND	ND	ND	ND	ND	***530***	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	7,800	7,700	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	14,000	14,000	***21,000***	***23,000***	6,800	6,900	10,000	11,000	16,000	16,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
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Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
Sample ID	Class GA	LMW-6	LMW-6	LMW-6	LMW-6	LMW-6	LMW-6F	LMW-6	LMW-6F	LMW-6	LMW-6F
Laboratory ID	Ground	E0833-02A	F1192-09A	G2136-06A	J0429-03A	K0919-04	K0919-03	L1807-03	L1808-03	AC75576-011	AC75576-012
Sample Date	Water	6/12/06	8/24/07	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	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

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LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
Sample ID	Class GA	LMW-6	LMW-6F	LMW-6	LMW-6F	LMW-6	LMW-6F	LMW-6	LMW-6F	LMW-6	LMW-6F
Laboratory ID	Ground	AC83866-009	AC83866-010	AC91268-017	AC91268-018	AD00074-013	AD00074-014	AD07749-009	AD07749-010	AD14614-015	AD14614-016
Sample Date	Water	3/19/15	3/19/15	5/10/16	5/10/16	9/13/17	9/13/17	11/14/18	11/14/18	12/9/19	12/9/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	800	ND	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	8,300	7,900	8,800	7,900	7,800	7,600	9,800	9,500	12,000	11,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	***990***	ND	ND	ND	ND	ND	***320***	ND
Lead	25	ND	ND	3.1	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	8,600	8,400	8,700	8,800	9,000	9,300	11,000	11,000	11,000	11,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
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Source Area Wells
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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-18F	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:
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Source Area Wells
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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-18F	LMW-18	LMW-18F	LMW-18	LMW-18F	LMW-18	LMW-18F	LMW-18	LMW-18F
Laboratory ID	Ground	AC83866-019	AC83866-020	AC91268-019	AC91268-020	AD00074-024	AD00074-025	AD07749-029	AD07749-030	AD14614-029	AD14614-030
Sample Date	Water	3/19/15	3/19/15	5/10/16	5/10/16	9/14/17	9/14/17	11/13/18	11/13/18	12/10/19	12/10/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	86.0	76.0	87.0	89.0	100	92.0	91.0	81.0
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	18,000	16,000	22,000	21,000	20,000	20,000	21,000	20,000	19,000	19,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	5,400	5,200	5,300	5,600	5,600	5,500	5,300	5,100
Manganese	300	***950***	ND	***1,000***	***750***	***1,300***	***890***	***1,200***	***940***	***1,700***	***920***
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	5,500	5,800	6,300	5,800	6,000	5,800
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	19,000	18,000	***25,000***	***24,000***	***24,000***	***25,000***	***26,000***	***24,000***	18,000	17,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
Sample ID	Class GA	LMW-19	LMW-19	LMW-19	LMW-19	LMW-19	LMW-19	LMW-19	LMW-19F	LMW-19	LMW-19F
Laboratory ID	Ground	E0868-15A	F1192-07A	G2136-01A	J0429-07A	K0919-12	K0919-11	L1807-05	L1808-05	AC75576-015	AC75576-016
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.	conc. Q
Aluminum	NC	53.4 B	74.9 B	ND	69.9 BE	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 BN	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
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B - Estimated value
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
Sample ID	Class GA	LMW-19	LMW-19F	LMW-19	LMW-19F	LMW-19	LMW-19F	LMW-19	LMW-19F	LMW-19	LMW-19F
Laboratory ID	Ground	AC83866-011	AC83866-014	AC91268-021	AC91268-022	AD00074-022	AD00074-023	AD07749-031	AD07749-032	AD14614-031	AD14614-032
Sample Date	Water	3/19/15	3/19/15	5/10/16	5/10/16	9/14/17	9/14/17	11/13/18	11/13/18	12/10/19	12/10/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc.	conc. Q	conc.	conc. Q	conc.	conc. Q	conc.	conc. Q	conc.	conc. Q
Aluminum	NC	ND	ND	460	ND	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	15,000	13,000	16,000	14,000	13,000	13,000	11,000	11,000	12,000	12,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	***730***	ND	ND	ND	ND	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	5,100	ND	6,000	ND	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	17,000	16,000	19,000	16,000	15,000	16,000	14,000	14,000	15,000	15,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
NC - No NYSDEC criterion
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B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
Sample ID	Class GA	LMW-10	LMW-10F	LMW-10	LMW-10F	LMW-10	LMW-10F	LMW-10	LMW-10F
Laboratory ID	Ground	K0943-03	K0943-04	L1807-10	L1808-10	AC75576-005	AC75576-006	AC83866-021	AC83866-022
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13	3/19/15	3/19/15
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	101 B	ND	159 B	ND	210	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	35.0 B	32.5 B	28.7 B	28.1 B	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***10.3***	***11.3***	***36.1***	***34.9***	***49.0***	***50.0***	***42.0***	***33.0***
Calcium	NC	18,700	18,700	25,900	26,000	28,000	28,000	22,000	20,000
Chromium	50	***72.7***	***89.3***	***152***	***155***	***140***	***140***	***92.0***	***83.0***
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	245	ND	***391***	ND	***420***	ND	***410***	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	3,700	3,590	3,640	3,650	ND	ND	ND	ND
Manganese	300	16.8 B	ND	18.9 B	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	1.6 B	0.91 B	3.5 B	3.5 B	ND	ND	ND	ND
Potassium	NC	2,380	2,530	4,810 E	4,770	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	17,100	19,300	14,800	14,900	9,200	9,300	12,000	13,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	27.1 B	21.7 B	ND	ND	ND	ND	ND	ND

Notes:
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Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
Sample ID	Class GA	LMW-10	LMW-10F	LMW-10	LMW-10F	LMW-10	LMW-10F	LMW-10	LMW-10F
Laboratory ID	Ground	AC91268-013	AC91268-014	AD00074-028	AD00074-029	AD07749-013	AD07749-014	AD14614-019	AD14614-020
Sample Date	Water	5/9/16	5/9/16	9/14/17	9/14/17	11/12/18	11/12/18	12/10/19	12/10/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	770	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***53.0***	***57.0***	***80.0***	***72.0***	***57.0***	***60.0***	***73.0***	***69.0***
Calcium	NC	22,000	22,000	18,000	18,000	29,000	27,000	30,000	27,000
Chromium	50	***130***	***130***	***82.0***	***81.0***	***120***	***110***	***180***	***160***
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	***2,200***	ND	ND	ND	***460***	ND
Lead	25	ND	ND	11.0	ND	ND	ND	3.0	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	5,300	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,000	18,000	11,000	11,000	13,000	12,000	13,000	12,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16
Sample ID	Class GA	LMW-16	LMW-16F	LMW-16	LMW-16F	LMW-16	LMW-16F	LMW-16	LMW-16F
Laboratory ID	Ground	K0943-09	K0943-10	L1807-11	L1808-11	AC75576-007	AC75576-008	AC83866-023	AC83866-024
Sample Date	Water	5/26/11	5/26/11	8/23/12	8/23/12	11/4/13	11/4/13	3/19/15	3/19/15
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,150	586	340	322	1,400	440	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	299	351	339	339	230	240	180	160
Beryllium	3	2.0 B	1.8 B	0.7 B	0.72 B	1.5	1.2	ND	ND
Cadmium	5	***5.3***	4.9 B	4.2 B	4.3 B	4.4	3.9	3.9	3.4
Calcium	NC	9,240	9,890	12,100	11,700	9,800	10,000	14,000	12,000
Chromium	50	11.7 B	8.9 B	2.8 B	2.3 B	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	9.4 B	11.3 B	66.6	63.0	ND	ND	ND	ND
Iron	300	115 B	ND	49.9 B	ND	***1,800***	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	2,350	2,570	3,740	3,680	ND	ND	ND	ND
Manganese	300	***597***	***623***	***661***	***632***	***570***	***530***	***380***	***350***
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	13.9 B	14.1 B	11.8 B	12.0 B	ND	ND	ND	ND
Potassium	NC	4,930	4,880	6,010 E	5,860	5,100	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	14,700	14,500	13,900	13,500	11,000	11,000	10,000	10,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	67.5	69	34.2 B	33.2 B	ND	ND	ND	ND

Notes:

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Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 SAMPLING EVENTS
SUMMARY OF TAL METALS IN GROUNDWATER

Sample Location	NYSDEC	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16
Sample ID	Class GA	LMW-16	LMW-16F	LMW-16	LMW-16F	LMW-16	LMW-16F	LMW-16	LMW-16F
Laboratory ID	Ground	AC91268-011	AC91268-012	AD00074-026	AD00074-027	AD07749-025	AD07749-026	AD14614-025	AD14614-026
Sample Date	Water	5/9/16	5/9/16	9/14/17	9/14/17	11/12/18	11/12/18	12/10/19	12/10/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,200	370	1,200	360	2,900	400	620	410
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	180	160	140	140	170	160	190	180
Beryllium	3	ND	ND	ND	ND	1.0	ND	ND	ND
Cadmium	5	4.2	4.1	***5.2***	***5.1***	***5.5***	***5.7***	***5.2***	4.4
Calcium	NC	11,000	10,000	10,000	11,000	11,000	12,000	13,000	12,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	58.0	50.0	2.2	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	***1,600***	ND	***1,800***	ND	***4,000***	ND	***480***	ND
Lead	25	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	300	***700***	***580***	***900***	***880***	***1,200***	***1,100***	***1,400***	***1,300***
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	11,000	11,000	11,000	11,000	12,000	12,000	12,000	12,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
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Source Area Wells
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Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-12F	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	51.0
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:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-12F	LMW-12	LMW-12F	LMW-12	LMW-12F	LMW-12	LMW-12F	LMW-12	LMW-12F
Laboratory ID	Ground	AC83866-025	AC83866-030	AC91268-001	AC91268-004	AD00074-030	AD00074-031	AD07749-015	AD07749-018	AD14614-021	AD14614-022
Sample Date	Water	3/20/15	3/20/15	5/9/16	5/9/16	9/14/17	9/14/17	11/12/18	11/12/18	12/10/19	12/10/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	870	ND	950	ND	ND	ND	ND	ND	260	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	3.2	2.0	ND	ND	ND	ND	ND	ND
Barium	1,000	68.0	58.0	ND	ND	64.0	66.0	ND	ND	ND	ND
Beryllium	3	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	***7.7***	4.4	***5.4***	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	32,000	29,000	27,000	28,000	41,000	43,000	45,000	46,000	21,000	22,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	3.0	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	***900***	ND	***980***	ND	ND	ND	***430***	***310***	***380***	ND
Lead	25	6.8	ND	11.0	ND	ND	ND	ND	ND	ND	ND
Magnesium	35,000	7,600	6,700	ND	ND	8,600	9,100	ND	ND	ND	ND
Manganese	300	ND	ND	ND	ND	ND	ND	82.0	82.0	ND	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	5,300	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***37,000***	***37,000***	***30,000***	***32,000***	***52,000***	***54,000***	***27,000***	***28,000***	***53,000***	***63,000***
Thallium	0.50	ND	ND	***2.5***	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	78.0	ND	65.0	ND	ND	ND	ND	ND	ND	ND

Notes:
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-14F	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:
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BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-14F	LMW-14	LMW-14F	LMW-14	LMW-14F	LMW-14	LMW-14F	LMW-14	LMW-14F
Laboratory ID	Ground	AC83866-031	AC83866-032	AC91268-009	AC91268-010	AD00074-032	AD00074-033	AD07749-021	AD07749-022	AD14614-023	AD14614-024
Sample Date	Water	3/20/15	3/20/15	5/9/16	5/9/16	9/14/17	9/14/17	11/12/18	11/12/18	12/10/19	12/10/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	1,500	ND	4,000	1,200	1,700	ND	1,400	ND	840	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	3.3	2.4	ND	ND	ND	ND	ND	ND
Barium	1,000	ND	ND	55.0	57.0	ND	ND	ND	ND	64.0	58.0
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	3.5	2.4	4.7	ND	***5.1***	4.0	***9.1***	***8.6***	***16.0***	***16.0***
Calcium	NC	9,700	8,900	7,500	11,000	9,500	8,800	12,000	11,000	16,000	16,000
Chromium	50	***74.0***	ND	***96.0***	***56.0***	***110***	***58.0***	***120***	***63.0***	***72.0***	***54.0***
Cobalt	NC	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	***1,800***	ND	***4,900***	***1,700***	***2,600***	ND	***1,600***	ND	***1,500***	ND
Lead	25	14.0	ND	***32.0***	9.9	14.0	ND	11.0	ND	7.9	ND
Magnesium	35,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	300	130	110	91	110	59.0	45.0	58.0	52.0	86.0	71.0
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	***110,000***	***100,000***	6,300	11,000	***21,000***	***21,000***	13,000	12,000	15,000	14,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	77.0	ND	210.0	82.0	55.0	ND	ND	ND	ND	ND

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Source Area Wells
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Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-20F	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:
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Source Area Wells
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Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-20F	LMW-20	LMW-20F	LMW-20	LMW-20F	LMW-20	LMW-20F	LMW-20	LMW-20F
Laboratory ID	Ground	AC83866-027	AC83866-028	AC91321-001	AC91321-003	AD00074-020	AD00074-021	AD07749-033	AD07749-034	AD14614-033	AD14614-034
Sample Date	Water	3/19/15	3/19/15	5/10/16	5/10/16	9/13/17	9/13/17	11/12/18	11/12/18	12/11/19	12/11/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc.	conc. Q	conc.	conc. Q	conc.	conc. Q	conc.	conc. Q	conc.	conc. Q
Aluminum	NC	2,000	ND	1,200	ND	550	ND	19,000	560	4,000	680
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND	11.0	ND	ND	ND
Barium	1,000	ND	ND	ND	ND	ND	ND	150	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	16,000	13,000	16,000	14,000	15,000	15,000	21,000	14,000	11,000	9,900
Chromium	50	ND	ND	ND	ND	ND	ND	***72.0***	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	10.0	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	63.0	ND	ND	ND
Iron	300	***2,700***	ND	***7,600***	ND	***680***	ND	***34,000***	***570***	***4,100***	***700***
Lead	25	6.1	ND	5.2	ND	ND	ND	***27.0***	ND	11.0	4.9
Magnesium	35,000	7,700	6,200	7,800	7,000	7,000	7,200	10,000	6,900	5,400	ND
Manganese	300	64.0	ND	70.0	ND	ND	ND	***1,100***	62.0	180	160
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	18,000	16,000	18,000	17,000	***20,000***	***20,000***	19,000	18,000	16,000	15,000
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	57.0	ND	ND	ND
Zinc	2,000	ND	ND	1,500	ND	ND	ND	340	ND	67.0	ND

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TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-21F	LMW-21	LMW-21F	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
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
JUNE 2006 THROUGH DECEMBER 2019 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-21F	LMW-21	LMW-21F	LMW-21	LMW-21F	LMW-21	LMW-21F	LMW-21	LMW-21F
Laboratory ID	Ground	AC83866-029	AC83866-026	AC91321-002	AC91321-004	AD00074-018	AD00074-019	AD07749-035	AD07749-036	AD14614-035	AD14614-036
Sample Date	Water	3/19/15	3/19/15	5/10/16	5/10/16	9/13/17	9/13/17	11/12/18	11/12/18	12/11/19	12/11/19
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered
		conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q	conc. Q
Aluminum	NC	ND	ND	1,400	ND	1,500	ND	2,500	ND	370	ND
Antimony	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND
Barium	1,000	56.0	56.0	73.0	68.0	97.0	85.0	92.0	84.0	120	110
Beryllium	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NC	12,000	12,000	12,000	13,000	15,000	15,000	16,000	18,000	18,000	17,000
Chromium	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	***2,500***	ND	***2,500***	***340***	***3,900***	***580***	***690***	ND
Lead	25	ND	ND	4.2	ND	3.5	ND	7.0	ND	ND	ND
Magnesium	35,000	ND	ND	6,400	6,700	ND	ND	ND	5,000	5,300	5,000
Manganese	300	ND	ND	96.0	63.0	140	89.0	***320***	130	120	ND
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NC	ND	ND	ND	ND	7,200	7,100	6,700	7,100	8,300	7,900
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	20,000	15,000	15,000	17,000	19,000	***32,000***	***32,000***	***23,000***	***25,000***	***48,000***	***46,000***
Thallium	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
All values in µg/L
NC - No NYSDEC criterion
ND - Not Detected
B - Estimated value
E - Estimated value due to interference
N - Spike recovery outside control limits

BOLD/Italics - Exceeds criterion
Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells
Groundwater Contaminant of Concern

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
DECEMBER 2019 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-7	MW-7	MW-7	MW-17	MW-17	MW17	MW-1R	MW-1R	MW-1R
Sample ID	Class GA	LMW-7	LMW-7F		LMW-17	LMW-17F		LMW-1	LMW-1F	
Laboratory ID	Ground	AD14614-017	AD14614-018		AD14614-027	AD14614-028		AD14614-001	AD14614-002	
Sample Date	Water	12/9/19	12/9/19		12/10/19	12/10/19		12/9/19	12/9/19	
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Percent	Unfiltered	Filtered	Percent	Unfiltered	Filtered	Percent
		conc. Q	conc. Q	Dissolved	conc. Q	conc. Q	Dissolved	conc. Q	conc. Q	Dissolved
Aluminum	NC	660	250	37.9%	2,700	290	10.7%	680	320	47.1%
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	63	59	93.7%	210.0	200.0	95.2%	58.0	57.0	98.3%
Beryllium	3	ND	ND	NC	1.3	ND	NC	ND	ND	NC
Cadmium	5	2.9	ND	NC	***13.0***	**11.0**	84.6%	ND	ND	NC
Calcium	NC	31,000	31,000	100.0%	48,000	49,000	102.1%	27,000	27,000	100.0%
Chromium	50	ND	ND	NC	**55.0**	ND	NC	ND	ND	NC
Cobalt	NC	ND	ND	NC	3.00	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC	ND	ND	NC
Iron	300	***960***	***420***	43.8%	***3,500***	ND	NC	***810***	***390***	48.1%
Lead	25	4.4	ND	NC	*19.0*	ND	NC	ND	ND	NC
Magnesium	35,000	ND	ND	NC	5,800	5,700	98.3%	5,000	5,100	102.0%
Manganese	300	ND	ND	NC	***1,100***	***1,100***	100.0%	71.0	52.0	73.2%
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	7,300	7,400	101.4%	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	***88,000***	***87,000***	98.9%	***27,000***	***27,000***	100.0%	***32,000***	***32,000***	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	480	350	72.9%	ND	ND	NC
Turbidity (NTU)		20.6			40.2			25.5		

Notes:

- Upgradient Wells
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells

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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
Groundwater Contaminant of Concern

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
DECEMBER 2019 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	AD14614-003	AD14614-006		AD14614-009	AD14614-010		AD14614-011	AD14614-012	
Sample Date	Water	12/9/19	12/9/19		12/9/19	12/9/19		12/9/19	12/9/19	
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Percent	Unfiltered	Filtered	Percent	Unfiltered	Filtered	Percent
		conc. Q	conc. Q	Dissolved	conc. Q	conc. Q	Dissolved	conc. Q	conc. Q	Dissolved
Aluminum	NC	ND	ND	NC	ND	ND	NC	940	330	35.1%
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	2.7	ND	NC	***47.0***	***46.0***	97.9%
Calcium	NC	23,000	25,000	108.7%	23,000	24,000	104.3%	25,000	25,000	100.0%
Chromium	50	ND	ND	NC	***57.0***	***56.0***	98.2%	***110***	***85.0***	77.3%
Cobalt	NC	ND	ND	NC	ND	ND	NC	ND	ND	NC
Copper	200	ND	ND	NC	ND	ND	NC	61.0	ND	NC
Iron	300	ND	ND	NC	***430***	***370***	86.0%	***1,100***	***380***	34.5%
Lead	25	ND	ND	NC	ND	ND	NC	11.0	4.5	40.9%
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	6,600	6,700	101.5%
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	9,400	10,000	106.4%	***35,000***	***36,000***	102.9%	12,000	13,000 J	108.3%
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	240	180	75.0%
Turbidity (NTU)		9.0			3.6			27.3		

Notes:

- Upgradient Wells
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells

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Groundwater Contaminant of Concern

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
DECEMBER 2019 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-5	MW-5	MW-5	MW-6	MW-6	MW-6	MW-18	MW-18	MW-18
Sample ID	Class GA	LMW-5	LMW-5F		LMW-6	LMW-6F		LMW-18	LMW-18F	
Laboratory ID	Ground	AD14614-013	AD14614-014		AD14614-015	AD14614-016		AD14614-029	AD14614-030	
Sample Date	Water	12/9/19	12/9/19		12/9/19	12/9/19		12/10/19	12/10/19	
Filtered/Unfiltered	Criteria	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved
Aluminum	NC	410	ND	NC	ND	ND	NC	ND	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	91.0	81.0	89.0%
Beryllium	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Cadmium	5	2.7	ND	NC	ND	ND	NC	ND	ND	NC
Calcium	NC	23,000	21,000	91.3%	12,000	11,000	91.7%	19,000	19,000	100.0%
Chromium	50	***110***	ND	NC	ND	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	***530***	ND	NC	***320***	ND	NC	ND	ND	NC
Lead	25	ND	ND	NC	ND	ND	NC	ND	ND	NC
Magnesium	35,000	ND	ND	NC	ND	ND	NC	5,300	5,100	96.2%
Manganese	300	ND	ND	NC	ND	ND	NC	***1,700***	***920***	54%
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	6,000	5,800	96.7%
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	16,000	16,000	100.0%	11,000	11,000	100.0%	18,000	17,000	94.4%
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)		887.3			8.7			6.3		

Notes:
- Upgradient Wells
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells

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Groundwater Contaminant of Concern

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
DECEMBER 2019 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-19	MW-19	MW-19	MW-10	MW-10	MW-10	MW-16	MW-16	MW-16
Sample ID	Class GA	LMW-19	LMW-19F		LMW-10	LMW-10F		LMW-16	LMW-16F	
Laboratory ID	Ground	AD14614-031	AD14614-032		AD14614-019	AD14614-020		AD14614-025	AD14614-026	
Sample Date	Water	12/10/19	12/10/19		12/10/19	12/10/19		12/10/19	12/10/19	
Filtered/Unfiltered	Criteria	Unfiltered conc.	Filtered conc. Q	Percent Dissolved	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved
Aluminum	NC	ND	ND	NC	ND	ND	NC	620	410	66.1%
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	190	180	94.7%
Beryllium	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Cadmium	5	ND	ND	NC	***73.0***	***69.0***	94.5%	***5.2***	4.4	84.6%
Calcium	NC	12,000	12,000	100.0%	30,000	27,000	90.0%	13,000	12,000	92.3%
Chromium	50	ND	ND	NC	***180***	***160***	88.9%	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	***460***	ND	NC	***480***	ND	NC
Lead	25	ND	ND	NC	3.0	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	***1,400***	***1,300***	92.9%
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	5,300	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	15,000	100.0%	13,000	12,000	92.3%	12,000	12,000	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	ND	ND	NC
Turbidity (NTU)		2.8			7.7			31.7		

Notes:

- Upgradient Wells
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells

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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
Groundwater Contaminant of Concern

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
DECEMBER 2019 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-12	MW-12	MW-12	MW-14	MW-14	MW-14	MW-20	MW-20	MW-20
Sample ID	Class GA	LMW-12	LMW-12F		LMW-14	LMW-14F		LMW-20	LMW-20F	
Laboratory ID	Ground	AD14614-021	AD14614-022		AD14614-023	AD14614-024		AD14614-033	AD14614-034	
Sample Date	Water	12/10/19	12/10/19		12/10/19	12/10/19		12/11/19	12/11/19	
Filtered/Unfiltered	Criteria	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved	Unfiltered conc. Q	Filtered conc. Q	Percent Dissolved	Unfiltered conc.	Filtered conc. Q	Percent Dissolved
Aluminum	NC	260	ND	NC	840	ND	NC	4,000	680	17.0%
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	64.0	58.0	90.6%	ND	ND	NC
Beryllium	3	ND	ND	NC	ND	ND	NC	ND	ND	NC
Cadmium	5	ND	ND	NC	***16.0***	***16.0***	100.0%	ND	ND	NC
Calcium	NC	21,000	22,000	104.8%	16,000	16,000	100.0%	11,000	9,900	90.0%
Chromium	50	ND	ND	NC	***72.0***	***54.0***	75%	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	***380***	ND	NC	***1,500***	ND	NC	***4,100***	***700***	17.1%
Lead	25	ND	ND	NC	7.9	ND	NC	11.0	4.9	44.5%
Magnesium	35,000	ND	ND	NC	ND	ND	NC	5,400	ND	NC
Manganese	300	ND	ND	NC	86.0	71.0	82.6%	180	160	88.9%
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	***53,000***	***63,000***	118.9%	15,000	14,000	93.3%	16,000	15,000	93.8%
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	67.0	ND	NC
Turbidity (NTU)		15.9			29.7			73.4		

Notes:

- Upgradient Wells
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells

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All values except turbidity are in micrograms per liter (µg/L)
% Dissolved = filtered conc. / unfiltered conc.
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Groundwater Contaminant of Concern

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
DECEMBER 2019 SAMPLING EVENT
COMPARISON OF FILTERED AND UNFILTERED METALS DATA IN GROUNDWATER

Sample Location	NYSDEC	MW-21	MW-21	MW-21
Sample ID	Class GA	LMW-21	LMW-21F	
Laboratory ID	Ground	AD14614-035	AD14614-036	
Sample Date	Water	12/11/19	12/11/19	
Filtered/Unfiltered	Criteria	Unfiltered	Filtered	Percent
		conc. Q	conc. Q	Dissolved
Aluminum	NC	370	ND	NC
Antimony	3	ND	ND	NC
Arsenic	25	ND	ND	NC
Barium	1,000	120	110	91.7%
Beryllium	3	ND	ND	NC
Cadmium	5	ND	ND	NC
Calcium	NC	18,000	17,000	94.4%
Chromium	50	ND	ND	NC
Cobalt	NC	ND	ND	NC
Copper	200	ND	ND	NC
Iron	300	***690***	ND	NC
Lead	25	ND	ND	NC
Magnesium	35,000	5,300	5,000	94.3%
Manganese	300	120	ND	NC
Mercury	0.7	ND	ND	NC
Nickel	100	ND	ND	NC
Potassium	NC	8,300	7,900	95.2%
Selenium	10	ND	ND	NC
Silver	50	ND	ND	NC
Sodium	20,000	***48,000***	***46,000***	95.8%
Thallium	0.50	ND	ND	NC
Vanadium	NC	ND	ND	NC
Zinc	2,000	ND	ND	NC
Turbidity (NTU)		24.3		

Notes:

- Upgradient Wells
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells

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

TABLE 5
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SUMMARY OF 1,4-DIOXANE AND PERFLUORINATED COMPOUNDS IN GROUNDWATER
SEPTEMBER 2017 SAMPLING EVENT

Sample Location		MW-2		MW-3		MW-4		MW-5		MW-6		MW-18	MW-19
Sample ID	NYSDEC	LMW-2		LMW-3		LMW-4		LMW-5		LMW-6		LMW-18	LMW-19
Laboratory IDs	Drinking	AD01096-006		AD01096-007		AD01096-008		AD01096-009		AD01096-010		AD01096-004	AD01096-001
	Water	AD00074-001		AD00074-003		AD00074-005		AD00074-007		AD00074-013		AD00074-024	AD00074-022
Sample Dates	Advisory	11/8/17		11/8/17		11/8/17		11/8/17		11/8/17		11/8/17	11/8/17
	Council	9/13/17		9/13/17		9/13/17		9/13/17		9/13/17		9/14/17	9/14/17
		conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	Q		conc.
1,4-Dioxane (ug/L)	1	ND		ND		ND		ND		ND		ND	ND
Perfluorinated Compounds (ng/L)													
6:2 FTS	100	ND		ND		ND		ND		ND		ND	ND
8:2 FTS	100	ND		ND		ND		ND		ND		ND	ND
NetFOSAA	100	ND		ND		ND		ND		ND		ND	ND
NMeFOSAA	100	ND		ND		ND		ND		ND		ND	ND
PFBA	100	**3.19**		**3.1**		**5.26**		**3.86**		**0.66**	**J**	**4.76**	**0.635** **J**
PFBS	100	**3.64**		**2.43**		**2.3**		**5.71**		**0.543**	**J**	**11.7**	**0.293** **J**
PFDA	100	ND		ND		**1.36**	**J**	**0.486**	**J**	ND		ND	ND
PFDoA	100	ND		ND		**0.27**	**J**	ND		ND		ND	ND
PFDS	100	ND		ND		ND		ND		ND		ND	ND
PFHpA	100	**3.19**		**2.49**		**1.92**		**2.24**		**0.575**	**J**	**3.93**	**0.247** **J**
PFHpS	100	**0.483**	**J**	**7.22**		**0.864**	**J**	**0.248**	**J**	ND		ND	ND
PFHxA	100	**4.5**		**4.48**		**4.06**		**3.77**		**1.61**	**J**	**11.4**	**1.11** **J**
PFHxS	100	**2.07**		**3.8**		**2.64**		**3.02**		**1.28**	**J**	**4.71**	**0.666** **J**
PFNA	100	**1.01**	**J**	**0.843**	**J**	**1.69**	**J**	**1.39**	**J**	ND		**ND**	ND
PFOA	10	**9.71**		**7.44**		**3.25**		**11.1**		**1.97**		**7.72**	**1.06** **J**
PFOS	10	**15.8**		***305***		**23.9**		**29.6**		**0.642**	**J**	**1.88** **J**	ND
PFPeA	100	**5.93**		**4.51**		**3.59**		**4.26**		**1.31**	**J**	**10.7**	**0.887** **J**
PFTreA	100	ND		**0.249**	**J**	**ND**		ND		ND		ND	ND
PFTriA	100	ND		**0.316**	**J**	**0.212**	**J**	ND		ND		ND	ND
PFuNA	100	ND		ND		**0.819**	**J**	ND		ND		ND	ND
Total PFCs	500	**49.5**		**341.9**		**52.1**		**65.7**		**8.6**		**56.8**	**4.9**

Notes:
ND - Not Detected
J - Estimated concentration
BOLD - compound detected
BOLD compound exceeds the criterion

Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells

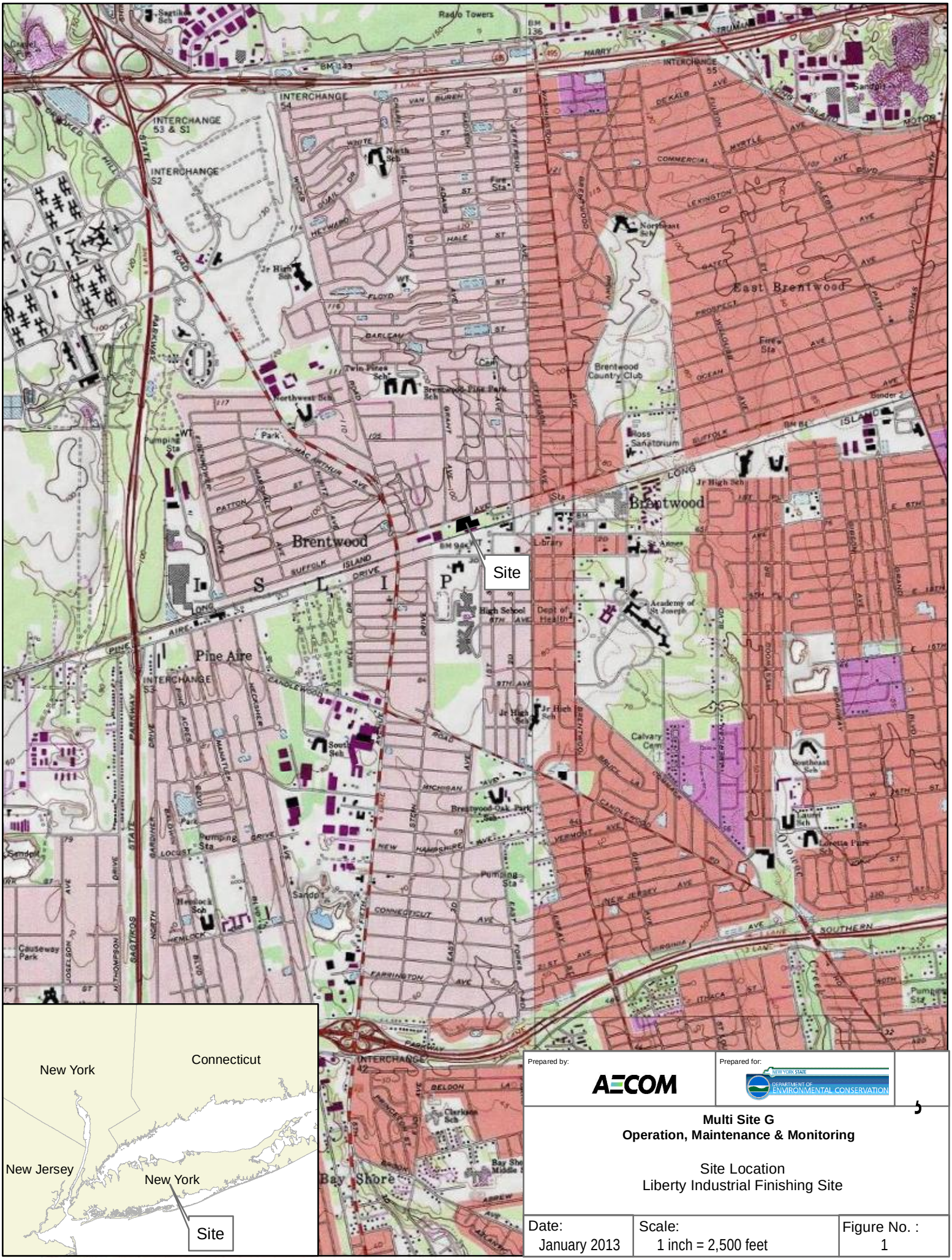
TABLE 5
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SUMMARY OF 1,4-DIOXANE AND PERFLUORINATED COMPOUNDS IN GROUNDWATER
SEPTEMBER 2017 SAMPLING EVENT

Sample Location		MW-10		MW-16		MW-12		MW-14		MW-20	MW-21	
Sample ID	NYSDEC	LMW-10		LMW-16		LMW-12		LMW-14		LMW-20	LMW-21	
Laboratory IDs	Drinking	AD01096-011		AD01096-012		AD01096-015		AD01096-016		AD01096-013	AD01096-014	
	Water	AD00074-028		AD00074-026		AD00074-030		AD00074-032		AD00074-020	AD00074-018	
Sample Dates	Advisory	11/8/17		11/8/17		11/8/17		11/8/17		11/8/17	11/8/17	
	Council	9/14/17		9/14/17		9/14/17		9/14/17		9/14/17	9/13/17	
		conc.	Q	conc.	Q	conc.	Q	conc.	Q	conc.	conc.	Q
1,4-Dioxane (ug/L)	1	ND		ND		ND		ND		ND	ND	
Perfluorinated Compounds (ng/L)												
6:2 FTS	100	ND		ND		ND		1.74		ND	ND	
8:2 FTS	100	ND		ND		ND		ND		ND	ND	
NetFOSAA	100	ND		ND		ND		ND		ND	ND	
NMeFOSAA	100	ND		ND		ND		ND		ND	ND	
PFBA	100	**5.85**		**3.86**		**3.36**		ND		**2.5**	**2.99**	
PFBS	100	**14.8**		**2.79**		**2.33**		**7.9**		**1.32**	**2.71**	
PFDA	100	ND		ND		**0.44**	**J**	**0.597**	**J**	ND	ND	
PFDoA	100	ND		ND		ND		**0.315**	**J**	ND	ND	
PFDS	100	ND		ND		ND		ND		ND	ND	
PFHpA	100	**4.05**		**3.17**		**4.26**		**1.98**	**J**	**1.76**	**2.27**	
PFHpS	100	**1.01**	**J**	**0.294**	**J**	0.498	J	**0.331**	**J**	ND	**0.237**	**J**
PFHxA	100	**4.98**		**4.86**		**10.5**		**3.07**		**3.54**	**4.07**	
PFHxS	100	**1.3**	**J**	**1.95**	**J**	**1.47**	**J**	**5.02**		**4.99**	**10.8**	
PFNA	100	**0.944**	**J**	**1.51**	**J**	**1.49**	**J**	**1.59**	**J**	ND	**0.408**	**J**
PFOA	10	**9.97**		**11.8**		**12.9**		**9.39**		**6.17**	**7.02**	
PFOS	10	**50.5**		**16.2**		**34.1**		**28.3**		**2.07**	**5.48**	
PFPeA	100	**4.11**		**5.63**		**10.7**		**3.1**		**3.05**	**3.77**	
PFTreA	100	ND		ND		ND		**0.363**	**J**	ND	ND	
PFTriA	100	ND		ND		ND		**0.295**	**J**	ND	ND	
PFuNA	100	ND		ND		**0.255**	**J**	**0.212**	**J**	ND	ND	
Total PFCs	500	**97.5**		**52.1**		**82.3**		**64.2**		**25.4**	**39.8**	

Notes:
ND - Not Detected
J - Estimated concentration
BOLD - compound detected
BOLD compound exceeds the criterion

Source Area Wells
Side Gradient Wells
Downgradient Wells
Sentinel Wells

Figures



Prepared by: AECOM

Prepared for: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Multi Site G
Operation, Maintenance & Monitoring

Site Location
Liberty Industrial Finishing Site

Date:	Scale:	Figure No. :
January 2013	1 inch = 2,500 feet	1

Legend:

- Wells Sampled for Long Term Monitoring
- Site-Boundary

0 50 100 200 300 400 Feet

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

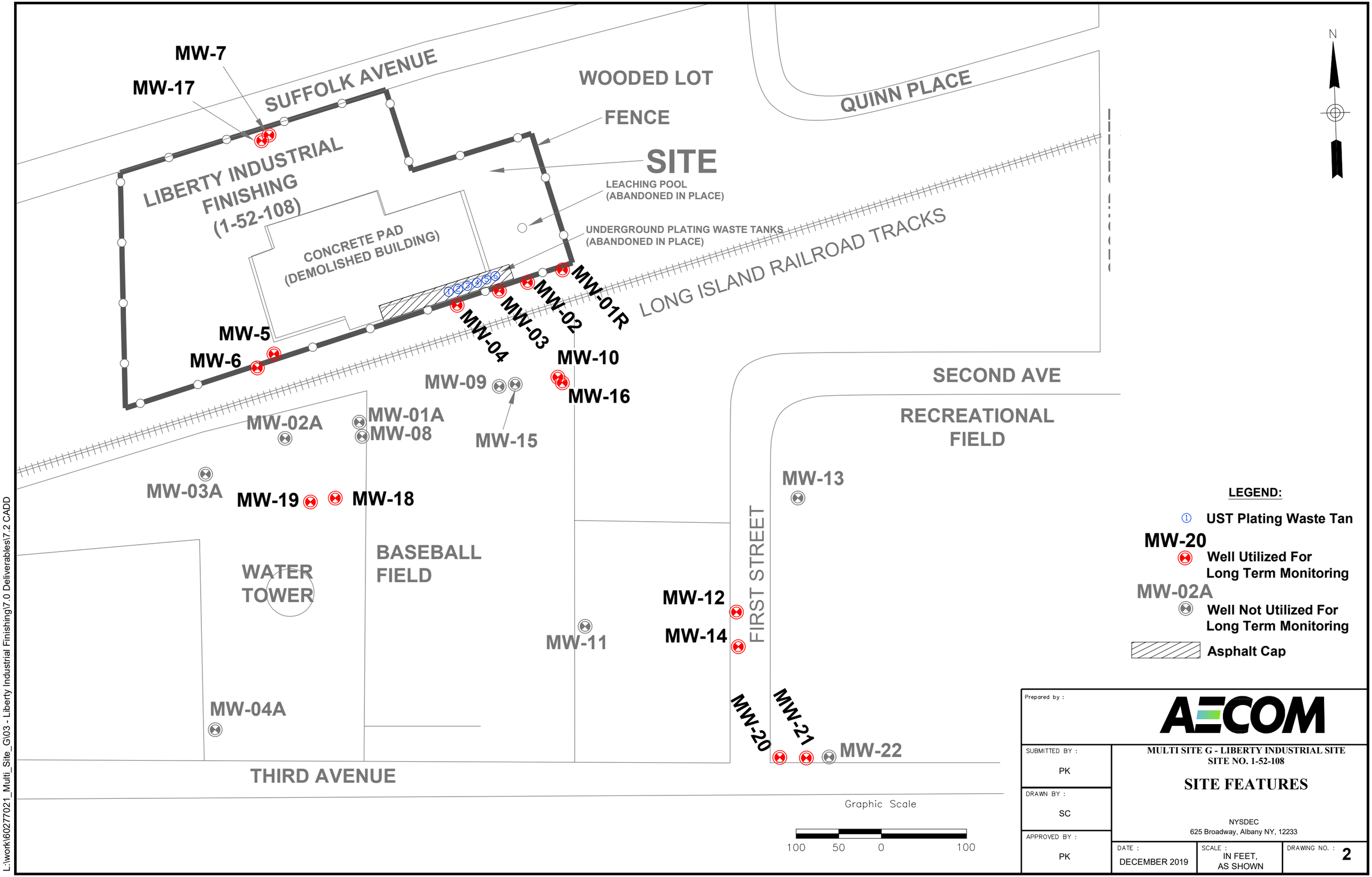
Prepared by: AECOM

Prepared for: New York State Department of Environmental Conservation

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

Liberty Industrial Finishing Site

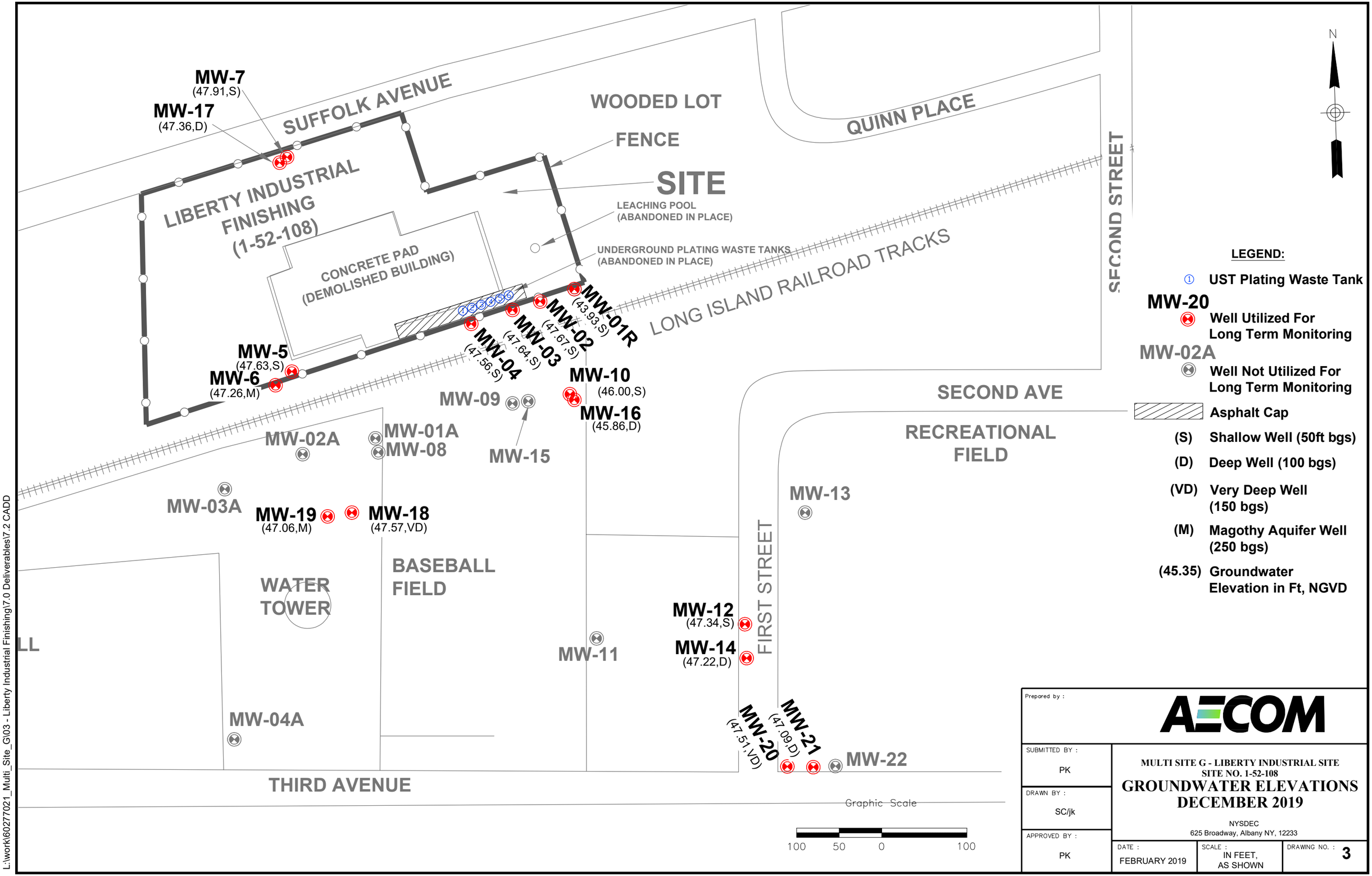
Date:	Scale:	Figure No. :
December 2019	1 inch = 167 feet	1A



