Former Nelson Foundry

11-02 BROADWAY

LONG ISLAND CITY, QUEENS, NEW YORK

Sidewalk Investigation Report

Prepared for:

New York City Office of Environmental Remediation

100 Gold Street, 2nd Floor

New York, NY 10038

Prepared by:

AKRF, Inc.

440 Park Avenue South

New York, New York 10016

(212) 696-0670

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SIDEWALK INVESTIGATION REPORT

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CERTIFICATION

I, Marc Godick, L.E.P., am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Sidewalk Investigation for the site at 11-02 Broadway, Long Island City, NY. I am responsible for the content of this Sidewalk Investigation Report, have reviewed its contents and certify that this report is accurate to the best of my knowledge and contains the current environmental information and data regarding the property.

Marc S. Godick, L.E.P.	12/23/13	
Qualified Environmental Professional	Date	Signature

EXECUTIVE SUMMARY

The Sidewalk Investigation Report provides information to assist with establishment of remedial action objectives and selection of a remedy for potential future development on the project site. The subsurface investigation described in this document was performed in accordance with the approved project-specific Work Plan and Quality Assurance Project Plan.

Site Location and Current Usage

The Nelson Foundry site occupies an approximately 0.67-acre parcel located at 11-02 Broadway in Long Island City, Queens, New York, and is identified as Section 3, Tax Block 316, Lot 1 (the "Site") in the New York City Department of Finance tax map. The property encompasses Lot 1 with full frontage along 33rd Avenue and 11th Street, and partial frontage along Broadway and 12th Street. A Site Location Map is provided as Figure 1 and a Site plan as Figure 2. At the time of this subsurface investigation, the Site was vacant with no structures. The buildings adjacent to the Site were used as automobile repair and automobile parts storage facilities.

Summary of Past Uses of Site and Areas of Concern

Available information about the Site status and history was limited to the text of a Phase I Environmental Site Assessment (ESA) conducted by TRC Environmental (TRC) in August 2005. The Phase I ESA identified several on-Site conditions that may have affected the Site. The identified conditions included six Recognized Environmental Conditions (RECs) and five Potential Recognized Environmental Conditions (PRECs) on the Site, including the potential historical use and storage of on-site drums containing elevated levels of sulfuric acid, hydrofluoric acid, sodium hydroxide, lead, chromium, arsenic, and an unknown solid material. A leaking electrical transformer, soil staining, and petroleum staining were also identified.

The Site was reportedly developed in the 1930s for industrial usage, including iron and steel wholesaling, a machine shop, and zinc galvanizing. The Site had been vacant since 1994. The Phase I ESA indicated that storage tanks on the Site historically contained sulfuric acid, hydrofluoric acid, sodium hydroxide, zinc ammonium chloride, molten zinc and fuel oil. Drums and smaller containers on the Site contained lacquer adhesive, sulfuric acid, hydrofluoric acid, zinc ammonium chloride, zinc oxide and solid zinc pieces, liquid sludge and solid wastes. TRC also observed drums of unknown contents. Historically, some waste was discharged to the municipal sewer and a neutralization pit was used to neutralize spent baths of acids and bases. Historical Sanborn Maps identified a transformer room present on the northeastern portion of the

Site. TRC observed a leaking oil-containing transformer during their reconnaissance as part of their 2005 Phase I ESA.

According to files summarized in the Phase I ESA, previous investigations and cleanup operations were performed by New York City Department of Environmental Protection (NYCDEP) and United States Environmental Protection Agency (USEPA) between 1988 and 2000. Remedial efforts, including stabilization and securing of vats, sumps, drums and other containers (including off-site disposal of numerous drums and other containers) was performed. TRC identified vent/fill pipes and the possible locations of suspect underground storage tanks (USTs). Large amounts of solid waste were also present and suspected asbestos containing materials (ACMs) were noted by TRC at the Site.

Summary of the Work Performed under the Sidewalk Investigation

The City of New York does not currently own or have access rights to the Site; therefore an off-site investigation was performed in the adjacent sidewalks as the closest representation to assess on-site groundwater condition and the potential of any off-site contamination migration. The investigation included the following scope of work:

1. Installed six soil borings around the Site perimeter, and collected 12 soil samples for chemical analysis from the soil borings to evaluate soil quality.
2. Installed six permanent monitoring wells around the Site perimeter, and collected six groundwater samples for chemical analysis from the monitoring wells to evaluate groundwater quality.
3. Installed six soil vapor probes around the Site perimeter and collected six soil vapor samples and one ambient air sample for chemical analysis.

Summary of Hydrogeological Findings

The following geologic and hydrogeologic conditions were noted during the investigation:

1. Depth to groundwater was between 7.4 and 8.8 feet below ground surface at the Site according to groundwater level measurements.
2. Based on the survey of monitoring wells and corresponding water table elevations, groundwater is anticipated to flow north-northeast. Regional groundwater flow is expected to be towards the East River, located approximately 750 feet to the north-northwest of the Site.

3. The stratigraphy of the Site from sidewalk grade consists of up to 15 feet of historic fill comprising brown sand and silt, gravel, brick, asphalt, underlain by native soil consisting of dark gray silt and sand.

4. Bedrock was not encountered during this study.

Summary of Environmental Findings

1. The results of the soil sampling completed during this sidewalk investigation indicated three volatile organic compounds (VOCs), benzene, ethylbenzene and total xylenes, were detected at concentrations exceeding NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and/or NYSDEC Protection of Groundwater Soil Cleanup Objectives (PWSCOs) in one of the 12 soil samples collected. No VOCs were detected in the soil samples at concentrations greater than the NYSDEC Restricted Residential Soil Cleanup Objectives (RRSCOs). Petroleum-like odor and elevated PID readings in soil headspace were noted in soil samples collected from three soil borings. Up to 20 semi-volatile organic compounds (SVOCs) were detected in 11 soil samples with a maximum total concentration of 115,530 parts per billion (ppb). SVOCs exceeding the UUSCOs, PWSCOs, and/or RRSCOs were detected in five soil samples with a maximum concentration of 14,000 ppb for benzo(b)fluoranthene in one sample. Concentrations of metals exceeding the UUSCOs included arsenic, cadmium, lead, mercury and zinc in nine soil samples. Only three metals exceeded the RRSCOs—lead in two soil samples and cadmium and zinc in one soil sample. Polychlorinated biphenyls (PCBs) were not detected in any of the soil samples. Detections of the pesticides 4,4' DDT and chlordane exceeded UUSCOs in two soil samples and 4,4' DDE exceeded the UUSCO in one soil sample. No pesticides exceeded applicable NYSDEC RRSCOs or PWSCOs. The observed contamination may be attributed to on-site or off-site sources. The elevated concentrations in soil, although greater on the southern and eastern side of the Site, did not identify a specific contamination source area or widespread soil contamination across the entire perimeter of the Site.
2. The results of the groundwater sampling showed two of the six groundwater samples had VOC(s) exceeding Class GA standards for benzene, chloroform and/or

isopropylbenzene. Seven metals were detected above Class GA standards in dissolved samples including cadmium, iron, magnesium, manganese, lead, sodium and zinc. Although some of the detected metals, including some of those at concentrations above the Class GA standards, are typical of groundwater quality in Queens, there were some elevated concentrations which may indicate a release or spill in the vicinity. Two pesticides were detected in one sample above Class GA standards. No SVOCs or PCBs were detected in the groundwater samples at concentrations greater than the NYSDEC Class GA standards.

3. The results of the soil vapor and ambient air sampling conducted during this investigation showed 16 VOCs detected in the seven samples. There was no detection of compounds for which air guideline values AGVs have been established by New York State Department of Health (NYSDOH). VOCs associated with petroleum [including benzene, toluene, ethylbenzene, xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, n-heptane, n-hexane, and 2,2,4-trimethylpentane] were detected at concentrations up to 7,400 micrograms per cubic meter ($\mu g/m^3$). Solvent-related VOCs [including acetone, carbon disulfide, cyclohexane, methyl ethyl ketone (MEK)] were detected at concentrations up to 8,400 $\mu g/m^3$. Low level VOC concentrations were also noted in the ambient air sample.
4. Based on an evaluation of the data and information from the investigation, there is some contaminated soil, groundwater and soil vapor present in the sidewalks surrounding the subject Site, particularly the southern and eastern portions of the Site in soil in borings SB-4, SB-5 and SB-6 and groundwater in monitoring wells MW-3 and MW-4. Elevated soil vapor concentrations were noted in all samples, with highest total VOC concentrations at location SV-3. These sampling locations are the closest to the adjacent auto repair establishments.
5. The observed contamination may be attributed to on-site or off-site sources. Prior to any soil disturbance or change in land use, including redevelopment of the Site, on-site investigation activities and remedial activities corresponding to the work are recommended.

SIDEWALK INVESTIGATION REPORT

1.0 SITE BACKGROUND

A sidewalk investigation was performed around the perimeter of the Nelson Foundry Site located at 11-02 Broadway in Long Island City, New York (Site). The City of New York does not currently own or have access rights to the Site; therefore an off-site investigation was performed in the adjacent sidewalks as the closest representation to assess of on-site groundwater condition and the potential of any off-site contamination migrations.

This Sidewalk Investigation Report summarizes the findings of a subsurface investigation performed along the sidewalks around the Site between August 27 and September 5, 2013. The objective of this investigation was to gain an understanding of potential impacts along the perimeter of the Site emanating from historic on-site operations. Work was performed in accordance with the Revised Sidewalk Investigation Work Plan and associated Brownfields Site-Specific Quality Assurance Project Plan (QAPP) dated August 2013.

1.1 Site Location and Current Usage

The Site occupies an approximately 0.67-acre parcel identified as Section 3, Block 316, Lot 1 on the Queens Tax Assessor's Map, and within the Central Park, New York 7.5' United States Geological Service (USGS) Quadrangle. Figure 1 shows the Site location. The property encompasses Lot 1 with full frontage along 33rd Avenue and 11th Street, and partial frontage along Broadway and 12th Street. At the time of this subsurface investigation, the Site was vacant with no structures. The buildings adjacent to the Site were used as automobile repair and automobile parts storage facilities.

1.1 Site History

Available information about the Site status and history was limited to the text of a Phase I ESA conducted by TRC in August 2005. The Phase I ESA identified several on-site conditions that may have affected the Site. The identified conditions included six Recognized Environmental Conditions (RECs) and five Potential Recognized Environmental Conditions (PRECs) on the Site, including the potential historical use and storage of on-site drums containing elevated levels of sulfuric acid, hydrofluoric acid, sodium hydroxide, lead, chromium, arsenic, and an unknown solid material. A leaking electrical transformer, soil staining, and petroleum staining were also identified.

The Site was reportedly developed in the 1930s for industrial usage, including iron and steel wholesaling, a machine shop, and zinc galvanizing. The Site had been vacant since 1994. The Phase I ESA indicated that storage tanks on the Site historically contained sulfuric acid, hydrofluoric acid, sodium hydroxide, zinc ammonium chloride, molten zinc and fuel oil. Drums and smaller containers on the Site contained lacquer adhesive, sulfuric acid, hydrofluoric acid, zinc ammonium chloride, zinc oxide and solid zinc pieces, liquid sludge and solid wastes. TRC also observed drums of unknown contents. Historically, some waste was discharged to the municipal sewer and a neutralization pit was used to neutralize spent baths of acids and bases. Historical Sanborn Maps identified a transformer room present in the northeastern portion of the Site. TRC observed a leaking oil-containing transformer during their reconnaissance as part of a 2005 Phase I ESA.

According to files summarized in the Phase I ESA, previous investigations and cleanup were performed by New York City Department of Environmental Protection (NYCDEP) and United States Environmental Protection Agency (USEPA) between 1988 and 2000. Remedial efforts, including stabilization and securing of vats, sumps, drums, and other containers (including off-site disposal of numerous drums and other containers) was performed.

No known assessments of the overall on-site soil or groundwater have been conducted. Based on historical and potential on-going presence of known hazardous materials improperly stored and discharged on the Site, and the presence of a dirt floor located at the subject property during operations, TRC concluded that it was likely that Site soils and/or groundwater have been adversely impacted as a result of historic operations. TRC identified vent/fill pipes and the possible locations of suspect underground storage tanks (USTs). Large amounts of solid waste were also present and suspected asbestos containing materials (ACMs) were noted by TRC at the Site. The adjacent office building on the Site was not inspected during the Phase I; however a 275-gallon aboveground storage tank (AST) and a boiler room were identified within the building. The Site was listed in the UST, AST, Resource Conservation and Recovery Act, No Longer Regulated (RCRA NLR), Toxic Release Inventory System (TRIS), and Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) databases.

2.0 PROJECT MANAGEMENT

2.1 Project Organization

The Qualified Environmental Profession (QEP) responsible for preparation of this Sidewalk Investigation Report is Marc Godick, L.E.P.

2.2 Health and Safety

All work described in this report was performed in full compliance with applicable laws and regulations, including Site and Occupational Safety and Health Administration (OSHA) worker safety requirements and Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements. The work described in this report was also performed in accordance with the Health and Safety Plan (HASP) submitted to USEPA as part of the August 2013 Revised Sidewalk Investigation Work Plan.

2.3 Materials Management

Investigation derived waste generated during the completion of the investigation was managed in accordance with applicable laws and regulations. Due to the lack of observed contamination in soil borings, soil cuttings were returned to their respective bore holes and patched at the surface. Purge water and development water was transferred to 55-gallon drums and transported off-site for disposal at Cycle Chem, Inc. of Lewisberry, Pennsylvania.

3.0 REMEDIAL INVESTIGATION ACTIVITIES

The following activities were performed as part of the investigation:

1. Installed six soil borings around the Site perimeter, and collected 12 soil samples for chemical analysis from the soil borings to evaluate soil quality.
2. Installed six permanent monitoring wells around the Site perimeter, and collected six groundwater samples for chemical analysis from the monitoring wells to evaluate groundwater quality.
3. Installed six soil vapor probes around the Site perimeter and collected six soil vapor samples and one ambient air sample for chemical analysis.

A map showing the location of soil borings, well locations, and soil vapor sample locations is provided as Figure 2.

3.1 Soil Borings

Prior to the commencement of Site work, the drilling contractor, Zebra Environmental of Lynbrook, N.Y., contacted Dig Safely New York to request the placement of sidewalk mark-outs and identification of utility lines and underground appurtenances that may exist at the Site. In addition, a geophysical survey was conducted by Enviroprobe Service, Inc. of Moorestown, New Jersey in the vicinity of anticipated work areas to clear proposed boring locations for subsurface utilities and to locate other buried structures.

Zebra Environmental operators used a direct-push Geoprobe drill rig to advance six soil borings around the perimeter of the Site between August 27 and 28, 2013. The boring locations were established along the Site perimeter (sidewalks) due to access restrictions on-site and New York City Department of Transportation sidewalk opening permits were obtained. Soil borings extended to depths of approximately 16 feet to 20 feet below sidewalk grade around the perimeter of the Site. Boring depth varied targeting approximately 7 feet below the observed water table to provide adequate depth of the wetted screen for groundwater sampling. Two borings were advanced on the western sidewalk (SB-1 and SB-2) to a depth of 17 feet below grade, one boring was advanced on the northern sidewalk (SB-3) to a depth of 20 feet below grade, one boring (SB-4) was advanced on the eastern sidewalk of the Site to a depth of 17 feet below grade and two borings (SB-5 and SB-6) were advanced on the southern sidewalk to a depths of 16 and 17 feet below grade, respectively.

Soil samples were obtained using a stainless steel, macro-core sampler with an internal acetate liner. Soil cores were field-screened using a photoionization detector (PID), which measures relative concentrations of VOCs in the soil. The PID was calibrated at the beginning of each field day with 100 parts per million (ppm) isobutelyne calibration gas. At each boring location, AKRF field personnel recorded and documented subsurface conditions.

Boring logs were prepared by AKRF personnel and are attached in Appendix A. Borings were sampled continuously and soil samples were screened for evidence of contamination by visual means and using a calibrated PID. Petroleum-like odor and elevated PID readings in soil headspace were noted by AKRF personnel in soil samples collected from borings NF-SB-3, NF-SB-4, and NF-SB-5. Detailed results of soil screening are recorded on the soil boring logs.

3.2 Well Installation

Each of the six soil borings were retrofitted with a two-inch diameter polyvinyl chloride (PVC) groundwater monitoring well. The wells were constructed with a 10-foot long pre-packed, 0.010-inch slotted well screen installed inside the direct-push casing. Each well was furnished with a locking well cap and a flush-mounted well cover. Following installation, each well was developed by pumping and surging in order to remove accumulated fines and establish a hydraulic connection with the surrounding aquifer. Wells were developed until turbidity was less than 50 nephelometric turbidity units (NTUs) for three successive readings and until water quality indicators stabilized to within 10% for pH, temperature, and specific conductivity for three successive readings, or until at least three well volumes were purged from the well.

Following installation of the wells, each well was surveyed by DPK Consulting, LLC of Middlesex, NJ, a New York State licensed surveyor, to determine their accurate location and elevation.

3.3 Soil Vapor Point Installation

The soil vapor sampling points were installed using a remote access direct-push probe by advancing a 0.75-inch diameter hollow probe rod fitted with an expendable 6-inch long stainless steel screened drive point to depths of 5.5 feet below grade at SV-1, SV-2, SV-3, SV-4, SV-5, and SV-6. Dedicated Teflon-lined polyethylene tubing with threaded fittings was connected to the probe. The hollow probe rod was then removed and the boring was backfilled with clean silica sand to at least one foot above the screen. Hydrated bentonite was used to fill the remaining void around the sampling tubing to ground surface.

3.4 Sample Collection and Chemical Analysis

Soil, groundwater, and soil vapor have been sampled and evaluated in this report. The sampling performed and presented in this report provides a basis for evaluation of subsurface Site conditions and potential remedial action.

Soil Sampling

Twelve soil samples were collected for chemical analysis during this investigation. Two soil samples were collected from each of the six soil borings—one from 0 to 2 feet below grade and one from the 2-foot interval exhibiting evidence of contamination (odor, staining, and/or elevated PID reading). In the absence of contamination, the subgrade sample was collected from the 2-foot interval above the groundwater interface.

Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported on the soil boring logs included in Appendix A. Figure 2 shows the location of soil borings completed as part of this investigation.

Groundwater Sampling

Groundwater samples were collected one week following development using low-flow purging and sampling methods based on the procedures described in the USEPA's Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers (EPA 542-S-02-001). Apparent petroleum sheen was noted on the purge water for monitoring well MW-1. No measureable light non-aqueous phase liquid (LNAPL) or dense non-aqueous phase liquid (DNAPL) were detected with the oil water interface probe. The samples were collected and containerized in accordance with New York State Department of Environmental Conservation (NYSDEC) and USEPA protocols. Each container was properly labeled and placed in a cooler under standard chain-of-custody procedures for transport to TestAmerica Laboratories. Groundwater sampling logs are provided in Appendix B.

Soil Vapor Sampling

Six soil vapor points were installed and six soil vapor samples and one ambient air sample were collected for chemical analysis on August 27, 2013. Soil vapor samples were screened from approximately 5 to 5.5 feet below sidewalk grade.