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 : DECEMBER 2019	SCALE : IN FEET, AS SHOWN
DRAWING NO. : 2	

L:\work\60277021_Multi_Site_G\03 - Liberty Industrial Finishing\7.0 Deliverables\7.2 CADD



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Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 GROUNDWATER ELEVATIONS DECEMBER 2019 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC/jk	
APPROVED BY : PK	DATE : FEBRUARY 2019 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 3

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

Figure 4A
Liberty Industrial Finishing Site (1-52-108)
Groundwater Hydrograph - Shallow Wells

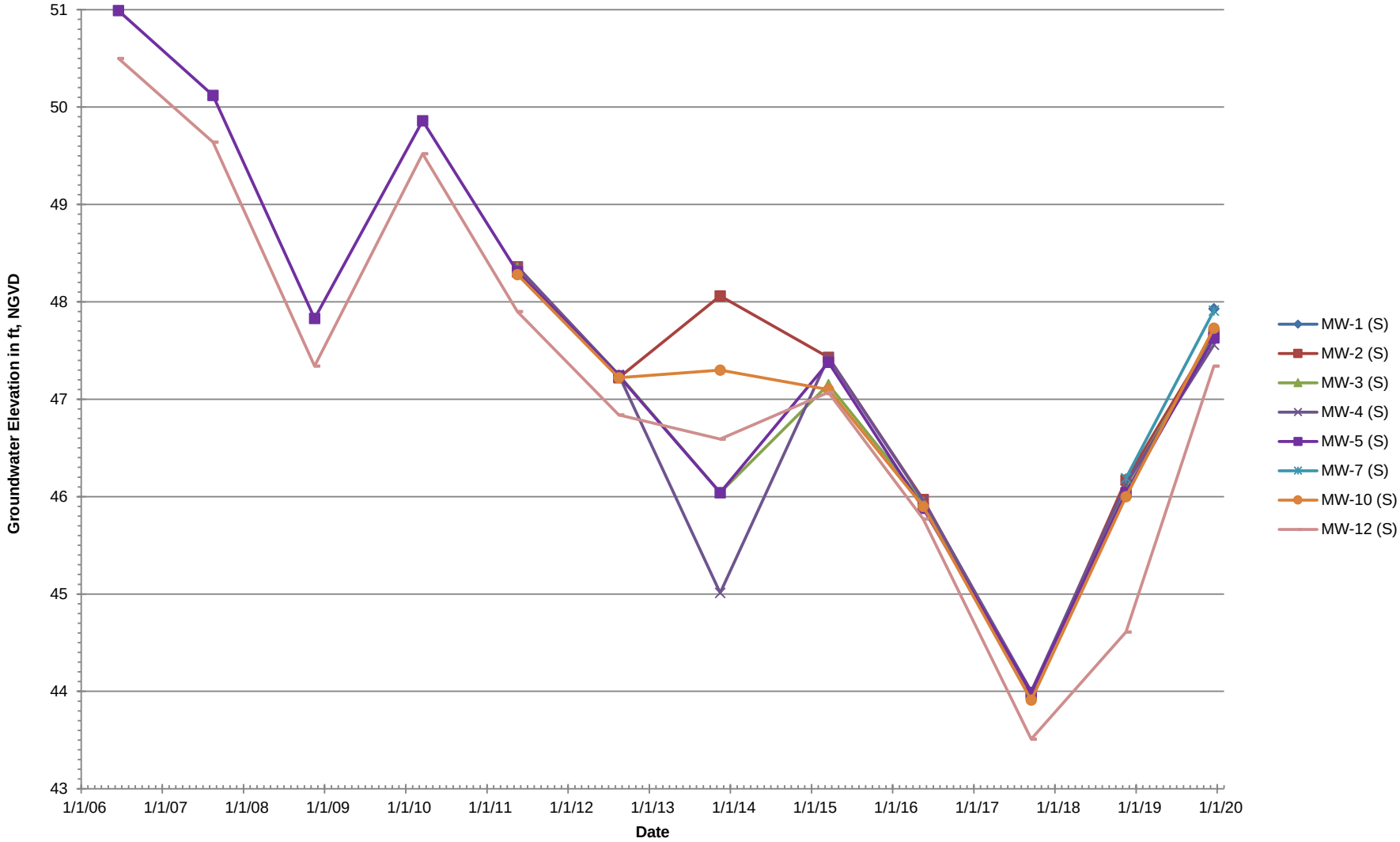


Figure 4B
LIberty Industrial Finishing Site (1-52-108)
Groundwater Hydrograph - Deep Wells

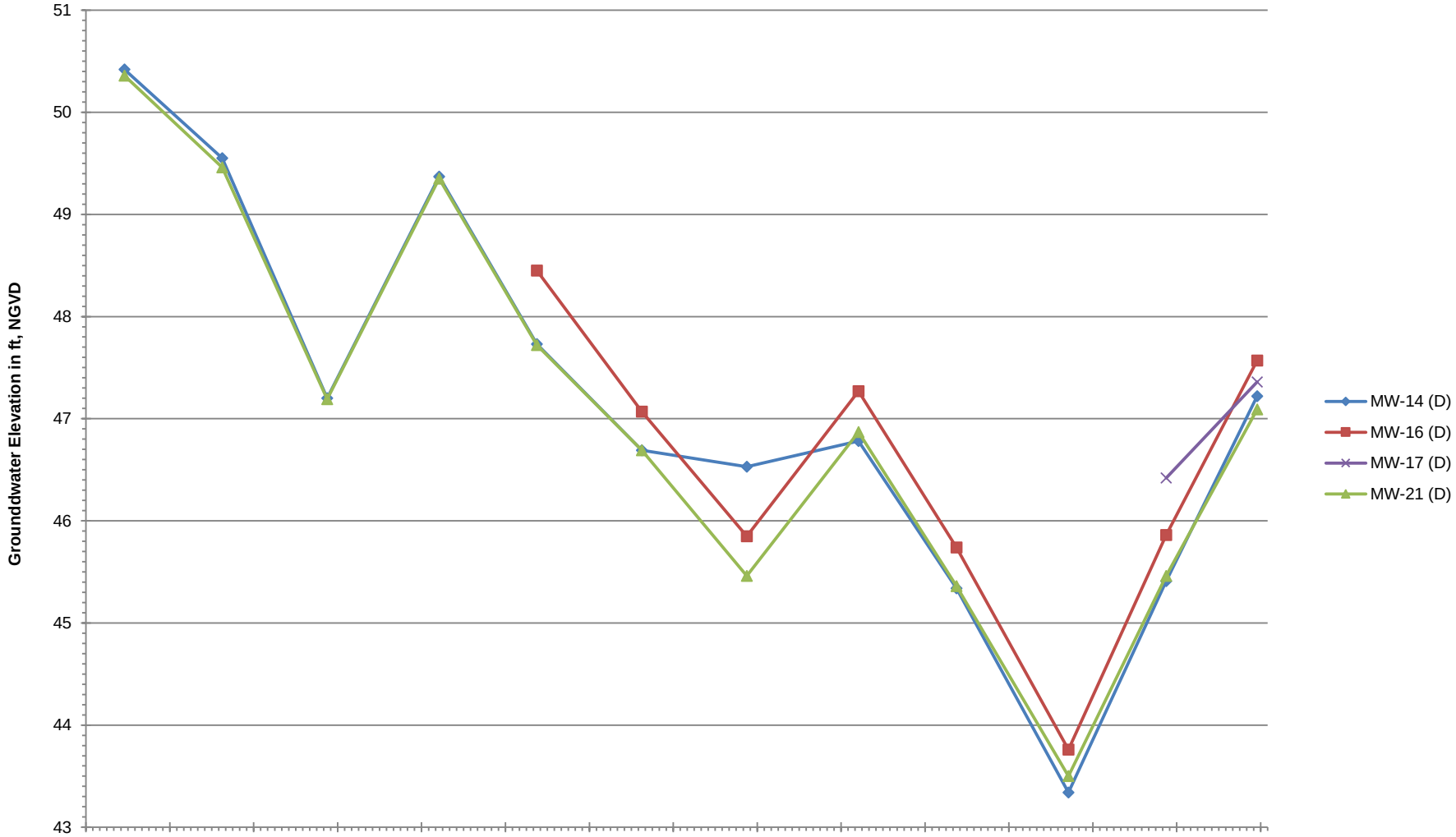
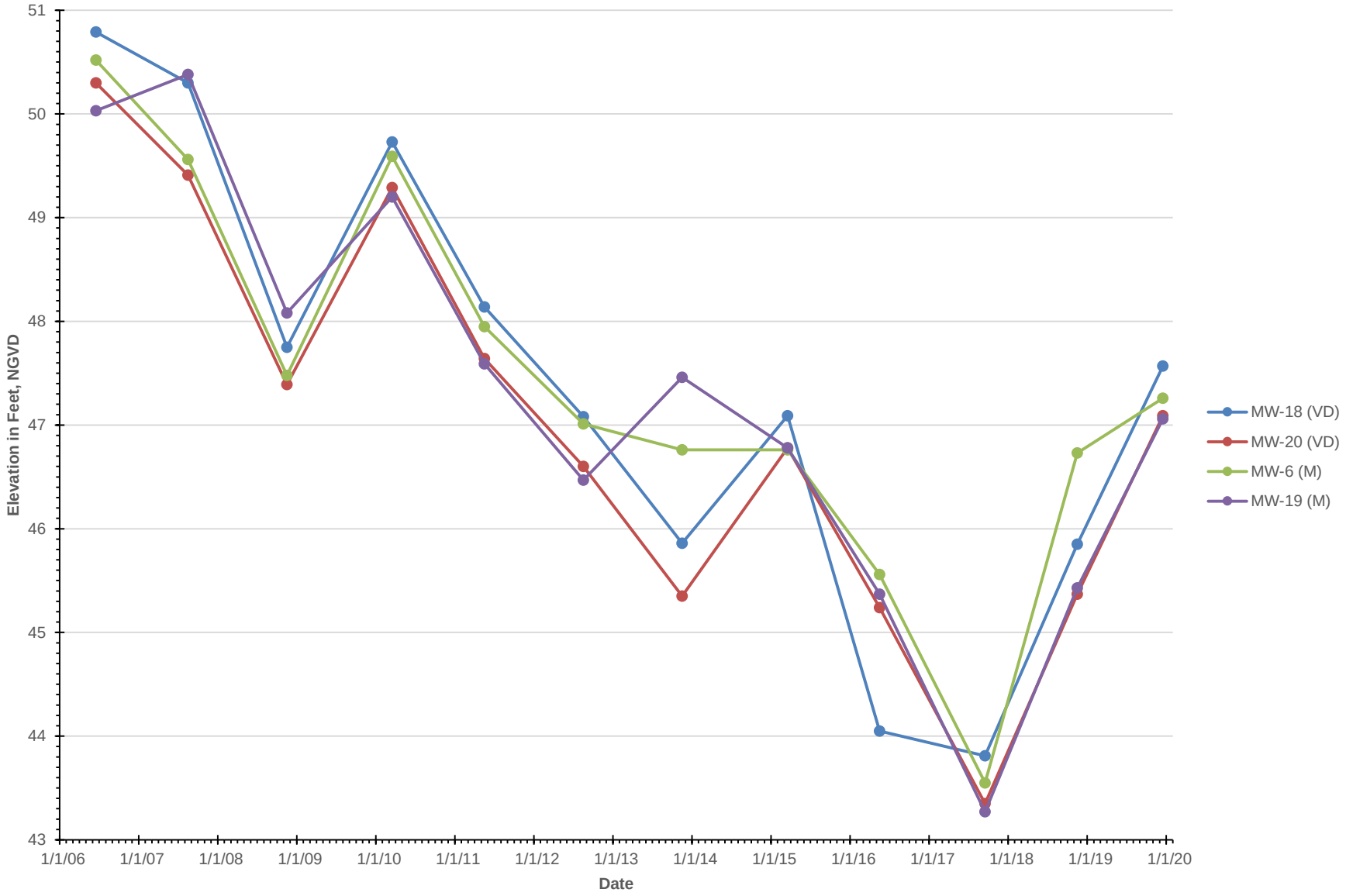


Figure 4C
Liberty Industrial Finishing Site (1-52-1008)
Groundwater Hydrograph, Very Deep and Magothy Wells



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

N

LEGEND:

- MW-20 — UST Plating Waste Tank
- 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 bg
- Asphalt Cap
- Source Area Wells
- Side Gradient Wells
- Downgradient Wells
- Sentinel Wells
- F Filtered
- ND Not Detected
- U Not Filtered
- ***8.5*** Concentration Exceeds the Class GA Criteria
- Exceedance Only All Values are in ug/L

Compound	MW-7 (S) Dec-19 U	MW-7 (S) Dec-19 F
Iron	***960***	***420***
Sodium	***88,000***	***87,000***

Compound	MW-4 (S) Dec-19 U	MW-4 (S) Dec-19 F
Cadmium	***47.0***	***46.0***
Chromium	***110***	***85.0***
Iron	***1,100***	***380***

Compound	MW-3 (S) Dec-19 U	MW-3 (S) Dec-19 F
Chromium	***57.0***	***56.0***
Iron	***430***	***370***
Sodium	***35,000***	***36,000***

MW-2 (S) Dec-19 U	MW-2 (S) Dec-19 F
No Exceedances	

Compound	MW-1R (S) Dec-19 U	MW-1R (S) Dec-19 F
Iron	***810***	***390***
Sodium	***32,000***	***32,000***

Compound	MW-17 (D) Dec-19 U	MW-17 (D) Dec-19 F
Cadmium	***13.0***	***11.0***
Chromium	***55.0***	ND
Iron	***3,500***	ND
Manganese	***1,100***	***1,100***
Sodium	***27,000***	***27,000***

Compound	MW-10 (S) Dec-19 U	MW-10 (S) Dec-19 F
Cadmium	***73.0***	***69.0***
Chromium	***180***	***160***
Iron	***460***	*ND*

Compound	MW-16 (D) Dec-19 U	MW-16 (D) Dec-19 F
Cadmium	***5.2***	*4.4*
Iron	***480***	ND
Manganese	***1,400***	***1,300***

Compound	MW-6 (M) Dec-19 U	MW-6 (M) Dec-19 F
Iron	***320***	ND

Compound	MW-5 (S) Dec-19 U	MW-5 (S) Dec-19 F
Chromium	***110***	ND
Iron	***530***	ND

Compound	MW-12 (S) Dec-19 U	MW-12 (S) Dec-19 F
Iron	***380***	ND
Sodium	***53,000***	***63,000***

Compound	MW-14 (D) Dec-19 U	MW-14 (D) Dec-19 F
Cadmium	***16.0***	***16.0***
Chromium	***72.0***	***54.0***
Iron	***1,500***	ND

MW-19 (M) Dec-19 U	MW-19 (M) Dec-19 F
No Exceedances	

Compound	MW-18 (VD) Dec-19 U	MW-18 (VD) Dec-19 F
Manganese	***1,700***	***920***

Compound	MW-20 (VD) Dec-19 U	MW-20 (VD) Dec-19 F
Iron	***4,100***	***700***

Compound	MW-21 (D) Dec-19 U	MW-21 (D) Dec-19 F
Iron	***690***	ND
Sodium	***48,000***	***46,000***

SUFFOLK AVENUE
WOODED LOT
FENCE
QUINN PLACE
SECOND STREET
SITE
LEACHING POOL (ABANDONED IN PLACE)
UNDERGROUND PLATING WASTE TANKS (ABANDONED IN PLACE)
LIBERTY INDUSTRIAL FINISHING (1-52-108)
CONCRETE PAD (DEMOLISHED BUILDING)
GAS STATION
LONG ISLAND RAILROAD TRACKS
WOODED LOT
SECOND AVE
RECREATIONAL FIELD
BASEBALL FIELD
WATER TOWER
BASEBALL FIELD
FIRST STREET
RECREATION DEPARTMENT
THIRD AVENUE

MW-7, MW-17, MW-5, MW-6, MW-04, MW-03, MW-02, MW-01R, MW-10, MW-16, MW-09, MW-15, MW-02A, MW-01A, MW-08, MW-03A, MW-19, MW-18, MW-13, MW-12, MW-14, MW-11, MW-04A, MW-20, MW-21, MW-22

Graphic Scale
200 100 0 200

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 DECEMBER 2019

NYSDEC
625 Broadway, Albany NY, 12233

DATE : FEBRUARY 2019
SCALE : IN FEET, AS SHOWN
DRAWING NO. : 5

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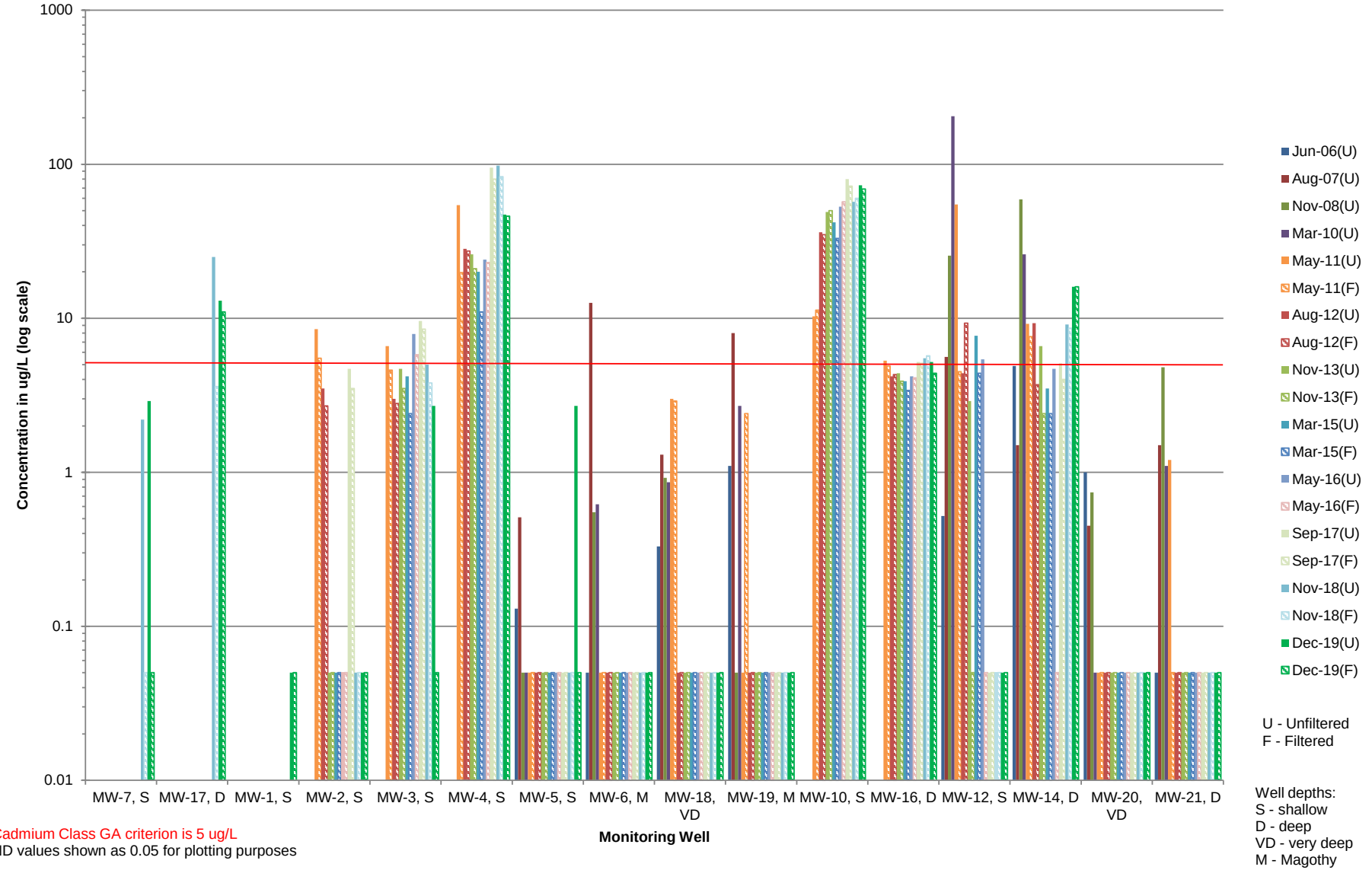
FIGURE 6
CADMIUM CONCENTRATIONS IN SELECTED MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)



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

FIGURE 6A
CADMIUM CONCENTATIONS IN SOURCE AREA MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)

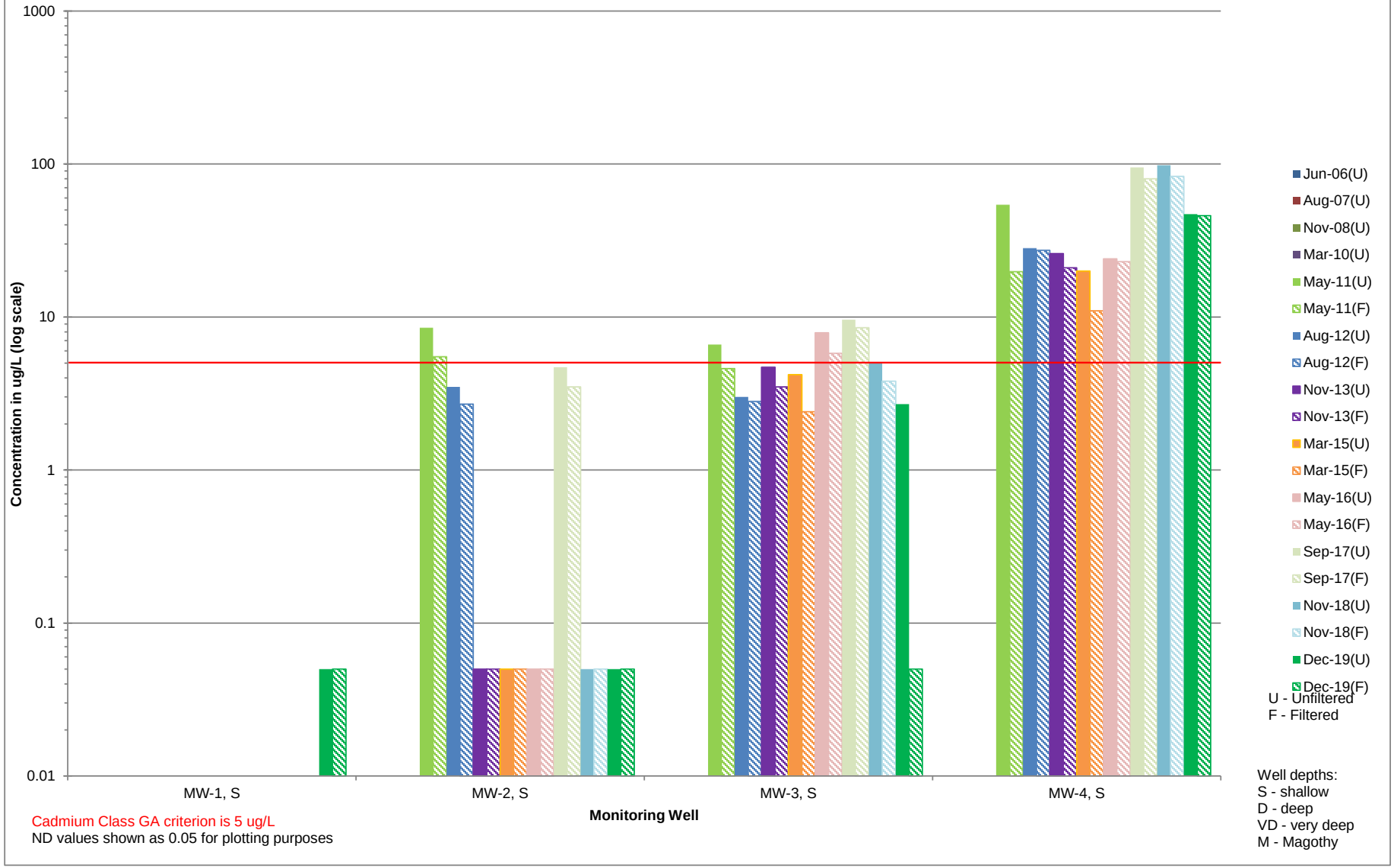
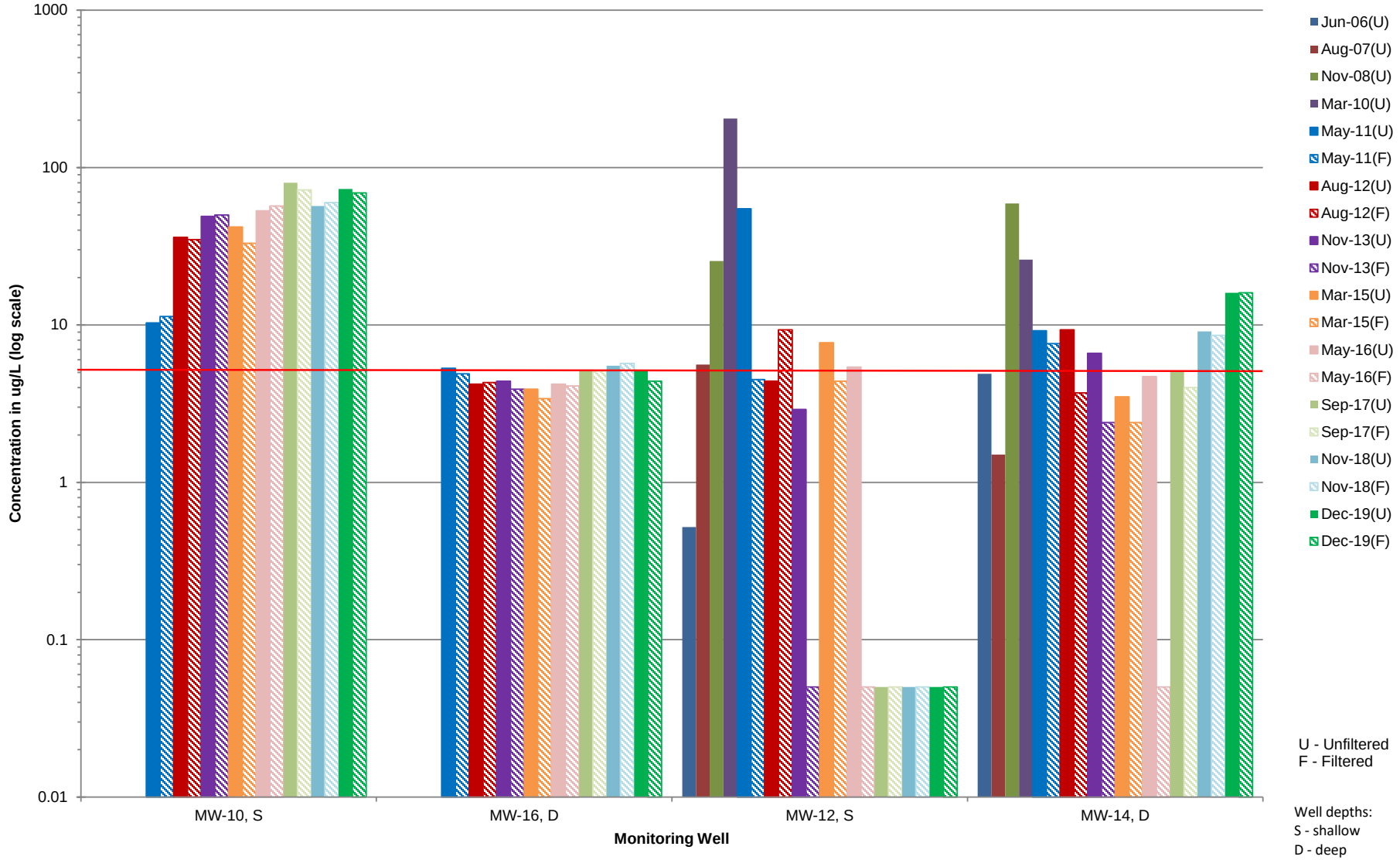


FIGURE 6B
CADMIUM CONCENTRATIONS IN DOWNGRADIENT MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING (1-52-108)



Cadmium Class GA criterion is 5 ug/L
ND values set to 0.05 ug/L for plotting purposes

MW-7
MW-17
SUFFOLK AVENUE
WOODED LOT
FENCE
SITE
LIBERTY INDUSTRIAL FINISHING (1-52-108)
LEACHING POOL (ABANDONED IN PLACE)
UNDERGROUND PLATING WASTE TANKS (ABANDONED IN PLACE)
CONCRETE PAD (DEMOLISHED BUILDING)
QUINN PLACE
SECOND STREET
LONG ISLAND RAILROAD TRACKS
MW-01
MW-02 (2.7,S)
MW-03 (2.8,S)
MW-04 (27.3,S)
MW-5 (ND,S)
MW-6 (ND,M)
MW-10 (34.9,S)
MW-16 (4.3,D)
MW-09
MW-15
SECOND AVE
RECREATIONAL FIELD
MW-02A
MW-01A
MW-08
MW-03A
MW-19 (ND,M)
MW-18 (ND,VD)
MW-13
BASEBALL FIELD
WATER TOWER
10
5
(9.3, S)
MW-12
MW-11
MW-14 (3.7, D)
FIRST STREET
MW-04A
MW-21 (ND, D)
MW-20 (ND, VD)
THIRD AVENUE

Graphic Scale
100 50 0 100

N

LEGEND:

- UST Plating Waste Tank
- **MW-20** — Well Utilized For Long Term Monitoring
- **MW-02A** — Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- ND Not Detected
- 5 — Cadmium Isoconcentration line, contour interval is 5ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (9.3) Filtered Cadmium Concentration in ug/L

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CADMIUM ISOCONCENTRATION MAP SHALLOW WELLS August 2012 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : NOV. 2012 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 7

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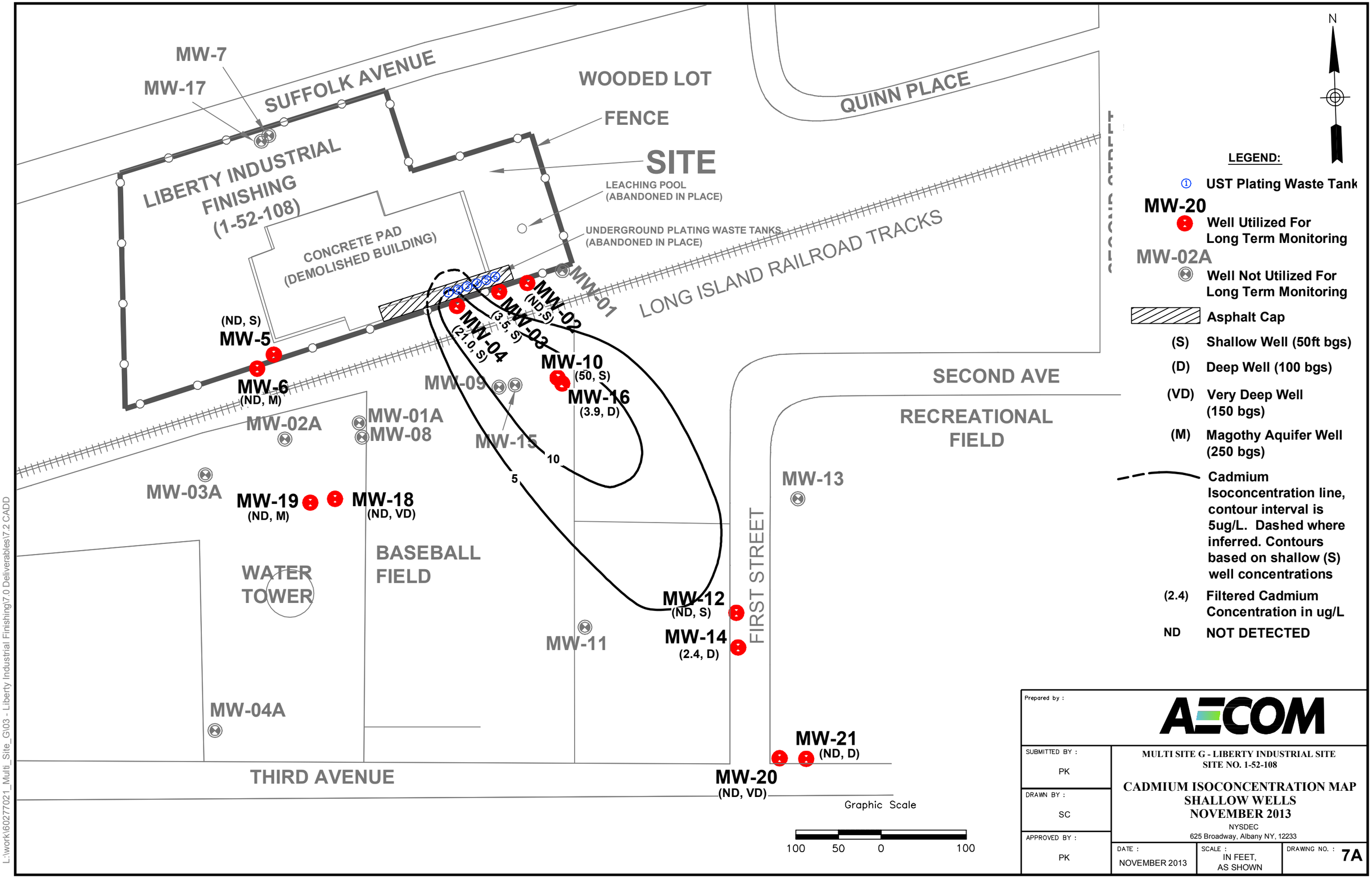

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108
DRAWN BY : SC	CADMIUM ISOCONCENTRATION MAP SHALLOW WELLS NOVEMBER 2013
APPROVED BY : PK	NYSDEC 625 Broadway, Albany NY, 12233
DATE : NOVEMBER 2013	SCALE : IN FEET, AS SHOWN
DRAWING NO. : 7A	

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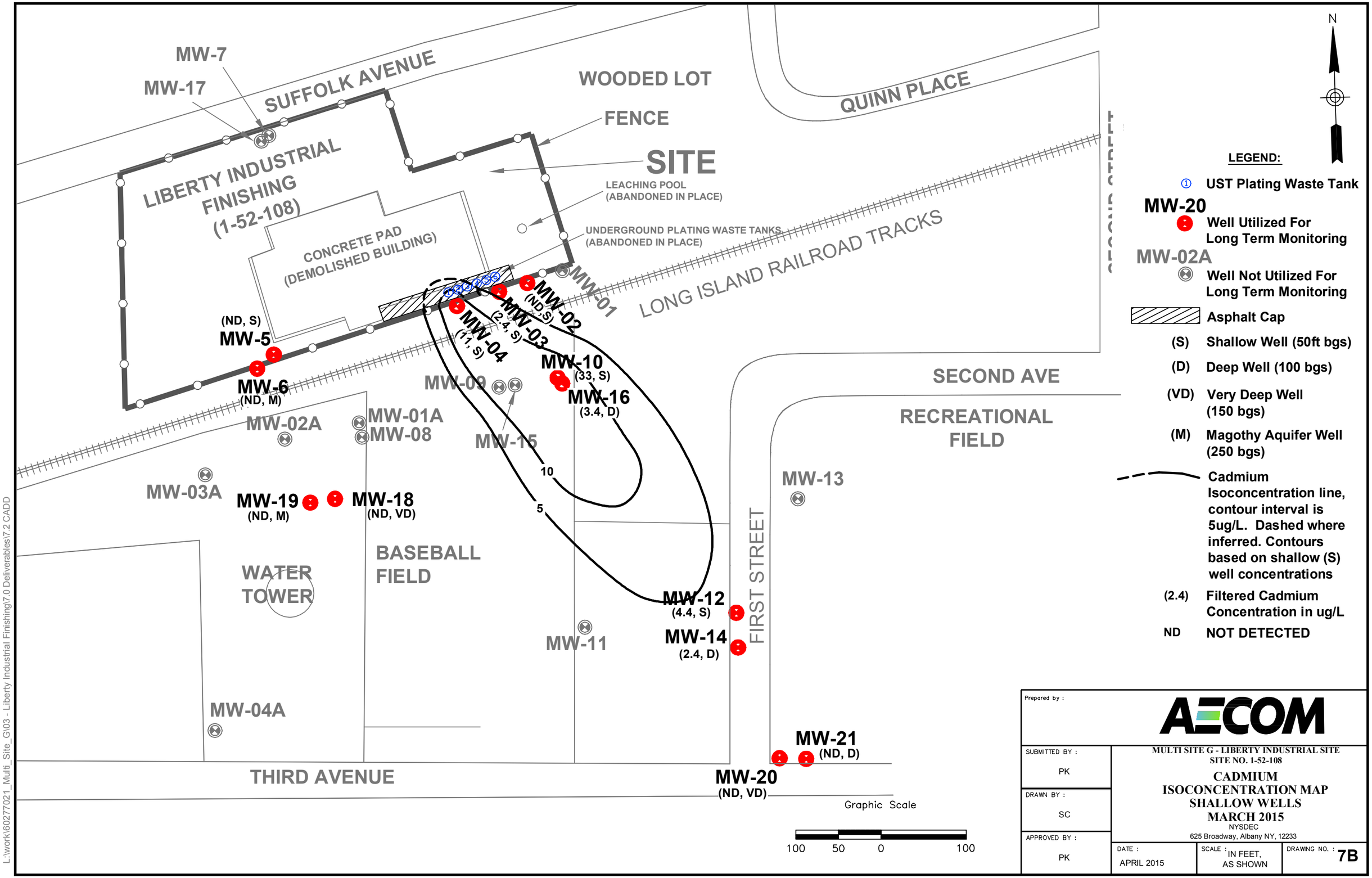