Prior to collection, each sampling point was purged of three sampler volumes using a peristaltic pump at a flow rate of approximately 0.1 liters/minute. During purging, a plastic bucket was placed over each sampling point and sealed to the concrete slab using duct tape along

the perimeter and helium gas was introduced through a small hole in the bucket to saturate the atmosphere around the sample port with helium gas. Purged vapors were collected in a Tedlar bag and field-screened for organic vapors using a PID. The purged air was also monitored using a portable helium detector to check for short-circuiting of ambient air into the vapor sampling point. All soil vapor points passed the seal integrity tests with helium readings being measured as not detected (ND). Total VOC concentrations measured in the field with the PID were recorded in each of the soil vapor sample locations at levels ranging from 1.8 ppm to 58.7 ppm.

After purging, each probe was connected via Teflon-lined polyethlylene tubing to a laboratory-supplied 6-liter SUMMA® canister equipped with a flow regulator set to collect a sample over a 2-hour sampling period. One ambient air sample was collected outside adjacent to the rear yard of the Site in a 6-liter SUMMA® canister for an approximately 2-hour sampling period conducted concurrently with the soil vapor samples to establish background conditions. Immediately after opening the flow control valve, the initial SUMMA® canister vacuum (inches of mercury) was noted. After two hours, the flow controller valve was closed, the final vacuum noted, and the canister placed in a shipping carton for delivery to the laboratory.

Soil vapor sampling locations are shown in Figure 2. Soil vapor sampling logs are included in Appendix C. Methodologies used for soil vapor assessment conform to the *NYSDOH Final Guidance on Soil Vapor Intrusion, October 2006.*

Chemical Analysis

Chemical analytical work presented in this report has been performed under a quality assurance program that includes the following:

Factor	**Description**
Quality Assurance Officer	The chemical analytical QA/QC is directed by Marc Godick, LEP, of AKRF.
Third Party Data Validator	The third-party data validation was performed by Renee Cohen of Premier Environmental Services.
Chemical Analytical Laboratory	Chemical analytical laboratory used in the investigation is Test America of Edison, New Jersey and Burlington, Vermont, both NYS Environmental Laboratory Approval Program (ELAP) certified laboratories.

Factor	Description
Chemical Analytical Methods	Soil analytical methods: • Target Compound List (TCL) VOCs by EPA Method 8260; • TCL SVOCs by EPA Method 8270; • Target Analyte List (TAL) Metals by EPA Method 6010 and 7471; • TCL Pesticides by EPA Method 8081; • Polychlorinated biphenyls (PCBs) by EPA Method 8082. Groundwater analytical methods: • TCL VOCs by EPA Method 8260; • TCL SVOCs by EPA Method 8270; • TAL Metals by EPA Method 6010 and 7471 (total and dissolved); • TCL Pesticides by EPA Method 8081; • PCBs by EPA Method 8082. Soil vapor and ambient air analytical methods: • VOCs by Method TO-15.

Quality Assurance/Quality Control (QA/QC) Sampling

QA/QC procedures were used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures were used (1) to document that samples are representative of actual conditions at the Site and (2) to identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses were used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process.

QA/QC samples were analyzed at Test America of Edison, New Jersey and Burlington, Vermont, both ELAP-certified laboratories. QA/QC sampling consisted of the following:

- one soil duplicate sample,

- one groundwater duplicate sample,
- one aqueous trip blank sample,
- two aqueous field blank samples, and
- one ambient air SUMMA® sample.

QA/QC samples were submitted with the collected soil, groundwater, and soil vapor samples. The duplicates and field blank samples were analyzed for the same analyte list as the accompanying samples and the trip blank samples were submitted for laboratory analysis for VOCs by EPA Method 8260. The ambient air sample was submitted for laboratory analysis for VOCs by EPA Method TO-15. Laboratory QA/QC sampling also included matrix spike/matrix spike duplicate (MS/MSD) analyses.

Duplicate samples for soil had high relative percent difference for numerous SVOCs and metals; however, soil samples are expected to have a greater variance due to difficulties in contaminant properties in soil, particularly in non-homogenous fill material as was identified in the soil samples collected during this investigation. In general, the compounds detected in the parent and duplicate sample were consistent. Duplicate samples for groundwater indicated relative percent differences for all detected compounds were less than the 40% criteria established in the QAPP.

A trace, estimated level of the VOC chloroform was detected in the trip blank sample. Chloroform is a common laboratory contaminant and this is not likely indicative of a compromise of on-site decontamination. No other VOCs were detected in the trip blank.

There were some low level detections of VOCs in the field blank samples consisting of traces of methylene chloride and toluene in the soil sampling field blank and a trace level of toluene in the groundwater sampling field blank. Methylene chloride is a common laboratory contaminant and this is not likely indicative of a compromise of on-site decontamination. Toluene was also found in the ambient air sample and may be attributable to an airborne source rather than a compromise of decontamination. Review of field blank results indicate that the associated data sets are accurate.

Low level VOC concentrations were also noted in the ambient air sample. These VOCs were detected at concentrations well below the soil vapor concentrations and are not likely to be related to Site contamination or sample compromise.

Soil samples NF-SB-3(8-10'), NF-SB-3B(8-10') [duplicate sample for NF-SB-3(8-10')], and NF-SB-4(8-10') required dilution in the laboratory for VOC analyses due to high overall

VOC concentrations, including compounds not identified in the Target Compound List. Soil samples NF-SB-4(8-10') and NF-SB-6(8-10') also required laboratory dilution for SVOC analysis. Laboratory dilutions for these analyses resulted in elevated detection limits, some of which were greater than the corresponding SCOs.

Groundwater samples for SVOC analyses did not require dilution; however, the method detection limits were higher than the Class GA standards for numerous SVOCs. Groundwater samples NF-GW-1 and NF-GW-1B (duplicate sample for NF-GW-1) required dilution in the laboratory for metals analyses, resulting in a detection limit greater than the corresponding Class GA standard for numerous total and dissolved metals.

The third-party data validation was performed by Premier Environmental Services and reported in Data Usability Summary Reports (DUSRs) for soil, groundwater, and soil vapor laboratory analytical data sets (see Appendix D). No significant issues were identified in the DUSRs. The data validator identified additional qualifiers for specific compounds for specific samples. The DUSRs concluded that the data sets were acceptable for use with the additional data qualifiers. These qualifiers have been added to the data summary tables provided as Tables 1 through 9. The changes included the addition of a "J" qualifier indicating that the contaminant detections in the samples were considered estimated values, or in several cases, concentrations considered by the lab as an estimate or flagged due to detections in the blanks were amended to "U" qualifiers, indicating not detected at the detection limit indicated.

Results of Chemical Analyses

Laboratory data for soil, groundwater, and soil vapor are summarized in Tables 1 through 9. Laboratory data deliverables and DUSRs for all samples evaluated in this investigation report are provided in digital form in Appendix D.

4.0 ENVIRONMENTAL EVALUATION

4.1 Geological and Hydrogeological Conditions

Stratigraphy

Soil observed in the borings during the sidewalk investigation consisted of primarily historic fill material comprising sand and silt with varying amounts of gravel. The historic fill material contained pieces of asphalt, brick and concrete. The 10 to 15 foot-thick fill layer was underlain by apparently native soil of silt and sand.

Hydrogeology

During the advancement of soil borings, saturated (wet) soil was observed at approximately 10 feet below grade in soil borings SB-1, SB-2, SB-4, SB-5 and SB-6. In soil boring SB-3, saturated (wet) soil was observed at approximately 20 feet below grade; however, the deeper-than-expected apparent water level was attributed to a lower-permeability soil. Well gauging and water levels in Site monitoring wells at the time of groundwater sampling on September 5, 2012 were as follows:

Well ID	Top of Casing Elevation (ft.)	Depth to Groundwater (ft. below TOC)	Groundwater Elevation (ft.)
MW-1	10.39	8.51	1.88
MW-2	9.52	7.62	1.90
MW-3	8.57	7.90	0.67
MW-4	9.69	7.94	1.75
MW-5	10.15	7.38	2.77
MW-6	11.35	8.81	2.54

Notes:
1. Elevation datum NAVD 1988.
2. TOC = top of PVC casing

Based on the well survey and static water level measurements taken one week following well development, groundwater flows towards the north-northeast as shown on the Groundwater

Elevation Plan provided as Figure 3. Regional groundwater flow is expected to be towards the East River, located approximately 750 feet to the north-northwest of the Site. Actual groundwater flow at the Site can be affected by many factors, including geology, past/current pumping of groundwater in the vicinity, past filling activities, subsurface openings or obstructions such as basements, underground parking garages or underground utilities, and other factors beyond the scope of this study. Groundwater in this part of Queens is not used as a source of drinking water.

4.2 Soil Chemistry

Twelve soil samples were collected for laboratory analysis from borings SB-1 through SB-6. In addition, one duplicate soil sample was collected for QA/QC purposes. Soil sample analytical results were compared to the NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs), NYSDEC Soil Cleanup Objectives for Protection of Groundwater (PWSCO) and the NYSDEC Restricted Residential Use Soil Cleanup Objectives (RRSCOs) listed in 6 NYCRR Subpart 375.

A summary table of data for chemical analyses performed on soil samples is included in Tables 1 through 4 and sampling locations with a summary of elevated concentrations are shown on Figure 4.

Volatile Organic Compounds in Soil

The results of the soil sampling completed during the sidewalk investigation showed one soil sample, NF-SB-4(8-10'), contained VOCs detected at concentrations exceeding NYSDEC UUSCOs for benzene, ethylbenzene, and total xylenes. The benzene and ethylbenzene concentrations were also greater than the PWSCOs in soil sample NF-SB-4(8-10'). No VOCs were detected at concentrations greater than the RRSCOs. Because of required dilution in the laboratory by factor of 50 for VOC analyses for sample NF-SB-4(8-10'), other TCL VOCs had detection limits greater than the corresponding SCOs. As such, other target and/or non-target VOCs may be present in the samples at concentrations below the elevated detection limit. The shallow sample from this boring, NF-SB-4(0-2'), had only one VOC detected with benzene at a trace, estimated concentration. Soil VOC results are summarized in Table 1.

A review of the analytical results indicates that VOCs were detected in six of the 12 soil samples and in the associated aqueous field blank. The VOCs, acetone, benzene, carbon

disulfide, ethylbenzene, methylene chloride, toluene and total xylenes were detected in one or more of the soil samples. Acetone and methylene chloride are common laboratory contaminants.

Total VOCs were detected at concentrations below 1,500 parts per billion (ppb). Excluding sample NF-SB-4(8-10'), no total VOC concentration from any one sample exceeded 25 ppb for TCL VOCs. Although no VOCs were detected for Target Compound List parameters, samples NF-SB-3(8-10') and NF-SB-3B(8-10') [duplicate sample for NF-SB-3(8-10')] required dilution in the laboratory for VOC analyses due to high overall VOC concentrations; therefore unknown VOCs were indicated outside of the standard compound list.

Based on the low VOC concentrations across much of the samples on the Site perimeter, the limited presence of VOCs in soil may be attributable to urban fill. The elevated concentrations in soil samples on the eastern perimeter of the Site appear to indicate an area of VOC contamination is present in soil, possibly attributable to an on-site or off-site source.

Semi-volatile Organic Compounds in Soil

A review of the analytical results indicates that up to 20 SVOCs were detected in 11 of the 12 soil samples with a maximum total SVOC concentration of 115,530 ppb in sample NF-SB-4(8-10'). SVOCs exceeding the UUSCOs, PWSCOs, and RRSCOs were detected in four soil samples [NF-SB-4(8-10'), NF-SB-5(0-2'), NF-SB-6(0-2') and NF-SB-6(8-10')] with a maximum concentration of 14,000 ppb for benzo(b)fluoranthene in sample SB-NF-6(8-10').

In addition, in sample NF-SB-1(0-2'), one SVOC, indeno(1,2,3-cd)pyrene, exceeded the UUSCO and RRSCO but was below the PWSCO. All SVOC detections in the remaining five soil samples (and duplicate) were at concentrations below the UUSCOs, RRSCOs, and PWSCOs. Soil samples NF-SB-4(8-10') and NF-SB-6(8-10') required laboratory dilution for SVOC analysis, resulting in elevated detection limits greater than the corresponding SCOs for some TCL SVOCs. As such, other target and/or non-target SVOCs may be present in the samples at concentrations below the elevated detection limits. A trace, estimated level of one SVOC (di-n-butyl phthalate) was detected in the aqueous field blank sample. Soil sample results for SVOCs are listed in Table 2.

Eight SVOCs which exceeded their respective UUSCOs and RRSCOs in at least one soil sample consisted of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. These polycyclic aromatic hydrocarbons (PAHs) are typical of urban fill and do not appear to be indicative of a substantial contamination release or spill. Notwithstanding, naphthalene and 2-methylnaphthalene were detected at higher concentrations in sample SB-4(8-10). While the levels of these compounds did not exceed their UUSCOs, PWSCOs, or RRSCOs, the higher concentrations along with field evidence of contamination suggest a source of non-fill related SVOC contamination.

Metals in Soil

A review of the analytical results indicates that 19 of the 23 metals analyzed were detected in all 12 soil samples analyzed. Five metals (arsenic, cadmium, lead, mercury and zinc) were detected in one or more samples with a concentration greater than their respective UUSCO. Three metals (cadmium, lead, and zinc) also exceeded the PWSCOs and RRSCOs. The elevated metals with concentrations greater than PWSCOs and RRSCOs were detected in three soil samples [NF-SB-4(0-2'), NF-SB-5(0-2') and NF-SB-5(7-9')].

Arsenic was detected in sample NF-SB-1(8-10') at a concentration of 14.1 ppm (the UUSCO is 13 ppm). Cadmium was detected in sample NF-SB-5(7-9') at a concentration of 13.3 ppm (the UUSCO is 2.5 ppm). Lead was detected at concentrations greater than the UUSCO of 63 ppm in eight soil samples with a maximum concentration of 711 ppm in sample NF-SB-5(0-2'). Mercury was detected in six samples at a concentration greater than the UUSCO with a maximum concentration of 0.47 ppm (the UUSCO is 0.18 ppm) in sample NF-SB-6(0-2'). Zinc was detected at levels greater than the UUSCO in six soil sample with the maximum concentration detected in sample NF-SB-5(7-9') at concentration of 21,200 ppm (the UUSCO is 109 ppm).

One additional metal exceeded the PWSCOs only; chromium was detected in three additional soil samples [NF-SB-3(0-2'), NF-SB-3(8-10'), and NF-SB-5(0-2') at concentrations of 22.5 ppm, 29.5 ppm, and 27 ppm, respectively]. No metals were detected in the aqueous field blank sample.

The elevated metals concentrations may be attributable to on-site contamination. Detected concentrations of other detected metals in the soil samples analyzed are either naturally occurring or may be attributable to urban fill (such as arsenic and lead). Analytical results for metals are presented in Table 3.

Polychlorinated Biphenyls and Pesticides in Soil

A review of the laboratory analytical results indicates that PCBs were not detected in any of the 12 soil samples.

A review of the analytical results indicates that no pesticides were detected at concentrations exceeding NYSDEC PWSCOs or RRSCOs. Two of the 12 soil samples analyzed had up to three pesticides detected at concentrations greater than UUSCOs. Two compounds (4,4'-DDT, and chlordane) were detected in two of the 12 soil samples [NF-SB-2(0-2') and NF-SB-2(8-10')] at maximum concentrations of 40 ppb (the UUSCO is 3.3 ppb) and 160 ppb (the UUSCO is 94 ppb) respectively. One pesticide, 4,4'-DDE, was also detected in soil sample NF-SB-2(8-10') at a concentration of 13 ppb (the UUSCO is 3.3 ppb). Soil sample results for PCBs and pesticides are listed in Table 4.

4.3 Groundwater Chemistry

Results from groundwater samples were compared to NYSDEC Class GA Ambient Water Quality Standards (drinking water standards), although groundwater is not used as a potable source in this part of Queens. Table of data for chemical analyses performed on groundwater samples is included in Tables 5 through 8 and sampling locations with a summary of elevated concentrations are shown on Figure 5.

VOCs in Groundwater

The results of the groundwater sampling showed two of the six samples had VOCs at concentrations exceeding NYSDEC Class GA groundwater standards. In these two samples, elevated VOCs were detected for benzene, chloroform and isopropylbenzene. Benzene was detected in groundwater sample NF-GW-3 at a concentration of 2.6 ppb and in sample NF-GW-4 at a concentration of 1.6 ppb, slightly above the Class GA standard of 1 ppb. Chloroform was detected in groundwater sample NF-GW-3 at a concentration of 10 ppb, slightly above the Class

GA standard of 7 ppb. Isopropylbenzene was detected in groundwater sample NF-GW-3 at a concentration of 81 ppb and in sample NF-GW-4 at a concentration of 10 ppb, above the Class GA standard of 5 ppb. A sheen was noted on the purge water for monitoring well MW-1; however, no TCL VOCs were detected in the corresponding groundwater sample NF-GW-1.

All other VOC detections in the groundwater samples were below the Class GA standards. Trace, estimated levels of two VOCs (chloroform and toluene) were detected in the aqueous field blank and trip blank samples. The VOC concentrations may be reflective of a past history of industrial activities in the area and are potentially attributable to on-site or off-site sources; however, the detections appear to be limited in area. Analytical results for VOCs are summarized in Table 4.

SVOCs in Groundwater

The results of the groundwater sampling showed no groundwater samples had SVOCs detected at concentrations exceeding the Class GA standards. A sheen was noted on the purge water for monitoring well MW-1; however, no TCL SVOCs were detected in the corresponding groundwater sample NF-GW-1. The method detection limits were higher than the Class GA standards for numerous SVOCs for all the groundwater samples collected.

Metals in Groundwater

Eighteen metals were detected in the unfiltered groundwater samples (total metals analysis) and 14 metals were detected in the filtered samples (dissolved metals analysis). Seven metals were detected by both analyses (total and dissolved) at concentrations above Class GA standards: cadmium, iron, magnesium, manganese, lead, sodium and zinc. In addition, chromium was above the Class GA standard in one total (unfiltered) sample (NF-GW-5) but was not detected in any of the filtered samples. Groundwater samples NF-GW-1 and NF-GW-1B (duplicate sample for NF-GW-1) required dilution in the laboratory for metals analyses, resulting in a detection limit greater than the corresponding Class GA standard for numerous total and dissolved metals in those two samples.

In general, concentrations of metals were reduced in the filtered samples suggesting that some of the metals concentrations were due to the presence of sediment/soil particles in the

samples entrained in the samples, resulting in overestimation of actual groundwater concentrations. Although some of the detected metals, including some of those at concentrations above the Class GA standards, are typical of groundwater quality in Queens, there were some elevated concentrations which may indicate on-site or off-site source of contamination. In addition, elevated metals concentrations in groundwater may be due to past use of acids on-site and the resulting increased leaching of metals found in soil and possibly processes related to the former operations. Analytical results for metals are presented in Table 5.

PCBs and Pesticides in Groundwater

No PCBs were detected in the groundwater samples analyzed. Pesticides 4,4'-DDE and 4,4'-DDT were detected at low-level, estimated concentrations (0.078 ppb and 0.089 ppb, respectively) slightly above the Class GA standards (0.04 ppb and 0.05 ppb, respectively) in one sample collected from monitoring well MW-2. No other pesticides were detected in the other groundwater samples collected.

4.4 Soil Vapor Chemistry

Concentrations of VOCs detected in the soil gas samples were compared to the NYSDOH 2006 Guidance for Evaluating Soil Vapor Intrusion air guideline values (AGVs), and the September 2013 NYSDOH Fact Sheet update for tetrachloroethene (PCE). These values provide a means of comparison; however, since these values reflect indoor air conditions, the comparison assumes that any soil vapor detected would completely penetrate into the building, a condition that does not typically occur. In addition, AGVs have only been established for four chlorinated VOCs.

A review of the soil vapor and ambient air sample analytical results identified that there were 16 VOCs detected in each of the seven samples; however, there was no detection of compounds for which AGVs have been established. Many of the detected VOCs were also identified in the ambient air sample. Two VOCs were identified in the ambient air sample, but not in any of the six soil vapor samples.

VOCs were detected in the six soil vapor samples at concentrations ranging from 11 to 8,400 $\mu g/m^3$. VOCs associated with petroleum [including benzene, toluene, ethylbenzene,

xylenes (collectively referred to as BTEX), 1,2,4- and 1,3,5-trimethylbenzene, n-heptane, n-hexane, and 2,2,4-trimethylpentane] were detected at concentrations up to 7,400 micrograms per cubic meter ($\mu g/m^3$). Solvent-related VOCs [including acetone, carbon disulfide, cyclohexane, methyl ethyl ketone (MEK)] were detected at concentrations up to 8,400 $\mu g/m^3$. Note that cyclohexane and MEK may also be related to petroleum compounds. Low level VOC concentrations, including 2,2,4-tripethylpentane, acetone, chloromethane, MEK, n-heptane, n-hexane, toluene, trichlorofluoromethane, and total xylenes, were detected in the ambient air sample. These concentrations were well below soil vapor concentrations and are not likely to be related to Site contamination.

A summary table of data for chemical analyses performed on soil vapor and ambient air samples is included in Table 9. Figure 6 shows the location for soil vapor samples with summary of detected parameters.

4.5 Conclusions

Based on an evaluation of the data and information from the investigation, there is some contaminated soil, groundwater and soil vapor present in the sidewalks surrounding the subject Site, particularly VOCs, SVOCs and metals in soil in borings SB-4, SB-5 and SB-6 on the southern and eastern side of the Site and VOCs in groundwater in monitoring wells MW-3 and MW-4 on the eastern side of the Site. Elevated metals concentrations were identified in groundwater samples throughout the Site perimeter. Elevated soil vapor concentrations were noted in all samples, with highest total concentrations at location SV-3. There were no significant concentrations of chlorinated solvents in soil vapor but there were petroleum hydrocarbons in the soil vapor entirety of the perimeter.

The observed contamination may be attributed to on-site or off-site sources. Prior to any soil disturbance or change in land use, including redevelopment of the property, on-Site investigation activities and remedial activities corresponding to the intended use of the Site are recommended.

TABLES

Table 1
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Groundwater SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	NF-SB-1(0-2') 460-61975-1 8/27/2013 1	NF-SB-1(8-10') 460-61975-2 8/27/2013 1	NF-SB-2(0-2') 460-61975-3 8/27/2013 1	NF-SB-2(8-10') 460-61975-4 8/27/2013 1	NF-SB-3(0-2') 460-61975-5 8/27/2013 1	NF-SB-3B(8-10') 460-61975-6 8/27/2013 50	NF-SB-3(8-10') 460-61975-7 8/27/2013 50
1,1,1-Trichloroethane	**680**	**680**	**100,000**	1.2 UJ	2.4 UJ	1.1 UJ	1.2 UJ	1 UJ	120 U	100 U
1,1,2,2-Tetrachloroethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
1,1,2-Trichloroethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
1,1-Dichloroethane	**270**	**270**	**26,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
1,1-Dichloroethene	**330**	**330**	**100,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
1,2-Dichloroethane	**20**	**20**	**3,100**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
1,2-Dichloropropane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
2-Butanone	**120**	**120**	**100,000**	12 U	24 U	11 U	12 U	10 U	610 U	500 U
2-Hexanone	**NS**	**NS**	**NS**	12 UJ	24 UJ	11 UJ	12 UJ	10 UJ	610 U	500 U
4-Methyl-2-pentanone	**NS**	**NS**	**NS**	12 UJ	24 UJ	11 UJ	12 UJ	10 UJ	610 U	500 U
Acetone	**50**	**50**	**100,000**	12 U	24 U	11 U	16	10 U	610 UJ	500 UJ
Benzene	**60**	**60**	**4,800**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Bromodichloromethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Bromoform	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 UJ	100 UJ
Bromomethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 UJ	100 UJ
Carbon disulfide	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Carbon tetrachloride	**760**	**760**	**2,400**	1.2 UJ	2.4 UJ	1.1 UJ	1.2 UJ	1 UJ	120 U	100 U
Chlorobenzene	**1,100**	**1,100**	**100,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Chloroethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Chloroform	**370**	**370**	**49,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Chloromethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 UJ	100 UJ
cis-1,2-Dichloroethene	**250**	**250**	**100,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
cis-1,3-Dichloropropene	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Dibromochloromethane	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Ethylbenzene	**1,000**	**1,000**	**41,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Methylene Chloride	**50**	**50**	**100,000**	1.2 U	2.4 U	1.6 U	1.2 U	1 U	120 U	100 U
Styrene	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Tetrachloroethene	**1,300**	**1,300**	**19,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Toluene	**700**	**700**	**100,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
trans-1,2-Dichloroethene	**190**	**190**	**100,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
trans-1,3-Dichloropropene	**NS**	**NS**	**NS**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Trichloroethene	**470**	**470**	**21,000**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Vinyl chloride	**20**	**20**	**900**	1.2 U	2.4 U	1.1 U	1.2 U	1 U	120 U	100 U
Xylenes, Total	**260**	**1,600**	**100,000**	3.7 U	7.1 U	3.2 U	3.5 U	3 U	370 U	300 U
Total VOCs	**NS**	**NS**	**NS**	ND	ND	1.6	16	ND	ND	ND

Table 1
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/Kg	NYSDEC Part 375 Unrestricted SCO µg/Kg	NYSDEC Part 375 Groundwater SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	NF-SB-4(0-2') 460-61975-8 8/27/2013 1	NF-SB-4(8-10') 460-61975-9 8/27/2013 50	NF-SB-5(0-2') 460-62062-1 8/28/2013 1	NF-SB-5(7-9') 460-62062-2 8/28/2013 1	NF-SB-6(0-2') 460-62062-3 8/28/2013 1	NF-SB-6(8-10') 460-62062-4 8/28/2013 1	FB20130828 460-62062-5 8/28/2013 1 µg/L
1,1,1-Trichloroethane	**680**	**680**	**100,000**	0.97 UJ	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
1,1,2,2-Tetrachloroethane	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
1,1,2-Trichloroethane	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
1,1-Dichloroethane	**270**	**270**	**26,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
1,1-Dichloroethene	**330**	**330**	**100,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
1,2-Dichloroethane	**20**	**20**	**3,100**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	0.002 U	1 U
1,2-Dichloropropane	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
2-Butanone	**120**	**120**	**100,000**	9.7 U	550 U	21 U	22 U	25 U	20 U	5 U
2-Hexanone	**NS**	**NS**	**NS**	9.7 UJ	550 U	21 UJ	22 UJ	25 UJ	20 UJ	5 U
4-Methyl-2-pentanone	**NS**	**NS**	**NS**	9.7 UJ	550 U	21 UJ	22 UJ	25 UJ	20 UJ	5 U
Acetone	**50**	**50**	**100,000**	9.7 U	550 UJ	21 U	24	25 U	20 U	5 U
Benzene	**60**	**60**	**4,800**	0.43 J	**120**	2.1 U	0.67 J	2.5 U	2 U	1 U
Bromodichloromethane	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Bromoform	**NS**	**NS**	**NS**	0.97 U	110 UJ	2.1 U	2.2 U	2.5 U	2 U	1 U
Bromomethane	**NS**	**NS**	**NS**	0.97 U	110 UJ	2.1 U	2.2 U	2.5 U	2 U	1 U
Carbon disulfide	**NS**	**NS**	**NS**	0.97 U	940	2.1 U	2.2 U	2.5 U	2 U	1 U
Carbon tetrachloride	**760**	**760**	**2,400**	0.97 UJ	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Chlorobenzene	**1,100**	**1,100**	**100,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Chloroethane	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Chloroform	**370**	**370**	**49,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Chloromethane	**NS**	**NS**	**NS**	0.97 U	110 UJ	2.1 U	2.2 U	2.5 U	2 U	1 U
cis-1,2-Dichloroethene	**250**	**250**	**100,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
cis-1,3-Dichloropropene	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Dibromochloromethane	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Ethylbenzene	**1,000**	**1,000**	**41,000**	0.97 U	**1,400**	2.1 U	2.2 U	2.5 U	2 U	1 U
Methylene Chloride	**50**	**50**	**100,000**	0.97 U	110 U	3 U	2.2 U	4.5 U	2 U	1.4
Styrene	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Tetrachloroethene	**1,300**	**1,300**	**19,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Toluene	**700**	**700**	**100,000**	0.97 U	110	2.1 U	2.2 U	2.5 U	2 U	0.29 J
trans-1,2-Dichloroethene	**190**	**190**	**100,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
trans-1,3-Dichloropropene	**NS**	**NS**	**NS**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Trichloroethene	**470**	**470**	**21,000**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Vinyl chloride	**20**	**20**	**900**	0.97 U	110 U	2.1 U	2.2 U	2.5 U	2 U	1 U
Xylenes, Total	**260**	**1,600**	**100,000**	2.9 U	**920**	6.3 U	6.5 U	7.6 U	6.1 U	NA
Total VOCs	**NS**	**NS**	**NS**	0.43	3,490	3	24.67	4.5	ND	1.96

Table 2
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Semivolatile Organic Compounds

Client ID	NYSDEC	NYSDEC	NYSDEC	NF-SB-1(0-2')	NF-SB-1(8-10')	NF-SB-2(0-2')	NF-SB-2(8-10')	NF-SB-3(0-2')
Lab Sample ID	Part 375	Part 375	Part 375	460-61975-1	460-61975-2	460-61975-3	460-61975-4	460-61975-5
Date Sampled	Unrestricted	Groundwater	Restricted	8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/27/2013
Dilution	SCO	SCO	Residential SCO	1	1	1	1	1
µg/Kg	µg/Kg	µg/Kg	µg/Kg					
1,2,4-Trichlorobenzene	NS	NS	NS	35 U	43 U	36 U	36 U	34 U
1,2-Dichlorobenzene	1,100	1,100	100,000	350 U	430 U	360 U	360 U	340 U
1,3-Dichlorobenzene	2,400	2,400	49,000	350 U	430 U	360 U	360 U	340 U
1,4-Dichlorobenzene	1,800	1,800	13,000	350 U	430 U	360 U	360 U	340 U
2,4,5-Trichlorophenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2,4,6-Trichlorophenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2,4-Dichlorophenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2,4-Dimethylphenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2,4-Dinitrophenol	NS	NS	NS	1,000 U	1,300 U	1,100 U	1,100 U	1,000 U
2,4-Dinitrotoluene	NS	NS	NS	70 U	87 U	73 U	74 U	70 U
2,6-Dinitrotoluene	NS	NS	NS	70 U	87 U	73 U	74 U	70 U
2-Chloronaphthalene	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2-Chlorophenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2-Methylnaphthalene	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
2-Methylphenol	330	330	100,000	350 U	430 U	360 U	360 U	340 U
2-Nitroaniline	NS	NS	NS	700 U	870 U	730 U	740 U	700 U
2-Nitrophenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
3,3'-Dichlorobenzidine	NS	NS	NS	700 U	870 U	730 U	740 U	700 U
3-Nitroaniline	NS	NS	NS	700 U	870 U	730 U	740 U	700 U
4,6-Dinitro-2-methylphenol	NS	NS	NS	1,000 U	1300 U	1,100 U	1,100 U	1,000 U
4-Bromophenyl phenyl ether	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
4-Chloro-3-methylphenol	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
4-Chlorophenyl phenyl ether	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
4-Methylphenol	330	330	100,000	350 U	430 U	360 U	360 U	340 U
4-Nitroaniline	NS	NS	NS	700 U	870 U	730 U	740 U	700 U
4-Nitrophenol	NS	NS	NS	1,000 U	1,300 U	1,100 UJ	1,100 UJ	1,000 U
Acenaphthene	20,000	98,000	100,000	61 J	430 U	360 U	360 U	340 U
Acenaphthylene	100,000	107,000	100,000	350 U	430 U	360 U	360 U	340 U
Anthracene	100,000	1,000,000	100,000	150 J	430 U	48 J	61 J	340 U
Benzo[a]anthracene	1,000	1,000	1,000	510	43 U	270	240	34 U
Benzo[a]pyrene	1,000	22,000	1,000	560	19 J	310	220	34 U
Benzo[b]fluoranthene	1,000	1,700	1,000	620	65	400	270	34 U
Benzo[g,h,i]perylene	100,000	1,000,000	100,000	380	430 U	370	210 J	340 U
Benzo[k]fluoranthene	800	1,700	3,900	220	43 U	130	120	34 U
bis (2-chloroisopropyl) ether	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Bis(2-chloroethoxy)methane	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Chrysene	1,000	1,000	3,900	530	97 J	290 J	230 J	340 U
Dibenz(a,h)anthracene	330	1,000,000	330	70	15 J	48	37	34 U
Dibenzofuran	7,000	210,000	59,000	350 U	430 U	360 U	360 U	340 U
Diethyl phthalate	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Dimethyl phthalate	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Di-n-butyl phthalate	NS	NS	NS	350 U	430 U	360 U	120 U	340 U
Di-n-octyl phthalate	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Fluoranthene	100,000	1,000,000	100,000	1,000	430 U	510	410	340 U
Fluorene	30,000	386,000	100,000	49 J	430 U	360 U	360 U	340 U
Hexachlorobenzene	330	3,200	1,200	35 U	43 U	36 U	36 U	34 U
Hexachlorobutadiene	NS	NS	NS	70 U	87 U	73 U	74 U	70 U
Hexachlorocyclopentadiene	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Hexachloroethane	NS	NS	NS	35 U	43 U	36 U	36 U	34 U
Indeno[1,2,3-cd]pyrene	500	8,200	500	**510 J**	17 J	350	210	34 UJ
Isophorone	NS	NS	NS	350 U	430 U	360 U	75 J	340 U
Naphthalene	12,000	12,000	100,000	350 U	430 U	360 U	360 U	340 U
Nitrobenzene	NS	NS	NS	35 U	43 U	36 U	36 U	34 U
N-Nitrosodi-n-propylamine	NS	NS	NS	35 U	43 U	36 U	36 U	34 U
N-Nitrosodiphenylamine	NS	NS	NS	350 U	430 U	360 U	360 U	340 U
Pentachlorophenol	800	800	6,700	1,000 U	1300 U	1,100 U	1,100 U	1,000 U
Phenanthrene	100,000	1,000,000	100,000	740	81 J	180 J	240 J	340 U
Phenol	330	330	100,000	350 U	430 U	360 U	360 U	340 U
Pyrene	100,000	1,000,000	100,000	990	430 U	360	320 J	340 U
Total SVOCs	NS	NS	NS	6,390	294	3,266	2,763	ND

Table 2
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Semivolatile Organic Compounds

Client ID	NYSDEC	NYSDEC	NYSDEC	NF-SB-3B(8-10')	NF-SB-3(8-10')	NF-SB-4(0-2')	NF-SB-4(8-10')	NF-SB-5(0-2')
Lab Sample ID	Part 375	Part 375	Part 375	460-61975-6	460-61975-7	460-61975-8	460-61975-9	460-62062-1
Date Sampled	Unrestricted	Groundwater	Restricted	8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/28/2013
Dilution	SCO	SCO	Residential	1	1	1	10	1
µg/Kg	µg/Kg	µg/Kg	SCO µg/Kg					
1,2,4-Trichlorobenzene	NS	NS	NS	47 U	37 U	36 U	370 U	37 U
1,2-Dichlorobenzene	1,100	1,100	100,000	470 U	370 U	360 U	3,700 U	370 U
1,3-Dichlorobenzene	2,400	2,400	49,000	470 U	370 U	360 U	3,700 U	370 U
1,4-Dichlorobenzene	1,800	1,800	13,000	470 U	370 U	360 U	3,700 U	370 U
2,4,5-Trichlorophenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
2,4,6-Trichlorophenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
2,4-Dichlorophenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
2,4-Dimethylphenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
2,4-Dinitrophenol	NS	NS	NS	1,400 U	1,100 U	1,100 U	11,000 U	1,100 U
2,4-Dinitrotoluene	NS	NS	NS	96 U	74 U	74 U	760 U	74 U
2,6-Dinitrotoluene	NS	NS	NS	96 U	74 U	74 U	760 U	74 U
2-Chloronaphthalene	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
2-Chlorophenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
2-Methylnaphthalene	NS	NS	NS	62 J	370 U	360 U	4,800	370 U
2-Methylphenol	330	330	100,000	470 U	370 U	360 U	3,700 U	370 U
2-Nitroaniline	NS	NS	NS	960 U	740 U	740 U	7,600 U	740 U
2-Nitrophenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
3,3'-Dichlorobenzidine	NS	NS	NS	960 U	740 U	740 U	7,600 U	740 U
3-Nitroaniline	NS	NS	NS	960 U	740 U	740 U	7,600 U	740 U
4,6-Dinitro-2-methylphenol	NS	NS	NS	1,400 U	1,100 U	1,100 U	11,000 U	1,100 U
4-Bromophenyl phenyl ether	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
4-Chloro-3-methylphenol	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
4-Chlorophenyl phenyl ether	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
4-Methylphenol	330	330	100,000	470 U	370 U	360 U	3,700 U	370 U
4-Nitroaniline	NS	NS	NS	960 U	740 U	740 U	7,600 U	740 U
4-Nitrophenol	NS	NS	NS	1,400 U	1,100 U	1,100 U	11,000 UJ	1,100 U
Acenaphthene	20,000	98,000	100,000	470 U	370 U	360 U	750 J	90 J
Acenaphthylene	100,000	107,000	100,000	470 U	370 U	360 U	3,700 U	370 U
Anthracene	100,000	1,000,000	100,000	470 U	370 U	360 U	4,300	320 J
Benzo[a]anthracene	1,000	1,000	1,000	47 U	37 U	36 U	**9,400**	**1,500**
Benzo[a]pyrene	1,000	22,000	1,000	47 U	10 J	110	**9,100**	**1,700**
Benzo[b]fluoranthene	1,000	1,700	1,000	55	21 J	110	**8,700**	**2,000**
Benzo[g,h,i]perylene	100,000	1,000,000	100,000	470 U	370 U	84 J	5,400	1,100
Benzo[k]fluoranthene	800	1,700	3,900	47 U	37 U	41	**3,500**	**810**
bis (2-chloroisopropyl) ether	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Bis(2-chloroethoxy)methane	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Chrysene	1,000	1,000	3,900	61 J	370 U	63 J	**9,600**	**1,500**
Dibenz(a,h)anthracene	330	1,000,000	330	47 U	37 U	15 J	**780**	280
Dibenzofuran	7,000	210,000	59,000	470 U	370 U	360 U	1,100 J	370 U
Diethyl phthalate	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Dimethyl phthalate	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Di-n-butyl phthalate	NS	NS	NS	320 U	370 U	360 U	3,700 U	370 U
Di-n-octyl phthalate	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Fluoranthene	100,000	1,000,000	100,000	130 J	370 U	73 J	23,000	2,600
Fluorene	30,000	386,000	100,000	170 J	370 U	360 U	2,300 J	65 J
Hexachlorobenzene	330	3,200	1,200	47 U	37 U	36 U	370 U	37 U
Hexachlorobutadiene	NS	NS	NS	96 U	74 U	74 U	760 U	74 U
Hexachlorocyclopentadiene	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U *
Hexachloroethane	NS	NS	NS	47 U	37 U	36 U	370 U	37 U
Indeno[1,2,3-cd]pyrene	500	8,200	500	47 UJ	37 UJ	86 J	**5,200**	**960**
Isophorone	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Naphthalene	12,000	12,000	100,000	58 J	370 U	360 U	3,400 J	140 J
Nitrobenzene	NS	NS	NS	47 U	37 U	36 U	370 U	37 U
N-Nitrosodi-n-propylamine	NS	NS	NS	47 U	37 U	36 U	370 U	37 U
N-Nitrosodiphenylamine	NS	NS	NS	470 U	370 U	360 U	3,700 U	370 U
Pentachlorophenol	800	800	6,700	1,400 U	1,100 U	1,100 U	11,000 U	1,100 U
Phenanthrene	100,000	1,000,000	100,000	220 J	370 U	360 U	2,200 J	1,300
Phenol	330	330	100,000	470 U	370 U	360 U	3,700 U	370 U
Pyrene	100,000	1,000,000	100,000	110 J	370 U	77 J	22,000	3,000
Total SVOCs	NS	NS	NS	1,186	31	659	115,530	17,365