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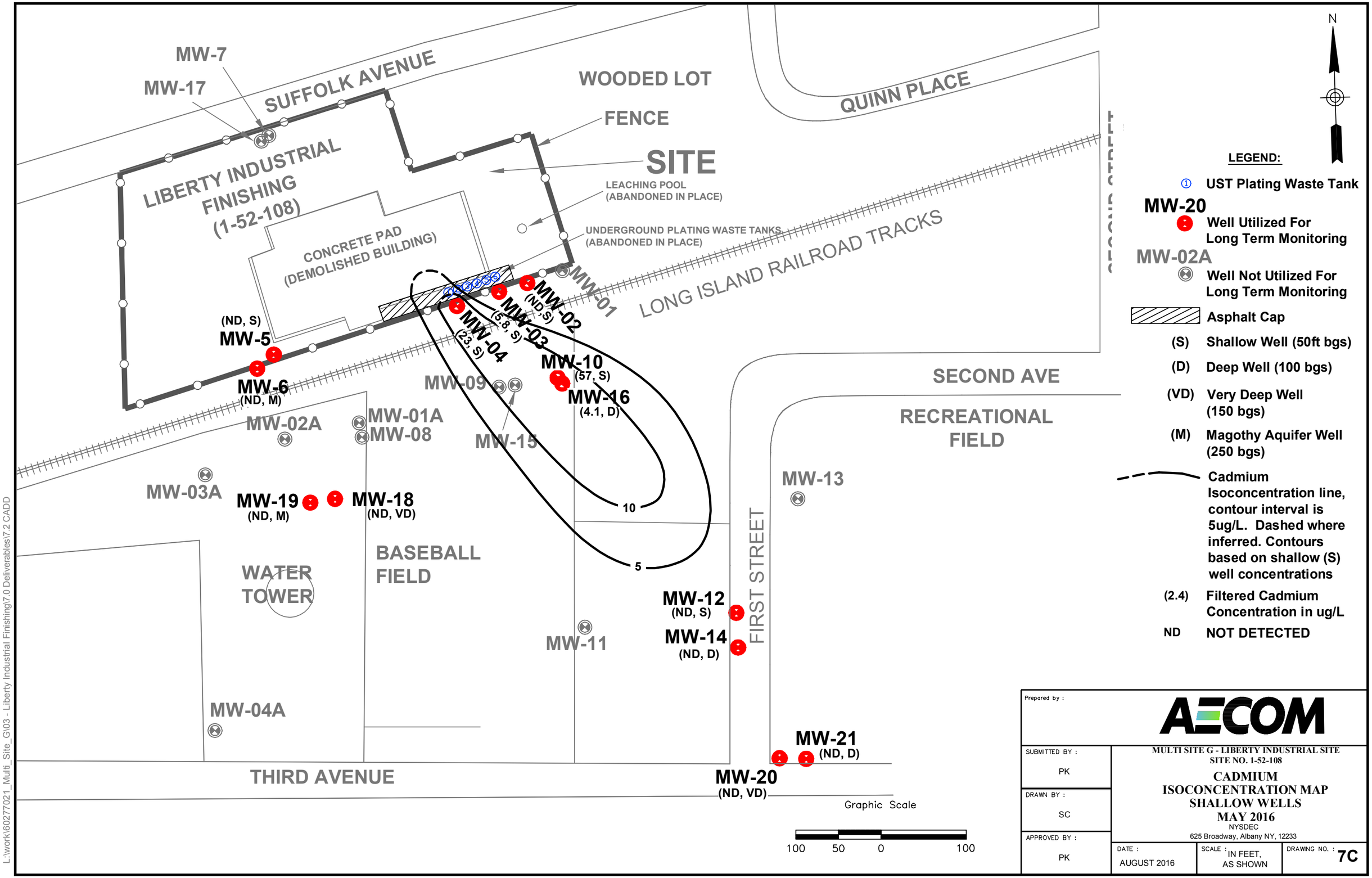
Prepared by : AECOM

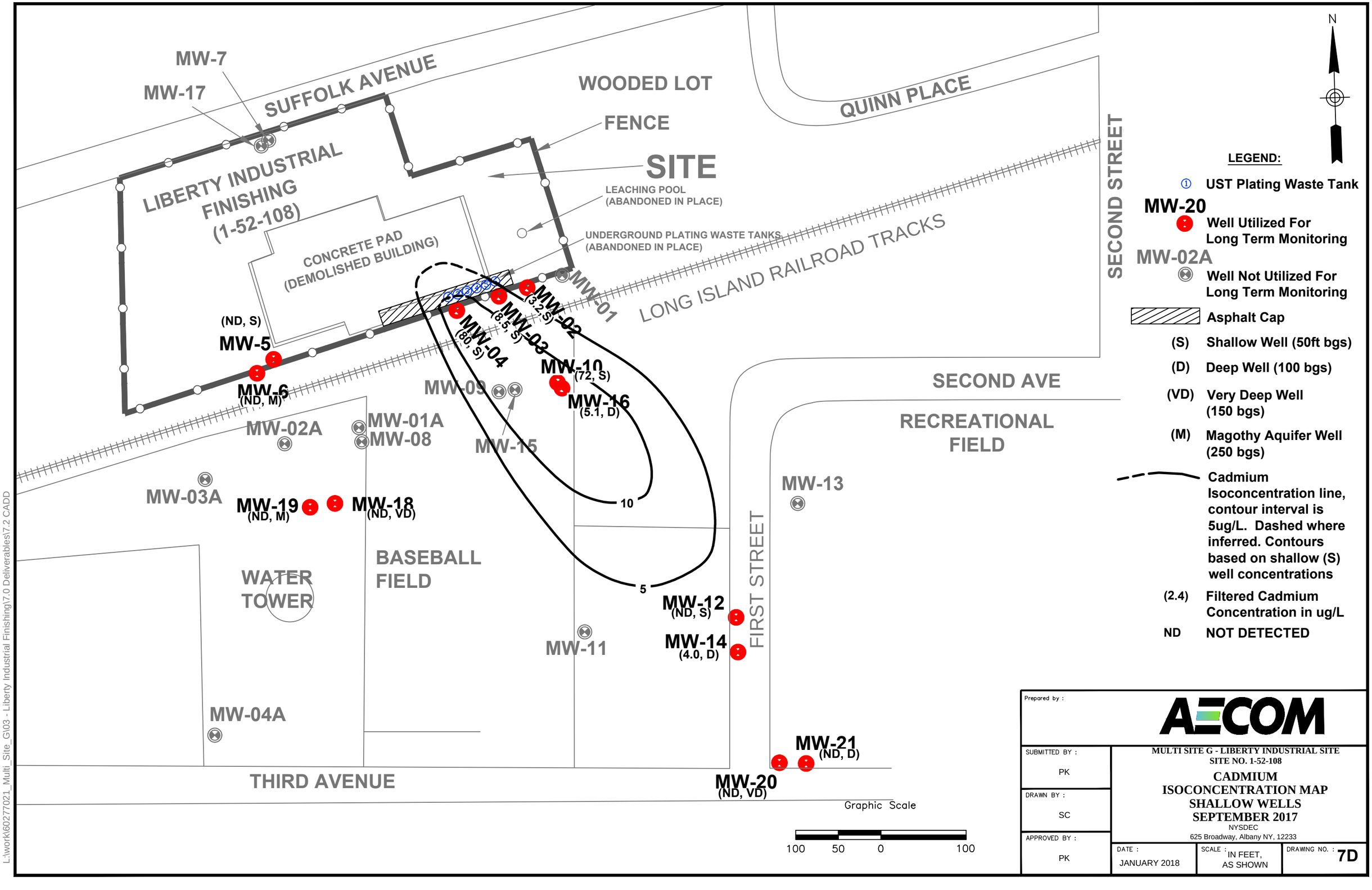
SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CADMIUM ISOCONCENTRATION MAP SHALLOW WELLS MARCH 2015 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : APRIL 2015 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 7B



L:\work\60277021_Multi_Site_G\03 - Liberty Industrial Finishing\7.0 Deliverables\7.2 CADD

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CADMIUM ISOCONCENTRATION MAP SHALLOW WELLS MAY 2016 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : AUGUST 2016 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 7C



Prepared by : AECOM

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DRAWN BY : SC	
APPROVED BY : PK	DATE : JANUARY 2018 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 7D

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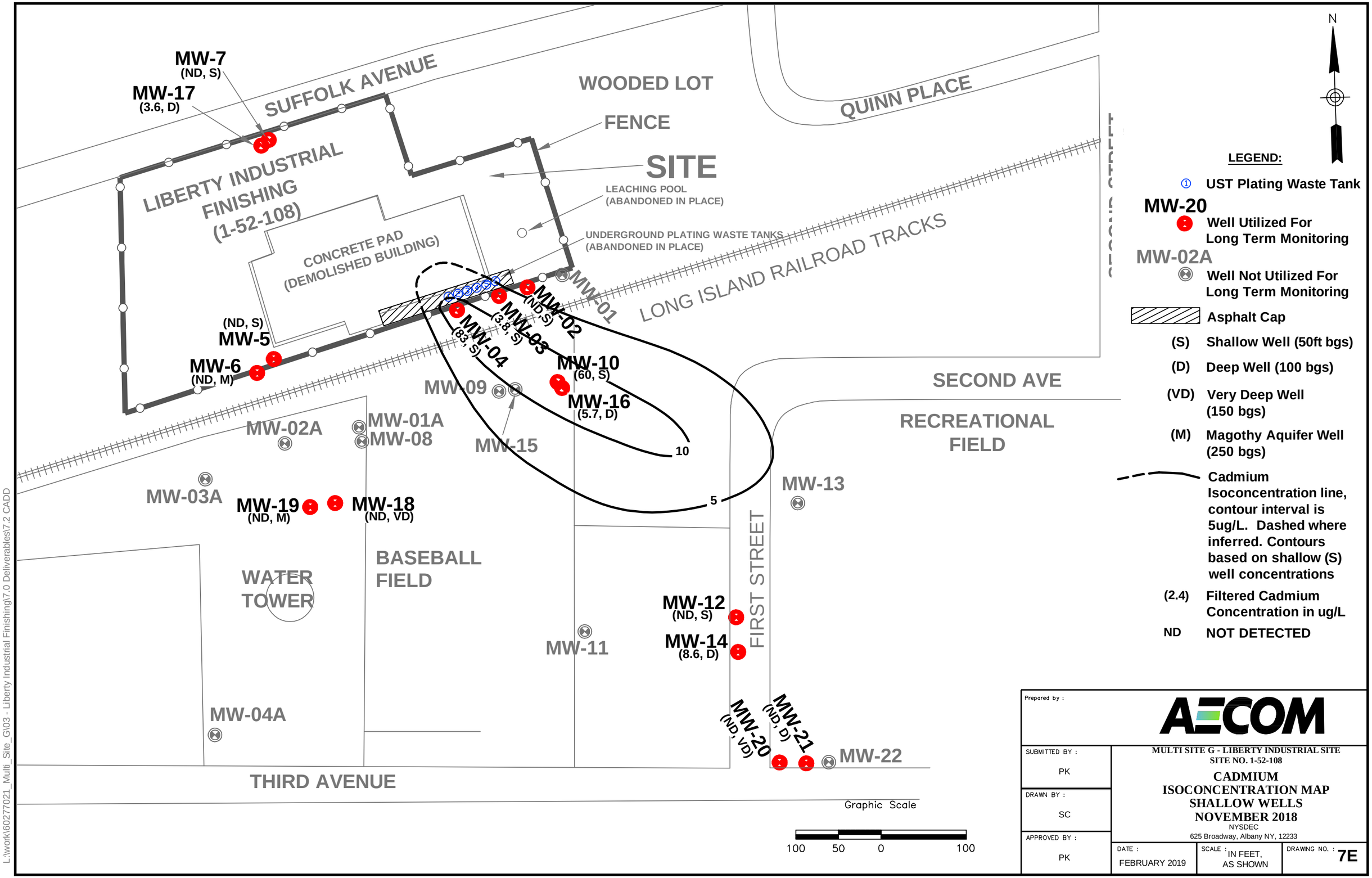

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CADMIUM ISOCONCENTRATION MAP SHALLOW WELLS NOVEMBER 2018 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : FEBRUARY 2019 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 7E

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SUFFOLK AVENUE

WOODED LOT

QUINN PLACE

FENCE

SITE

LIBERTY INDUSTRIAL FINISHING (1-52-108)

LEACHING POOL (ABANDONED IN PLACE)

UNDERGROUND PLATING WASTE TANKS (ABANDONED IN PLACE)

CONCRETE PAD (DEMOLISHED BUILDING)

LONG ISLAND RAILROAD TRACKS

SECOND STREET

SECOND AVE

RECREATIONAL FIELD

MW-7 (ND, S)

MW-17 (1.1, D)

MW-5 (ND, S)

MW-6 (ND, M)

MW-01R (ND, S)

MW-02 (ND, S)

MW-03 (3.8, S)

MW-04 (46, S)

MW-10 (69, S)

MW-16 (4.4, D)

MW-09

MW-15

MW-01A

MW-08

MW-02A

MW-03A

MW-19 (ND, M)

MW-18 (ND, VD)

MW-13

FIRST STREET

BASEBALL FIELD

WATER TOWER

MW-12 (ND, S)

MW-14 (16, D)

MW-11

MW-04A

MW-20 (ND, VD)

MW-21 (ND, D)

MW-22

THIRD AVENUE

10

5

Graphic Scale

100 50 0 100

N

LEGEND:

- ① UST Plating Waste Tank
- MW-20 — Well Utilized For Long Term Monitoring
- MW-02A — Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Cadmium Isoconcentration line, contour interval is 5ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (2.4) Filtered Cadmium Concentration in ug/L
- ND NOT DETECTED

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CADMIUM ISOCONCENTRATION MAP SHALLOW WELLS DECEMBER 2019 NYSDEC 625 Broadway, Albany NY, 12233
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APPROVED BY : PK	DATE : FEBRUARY 2019 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 7F

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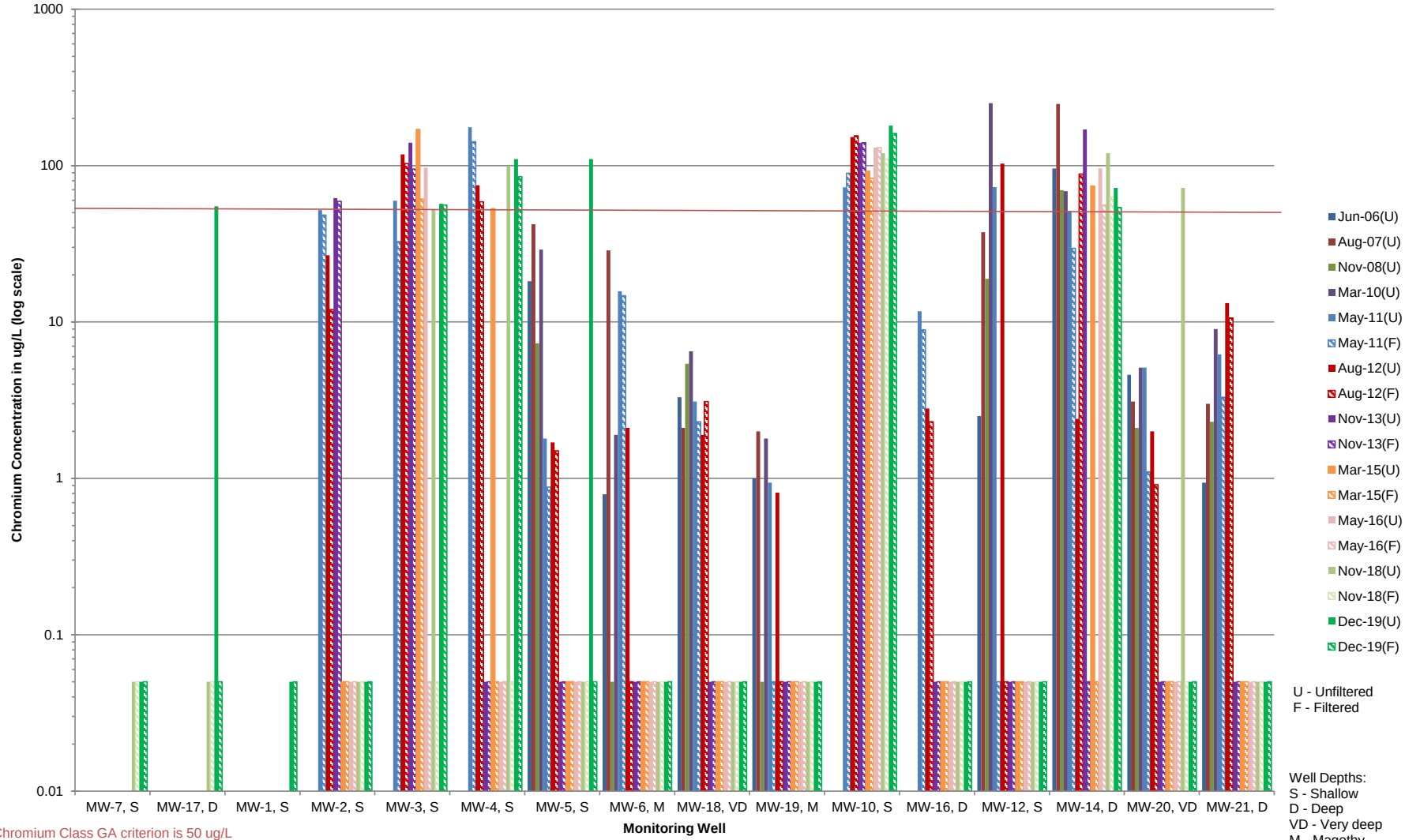
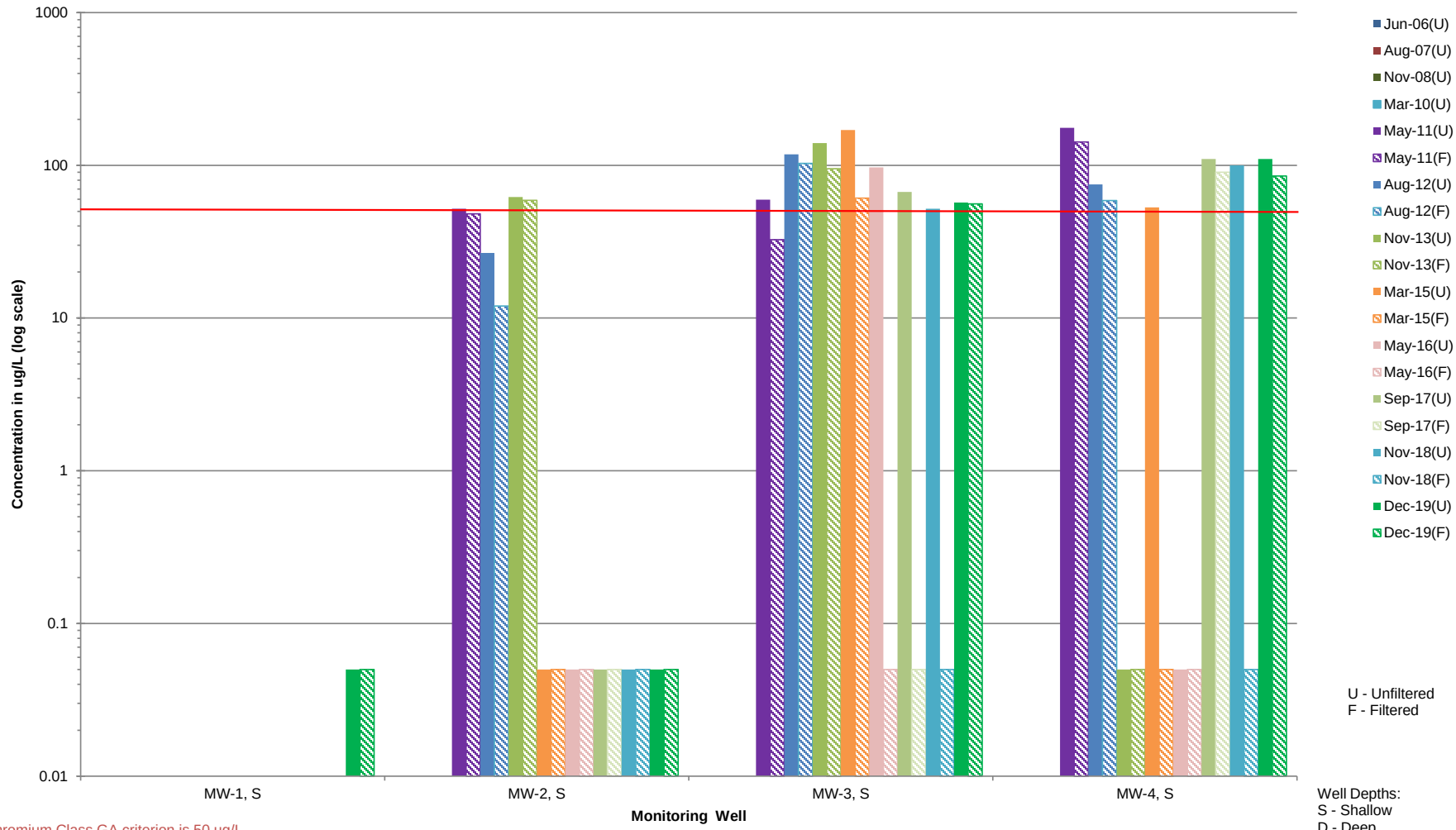
FIGURE 8
CHROMIUM CONCENTRATIONS IN SELECTED MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING (1-52-108)



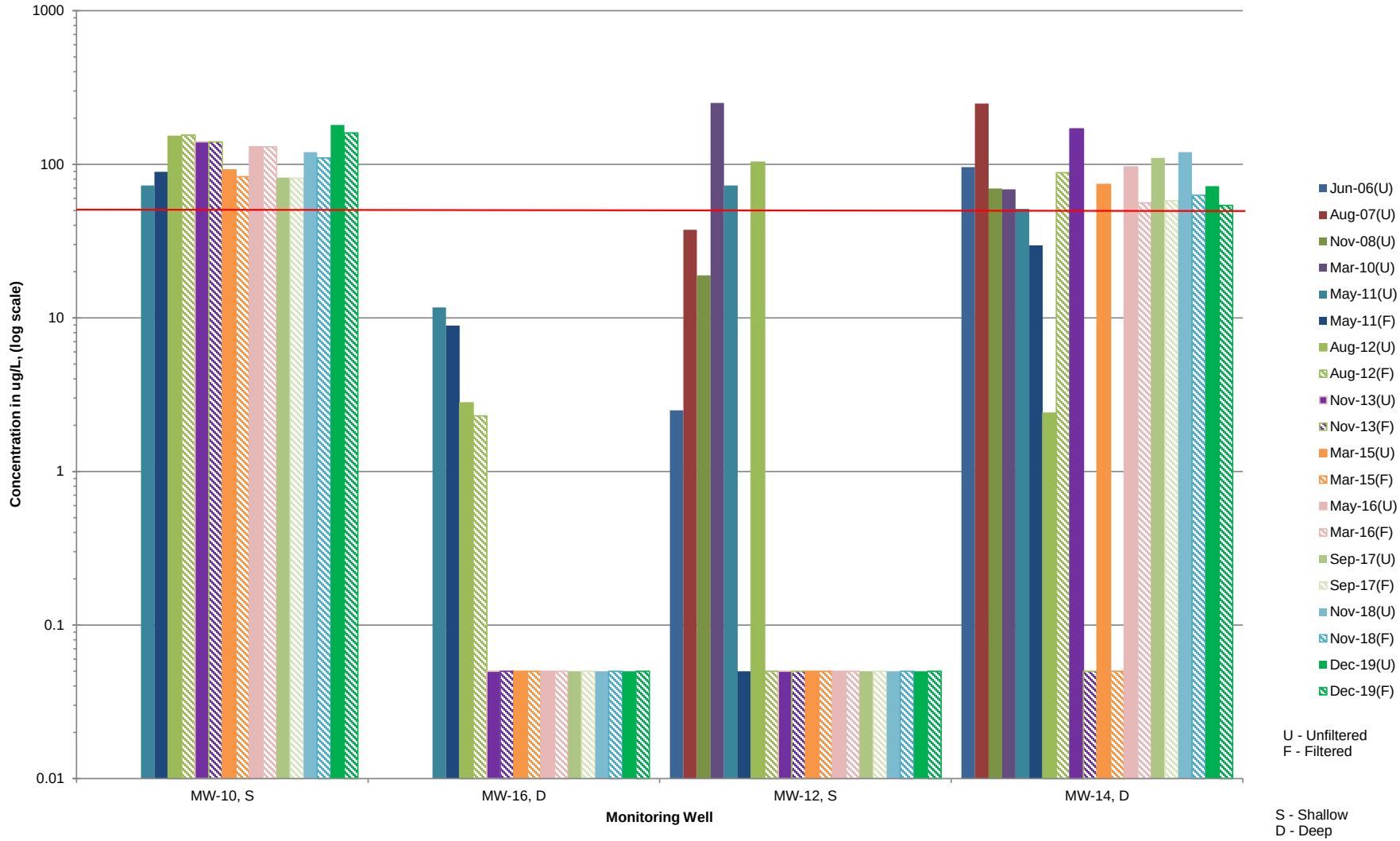
Chromium Class GA criterion is 50 ug/L
ND shown as 0.05 ug/L for plotting purposes

FIGURE 8A
CHROMIUM CONCENTRATIONS IN SOURCE AREA MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)

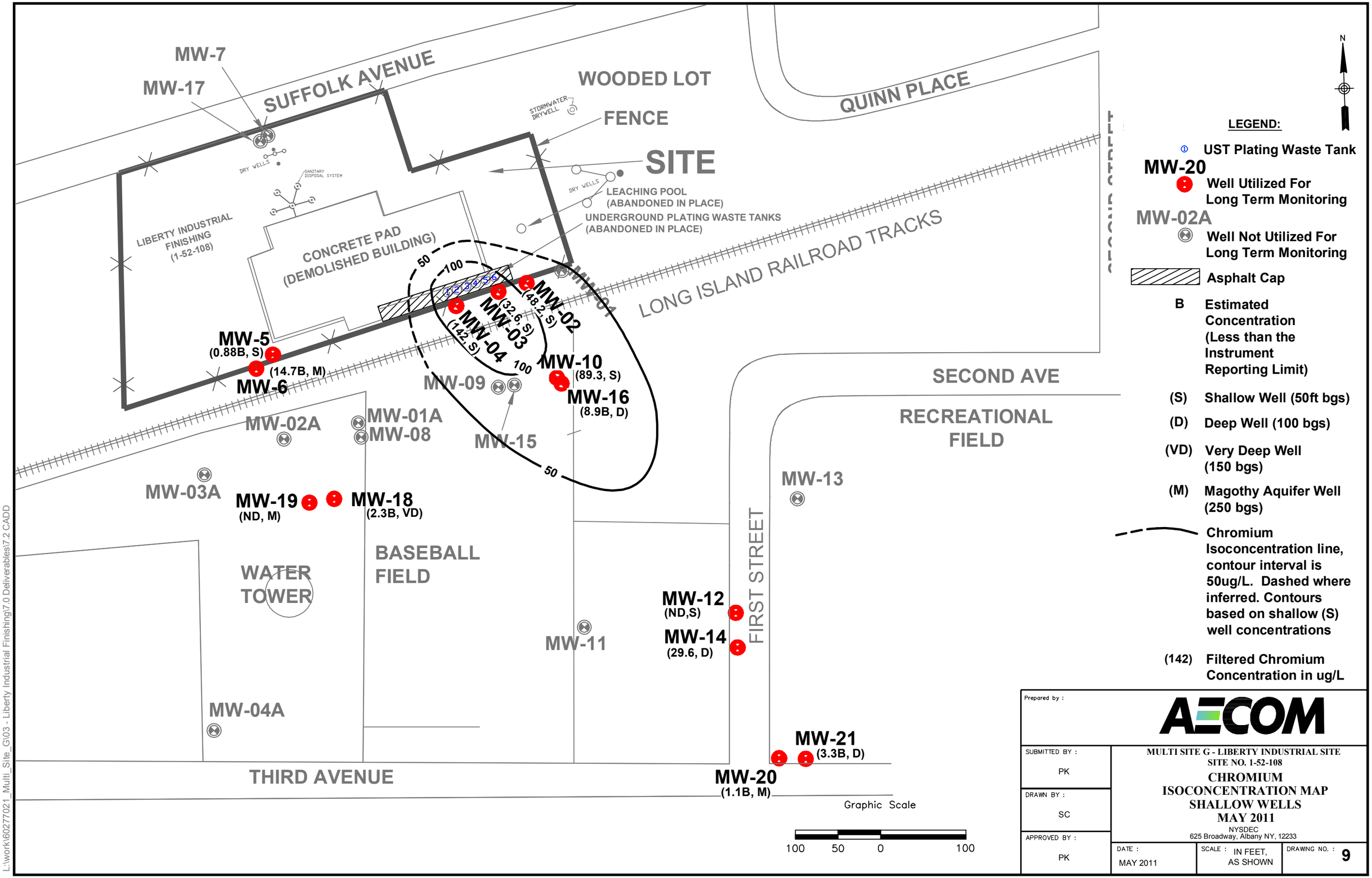


Chromium Class GA criterion is 50 ug/L
ND shown as 0.05 ug/L for plotting purposes

FIGURE 8B
CHROMIUM CONCENTRATIONS IN DOWNGRADIENT 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 purposes



Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CHROMIUM ISOCONCENTRATION MAP SHALLOW WELLS MAY 2011 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : MAY 2011 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 9

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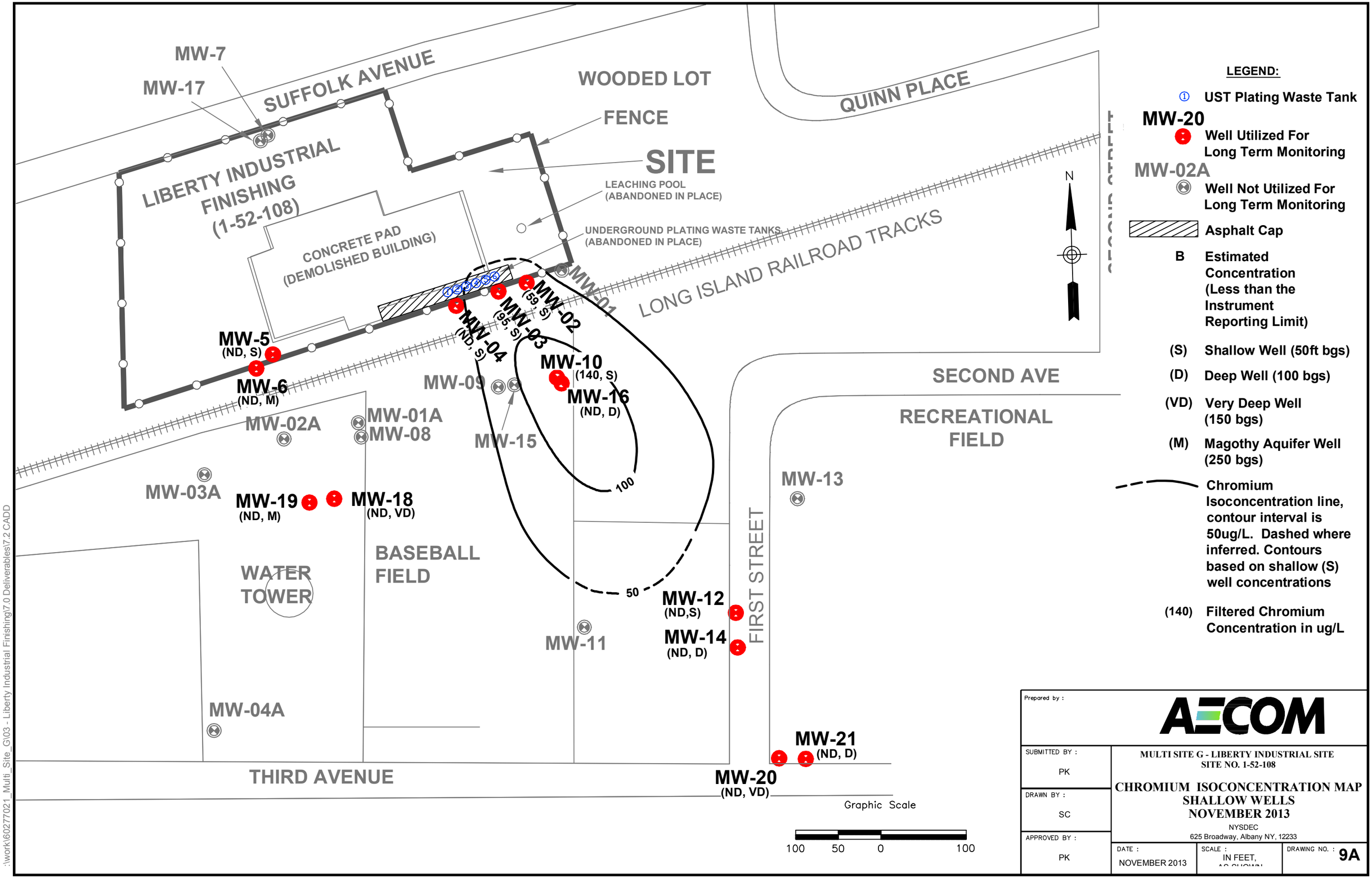

LEGEND:

- ① UST Plating Waste Tank
- **MW-20** Well Utilized For Long Term Monitoring
- **MW-02A** Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- B Estimated Concentration (Less than the Instrument Reporting Limit)
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Chromium Isoconcentration line, contour interval is 50ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (140) Filtered Chromium Concentration in ug/L

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108
DRAWN BY : SC	CHROMIUM ISOCONCENTRATION MAP SHALLOW WELLS NOVEMBER 2013
APPROVED BY : PK	NYSDEC 625 Broadway, Albany NY, 12233
DATE : NOVEMBER 2013	SCALE : IN FEET, AS SHOWN
DRAWING NO. : 9A	

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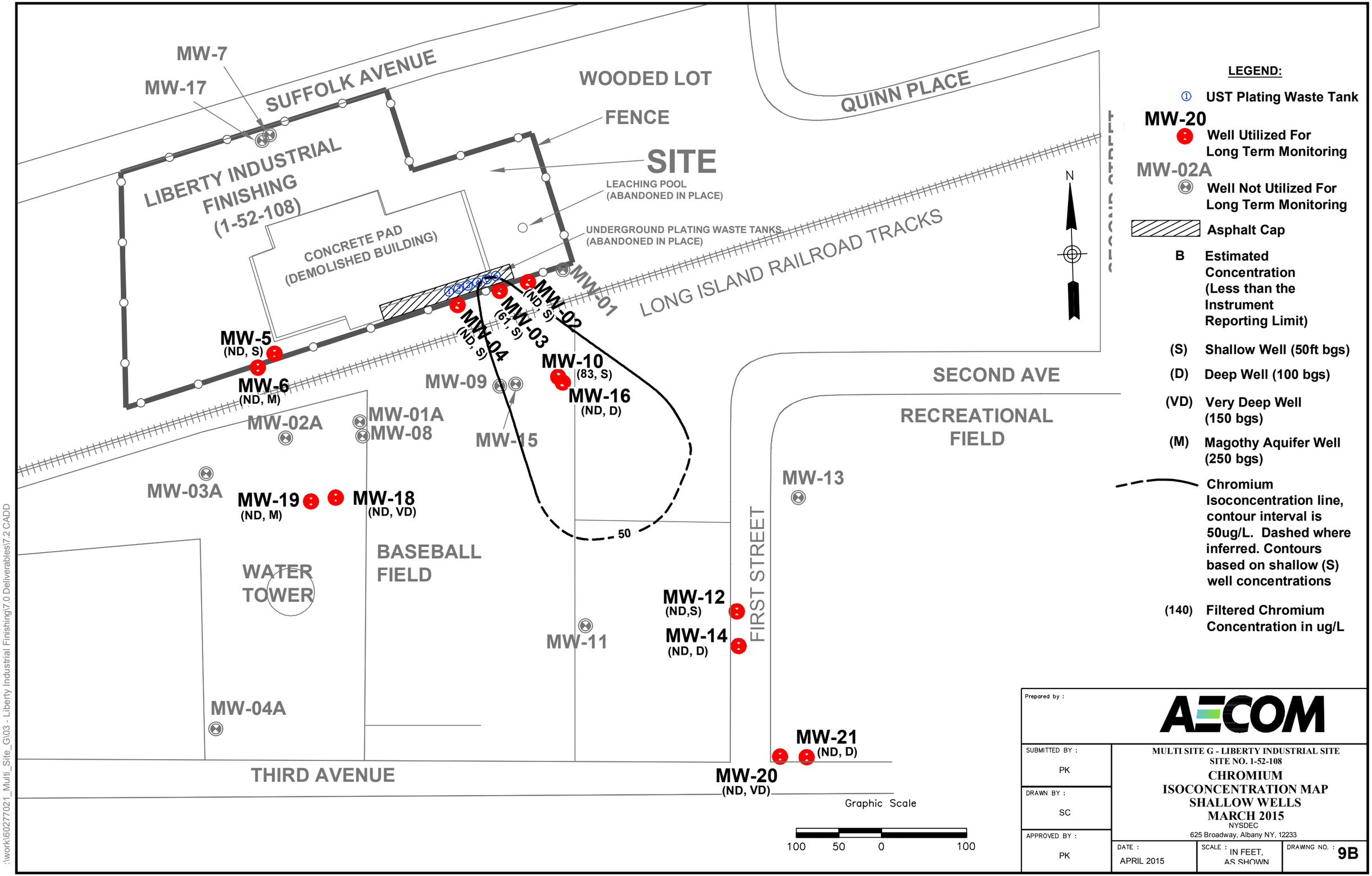

LEGEND:

- ① UST Plating Waste Tank
- **MW-20** Well Utilized For Long Term Monitoring
- **MW-02A** Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- B Estimated Concentration (Less than the Instrument Reporting Limit)
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Chromium Isoconcentration line, contour interval is 50ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (140) Filtered Chromium Concentration in ug/L

Prepared by : AECOM

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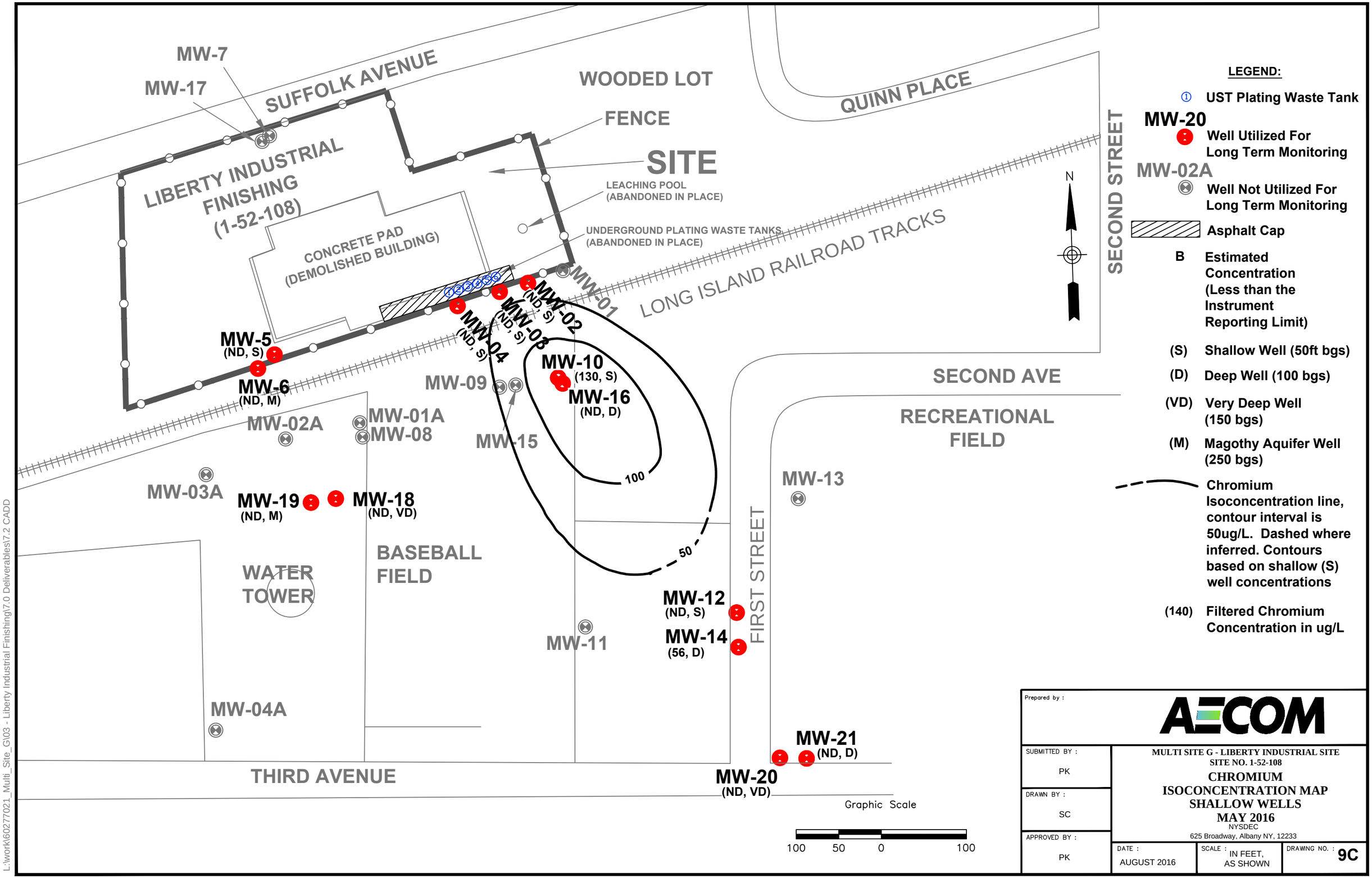

LEGEND:

- ① UST Plating Waste Tank
- **MW-20** Well Utilized For Long Term Monitoring
- **MW-02A** Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- B Estimated Concentration (Less than the Instrument Reporting Limit)
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Chromium Isoconcentration line, contour interval is 50ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (140) Filtered Chromium Concentration in ug/L