Table 2
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Semivolatile Organic Compounds

Client ID	NYSDEC	NYSDEC	NYSDEC	NF-SB-5(7-9')	NF-SB-6(0-2')	NF-SB-6(8-10')	FB20130828
Lab Sample ID	Part 375	Part 375	Part 375	460-62062-2	460-62062-3	460-62062-4	460-62062-5
Date Sampled	Unrestricted	Groundwater	Restricted	8/28/2013	8/28/2013	8/28/2013	8/28/2013
Dilution	SCO	SCO	Residential SCO	1	1	5	1
µg/Kg	µg/Kg	µg/Kg	µg/Kg				µg/L
1,2,4-Trichlorobenzene	NS	NS	NS	40 U	35 U	180 U	NA
1,2-Dichlorobenzene	1,100	1,100	100,000	400 U	350 U	1,800 U	NA
1,3-Dichlorobenzene	2,400	2,400	49,000	400 U	350 U	1,800 U	NA
1,4-Dichlorobenzene	1,800	1,800	13,000	400 U	350 U	1,800 U	NA
2,4,5-Trichlorophenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
2,4,6-Trichlorophenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
2,4-Dichlorophenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
2,4-Dimethylphenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
2,4-Dinitrophenol	NS	NS	NS	1,200 U	1,000 U	5,400 U	31 U
2,4-Dinitrotoluene	NS	NS	NS	81 U	70 U	360 U	2.1 U
2,6-Dinitrotoluene	NS	NS	NS	81 U	70 U	360 U	2.1 U
2-Chloronaphthalene	NS	NS	NS	400 U	350 U	1,800 U	10 U
2-Chlorophenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
2-Methylnaphthalene	NS	NS	NS	100 J	350 U	1,800 U	10 U
2-Methylphenol	330	330	100,000	400 U	350 U	1,800 U	10 U
2-Nitroaniline	NS	NS	NS	810 U	700 U	3,600 U	21 U
2-Nitrophenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
3,3'-Dichlorobenzidine	NS	NS	NS	810 U	700 U	3,600 U	21 U
3-Nitroaniline	NS	NS	NS	810 U	700 U	3,600 U	21 U
4,6-Dinitro-2-methylphenol	NS	NS	NS	1,200 U	1,000 U	5,400 U	31 U
4-Bromophenyl phenyl ether	NS	NS	NS	400 U	350 U	1,800 U	10 U
4-Chloro-3-methylphenol	NS	NS	NS	400 U	350 U	1,800 U	10 U
4-Chlorophenyl phenyl ether	NS	NS	NS	400 U	350 U	1,800 U	10 U
4-Methylphenol	330	330	100,000	400 U	350 U	1,800 U	10 U
4-Nitroaniline	NS	NS	NS	810 U	700 U	3,600 U	21 U
4-Nitrophenol	NS	NS	NS	1,200 U	1,000 U	5,400 U	31 U
Acenaphthene	20,000	98,000	100,000	74 J	120 J	910 J	10 U
Acenaphthylene	100,000	107,000	100,000	400 U	350 U	350 J	10 U
Anthracene	100,000	1,000,000	100,000	180 J	290 J	3,100	10 U
Benzo[a]anthracene	1,000	1,000	1,000	550	**1,100**	**8,800**	1 U
Benzo[a]pyrene	1,000	22,000	1,000	610	**1,400**	**9,900**	1 U
Benzo[b]fluoranthene	1,000	1,700	1,000	740	**1,700**	**14,000**	1 U
Benzo[g,h,i]perylene	100,000	1,000,000	100,000	340 J	920	2,500	10 U
Benzo[k]fluoranthene	800	1,700	3,900	290	620	**4,600**	1 U
bis (2-chloroisopropyl) ether	NS	NS	NS	400 U	350 U	1,800 U	NA
Bis(2-chloroethoxy)methane	NS	NS	NS	400 U	350 U	1,800 U	10 U
Chrysene	1,000	1,000	3,900	610	**1,100**	**8,400**	10 U
Dibenz(a,h)anthracene	330	1,000,000	330	70	220	**730**	1 U
Dibenzofuran	7,000	210,000	59,000	50 J	53 J	670 J	10 U
Diethyl phthalate	NS	NS	NS	400 U	350 U	1,800 U	10 U
Dimethyl phthalate	NS	NS	NS	400 U	350 U	1,800 U	10 U
Di-n-butyl phthalate	NS	NS	NS	400 U	350 U	1,800 U	2 J
Di-n-octyl phthalate	NS	NS	NS	400 U	350 U	1,800 U	10 U
Fluoranthene	100,000	1,000,000	100,000	1,100	2,000	19,000	10 U
Fluorene	30,000	386,000	100,000	78 J	84 J	920 J	10 U
Hexachlorobenzene	330	3,200	1,200	40 U	35 U	180 U	1 U
Hexachlorobutadiene	NS	NS	NS	81 U	70 U	360 U	2.1 U
Hexachlorocyclopentadiene	NS	NS	NS	400 U *	350 U *	1,800 U *	10 U
Hexachloroethane	NS	NS	NS	40 U	35 U	180 U	1 U
Indeno[1,2,3-cd]pyrene	500	8,200	500	300	**780**	**2,600**	1 U
Isophorone	NS	NS	NS	400 U	350 U	1,800 U	10 U
Naphthalene	12,000	12,000	100,000	82 J	61 J	480 J	10 U
Nitrobenzene	NS	NS	NS	40 U	35 U	180 U	1 U
N-Nitrosodi-n-propylamine	NS	NS	NS	40 U	35 U	180 U	1 U
N-Nitrosodiphenylamine	NS	NS	NS	400 U	350 U	1,800 U	10 U
Pentachlorophenol	800	800	6,700	1,200 U	1,000 U	5,400 U	31 U
Phenanthrene	100,000	1,000,000	100,000	990	1,300	12,000	10 U
Phenol	330	330	100,000	400 U	350 U	1,800 U	10 U
Pyrene	100,000	1,000,000	100,000	1,300	2,400	14,000	10 U
Total SVOCs	NS	NS	NS	7,464	14,148	102,960	4

Table 3
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/Kg	NYSDEC Part 375 Unrestricted SCO mg/Kg	NYSDEC Part 375 Groundwater SCO mg/Kg	NYSDEC Part 375 Restricted Residential SCO mg/Kg	NF-SB-1(0-2') 460-61975-1 08/27/2013 4/1 †	NF-SB-1(8-10') 460-61975-2 08/27/2013 4/1 †	NF-SB-2(0-2') 460-61975-3 08/27/2013 4/1 †	NF-SB-2(8-10') 460-61975-4 08/27/2013 4/1 †	NF-SB-3(0-2') 460-61975-5 08/27/2013 4/1 †	NF-SB-3B(8-10') 460-61975-6 08/27/2013 4/1 †	NF-SB-3(8-10') 460-61975-7 08/27/2013 4/1 †
Aluminum	**NS**	**NS**	**NS**	3,360	2,310	7,190	5,710	11,100	11,500	7,140
Antimony	**NS**	**NS**	**NS**	1.9 U	2.4 U	1.8 U	2 U	1.8 U	2.5 U	1.8 U
Arsenic	**13**	**16**	**16**	1.9	**14.1**	4.7	4.2	0.93	2.2	1.9
Barium	**350**	**820**	**400**	55.2	49.7	78.9	67.4	77.1	53.9	29.2 J
Beryllium	**7.2**	**47**	**72**	0.17 J	0.55	0.27 J	0.23 J	0.21 J	0.32 J	0.55
Cadmium	**2.5**	**7.5**	**4.3**	0.93 U	1.2 U	0.92 U	0.99 U	0.89 U	1.3 U	0.91 U
Calcium	**NS**	**NS**	**NS**	10,500	2,290	13,100	41,300	1,810	6,670	1,580
Chromium	**30**	**19**	**180**	9.8	4.6	15.4	15.9	22.5	29.5	13.6
Cobalt	**NS**	**NS**	**NS**	3.7 J	3.7 J	4.4 J	4.1 J	12.5	10.3 J	9 J
Copper	**50**	**1,720**	**270**	44.3	32.4	22.2	20.4	49.8	28.4	17.7
Iron	**NS**	**NS**	**NS**	8,580	9,230	14,200	11,400	21,700	23,000	12,200
Lead	**63**	**450**	**400**	**63.5**	16.3	**78**	44.1	10.3	23.4	13.2
Magnesium	**NS**	**NS**	**NS**	2,130	199 J	2,010	9,100	6,170	8,460	3,890
Manganese	**1,600**	**2,000**	**2,000**	288	35.2	241	231	200	868	196
Mercury	**0.18**	**0.73**	**0.81**	**0.2**	0.08	0.073	0.093	0.018 U	0.033	0.058
Nickel	**30**	**130**	**310**	20.9	8.1 J	11.7	12.8	21.5	22.7	18.1
Potassium	**NS**	**NS**	**NS**	878 J	198 J	678 J	747 J	5,010	2,080	1,270
Selenium	**3.9**	**4**	**180**	1.9 U	2.4 U	1.8 U	2 U	1.8 U	2.5 U	1.8 U
Silver	**2**	**8.3**	**180**	1.9 U	2.4 U	1.8 U	2 U	1.8 U	2.5 U	1.8 U
Sodium	**NS**	**NS**	**NS**	185 J	1190 U	925 U	257 J	191 J	302 J	912 U
Thallium	**NS**	**NS**	**NS**	1.9 U	2.4 U	1.8 U	2 U	1.8 U	2.5 U	1.8 U
Vanadium	**NS**	**NS**	**NS**	10.9	10.9 J	19.2	16.3	34.6	36.4	17.1
Zinc	**109**	**2,480**	**10,000**	**170**	68	90	72	73	54	46

Notes: † = The dilution rate for Mercury is 1.

‡ = The dilution rate varies.

Table 3
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/Kg	NYSDEC Part 375 Unrestricted SCO mg/Kg	NYSDEC Part 375 Groundwater SCO mg/Kg	NYSDEC Part 375 Restricted Residential SCO mg/Kg	NF-SB-4(0-2') 460-61975-8 08/27/2013 4/40/1 ‡	NF-SB-4(8-10') 460-61975-9 08/27/2013 4/1 †	NF-SB-5(0-2') 460-62062-1 08/28/2013 4/10/1 ‡	NF-SB-5(7-9') 460-62062-2 08/28/2013 20/100/1 ‡	NF-SB-6(0-2') 460-62062-3 08/28/2013 4/1 †	NF-SB-6(8-10') 460-62062-4 08/28/2013 4/1 †	FB20130828 460-62062-5 08/28/2013 1
Aluminum	**NS**	**NS**	**NS**	7,020	4,860	2,210	3,750	5,170	4,600	200 U
Antimony	**NS**	**NS**	**NS**	1.9 U	2.1 U	2 U	10.9 U	1.9 U	1.8 U	10 U
Arsenic	**13**	**16**	**16**	2.6	5.2	2.5	5.4 U	3.1	3.3	5 U
Barium	**350**	**820**	**400**	70.7	62.8	68.4	72.6 J	55.2	70.6	200 U
Beryllium	**7.2**	**47**	**72**	0.28 J	0.18 J	0.4 U	2.2 U	0.25 J	0.18 J	2 U
Cadmium	**2.5**	**7.5**	**4.3**	1.5	1 U	1 U	**13.3**	0.26 J	0.13 J	5 U
Calcium	**NS**	**NS**	**NS**	13,000	14,000	408 J	104,000	9,070	10,700	5,000 U
Chromium	**30**	**19**	**180**	14.3	12.3	27	6 J	13.1	9	10 U
Cobalt	**NS**	**NS**	**NS**	5.4 J	4.2 J	10 U	6.7 J	4.7 J	4.8 J	50 U
Copper	**50**	**1,720**	**270**	37.3	37.1	6.7	26.8 J	21.6	32.9	25 U
Iron	**NS**	**NS**	**NS**	13,200	19,900	47,800	55,700	10,200	11,400	150 U
Lead	**63**	**450**	**400**	**483**	**292**	**711**	**167**	**139**	**93.7**	5 U
Magnesium	**NS**	**NS**	**NS**	5,460	5,250	1,260	857 J	3,420	2,770	5,000 U
Manganese	**1,600**	**2,000**	**2,000**	259	289	26.7	633	227	533	15 U
Mercury	**0.18**	**0.73**	**0.81**	**0.26**	0.12	**0.23**	**0.32**	**0.47**	**0.37**	0.2 U
Nickel	**30**	**130**	**310**	14.7	10.2	10.8	21.6 J	23.8	26.6	40 U
Potassium	**NS**	**NS**	**NS**	1,090	663 J	2,600	5,430 U	1,130	961	5,000 U
Selenium	**3.9**	**4**	**180**	1.9 U	2.1 U	2 U	10.9 U	1.9 U	1.8 U	10 U
Silver	**2**	**8.3**	**180**	1.9 U	2.1 U	2 U	10.9 U	1.9 U	1.8 U	10 U
Sodium	**NS**	**NS**	**NS**	956 U	177 J	1100	5,430 U	929 U	150 J	5,000 U
Thallium	**NS**	**NS**	**NS**	1.9 U	2.1 U	2 U	10.9 U	1.9 U	1.8 U	10 U
Vanadium	**NS**	**NS**	**NS**	18.2	16.5	12	5.4 J	13.9	15.4	50 U
Zinc	**109**	**2,480**	**10,000**	**3,090**	**216**	**126**	**21,200**	**145**	81	30 U

Notes: † = The dilution rate for Mercury is 1.

‡ = The dilution rate varies.

Table 4
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/Kg	NYSDEC Part 375 Unrestricted SCO	NYSDEC Part 375 Groundwater SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	NF-SB-1(0-2') 460-61975-1 8/27/2013	NF-SB-1(8-10') 460-61975-2 8/27/2013	NF-SB-2(0-2') 460-61975-3 8/27/2013	NF-SB-2(8-10') 460-61975-4 8/27/2013	NF-SB-3(0-2') 460-61975-5 8/27/2013	NF-SB-3B(8-10') 460-61975-6 8/27/2013	NF-SB-3(8-10') 460-61975-7 8/27/2013
Aroclor 1016	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1221	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1232	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1242	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1248	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1254	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1260	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1262	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Aroclor 1268	**NS**	**NS**	**NS**	70 U	88 U	73 U	74 U	70 U	96 U	75 U
Total PCBs	**100**	**3,200**	**1,000**	ND	ND	ND	ND	ND	ND	ND

Pesticides - µg/Kg

2,4,5-T	**NS**	**NS**	**NS**	18 U	22 U	19 UJ	19 UJ	18 U	24 U	19 U
2,4-D	**NS**	**NS**	**NS**	18 U	22 U	19 U	19 U	18 U	24 U	19 U
4,4'-DDD	**3.3**	**14,000**	**13,000**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
4,4'-DDE	**3.3**	**17,000**	**8,900**	7 U	8.7 U	7.3 U	**13**	7 U	9.6 U	7.5 U
4,4'-DDT	**3.3**	**136,000**	**7,900**	7 U	8.7 U	**10**	**40**	7 U	9.6 U	7.5 U
Aldrin	**5**	**190**	**97**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
alpha-BHC	**20**	**20**	**480**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
beta-BHC	**36**	**90**	**360**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Chlordane	**94**	**2,900**	**4,200**	70 U	87 U	**140**	**160**	70 U	96 U	75 U
delta-BHC	**40**	**250**	**100,000**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Dieldrin	**5**	**100**	**200**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Endosulfan I	**2,400**	**102,000**	**24,000**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Endosulfan II	**2,400**	**102,000**	**24,000**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Endosulfan sulfate	**2,400**	**1,000,000**	**24,000**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Endrin	**14**	**60**	**11,000**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Endrin aldehyde	**NS**	**NS**	**NS**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Endrin ketone	**NS**	**NS**	**NS**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
gamma-BHC (Lindane)	**NS**	**100**	**1,300**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Heptachlor	**42**	**380**	**2,100**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Heptachlor epoxide	**NS**	**NS**	**NS**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Methoxychlor	**NS**	**NS**	**NS**	7 U	8.7 U	7.3 U	7.4 U	7 U	9.6 U	7.5 U
Silvex (2,4,5-TP)	**NS**	**NS**	**NS**	18 U *	22 UJ	19 UJ	19 UJ	18 UJ	24 UJ	19 UJ
Toxaphene	**NS**	**NS**	**NS**	70 U	87 U	73 U	74 U	70 U	96 U	75 U

Table 4
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/Kg	NYSDEC Part 375 Unrestricted SCO	NYSDEC Part 375 Groundwater SCO µg/Kg	NYSDEC Part 375 Restricted Residential SCO µg/Kg	NF-SB-4(0-2') 460-61975-8 8/27/2013	NF-SB-4(8-10') 460-61975-9 8/27/2013	NF-SB-5(0-2') 460-62062-1 8/28/2013	NF-SB-5(7-9') 460-62062-2 8/28/2013	NF-SB-6(0-2') 460-62062-3 8/28/2013	NF-SB-6(8-10') 460-62062-4 8/28/2013	FB20130828 460-62062-5 8/28/2013 µg/L
Aroclor 1016	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1221	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1232	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1242	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1248	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1254	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1260	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1262	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Aroclor 1268	**NS**	**NS**	**NS**	74 U	75 U	74 U	81 U	70 U	73 U	0.4 U
Total PCBs	**100**	**3,200**	**1,000**	ND	ND	ND	ND	ND	ND	ND

Pesticides - µg/Kg

2,4,5-T	**NS**	**NS**	**NS**	19 U	19 UJ	19 UJ	21 UJ	18 U	18 U	0.53 U
2,4-D	**NS**	**NS**	**NS**	19 U	19 UJ	19 U	21 UJ	18 U	18 U	0.53 U
4,4'-DDD	**3.3**	**14,000**	**13,000**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
4,4'-DDE	**3.3**	**17,000**	**8,900**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U
4,4'-DDT	**3.3**	**136,000**	**7,900**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
Aldrin	**5**	**190**	**97**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U *
alpha-BHC	**20**	**20**	**480**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U
beta-BHC	**36**	**90**	**360**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U *
Chlordane	**94**	**2,900**	**4,200**	74 U	76 U	74 U	81 U	70 U	73 U	0.5 U
delta-BHC	**40**	**250**	**100,000**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U
Dieldrin	**5**	**100**	**200**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U *
Endosulfan I	**2,400**	**102,000**	**24,000**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
Endosulfan II	**2,400**	**102,000**	**24,000**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U *
Endosulfan sulfate	**2,400**	**1,000,000**	**24,000**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
Endrin	**14**	**60**	**11,000**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U
Endrin aldehyde	**NS**	**NS**	**NS**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
Endrin ketone	**NS**	**NS**	**NS**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
gamma-BHC (Lindane)	**NS**	**100**	**1,300**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U *
Heptachlor	**42**	**380**	**2,100**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U *
Heptachlor epoxide	**NS**	**NS**	**NS**	7.4 U	7.6 U	7.4 U	8.1 U	7 U	7.3 U	0.05 U *
Methoxychlor	**NS**	**NS**	**NS**	7.4 U	7.6 U	7.4 U	8.1 UJ	7 U	7.3 U	0.05 U
Silvex (2,4,5-TP)	**NS**	**NS**	**NS**	19 UJ	19 UJ	19 U	21 UJ	18 U	18 U	0.53 U
Toxaphene	**NS**	**NS**	**NS**	74 U	76 U	74 U	81 U	70 U	73 U	0.5 U

Table 5
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	NF-GW-1 460-62458-1 09/05/2013	NF-GW-1B 460-62458-8 09/05/2013	NF-GW-2 460-62458-2 09/05/2013	NF-GW-3 460-62458-3 09/05/2013	NF-GW-4 460-62458-4 09/05/2013
1,1,1-Trichloroethane	**5**	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	**5**	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	**1**	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	**5**	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	**5**	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	**5**	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	**0.04**	1 U *	1 U *	1 U *	1 U	1 U *
1,2-Dibromoethane	**0.0006**	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	**3**	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	**0.6**	1 U *	1 U *	1 U *	1 U	1 U *
1,2-Dichloropropane	**1**	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	**3**	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	**3**	1 U	1 U	1 U	1 U	1 U
2-Butanone	**50**	5 U *	5 U *	2.4 J	5 U *	5 U *
2-Hexanone	**50**	5 U	5 U	5 U	5 UJ	5 U
4-Methyl-2-pentanone	**NS**	5 U	5 U	5 U	5 U	5 U
Acetone	**50**	5 U	5 U	21	33	5 U
Benzene	**1**	1 U	1 U	0.19 J	**2.6**	**1.6**
Bromodichloromethane	**50**	1 U	1 U	1 U	1 U	1 U
Bromoform	**50**	1 U	1 U	1 U	1 UJ	1 U
Bromomethane	**5**	1 U	1 U	1 U	1 UJ	1 U
Carbon disulfide	**60**	1 U	1 U	0.52 J	1.4	0.46 J
Carbon tetrachloride	**5**	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	**5**	1 U	1 U	1 U	1 U	1 U
Chloroethane	**5**	1 U	1 U	1 U	1 U	1 U
Chloroform	**7**	1 U	1 U	1 U	**10**	0.42 U
Chloromethane	**5**	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
cis-1,2-Dichloroethene	**5**	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	**NS**	1 U	1 U	1 U	1 U	1 U
Cyclohexane	**NS**	1 U	1 U	1 U	37	3.2
Dibromochloromethane	**50**	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	**5**	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**5**	1 U	1 U	1 U	2.1	1.1
Isopropylbenzene	**5**	1 U	1 U	1 U	**81**	**10**
Methylcyclohexane	**NS**	1 U	1 U	1 U	120	3.3
Methylene Chloride	**5**	1 U	1 U	1 U	1 U	1 U
Styrene	**5**	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	**5**	1 U	1 U	1 U	1 U	1 U
Toluene	**5**	1 U	1 U	0.2 U	2.3	0.24 U
trans-1,2-Dichloroethene	**5**	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	**NS**	1 U *	1 U *	1 U *	1 U	1 U *
Trichloroethene	**5**	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	**5**	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	**2**	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	**5**	3 U	3 U	3 U	4.2	0.73 J
Total VOCs	**NS**	ND	ND	24.31	293.6	21.05

Table 5
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	NF-GW-5 460-62458-5 09/05/2013	NF-GW-6 460-62458-6 09/05/2013	FB-20130905 460-62458-7 09/05/2013	TB20130905 460-62458-9 09/05/2013
1,1,1-Trichloroethane	**5**	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	**5**	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	**1**	1 U	1 U	1 U	1 U
1,1-Dichloroethane	**5**	1 U	1 U	1 U	1 U
1,1-Dichloroethene	**5**	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	**5**	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	**0.04**	1 U *	1 U *	1 U *	1 U *
1,2-Dibromoethane	**0.0006**	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	**3**	1 U	1 U	1 U	1 U
1,2-Dichloroethane	**0.6**	1 U *	1 U *	1 U *	1 U *
1,2-Dichloropropane	**1**	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	**3**	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	**3**	1 U	1 U	1 U	1 U
2-Butanone	**50**	3.3 J	5 U *	5 U *	5 U *
2-Hexanone	**50**	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	**NS**	5 U	5 U	5 U	5 U
Acetone	**50**	18	5 U	5 U	5 U
Benzene	**1**	0.5 J	0.35 J	1 U	1 U
Bromodichloromethane	**50**	1 U	1 U	1 U	1 U
Bromoform	**50**	1 U	1 U	1 U	1 U
Bromomethane	**5**	1 U	1 U	1 U	1 U
Carbon disulfide	**60**	0.3 J	1 U	1 U	1 U
Carbon tetrachloride	**5**	1 U	1 U	1 U	1 U
Chlorobenzene	**5**	1 U	1 U	1 U	1 U
Chloroethane	**5**	1 U	1 U	1 U	1 U
Chloroform	**7**	1 U	1 U	1 U	0.22 J
Chloromethane	**5**	1 UJ	1 UJ	1 UJ	1 UJ
cis-1,2-Dichloroethene	**5**	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	**NS**	1 U	1 U	1 U	1 U
Cyclohexane	**NS**	1 U	1 U	1 U	1 U
Dibromochloromethane	**50**	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	**5**	1 U	1 U	1 U	1 U
Ethylbenzene	**5**	0.19 J	1 U	1 U	1 U
Isopropylbenzene	**5**	0.5 J	1 U	1 U	1 U
Methylcyclohexane	**NS**	1 U	1 U	1 U	1 U
Methylene Chloride	**5**	1 U	1 U	1 U	1 U
Styrene	**5**	1 U	1 U	1 U	1 U
Tetrachloroethene	**5**	1 U	1 U	1 U	1 U
Toluene	**5**	0.98 U	1 U	0.33 J	1 U
trans-1,2-Dichloroethene	**5**	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	**NS**	1 U *	1 U *	1 U *	1 U *
Trichloroethene	**5**	1 U	1 U	1 U	1 U
Trichlorofluoromethane	**5**	1 U	1 U	1 U	1 U
Vinyl chloride	**2**	1 U	1 U	1 U	1 U
Xylenes, Total	**5**	3 U	3 U	3 U	3 U
Total VOCs	**NS**	23.77	0.35	0.33	0.22

Table 6
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	NF-GW-1 460-62458-1 09/05/2013	NF-GW-1B 460-62458-8 09/05/2013	NF-GW-2 460-62458-2 09/05/2013	NF-GW-3 460-62458-3 09/05/2013
2,2'-oxybis[1-chloropropane]	**5**	10 U	10 U	11 U	10 U
2,4,5-Trichlorophenol	**NS**	10 U	10 U	11 U	10 U
2,4,6-Trichlorophenol	**NS**	10 U	10 U	11 U	10 U
2,4-Dichlorophenol	**1**	10 U	10 U	11 U	10 U
2,4-Dimethylphenol	**1**	10 U	10 U	11 U	10 U
2,4-Dinitrophenol	**1**	31 U	31 U	34 U	31 U
2,4-Dinitrotoluene	**5**	2.1 U	2.1 U	2.3 U	2.1 U
2,6-Dinitrotoluene	**5**	2.1 U	2.1 U	2.3 U	2.1 U
2-Chloronaphthalene	**10**	10 U	10 U	11 U	10 U
2-Chlorophenol	**NS**	10 U	10 U	11 U	10 U
2-Methylnaphthalene	**NS**	10 U	10 U	11 U	10 U
2-Nitroaniline	**5**	21 U	21 U	23 U	21 U
2-Nitrophenol	**NS**	10 U	10 U	11 U	10 U
3,3'-Dichlorobenzidine	**5**	21 U	21 U	23 U	21 U
3-Nitroaniline	**5**	21 U	21 U	23 U	21 U
4,6-Dinitro-2-methylphenol	**NS**	31 U	31 U	34 U	31 U
4-Bromophenyl phenyl ether	**NS**	10 U	10 U	11 U	10 U
4-Chloro-3-methylphenol	**NS**	10 U	10 U	11 U	10 U
4-Chloroaniline	**5**	1 U	1 U	1.1 U	1 U
4-Chlorophenyl phenyl ether	**NS**	10 U	10 U	11 U	10 U
4-Nitroaniline	**5**	21 U	21 U	23 U	21 U
4-Nitrophenol	**NS**	31 U	31 U	34 U	31 U
Acenaphthene	**20**	10 U	10 U	11 U	10 U
Acenaphthylene	**NS**	10 U	10 U	11 U	10 U
Anthracene	**50**	10 U	10 U	11 U	10 U
Benzo[a]anthracene	**0.002**	1 U	1 U	1.1 U	1 U
Benzo[a]pyrene	**ND**	1 U	1 U	1.1 U	1 U
Benzo[b]fluoranthene	**0.002**	1 U	1 U	1.1 U	1 U
Benzo[g,h,i]perylene	**NS**	10 U	10 U	11 U	10 U
Benzo[k]fluoranthene	**0.002**	1 U	1 U	1.1 U	1 U
Bis(2-chloroethoxy)methane	**5**	10 U	10 U	11 U	10 U
Bis(2-chloroethyl)ether	**1**	1 U	1 U	1.1 U	1 U
Bis(2-ethylhexyl) phthalate	**5**	10 U	10 U	1.6 J	10 U
Butyl benzyl phthalate	**50**	10 U	10 U	11 U	10 U
Carbazole	**NS**	10 U	10 U	11 U	10 U
Chrysene	**0.002**	10 U	10 U	11 U	10 U
Dibenz(a,h)anthracene	**NS**	1 U	1 U	1.1 U	1 U
Dibenzofuran	**NS**	10 U	10 U	11 U	10 U
Diethyl phthalate	**50**	10 U	10 U	11 U	10 U
Dimethyl phthalate	**50**	10 U	10 U	11 U	10 U
Fluoranthene	**50**	10 U	10 U	11 U	10 U
Fluorene	**50**	10 U	10 U	11 U	10 U
Hexachlorobenzene	**0.04**	1 U	1 U	1.1 U	1 U
Hexachlorobutadiene	**0.5**	2.1 U	2.1 U	2.3 U	2.1 U
Hexachlorocyclopentadiene	**5**	10 U	10 U	11 U	10 U
Hexachloroethane	**5**	1 U	1 U	1.1 U	1 U
Indeno[1,2,3-cd]pyrene	**0.002**	1 U	1 U	1.1 U	1 U
Isophorone	**50**	10 U	10 U	11 U	10 U
Naphthalene	**10**	10 U	10 U	11 U	10 U
Nitrobenzene	**0.4**	1 U	1 U	1.1 U	1 U
N-Nitrosodi-n-propylamine	**NS**	1 U	1 U	1.1 U	1 U
N-Nitrosodiphenylamine	**50**	10 U	10 U	11 U	10 U
Pentachlorophenol	**1**	31 U	31 U	34 U	31 U
Phenanthrene	**50**	10 U	10 U	11 U	10 U
Phenol	**1**	10 U	10 U	11 U	10 U
Pyrene	**50**	10 U	10 U	11 U	10 U
Total SVOCs	**NS**	ND	ND	1.6	ND

Table 6
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled µg/L	NYSDEC Class GA Ambient Standard µg/L	NF-GW-4 460-62458-4 09/05/2013	NF-GW-5 460-62458-5 09/05/2013	NF-GW-6 460-62458-6 09/05/2013	FB-20130905 460-62458-7 09/05/2013
2,2'-oxybis[1-chloropropane]	**5**	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	**NS**	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	**NS**	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	**1**	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	**1**	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	**1**	31 U	31 U	31 U	31 U
2,4-Dinitrotoluene	**5**	2.1 U	2.1 U	2.1 U	2.1 U
2,6-Dinitrotoluene	**5**	2.1 U	2.1 U	2.1 U	2.1 U
2-Chloronaphthalene	**10**	10 U	10 U	10 U	10 U
2-Chlorophenol	**NS**	10 U	10 U	10 U	10 U
2-Methylnaphthalene	**NS**	10 U	10 U	10 U	10 U
2-Nitroaniline	**5**	21 U	21 U	21 U	21 U
2-Nitrophenol	**NS**	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	**5**	21 U	21 U	21 U	21 U
3-Nitroaniline	**5**	21 U	21 U	21 U	21 U
4,6-Dinitro-2-methylphenol	**NS**	31 U	31 U	31 U	31 U
4-Bromophenyl phenyl ether	**NS**	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	**NS**	10 U	10 U	10 U	10 U
4-Chloroaniline	**5**	1 U	1 U	1 U	1 U
4-Chlorophenyl phenyl ether	**NS**	10 U	10 U	10 U	10 U
4-Nitroaniline	**5**	21 U	21 U	21 U	21 U
4-Nitrophenol	**NS**	31 U	31 U	31 U	31 U
Acenaphthene	**20**	1.5 J	3.1 J	10 U	10 U
Acenaphthylene	**NS**	10 U	10 U	10 U	10 U
Anthracene	**50**	10 U	10 U	10 U	10 U
Benzo[a]anthracene	**0.002**	1 U	1 U	1 U	1 U
Benzo[a]pyrene	**ND**	1 U	1 U	1 U	1 U
Benzo[b]fluoranthene	**0.002**	1 U	1 U	1 U	1 U
Benzo[g,h,i]perylene	**NS**	10 U	10 U	10 U	10 U
Benzo[k]fluoranthene	**0.002**	1 U	1 U	1 U	1 U
Bis(2-chloroethoxy)methane	**5**	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	**1**	1 U	1 U	1 U	1 U
Bis(2-ethylhexyl) phthalate	**5**	1.8 J	10 U	10 U	10 U
Butyl benzyl phthalate	**50**	10 U	10 U	10 U	10 U
Carbazole	**NS**	10 U	4.6 J	10 U	10 U
Chrysene	**0.002**	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	**NS**	1 U	1 U	1 U	1 U
Dibenzofuran	**NS**	10 U	1.7 J	10 U	10 U
Diethyl phthalate	**50**	10 U	10 U	10 U	10 U
Dimethyl phthalate	**50**	10 U	10 U	10 U	10 U
Fluoranthene	**50**	10 U	10 U	10 U	10 U
Fluorene	**50**	2 J	2.6 J	10 U	10 U
Hexachlorobenzene	**0.04**	1 U	1 U	1 U	1 U
Hexachlorobutadiene	**0.5**	2.1 U	2.1 U	2.1 U	2.1 U
Hexachlorocyclopentadiene	**5**	10 U	10 U	10 U	10 U
Hexachloroethane	**5**	1 U	1 U	1 U	1 U
Indeno[1,2,3-cd]pyrene	**0.002**	1 U	1 U	1 U	1 U
Isophorone	**50**	10 U	10 U	10 U	10 U
Naphthalene	**10**	3.3 J	3.4 J	10 U	10 U
Nitrobenzene	**0.4**	1 U	1 U	1 U	1 U
N-Nitrosodi-n-propylamine	**NS**	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	**50**	10 U	10 U	10 U	10 U
Pentachlorophenol	**1**	31 U	31 U	31 U	31 U
Phenanthrene	**50**	10 U	2.3 J	10 U	10 U
Phenol	**1**	10 U	10 U	10 U	10 U
Pyrene	**50**	10 U	10 U	10 U	10 U
Total SVOCs	**NS**	8.6	17.7	ND	ND

Table 7
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Metals - Total & Dissolved

Client ID	NYSDEC	NF-GW-1	NF-GW-1B	NF-GW-2	NF-GW-3
Lab Sample ID	Class GA	460-62458-1	460-62458-8	460-62458-2	460-62458-3
Date Sampled	Ambient	09/05/2013	09/05/2013	09/05/2013	09/05/2013
Dilution	Standard	10/1 ǂ	10/1 ǂ	1/2 ǂ	1/2 ǂ
Total Metals - µg/L	µg/L				
Aluminum	NS	4,540	4,830	2,030	440
Arsenic	25	50 U	50 U	8.2	5 U
Barium	1,000	2,000 U	2,000 U	94 J	147 J
Beryllium	3	20 U	20 U	2 U	2 U
Cadmium	5	50 U	50 U	5 U	5 U
Calcium	NS	549,000	557,000	347,000	151,000
Chromium	50	100 U	100 U	10 U	10 U
Cobalt	NS	500 U	500 U	9.7 J	50 U
Copper	200	250 U	250 U	25 U	25 U
Iron	300+	**1,010,000**	**891,000**	**3,030**	**8,100**
Magnesium	35,000	**175,000**	**158,000**	23,900	**51,800**
Manganese	300+	**16,100**	**14,400**	**524**	**780**
Mercury	0.7	0.21	0.2 U	0.2 U	0.27
Nickel	100	400 U	400 U	16.8 J	40 U
Potassium	NS	32,100 J	28,300 J	43,500	41,600
Lead	25	50 U	**40.5** J	14.8	4.4 J
Antimony	3	100 U	100 U	10 U	10 U
Silver	50	100 U	100 U	10 U	10 U
Selenium	10	100 U	100 U	10 U	10 U
Sodium	20,000	**493,000**	**408,000**	**305,000**	**330,000**
Thallium	0.5	100 U	100 U	10 U	10 U
Vanadium	NS	500 U	500 U	7.1 J	8.8 J
Zinc	2,000	**3,860**	**3,420**	27 J	10 J

Dissolved Metals - µg/L

Dilution	NS	5/1 ǂ	5/1 ǂ	1/2 ǂ	1/2 ǂ
Aluminum	NS	1,320	1,660	87 J	200 U
Arsenic	25	25 U	25 U	4.2 J	7.6
Barium	1,000	34.5 J	33.1 J	75.8 J	207
Beryllium	3	10 U	10 U	2 U	2 U
Cadmium	5	25 U	25 U	5 U	5 U
Calcium	NS	535,000	524,000	334,000	232,000
Chromium	50	50 U	50 U	10 U	10 U
Cobalt	NS	250 U	250 U	6.1 J	50 U
Copper	200	125 U	125 U	25 U	25 U
Iron	300+	**876,000**	**908,000**	150 U	76 J
Magnesium	35,000	**163,000**	**162,000**	23,000	17,600
Manganese	300+	**14,700**	**14,900**	**410**	**778**
Mercury	0.7	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	25.6 J	27.3 J	11.7 J	40 U
Potassium	NS	29,900	27,900	43,300	30,000
Lead	25	**26.5**	25 U	5 U	7.5
Antimony	3	50 U	50 U	10 U	10 U
Silver	50	50 U	50 U	10 U	10 U
Selenium	10	50 U	50 U	10 U	10 U
Sodium	20,000	**437,000**	**421,000**	**305,000**	**273,000**
Thallium	0.5	50 U	50 U	10 U	10 U
Vanadium	NS	250 U	250 U	50 U	50 U
Zinc	2,000	**3280**	**3,460**	30 U	9 J

Note: ǂ = Dilution rate varies.