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CHROMIUM ISOCONCENTRATION MAP SHALLOW WELLS MAY 2016 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
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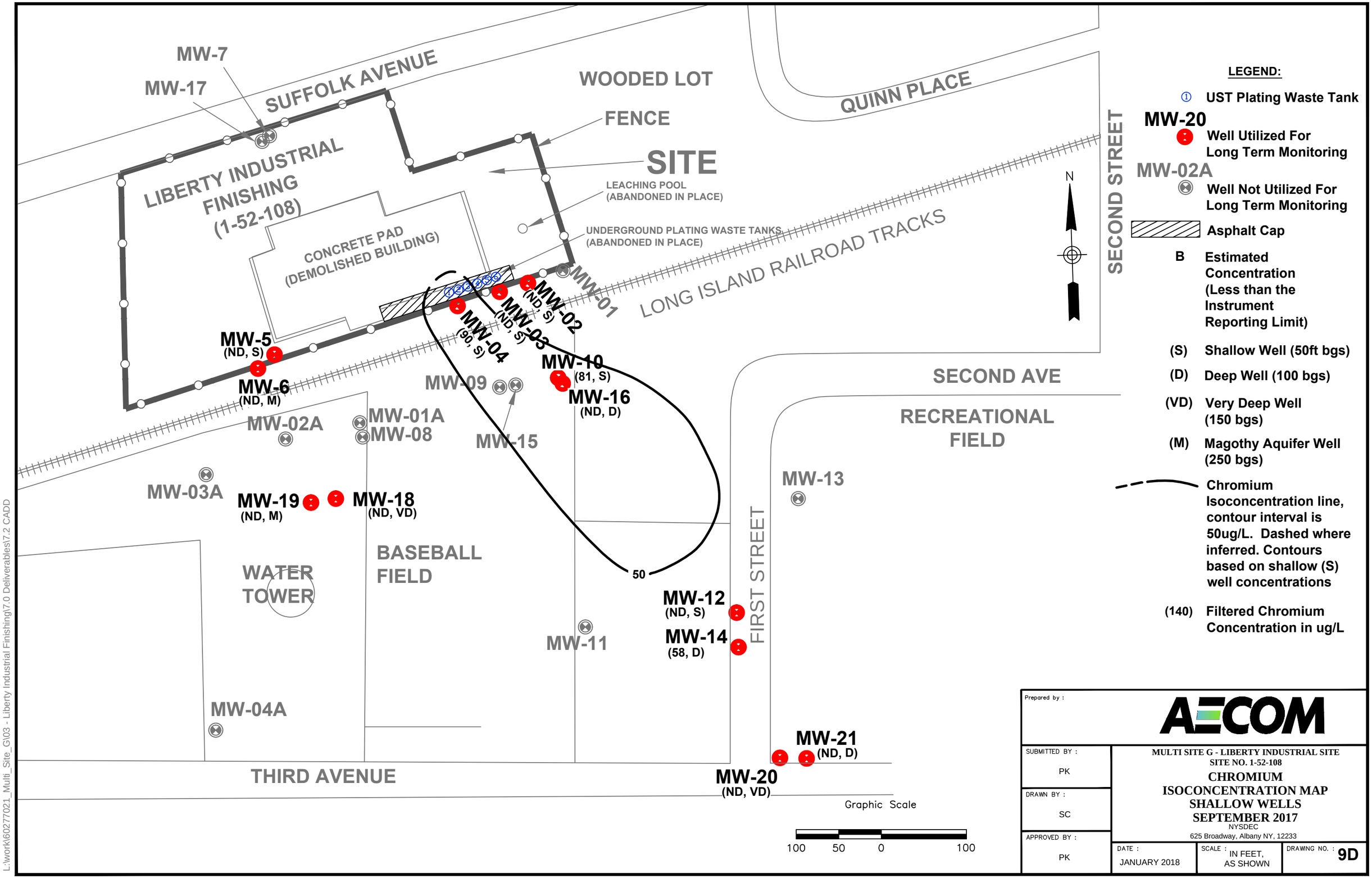

LEGEND:

- ① UST Plating Waste Tank
- **MW-20** Well Utilized For Long Term Monitoring
- **MW-02A** Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- B Estimated Concentration (Less than the Instrument Reporting Limit)
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Chromium Isoconcentration line, contour interval is 50ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (140) Filtered Chromium Concentration in ug/L

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CHROMIUM ISOCONCENTRATION MAP SHALLOW WELLS SEPTEMBER 2017 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : JANUARY 2018 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 9D

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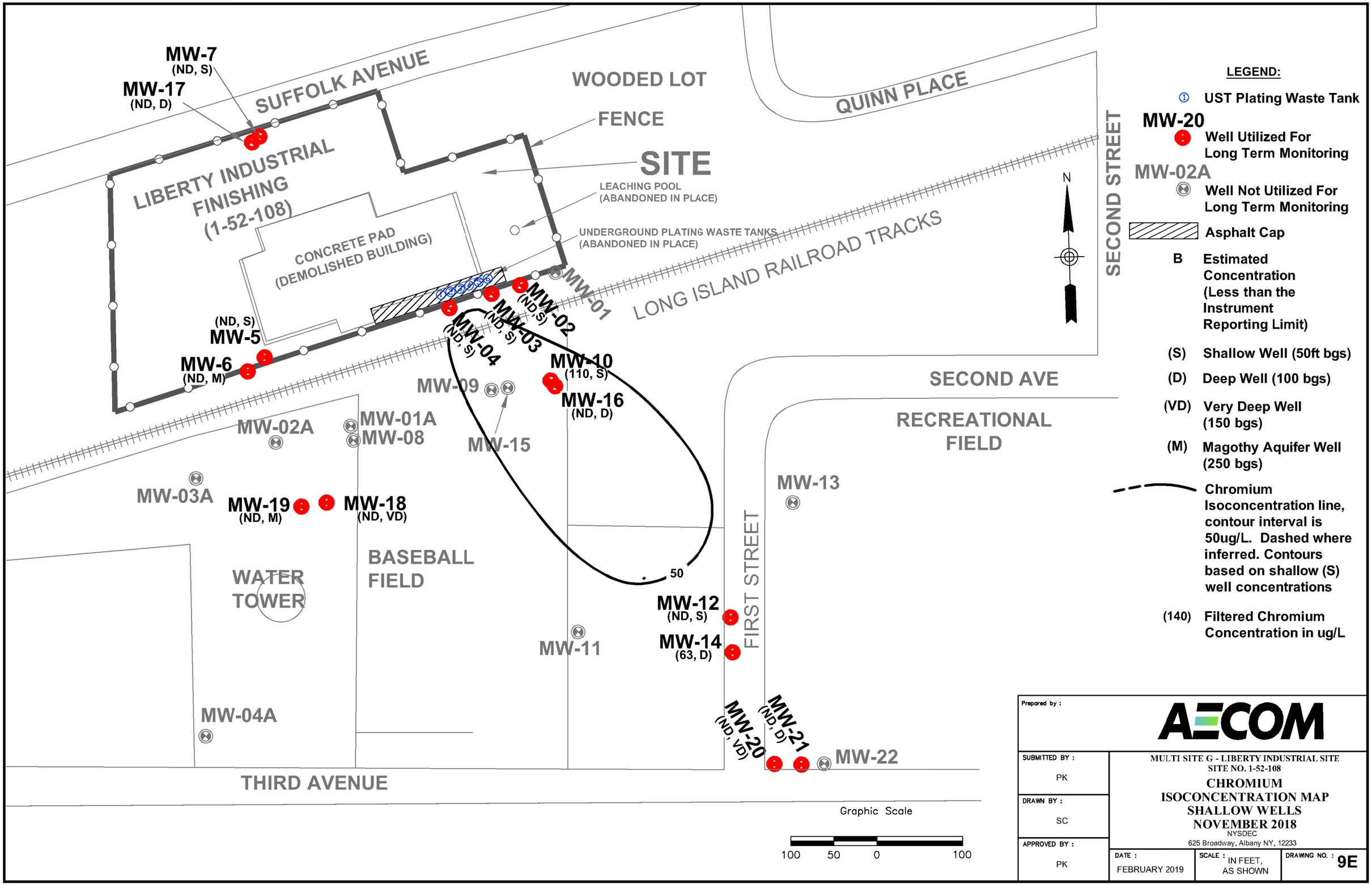

LEGEND:

- ① UST Plating Waste Tank
- MW-20 — Well Utilized For Long Term Monitoring
- MW-02A — Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- B — Estimated Concentration (Less than the Instrument Reporting Limit)
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Chromium Isoconcentration line, contour interval is 50ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (140) Filtered Chromium Concentration in ug/L

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CHROMIUM ISOCONCENTRATION MAP SHALLOW WELLS NOVEMBER 2018 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
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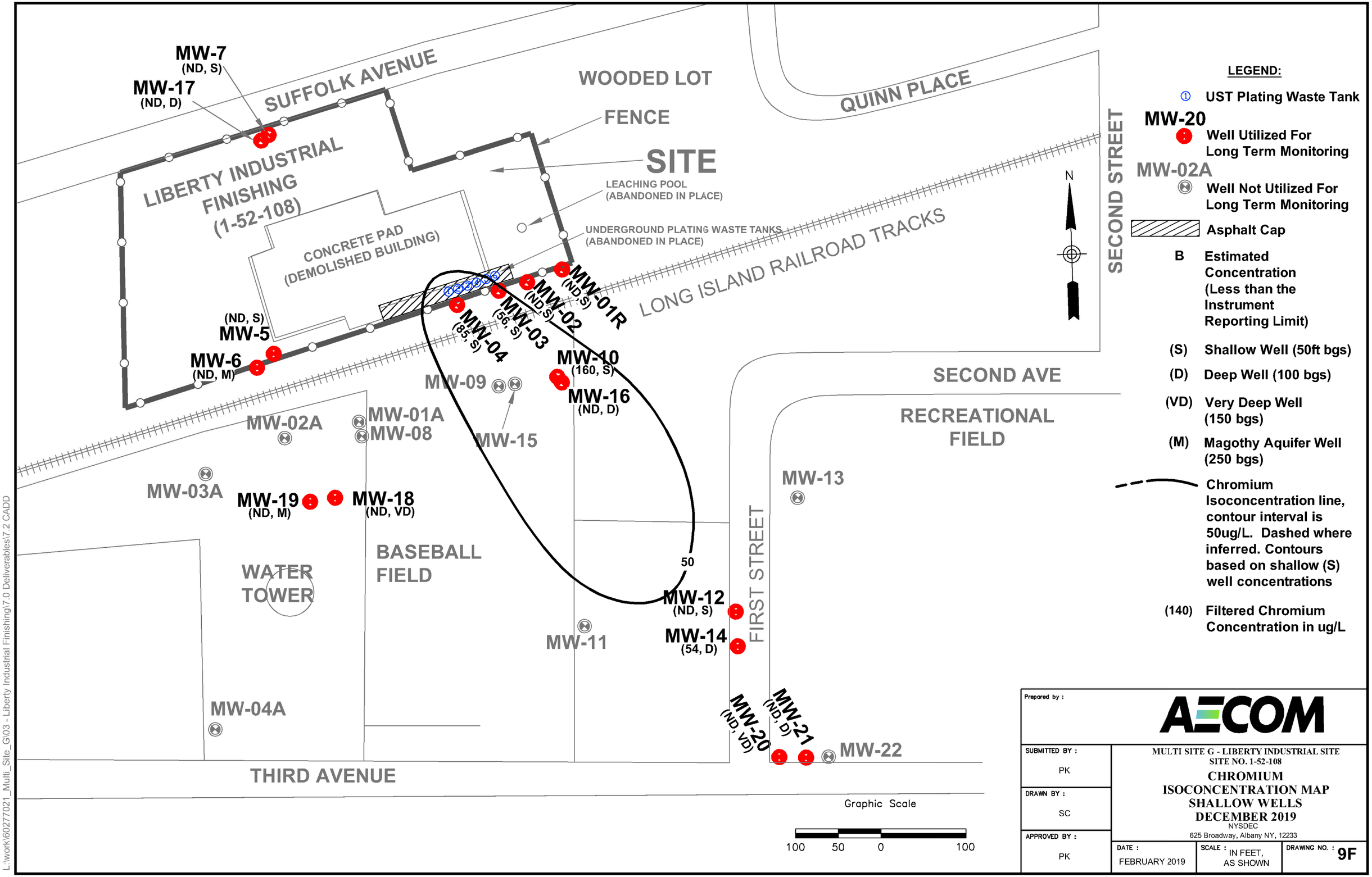

LEGEND:

- ① UST Plating Waste Tank
- MW-20 — Well Utilized For Long Term Monitoring
- MW-02A — Well Not Utilized For Long Term Monitoring
- Asphalt Cap
- B — Estimated Concentration (Less than the Instrument Reporting Limit)
- (S) Shallow Well (50ft bgs)
- (D) Deep Well (100 bgs)
- (VD) Very Deep Well (150 bgs)
- (M) Magothy Aquifer Well (250 bgs)
- Chromium Isoconcentration line, contour interval is 50ug/L. Dashed where inferred. Contours based on shallow (S) well concentrations
- (140) Filtered Chromium Concentration in ug/L

Prepared by : AECOM

SUBMITTED BY : PK	MULTI SITE G - LIBERTY INDUSTRIAL SITE SITE NO. 1-52-108 CHROMIUM ISOCONCENTRATION MAP SHALLOW WELLS DECEMBER 2019 NYSDEC 625 Broadway, Albany NY, 12233
DRAWN BY : SC	
APPROVED BY : PK	DATE : FEBRUARY 2019 / SCALE : IN FEET, AS SHOWN / DRAWING NO. : 9F

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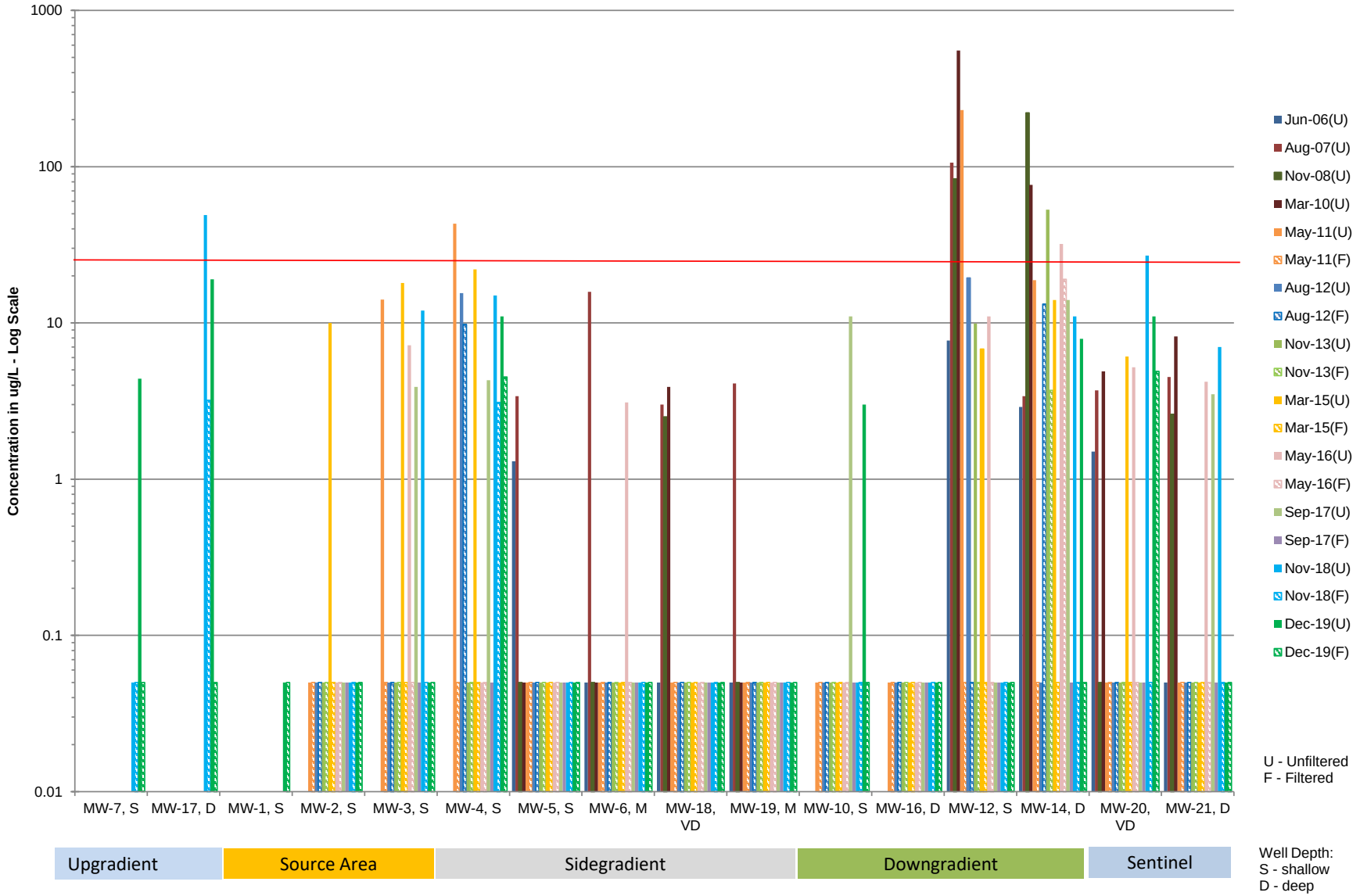
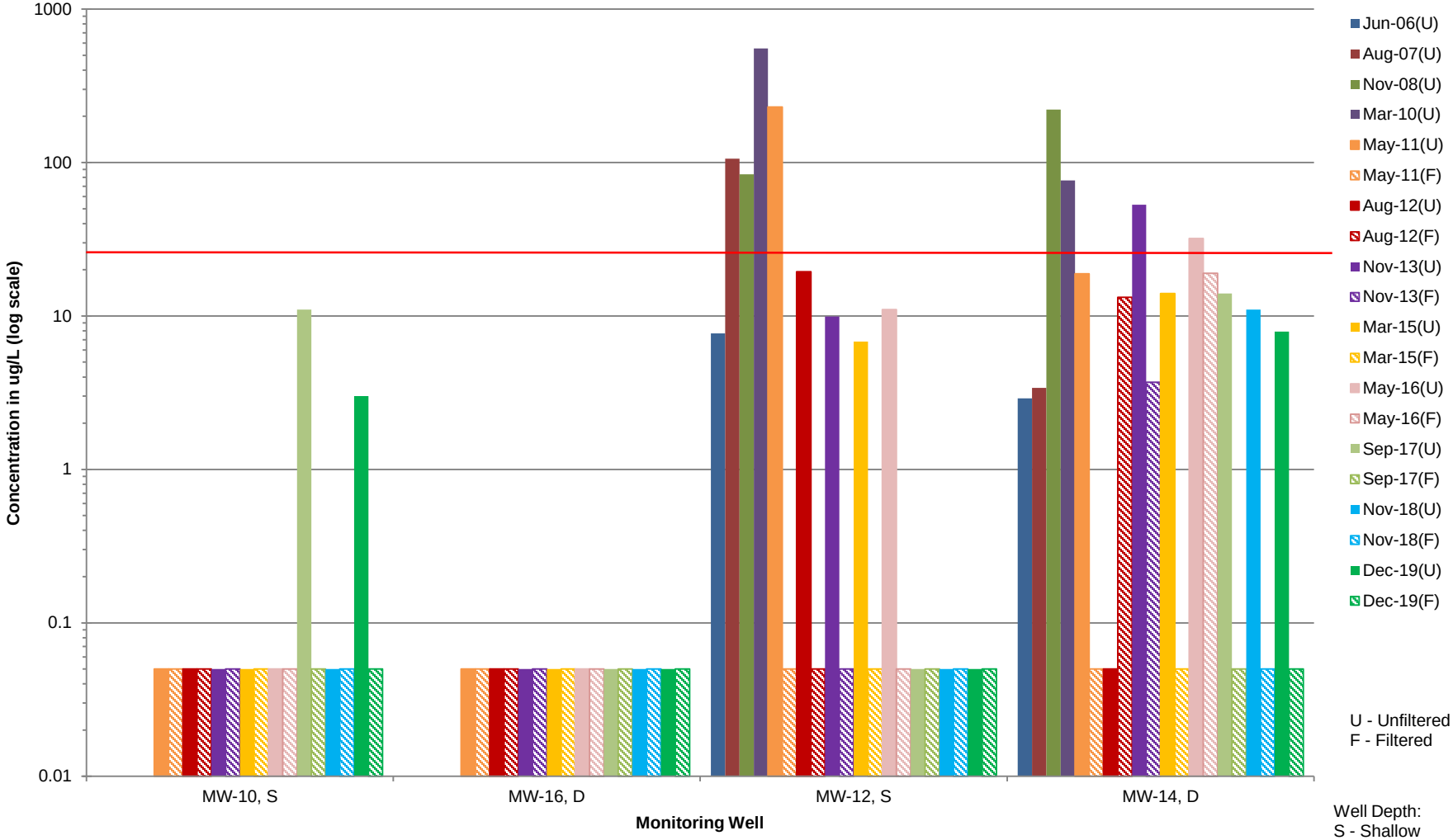
FIGURE 10
LEAD CONCENTRATIONS IN SELECTED MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)



Class GA criterion is 25 ug/L
ND values set to 0.05 ug/L for plotting purposes

FIGURE 10A
LEAD CONCENTRATIONS IN DOWNGRADIENT MONITORING WELLS
LIBERTY INDUSTRIAL FINISHING (1-52-108)



Class GA criterion is 25 ug/L
ND shown as 0.05 ug/L for plotting purposes

Appendix A

Record of Decision, NYSDEC Public Notice dated March 2017 Reclassification, and Draft Deed Restriction

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

Liberty Industrial Finishing Site
Town of Islip, Suffolk County
Site Number 1-52-108

March 1999

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Liberty Industrial Finishing Inactive Hazardous Waste Disposal Site
Town of Islip, Suffolk County, New York
Site No. 1-52-108

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Liberty Industrial Finishing inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Liberty Industrial Finishing Inactive Hazardous Waste Disposal Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Liberty Industrial Finishing site and the criteria identified for evaluation of alternatives the NYSDEC has selected source removal and mitigation and assessment of on-site and off-site groundwater quality as the remedy for this site. The components of the remedy are as follows:

- Removal of the upper two (2) feet of contaminated soil from the area of the underground plating waste storage tanks and pipe gallery;
- Removal of soil to a minimum of eight (8) feet below ground surface (bgs) at the west end of the underground storage tank (UST) pipe gallery;
- Installation of a nonporous asphalt cap over the UST and pipe gallery area to prevent surface water from infiltrating the contaminated area and leaching metals from the subsurface soil into the groundwater;

- Excavation and off-site disposal of contaminated sediments/sludge from four storm water dry wells and one leaching pool;

- Installation of deep groundwater monitoring wells and performance of long-term groundwater monitoring of shallow and deep wells to insure the effectiveness of the remedial measures and to protect the public drinking water supply;

- Remediation of the groundwater contamination plume by natural attenuation;

- Implementation of institutional controls and recording of deed restrictions in the chain of title of the property to restrict future use of groundwater at the site.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

March 31, 1995
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) has selected a remedy to address the significant threat to human health and/or the environment created by the presence of hazardous waste at the Liberty Industrial Finishing Site, which has been designated a Class 2 site by the NYSDEC. A Class 2 site is a site that has been determined to be a significant threat to human health and/or the environment. Liberty Industrial Finishing operated a metal finishing facility at the site from 1978-1997. The Suffolk County Department of Health Services has documented disposal of hazardous wastes, including chromium and cadmium on several occasions from Liberty's operations at the site. Discharges to the environment included: leaks from a tank farm containing six underground storage tanks, discharges to surface soils, and discharges to drainage structures such as stormwater dry wells and leaching pools. Some of the wastes have migrated from the site to surrounding areas, including the shallow groundwater southeast of the site. These disposal activities have resulted in the following significant threats to the public health and/or the environment:

- a significant environmental threat associated with the impacts of contaminants to surface soil, subsurface soil, and groundwater.

- a significant threat to human health associated with potential exposure to site-related contaminants in contaminated surface soil and on-site contaminated shallow groundwater.

As more fully described in Sections 3 and 4 of this document, the Remedial Investigation (RI) performed by the NYSDEC revealed areas of surface and subsurface soils that were significantly contaminated with metals. These contaminated soils are situated above the water table. The sediments in four stormwater dry wells and one leaching pool were found to be significantly contaminated with metals and semivolatile organic compounds. Shallow groundwater on-site and downgradient of the site (southeast) was found to be contaminated with metals, primarily chromium.

Two Interim Remedial Measures (IRMs) were conducted during the RI. First, the EPA conducted an emergency removal action at the site to remove waste materials inside the factory building and close the six on-site underground storage tanks (USTs) in place. The following tasks were performed on the interior of the building: pressure washing of vats; vacuuming and pressure washing of floors; and removal of contaminated debris from the vat areas and floors. All waste materials were drummed and disposed of off-site at a permitted disposal facility.

As part of the IRM, the EPA closed the six underground plating waste storage tanks in place using the following procedure: cleaning and sandblasting each tank, filling each tank with clean soil to one (1) foot below the top of the tank, and filling the remainder of the tank and the fill pipe with concrete. The tanks were not removed because the adjacent Long Island Railroad commuter train line would have to have been shut down during excavation. No other remedial actions were performed by EPA as part of this IRM.

Surface soil testing revealed metals contamination at the Town of Islip Ballfield and at the Brentwood Water District property. The metals contamination is not associated with the site. The Town of Islip

excavated one area at the Ballfield and two areas at the Water District Property and backfilled the excavations with clean soil.

In order to restore the Liberty Industrial Finishing inactive hazardous waste disposal site to predisposal conditions to the extent feasible and authorized by law, but at a minimum to eliminate or mitigate the significant threats to the public health and/or the environment that the hazardous waste disposed at the site has caused, the following remedy was selected:

- Removal of the upper two (2) feet of contaminated soil from the area of the underground plating waste storage tanks and pipe gallery;
- Removal of soil to a minimum of eight (8) feet bgs at the west end of the UST pipe gallery;
- Installation of a nonporous asphalt cap over the UST and pipe gallery area to prevent surface water from infiltrating the contaminated area and leaching metals from the subsurface soil into the groundwater;
- Excavation and off-site disposal of contaminated sediments/sludge from four storm water dry wells and one leaching pool;
- Installation of deep groundwater monitoring wells and performance of long-term groundwater monitoring of shallow and deep wells to insure the effectiveness of the remedial measures and to protect the public drinking water supply;
- Remediation of the groundwater contamination plume by natural attenuation;
- Implementation of institutional controls and recording of deed restrictions in the chain of title of the property to restrict future use of groundwater at the site.

The selected remedy, discussed in detail in Section 7 of this document, is intended to attain the remediation goals selected for this site in Section 6 of this Record of Decision (ROD), in conformity with applicable standards, criteria, and guidance (SCGs).

SECTION 2: SITE LOCATION AND DESCRIPTION

The Liberty Industrial Finishing Site (Site #1-52-108) is situated on 3.9 acres, 1.3 acres of which are undeveloped, in a suburban area at 550 Suffolk Avenue in the Hamlet of Brentwood, Town of Islip, Suffolk County. The site includes one 30,000 square foot single story industrial building. The building was used as a metal finishing facility engaging in finishing, plating, and non-destructive testing of parts and components used primarily in the aircraft industry. The site is bordered by Suffolk Avenue on the north and the Long Island Railroad on the south. Directly south of the railroad is the Town of Islip Athletic Field and the Brentwood Water District well field. The Site Location Map and Study Area Map are included as Figure 1 and Figure 2, respectively.

Six underground storage tanks (USTs) ranging from 3,000-7,000 gallons in capacity are situated on-site and are located outside of the building adjacent to the south wall. These tanks formerly contained waste liquids from the industrial plating operations. The tanks are connected to the building via an underground pipe gallery, located west of the tanks. These vertically-oriented cylindrical tanks are situated two (2) to three (3) feet below ground surface (bgs) and range from four (4) to twelve (12) feet in length.

To date, the site has not been connected to the public sewer system. Liberty Industrial used three types of drainage structures: sanitary leaching pools, stormwater dry wells, and an emergency leaching pool. The sanitary leaching pools were connected to the industrial building and were used for discharge of in-plant sanitary waste. The storm water dry wells collected on-site surface runoff. The emergency leaching pool was connected to the pipe gallery that supplies the USTs. When the USTs were overfilled, the remaining plating waste would discharge into the emergency leaching pool.

Public water is supplied to area residents and businesses. As part of the Remedial Investigation, a well survey was conducted to determine if private wells exist that may be potentially affected by site contamination. Results of the survey indicate that no private wells have been impacted by the site.

The Brentwood public water district well field is located less than 100 feet south of the subject site. The wells are situated at 450-900 feet below ground surface (bgs) in the Magothy aquifer. Groundwater at the site flows southeast and therefore flows to the east and away from the Brentwood Water District property. To date, these wells have not been affected by contamination at the Liberty Industrial Finishing site.

Several clay layers ranging from one (1) foot to 60 feet in thickness, exist above 450 feet bgs at the Brentwood well field. Although the clay layers are discontinuous, they would likely protect the Brentwood well field by slowing or stopping the downward migration of contaminants.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Liberty Industrial Finishing operated a metal finishing facility at the site from 1978-1997. Shortly after Liberty moved into the Brentwood facility, the Suffolk County Department of Health Services (SCDHS) noted serious problems with their operations. Plating wastes were discharged to various leaching pools throughout the site. The highest concentrations were found in the emergency leaching pool located immediately east of the underground plating tanks. Surface discharges were also observed by SCDHS and the plating tanks themselves were also a concern. The SCDHS was most concerned with possible contamination of the nearby supply wells located to the south of the site. In 1982, Liberty signed a Consent Order with Suffolk County to correct the deficiencies. Liberty agreed to: perform leak tests on USTs, repair and test leak detection systems on USTs, seal off piping from the pipe gallery to the emergency leaching pool, and install groundwater monitoring wells. Records from the SCDHS indicated that Liberty had satisfied the terms of the agreement.

On September 18, 1984, during a NYSDEC inspection, problems were noticed at the site. A liquid sample from the sanitary system contained 33 parts per million (ppm) of cadmium, 35.9 ppm of copper, 6 ppm of lead, 6 ppm of silver, 17 ppm of zinc, lesser concentrations of chromium and cyanide, and as much as 3.8 ppm of 1,1,1-trichloroethane. A stormwater dry well was contaminated with lead, cadmium and chromium. A soil sample from outside the northeast corner of the building contained an EP Toxicity concentration of 3.04 ppm for cadmium. As a result of this inspection, the sanitary system and the dry well were pumped and cleaned in July 1985.

3.2: Remedial History

The site was originally listed as a class "2a" on the Registry of Inactive Hazardous Waste Disposal Sites on December 12, 1987. A class "2a" was a temporary classification for this site pending further investigation. The results of the investigation were used to determine if the site would be reclassified or delisted. Under a Consent Order with the NYSDEC, a Phase II Investigation was performed by Liberty's consultant in 1987. Five monitoring wells were installed and sampled, including upgradient, on-site, and downgradient wells. Four wells from a prior investigation were also sampled. Two on-site wells exhibited concentrations of 210 parts per billion (ppb) and 8,120 ppb of chromium, which exceeded the groundwater standard of 50 ppb.

A Supplemental Phase II investigation was performed in 1991. Soil sampling for EP Toxicity, volatile organic compounds, and cyanide was performed at three locations. The most notable detection was 11.5 ppm of cyanide in the sediment at the bottom of the leaching pool. Additional rounds of groundwater samples were collected. Chromium concentrations ranging from 2,300 ppb to 5,800 ppb were detected in these samples, which exceeded the groundwater standard of 50 ppb.

A remedial measure was performed by Liberty at the request of the SCDHS on the industrial emergency leaching pool, as a result of the 11.5 ppm of cyanide detected in the Supplemental Phase II Investigation. A total of 45 inches of soil were excavated from the bottom of the leaching pool in 1992.

The site was reclassified as a class "2" on February 10, 1994 because of the disposal of plating wastes into drainage structures and the contaminated groundwater which exceeded NYSDEC groundwater standards. A Consent Order, with an effective date of March 18, 1996, required the site operator/owner to perform a Focused Remedial Investigation (FRI) limited to the area around the six underground plating tanks that leaked and the emergency leaching pool that had historically received untreated plating wastes. Based on available information, these areas were suspected to be the main sources for high levels of hexavalent chromium and, to a lesser extent cadmium, detected in a downgradient off-site monitoring well. Remedial work required by the Consent Order was not implemented by Liberty Industrial Finishing because of alleged financial difficulties.

In 1997, with oversight from the NYSDEC, Liberty Industrial Finishing removed waste materials from the interior of the on-site industrial building. The following materials were disposed of as part of this removal action: cyanide plating waste, phosphates, copper strips, copper strip sludge, metal hydroxide sludges, paint wastes containing methyl-ethyl-ketone, waste from the vapor degreaser containing trichloroethene (TCE), chromic acid solutions, solutions containing cadmium and chromium, and cyanide salts.

Floor sweepings were drummed and disposed of as hazardous waste due to cyanide and metals. All wood flooring was collected but left on-site. The flooring was later disposed of by the Environmental Protection Agency (EPA) as part of an Interim Remedial Measure.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to the environment posed by the presence of hazardous waste, the NYSDEC has recently conducted a Remedial Investigation/Feasibility Study (RI/FS).

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was conducted between September 1997 and November 1998. A report entitled, "Remedial Investigation Report", dated January 1999 has been prepared which describes the field activities and findings of the RI in detail.

The RI included the following activities:

- *Public and private water supply well survey to identify potential groundwater receptors;*
- *Geophysical survey to determine the location of subsurface drainage systems that could have been used for waste disposal and areas of buried waste;*
- *Excavation of six test trenches and collection of two soil samples to determine if waste was present in an area of suspected disposal;*
- *Collection of 17 sediment/sludge samples from stormwater dry wells, sanitary leaching pools and an emergency leaching pool to determine if wastes were disposed to these drainage systems;*
- *Collection of 65 surface soil and 42 subsurface soil samples to determine if activities at the site resulted in contamination of soil both on-site and off-site;*
- *Collection of 25 Geoprobe groundwater samples to determine if activities at the site contaminated groundwater on-site and off-site;*
- *Installation and sampling of seven new monitoring wells, together with ten existing, to determine on-site and off-site groundwater quality;*
- *Monitoring of vapors and gases to determine impacts on ambient air;*

- *Performance of a wildlife habitat survey to determine environmental conditions and impacts at the site; and*

- *Performance of an exposure assessment to determine impacts on human health.*

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the RI analytical data were compared to New York State Standards, Criteria, and Guidance values (SCGs). Groundwater and drinking water SCGs identified for the Liberty Industrial Finishing site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. For soils, NYSDEC TAGM 4046 provides soil cleanup objectives for the protection of groundwater, background conditions, and health-based exposure scenarios.

High levels of metals, specifically chromium, were found in the on-site surface soils (maximum 412 ppm), subsurface soils (maximum 1,530 ppm), drainage structures (maximum 579 ppm), and on- and off-site groundwater (maximum 3,600 ppb). High levels of SVOCs (maximum 10,100 of total SVOCs) were also found in the on-site drainage structures. Based on the results of the RI, remediation of these media is required.

For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1 Nature of Contamination

As described in the RI Report, many soil, groundwater and sediment samples were collected at the site to characterize the nature and extent of contamination. The main categories of contaminants which exceed their SCGs are semivolatile organic compounds and inorganics.

The inorganic contaminants of concern are cyanide and the following metals: cadmium, chromium, copper, nickel and zinc. The semivolatile organic compounds are limited to contaminated sediments and include: phenol, benzo(a)anthracene, chrysene, and benzo(a)pyrene.

4.1.2 Extent of Contamination

The following are the media which were investigated and a summary of the findings of the investigation. The analytical data are presented in the following format:

Name of compound (analytical result > soil cleanup objective or groundwater standard).

Soil

Contaminated surface soil was found on-site at the eastern end of the UST farm. The surface soil at this location (SS-31) exhibited maximum concentrations of cadmium (277 ppm > 10 ppm), chromium (412 ppm > 50 ppm), copper (145 ppm > 25 ppm), iron (43,000 ppm > 10,000 ppm), mercury (1.5 ppm > 0.1 ppm), nickel (146 ppm > 13 ppm), and zinc (607 ppm > 47 ppm) that exceeded the NYSDEC soil cleanup objectives.

Contaminated surface soil was also found at the Town of Islip Athletic Field and the Brentwood Water District well field. Arsenic-contaminated soil [(381 ppm and 967 ppm) > 7.5 ppm] was found at the southwest corner of the athletic field (SS-01) at concentrations exceeding the NYSDEC cleanup objective. Surface soil contaminated with barium [(385-943 ppm) > 300 ppm], chromium [(217-1,010 ppm) > 50 ppm], cobalt [(97-393 ppm) > 30 ppm], copper [(34-393 ppm) > 25 ppm], nickel [(272-1,050 ppm) > 13 ppm], and zinc [(87.2-3,450 ppm) > 47 ppm] was identified at two locations (SS-24 & SS-25) on the Brentwood Water District property at concentrations exceeding the soil cleanup objectives. These two areas were remediated as an Interim Remedial Measure in August 1998 (see Section 4.2). A summary of the analytical results for surface soil sampling is included in Table 1. Locations of surface soil samples are depicted in Figure 3.

Contaminated subsurface soil was found at two locations adjacent to the six USTs [B-12 (12-16 feet bgs) & B-15 (2-6 feet bgs)] and at one location approximately 125 feet west of the USTs [B-29 (0-8 feet bgs)]. Analytical results revealed concentrations of cadmium [(118-126 ppm) > 10 ppm], chromium [(972-1530 ppm) > 50 ppm] and nickel [(22-139 ppm) > 13 ppm] that exceed soil cleanup objectives. A summary of the analytical results for the subsurface soil sampling locations is included in Table 2. Sample locations are depicted in Figure 4.

Sediments

Contaminated sediment/sludge was detected in one of the four sanitary leaching pools, which is the western most pool (S-07). This pool exhibited concentrations of cadmium (90 ppm > 10 ppm), chromium (148 ppm > 50 ppm), copper (519 ppm > 25 ppm), and zinc (127 ppm > 47 ppm) that exceeded the NYSDEC soil cleanup objectives.

As part of this investigation, ten (10) on-site stormwater dry wells were sampled. Contaminated sediment/sludge was detected in four stormwater dry wells, one of which is located in the area of the western loading dock (S-03) and the remaining three located in the area of the former eastern loading dock (S-13, S-14, S-15). Analytical results from these dry wells revealed exceedances of soil cleanup objectives for several semivolatile organic compounds and metals, including phenol [(77-1,300 ppb) > 30 ppb], benzo(a)anthracene [(790-1,900 ppb) > 224 ppb], chrysene [(1,300-2,600 ppb) > 400 ppb], benzo(a)pyrene [(760-2,000 ppb) > 61 ppb], cadmium [(35-303 ppb) > 10 ppb], chromium [(191-579 ppb) > 50 ppb], nickel [(32-102 ppb) > 13 ppb] and zinc [(248-866 ppb) > 47 ppb].

The emergency leaching pool (Sample #B-04) was also tested as part of the RI. As discussed in Section 3.2, a remedial measure was performed on this leaching pool in 1992. The analytical results from the RI indicate that this leaching pool was not contaminated above soil cleanup objectives; therefore, the emergency leaching pool is no longer an environmental concern for the site.

Analytical results for sediment/sludge samples are included in Table 3. Sample locations are depicted in Figure 5.

Groundwater

Groundwater was sampled by two methods as part of this investigation. One method utilized was obtaining grab samples using the Geoprobe™ direct push sampling apparatus. This method was used as a screening tool to determine placement of groundwater monitoring wells and to determine relative levels of contaminants. By measuring water levels in the wells, it was determined that groundwater flow is toward the southeast. The data validation report indicates that the results for metals are estimated as biased high for the Geoprobe™ samples due to high turbidity results. The high levels of metals are likely attributable to the suspended solids contained in the samples.

Groundwater monitoring wells were used to determine on-site and off-site groundwater quality. The monitoring wells were developed for several days prior to sampling and contain larger screen sections which allow for greater water flow rates. These wells provided a more reliable assessment of actual contaminant concentrations than the Geoprobe™ sampling results. Therefore, the discussion below concerning the nature and extent of groundwater contamination will utilize primarily the groundwater monitoring well analytical data.

Monitoring wells were placed in upgradient, on-site, and downgradient locations to determine the boundaries and potential for migration of groundwater contamination. Shallow wells (MW-01 to MW-05, MW-7 to MW-13, MW-15) were installed directly below the water table at approximately 50 feet bgs. Deep wells (MW-14, MW-16, MW-17) were installed at 100 feet bgs. However, one deep well (MW-06) that was sampled is screened in the Magothy aquifer at 265 feet bgs.

Groundwater monitoring well data downgradient (southeast) of the underground plating waste storage tanks and the former eastern loading dock stormwater dry wells indicates exceedances of cadmium, cyanide, and chromium, likely resulting from plating waste disposal or spills and/or leaking underground waste storage tanks. Groundwater contaminated with cadmium (maximum 369 ppb at MW-10 > 10 ppb) and cyanide (maximum 417 ppb at MW-04 > 100 ppb) is primarily in the shallow on-site wells and extends approximately 150 feet downgradient of the site. Analytical results from the December 15, 1997 sampling event indicate that shallow chromium-contaminated groundwater on-site ranged up to 3,600 ppb at MW-04 (groundwater standard: 50 ppb) and immediately off-site (about 150 feet at MW-10) was 3,070 ppb. Results from the most recent sampling event on June 3, 1998 indicate groundwater concentrations of 1,960 ppb for MW-04 and 2,930 ppb for MW-10. Only one deep well (MW-14) exhibited chromium concentrations above groundwater standards. This downgradient well, located about 500 feet from the site and 100 feet bgs, shows a chromium concentration of 53.7 ppb, which slightly exceeds the groundwater standard of 50 ppb. The shallow monitoring well at this location (MW-12) exhibited a chromium concentration of 1.2 ppb. Upgradient wells at the Brentwood Public Library show no evidence of groundwater contamination. Locations of monitoring wells and Geoprobe™ sampling locations are included in Figure 6 and Figure 7, respectively. Figure 6 also includes chromium concentrations for each monitoring well from the June 3, 1998 sampling event. A summary of the analytical results from the monitoring well samples and Geoprobe™ sampling locations are included in Tables 4 and 5, respectively.