Table 7
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Metals - Total & Dissolved

Client ID	NYSDEC	NF-GW-4	NF-GW-5	NF-GW-6	FB-20130905
Lab Sample ID	Class GA	460-62458-4	460-62458-5	460-62458-6	460-62458-7
Date Sampled	Ambient	09/05/2013	09/05/2013	09/05/2013	09/05/2013
Dilution	Standard	1/5 ‡	2/20/1 ‡	1/5 ‡	10/1 ‡
Total Metals - µg/L	µg/L				
Aluminum	NS	745	5,410	90 J	200 U
Arsenic	25	5 U	10 U	5 U	5 U
Barium	1,000	138 J	115 J	38 J	200 U
Beryllium	3	2 U	4 U	2 U	2 U
Cadmium	5	5 U	**6.4** J	**5.3**	5 U
Calcium	NS	806,000	627,000	516,000	5,000 U
Chromium	50	10 U	**75.8**	10 U	10 U
Cobalt	NS	50 U	27.3 J	15.1 J	50 U
Copper	200	25 U	34.6 J	25 U	25 U
Iron	300+	**28,600**	**384,000**	**16,600**	150 U
Magnesium	35,000	**35,400**	**172,000**	**47,300**	5,000 U
Manganese	300+	**884**	**5,240**	**1,900**	15 U
Mercury	0.7	0.2 U	0.51	0.16 J	0.2 U
Nickel	100	40 U	98.4	48	40 U
Potassium	NS	18,600	46,100	10,200	5,000 U
Lead	25	23.1	**379**	5 U	5 U
Antimony	3	10 U	20 U	10 U	10 U
Silver	50	10 U	20 U	10 U	10 U
Selenium	10	10 U	20 U	10 U	10 U
Sodium	20,000	**230,000**	**796,000**	**48,400**	5,000 U
Thallium	0.5	10 U	20 U	10 U	10 U
Vanadium	NS	50 U	17.1 J	50 U	50 U
Zinc	2,000	473	**61,900**	**13,100**	30 U

Dissolved Metals - µg/L

Dilution	NS	1/5 ‡	2/20/1 ‡	1/3 ‡	5/1 ‡
Aluminum	NS	200 U	800 U	200 U	200 U
Arsenic	25	5 U	20 U	5 U	5 U
Barium	1,000	88.5 J	800 U	35.3 J	200 U
Beryllium	3	2 U	8 U	2 U	2 U
Cadmium	5	5 U	20 U	**5.1**	5 U
Calcium	NS	766,000	603,000	497,000	5,000 U
Chromium	50	10 U	40 U	10 U	10 U
Cobalt	NS	50 U	25 J	14.5 J	50 U
Copper	200	25 U	100 U	25 U	25 U
Iron	300+	165	**267,000**	**13,400**	150 U
Magnesium	35,000	34,000	**200,000**	**46,700**	5,000 U
Manganese	300+	**839**	**5,580**	**1,910**	15 U
Mercury	0.7	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	40 U	78.9 J	44.7	40 U
Potassium	NS	17,300	44,000	9,600	5,000 U
Lead	25	5 U	20 U	5 U	5 U
Antimony	3	10 U	40 U	10 U	10 U
Silver	50	10 U	40 U	10 U	10 U
Selenium	10	10 U	40 U	10 U	10 U
Sodium	20,000	**210,000**	**784,000**	**46,000**	5,000 U
Thallium	0.5	10 U	40 U	10 U	10 U
Vanadium	NS	50 U	200 U	50 U	50 U
Zinc	2,000	193	**66,600**	**12,500**	30 U

Note: ‡ = Dilution rate varies.

Table 8
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Groundwater Analytical Results
Polychlorinated Biphenyls & Pesticides

Client ID Lab Sample ID Date Sampled Polychlorinated Biphenyls - µg/L	NYSDEC Class GA Ambient Standard µg/L	NF-GW-1 460-62458-1 09/05/2013	NF-GW-1B 460-62458-8 09/05/2013	NF-GW-2 460-62458-2 09/05/2013	NF-GW-3 460-62458-3 09/05/2013	NF-GW-4 460-62458-4 09/05/2013	NF-GW-5 460-62458-5 09/05/2013	NF-GW-6 460-62458-6 09/05/2013	FB-20130905 460-62458-7 09/05/2013
Aroclor 1016	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Aroclor 1221	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Aroclor 1232	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Aroclor 1242	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Aroclor 1248	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Aroclor 1254	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Aroclor 1260	**NS**	0.4 U	0.4 U	0.42 U	0.4 U	0.4 U	0.4 U	0.42 U	0.42 U
Total PCBs	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides and Herbicides - µg/L									
2,4-D	**0.2**	0.51 U	0.53 U	0.53 U	0.51 U	0.53 U	0.51 U	0.51 U	0.51 U
2,4,5-T	**ND**	0.51 U	0.53 U	0.53 U	0.51 U	0.53 U	0.51 U	0.51 U	0.51 U
4,4'-DDD	**0.01**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
4,4'-DDE	**0.04**	0.050 U	0.050 U	**0.078 J**	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
4,4'-DDT	**0.05**	0.050 U	0.050 U	**0.089 J**	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Aldrin	**0.04**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
alpha-BHC	**0.004**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
beta-BHC	**NS**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Chlordane	**NS**	0.50 U	0.50 U	0.52 U	0.50 U	0.50 U	0.50 U	0.52 U	0.52 U
delta-BHC	**NS**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Dieldrin	**ND**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Endosulfan I	**5**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Endosulfan II	**5**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Endosulfan sulfate	**0.05**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Endrin	**0.04**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Endrin aldehyde	**0.03**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Endrin ketone	**35**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
gamma-BHC (Lindane)	**NS**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Heptachlor	**0.06**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Heptachlor epoxide	**0.03**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Methoxychlor	**35**	0.050 U	0.050 U	0.052 U	0.050 U	0.050 U	0.050 U	0.052 U	0.052 U
Silvex (2,4,5-TP)	**NS**	0.51 U *	0.53 U *	0.53 U *	0.51 U *	0.53 U *	0.51 U *	0.51 U *	0.51 U *
Toxaphene	**0.06**	0.50 U	0.50 U	0.52 U	0.50 U	0.50 U	0.50 U	0.52 U	0.52 U

Table 9
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Soil Vapor Analytical Results
Volatile Organic Compounds

Client ID	NYSDOH	NF-SV-1	NF-SV-2	NF-SV-3	NF-SV-4	NF-SV-5	NF-SV-6	NF-AA-1
Lab Sample ID	Soil Vapor	200-18145-1	200-18145-2	200-18145-3	200-18145-4	200-18145-5	200-18145-6	200-18145-7
Date Sampled	Intrusion	8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/27/2013
Dilution	Guidance	12	35.7	75.4	24.2	32.2	26.9	1
µg/m^3	µg/m^3							
1,1,1-Trichloroethane	100	13 U	39 U	82 U	26 U	35 U	29 U	1.1 U
1,1,2,2-Tetrachloroethane	NS	16 U	49 U	100 U	33 U	44 U	37 U	1.4 U
1,1,2-Trichloroethane	NS	13 U	39 U	82 U	26 U	35 U	29 U	1.1 U
1,1-Dichloroethane	NS	9.7 U	29 U	61 U	20 U	26 U	22 U	0.81 U
1,1-Dichloroethene	NS	9.5 U	28 U	60 U	19 U	26 U	21 U	0.79 U
1,2,4-Trichlorobenzene	NS	45 U	130 U	280 U	90 U	120 U	100 U	3.7 U
1,2,4-Trimethylbenzene	NS	31	35 U	74 U	34	36	26 U	0.98 U
1,2-Dibromoethane	NS	18 U	55 U	120 U	37 U	49 U	41 U	1.5 U
1,2-Dichlorobenzene	NS	14 U	43 U	91 U	29 U	39 U	32 U	1.2 U
1,2-Dichloroethane	NS	9.7 U	29 U	61 U	20 U	26 U	22 U	0.81 U
1,2-Dichloroethene, Total	NS	9.5 U	28 U	60 U	19 U	26 U	21 U	0.79 U
1,2-Dichloropropane	NS	11 U	33 U	70 U	22 U	30 U	25 U	0.92 U
1,2-Dichlorotetrafluoroethane	NS	17 U	50 U	110 U	34 U	45 U	38 U	1.4 U
1,3,5-Trimethylbenzene	NS	13	35 U	74 U	24 U	32 U	26 U	0.98 U
1,3-Butadiene	NS	11	16 U	33 U	11	14 U	15	0.44 U
1,3-Dichlorobenzene	NS	14 U	43 U	91 U	29 U	39 U	32 U	1.2 U
1,4-Dichlorobenzene	NS	14 U	43 U	91 U	29 U	39 U	32 U	1.2 U
1,4-Dioxane	NS	220 U	640 U	1,400 U	440 U	580 U	480 U	18 U
2,2,4-Trimethylpentane	NS	43	58	7,400	300	52	67	1.7
2-Chlorotoluene	NS	12 U	37 U	78 U	25 U	33 U	28 U	1 U
2-Hexanone	NS	25 U	73 U	150 U	50 U	66 U	55 U	2 U
4-Ethyltoluene	NS	15	35 U	74 U	24 U	32 U	26 U	0.98 U
Acetone	NS	590 J	820 J	900 UJ	930 J	930 J	900 J	19 J
Benzene	NS	130	160	190	180	150	200	0.64 U
Bromodichloromethane	NS	16 U	48 U	100 U	32 U	43 U	36 U	1.3 U
Bromoethene(Vinyl Bromide)	NS	10 U	31 U	66 U	21 U	28 U	24 U	0.87 U
Bromoform	NS	25 U	74 U	160 U	50 U	67 U	56 U	2.1 U
Bromomethane	NS	9.3 U	28 U	59 U	19 U	25 U	21 U	0.78 U
Carbon disulfide	NS	19 U	56 U	120 U	80	50 U	42 U	1.6 U
Carbon tetrachloride	50	15 U	45 U	95 U	30 U	41 U	34 U	1.3 U
Chlorobenzene	NS	11 U	33 U	69 U	22 U	30 U	25 U	0.92 U
Chloroethane	NS	16 U	47 U	99 U	32 U	42 U	35 U	1.3 U
Chloroform	NS	12 U	35 U	74 U	24 U	31 U	26 U	0.98 U
Chloromethane	NS	12 U	37 U	78 U	25 U	33 U	28 U	1.3
cis-1,2-Dichloroethene	NS	9.5 U	28 U	60 U	19 U	26 U	21 U	0.79 U
cis-1,3-Dichloropropene	NS	11 U	32 U	68 U	22 U	29 U	24 U	0.91 U
Cyclohexane	NS	57	75	8,400	92	71	70	0.69 U
Dibromochloromethane	NS	20 U	61 U	130 U	41 U	55 U	46 U	1.7 U
Dichlorodifluoromethane	NS	30 U	88 U	190 U	60 U	80 U	67 U	2.5 U
Ethylbenzene	NS	140	170	130	150	160	130	0.87 U
Freon TF	NS	18 U	55 U	120 U	37 U	49 U	41 U	1.5 U
Hexachlorobutadiene	NS	26 U	76 U	160 U	52 U	69 U	57 U	2.1 U
Isopropyl alcohol	NS	150 U	440 U	930 U	300 U	400 U	330 U	12 U
m,p-Xylene	NS	530	610	470	530	610	480	2.2 U
Methyl Ethyl Ketone	NS	18 U	53 U	110 U	62	47 U	37	2.9
methyl isobutyl ketone	NS	25 U	73 U	150 U	50 U	66 U	55 U	2 U
Methyl tert-butyl ether	NS	8.7 U	26 U	54 U	17 U	23 U	19 U	0.72 U
Methylene Chloride	NS	21 U	62 U	130 U	42 U	56 U	47 U	1.7 U
n-Heptane	NS	220	1,500	4,500	2,100	1,400	3,400	1.1
n-Hexane	NS	180	230	5,000	230	200	200	3.1
Styrene	NS	10 U	30 U	64 U	21 U	27 U	23 U	0.85 U
tert-Butyl alcohol	NS	180 U	540 U	1,100 U	370 U	490 U	410 U	15 U
Tetrachloroethene	30	16 U	48 U	100 U	33 U	44 U	36 U	1.4 U
Tetrahydrofuran	NS	180 UJ	530 UJ	1,100 UJ	360 UJ	470 UJ	400 UJ	15 UJ
Toluene	NS	1,100	3,300	850	2,800	4,000	3,500	3.6
trans-1,2-Dichloroethene	NS	9.5 U	28 U	60 U	19 U	26 U	21 U	0.79 U
trans-1,3-Dichloropropene	NS	11 U	32 U	68 U	22 U	29 U	24 U	0.91 U
Trichloroethene	50	13 U	38 U	81 U	26 U	35 U	29 U	1.1 U
Trichlorofluoromethane	NS	22	40 U	85 U	27 U	36 U	30 U	1.2
Vinyl chloride	NS	6.1 U	18 U	39 U	12 U	16 U	14 U	0.51 U
Xylene (total)	NS	650	760	600	660	770	590	1.1
Xylene, o-	NS	130	150	120	130	150	120	0.87 U
Total VOCs	NS	3,862	7,833	27,660	8,289	8,529	9,709	35

Tables 1-9
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Analytical Results
Notes

GENERAL

NS : No cleanup objective listed.

ND : No Detect

NA : Not Analyzed.

U : The analyte was not detected at the indicated concentration.

B : The analyte was found in an associated blank, as well as in the sample.

J : The concentration given is an estimated value.

*** :** Surrogate exceeds the control limit.

^ : Instrument related QC exceeds the control limits.

Samples were analyzed by TestAmerica Laboratories, Inc. of Edison, NJ and South Burlington, VT. Data qualifier adjustments were made to the reported laboratory data sets based on the third-party Data Usability Summary Reports prepared by Premier Environmental Services of Merrick, NY.

SOIL

Exceedences of Part 375 Unrestricted Use SCOs are highlighted in bold font.

Exceedences of Part 375 Restricted Residential SCOs are highlighted gray.

Part 375 Protection of Groundwater SCOs are also shown for reference.

Blind duplicate soil samples were labeled NF-SB-3(8-10') and NF-SB-3B(8-10').

Part 375 Soil Cleanup Objectives : Soil Clean-up Objectives listed in NYSDEC (New York State Department of Environmental Conservation) "Part 375" Regulations (6 NYCRR Part 375).

µg/kg : micrograms per kilogram = parts per billion (ppb)

mg/kg : milligrams per kilogram = parts per million (ppm)

GROUNDWATER

Exceedences of NYSDEC Class GA Ambient Standards/Guidance are highlighted in bold font.

Blind duplicate groundwater samples were labeled NW-GW-1 and NF-GW-1B.

NYSDEC Class GA Ambient Standard : New York State Department of Environmental Conservation Technical and Operational Guidance Series (1.1.1): Class GA Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

µg/L : micrograms per Liter = parts per billion (ppb)

*** :** Laboratory Control Standard or Laboratory Control Standard Duplicate exceeds the control limits.

The Class GA standard of 1 ug/L shown for 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, Pentachlorophenol, and Phenol is actually the standard for the sum of total phenolic compounds.

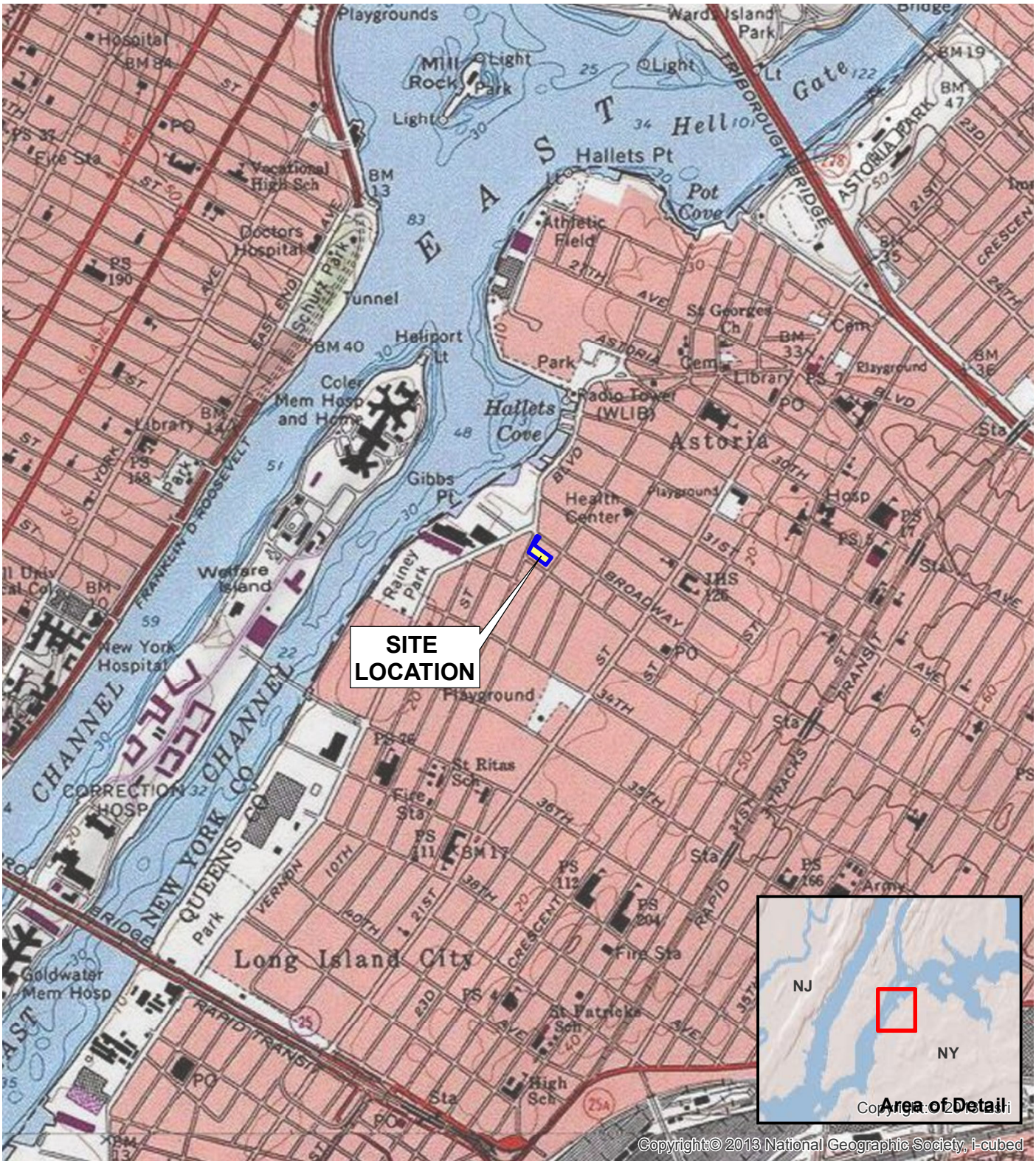
SOIL VAPOR

NYSDOH Soil Vapor Intrusion Air Guidance Value : NYSDOH Air Guideline Values (AGVs) presented in the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 (“NYSDOH Vapor Intrusion Guidance Document”), with update by NYSDOH Tetrachloroethene Fact Sheet dated October 2013.