Figure 8 depicts the extent of the groundwater plume. As indicated on the figure, the plume emanates southeast from the on-site UST and pipe gallery area and moves in the direction of groundwater flow. The site history (Section 3.1) indicates that discharges to groundwater began in the late 1970's. However, the groundwater

monitoring well data indicate that chromium concentrations meet groundwater standards 500 feet downgradient of the site.

Figure 9 depicts a cross section of the highest concentration gradient for chromium. As indicated on the figure, exceedances of groundwater standards for chromium are limited to the wells situated directly below the water table, except for MW-14 (53.7 ppb) which slightly exceeds the groundwater standard of 50 ppb.

The groundwater contamination plume associated with this site does not threaten the Brentwood Water District well field. Neither groundwater monitoring well located upgradient of the well field (MW-3A & MW-8) exhibited detectable concentrations of chromium. Figure 8 shows that the extent of the groundwater contamination plume is 120 feet east of the Brentwood well field. In addition, the groundwater contamination is limited to 100 feet bgs and has a chromium concentration of 6.2 ppb at the nearest downgradient deep monitoring well (MW-16). The Brentwood wells are screened at a minimum of 450 feet bgs. Also, the Brentwood supply wells are tested on a annual basis and have not shown any evidence of contamination to date. Therefore, the groundwater contamination from the site does not threaten the water quality of the Brentwood well field.

A well survey was conducted as part of the RI. The well survey indicated that there are no public or private wells located within 1.5 miles downgradient of the site. Therefore, there are no known completed exposure pathways within 1.5 miles of this site.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. Two IRMs were completed while performing the RI/FS.

IRM #1

Analytical results for the Town of Islip Athletic Field and the Brentwood Water District property revealed the presence of surface soils that were contaminated with heavy metals (see Section 4.1.2 for analytical results). In August 1998, the Town of Islip performed an IRM in which soil was excavated from areas of both properties for off-site disposal. Referring to Figure 3, soil was excavated from a square-shaped area centered on SS-01 at the Town of Islip ballfield measuring 7 feet by 7 feet by 2 feet deep. Circular excavations were also performed at SS-24 and SS-25 at the Brentwood Water District property, each measuring 6 feet in diameter and 6 feet deep.

IRM #2

The United States Environmental Protection Agency performed an Emergency Removal Action on the site from August 1998 to January 1999. This IRM included removing waste materials from the interior of the factory building and closing the six USTs in place.

The USTs on the south side of the building were closed in place using the following procedure:

- Removing the remaining contents of the tanks including the plastic liners;

- Cleaning and sandblasting the empty tanks;

- Filling the USTs with soil to approximately one (1) foot from the top of each tank; and filling the remaining foot with concrete.

The USTs were not removed because of the proximity of the adjacent Long Island Railroad tracks. An electric line that supplies power to the railroad is located between the tanks and the railroad tracks. Excavation of the tanks would have required the electric line to be shut off which would have resulted in interruption of railroad service.

As part of the IRM performed by the EPA, waste materials were removed from the interior of the factory building. The following tasks were performed in the interior of the building:

- Pressure washing of process vats.

- Vacuuming and pressure washing of floors.

- Removal of contaminated debris from vat areas and floors.

- Packaging all waste materials in drums for off-site disposal at a permitted disposal facility.

4.3 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 6.0 of the RI Report.

An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Pathways which are known to or may exist at or around the site include:

- ingestion of surface soil in the eastern portion of the underground waste storage tank area.

- ingestion of shallow groundwater.

Residences and businesses located downgradient of the site are provided with public water; therefore, contact with shallow groundwater is unlikely. Ingestion of surface soil will be addressed in Section 7.

4.4 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site.

No significant pathways for environmental exposure have been identified at the site.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The Potentially Responsible Party (PRP) for the site is:

Liberty Industrial Finishing
550 Suffolk Avenue
Brentwood, New York 11717

Liberty Industrial Finishing has ceased manufacturing operations at the site. The PRP declined to implement the RI/FS at the site when requested by the NYSDEC because of alleged financial hardship. The RI/FS is being conducted with State Superfund money. After the remedy is selected, the PRP will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRP, the NYSDEC will implement the selected remedial action under the State Superfund. The PRP is subject to legal actions by the State for recovery of all response costs the State has incurred.

The following is the chronological enforcement history of this site.

Date	Index No.	Subject of Order
1987	W1-0025-84-08	Phase II investigation of USTs and areas of documented discharges.
1996	W1-0714-95-01	Remedial Investigation and remediation of the area around the six USTs.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all Standards, Criteria and Guidance (SCGs) and be protective of human health and the environment. At a minimum, the remedy selected should eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- *Eliminate sources of contamination that exceed SCGs, such as: surface soil, subsurface soil, and stormwater dry well or sanitary leaching pool sediment.*

- *Eliminate, to the extent practicable, ingestion of groundwater affected by the site that does not attain NYSDEC Class GA Ambient Water Quality Criteria.*
- *Mitigate the impacts of contaminated groundwater to the environment by natural attenuation.*
- *Eliminate the potential for direct human contact with the contaminated soil on site.*

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy should be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Liberty Industrial Finishing site were identified, screened and evaluated in the report entitled Feasibility Study Report, dated January 1999.

A summary of the detailed analysis follows. As presented below, the time to implement reflects only the time required to construct the remedy, and does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with responsible parties for implementation of the remedy.

7.1: Description of Remedial Alternatives

The potential remedies are intended to address the contaminated soil, sediments, and groundwater at the site.

Alternative #1: No Further Action

Present Worth:	*$ 264,000*
Capital Cost:	*$ 0*
Annual O&M:	*$ 17,200*
Time to Implement	*0 years*

This alternative recognizes remediation of the site conducted under two previously completed IRMs. Only continued monitoring would be necessary to evaluate the effectiveness of the remediation completed under the IRM. The monitoring would consist of quarterly sampling of six wells, two on-site (MW-5 and MW-6) and four downgradient (MW-10, MW-12, MW-14, MW-16). Three wells are screened just below the water table at approximately 50 feet bgs (MW-5, MW-10, MW-12), two wells are screened at 100 feet bgs (MW-14, MW-16), and one well is screened at 265 feet bgs (MW-6).

This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative #2: Source Removal and Mitigation and Assessment of On-site and Off-site Groundwater Quality

Present Worth:	*$ 501,700*
Capital Cost:	*$ 237,700*

Annual O&M:	*$ 17,200*
Time to Implement	*6 months*

This remedy would consist of four distinct remedial actions: soil excavation, installation of an asphalt cap, removal of sediment from drainage structures, and installation of long-term monitoring wells. First, two (2) feet of soil would be excavated in the vicinity of the UST farm and pipe gallery. This excavation would measure 20 feet long by 150 feet wide.

Since the subsurface soil samples at the west end of the pipe gallery at sample location B-29 (see Figure 4) exhibited concentrations of chromium (1320-1530 ppm) that may exceed characteristic hazardous waste threshold limits, soil at this location would be excavated an additional six (6) feet to a minimum depth of eight (8) feet bgs. This excavation would measure fifteen (15) feet long by fifteen (15) feet wide. A sample would be obtained from the bottom of the excavation and analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) and for total metals to determine if further excavation would be needed. Structural support for the building would be required during excavation.

The soil from both excavations would be disposed of at an off-site permitted treatment, storage, and disposal facility (TSDF).

This remedial action would mitigate the human health concern associated with human contact with contaminated surface soil and would remove the potential hazardous waste from the on-site soils at sample location B-29.

Excavation would not occur at the other two locations exhibiting subsurface soil contamination (B-12, B-15). These sample locations are directly adjacent to the USTs, which were closed in place during the EPA removal action. Excavation at these locations to depths below two (2) feet may damage or compromise the integrity of the USTs. Excavation may also compromise the structural integrity of the adjacent building.

Also, sample location B-12 is directly adjacent to the Long Island Railroad right-of-way. The Long Island Railroad supplies power to its trains using an underground electric line, which is located between the UST farm and the railroad tracks. Excavation of soil below two (2) feet at sample location B-12 would require shutting off the electricity in the power cable and providing structural support for the railroad bed. Therefore, rail service would be disrupted during excavation at this location.

To mitigate the environmental threat associated with the subsurface soils, this alternative would include the installation of a nonporous asphalt cap over the entire 150-foot by 20-foot excavation above the UST farm and pipe gallery extending to location B-29. After backfilling the deeper excavation with clean soil to two (2) feet bgs, both excavations would be covered with 1.5 feet of clean soil followed by a six (6) inch base consisting of clean gravel. Two (2) inches of asphalt would be laid over the gravel. This remedial measure would prevent surface water from infiltrating the contaminated area and leaching metals from the subsurface soil into the groundwater. Since this contamination source would be immobilized, groundwater would naturally attenuate and long-term monitoring would be conducted to verify that contaminants would reach New York State Class GA groundwater standards.

Other potential sources of groundwater contamination are the sediments in four stormwater dry wells and in one leaching pool. The structures would be cleaned using standard removal techniques such as utilization of a vacuum truck or "guzzler" to remove the sediment and any standing water to a depth of approximately five (5) feet below the sediment surface. The dry wells and leaching pool would be cleaned with a power washer during removal of the sediment. Once the sediment has been removed, end point samples would be collected in order to determine if additional remediation would be required. The contaminated sediments would be disposed of at a permitted TSDF.

For this alternative, groundwater remediation would occur by natural attenuation. This alternative would remove all on-site sources of contamination which would prevent further release of contaminants into the groundwater and result in declining contaminant concentrations in the plume as it disperses downgradient of the site. The plume concentrations meet groundwater standards 500 feet downgradient of the site. As stated in Section 4.1, there are no complete exposure pathways within 1.5 miles downgradient of the site and the Brentwood Public Water Supply well field is not threatened by this site. Therefore, natural attenuation would reduce groundwater contamination to below groundwater standards without threatening the public health or the environment.

Finally, two pairs of groundwater monitoring wells would be installed as part of the remedy: one pair downgradient of the site and one pair on the Brentwood Water District property. For each well pair, one well would be installed in the deep upper glacial aquifer (approximately 150 feet bgs) and the other well would be screened in the shallow Magothy aquifer (approximately 250 feet bgs). These four new wells, along with two existing on-site wells (MW-5 and MW-6) and two existing off-site wells (MW-12 and MW-14), would be monitored on a quarterly basis for up to 30 years to insure the quality of the public water supply and confirm that the groundwater contamination would be confined to the shallow upper glacial aquifer. Proposed locations of long-term monitoring wells are included in Figure 10.

Alternative #3: Source Removal and Mitigation and Treatment of Contaminated Groundwater

Present Worth:	*$ 2,946,000*
Capital Cost:	*$ 1,102,000*
Annual O&M:	*$ 148,000*
Time to Implement	*1 year*

This alternative would include the following remedial actions: excavation and off-site removal of contaminated surface soil and subsurface soil at sample location B-29, installing an asphalt cap above the UST farm and pipe gallery, removal and off-site disposal of contaminated sediment in one leaching pool and four stormwater dry wells, and groundwater treatment. The first three elements of this alternative were discussed in the previous alternative. The fourth remedial measure would include treatment of contaminated groundwater using an extraction well and on-site treatment system. The well would be installed downgradient of the site on the Town of Islip Athletic Field property at an approximate depth of 70 feet bgs. The well location is depicted on Figure 8. The well would pump at a rate of approximately 80 gallons per minute and well would have a horizontal zone of capture of 120 feet. Metals and cyanide would be removed from the groundwater by precipitation and filtration. The water would be treated to New York State GA drinking water standards before discharge. The treated groundwater would be discharged into a stormwater system via a recharge basin.

The groundwater treatment system would be selected as a focused remedy for this site. The system would be designed to treat the portion of the shallow groundwater plume exceeding 100 ppb of chromium. However, some contaminated groundwater between 50 ppb and 100 ppb, and possibly as high as 500 ppb, has already passed the point where the well would be installed and it is unlikely that this well would remediate the contaminated groundwater found below a depth of 60 feet.

Comprehensive remediation of the groundwater would require a number of both shallow and deep wells placed at varying distances from the source. The more comprehensive system would cost several times more than this alternative.

Since the source areas would be removed and/or isolated as part of this alternative, the remaining contamination is expected to meet groundwater standards by natural attenuation by the same mechanisms discussed in Alternative #2.

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each of the criteria, a brief description is provided, followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

The three media that require remediation at this site are soil, sediment/sludges, and groundwater. The SCGs for the soil and sediment/sludges are the recommended soil cleanup objectives from the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046: Determination of Soil Cleanup Objectives and Cleanup Levels. The SCGs for groundwater are the Class GA water standards from the Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

Alternative #1 would not meet the SCGs established at this site, since contaminants would remain in all three media at unacceptably high levels.

Alternatives #2 and #3 would meet the SCGs for the surface soil and sediment/sludge by removal of these media. However, some contaminated subsurface soils would remain in place and would not reach SCGs. The contaminants in these soils would be immobilized due to the installation of the nonporous asphalt cap and would not continue to pose a threat to the environment.

For Alternative #2, Groundwater would naturally attenuate to below the SCGs because the sources of the contamination would be removed/mitigated.

Alternative #3 would meet the SCGs for groundwater by actively remediating the threat through the groundwater treatment system. The remaining groundwater contamination would meet SCGs by natural attenuation.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Alternative #1 would not be protective of human health and the environment since receptors that gain access to the site could potentially come into contact with contaminated soil. Also, the continued release of contaminants from the site could threaten the public water supply.

Alternatives #2 and #3 would be protective of human health and the environment through the removal of contaminated dry well/leaching pool sediment/sludge and soil. Groundwater contamination is limited to the shallow upper aquifer. Alternative #2 would rely on natural attenuation to remediate the contaminated groundwater and would include extensive long-term monitoring to insure that natural attenuation of groundwater progresses satisfactorily. Alternative #3 would mitigate the groundwater threat by using extraction and treatment technology and by natural attenuation.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternative #1 would not have any short-term construction related impacts and could be fully implemented immediately.

Alternative #2 could be fully implemented within about six months of issuance of the Record of Decision. This alternative would be immediately effective in mitigating the potential for direct contact with contaminated soil and mitigating continued impacts to groundwater. No short term impacts are expected with proper implementation of construction related health and safety and construction quality assurance plans.

Alternative #3 could be implemented within one year. In addition to the benefits listed for Alternative #2, this alternative would hydraulically control contaminated shallow groundwater from migrating into the deep aquifer and further downgradient from the site. Some disruption to the community would be expected during installation of the groundwater extraction and treatment system, since the system would be on public property.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative #1 would not provide for long-term effectiveness and permanence, since remediation of contaminated sediment/sludge and soil would not occur, contaminants would continue to be released to groundwater, and natural attenuation would not be effective.

Alternative #2 would be considered semi- permanent, with respect to the removal of soil and contaminated sediment/sludge. Placement of the asphalt cover to isolate the contaminated subsurface soil would be considered an effective remedial action in the long-term, but would not be not considered permanent because the asphalt cap would require periodic maintenance. The risk posed by the contaminants that remain in the subsurface are minimal, since these contaminants would be isolated from direct exposure and leaching to groundwater. By mitigating release of contaminants to groundwater, it would be expected that natural attenuation of existing groundwater contamination would eventually be effective and permanent.

In addition to the remedial actions evaluated for Alternative #2, Alternative #3 would include hydraulically controlling and treating groundwater, which would be considered permanent and effective.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative #1 would not be effective in reducing the toxicity, volume or mobility of the contaminants at the site, and as a result, natural attenuation would also not be effective. Contaminants would continue to be released to groundwater and migrate in significant, unacceptable concentrations.

Alternative #2 would reduce the mobility and volume of contaminants on-site by removing the contaminated sediment/sludge and the contaminated surface soil for off-site disposal. Placement of the asphalt cap would also significantly reduce the mobility of the contaminants that remain in the subsurface soil. Natural attenuation of the existing impacted groundwater would reduce the toxicity of contaminants in groundwater through dilution, dispersion, and adsorption onto soil.

In addition to the benefits listed for the source areas in Alternative #2, Alternative #3 would reduce the toxicity, mobility and volume of contaminants in groundwater by hydraulically controlling and treating the existing impacted groundwater and by natural attenuation.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Alternative #1 could be easily implemented, but as discussed above, would not be effective in protecting human health and the environment.

There are no expected delays in implementation of Alternative #2. Since all work would be conducted on-site, with the exception of the early warning monitoring wells, there would be no expected administrative delays in coordination with local agencies.

The technologies associated with Alternative #3 are commercially available and have been proven effective and reliable. The only potential delay in implementation would be obtaining approval to construct the groundwater

remediation system on Town of Islip property and authorization for discharge of treated groundwater to Town of Islip/Suffolk County Department of Public Works facilities.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 6.

The estimated long-term (30 year) operation and maintenance (O&M) present worth cost associated with Alternative #1 would be $264,000. The estimated capital cost and present worth O&M cost for Alternative #2 would be $501,700, based on 30 years of continued monitoring. The estimated capital cost and present worth O&M cost of Alternative #3 would be $2,946,000 based on 20 years of operation for the treatment system and continued monitoring. A discount rate of five (5) percent is used to calculate present worth cost.

8. Community Assessment - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and how the Department will address the concerns raised.

In general the public comments received were supportive of the selective remedy. Comments were received, however, pertaining to the on-site underground storage tanks. Two citizens requested that the underground tanks be removed as part of the remedy. The underground tanks were properly closed in place as part of the EPA removal action. The remaining liquid was pumped from the tanks and the tanks were cleaned and sandblasted. The tanks were then filled with clean soil and capped with concrete. Since the underground tank and pipe gallery area will be capped with asphalt and the underground tanks have been closed in place with a concrete cap, the remaining contaminants in the subsurface soil will be immobilized. However, if tank removal were performed, the adjacent Long Island Railroad line would be shut down because of the presence of a high-voltage underground power line and the integrity of the on-site building may be compromised. Since tank removal would present these significant disadvantages and would only provide a marginal benefit, the tanks will not be removed as part of the remedy.

Also, a citizen requested that more deep monitoring wells be installed at the west end of the site. After reviewing the RI data, the NYSDEC has determined that the nature of on-site groundwater contamination has been sufficiently characterized and that additional on-site investigation is therefore not necessary.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC is selecting Alternative #2 as the remedy for this site. Alternative #2 includes source removal and mitigation and assessment of on-site and off-site groundwater quality.

This selection is based upon the evaluation of the three alternatives for this site. Alternative #1, the no further action alternative, was eliminated because it did not meet either of the two threshold criteria, compliance with SCGs and protection of human health and the environment.

Of the remaining two alternatives, both alternatives met the requirements of the first six evaluation criteria, except for compliance with SCGs for subsurface soils. The only known remedial action that would enable the subsurface soils to satisfy SCGs would be excavation of subsurface soil, which was determined to be infeasible at two locations. These locations (B-12, B-15) are directly adjacent to the UST farm. The USTs were closed in place as part of an EPA removal action. Therefore, excavating the contaminated soil would risk damaging the USTs and compromising their closure. Also, the excavation would occur adjacent to the industrial building, which may compromise the structural integrity of the building.

One of the sample points (B-12) is directly adjacent to the railroad bed. If this location were excavated, the integrity of the railroad bed may be compromised and the underground power line that is located north of the bed and supplies power to the railroad would need to be shut off. Therefore, excavation at this point would disrupt railroad service.

Capping the UST area and pipe gallery would prevent contaminants in the subsurface soil from leaching into the groundwater and would not present the problems associated with excavating at sample locations B-12 and B-15. For Alternative #2, the groundwater would eventually attenuate to below SCGs. For Alternative #3, the groundwater would be treated to below SCGs by the groundwater treatment system. The subsurface soil would no longer pose a threat to the environment.

Both Alternative #2 and Alternative #3 would mitigate the threat to human health and the environment. As stated in Section 7.1, under Alternative #2 the contaminated groundwater would meet SCGs by natural attenuation prior to completion of exposure pathways. Alternative #3 would actively pump contaminated groundwater in the most contaminated area of the plume but would rely on natural attenuation in less contaminated regions of the plume to meet SCGs for groundwater. Alternative #2 is an acceptable remedy for this site because:

- Sources of groundwater contamination will be removed or mitigated as part of this alternative. Since all remaining soil contamination will be above the water table, continued leaching of contaminants into the groundwater would be eliminated.

- The size of the groundwater contamination plume is limited. Although disposal activities began in 1978, the extent of the plume is only 500 feet downgradient from the site. Chromium concentrations exceeding 1 ppm extend to only 200 feet downgradient of the site.

- The groundwater contamination plume is shallow, with the highest chromium concentrations (3,600 ppb) at 50 feet bgs. The deeper monitoring wells (100 foot bgs) exhibited chromium concentrations (53.7 ppb) that were only of slightly above SCGs (50 ppb). Since disposal of plating waste began at this site over 20 years ago, the analytical data suggests that the plume is not sinking into the deeper aquifer.

- Groundwater travels southeast from the site; therefore, the Brentwood Water District well field which is directly south of the site is not downgradient of the site and is over 100 feet west of the contaminant plume. Annual testing of the well field indicates no impacts from this site. Further, the Brentwood Water District wells draw their water from a minimum depth of 450 feet bgs, well below the plume.

- The well survey conducted for the RI indicated that there are no groundwater receptors within 1.5 miles downgradient of the site.

Alternative #2 was preferred for short-term effectiveness, implementability, and cost. The advantages of Alternative #3 include long-term effectiveness and permanence, and reduction of toxicity, mobility and volume. Since Alternative #2 satisfies all seven evaluation criteria and the additional remedial benefit of Alternative #3 does not justify the large cost increase, Alternative #2 was chosen for this site.

The estimated present worth cost to implement the remedy is $501,700. The cost to construct the remedy is estimated to be $237,700 and the estimated average annual operation and maintenance cost for 30 years is $17,200.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved; and

2. Construction of the remedial design, which will include the following remedial actions;

- Removal of contaminated soil from the upper two (2) feet in the area of the underground plating waste storage tanks and pipe gallery;

- Removal of soil to a minimum of eight (8) feet bgs at the west end of the UST pipe gallery;

- Installation of an asphalt cap over the UST and pipe gallery area;

- Excavation and off-site disposal of contaminated sediments/sludge from four stormwater dry wells and one sanitary leaching pool; and

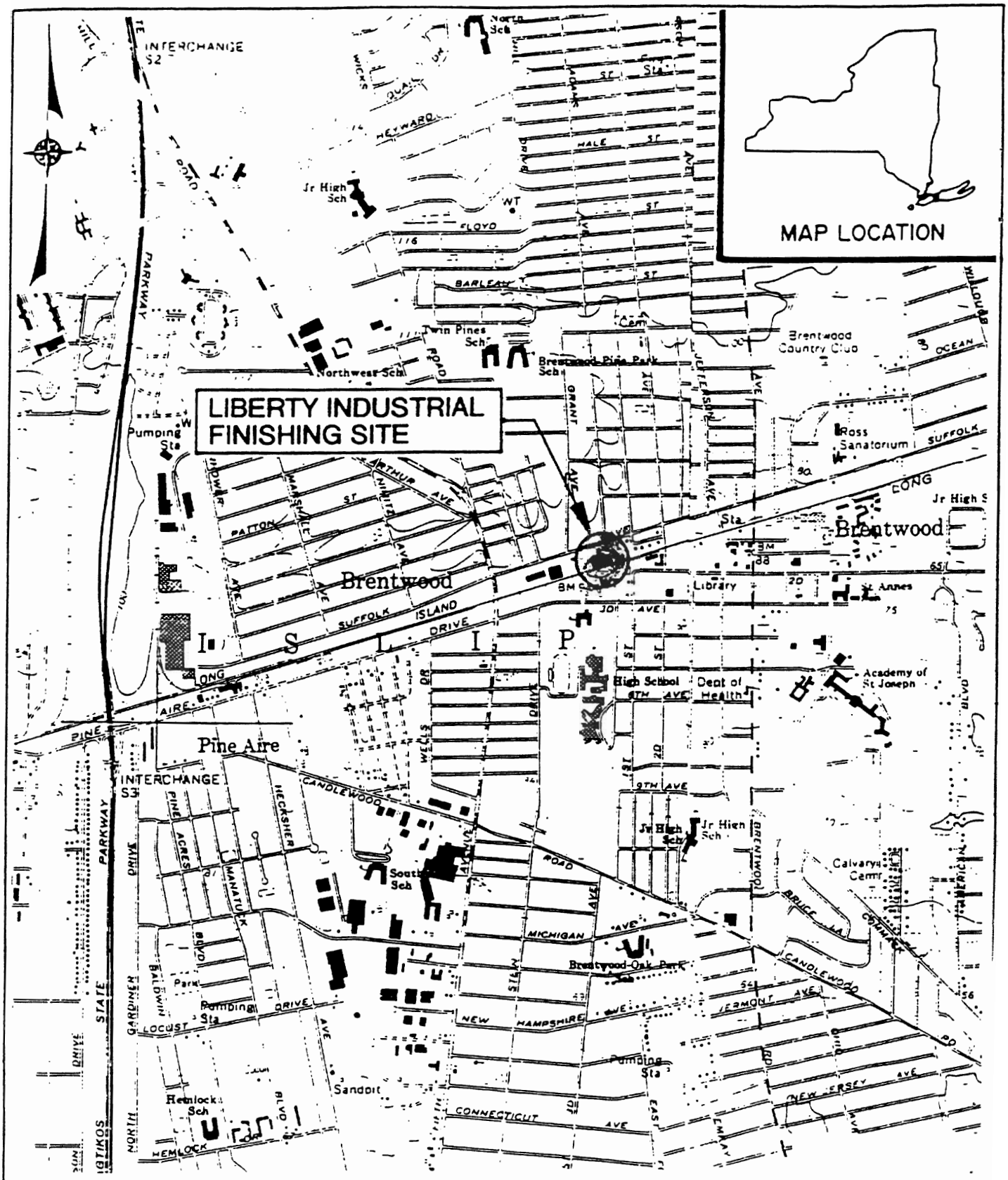
- Institutional controls will be implemented and deed restrictions will be recorded in the chain of title of the property to restrict future use of groundwater at the site.

  Since the remedy results in untreated contaminated groundwater remaining at the site, a long term monitoring program will be instituted. Four groundwater monitoring wells will be installed with two wells located downgradient of the site and two wells located on the Brentwood Water District property. These wells, together with four existing on-site monitoring wells, will be tested on a quarterly basis for a 30-year period. Monitoring requirements will be reevaluated on an annual basis, based on analytical results. This program will allow the effectiveness of the source removal and mitigation to be monitored and will be a component of the operation and maintenance for the site.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation (CP) activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- A repository for documents pertaining to the site was established.
- A site mailing list was established which included nearby property owners, local political officials local media and other interested parties.
- Fact Sheets were mailed to the contact list in August 1997 and February 1999 to update interested parties on the site status.
- Public informational meetings were held in September 1997 and March 1999 to discuss the project and answer questions posed by the public.
- In February 1999 a public information sheet was mailed to the public contact list and a public meeting was held on March 11, 1999 to present the Liberty Industrial Finishing Site Proposed Remedial Action Plan (PRAP). A 30 day public comment period was established for the receipt of written comments which ended on March 26, 1999.
- In March 1999 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

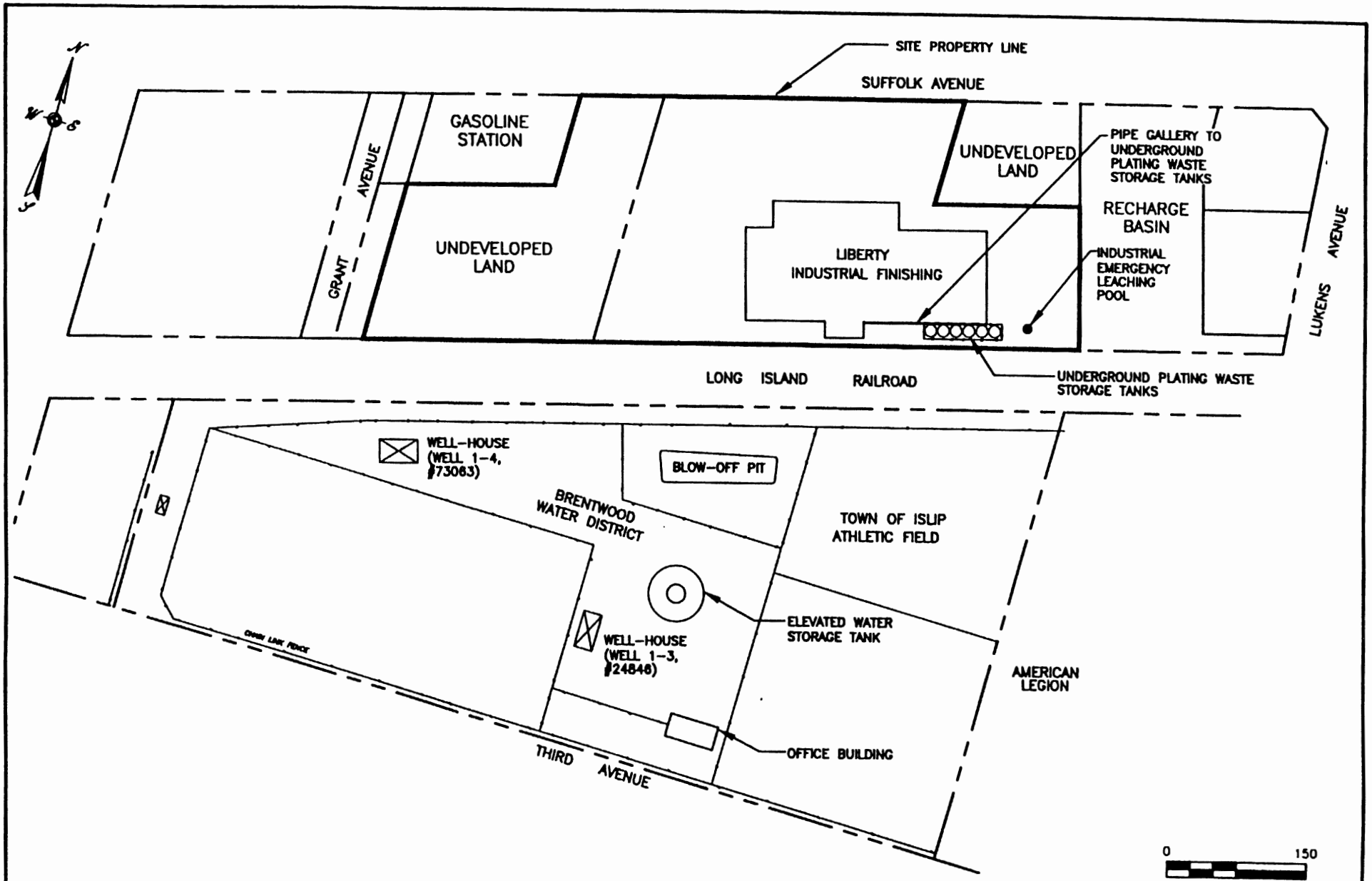


LIBERTY INDUSTRIAL FINISHING SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
BRENTWOOD, NEW YORK

SITE LOCATION MAP

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

FIGURE 1



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

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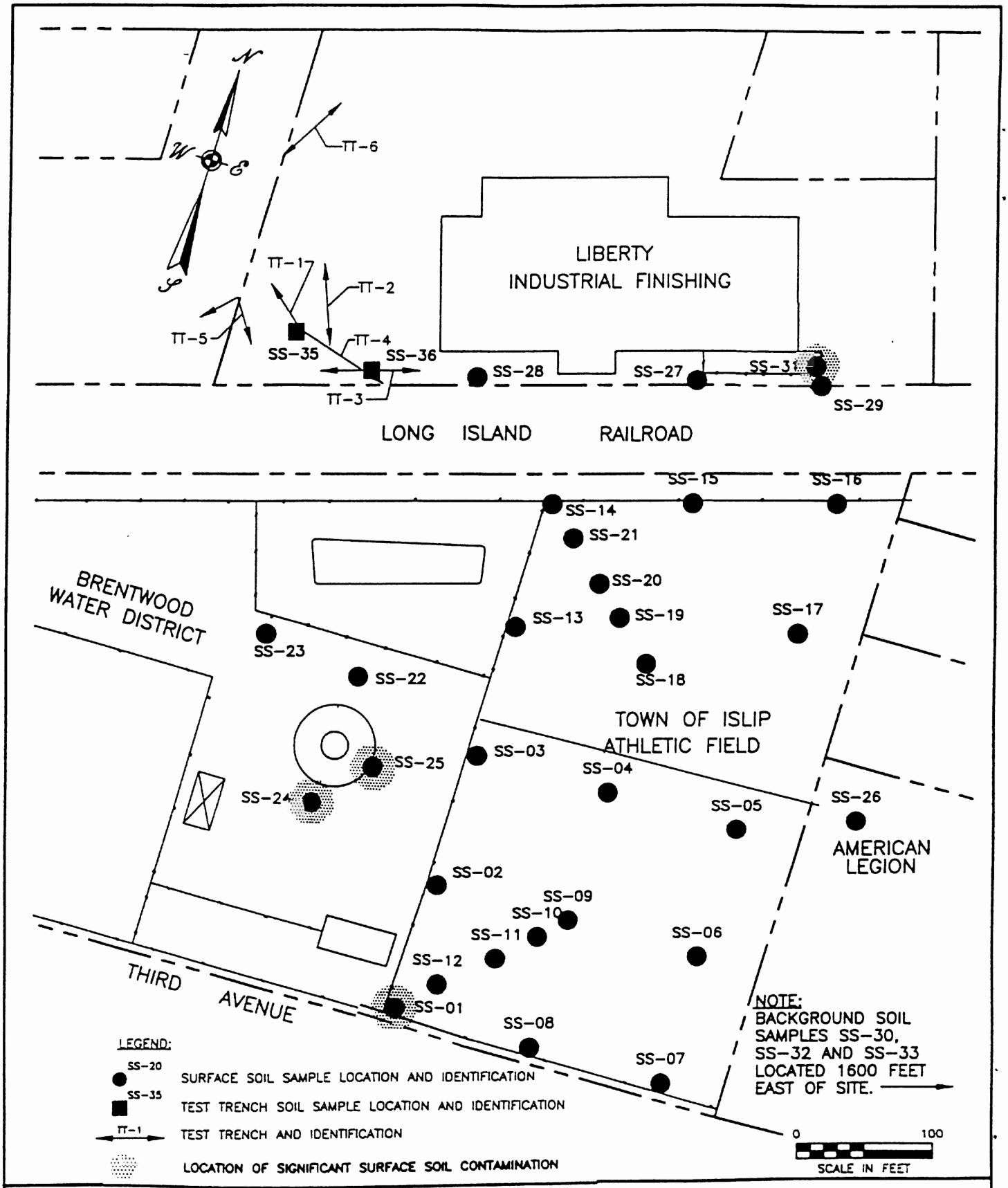
STUDY AREA MAP

FIGURE 2



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

SURFACE SOIL SAMPLE AND TEST TRENCH LOCATIONS

FIGURE 3

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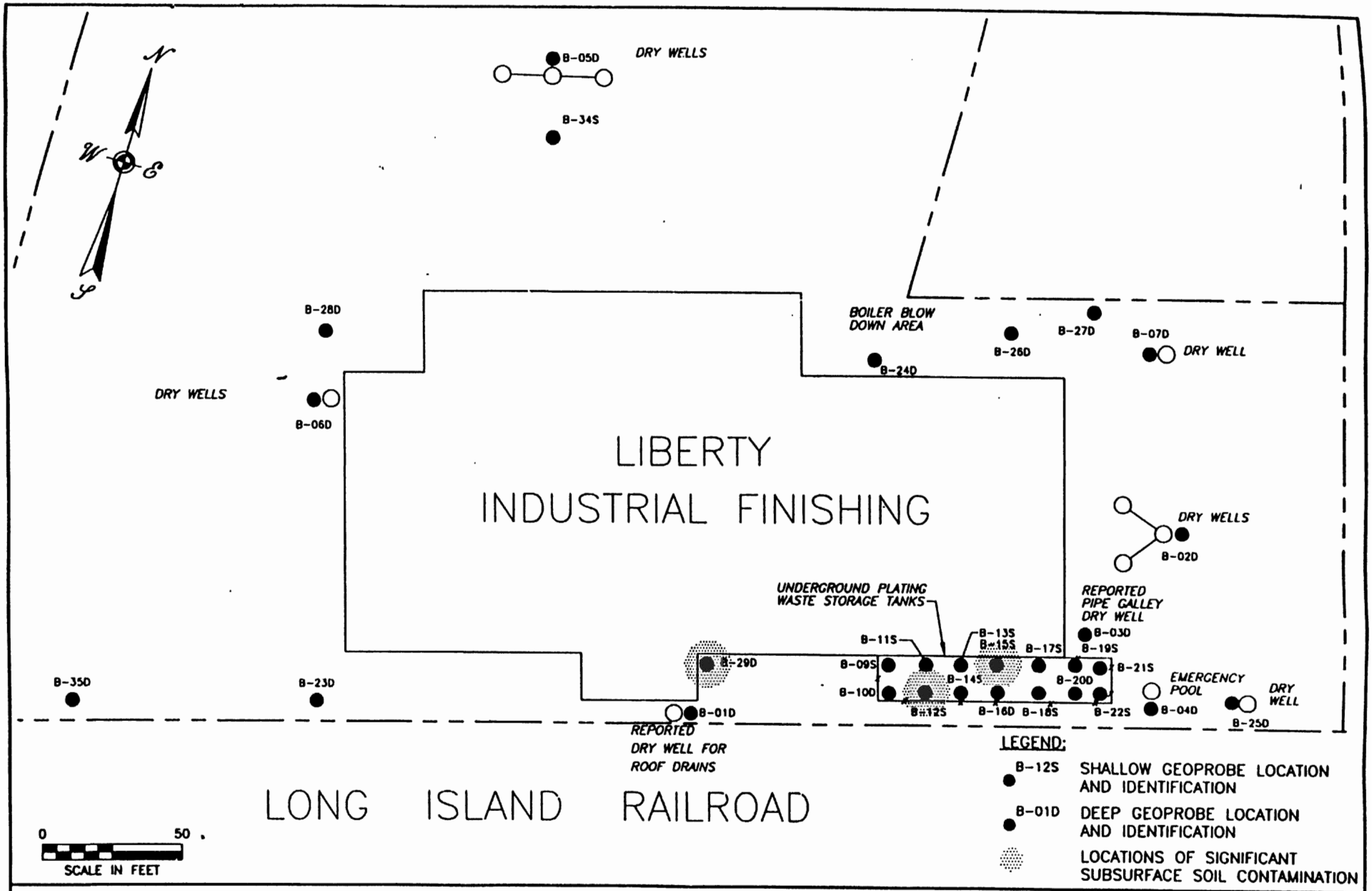
A Division of William F. Cosulich Associates, P.C.