Tables 1-9
Former Nelson Foundry
11-02 Broadway
Long Island City, NY
Analytical Results
Notes

µg/m^3 : micrograms per cubic meter of air

FIGURES



SOURCE
USGS 7.5 Minute Topographic Map
CENTRAL PARK Quad 1995

0 1,000 2,000 Feet

NELSON FOUNDRY
LONG ISLAND CITY, NEW YORK

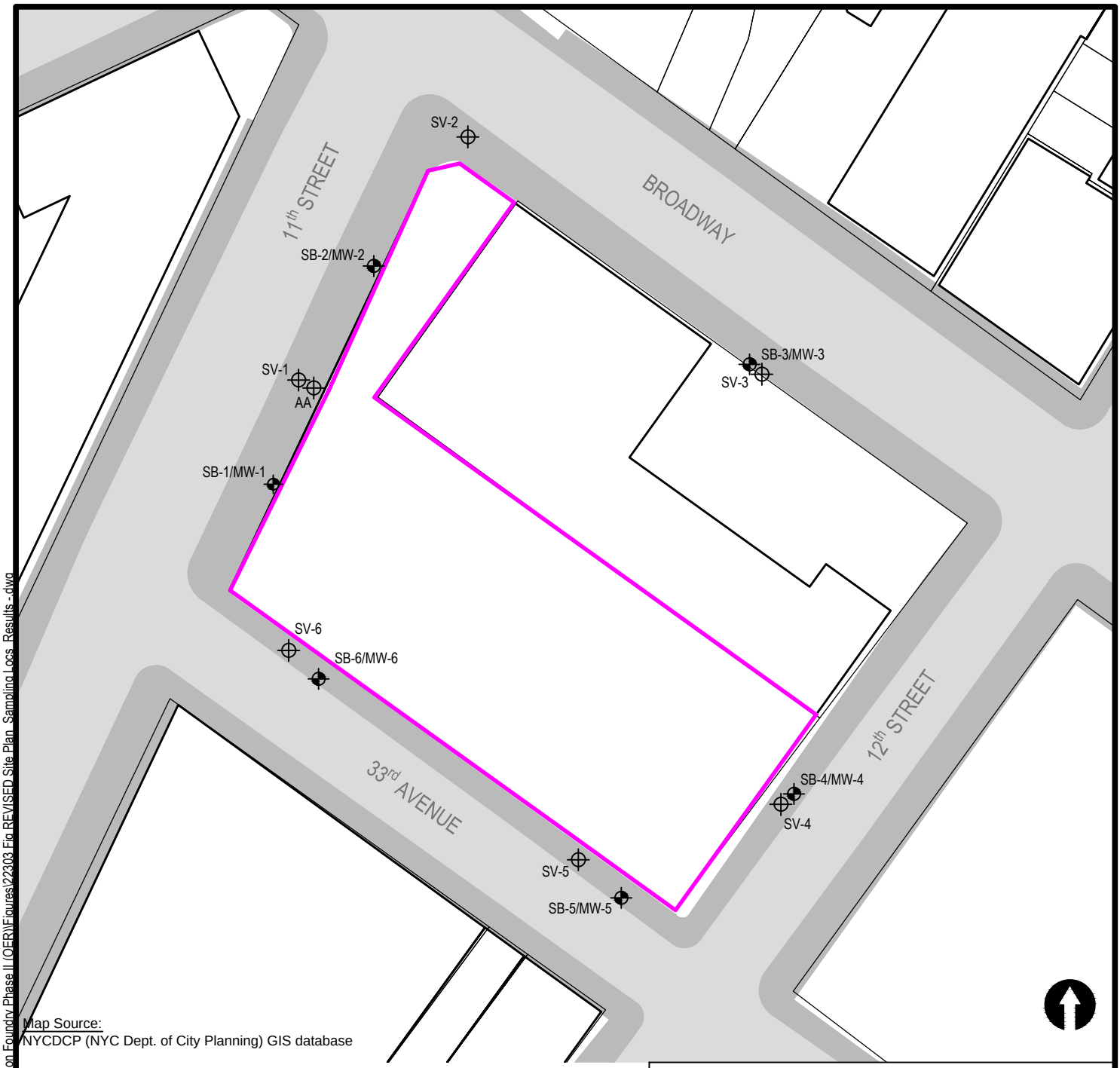
SITE LOCATION

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
12/19/2013

PROJECT No.
22303

FIGURE
1



Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

LEGEND:

- PROJECT SITE BOUNDARY
- SB-4/MW-4 — SOIL BORING/MONITORING WELL
- SV-4 — SOIL VAPOR SAMPLE LOCATION
- AA — AMBIENT AIR SAMPLE LOCATION
- BUILDING LINE
- LOT LINE

0' 30' 60' 120'
SCALE IN FEET

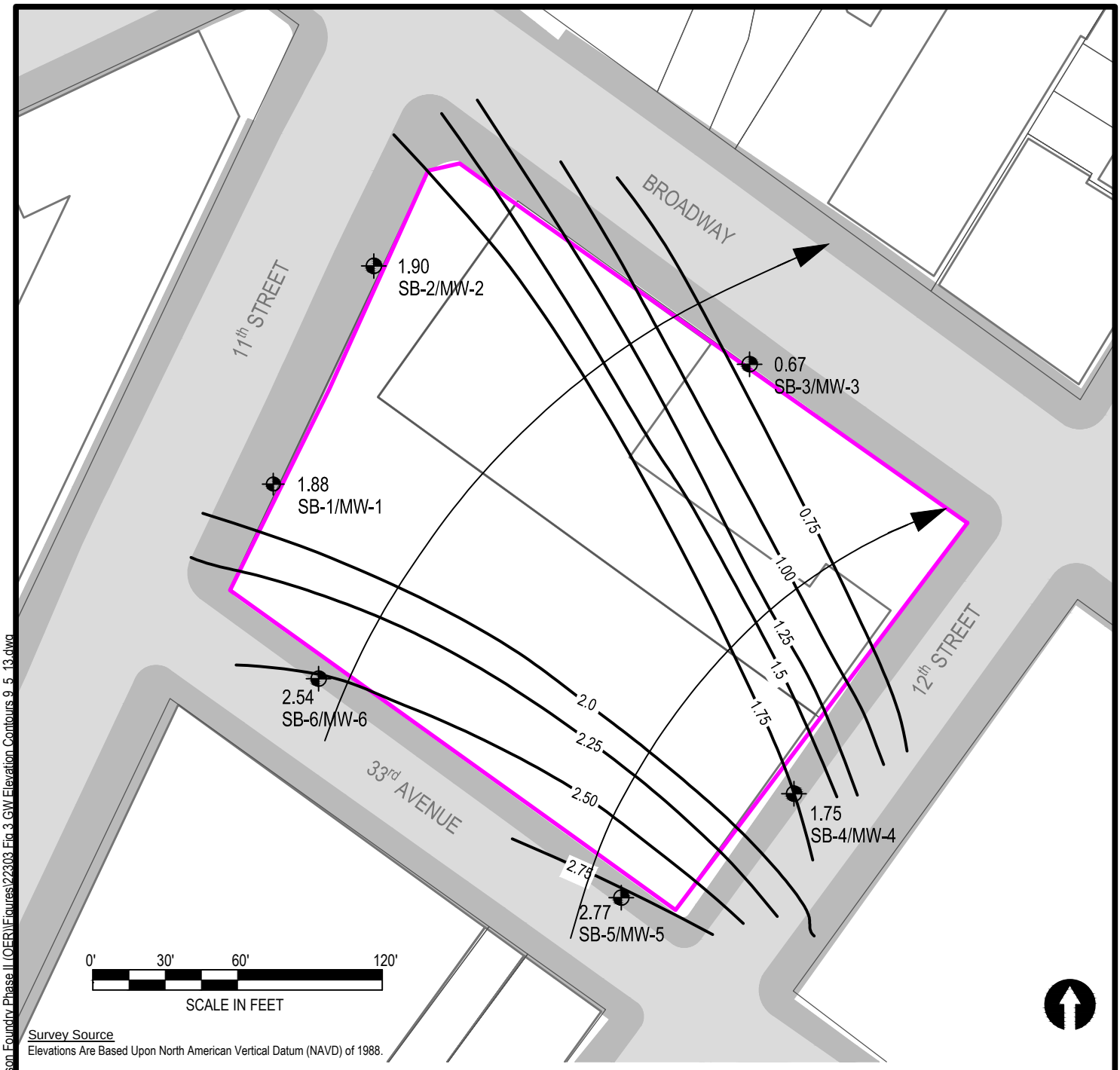
FORMER NELSON FOUNDRY

11-02 Broadway, Long Island City, New York

SAMPLING LOCATIONS

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE 12.19.2013
PROJECT No. 22303
SCALE as shown
FIGURE 2



Survey Source
Elevations Are Based Upon North American Vertical Datum (NAVD) of 1988.

LEGEND:

- SB-3 / MW-3 — MONITORING WELL WATER TABLE ELEVATION IN FEET
- 2.75 — ELEVATION CONTOUR IN FEET
- ANTICIPATED GROUNDWATER FLOW DIRECTION
- PROJECT SITE BOUNDARY
- SB-3/MW-3 — SOIL BORING/MONITORING WELL
- BUILDING LINE
- LOT LINE

Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

FORMER NELSON FOUNDRY
LONG ISLAND CITY, NEW YORK

GROUNDWATER ELEVATION (9/5/13)

AKRF
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE 11.11.2013
PROJECT No. 22303
SCALE as shown
FIGURE 3

Client ID	NF-SB-2(0-2')		NF-SB-2(8-10')	
Date Sampled	8/27/2013		8/27/2013	
Metals - mg/Kg				
Lead	78		44.1	
Pesticides - µg/Kg				
4,4'-DDE	7.3	U	13	
4,4'-DDT	10		40	
Chlordane	140		160	

Client ID	NF-SB-1(0-2')		NF-SB-1(8-10')	
Date Sampled	8/27/2013		8/27/2013	
SVOCs - µg/Kg				
Indeno[1,2,3-cd]pyrene	510	J	17	J
Metals - mg/Kg				
Arsenic	1.9		14.1	
Lead	63.5		16.3	
Mercury	0.2		0.08	
Zinc	170		68	

Client ID	NF-SB-6(0-2')		NF-SB-6(8-10')	
Date Sampled	8/28/2013		8/28/2013	
SVOCs - µg/Kg				
Benzo[a]anthracene	1,100		8,800	
Benzo[a]pyrene	1,400		9,900	
Benzo[b]fluoranthene	1,700		14,000	
Benzo[k]fluoranthene	620		4,600	
Chrysene	1,100		8,400	
Dibenz(a,h)anthracene	220		730	
Indeno[1,2,3-cd]pyrene	780		2,600	
Metals - mg/Kg				
Lead	139		93.7	
Mercury	0.47		0.37	
Zinc	145		81	

Client ID	NF-SB-5(0-2')		NF-SB-5(7-9')	
Date Sampled	8/28/2013		8/28/2013	
SVOCs - µg/Kg				
Benzo[a]anthracene	1,500		550	
Benzo[a]pyrene	1,700		610	
Benzo[b]fluoranthene	2,000		740	
Benzo[k]fluoranthene	810		290	
Chrysene	1,500		610	
Indeno[1,2,3-cd]pyrene	960		300	
Metals - mg/Kg				
Cadmium	1	U	13.3	
Lead	711		167	
Mercury	0.23		0.32	
Zinc	126		21,200	

Client ID	NF-SB-4(0-2')		NF-SB-4(8-10')	
Date Sampled	8/27/2013		8/27/2013	
VOCs - µg/Kg				
Benzene	0.43	J	120	
Ethylbenzene	0.97	U	1,400	
Xylenes, Total	2.9	U	920	
SVOCs - µg/Kg				
Benzo[a]anthracene	36	U	9,400	
Benzo[a]pyrene	110		9,100	
Benzo[b]fluoranthene	110		8,700	
Benzo[k]fluoranthene	41		3,500	
Chrysene	63	J	9,600	
Dibenz(a,h)anthracene	15	J	780	
Indeno[1,2,3-cd]pyrene	86	J	5,200	
Metals - mg/Kg				
Lead	483		292	
Mercury	0.26		0.12	
Zinc	3,090		216	

No Exceedances

SB-1/MW-1
SB-2/MW-2
SB-3/MW-3
SB-4/MW-4
SB-5/MW-5
SB-6/MW-6

11th STREET
BROADWAY
12th STREET
33rd AVENUE

SOIL
Exceedences of Part 375 Unrestricted SCOs are highlighted in bold font.
Exceedences of Part 375 Restricted Residential are highlighted in gray.

Part 375 Soil
Cleanup Objectives:Soil Clean-up Objectives listed in NYSDEC
(New York State Department of Environmental Conservation)
"Part 375" Regulations (6 NYCRR Part 375).

µg/kg:micrograms per kilogram = parts per billion (ppb)
mg/kg:micrograms per kilogram = parts per million (ppm)

U:The analyte was not detected at the indicated concentration.
J: The concentration given is an estimated value.

LEGEND:

- PROJECT SITE BOUNDARY
- BUILDING LINE
- LOT BOUNDARY
- SB-1/MW-1 — SOIL BORING AND MONITORING WELL LOCATION

Client ID	NF-SB-1(0-2')		NF-SB-1(8-10')	
Date Sampled	8/27/2013		8/27/2013	
SVOCs - µg/Kg				
Indeno[1,2,3-cd]pyrene	510	J	17	J

Sample ID number
Sample Date
Concentration in Soil
Compound in Soil

0' 30' 60' 120'
SCALE IN FEET

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

FORMER NELSON FOUNDRY
11-02 Broadway, Long Island City, New York

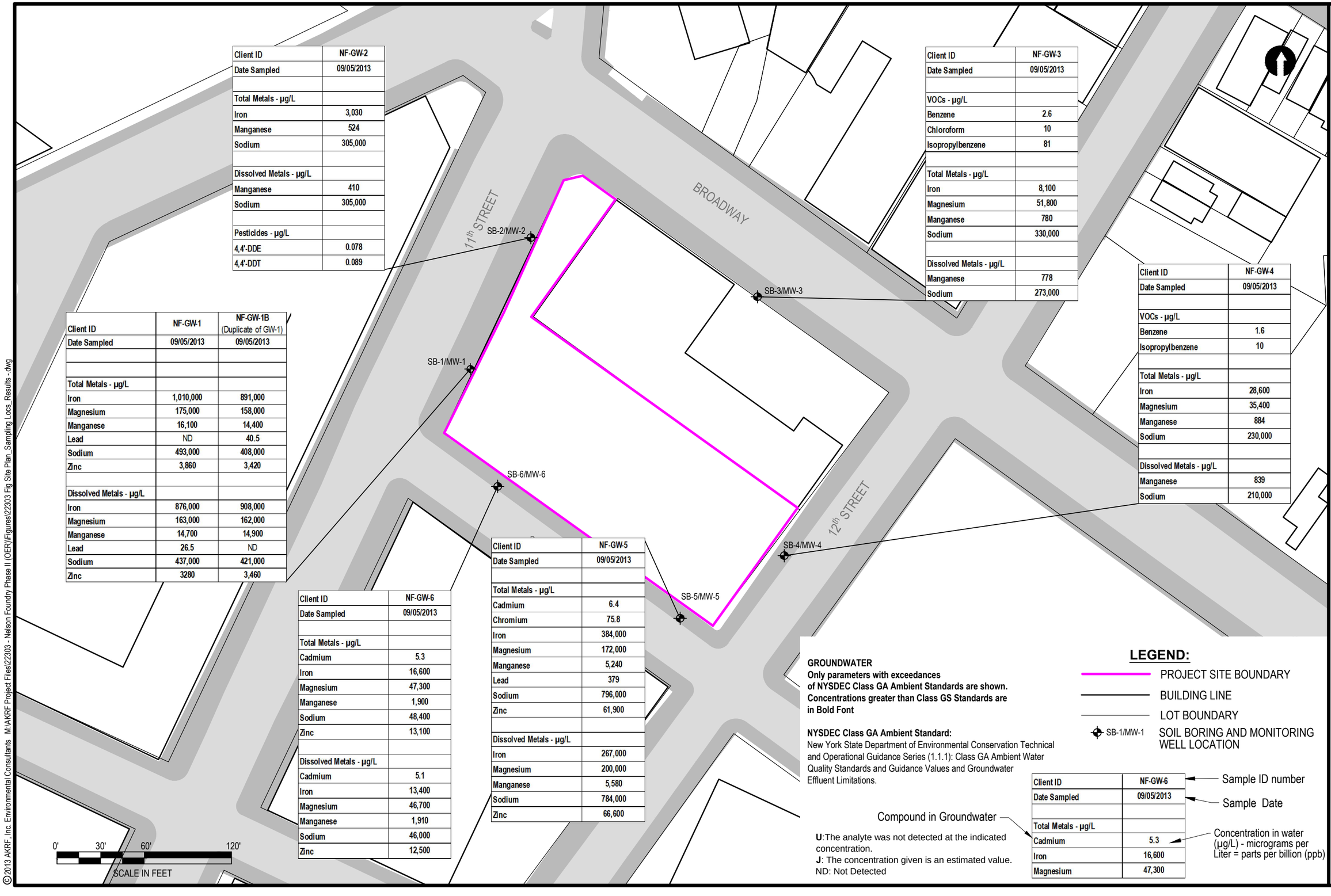
SOIL SAMPLING SPIDER MAP DEPICTING EXCEEDANCES OF UUSCOS AND/OR RRSCOS

DATE
12.23.2013

PROJECT NO.
22303

SCALE
as shown

FIGURE
4



Client ID	NF-GW-2
Date Sampled	09/05/2013
Total Metals - µg/L	
Iron	3,030
Manganese	524
Sodium	305,000
Dissolved Metals - µg/L	
Manganese	410
Sodium	305,000
Pesticides - µg/L	
4,4'-DDE	0.078
4,4'-DDT	0.089

Client ID	NF-GW-3
Date Sampled	09/05/2013
VOCs - µg/L	
Benzene	2.6
Chloroform	10
Isopropylbenzene	81
Total Metals - µg/L	
Iron	8,100
Magnesium	51,800
Manganese	780
Sodium	330,000
Dissolved Metals - µg/L	
Manganese	778
Sodium	273,000

Client ID	NF-GW-4
Date Sampled	09/05/2013
VOCs - µg/L	
Benzene	1.6
Isopropylbenzene	10
Total Metals - µg/L	
Iron	28,600
Magnesium	35,400
Manganese	884
Sodium	230,000
Dissolved Metals - µg/L	
Manganese	839
Sodium	210,000

Client ID	NF-GW-1	NF-GW-1B (Duplicate of GW-1)
Date Sampled	09/05/2013	09/05/2013
Total Metals - µg/L		
Iron	1,010,000	891,000
Magnesium	175,000	158,000
Manganese	16,100	14,400
Lead	ND	40.5
Sodium	493,000	408,000
Zinc	3,860	3,420
Dissolved Metals - µg/L		
Iron	876,000	908,000
Magnesium	163,000	162,000
Manganese	14,700	14,900
Lead	26.5	ND
Sodium	437,000	421,000
Zinc	3280	3,460