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

LOCATIONS OF SIGNIFICANT SUBSURFACE SOIL CONTAMINATION

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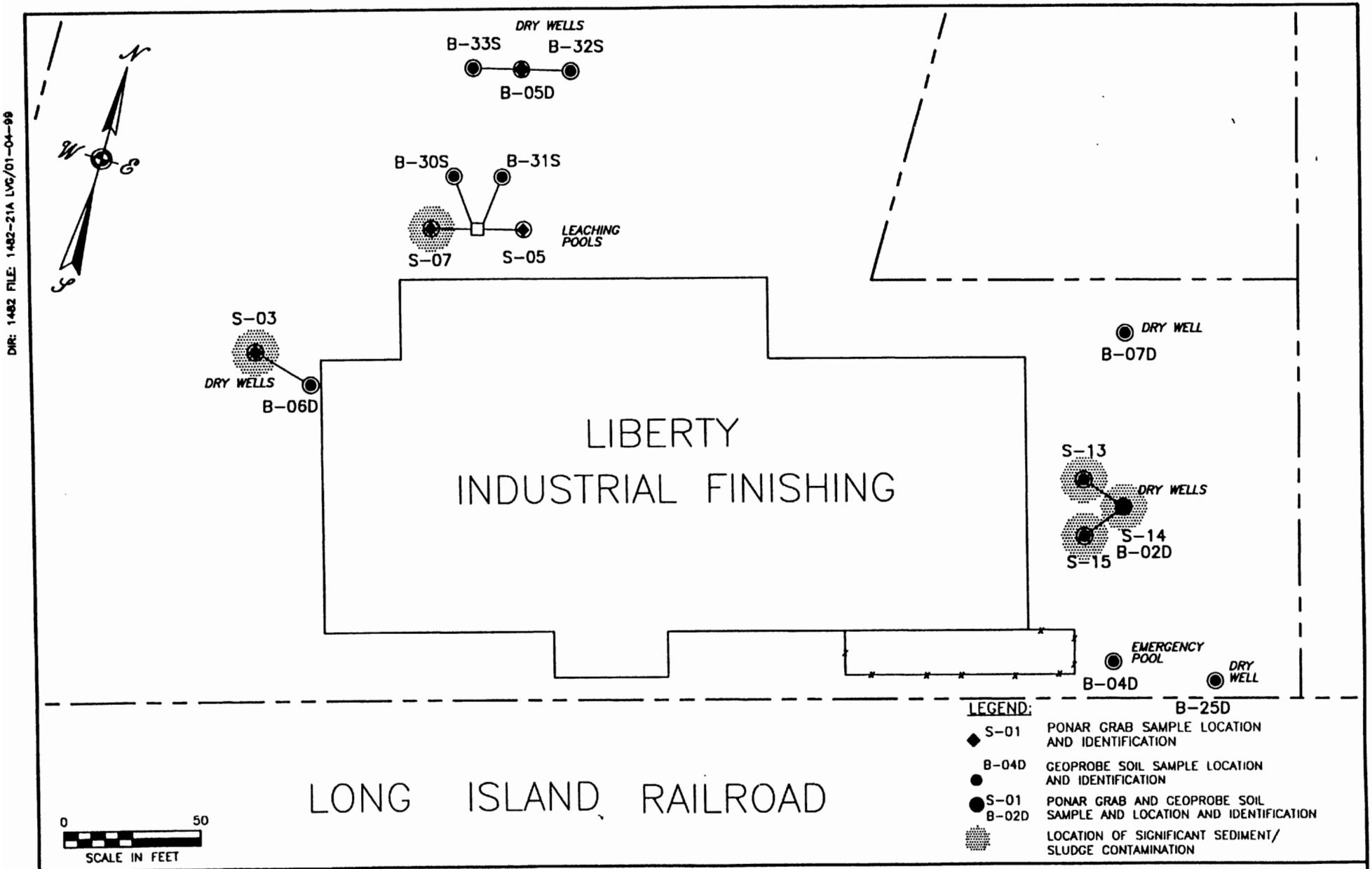
FIGURE 4



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

LOCATIONS OF SIGNIFICANT DRYWELL/ LEACHING POOL SEDIMENT/SLUDGE CONTAMINATION

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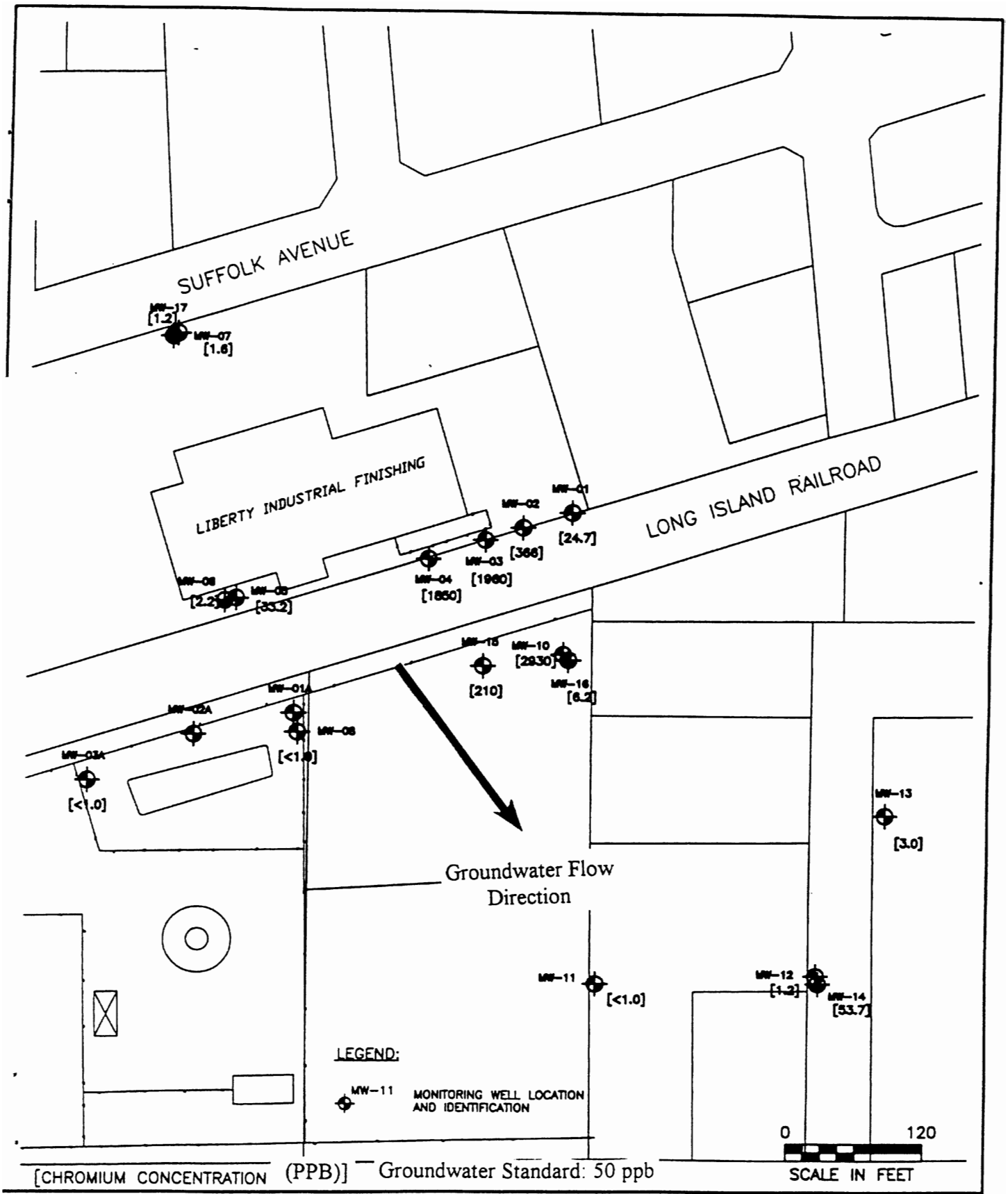
FIGURE 5



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

MONITORING WELL GROUNDWATER SAMPLE RESULTS FOR CHROMIUM

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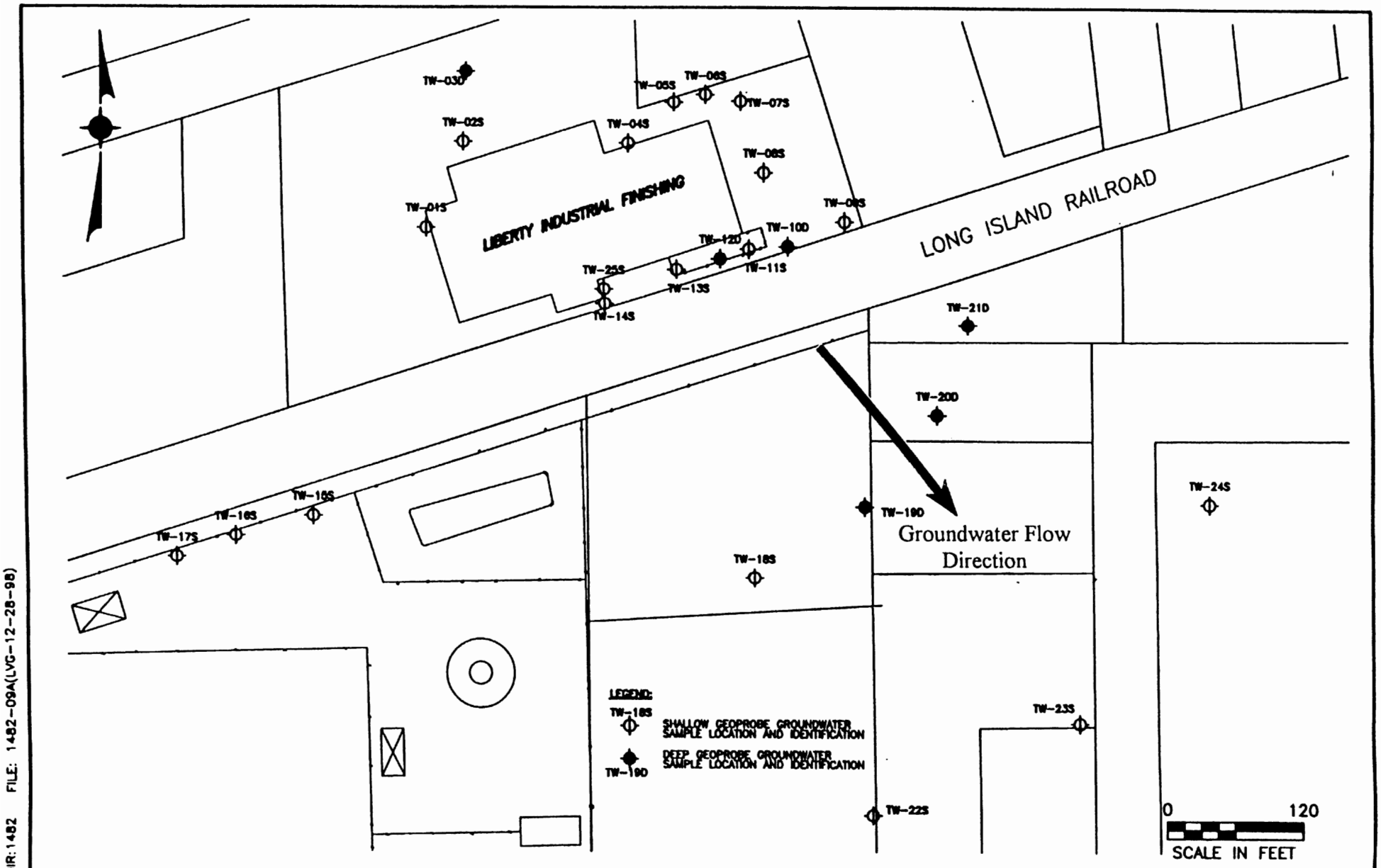
FIGURE 6



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

GEOPROBE GROUNDWATER SAMPLE LOCATIONS

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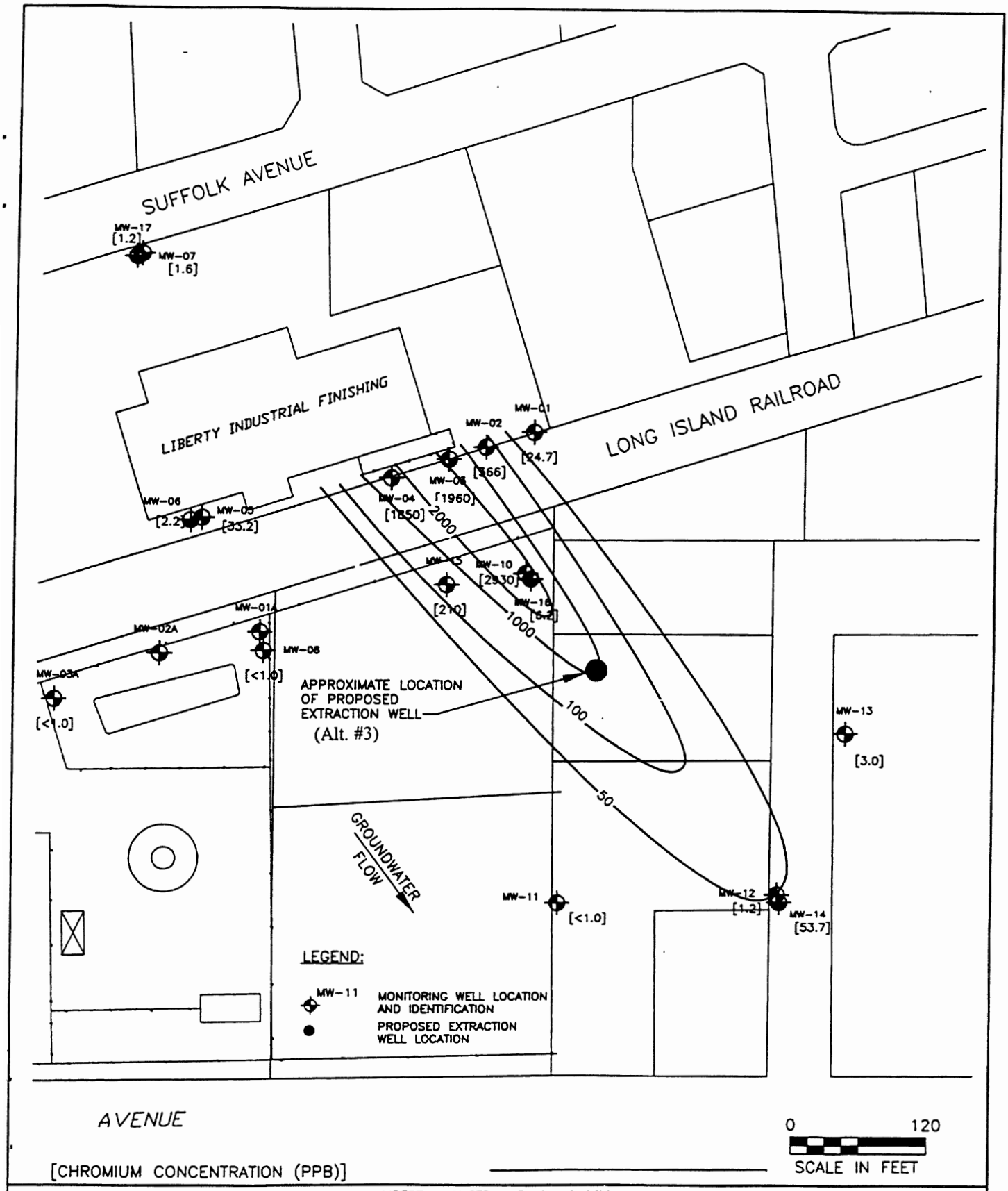
FIGURE 7



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

GROUNDWATER CONTAMINATION CONTOURS SAMPLE RESULTS FOR CHROMIUM

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FIGURE 8

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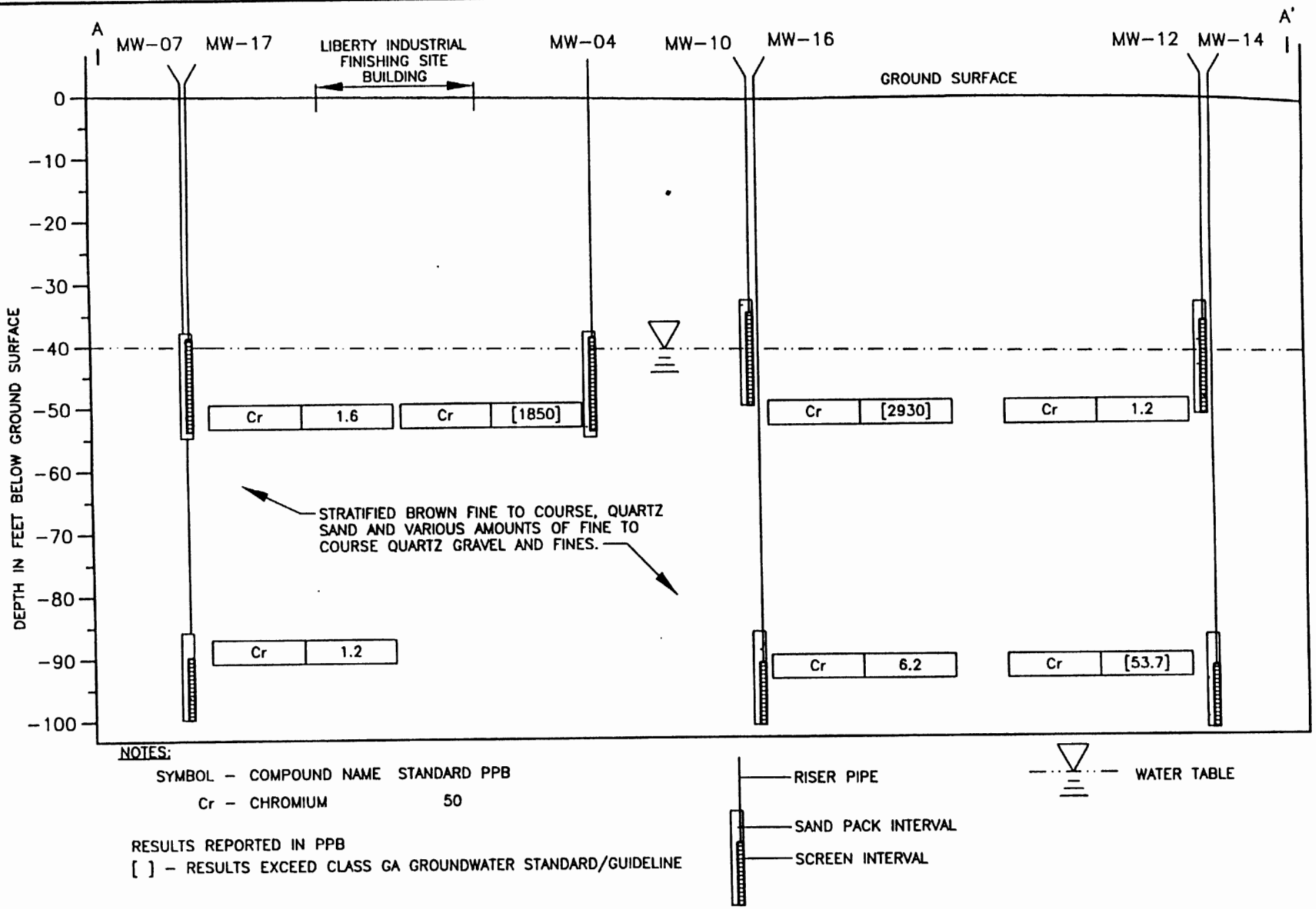

LIBERTY INDUSTRIAL FINISHING SITE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
BRENTWOOD, NEW YORK

CHROMIUM CONTAMINATION CROSS-SECTION

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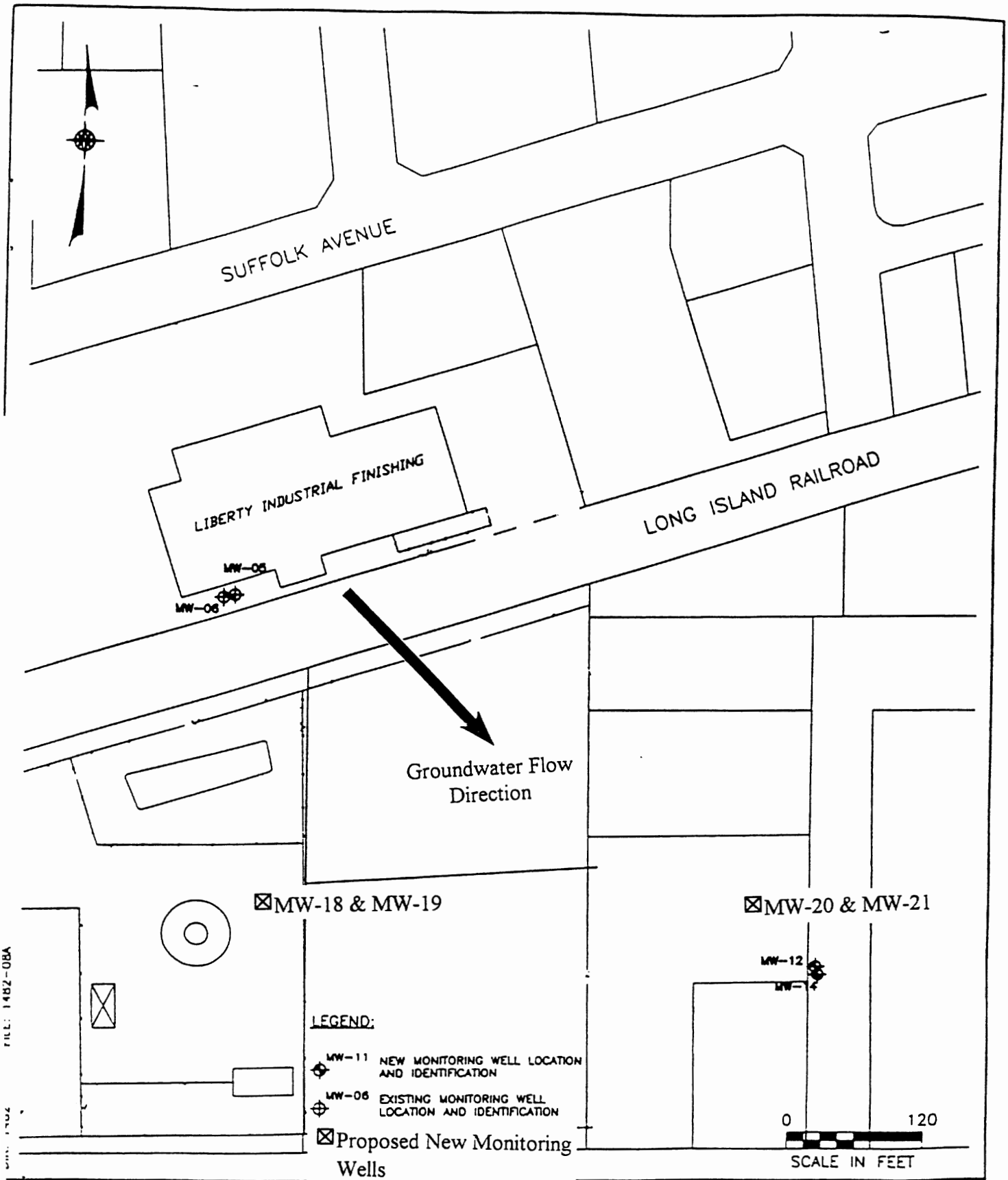
FIGURE 9



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

LONG-TERM MONITORING WELL LOCATIONS

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FIGURE 10

TABLE 1
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SURFACE SOIL SAMPLE RESULTS
SAMPLED FROM APRIL TO JUNE 1997

SAMPLE LOCATION	On-site		Off-site				Background**		Soil Cleanup Objectives
			Athletic Field*		Water District*				
SAMPLE DEPTH, INCHES	0-2	2-6	0-2	2-6	0-2	2-6	0-2	2-6	
METALS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Arsenic	BSC	BSC	BSC-381	BSC-967	BSC-7.6	BSC	3.83	3.27	7.5
Barium	BSC	BSC	BSC	BSC	BSC-943	BSC	24.1	20.2	300
Beryllium	BSC-0.50	12.8-35.4	BSC-1.5	BSC-0.84	0.72-17.8	BSC-5.8	0.26	0.23	0.24***
Cadmium	BSC-277	10.6-35.4	BSC	BSC	BSC	BSC	0.24	ND	10
Chromium	BSC-412	BSC-80.5	BSC-74.6	BSC	BSC-1,010	BSC-264	10.8	8.4	50
Cobalt	BSC	BSC	BSC-35.9	BSC	BSC-393	BSC-106	2.77	2.33	30
Copper	BSC-145	BSC-48.3	BSC-208	BSC-37	BSC-3,130	128-1,020	7.8	5.7	25
Iron	BSC-43,000	BSC	BSC-22,400	BSC-44,700	10,500-153,000	BSC-54,300	11,347	8,627	10,000***
Lead	BSC	BSC	BSC	BSC	BSC-2,220	BSC-1,360	60.7	52.7	400
Mercury	BSC-1.5	BSC	BSC-0.43	BSC-0.36	BSC	BSC-0.44	ND	ND	0.1
Nickel	BSC-146	13.9-63.0	BSC-77.1	BSC-18.8	50.3-1,050	BSC-437	6.33	5.03	13
Selenium	BSC	BSC	BSC-4.5	BSCD-2.5	BSC-50.1	BSC-11.5	1.06	1.00	2
Vanadium	BSC	BSC	BSC	BSC	BSC	BSC	17.1	13.7	150
Zinc	52.9-607	89.8-180	BSC-728	BSC-182	408-3,540	66.8-2,730	58.6	34.8	47***

BSC - below soil cleanup objectives

ND - indicates that the analyte was not detected

* Samples collected before IRM

** Background samples collected at Brentwood Public Library, located 1600 feet east of site

*** Soil Cleanup Objectives calculated by averaging of six background soil samples

TABLE 2
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SUMMARY OF EXCEEDANCES OF NYSDEC RECOMMENDED SOIL CLEANUP OBJECTIVES
SUBSURFACE SOIL SAMPLES
TAL METALS

SAMPLE LOCATION	On-Site (UST Area)										NYSDEC SOIL CLEANUP OBJECTIVES
SAMPLE ID	B-12S	B-14S	B-15S	B-16D	B-17S	B-18S	B-19S	B-20D	B-29D	B-29D	
SAMPLE DEPTH, FT	12-16	12-16	2-6	12-16	8-12	12-16	8-12	8-12	0-4	4-8	
DATE SAMPLED	3/11/98	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98	3/6/98	3/6/98	3/10/98	3/10/98	
METALS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Cadmium	**126**	**19**	**118**	7	**19.7**	6.7	**22.7**	0.96	1.4	0.4	10
Chromium	12.9	6.4	**972**	27.5	30.9	3.1	3	5.4	**1320**	**1530**	50
Copper	3.9	6.8	**87.8**	8.3	3.8	18.6	2.8	1.3	**39.8**	**31.6**	25
Nickel	8.6	7.6	**139**	**14.8**	9.3	**18.7**	**17.4**	**13.2**	**22**	9.9	13
Cyanide*	8.08	5.58	14.6	ND	17.9	2.13	5.38	ND	ND	ND	

NOTES
Results in bold exceed NYSDEC Recommended Soil Cleanup Objectives
*Detections of Cyanide - no NYSDEC Recommended Soil Cleanup Objective
ND: Not Detected

TABLE 3
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SUMMARY OF EXCEEDANCES OF NYSDEC RECOMMENDED SOIL CLEANUP OBJECTIVES
DRYWELL/LEACHING POOL SEDIMENT/SLUDGE SAMPLES

SAMPLE LOCATION	Sanitary Leaching Pools	Storm Water Dry Wells				NYSDEC Soil Cleanup Objectives (mg/kg)
SAMPLE ID	S-07	S-03	S-13	S-14	S-15	
SAMPLE DEPTH	0-2"	0-2"	0-2"	0-2"	0-2"	
DATE OF COLLECTION	12/19/97	12/19/97	12/19/97	12/19/97	12/19/97	
SEMIVOLATILE ORGANICS (ppb)						
Phenol	ND	77	ND	**120**	**1300**	30
Dimethyl Phthalate	ND	140	**2300**	**3500**	**2300**	2000
Benzo(a)anthracene	130	**790**	**860**	**920**	**1900**	224
Chrysene	240	**2000**	**1300**	**1600**	**2600**	400
Benzo(b)fluoranthene	75	**1200**	920	**1300**	**2000**	1100
Benzo(k)fluoranthene	72	**1300**	1100	**1200**	**1600**	1100
Benzo(a)pyrene	**120**	**760**	**1000**	**1100**	**2000**	61
Dibenzo(a,h)anthracene	ND	ND	ND	**170**	ND	14
Total CaPAHs***	637	6050	5180	6290	**10100**	10000
METALS (mg/kg)						
Beryllium	ND	**0.42**	**0.54**	ND	**0.4**	0.24**
Cadmium	**89.8**	**303**	**52.8**	**186**	**34.9**	10
Chromium	**148**	**579**	**330**	**314**	**191**	50
Copper	**519**	**131**	**172**	**208**	**62.5**	25
Iron	6380	**10700**	7980	9630	**12800**	10000**
Mercury	**0.96**	ND	ND	ND	ND	0.1
Nickel	11.5	**102**	**51.7**	**67**	**31.9**	13
Selenium	**3.8**	2	1.1	2	1.2	2
Zinc	127	**528**	**554**	**866**	**248**	47**
Cyanide	2.6*	ND	6.69*	ND	4.34*	

NOTES
Results in bold exceed NYSDEC Recommended Soil Cleanup Objectives
*:Detections of Cyanide - no NYSDEC Recommended Soil Cleanup Objective
**: Soil cleanup objectives calculated using results from background samples SS-30, SS-32, SS-33
***: CaPAH refers to Carcinogenic polyaromatic hydrocarbons
ND: Not Detected

TABLE 4
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
SUMMARY OF EXCEEDANCES OF NEW YORK STATE GROUNDWATER STANDARDS
GROUNDWATER MONITORING WELL SAMPLES

SAMPLE TYPE	Shallow Wells (50 feet bgs)			Deep Wells (100 feet bgs)*			NYSDEC Groundwater Standards (ppb)
SAMPLE LOCATION	Upgradient	On-site	Downgradient	Upgradient	On-site	Downgradient	
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	
SAMPLE DATE	12/97 & 6/98	12/97 & 6/98	12/97 & 6/98	6/98	12/97 & 6/98	12/97 & 6/98	
Antimony	BGA	BGA-22.5	BGA-20.7	4.9	BGA	BGA	3
Cadmium	BGA	BGA-16.3	BGA-369	BGA	BGA	BGA-15.2	10
Chromium	BGA	BGA-3,600	BGA-3,070	BGA	BGA	BGA-53.7	50
Sodium	27,700-43,200	BGA-90,200	BGA-41,100	BGA	BGA	BGA-27,200	20000
Cyanide	BGA	BGA-417	BGA	BGA	BGA	BGA	100

NOTES
BGA: Result does not exceed NYSDEC Groundwater Standards
*: The on-site deep well was screened at 265 feet bgs

TABLE 5
LIBERTY INDUSTRIAL FINISHING SITE (1-52-108)
GEOPROBE GROUNDWATER SAMPLING RESULTS

SAMPLE TYPE	Shallow Samples (50 feet bgs)			Deep Samples (100 feet bgs)			NYSDEC Class GA
SAMPLE LOCATION	Upgradient	On-site	Downgradient	Upgradient	On-site	Downgradient	Groundwater
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	Standards
SAMPLE DATE	2/98-3/98	2/98-3/98	2/98-3/98	2/98-3/98	2/98-3/98	2/98-3/98	(ppb)
Antimony	6.2	3.9-35.7	3.1-9.2	6.1	4.1-8.9	6.3-8.6	3
Arsenic	26.3	BGA-34.7	BGA-27.2	60.9	BGA-26.2	34.9-70.6	25
Beryllium	BGA	BGA-5.2	BGA-3.7	6.8	BGA-3.2	5.8-7.7	3
Cadmium	BGA	BGA-22.8	BGA-18.9	BGA	BGA	BGA-14.2	10
Chromium	1510	174-9,070	359-1,930	2,680	941-1,170	1,880-4,290	50
Copper	BGA	BGA-342	BGA	503	BGA-248	223-508	200
Iron	178,000	14,800-467,000	54,600-312,000	424,000	112,000-198,000	275,000-676,000	300
Lead	63.3	BGA-571	BGA-91.6	194	27.2-76.6	89.7-231	25
Manganese	5,860	BGA-5,860	1,780-7,600	10600	2,660-3,180	4,770-13,400	300
Selenium	14.9	BGA-16.4	BGA-14.8	28.4	BGA-19.1	13.2-27.6	10
Sodium	BGA	BGA-88,500	BGA-34,400	20900	BGA-22,200	22,000-27,000	20,000
Thalium	BGA	BGA-15.4	BGA-14.7	14.5	BGA-8.2	14.6-33	4
Zinc	679	BGA-1940	BGA-1,170	993	BGA-467	BGA-1,660	300

Notes
BGA: Below New York State Groundwater Limit
All samples were unfiltered

Table 6
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual O&M	Total Present Worth
Alt. #1: No Further Action	$0	$17,200	$264,000
Alt. #2: Source Removal and Mitigation and Assessment of On-Site and Off-Site Groundwater Quality	$237,700	$17,200	$501,700
Alt. #3: Source Removal and Mitigation and Treatment of Contaminated Groundwater	$1,102,000	$148,000	$2,946,000

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Liberty Industrial Finishing Site
Proposed Remedial Action Plan
Town of Islip, Suffolk County
Site No. 1-52-108

The Proposed Remedial Action Plan (PRAP) for the Liberty Industrial Finishing site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repositories on February 24, 1999. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil, sediment, and groundwater at the Liberty Industrial Finishing site. The preferred remedy is source removal and assessment of on-site and off-site groundwater quality.

The release of the PRAP was announced via a notice to the mailing list and notice to the print and electronic media, informing the public of the PRAP's availability.

A public meeting was held on March 11, 1999 which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. Written comments were received from Assemblyman Paul Harenberg, Mr. Sy Robbins of the Suffolk County Department of Health Services (SCDHS), and Ms. Elsa Ford of the Brentwood/Bayshore Breast Cancer Coalition.

The public comment period for the PRAP ended on March 26, 1999.

This Responsiveness Summary responds to all questions and comments raised at the March 11, 1999 public meeting and to the written comments received.

The following are the comments received at the public meeting, with the NYSDEC's responses:

COMMENT 1: Why aren't the Brentwood water supply wells tested quarterly instead of annually?

RESPONSE 1: According to the Suffolk County Department of Health Services, the wells are tested twice each year: once by the SCDHS and once by the Brentwood Water District. In addition to the annual samples, both the Brentwood Water District and the SCDHS test several distribution samples throughout the year. The SCDHS indicated that the current testing frequency is sufficient because of the well depths (minimum 450 feet bgs). They indicated that any contamination entering the public water supply would be detected before a public health risk occurs.

COMMENT 2: The Fact Sheet indicated that the surface soils at the Town of Islip Athletic Field were contaminated with metals? Is there a public health risk for children utilizing the athletic field?

RESPONSE 2: The only contaminated soils found at the athletic field were located in a small area at the southwest corner of the property. These soils were excavated by the Town of Islip and disposed of off-site. The area was then filled with clean soil. Since no known contaminated soil remains at the athletic field, the field is not a public health risk.

COMMENT 3: The RI predicted dire consequences for the groundwater and public water supply. However, the FS appeared to discount the groundwater contamination. Why is the groundwater contamination being discounted?

RESPONSE 3: The RI data indicate that the groundwater contamination plume continues to be fed by the on-site source areas. Since all of the on-site source areas will be removed and/or mitigated as part of the selected remedy, the groundwater contamination will naturally attenuate to meet NYSDOH drinking water standards. The Brentwood Public Water Supply Wells are located at 450 feet bgs while the groundwater contamination is limited to the upper aquifer (50 feet bgs). The groundwater flows southeast while the public supply wells are located southwest of the site.

COMMENT 4: Six hundred children use the Town of Islip Athletic Field. Will these children be protected from airborne contaminants during construction of the remedy? Can the construction be delayed until after August 1, 1999, which is the end of the youth baseball season?

RESPONSE 4: Before construction of the remedy begins, a Community Health and Safety Plan will be implemented to protect nearby residents from potential impacts from the construction activities. The construction schedule can be arranged to coordinate with the athletic field schedule. A public meeting will be planned before construction activities begin to address issues related to construction of the remedy.

COMMENT 5: Can the soils at the Town of Islip Athletic Field be tested following construction of the remedy?

RESPONSE 5: Yes, the athletic field surface soils will be tested before commencement and after completion of construction activities to determine if they were impacted by construction activities.

COMMENT 6: Could the contaminated groundwater seep into basements?

RESPONSE 6: The water table is located at approximately 50 feet bgs, well below the depth of a residential basement. The contaminants are metals which tend to bind to the soil, rather than emit vapors. Therefore, groundwater contamination related to the Liberty Industrial site will not affect residential basements.

COMMENT 7: Could contamination be present in the groundwater south of the furthest monitoring wells? Groundwater downgradient of the site should be tested until chromium concentrations of zero are detected.

RESPONSE 7: Since the furthest downgradient wells detected metals concentrations that meet or marginally exceed NYSDOH drinking water standards, it is unlikely that groundwater contamination would be found further downgradient. However, additional monitoring wells will be placed further downgradient of the site to insure that groundwater contamination has not migrated further downgradient of the site and monitor the effectiveness of the implemented remedy.

COMMENT 8: Deeper profile testing should be taken to determine if discharges from the 1970's have washed down to deeper groundwater levels upgradient of the Brentwood Water District well field. More outpost monitoring wells are needed.

RESPONSE 8: The on-site nature and extent of on-site groundwater contamination has been sufficiently characterized by an extensive groundwater sampling program including the analysis of Geoprobe groundwater samples and groundwater monitoring well samples at various depths. The results of this investigation indicate that the groundwater contamination plume is limited to the area southeast of the Liberty Industrial site, which is east of the Brentwood Water District supply wells. However, the NYSDEC will be installing outpost monitoring wells upgradient of the supply wells at 150 feet bgs and 250 feet bgs to detect any contamination that may affect the supply wells before contaminants reach them. Remedial actions would be considered in the unlikely event that the outpost monitoring wells detect contamination.

COMMENT 9: Were any soil samples taken directly below the underground tanks?

RESPONSE 9: No soil samples were obtained below the underground tanks because the sampling activities would have interfered with the in-place closure of the tanks. However, several subsurface soil samples were obtained directly adjacent to the tanks and should have similar contaminants and concentrations as the soils directly below the tanks.

COMMENT 10: Two citizens requested that the underground tanks be removed and that the soil beneath the tanks be excavated. They indicated that the soil below the tanks may be the most contaminated soil at the site. Was the decision to leave the tanks in the ground based on financial rather than health and environmental reasons?

RESPONSE 10: The underground tanks were properly closed in place as part of the EPA removal action. The remaining liquid was pumped from the tanks and the tanks were cleaned and sandblasted. The tanks were then filled with clean soil and capped with concrete. Since the underground tank and pipe gallery area will be capped with asphalt and the underground tanks have been closed in place with a concrete cap, the remaining contaminants in the subsurface soil will be immobilized. However, if tank removal were performed, the adjacent Long Island Railroad line would be shut down because of the presence of a high-voltage underground power line and the integrity of the on-site building may be compromised. Since tank removal would

present these significant disadvantages and would only provide a marginal benefit, the tanks will not be removed as part of the remedy.

COMMENT 11: What are the human health effects of chromium?

RESPONSE 11: Inhalation of high levels of chromium can cause irritation to the nose. Long-term exposure to airborne chromium has been associated with lung cancer in workers exposed to levels that were 100 to 1,000 times higher than those found in the environment. Certain people have an allergy to chromium which causes skin rashes upon dermal contact. Ingestion of large amounts of chromium can cause damage to the kidneys, liver, and stomach. However, the chromium contamination levels associated with this site are not expected to result in any adverse health effects.

COMMENT 12: There have recently been several cases of childhood Leukemia in the Brentwood area. Has a Leukemia study been done in the Brentwood area? Can a GIS mapping study or site-specific analysis be done for this site?

RESPONSE 12: No cancer case verification study has been performed in the Brentwood area by the NYSDOH. A cancer case verification study or case review involves confirming suspected cancer cases and an examination of the characteristics of the confirmed cases in order to detect any unusual patterns that would indicate the need for further investigation. Approximately one in 300 children will be diagnosed with some type of cancer between birth and age 19. Leukemia is the most common childhood cancer, accounting for approximately one third of all childhood cancer cases. The number of leukemia cancer cases that might be associated with one specific site is usually too small for a statistical analysis to be conducted. However, if specific information on the suspected cases is sent to the NYSDOH, staff will use the Cancer Registry to confirm the cases and will review them to see if they show an unusual pattern. Researchers use geographical mapping programs and databases (GIS) when they conduct a case review.

A letter dated February 16, 1999 was received from Assemblyman Paul Harenberg which included the following comments:

COMMENT 1: He and his constituents are anxious and worried about the soil contaminants of cadmium and chromium. He urged us to give this project an expedited position on our list of projects awaiting action.

RESPONSE 1: This project has been given a high priority by the NYSDEC. With the issuance of this ROD, design of the remedy and construction of the remedy will follow.

A copy of the letter from Mr. Harenberg is attached.

A letter dated March 12, 1999 was received from Mr. Sy Robbins of the SCDHS which included the following comments:

COMMENT 1: The abandonment of the tanks in place does not conform to the requirements of Article 12 of the Suffolk County Sanitary Code.

RESPONSE 1: The referenced section of the Suffolk County Sanitary Code indicates that the removal of abandoned underground storage tanks is required except under certain extenuating circumstances. These circumstances exist with respect to the tanks at the Liberty Industrial site. Removal of the tanks would have required interruption of railroad service because a high-voltage underground power line would have been shut off during tank removal. Instead, the tanks were closed in place by emptying the contents, cleaning and sandblasting the tanks, filling the tanks with sand, and capping them with concrete.

COMMENT 2: The design of the outpost monitoring wells should be finalized with input from the SCDHS, and will probably require the collection of vertical profile data prior to the selection of screened intervals.

RESPONSE 2: As discussed at the public meeting, the NYSDEC will consult with the SCDHS in placing the downgradient monitoring wells.

A copy of Mr. Robbins' letter is attached.

A letter dated March 25, 1999 was received from Ms. Elsa Ford of the Brentwood/Bayshore Breast Cancer Coalition which included the following comments. Other comments are responded to elsewhere in the Responsiveness Summary.

COMMENT 1: The building should be tested after the clean up to be sure there will be no exposure from future use.

RESPONSE 1: The interior of the building, including the flooring, was remediated as part of the EPA Emergency Removal Action. The emergency removal action included the following tasks: pressure washing of process vats; vacuuming and pressure washing of floors; removal of contaminated debris from vat areas and floors; and packaging all waste materials in drums for off-site disposal at a permitted disposal facility. Since the EPA performed a thorough cleanup of the on-site building, no further testing is needed in the interior of the building.

COMMENT 2: A number of health-related issues were not addressed as part of this investigation such as: exposure to a combination of toxins, routes of exposure, and especially sensitive individuals.

RESPONSE 2: As stated in the February 1999 Feasibility Study Report, an exposure assessment was performed for the site to determine the constituents of concern and the possible routes of exposure. Several constituents were identified in on-site soils as being in excess of DEC standards, criteria and guidelines (SCGs), however, chromium was the only contaminant in the groundwater that presented a potential health concern. What is important to remember is whether or not the exposure pathways are completed. The routes of exposure examined in the exposure assessment

were again discussed at the March 11, 1999 PRAP meeting. These routes are inhalation, direct contact and ingestion.

Inhalation of contaminated dust or dirt, during remedial activities, by children playing on the ballfield directly south of the site is a potential exposure pathway. This pathway, however, will be prevented by the community health and safety plan which is used to protect the community from exposures to site-related contaminants during any kind of site-related remedial activity, usually involving the disturbance of soils. Particulate air monitoring was included during the RI activities and will be included in the remedial construction in the protective procedures to prevent contaminated dusts or particulates from leaving the site.

Direct contact is an exposure pathway which is unlikely to be completed since the majority of soil contamination on-site is subsurface. Surface soil contamination has been identified, but is located in an area that is not easily accessible to trespassers. Surface soil contamination will be remediated as a part of the selected remedy. Off-site soil contamination identified in the athletic field and at the Brentwood water district were determined to originate from sources other than the site. Contamination identified in these areas has been removed.

Ingestion of site-related contaminants is not considered an exposure pathway that will be completed since the on-site and off-site groundwater contamination is currently not affecting any public supply or private wells. Site-related groundwater contamination, chromium, has been detected no deeper than 50 feet below ground surface (BGS). The groundwater flow direction has been determined to be to the southeast. The closest supply well, the Brentwood water district, is located to the southwest with wells 450 and 700 feet BGS, much deeper than the current groundwater contaminant plume.

Although sensitive individuals are not specifically referenced within the data, determination of exposure pathways considers sensitive populations such as children and the elderly.

A copy of Ms. Ford's letter is attached.

THE ASSEMBLY
STATE OF NEW YORK
ALBANY

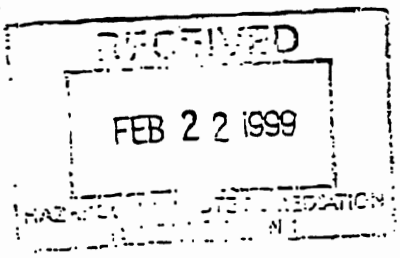
PAUL HARENBERG
Assemblyman 5th District
Room 724
Legislative Office Building
Albany, New York 12248
(518) 455-5937

1217-2 Montauk Highway
Oakdale, New York 11769
(516) 589-8685

CHAIRMAN
Majority Steering Committee

COMMITTEES
Higher Education
Mental Health
Veterans Affairs
Ways & Means

February 16, 1999



Raymond Cowen, Regional Director
New York State Dept. of Environmental Conservation
State University of New York
Bldg. 40
Stony Brook, New York 11790

Dear Mr. Cowen:

I write to urge your good faith efforts to expedite plans for a clean-up of the site of the former Liberty Industrial Plant in Brentwood.

My constituents and I are anxious and worried about the soil contaminants of cadmium and chromium. We are anxious that the clean-up happen soon, for fear that pedestrians and youngsters who traffic that area may be hurt. The Liberty site is not far from a school and a library.

I join Supervisor McGowan, Rev. McGowan, and Elsa Ford, as well as all the residents of the Brentwood community in urging that you give this project an expedited position in your list of projects awaiting action.

Thank you.

Very truly yours,

Paul Harenberg

PAUL HARENBERG
Member of Assembly

PH:gb

COUNTY OF SUFFOLK

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF HEALTH SERVICES

CLARE B. BRADLEY, M.D., M.P.H.
COMMISSIONER

March 12, 1999

Mr. Jeffrey Dyber, Project Manager
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Dear Mr. Dyber:

RE: PRAP FOR LIBERTY INDUSTRIAL FINISHING (#152108)

On behalf of the Suffolk County Department of Health Services, I would like to offer the following comments on the Proposed Remedial Action Plan for Liberty Industrial Finishing, Brentwood (Site #152108) prepared by the Division of Environmental Remediation (Jan. 1999):

The proposed remedy, which includes soil removal from the underground tank and pipe gallery area, installation of an asphalt cap over this area, removal of contaminated sediment from four stormwater drywells and one sanitary leaching pool, institutional controls and deed restrictions, and long-term groundwater monitoring, should be protective of public health. You should be aware, however, that the abandonment of the tanks in place does not conform to the requirements of Article 12 of the Suffolk County Sanitary Code; you will, therefore, have to contact Mr. Alex Santino of the SCDHS' Office of Pollution Control at (516) 854-2529 to discuss future options. In addition, the design of the outpost monitoring wells should be finalized with input from me, and will probably require the collection of vertical profile data prior to the selection of screened intervals.

If you have any questions, please call me at (516) 853-3196.

Very truly yours,

Sy F. Robbins, C.P.G.
County Hydrogeologist

cc: A. Santino, SCDHS
J. Nealon, NYSDOH
B. Becherer, NYSDEC Region 1
G. Proios, Office Co. Exec.

BRENTWOOD/BAYSHORE
BREAST CANCER COALITION
POST OFFICE BOX 927
BRENTWOOD, N.Y. 11717-0993

To: Mr. Jeffrey L. Dyber
From: Elsa Ford
Ref: Liberty Industrial Finishing Site
Town of Islip, N.Y.
SITE #: 1-52-108

REMEDY FOR LIBERTY INDUSTRIAL FINISHING
TOWN OF ISLIP, N.Y.
SITE # 1-52-108

A remedy can not be selected before there is more information of the exact extent of contamination.

#1: Since there were reports of violations at the site since the '70's[1], the possibility of deeper groundwater contamination above the Brentwood Water District on the west end of the property should be explored. Deep profile testing should be taken to see if contaminants found a S03 dry well and leaching pool S07 for example, have washed down to deeper ground water levels upgradient of the Brentwood Water District well field. There is the possibility of both semi volatiles and metals presence. Heavy metals, usually immobile in soil can move more readily in combination with acid. Acid was involved in the Liberty processes. Ingestion of contaminated ground-water between testing periods of the Brentwood Water District is a possibility that must be addressed. Proposed monitoring wells 18 and 19 are too little, not addressing the upgradient possibility. Any findings would require changes in the proposed remedy. The sooner such threat is detected the better for the Brentwood Water District and community so that specific remedial actions could be taken. The remedy would have to be addressed in the ROD. Note that liberty is located in the Ground water Management Zone 1.

#2: The full extent of the plume from the tank farm has not been plotted to 0. This information is needed for exact determination. Profile testing with a number of screen levels is needed.

#3: I was told that Liberty signed a consent order to remove the underground storage tanks, but later claimed lack of funding. The DEC 4/98 IHWDS in NYS report notes that the EPA was waiting for final approval for appropriation of funds for a removal action. Was the decision to leave the tanks in based on financial rather than health and environmental reasons? The train schedule problem sited in the PRAP could be overcome by using diesel trains on a temporary basis while the problem is corrected. Leaving the tanks in prevents ground wager and other testing at the place where contamination is likely to be the greatest. A deep test well is needed here.

#4: Soil removal work can be scheduled with representatives of the Little League so that contaminated soil won't blow on children playing. This is a route of exposure. The soil at the Little League fields would have to be tested after the Liberty soil removal work is completed.

#5: There should be testing of the building after the clean up to be sure there will not be exposure from future use.

[1] PRAP page 5. "Plating wastes were discharged to various leaching pools throughout the site."

Email: bbbcc@worldnet.att.net
Web page: http://home.att.net/~bbbcc
Phone and Fax: 516-273-9252

BRENTWOOD/BAYSHORE BREAST CANCER COALITION

#6: While granting that the health risk analysis follows current procedures and guidelines, there is reason to apply a stronger measure of prudent avoidance. This is due to the proximity of the Little League Ball Field and the Brentwood Water District. A number of issues not addressed in the current health analysis are exposure to a combination of toxins, routes of exposure, and especially sensitive individuals. For example the same child may eat the contaminated soil and breathe it.

The need for extraction at proposed or other sites and levels cannot be ruled out at this point. Note that the site for the proposed extraction well on Figure 8 is not on the ball field as stated on page 16 of the PRAP, but on the American Legion property.

I request that these and other issues raised at the public meeting should be reviewed and presented at another public meeting before the writing of the ROD's final selection of remedy for this site.

Elsa Ford, President
Brentwood/Bay Shore Breast Cancer Coalition
18 Stockton St.
Brentwood, N.Y. 11717
516-273-4074

APPENDIX B

Administrative Record

APPENDIX B
LIBERTY INDUSTRIAL FINISHING ADMINISTRATIVE RECORD

1. Work Plan for Remedial Investigation/Feasibility Study of Liberty Industrial Finishing Site, Dvirka and Bartilucci Consulting Engineers, September 1997

2. Remedial Investigation Report for Liberty Industrial Finishing Site, Dvirka and Bartilucci Consulting Engineers, January 1999

3. Feasibility Study Report for Liberty Industrial Finishing Site, Dvirka and Bartilucci Consulting Engineers, February 1999

4. Proposed Remedial Action Plan for Liberty Industrial Finishing Site, NYSDEC, February 1999

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

PUBLIC NOTICE

State Superfund Program

Receive Site Information by Email. See next page to Learn How.

Site Name: Liberty Industrial Finishing Products **March, 2017**
Site No.: 152108 **Tax Map No.:** 500-136-3-9, 500-136-3-11.6, 500-136-3-10.2
Site Location: 500 Suffolk Avenue, Brentwood, NY 11717

Inactive Hazardous Waste Disposal Site Classification Notice

The Inactive Hazardous Waste Disposal Site Program (the State Superfund Program) is the State's program for identifying, investigating, and cleaning up sites where the disposal of hazardous waste may present a threat to public health and/or the environment. The New York State Department of Environmental Conservation (DEC) maintains a list of these sites in the Registry of Inactive Hazardous Waste Disposal Sites (Registry). The site identified above, and located on the attached map, has been reclassified on the Registry as a Class 4 site as it no longer presents a significant threat to public health and/or the environment for the following reason(s):

Human exposures with residual contamination at the site are being addressed through the implementation of a Site Management Plan which includes an environmental notice that limits the use and development of the site to industrial use and prohibits the use of groundwater at the site as a source of potable or process water without prior approval. Compliance with the approved Site Management Plan and periodic certification by the property owner to the New York State Department of Environmental Conservation will ensure that the institutional and engineering controls remain effective.

If you own property adjacent to this site and are renting or leasing your property to someone else, please share this information with them. If you no longer wish to be on the contact list for this site or otherwise need to correct our records, please contact DEC's Project Manager listed below.

FOR MORE SITE INFORMATION

Additional information about this site can be found using DEC's "Environmental Site Remediation Database Search" engine which is located on the internet at:
www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

Comments and questions are always welcome and should be directed as follows:

Project Related Questions
Payson Long, Project Manager
NYS Department of Environmental Conservation
DER – Remedial Bureau E
625 Broadway
Albany, New York 12233-7017
Payson.long@dec.ny.gov
518-402-9813

DEC is sending you this notice in accordance with Environmental Conservation Law Article 27, Title 13 and its companion regulation (6 NYCRR 375-2.7(b)(6)(ii)) which requires DEC to notify all parties on the contact list for this site of this recent action.

Approximate Site Location
Liberty Industrial Finishing Products
SITE ID 152108
500 Suffolk Avenue, Brentwood, NY 11717

Receive Site Updates by Email
Have site information such as this public notice sent right to your email inbox. DEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page: www.dec.ny.gov/chemical/61092.html . It's *quick*, it's *free*, and it will help keep you *better informed*.

As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you received this notice by way of a county email listserv.

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 subdivison; 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 B

IC/EC Certification Forms

Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form

Site Details **Box 1**

Site No. **152108**

Site Name Liberty Industrial Finishing Products

Site Address: 500 Suffolk Avenue Zip Code: 11717
City/Town: Brentwood
County: Suffolk
Site Acreage: 3.9

Reporting Period: January 30, 2017 to January 30, 2020

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	X	☐
4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. To your knowledge is the site currently undergoing development?	X	☐

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	X	☐
7. Are all ICs/ECs in place and functioning as designed?	☐	X

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Paul Kwiatkowski
Signature of Standby Consultant/Contractor

12/8/2020
Date

SITE NO. 152108 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
136000300008000	Liberty Industrial Finishing	

The former concrete building slab has been removed. The Site is currently being investigated to change the land use to commercial for redevelopment.

Soil Management Plan
Monitoring Plan
Site Management Plan
IC/EC Plan

Restrictions include: Groundwater use restriction, land use restriction to industrial and adherence to a Site Management plan. Any developement of the site must be hooked in to the public water supply an must not disturb the slab which is serving as a cover system.

136000300010001 LIBERTY INDUSTRIAL PRODUCTS, I

The former concrete building slab has been removed. The Site is currently being investigated to change the land use to commercial for redevelopment.

Monitoring Plan
Soil Management Plan
Ground Water Use Restriction
Landuse Restriction
IC/EC Plan
Site Management Plan

ICs include an Environmental Notice which restricts goundwater use, land use to industrial and require adherence to the Site Management Plan. Any developement of the site must be hooked in to the publi water supply and must not disturb the slab which is serving as a cover system.

500136000300011600 LIBERTY INDUSTRIAL PRODUCTS, I

Soil Management Plan
Monitoring Plan

The former concrete building slab has been removed. The Site is currently being investigated to change the land use to commercial for redevelopment.

Ground Water Use Restriction
Landuse Restriction
Site Management Plan
IC/EC Plan

ICs include an Environmental Notice which restricts groundwater use and land use to industrial and requires adherence to the Site Management plan. Any developement of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cover system.

Box 4

Description of Engineering Controls

The former concrete building slab has been removed.

Parcel	Engineering Control
136000300008000	Fencing/Access Control

ECs for the site include fencing and a cover (slab and asphalt). Cover on parcel # 136.-3-11.6 must rem in place and be inspected for degradation and repaired if necessary. The perimeter fence is to remain intact.

136000300010001

Fencing/Access Control

ECs for the site include a cover system (slab and asphalt) and fencing. The cover (concrete slab) located on parcel #136.-3-11.6 is to be inspected and repaired if necessary. The perimeter fence is to remain intact

500136000300011600

Cover System
Fencing/Access Control

ECs for the site include a cover system (slab and asphalt) and fencing. The cover must remain in place and b inspected for degradation and repaired if necessary. The perimeter fence must remain intact.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

YES	NO
☐	X

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Paul Kaufty
Signature of Standby Consultant/Contractor

12/8/20
Date

Box 6

IC/EC CERTIFICATIONS

Qualified Environmental Professional Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Paul Kaeth at AECOM
print name

1255 Broad Street

Clifton, New Jersey 07013,
(print business address)

am certifying as a Qualified Environmental Professional.

Paul Kaeth, PG (NYS PG# 000031) 12/8/20

Signature of Qualified Environmental Professional | Stamp (Required for PE) | Date

Liberty Industrial Finishing – Required Work for Property Owner

- Provide a work plan to excavate and dispose of contaminated soil that includes:
  - Excavating the areas denoted on the attached two figures to a depth of one foot below ground surface. AECOM, the DEC's consultant, identified these contaminated areas in 2013 and 2020.
  - Sampling the excavated soil according to the requirements of the disposal facility.
  - Transporting and disposing of the excavated soil according to local, state and federal requirements.
  - Providing a site cover in the excavated areas consisting of one foot of clean fill, buildings and/or pavement. If the property owner wants to import or reuse soil, they must submit the Request to Import/Reuse Fill or Soil form to the DEC project manager and section chief along with required attachments, including analytical data.
- Provide an updated redevelopment plan to the DEC project manager and section chief. Specify which types of site cover will be used throughout the site.
- Protect all monitoring wells and replace any wells that are damaged or destroyed.
- Protect the asphalt cap that was installed as part of the remedy.
- Identify the source of the soil pile. If the soil pile is imported or reused soil, submit the Request to Import/Reuse Fill or Soil form for the soil to the DEC project manager and section chief along with required attachments, including analytical data.
- Submit the signed environmental easement to the DEC attorney.
- Submit a report detailing the concrete slab removal. The report should include:
  - Dates of removal.
  - How much concrete was removed and where it was disposed. Include disposal receipts.
  - Whether the concrete tested before it was removed and any test results.
  - Whether any soil excavated and removed and any sampling results.
  - Whether any soil was placed in the area of the former concrete slab after removal and any sampling results for the reused or imported soil.
- Repair the site fence and lock the gate. Provide the DEC project manager with a key to the lock.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-720
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

12/18/2019

Liberty Industrial Finishing
500 SUFFOLK AVE
(Hempstead) Brentwood, NY 11717

Re: Property Owner Survey: Site Management Periodic Review
Parcel: 136000300008000
Site Name: Liberty Industrial Finishing Products
Site No.: 152108
Site Address: 500 Suffolk Avenue
Brentwood, NY 11717

Dear Property Owner:

This letter and attached survey have been mailed to you because you are the listed property owner (or their contact) on which a State Superfund site exists that is currently in the Site Management (SM) phase of remediation. This letter is meant to serve as an informative reminder to you and any tenants, occupants or users of the property that sites in active Site Management must undergo a periodic progress review to ensure that the selected remedy continues to be protective. This process and resulting report, referred to as the Periodic Review Report (PRR), documents the implementation of site specific SM requirements. Section 6.3(b) of DER-10 Technical Guidance for Site Investigation and Remediation (see "IV. Reference Documents" in the attached) provides guidance regarding the information that is included in a typical PRR. Additionally, the site referenced may be comprised of multiple tax parcels with different owners. This letter only pertains to the portion of the site that exists on property which is under your direct ownership. To assist the NYSDEC in its periodic review, please respond, sign and date the attached survey (Enclosure 1 "Institutional and Engineering Controls - Property Owner Survey") by February 29, 2020.

Site Management is defined in regulation at 6 NYCRR 375-1.2(at), and in Chapter 6 of DER-10 (see also "III. Helpful Definitions" in the attached). SM may be governed by multiple individual documents (e.g., an Operation, Maintenance, and Monitoring Plan; a Soil Management Plan; etc.) or under the umbrella of one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you respond to this survey, please include the enclosed form (Enclosure 1) which documents that, to the best of your knowledge, all Site Management requirements that pertain to the site on your property are being met. The Institutional Controls (ICs) and Engineering Controls (ECs) certification portion of the form should be completed, signed and returned to the NYSDEC. If you cannot verify that all SM requirements are being met, please provide adequate information in response so that actions may be taken to restore the level of protection intended. Instructions for completing the attached forms are included as Enclosure 2 "Survey Instructions."

The survey form should be submitted in either paper or electronic format. Any supporting documents or information (e.g., collected data, reports, copy of current deed) should be submitted in electronic format only. These documents and electronic submissions should be sent to:

Payson Long, Project Manager.
New York State Department of Environmental Conservation
Division of Environmental Remediation, BURE
625 Broadway
Albany, NY 12233-7017

Phone number: 518-402-9651. E-mail: payson.long@dec.ny.gov

Finally, as the state and condition of your property may be influenced by tenants or others users, please share the information contained in this letter and survey so that all controls put in place will provide the greatest level of protection of public health and the environment.

Thank you for your cooperation and assistance.

Sincerely,

Payson Long, Project Manager
NYSDEC

Enclosures

ec: Payson Long, Project Manager
Jeffrey Dyber, Section Chief

Enclosure 1
Institutional and Engineering Controls - Property Owner Survey

Site Details **Box 1**

Site No. 152108

Site Name Liberty Industrial Finishing Products

Site Address: 500 Suffolk Avenue Zip Code: 11717
City/Town: Brentwood
County: Suffolk
Site Acreage: 3.9

Reporting Period: January 30, 2017 to January 30, 2020

	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, 3 or 4, include documentation with this 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 Institutional Controls (ICs) in place and functioning as designed?	☐	☐

_____ _____
Signature of Property Owner Date

SITE NO. 152108 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
136000300008000	Liberty Industrial Finishing	Soil Management Plan Monitoring Plan Site Management Plan IC/EC Plan

Restrictions include: Groundwater use restriction, land use restriction to industrial and adherence to a Site Management plan. Any developement of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cover system.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
136000300008000	Fencing/Access Control

ECs for the site include fencing and a cover (slab and asphalt). Cover on parcel # 136.-3-11.6 must rema in place and be inspected for degradation and repaired if necessary. The perimeter fence is to remain intact.

Box 5

Periodic Review Report (PRR) Survey Statements

For each Institutional or Engineering control listed in Boxes 3 and/or 4, by checking "YES" below I believe all of the following statements to be true:

(a) the Institutional Control(s) and/or Engineering Control(s) employed at this site remain 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; and

(d) if a Site Management Plan (SMP) exists, nothing has occurred that would constitute a violation or failure to comply with the SMP for this Control.

YES ☐ NO ☐

_____ _____

Signature of Property Owner Date

Enclosure 2
Survey Instructions

I. Verification of Site Details (Box 1 and Box 2):
Answer the YES/NO questions in the Verification of Site Details Section. The Property Owner may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)
Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Property Owner should petition the Department separately to request approval to remove the control.

In Box 5, complete the certification for all components, as applicable, by checking the corresponding YES/NO checkbox.

If you cannot respond "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why a "YES" response could not be rendered. Note that this survey form should be submitted even if an IC or EC cannot be certified at this time.

III. Helpful Definitions
"Change of use" means the erection of any structure on a site, the paving of a site for use as a roadway or parking lot, the creation of a park or other recreational facility on a site, any activity that is likely to disrupt or expose contamination or increase direct human or environmental exposure, or any other conduct that will or may tend to prevent or significantly interfere with a proposed, ongoing, or completed remedial program.

"Site management" means the activities undertaken as the last phase of the remedial program at a site which continue after a certificate of completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the institutional and engineering controls required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

IV. Reference Documents

DER-10	http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf
Part 375-2.2(a)	http://www.dec.ny.gov/regs/4373.html#15089

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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www.dec.ny.gov

12/18/2019

Liberty Industrial Products, Inc.
LIBERTY INDUSTRIAL PRODUCTS, INC.
500 SUFFOLK AVE
(Hempstead) Brentwood, NY 11717

Re: Property Owner Survey: Site Management Periodic Review
Parcel: 500136000300011600
Site Name: Liberty Industrial Finishing Products
Site No.: 152108
Site Address: 500 Suffolk Avenue

Dear Property Owner:

This letter and attached survey have been mailed to you because you are the listed property owner (or their contact) on which a State Superfund site exists that is currently in the Site Management (SM) phase of remediation. This letter is meant to serve as an informative reminder to you and any tenants, occupants or users of the property that sites in active Site Management must undergo a periodic progress review to ensure that the selected remedy continues to be protective. This process and resulting report, referred to as the Periodic Review Report (PRR), documents the implementation of site specific SM requirements. Section 6.3(b) of DER-10 Technical Guidance for Site Investigation and Remediation (see "IV. Reference Documents" in the attached) provides guidance regarding the information that is included in a typical PRR. Additionally, the site referenced may be comprised of multiple tax parcels with different owners. This letter only pertains to the portion of the site that exists on property which is under your direct ownership. To assist the NYSDEC in its periodic review, please respond, sign and date the attached survey (Enclosure 1 "Institutional and Engineering Controls - Property Owner Survey") by February 29, 2020.

Site Management is defined in regulation at 6 NYCRR 375-1.2(at), and in Chapter 6 of DER-10 (see also "III. Helpful Definitions" in the attached). SM may be governed by multiple individual documents (e.g., an Operation, Maintenance, and Monitoring Plan; a Soil Management Plan; etc.) or under the umbrella of one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you respond to this survey, please include the enclosed form (Enclosure 1) which documents that, to the best of your knowledge, all Site Management requirements that pertain to the site on your property are being met. The Institutional Controls (ICs) and Engineering Controls (ECs) certification portion of the form should be completed, signed and returned to the NYSDEC. If you cannot verify that all SM requirements are being met, please provide adequate information in response so that actions may be taken to restore the level of protection intended. Instructions for completing the attached forms are included as Enclosure 2 "Survey Instructions."

The survey form should be submitted in either paper or electronic format. Any supporting documents or information (e.g., collected data, reports, copy of current deed) should be submitted in electronic format only. These documents and electronic submissions should be sent to:

Payson Long, Project Manager.
New York State Department of Environmental Conservation
Division of Environmental Remediation, BURE
625 Broadway
Albany, NY 12233-7017

Phone number: 518-402-9651. E-mail: payson.long@dec.ny.gov

Finally, as the state and condition of your property may be influenced by tenants or others users, please share the information contained in this letter and survey so that all controls put in place will provide the greatest level of protection of public health and the environment.

Thank you for your cooperation and assistance.

Sincerely,

Payson Long, Project Manager
NYSDEC

Enclosures

ec: Payson Long, Project Manager
Jeffrey Dyber, Section Chief

Enclosure 1
Institutional and Engineering Controls - Property Owner Survey

Site Details **Box 1**

Site No. 152108

Site Name Liberty Industrial Finishing Products

Site Address: 500 Suffolk Avenue Zip Code: 11717
City/Town: Brentwood
County: Suffolk
Site Acreage: 3.9

Reporting Period: January 30, 2017 to January 30, 2020

	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, 3 or 4, include documentation with this 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 Institutional Controls (ICs) in place and functioning as designed?	☐	☐

_____ _____
Signature of Property Owner Date

SITE NO. 152108 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
500136000300011600	LIBERTY INDUSTRIAL PRODUCTS, II	Ground Water Use Restriction Landuse Restriction Soil Management Plan Monitoring Plan Site Management Plan IC/EC Plan

ICs include an Environmental Notice which restricts groundwater use and land use to industrial and requires adherence to the Site Management plan. Any developement of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cover system.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
500136000300011600	Cover System Fencing/Access Control

ECs for the site include a cover system (slab and asphalt) and fencing. The cover must remain in place and b inspected for degradation and repaired if necessary. The perimeter fence must remain intact.

Box 5

Periodic Review Report (PRR) Survey Statements

For each Institutional or Engineering control listed in Boxes 3 and/or 4, by checking "YES" below I believe all of the following statements to be true:

(a) the Institutional Control(s) and/or Engineering Control(s) employed at this site remain 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; and

(d) if a Site Management Plan (SMP) exists, nothing has occurred that would constitute a violation or failure to comply with the SMP for this Control.

YES	NO
☐	☐

_____ _____

Signature of Property Owner Date

Enclosure 2
Survey Instructions

I. Verification of Site Details (Box 1 and Box 2):
Answer the YES/NO questions in the Verification of Site Details Section. The Property Owner may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)
Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Property Owner should petition the Department separately to request approval to remove the control.

In Box 5, complete the certification for all components, as applicable, by checking the corresponding YES/NO checkbox.

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"Site management" means the activities undertaken as the last phase of the remedial program at a site which continue after a certificate of completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the institutional and engineering controls required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

IV. Reference Documents

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Part 375-2.2(a)	http://www.dec.ny.gov/regs/4373.html#15089

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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12/18/2019

Liberty Industrial Products, Inc.
500 SUFFOLK AVE
(Hempstead) Brentwood, NY 11717

Re: Property Owner Survey: Site Management Periodic Review
Parcel: 136000300010001
Site Name: Liberty Industrial Finishing Products
Site No.: 152108
Site Address: 500 Suffolk Avenue
Brentwood, NY 11717

Dear Property Owner:

This letter and attached survey have been mailed to you because you are the listed property owner (or their contact) on which a State Superfund site exists that is currently in the Site Management (SM) phase of remediation. This letter is meant to serve as an informative reminder to you and any tenants, occupants or users of the property that sites in active Site Management must undergo a periodic progress review to ensure that the selected remedy continues to be protective. This process and resulting report, referred to as the Periodic Review Report (PRR), documents the implementation of site specific SM requirements. Section 6.3(b) of DER-10 Technical Guidance for Site Investigation and Remediation (see "IV. Reference Documents" in the attached) provides guidance regarding the information that is included in a typical PRR. Additionally, the site referenced may be comprised of multiple tax parcels with different owners. This letter only pertains to the portion of the site that exists on property which is under your direct ownership. To assist the NYSDEC in its periodic review, please respond, sign and date the attached survey (Enclosure 1 "Institutional and Engineering Controls - Property Owner Survey") by February 29, 2020.

Site Management is defined in regulation at 6 NYCRR 375-1.2(at), and in Chapter 6 of DER-10 (see also "III. Helpful Definitions" in the attached). SM may be governed by multiple individual documents (e.g., an Operation, Maintenance, and Monitoring Plan; a Soil Management Plan; etc.) or under the umbrella of one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you respond to this survey, please include the enclosed form (Enclosure 1) which documents that, to the best of your knowledge, all Site Management requirements that pertain to the site on your property are being met. The Institutional Controls (ICs) and Engineering Controls (ECs) certification portion of the form should be completed, signed and returned to the NYSDEC. If you cannot verify that all SM requirements are being met, please provide adequate information in response so that actions may be taken to restore the level of protection intended. Instructions for completing the attached forms are included as Enclosure 2 "Survey Instructions."

The survey form should be submitted in either paper or electronic format. Any supporting documents or information (e.g., collected data, reports, copy of current deed) should be submitted in electronic format only. These documents and electronic submissions should be sent to:

Payson Long, Project Manager.
New York State Department of Environmental Conservation
Division of Environmental Remediation, BURE
625 Broadway
Albany, NY 12233-7017

Phone number: 518-402-9651. E-mail: payson.long@dec.ny.gov

Finally, as the state and condition of your property may be influenced by tenants or others users, please share the information contained in this letter and survey so that all controls put in place will provide the greatest level of protection of public health and the environment.

Thank you for your cooperation and assistance.

Sincerely,

Payson Long, Project Manager
NYSDEC

Enclosures

ec: Payson Long, Project Manager
Jeffrey Dyber, Section Chief

Enclosure 1
Institutional and Engineering Controls - Property Owner Survey

Site Details **Box 1**

Site No. 152108

Site Name Liberty Industrial Finishing Products

Site Address: 500 Suffolk Avenue Zip Code: 11717
City/Town: Brentwood
County: Suffolk
Site Acreage: 3.9

Reporting Period: January 30, 2017 to January 30, 2020

	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, 3 or 4, include documentation with this 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 Institutional Controls (ICs) in place and functioning as designed?	☐	☐

_____ _____
Signature of Property Owner Date

SITE NO. 152108 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
136000300010001	LIBERTY INDUSTRIAL PRODUCTS, II	Monitoring Plan Soil Management Plan Ground Water Use Restriction Landuse Restriction IC/EC Plan Site Management Plan

ICs include an Environmental Notice which restricts goundwater use, land use to industrial and requires adherence to the Site Management Plan. Any developement of the site must be hooked in to the public water supply and must not disturb the slab which is serving as a cover system.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
136000300010001	Fencing/Access Control

ECs for the site include a cover system (slab and asphalt) and fencing. The cover (concrete slab) located on parcel #136.-3-11.6 is to be inspected and repaired if necessary. The perimeter fence is to remain intact.

Box 5

Periodic Review Report (PRR) Survey Statements

For each Institutional or Engineering control listed in Boxes 3 and/or 4, by checking "YES" below I believe all of the following statements to be true:

(a) the Institutional Control(s) and/or Engineering Control(s) employed at this site remain 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; and

(d) if a Site Management Plan (SMP) exists, nothing has occurred that would constitute a violation or failure to comply with the SMP for this Control.

YES ☐ NO ☐

_____ _____

Signature of Property Owner Date

Enclosure 2
Survey Instructions

I. Verification of Site Details (Box 1 and Box 2):
Answer the YES/NO questions in the Verification of Site Details Section. The Property Owner may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)
Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Property Owner should petition the Department separately to request approval to remove the control.

In Box 5, complete the certification for all components, as applicable, by checking the corresponding YES/NO checkbox.

If you cannot respond "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why a "YES" response could not be rendered. Note that this survey form should be submitted even if an IC or EC cannot be certified at this time.

III. Helpful Definitions
"Change of use" means the erection of any structure on a site, the paving of a site for use as a roadway or parking lot, the creation of a park or other recreational facility on a site, any activity that is likely to disrupt or expose contamination or increase direct human or environmental exposure, or any other conduct that will or may tend to prevent or significantly interfere with a proposed, ongoing, or completed remedial program.

"Site management" means the activities undertaken as the last phase of the remedial program at a site which continue after a certificate of completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the institutional and engineering controls required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

IV. Reference Documents

DER-10	http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf
Part 375-2.2(a)	http://www.dec.ny.gov/regs/4373.html#15089

Appendix C

Site Inspection Forms

AECOM

SITE INSPECTION FORM

Liberty Industrial Finishing Site
550 Suffolk Ave, Brentwood, Suffolk County, NY
NYSDEC Site ID # 1-52-108

Client: New York State Department of Environmental Conservation

Preparer's Name: Celeste Foster Date/Time: 9/13/2017, 13:00

Asphalt Cap

Has the condition of the asphalt degraded since the last inspection?	☐ YES	■ NO	☐ NA
Are any cracks visible in the asphalt pavement?	■ YES	☐ NO	☐ NA
Is there evidence of uneven settling and or ponding?	☐ YES	■ NO	☐ NA
Is there damage to any surface coverage?	☐ YES	■ NO	☐ NA

Fence

Are there any breaks in the perimeter fence?	■ YES	☐ NO	☐ NA
Are there any damaged or bent posts?	■ YES	☐ NO	☐ NA
Are the "No Trespassing" signs missing or damaged?	☐ YES	■ NO	☐ NA
Is the Suffolk Avenue gate damaged or bent?	☐ YES	■ NO	☐ NA
Is the Suffolk Avenue locked?	☐ YES	■ NO	☐ NA
Is the gate padlock damaged or in poor condition?	■ YES	☐ NO	☐ NA

Site Condition

Is there any evidence of illegal disposal?	■ YES	☐ NO	☐ NA
Is there uncontrolled vegetation growth?	■ YES	☐ NO	☐ NA
Is there any evidence of unauthorized entry?	■ YES	☐ NO	☐ NA

If yes to any question above, provide additional information below.

There are cracks in the asphalt pavement, there does not appear to be settling or ponding or damage to the surface coverage. The condition is the same as the last inspection.

The site security has been compromised by trespassers. There are two groups that appear to regularly trespass onto the site. One group is young skateboarders who have set up a skate park and the other group is vagrants who are possibly homeless. Trash/debris has been scattered around the site.

The new owner has removed the gate and put large cement blocks which can be removed for heavy equipment entry.

The new owner has been clearing the Site but there is still uncontrolled vegetation.

The new owner has dug a hole along the concrete slab to determine the thickness of the slab.

The new owners contact information is Nick 631-782-9222.



Hole next to slab

Evidence of trespassers

Gate removed

Site Photos

Site Photos (cont.)









Site Photos (cont.)

AECOM

SITE INSPECTION FORM

Liberty Industrial Finishing Site
550 Suffolk Ave, Brentwood, Suffolk County, NY
NYSDEC Site ID # 1-52-108

Client: New York State Department of Environmental Conservation

Preparer's Name: Celeste Foster Date/Time: 11/14/2018, 09:00

Asphalt Cap

Has the condition of the asphalt degraded since the last inspection?	☐ YES	■ NO	☐ NA
Are any cracks visible in the asphalt pavement?	■ YES	☐ NO	☐ NA
Is there evidence of uneven settling and or ponding?	☐ YES	■ NO	☐ NA
Is there damage to any surface coverage?	☐ YES	■ NO	☐ NA

Fence

Are there any breaks in the perimeter fence?	■ YES	☐ NO	☐ NA
Are there any damaged or bent posts?	■ YES	☐ NO	☐ NA
Are the "No Trespassing" signs missing or damaged?	☐ YES	■ NO	☐ NA
Is the Suffolk Avenue gate damaged or bent?	☐ YES	■ NO	☐ NA
Is the Suffolk Avenue locked?	☐ YES	■ NO	☐ NA
Is the gate padlock damaged or in poor condition?	■ YES	☐ NO	☐ NA

Site Condition

Is there any evidence of illegal disposal?	■ YES	☐ NO	☐ NA
Is there uncontrolled vegetation growth?	■ YES	☐ NO	☐ NA
Is there any evidence of unauthorized entry?	■ YES	☐ NO	☐ NA

If yes to any question above, provide additional information below.

There are cracks in the asphalt pavement, there does not appear to be settling or ponding or damage to the surface coverage. The condition is the same as the last inspection.

Trash/debris has been scattered around the site.

The new owner has removed the gate and put large cement blocks which can be removed for heavy equipment entry.

The new owner has been clearing the Site but there is still uncontrolled vegetation.

PHOTOS:

PHOTOS:

PHOTOS:

AECOM

SITE INSPECTION FORM

Liberty Industrial Finishing Site
550 Suffolk Ave, Brentwood, Suffolk County, NY
NYSDEC Site ID # 1-52-108

Client: New York State Department of Environmental Conservation

Preparer's Name: Celeste Foster Date/Time: 12/9/2019, 09:00

Asphalt Cap

Has the condition of the asphalt degraded since the last inspection?	☐ YES	■ NO	☐ NA
Are any cracks visible in the asphalt pavement?	■ YES	☐ NO	☐ NA
Is there evidence of uneven settling and or ponding?	☐ YES	■ NO	☐ NA
Is there damage to any surface coverage?	☐ YES	■ NO	☐ NA

Fence

Are there any breaks in the perimeter fence?	■ YES	☐ NO	☐ NA
Are there any damaged or bent posts?	■ YES	☐ NO	☐ NA
Are the "No Trespassing" signs missing or damaged?	☐ YES	■ NO	☐ NA
Is the Suffolk Avenue gate damaged or bent?	☐ YES	■ NO	☐ NA
Is the Suffolk Avenue locked?	☐ YES	■ NO	☐ NA
Is the gate padlock damaged or in poor condition?	■ YES	☐ NO	☐ NA

Site Condition

Is there any evidence of illegal disposal?	■ YES	☐ NO	☐ NA
Is there uncontrolled vegetation growth?	■ YES	☐ NO	☐ NA
Is there any evidence of unauthorized entry?	■ YES	☐ NO	☐ NA

If yes to any question above, provide additional information below.

There are cracks in the asphalt pavement, there does not appear to be settling or ponding or damage to the surface coverage. The site has been substantially cleared/cleaned. Much of the trash/debris from the last inspection has been removed. However there is still trash and debris scattered around the site. The new owner has removed the gate and put large cement blocks which can be removed for heavy equipment entry. The new owner has been clearing the Site but there is still uncontrolled vegetation.

PHOTOS:

Appendix D

Well Sampling Forms

AECOM

WELL NO. MW-2

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 4.5 gallons WELL TD: 54.2 ft PUMP INTAKE DEPTH: 51 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:35	47.30								Static water level
9:40									pump on
10:00	47.41	200	13.41	0.383	7.70	6.09	274	5.1	
10:05	47.41	200	13.94	0.383	7.55	6.15	278	4.6	
10:10	47.41	200	14.15	0.381	6.81	6.13	276	4.4	
10:20	47.41	200	14.16	0.380	6.92	6.11	276	4.6	
10:25	47.41	200	14.19	0.382	6.99	6.08	276	4.3	
10:30	47.41	200	14.20	0.382	7.04	6.07	276	4.80	
10:35	47.41	200	14.22	0.383	7.57	6.07	276	4.90	
10:40	47.41	200	14.22	0.382	7.55	6.09	276	4.10	
10:45	47.41	200	14.10	0.380	7.55	6.12	277	3.20	
10:45									Unfiltered Sample LMW-2 Collected
10:47									Filtered Sample LMW-2F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-3

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 4.3 gallons WELL TD: 53.9 ft PUMP INTAKE DEPTH: 51 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:45	47.26								Static water level
9:50									pump on
10:00	47.29	200	16.27	0.335	8.42	5.75	211	3.0	
10:05	47.29	200	16.15	0.335	8.58	5.77	210	3.8	
10:10	47.29	200	16.16	0.335	8.58	5.74	211	3.9	
10:20	47.29	200	16.18	0.335	8.58	5.74	211	3.1	
10:25	47.29	200	16.21	0.335	8.57	5.74	210	2.9	
10:30	47.29	200	16.25	0.335	8.57	5.74	210	3.0	
10:35	47.29	200	16.31	0.335	8.56	5.75	210	2.5	
10:35									Unfiltered Sample LMW-3 Collected
10:37									Filtered Sample LMW-3F Collected
12:12									Duplicate Unfiltered LMW-53 Collected
12:14									Duplicated Filtered LMW-53F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-4

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 3.8 gallons WELL TD: 53.4 ft PUMP INTAKE DEPTH: 51.0 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:17	47.61								Static water level
12:20									pump on
12:25	47.61	200	16.03	0.159	0.63	6.08	182	2.0	
12:30	47.61	200	15.39	0.162	0.64	6.11	161	0.0	
12:35	47.61	200	15.21	0.168	0.79	6.18	145	0.0	
12:40	47.61	200	15.01	0.177	1.23	6.15	148	0.0	
12:45	47.61	200	14.97	0.181	1.39	6.22	149	0.0	
12:50	47.61	200	14.90	0.189	1.46	6.23	153	0.0	
12:55	47.61	200	14.86	0.194	1.50	6.25	156	0.0	
13:00	47.61	200	14.80	0.197	1.51	6.26	162	0.0	
13:00									Unfiltered Sample LMW-4 Collected
13:02									Filtered Sample LMW-4F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-5

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 0.5 gallons WELL TD: 50 ft PUMP INTAKE DEPTH: 49 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:20	49.30								Static water level
10:25									pump on
10:30	49.30	250	20.52	0.106	6.59	5.83	324	0.0	
10:40	49.31	250	20.10	0.106	6.55	5.78	325	0.0	
10:50	49.31	250	20.06	0.108	6.84	5.80	293	0.0	
11:00	49.31	250	21.54	0.101	6.26	5.79	289	0.0	
11:05	49.31	250	21.62	0.102	6.10	5.80	294	0.0	
11:10									Unfiltered Sample LMW-5 Collected
11:12									Filtered Sample LMW-5F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-6

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 141 gallons WELL TD: 265 ft PUMP INTAKE DEPTH: 259 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:00	49.16								Static water level
10:25									pump on, no water
11:00	Pump back on, pulled pump, fixed bladder, fixed air line								
11:05	49.27	250	18.24	0.122	9.58	6.05	171	3.6	
11:10	49.27	250	17.92	0.121	7.40	4.94	177	6.7	
11:20	49.27	250	17.84	0.123	7.73	5.82	189	0.0	
11:30	49.27	250	17.66	0.123	8.14	4.93	194	0.0	
11:40	49.27	250	17.83	0.123	6.96	5.62	195	10.0	
11:45	49.27	250	17.73	0.124	6.88	5.70	197	27.3	
11:50	49.27	250	17.52	0.124	7.30	4.83	199	0.0	
11:55	49.27	250	17.83	0.125	6.83	5.66	201	0.0	
12:00	49.27	250	17.60	0.126	6.88	5.56	204	0.0	
12:05	49.27	250	17.62	0.126	6.90	5.61	202	0.0	
12:10	49.27	250	17.63	0.126	6.90	5.61	202	0.0	
12:15									Unfiltered Sample LMW-6 Collected
12:17									Filtered Sample LMW-6F Collected

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-10

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF SHEETS: 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/14/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 2.3 gallons WELL TD: 50 ft PUMP INTAKE DEPTH: 48 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:06	46.49								Static water level
10:09									pump on
10:15	46.49	200	18.41	0.141	6.94	5.81	286	78.3	
10:20	46.49	200	17.12	0.141	6.86	6.02	312	50.4	
10:25	46.49	200	17.04	0.135	6.83	6.10	314	49.2	
10:30	46.49	200	16.42	0.129	6.79	6.12	321	46.7	
10:35	46.49	200	16.15	0.126	6.72	6.12	322	41.8	
10:40	46.49	200	16.08	0.127	6.72	6.09	324	39.4	
10:45	46.49	200	15.97	0.127	6.73	6.07	327	36.4	
10:50	46.49	200	15.99	0.124	6.75	6.11	333	36.0	
10:55	46.49	200	15.92	0.122	6.70	6.15	334	34.8	
10:58									Unfiltered Sample LMW-10 Collected
11:00									Filtered Sample LMW-10F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-12

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/14/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 0.52 gallons WELL TD: 49.3 ft PUMP INTAKE DEPTH: 47.0 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:40	46.08								Static water level
13:00									pump on
13:10	46.08								very turbid, hard to get water to pump
13:25	46.08	low	19.31	0.524	8.00	6.09	107	>1000	
13:30									stopped pumping, clogged
13:50	pump back on after cleaning and part replacement								
13:55	46.08	250	18.30	0.577	2.86	6.20	120	>1000	
14:00	46.08	250	16.18	0.674	4.56	6.03	140	110	
14:05	46.08	250	15.97	0.634	4.83	6.03	151	79.2	
14:10									stopped pumping, clogged
									pulled and cleaned
14:15								>1000	restarted pump
14:20	46.08	250	17.64	0.626	4.40	6.15	126	>1000	
14:25	46.08	250	16.91	0.694	4.97	6.00	146	185	
14:30	46.08	250	16.67	0.677	5.41	6.00	163	50.0	
14:35	46.08	250	16.55	0.662	5.50	6.00	169	32.8	
14:40	46.08	250	16.63	0.654	5.58	5.99	178	17.0	
14:45	46.08	250	16.51	0.649	5.68	6.00	182	17.5	
14:50	46.08	250	16.52	0.642	5.75	5.99	190	6.0	
14:55	46.08	250	16.50	0.635	5.76	5.99	191	3.4	
15:00	46.08	250	16.48	0.633	5.80	5.98	194	3.0	
15:05	46.08	250	16.48	0.632	5.84	5.98	193	2.7	
15:10									Unfiltered Sample LMW-12 Collected
15:12									Filtered Sample LMW-12F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-14

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/14/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 8.77 gallons WELL TD: 100 ft PUMP INTAKE DEPTH: 95 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:35	46.21								Static water level
13:00									pump on
13:10	46.21	250	20.39	0.348	6.61	5.28	179	987	
13:15	46.21	250	19.95	0.315	6.92	5.31	175	>1000	
13:20	46.21	250	20.25	0.316	6.97	5.30	178	901	
13:25	46.21	250	19.96	0.311	7.17	5.30	186	716	
13:30	46.21	250	19.83	0.283	7.12	5.33	194	481	
13:40	46.21	250	20.19	0.259	7.29	5.31	204	320	
13:50	46.21	250	19.79	0.212	7.67	5.27	217	216	
14:00	46.21	250	19.80	0.218	7.60	5.20	230	208	
14:05	46.21	250	20.12	0.219	7.52	5.20	233	187	
14:10	46.21	250	19.86	0.220	7.44	5.18	236	180	
14:15	46.21	250	20.11	0.214	6.74	5.21	240	154	
14:20	46.21	250	20.06	0.205	6.77	5.21	242	150	
14:25	46.21	250	19.83	0.206	6.80	5.21	245	127	
14:30	46.21	250	19.48	0.196	7.37	5.19	249	111	
14:35	46.21	250	19.31	0.189	7.35	5.17	253	95.7	
14:40	46.21	250	19.03	0.185	7.41	5.16	257	81.2	
14:45	46.21	250	19.03	0.184	7.39	5.16	259	76.4	
14:50	46.21	250	19.03	0.182	7.38	5.15	260	71.8	
14:55	46.21	250	19.02	0.183	7.35	5.15	260	71.0	
15:00									Unfiltered Sample LMW-14 Collected
15:15									Filtered Sample LMW-14F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-16

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/14/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 8.55 gallons WELL TD: 99.2 ft PUMP INTAKE DEPTH: 95 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:21	46.72								Static water level
10:22									pump on
10:25	46.72	200	18.77	0.161	6.35	7.69	253	236	
10:30	46.73	200	16.04	0.175	6.60	7.77	324	316	
10:35	46.73	200	15.62	0.178	6.53	4.00	346	293	
10:40	46.73	200	15.61	0.179	6.23	3.81	354	239	
10:45	46.73	200	15.57	0.178	5.98	3.74	366	225	
10:50	46.73	200	15.41	0.180	6.18	3.68	372	173	
10:55	46.73	200	14.16	0.180	6.20	3.64	376	113	
11:00	46.73	200	13.84	0.181	6.26	3.61	381	82.6	
11:05	46.73	200	13.55	0.182	6.34	3.60	382	75.1	
0.535	46.73	200	13.43	0.182	6.02	3.60	382	62.2	
11:15	46.73	200	13.38	0.183	5.97	3.55	383	57.3	
11:20	46.73	200	13.36	0.183	5.92	3.54	383	52.8	
11:20									Unfiltered Sample LMW-16 Collected
11:22									Filtered Sample LMW-16F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-18

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/14/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 16.67 gallons WELL TD: 150 ft PUMP INTAKE DEPTH: 145 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:05	47.74								Static water level
9:45									pump on
9:55	47.74	250	17.49	0.313	11.49	5.11	319	5.1	
10:05	47.74	250	17.05	0.309	12.83	5.07	332	7.0	
10:15	47.74	250	17.41	0.309	12.50	5.02	341	10.6	
10:25	47.74	250	17.61	0.313	12.50	5.02	347	34.5	
10:30	47.74	250	17.46	0.309	12.31	4.94	355	13.0	
10:35	47.74	250	17.44	0.312	12.36	4.98	356	0.2	
10:40	47.74	250	17.51	0.308	12.37	5.01	355	0.0	
10:45	47.74	250	17.48	0.307	12.42	4.96	358	0.0	
10:50									Unfiltered Sample LMW-18 Collected
10:52									Filtered Sample LMW-18F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-19

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/14/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 130.1 gallons WELL TD: 248 ft PUMP INTAKE DEPTH: 243 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:20	48.74								Static water level
9:30									pump on
9:37									Water!
9:45	48.74	250	20.84	0.194	3.24	5.40	290	0.0	
9:55	48.74	250	19.78	0.199	3.11	5.40	290	0.0	
10:05	48.74	250	19.70	0.198	2.87	5.46	288	0.0	
10:15	48.74	250	19.62	0.200	2.85	5.50	289	0.0	
10:25	48.74	250	19.83	0.200	2.86	5.53	287	0.0	
10:30	48.74	250	19.88	0.200	2.87	5.35	297	0.0	
10:35	48.74	250	19.97	0.199	2.85	5.35	292	0.0	
10:40	48.74	250	19.97	0.199	2.86	5.38	291	0.0	
10:45									Unfiltered Sample LMW-19 Collected
10:47									Filtered Sample LMW-19F Collected
									Tubing would not fit back into the well,
									bagged for later us.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-20

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 17.08 gallons WELL TD: 150 ft PUMP INTAKE DEPTH: 145 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
14:50	45.24								Static water level
15:00									pump on, no water
15:20									pulled pump, replaced, got water
15:20	45.33	250	23.27	0.218	9.41	5.63	242	>1000	
15:30	45.28	250	19.05	0.237	8.94	5.46	263	>1000	
15:35	45.27	250	17.65	0.243	8.91	5.43	270	548.0	
15:40	45.25	250	19.02	0.241	8.71	5.45	273	199.0	
15:50	45.10	250	18.41	0.238	7.88	5.41	280	74.6	
15:55	45.08	250	17.71	0.241	8.37	5.41	283	52.1	
16:00	45.19	250	17.80	0.240	8.36	5.44	254	36.3	
16:05	45.20	250	18.22	0.239	8.96	5.45	287	27.2	
16:10	45.20	250	17.45	0.240	8.92	5.45	290	26.5	
16:15	45.20	250	17.36	0.240	8.97	5.44	292	26.8	
16:20	45.20	250	17.43	0.239	8.93	5.45	292	25.5	
16:25									Unfiltered Sample LMW-20 Collected
16:27									Filtered Sample LMW-20F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-21

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 9/13/2017	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 10.65 gallons WELL TD: 110.5 ft PUMP INTAKE DEPTH: 105 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
15:00	45.16								Static water level
15:10									pump on
15:20	45.00	250	32.18	0.264	4.66	5.85	233	39.0	
15:30	45.01	250	29.40	0.268	4.43	5.61	247	26.4	
15:35	45.03	250	27.81	0.275	4.98	5.62	253	20.4	
15:40	45.04	250	26.35	0.273	5.55	5.51	257	30.0	
15:50	45.08	250	25.02	0.271	5.86	5.61	244	36.4	
15:55	45.08	250	24.69	0.272	6.08	5.55	247	39.7	
16:00	45.14	250	23.78	0.274	5.52	5.52	234	48.7	
16:05	45.19	250	23.48	0.276	5.61	5.50	235	48.6	
16:10	45.19	250	23.25	0.277	5.68	5.47	234	49.3	
16:15									Unfiltered Sample LMW-21 Collected
16:17									Filtered Sample LMW-21F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump with HDPE tubing

Analytical Parameters: TAL Metals (Total and Field Filtered), and PFAs

AECOM

WELL NO. MW-2

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/14/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 5.9 gallons WELL TD: 54.2 ft PUMP INTAKE DEPTH: 51 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:10	45.10								Static water level
9:10									pump on
9:15	45.11	250	12.46	0.166	1.41	6.24	161.4	13.2	
9:20	45.11	250	12.50	0.171	0.26	6.25	176.8	13.6	
9:25	45.11	250	12.51	0.173	0.63	6.25	179.7	13.3	
9:30	45.11	250	12.48	0.171	0.24	6.25	180.1	13.7	
9:35	45.11	250	12.48	0.165	0.39	6.23	183.9	12.8	
9:40	45.11	250	12.53	0.158	9.11	6.23	189.1	10.6	
9:45	45.11	250	12.54	0.158	9.09	6.22	190.5	11.1	
9:50	45.11	250	12.50	0.156	9.21	6.21	193.8	10.3	
9:52									Unfiltered Sample LMW-2 Collected
9:54									Filtered Sample LMW-2F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-3

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/14/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 5.7 gallons WELL TD: 53.9 ft PUMP INTAKE DEPTH: 51 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:20	45.14								Static water level
9:20									pump on
9:25	45.14	300	11.37	0.176	7.79	6.01	162.0	22.6	
9:30	45.14	300	11.38	0.176	6.95	6.02	162.1	21.1	
9:35	45.14	300	11.58	0.174	7.82	6.02	165.4	22.4	
9:40	45.14	300	11.81	0.169	7.94	6.05	162.6	22.1	
9:45	45.14	300	11.88	0.169	8.30	6.05	162.0	22.3	
9:50	45.14	300	11.97	0.171	8.31	6.06	161.7	17.4	
9:55	45.14	300	11.82	0.172	8.48	6.08	161.5	17.3	
10:00	45.14	300	11.86	0.172	8.61	6.08	161.4	15.90	
10:02									Unfiltered Sample LMW-3 Collected
10:04									Filtered Sample LMW-3F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-4

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/14/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 5.2 gallons WELL TD: 53.4 ft PUMP INTAKE DEPTH: 51.0 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:25	45.48								Static water level
9:25									pump on
9:30	45.48	250	12.34	0.160	10.44	6.55	195.8	51.0	
9:35	45.48	250	12.64	0.156	12.10	6.60	194.4	45.4	
9:40	45.48	250	12.87	0.157	14.11	6.73	198.6	40.6	
9:45	45.48	250	12.85	0.157	14.20	6.74	198.9	42.4	
9:50	45.48	250	12.85	0.159	14.64	6.78	201.2	40.2	
9:55	45.48	250	12.75	0.160	14.78	6.82	204.8	37.6	
10:00	45.48	250	12.70	0.161	14.74	6.83	206.2	34.8	
10:05	45.48	250	12.71	0.161	14.76	6.83	206.3	34.8	
10:10	45.48	250	12.62	0.161	14.64	6.83	207.6	31.8	
10:15	45.48	250	12.79	0.164	14.59	6.83	209.4	29.9	
10:20	45.48	250	12.90	0.165	14.41	6.83	211.6	28.4	
10:22									Unfiltered Sample LMW-4 Collected
10:24									Filtered Sample LMW-4F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-5

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/14/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 1.8 gallons WELL TD: 50 ft PUMP INTAKE DEPTH: 49 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:10	47.19								Static water level
10:15									pump on
10:25	47.19	250	12.95	0.441	0.59	6.28	-126.6	126.3	
10:35	47.19	250	12.93	0.427	0.44	6.27	-147.7	94.0	
10:40	47.19	250	13.01	0.400	0.45	6.26	-157.8	75.8	
10:45	47.19	250	13.00	0.374	0.83	6.23	-157.6	48.0	
10:50	47.19	250	12.98	0.349	0.93	6.20	-168.6	35.9	
10:55	47.19	250	13.10	0.333	1.34	6.18	-164.3	27.6	
11:00	47.19	250	13.05	0.320	1.60	6.16	-159.7	24.4	
11:05	47.19	250	13.05	0.319	1.59	6.16	-159.5	22.8	
11:10	47.19	250	13.10	0.315	1.60	6.16	-159.3	22.7	
11:12									Unfiltered Sample LMW-5 Collected
11:14									Filtered Sample LMW-5F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-6

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/14/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 143 gallons WELL TD: 265 ft PUMP INTAKE DEPTH: 259 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:50	45.98								Static water level
9:55									pump on, no water
10:05	45.98	250	11.37	0.103	11.17	6.94	85.2	9.5	
10:15	45.98	250	11.46	0.103	10.83	5.94	110.9	9.0	
10:25	45.98	250	11.69	0.103	10.61	5.95	143.3	6.9	
10:35	45.98	250	11.43	0.103	10.58	5.95	148.8	7.1	
10:40	45.98	250	11.71	0.103	10.51	5.94	155.5	6.7	
10:45	45.98	250	11.58	0.103	10.52	5.94	160.3	6.5	
10:50	45.98	250	11.60	0.103	10.51	5.94	163.1	6.5	
10:55	45.98	250	11.63	0.103	10.52	5.94	163.6	6.5	
11:00									Unfiltered Sample LMW-6 Collected
11:02									Filtered Sample LMW-6F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-7

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/13/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 1.42 gallons WELL TD: 54.7 ft PUMP INTAKE DEPTH: 50 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
	45.99								Static water level 11/12/2018
9:00	45.95								Static water level 11/13/2018
9:00									pump on
9:20	45.95	250	13.40	0.148	8.35	5.35	221.2	92.6	
9:25	45.95	250	13.33	0.146	11.54	5.29	245.3	38.1	
9:30	45.95	250	13.27	0.144	13.26	5.29	261.5	13.1	
9:35	45.95	250	13.28	0.146	13.83	5.30	269.6	7.5	
9:40	45.95	250	13.27	0.145	14.31	5.28	280.5	5.0	
9:45	45.95	250	13.29	0.144	14.78	5.26	293.8	3.2	
9:50	45.95	250	13.30	0.146	14.83	5.25	295.7	3.0	
9:55	45.95	250	13.30	0.146	14.89	5.25	298.2	2.7	
10:01									Unfiltered Sample LMW-7 Collected
10:03									Filtered Sample LMW-7F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-10

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/12/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 3.7 gallons WELL TD: 50 ft PUMP INTAKE DEPTH: 48 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:20	44.40								Static water level
11:25									pump on
11:35	44.40	250	13.40	0.141	10.84	5.65	162.5	10.2	
11:40	44.40	250	13.35	0.145	9.89	5.56	209.5	6.7	
11:45	44.40	250	13.15	0.149	9.89	5.62	234.6	4.7	
11:50	44.40	250	13.25	0.159	10.49	5.75	251.4	3.7	
11:55	44.40	250	13.31	0.165	10.90	5.79	264.8	2.8	
12:00	44.40	250	13.23	0.165	11.13	5.81	270.4	2.9	
12:05	44.40	250	13.22	0.165	11.14	5.80	273.5	2.5	
12:10	44.40	250	13.23	0.165	11.17	5.80	274.8	2.3	
12:15									Unfiltered Sample LMW-10 Collected
12:17									Filtered Sample LMW-10F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-12

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/12/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 0.87 gallons WELL TD: 49.3 ft PUMP INTAKE DEPTH: 47.0 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:40	43.98								Static water level
8:45									pump on
8:55	44.21	250	14.73	0.262	8.09	7.30	62.6	286.1	
9:00	44.21	250	15.01	0.309	6.57	6.86	29.8	114.4	
9:05	44.21	250	15.02	0.339	1.45	6.75	33.0	75.3	
9:10	44.21	250	14.96	0.354	1.41	6.68	39.5	45.2	
9:15	44.21	250	15.01	0.387	0.95	6.57	44.3	31.7	
9:20	44.21	250	15.05	0.364	0.32	6.54	58.7	20.3	
9:25	44.21	250	15.09	0.365	0.75	6.50	65.9	14.8	
9:30	44.21	250	15.02	0.359	2.15	6.44	77.1	10.1	
9:35	44.21	250	15.04	0.356	2.24	6.40	85.6	9.8	
9:40	44.21	250	15.02	0.356	2.35	6.40	86.4	9.2	
9:45								+MS/MSD	Unfiltered Sample LMW-12 Collected
9:47								+MS/MSD	Filtered Sample LMW-12F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-14

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/12/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 9.11 gallons WELL TD: 100 ft PUMP INTAKE DEPTH: 95 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:50	44.14								Static water level
8:50									pump on
8:55	44.12	250	15.08	0.170	3.29	6.45	69.4	181.0	
9:00	44.11	250	14.73	0.143	4.68	5.53	104.1	150.9	
9:05	44.11	250	14.62	0.139	5.23	5.46	120.1	121.4	
9:10	44.11	250	14.59	0.138	5.83	5.42	141.3	91.9	
9:15	44.11	250	14.58	0.137	6.23	5.39	157.2	59.6	
9:20	44.11	250	14.63	0.138	6.17	5.37	168.4	34.3	
9:25	44.11	250	14.60	0.138	6.33	5.38	172.9	30.0	
9:30	44.11	250	14.60	0.138	6.54	5.36	177.3	27.2	
9:35									Unfiltered Sample LMW-14 Collected
9:38									Filtered Sample LMW-14F Collected
							11:10	Duplicate	Unfiltered Sample LMW-64 Collected
							11:12	Duplicate	Filtered Sample LMW-64F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-16

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/12/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 8.90 gallons WELL TD: 99.2 ft PUMP INTAKE DEPTH: 95 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:30	44.62								Static water level
11:30									pump on
11:35	44.62	250	12.87	0.123	5.04	5.70	77.7	287.1	
11:40	44.62	250	12.84	0.142	4.62	4.99	121.8	258.9	
11:45	44.62	250	12.79	0.147	5.32	4.86	178.9	162.2	
11:50	44.62	250	12.87	0.148	5.23	4.86	199.0	129.4	
11:55	44.62	250	12.87	0.148	5.22	4.86	206.6	101.1	
12:00	44.62	250	12.85	0.148	5.19	4.86	209.7	80.2	
12:05	44.62	250	12.90	0.148	4.98	4.87	213.3	68.3	
12:10									Unfiltered Sample LMW-16 Collected
12:12									Filtered Sample LMW-16F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-17

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1 SHEETS
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/13/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 0.55 gallons WELL TD: 49.85 ft PUMP INTAKE DEPTH: 47 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:20	46.50								Static water level
9:20									pump on
9:30	46.50	200	13.40	0.314	0.75	6.40	67.3	270.4	
9:35	46.49	200	13.39	0.309	0.63	6.35	67.0	224.9	
9:40	46.49	200	13.36	0.302	0.48	6.28	67.2	182.0	
9:45	46.49	200	13.36	0.296	0.45	6.19	68.4	101.4	
9:50	46.49	200	13.36	0.290	0.40	6.13	69.9	94.8	
10:00									Unfiltered Sample LMW-17 Collected
10:02									Filtered Sample LMW-17F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-18

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/13/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 17.00 gallons WELL TD: 150 ft PUMP INTAKE DEPTH: 145 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:55	45.70								Static water level
12:00									pump on
12:10	45.70	200	12.61	0.241	8.69	5.77	137.7	28.7	
12:15	45.70	200	12.57	0.242	7.67	5.48	156.4	33.4	
12:20	45.70	200	12.55	0.243	6.63	5.35	175.6	24.7	
12:25	45.70	200	12.42	0.245	6.22	5.31	189.0	12.7	
12:30	45.70	200	12.41	0.246	5.93	5.29	199.5	6.2	
12:35	45.70	200	12.41	0.246	5.68	5.29	203.0	4.9	
12:40	45.70	200	12.40	0.246	5.46	5.29	203.7	5.0	
12:45	45.70	200	12.39	0.246	5.60	5.29	204.2	5.2	
12:50									Unfiltered Sample LMW-18 Collected
12:52									Filtered Sample LMW-18F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-19

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/13/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 131.5 gallons WELL TD: 248 ft PUMP INTAKE DEPTH: 243 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:45	46.55								Static water level
11:45									pump on
11:55	46.55	200	12.55	0.129	3.92	5.62	270.6	0.1	
12:00	46.55	200	12.56	0.129	2.07	5.55	279.5	0.0	
12:05	46.55	200	12.55	0.129	1.85	5.55	280.2	0.0	
12:10	46.55	200	12.54	0.129	1.77	5.55	280.5	0.0	
12:15	46.55	200	12.54	0.129	1.68	5.56	281.1	0.0	
12:20	46.55	200	12.55	0.129	1.55	5.56	281.9	0.0	
12:25	46.55	200	12.47	0.129	1.31	5.56	282.8	0.0	
12:30	46.55	200	12.47	0.129	1.20	5.56	283.2	0.0	
12:35	46.55	200	12.47	0.129	1.15	5.57	283.6	0.0	
12:40									Unfiltered Sample LMW-19 Collected
12:42									Filtered Sample LMW-19F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-20

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/12/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 17.41 gallons WELL TD: 150 ft PUMP INTAKE DEPTH: 145 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:52	43.22								Static water level
12:55									pump on, no water
13:05	43.22	250	14.48	0.222	6.33	5.92	171.7	1553.4	
13:10	43.22	250	14.17	0.233	7.82	5.66	186.8	1448.4	
13:15	43.22	250	14.08	0.233	8.74	5.62	190.8	845.7	
13:20	43.22	250	14.03	0.232	9.76	5.63	194.3	488.7	
13:25	43.22	250	14.04	0.232	9.36	5.63	194.9	452.7	
13:30	43.22	250	13.99	0.231	9.97	5.64	196.5	290.3	
13:35	43.22	250	14.02	0.231	10.72	5.66	198.0	204.8	
13:40	43.22	250	14.10	0.231	11.26	5.66	199.3	158.9	
13:45	43.22	250	14.11	0.230	11.64	5.67	201.6	98.2	
13:50	43.22	250	14.15	0.229	11.79	5.68	202.6	87.4	
13:55	43.22	250	14.22	0.227	12.01	5.69	203.5	84.6	
14:00									Unfiltered Sample LMW-20 Collected
14:02									Filtered Sample LMW-20F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-21

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 11/12/2018	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster and Jim Christopher	

ONE WELL VOLUME : 10.97 gallons WELL TD: 110.5 ft PUMP INTAKE DEPTH: 105 ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:45	43.20								Static water level
12:55									pump on
13:05	43.20	250	14.31	0.225	11.40	5.49	243.2	95.3	
13:10	43.20	250	14.23	0.224	12.08	5.44	240.9	77.7	
13:15	43.20	250	14.20	0.223	12.17	5.43	238.9	71.4	
13:20	43.20	250	14.16	0.222	12.53	5.42	233.0	57.2	
13:25	43.20	250	14.14	0.222	12.59	5.42	231.7	55.3	
13:30	43.20	250	14.15	0.222	12.67	5.43	228.2	56.6	
13:35	43.20	250	14.21	0.222	12.70	5.44	223.4	54.8	
13:40									Unfiltered Sample LMW-21 Collected
13:42									Filtered Sample LMW-21F Collected
									1/4" (OD) poly and 1/4" (OD) poly
									bonded tubing put back into the well.

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-1R

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/9/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: S Wright	

ONE WELL VOLUME : gallons WELL TD: ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:00	43.64	200	12.52	0.184	9.74	6.09	82.2	902	
11:05	43.64	200	12.56	0.191	9.33	5.99	101.1	554	
11:10	43.64	200	12.58	0.212	9.21	5.85	121.1	302	
11:15	43.65	200	12.61	0.222	9.04	5.84	141.7	206	
11:20	43.65	200	12.65	0.239	8.93	5.84	152.2	113.9	
11:25	54.66	200	12.66	0.242	8.80	5.84	153.6	61.3	
11:30	54.66	200	12.67	0.244	8.85	5.84	154.4	32.1	
11:35	54.66	200	12.68	0.245	8.83	5.84	154.8	26.0	
11:40	54.66	200	12.69	0.245	8.81	5.84	155.2	25.5	
11:45									sample MW-RU
11:47									sample MW-RF

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-2

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/19/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: S. Wright	

ONE WELL VOLUME : gallons WELL TD: 54.2 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:20	43.60	200	13.01	0.133	9.21	6.10	156.2	14.3	
12:25	43.61	200	13.05	0.013	9.10	6.09	161.1	12.4	
12:30	43.61	200	13.00	0.137	8.92	6.07	170.2	11.3	
12:35	43.62	200	12.95	0.132	8.83	6.08	178.3	10.2	
12:40	43.62	200	12.94	0.133	8.82	6.08	181.3	9.9	
12:45	43.62	200	12.93	0.134	8.81	6.08	183.8	9.6	
12:50	43.62	200	12.93	0.134	8.80	6.08	184.1	9.4	
12:55	43.62	200	12.94	0.134	8.79	6.08	184.6	9.2	
13:00	43.62	200	12.94	0.134	8.78	6.08	185.0	9.0	
13:15									sample MW-2U, MS/MSD
13:17									sample MW-2F, MS/MSD

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-3

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/9/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: C. Foster	

ONE WELL VOLUME : gallons WELL TD: 53.9 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
12:15	43.61								
12:20	43.61	200							pump on
12:30	43.61	200	13.04	0.400	1.07	6.14	-47.1	12.7	
12:40	43.61	200	13.05	0.365	1.92	6.10	-5.6	8.9	
12:45	43.61	200	13.08	0.352	2.77	6.06	37.9	6.8	
12:50	43.61	200	13.06	0.340	3.08	6.06	38.0	6.5	
13:00	43.61	200	13.06	0.320	4.17	6.06	70.7	4.8	
12:10	43.61	200							
13:20	43.61	200	12.98	0.309	5.30	6.07	92.6	3.8	
13:30	43.61	200	13.00	0.310	5.50	6.07	97.4	3.9	
13:40	43.61	200	12.96	0.310	5.62	6.07	103.4	3.6	
13:50	43.61	200	12.96	0.308	5.66	6.07	107	3.6	
13:55									sample MW-3U
13:57									sample MW-3F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-4

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/9/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: C. Foster	

ONE WELL VOLUME : gallons WELL TD: 53.4 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:45	44.05								static water level
12:00									pump on
12:05	44.05	250	13.59	0.117	3.72	6.03	153.3	329.4	
12:10	44.05	250	13.65	0.120	8.58	6.36	154.5	347.2	
12:20	44.05	250	13.66	0.124	9.85	6.44	162.9	361.1	
12:30	44.05	250	13.64	0.127	10.23	6.49	181.8	39.8	
12:40	44.05	250	13.64	0.131	11.24	6.55	204.4	35.1	
12:45	44.05	250	13.66	0.135	11.46	6.60	229.3	32.0	
12:50	44.05	250	13.67	0.137	12.02	6.62	258.3	34.8	
13:00	44.05	250	13.64	0.142	11.47	6.65	264.4	28.5	
13:10	44.05	250	13.62	0.147	11.48	6.71	298.8	28.1	
13:15	44.05	250	13.62	0.147	11.52	6.72	300.0	27.4	
13:25	44.05	250	13.58	0.148	11.55	6.72	305.4	27.3	
13:30									sample MW-4U
13:32									sample MW-4F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-5

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/9/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: C. Foster	

ONE WELL VOLUME : gallons WELL TD: 50 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µ/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:45	45.60								static, pump on
9:50	45.60	250	13.16	0.182	5.60	5.75	37.4	974.3	
10:00	45.60	250	13.15	0.180	5.98	5.76	759.0	954.3	
10:10	45.60	250	13.23	0.188	5.96	5.78	117.9	940.1	
10:20	45.60	250	13.28	0.198	6.82	5.82	131.6	912.4	
10:30	45.60	250	13.12	0.204	7.18	5.85	143.3	899.9	
10:40	45.60	250	13.19	0.203	7.41	5.88	147.6	900.5	
10:50	45.60	250	12.12	0.214	7.25	5.84	155.7	881.6	
11:00	45.60	250	13.07	0.208	7.39	5.89	155.3	882.7	
11:05	45.60	250	13.06	0.207	7.44	5.89	155.6	889.5	
11:10	45.60	250	13.06	0.207	7.47	5.90	1555	887.3	
11:15									Collected MW-5U
11:17									Collected MW-5F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-6

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/9/2020	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster	

ONE WELL VOLUME : gallons WELL TD: 265 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:00	45.45								static
9:45	45.45	200	10.66	0.094	2.39	6.35	126.8	8.1	slow pumping, switched compressors
9:55	45.45	200	10.88	0.094	3.50	6.24	175.7	9.3	
10:00	45.45	200	10.89	0.095	3.54	6.19	190.4	12.0	
10:05	45.45	200	10.97	0.095	2.62	6.12	214.1	8.4	
10:10	45.45	200	11.85	0.098	9.73	6.02	237.9	9.0	
10:20	45.45	200	12.41	0.099	4.92	5.97	255.9	7.2	
10:30	45.45	200	12.50	0.099	1.92	5.96	270.0	8.5	
10:40	45.45	200	12.56	0.099	1.89	5.95	278.4	8.3	
10:50	45.45	200	11.54	0.099	1.90	5.95	279.2	8.1	
10:55									Collect MW-6U
10:57									Collect MW-6f
11:00									collect duplicate MW-56U
11:02									collect duplicate MW-56F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-7

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED:	
CLIENT: NYSDEC		NAME OF INSPECTOR:	

ONE WELL VOLUME : gallons WELL TD: 54.7 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:15	44.27	200	11.13	0.127	9.03	7.11	62.9		
9:20	44.27	200	12.93	0.769	7.95	6.40	437		
9:25	44.27	200	12.98	0.644	7.10	6.22	21.9		
9:30	44.27	200	13.04	0.583	6.67	6.08	17.7		
9:35	44.27	200	13.07	0.561	6.65	6.07	18.2		
9:40	44.27	200	13.09	0.547	6.64	6.07	19.3		
9:45	44.28	200	13.10	0.541	6.65	6.07	20.3		
9:50	44.28	200	13.11	0.533	6.67	6.07	20.6		
10:00	44.28	200	13.12	0.529	6.67	6.07	20.7		
10:00									collect MW-7U
10:02									collect MW-7F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-10

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/10/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster	

ONE WELL VOLUME : gallons WELL TD: 50 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:40	42.67								static
11:45	42.67	250							pump on
11:50	42.67	250	12.96	0.204	7.75	6.21	23.4	20.9	
12:00	42.67	250	12.94	0.207	8.08	6.30	244.5	13.7	
12:10	42.67	250	12.92	0.208	8.10	6.31	247.4	11.4	
12:20	42.67	250	12.87	0.209	8.10	6.33	254.3	9.2	
12:30	42.67	250	12.86	0.208	8.13	6.34	258.0	7.6	
12:35	42.67	250	12.86	0.209	8.15	6.34	258.2	7.6	
12:40	42.67	250	12.86	0.209	8.14	6.34	258.1	7.7	
12:45									Collect MW-10U
12:47									Collect MW-10F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-12

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/10/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Steve Wright	

ONE WELL VOLUME : gallons WELL TD: 49.3 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:30	42.25	200	14.20	0.055	8.38	8.00	86.0	173	
9:35	42.40	200	15.01	0.042	5.65	5.84	138.0	404.2	
9:40	42.50	200	14.94	0.066	5.72	5.81	144.2	808.2	
9:45	42.61	200	14.93	0.123	5.80	5.76	145.8	80.7	
9:50	42.66	200	14.92	0.196	5.86	5.75	147.1	65.1	
9:55	42.71	200	14.95	0.205	5.62	5.74	151.8	70.6	
10:00	42.74	200	14.96	0.210	5.56	5.74	152.9	16.4	
10:05	42.76	200	14.97	0.212	5.52	5.74	154.1	15.7	
10:10	45.78	200	14.96	0.214	5.47	5.74	155.1	15.9	
10:15									Collect MW-12U
10:17									Collect MW-12F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-14

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/10/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Steve Wright	

ONE WELL VOLUME : gallons WELL TD: 100 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
10:55	42.33	200	14.13	0.115	6.46	6.46	148.9	59.2	
11:00	42.38	200	14.36	0.156	5.44	5.44	213.0	38.7	
11:05	42.44	200	14.34	0.162	5.37	5.37	226.1	40.5	
11:10	42.47	200	14.32	0.164	5.35	5.35	232.1	67.2	
11:15	42.48	200	14.32	0.165	5.33	5.33	236.7	59.9	
11:20	42.50	200	14.28	0.164	5.31	5.31	240.9	44.5	
11:25	42.51	200	14.37	0.169	5.27	5.27	247.6	36.2	
11:30	42.53	200	14.37	0.169	5.26	5.26	250.6	30.7	
11:35	42.53	200	14.38	0.170	5.24	5.24	252.4	28.4	
11:40	42.53	200	14.38	0.171	5.23	5.23	253.6	29.7	
11:45									Collect MW-14U
11:47									Collect MW-14F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-16

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/10/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster	

ONE WELL VOLUME : gallons WELL TD: 99.2 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
11:30	42.85								static
11:31	42.85	200							pump on
11:45	42.85	200	12.97	0.136	5.01	5.29	133.8	406.2	
11:50	42.85	200	12.87	0.149	6.89	4.62	208.8	246.7	
12:00	42.85	200	12.87	0.148	6.71	4.66	296.5	175.7	
12:10	42.85	200	12.85	0.148	6.41	4.64	326.9	145.4	
12:20	42.85	200	12.83	0.147	6.39	4.63	370.7	95.1	
12:30	42.85	200	12.82	0.146	6.34	4.64	387.9	73.1	
12:35	42.85	200	12.48	0.146	6.32	4.64	398.3	59.2	
12:40	42.85	200	12.73	0.145	6.19	4.65	408.4	51.1	
12:50	42.85	200	12.71	0.144	6.35	4.65	411.6	37.7	
12:55	42.85	200	12.72	0.144	6.40	4.66	414.7	32.0	
13:00	42.85	200	12.73	0.144	6.39	4.66	415.2	31.8	
13:05	42.85	200	12.73	0.144	6.39	4.66	415.4	31.7	
13:10									Collect MW-16U
13:12									Collect MW-16F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-17

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/11/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Steve Wright	

ONE WELL VOLUME : gallons WELL TD: 49.85 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
13:30	44.55								Static
10:45	44.55	100							pump on
10:50	44.55	100	10.78	0.380	2.40	5.87	234.2	63.8	
11:00	44.55	100	9.82	0.308	0.47	5.88	229.3	69.6	
11:10	44.55	100	8.55	0.298	0.27	5.89	228.5	43.3	
11:20	44.55	100	8.58	0.298	0.15	5.89	228.4	39.7	
11:30	44.55	100	8.59	0.297	0.14	5.89	288.3	40.2	
11:35									Collect MW-17U
11:37									Collect MW-17F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-18

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/10/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster	

ONE WELL VOLUME : gallons WELL TD: 150 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:50	43.98								Static
9:15	43.98								Pump on
9:30	43.98	200	11.87	0.150	8.35	6.47	238.5	13.0	
9:40	43.98	200	12.13	0.143	7.59	5.90	286.6	13.5	
9:50	43.98	200	12.25	0.145	7.56	5.84	313.8	13.2	
10:00	43.98	200	12.26	0.157	7.28	5.77	333.9	12.5	
10:10	43.98	200	12.30	0.148	7.02	5.49	349.2	8.3	
10:20	43.98	200	12.24	0.181	6.62	5.40	378.8	9.6	
10:30	43.98	200	12.22	0.184	6.65	5.29	349.3	7.1	
10:35	43.98	200	12.19	0.184	6.63	5.27	358.2	6.6	
10:40	43.98	200	12.18	0.185	6.72	5.27	359.3	6.7	
10:45	43.98	200	12.17	0.019	6.74	5.27	359.8	6.3	
10:50									Collect MW-18U
10:52									Collect MW-18F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-19

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/10/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster	

ONE WELL VOLUME : gallons WELL TD: 248 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:45	44.92								Static
9:10	44.92								Pump on
9:20	44.92	280	12.16	0.169	0.43	5.67	158.4	2.5	
9:30	44.92	280	12.21	0.169	0.29	5.65	181.2	2.5	
9:40	44.92	280	12.26	0.169	0.23	5.64	191.2	2.6	
9:50	44.92	280	12.26	0.169	0.17	5.63	200.7	2.6	
10:00	44.92	200	12.27	0.170	0.15	5.62	205.1	2.7	
10:10	44.92	200	12.28	0.170	0.14	5.62	208.3	2.7	
10:15	44.92	200	12.26	0.171	0.13	5.61	209.5	2.8	
10:20									Collect MW-19U
10:22									Collect MW-19F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-20

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/11/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Celeste Foster	

ONE WELL VOLUME : gallons WELL TD: 150 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
8:45	41.55								Static
9:00	41.55	250							Pump on
9:15	41.55	250	11.86	0.104	5.93	6.50	146.8	363.4	
9:25	41.55	250	12.30	0.120	10.08	5.91	207.8	188.9	
9:30	41.55	250	12.61	0.133	10.53	5.94	216.9	145.3	
9:40	41.55	250	12.87	0.143	11.17	5.94	252.1	116.3	
9:45	41.55	250	12.74	0.152	11.40	5.94	229.3	107.8	
9:55	41.55	250	12.80	0.166	11.77	5.91	235.7	82.2	
10:00	41.55	250	12.60	0.175	11.93	5.90	238.5	78.4	
10:05	41.55	250	12.50	0.182	11.74	5.86	240.0	79.8	
10:10	41.55	250	12.48	0.181	11.82	5.89	240.8	73.4	
10:15									Collect MW-20U
10:17									Collect MW-20F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)

AECOM

WELL NO. MW-21

WELL SAMPLING FORM	PROJECT: Liberty Industrial Finishing	PROJECT No.: 602770271	SHEET: 1 OF 1
LOCATION: Brentwood, NY		DATE WELL SAMPLED: 12/11/2019	
CLIENT: NYSDEC		NAME OF INSPECTOR: Steve Wright	

ONE WELL VOLUME : gallons WELL TD: 110.5 ft PUMP INTAKE DEPTH: ft

Time	Depth to Water (ft)	Purge Rate (mL/min)	FIELD MEASUREMENTS						REMARKS
			Temp. (°C)	Conduct. (µs/cm)	DO (mg/L)	pH	ORP	Turbidity (ntu)	
9:10	41.57	200	7.10	0.223	3.85	5.98	196.8	25.1	
9:15		200						26.1	
9:20	41.57	200	8.71	0.264	20.60	5.72	220.5	25.1	
9:25	41.57	200	8.63	0.248	4.11	5.66	232.7	38.8	
9:30									YSI not wokring
9:35									
9:40	41.57	200	7.61	0.242	3.69	5.66	288.0	29.8	
9:45	41.57	200	8.85	0.248	3.72	5.65	242.7	41.0	
9:55	41.57	200	7.34	0.242	3.68	5.66	250.7	35.2	
10:00	41.57	200	9.97	0.260	4.06	5.67	252.4	36.6	
10:05	41.57	200	13.28	0.280	4.78	5.61	256.6	51.2	
10:10	41.57	200	13.32	0.281	5.11	5.59	257.8	39.8	
10:15	41.57	200	13.38	0.282	5.34	5.59	256	29.2	
10:20	41.57	200	13.40	0.282	5.61	5.56	267.7	25.0	
10:25	41.57	200	13.41	0.282	5.64	5.56	268.3	24.1	
10:30	41.57	200	13.42	0.282	5.69	5.56	268.5	24.3	
10:35									Collect MW-21U
10:37									Collect MW-21F

Pump Type: Bladder Pump

Analytical Parameters: TAL Metals (Total and Field Filtered)