Client ID	NF-GW-5
Date Sampled	09/05/2013
Total Metals - µg/L	
Cadmium	6.4
Chromium	75.8
Iron	384,000
Magnesium	172,000
Manganese	5,240
Lead	379
Sodium	796,000
Zinc	61,900
Dissolved Metals - µg/L	
Iron	267,000
Magnesium	200,000
Manganese	5,580
Sodium	784,000
Zinc	66,600

Client ID	NF-GW-6
Date Sampled	09/05/2013
Total Metals - µg/L	
Cadmium	5.3
Iron	16,600
Magnesium	47,300
Manganese	1,900
Sodium	48,400
Zinc	13,100
Dissolved Metals - µg/L	
Cadmium	5.1
Iron	13,400
Magnesium	46,700
Manganese	1,910
Sodium	46,000
Zinc	12,500

GROUNDWATER
Only parameters with exceedances of NYSDEC Class GA Ambient Standards are shown. Concentrations greater than Class GS Standards are in Bold Font

NYSDEC Class GA Ambient Standard:
New York State Department of Environmental Conservation Technical and Operational Guidance Series (1.1.1): Class GA Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

U:The analyte was not detected at the indicated concentration.
J: The concentration given is an estimated value.
ND: Not Detected

LEGEND:

- PROJECT SITE BOUNDARY
- BUILDING LINE
- LOT BOUNDARY
- SB-1/MW-1 — SOIL BORING AND MONITORING WELL LOCATION

Compound in Groundwater

Client ID	NF-GW-6	← Sample ID number
Date Sampled	09/05/2013	← Sample Date
Total Metals - µg/L		
Cadmium	5.3	← Concentration in water (µg/L) - micrograms per Liter = parts per billion (ppb)
Iron	16,600	
Magnesium	47,300	

AKRF Environmental Consultants
440 Park Avenue South, New York, NY 10016

FORMER NELSON FOUNDRY
11-02 Broadway, Long Island City, New York

GROUNDWATER SAMPLING SPIDER MAP DEPICTING EXCEEDANCES OF CLASS GA STANDARDS

DATE: 12.23.2013
PROJECT NO.: 22303
SCALE: as shown
FIGURE: 5

Client ID	NF-AA-1	
Date Sampled	8/27/2013	
µg/m³		
2,2,4-Trimethylpentane	1.7	
Acetone	19	J
Chloromethane	1.3	
Methyl Ethyl Ketone	2.9	
n-Heptane	1.1	
n-Hexane	3.1	
Toluene	3.6	
Trichlorofluoromethane	1.2	
Xylene (total)	1.1	

Client ID	NF-SV-1	
Date Sampled	8/27/2013	
µg/m³		
1,2,4-Trimethylbenzene	31	
1,3,5-Trimethylbenzene	13	
1,3-Butadiene	11	
2,2,4-Trimethylpentane	43	
4-Ethyltoluene	15	
Acetone	590	J
Benzene	130	
Cyclohexane	57	
Ethylbenzene	140	
m,p-Xylene	530	
n-Heptane	220	
n-Hexane	180	
Toluene	1,100	
Trichlorofluoromethane	22	
Xylene (total)	650	
Xylene, o-	130	

Client ID	NF-SV-2	
Date Sampled	8/27/2013	
µg/m³		
2,2,4-Trimethylpentane	58	
Acetone	820	J
Benzene	160	
Cyclohexane	75	
Ethylbenzene	170	
m,p-Xylene	610	
n-Heptane	1,500	
n-Hexane	230	
Toluene	3,300	
Xylene (total)	760	
Xylene, o-	150	

Client ID	NF-SV-3	
Date Sampled	8/27/2013	
µg/m³		
2,2,4-Trimethylpentane	7,400	
Benzene	190	
Cyclohexane	8,400	
Ethylbenzene	130	
m,p-Xylene	470	
n-Heptane	4,500	
n-Hexane	5,000	
Toluene	850	
Xylene (total)	600	
Xylene, o-	120	

Client ID	NF-SV-4	
Date Sampled	8/27/2013	
µg/m³		
1,2,4-Trimethylbenzene	34	
1,3-Butadiene	11	
2,2,4-Trimethylpentane	300	
Acetone	930	J
Benzene	180	
Carbon disulfide	80	
Cyclohexane	92	
Ethylbenzene	150	
m,p-Xylene	530	
Methyl Ethyl Ketone	62	
n-Heptane	2,100	
n-Hexane	230	
Toluene	2,800	
Xylene (total)	660	
Xylene, o-	130	

Client ID	NF-SV-5	
Date Sampled	8/27/2013	
µg/m³		
1,2,4-Trimethylbenzene	36	
2,2,4-Trimethylpentane	52	
Acetone	930	J
Benzene	150	
Cyclohexane	71	
Ethylbenzene	160	
m,p-Xylene	610	
n-Heptane	1,400	
n-Hexane	200	
Toluene	4,000	
Xylene (total)	770	
Xylene, o-	150	

Client ID	NF-SV-6	
Date Sampled	8/27/2013	
µg/m³		
1,3-Butadiene	15	
2,2,4-Trimethylpentane	67	
Acetone	900	J
Benzene	200	
Cyclohexane	70	
Ethylbenzene	130	
m,p-Xylene	480	
Methyl Ethyl Ketone	37	
n-Heptane	3,400	
n-Hexane	200	
Toluene	3,500	
Xylene (total)	590	
Xylene, o-	120	

SV-1 AA SV-2 SV-3 SV-4 SV-5 SV-6

11th STREET

BROADWAY

12th STREET

0' 30' 60' 120'

SCALE IN FEET

SOIL VAPOR
Only parameters with detections are shown

J: The concentration given is an estimated value.

LEGEND:

- PROJECT SITE BOUNDARY
- BUILDING LINE
- LOT BOUNDARY
- SV-4 — SOIL VAPOR SAMPLE LOCATION
- AA — AMBIENT AIR SAMPLE LOCATION

Client ID	NF-SV-1		
Date Sampled	8/27/2013		← Sample Date
µg/m³			
1,2,4-Trimethylbenzene	31		
1,3,5-Trimethylbenzene	13		
1,3-Butadiene	11		
2,2,4-Trimethylpentane	43		
4-Ethyltoluene	15		
Acetone	590	J	← Concentration in Soil Vapor (µg/m³) (micrograms per cubic meter)
Benzene	130		
Cyclohexane	57		

← Sample ID number

Compound in Soil Vapor →

AKRF
Environmental Consultants
440 Park Avenue South, New York, NY 10016

FORMER NELSON FOUNDRY
11-02 Broadway, Long Island City, New York

SOIL VAPOR AND AIR SAMPLING SPIDER MAP DEPICTING DETECTIONS

DATE
12.23.2013

PROJECT NO.
22303

SCALE
as shown

FIGURE
6

APPENDIX A

SOIL BORING LOGS

SOIL BORING LOG

Nelson Foundry

AKRF Project Number: 22303

Boring No. **NF-SB-1**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra Environmental Corp.
Sampler: R. Andrews/C. Richard

Drilling
Start Time 11:10
Finish Time 11:30
Date 8-27-2013
Weather: Cloudy, 72° F

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Concrete - 6"	Odor	Moisture	PID (ppm)	NAPL	Samples Collected for Lab Analysis
1	24		Top 6" - Brown SAND, some silt, trace brick and concrete (FILL).	ND	Dry	0.3	ND	NF-SB-1 (0-2)
2								
3			Middle 12" - Brown SAND, some silt.	ND	Dry	0.3	ND	
4								
5			Bottom 6 " - CRUSHED ASPHALT.	ND	Dry	0.3	ND	
6	33		33" - CRUSHED ASPHALT.	ND	Moist	0.3	ND	
7								
8								
9				ND	Wet	0.3	ND	NF-SB-1 (8-10)
10								
11	48		48" - Dark gray SILT, some sand.	ND	Wet	0.3	ND	
12								
13				ND	Wet	0.3	ND	
14								
15				ND	Wet	0.3	ND	
16	24		24" - Dark gray SILT, some sand.	ND	Wet	0.3	ND	
17								
18			EOB @ 17' BG					
19								
20								

Notes:
Groundwater encountered at 10' below grade.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Nelson Foundry

AKRF Project Number: 22303

Boring No. **NF-SB-2**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra Environmental Corp.
Sampler: R. Andrews/C. Richard

Drilling
Start Time 11:45
Finish Time 12:30
Date 8-27-2013
Weather: Cloudy, 72° F

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Concrete - 4"	Odor	Moisture	PID (ppm)	NAPL	Samples Collected for Lab Analysis
1	12		12" - Brown Sand, some silt, trace brick and concrete (FILL).	ND	Dry	0.3	ND	NF-SB-2 (0-2)
2								
3								
4								
5								
6	12		12" - Brown Sand, some silt, trace brick and concrete (FILL).	ND	Dry	0.3	ND	
7								
8								
9				ND	Wet	0.3	ND	NF-SB-2 (8-10)
10								
11	36		36" - Dark gray SILT, some sand.					
12				ND	Wet	0.3	ND	
13				ND	Wet	0.3	ND	
14				ND	Wet	0.3	ND	
15								
16	24		24" - Dark gray SILT, some sand.	ND	Wet	0.3	ND	
17								
18			EOB @ 17' BG					
19								
20								

Notes:

Groundwater encountered at 10' below grade.

PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Nelson Foundry

AKRF Project Number: 22303

Boring No. **NF-SB-3**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra Environmental Corp.
Sampler: R. Andrews/C. Richard

Drilling
Start Time 13:30
Finish Time 14:15
Date 8-27-2013
Weather: Cloudy, 72° F

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Concrete - 6"	Odor	Moisture	PID (ppm)	NAPL	Samples Collected for Lab Analysis
1								
2	24		24" - Brown SAND, some silt, trace brick and concrete (FILL).	Strong petro like odor	Dry	2.3	ND	(NF-SB-3) (0-2)
3					Dry	7.2	ND	
4					Dry	4.4	ND	
5								
6								
7	24		24" - Brown SAND, some silt, trace brick and concrete (FILL).	Strong petro like odor	Dry	62.9	ND	
8								
9					Dry	1029	ND	NF-SB-3 (8-10) NF-SB-3B (8-10)
10								
11					Moist	78.3	ND	
12					Moist	50.9	ND	
13	30		30" - Dark gray SILT, some sand.	Strong petro like odor	Moist	9	ND	
14					Moist	5.2	ND	
15								
16					Moist	9.9	ND	
17								
18	24		24" - Dark gray SILT, some sand.	Strong petro like odor				
19								
20			EOB @ 20' BG		Wet	3	ND	

Notes:

Groundwater encountered at 20' below grade. Duplicate soil sample (labeled NF-SB-3B(8-10)) collected from this boring.

PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Nelson Foundry

AKRF Project Number: 22303

Boring No. **NF-SB-4**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra Environmental Corp.
Sampler: R. Andrews/C. Richard

Drilling
Start Time 14:30
Finish Time 15:15
Date 8-27-2013
Weather: Cloudy, 72° F

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Concrete - 6"	Odor	Moisture	PID (ppm)	NAPL	Samples Collected for Lab Analysis
1								
2	24		24" - Brown SAND, some silt, (FILL).	Strong petro like odor	Dry	0.3	ND	NF-SB-4 (0-2)
3					Dry	6.3	ND	
4					Dry	1.4	ND	
5								
6								
7	36		36" - Brown SAND, some silt, (FILL).	Strong petro like odor	Dry	1.7	ND	
8					Moist	5.1	ND	NF-SB-4 (8-10)
9					Wet	49.3	ND	
10								
11					Wet	7.3	ND	
12					Wet	1.6	ND	
13	60		60" - Dark gray SILT, some sand.	Strong petro like odor	Wet	0.9	ND	
14					Wet	0.3	ND	
15								
16	24		24" - Dark gray SILT, some sand.	ND	Wet	0.3	ND	
17								
18			EOB @ 17' BG					
19								
20								

Notes:
Groundwater encountered at 10' below grade.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Nelson Foundry

AKRF Project Number: 22303

Boring No. **NF-SB-5**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra Environmental Corp.
Sampler: R. Andrews/C. Richard

Drilling
Start Time 9:30
Finish Time 10:25
Date 8-28-2013
Weather: Sunny, 73° F

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Asphalt - 2", Concrete 6"	Odor	Moisture	PID (ppm)	NAPL	Samples Collected for Lab Analysis
1	36		36" Brown SAND, some silt, (FILL).	ND	Dry	ND	ND	NF-SB-5 (0-2)
2				ND	Dry	ND	ND	
3				ND	Dry	ND	ND	
4				ND	Dry	ND	ND	
5								
6	42		Top 36" - Brown SAND, some silt, (FILL).	Slight petro like odor	Dry	3.5	ND	NF-SB-5 (7-9)
7					Dry	16.5	ND	
8					Dry	15.2	ND	
9			Bottom 6" - Gray SAND, some silt & gravel.		Dry	3.1	ND	
10								
11	42		42" - Gray SAND, some silt, trace red brick.	Slight petro like odor	Wet	7.5	ND	
12					Wet	2.5	ND	
13					Wet	1.6	ND	
14					Wet	0.4	ND	
15								
16	12		12" - Brown SAND & SILT.	ND	Wet	0.6	ND	
17			EOB @ 16' BG					
18								
19								
20								

Notes:
Groundwater encountered at 9' below grade.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Nelson Foundry

AKRF Project Number: 22303

Boring No. **NF-SB-6**

Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: 5' Macrocore
Driller : Zebra Environmental Corp.
Sampler: R. Andrews/C. Richard

Drilling
Start Time 10:40
Finish Time 11:15
Date 8-28-2013
Weather: Sunny, 73° F

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Asphalt - 2", Concrete 6"	Odor	Moisture	PID (ppm)	NAPL	Samples Collected for Lab Analysis
1								
2	24		24" - Brown SAND, some silt, trace gravel, (FILL).	ND	Dry	ND	ND	NF-SB-6 (0-2)
3								
4				ND	Dry	ND	ND	
5								
6			Top 18" - Brown SAND, some silt, trace gravel, (FILL).	ND	Dry	ND	ND	
7	36			ND	Moist	ND	ND	
8								
9			Bottom 18" - Brown SAND, some silt, trace gravel (FILL)	ND	Wet	0.3	ND	NF-SB-6 (8-10)
10								
11								
12	24		24" - Brown SAND, some silt, trace gravel, (FILL).	ND	Wet	0.1	ND	
13								
14				ND	Wet	0.5	ND	
15								
16	24		24" - Gray SILT, some sand.	ND	Wet	ND	ND	
17				ND	Wet	ND	ND	
18			EOB @ 17' BG					
19								
20								

Notes:
Groundwater encountered at 10' below grade.
PID = photoionization detector ppm = parts per million ND = Not Detected

APPENDIX B

WELL SAMPLING LOGS

Well Sampling Log

Job No:	**22303**	**Client:**	NYCOER	**Well No:**	**MW-1**
Project Location:	**Former Nelson Foundry**	**Sampled By:**	SS/CR/RA		
Date:	9/5/2013	**Sampling Time:**	12:00		
PID at surface:	13.0 ppm				
Total Depth:	17.40 ft. below top of casing	**Water Column (V**	8.89 feet	*= 0.163 * WC for 2" wells	
Depth to Water:	8.51 ft. below top of casing	**Well Volume*:**	1.45 gallons	*= 0.653 * WC for 4" wells	
Depth to Product:	ND	**Volume Purged:**	5 gallons	*= 1.469 * WC for 6" wells	
Depth to top of screen:	7.40 ft. below top of casing	**Well Diam.:**	2 inches	Target maximum flow rate is 100 ml/min	
Depth to bottom of screen:	17.40 ft. below top of casing	**Pump type:**	QED Sample Pro Bladder Pump		
Approx. Pump Intake:	14.00 ft. below top of casing	**Field Screening Instrument:**	Horiba U-22		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (^{o}C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity* (NTU)	Comments (problems, odor, sheen)
11:01	8.51	100	21.23	9.41	4.10	6.12	-34	588	
11:06	8.51	100	20.37	9.83	3.21	6.12	-50	303	
11:11	8.51	100	20.01	9.82	2.97	6.12	-56	326	
11:16	8.51	100	19.30	9.45	2.80	6.14	-59	397	
11:21	8.51	100	19.16	8.41	2.74	6.11	-55	244	
11:26	8.51	100	19.37	7.52	2.63	6.04	-46	165	
11:31	8.51	100	19.97	6.89	2.56	5.93	-34	108	Sheen on purge water
11:36	8.51	100	20.04	6.44	2.40	5.88	-26	81.6	
11:41	8.51	100	20.07	6.21	2.36	5.81	-15	51.9	
11:46	8.51	100	20.12	6.04	2.31	5.77	-13	47.8	
11:51	8.51	100	20.21	5.99	2.25	5.76	-12	43.1	
11:56	8.51	100	20.23	5.98	2.20	5.77	-12	38.7	
12:45	8.51	100	20.87	5.97	2.17	5.76	-12	39.4	Post sample
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL Metals (total and dissolved) by EPA Methods 6010 and 7471, pesticides by EPA Method 8081 and PCBs by EPA Method 8082. Duplicate sample (labeled NF-GW-1B) collected from this well for same analyte list.

Well Sampling Log

Job No:	**22303**	**Client:**	NYCOER	**Well No:**	**MW-2**
Project Location:	**Former Nelson Foundry**	**Sampled By:**	SS/CR/RA		
Date:	9/5/2013	**Sampling Time:**	11:38		
PID at surface:	5.5 ppm				
Total Depth:	17.10 ft. below top of casing	**Water Column (**	9.48 feet	*= 0.163 * WC for 2" wells	
Depth to Water:	7.62 ft. below top of casing	**Well Volume*:**	1.54 gallons	*= 0.653 * WC for 4" wells	
Depth to Product:	ND	**Volume Purged:**	5.5 gallons	*= 1.469 * WC for 6" wells	
Depth to top of screen:	7.10 ft. below top of casing	**Well Diam.:**	2 inches	Target maximum flow rate is 100 ml/min	
Depth to bottom of screen:	17.10 ft. below top of casing	**Pump type:**	QED Sample Pro Bladder Pump		
Approx. Pump Intake:	13.00 ft. below top of casing	**Field Screening Instrument:**	Horiba U-22		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity* (NTU)	Comments (problems, odor, sheen)
10:40	7.60	100	26.81	2.66	8.12	9.98	-218	305.0	
10:45	7.60	100	27.16	2.64	3.22	10.39	-264	151.0	
10:50	7.60	100	27.43	2.62	2.57	10.35	-273	112.0	
10:55	7.60	100	27.55	2.61	2.17	10.25	-274	91.6	
11:00	7.60	100	27.85	2.61	1.84	10.12	-271	89.3	
11:05	7.60	100	27.92	2.60	1.70	9.98	-264	94.5	No odor or sheen on purge water
11:10	7.60	100	27.97	2.61	1.62	9.77	-255	82.0	
11:15	7.60	100	28.07	2.63	1.48	9.42	-240	62.7	
11:20	7.60	100	28.08	2.65	1.37	9.14	-218	54.5	
11:25	7.60	100	28.13	2.70	1.43	9.10	-213	48.6	
11:30	7.60	100	28.19	2.68	1.49	9.06	-210	43.1	
11:35	7.60	100	28.37	2.69	1.53	9.01	-209	39.8	
12:40	7.60	100	29.01	2.66	1.56	8.97	-206	44.8	Post Sample
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL Metals (total and dissolved) by EPA Methods 6010 and 7471, pesticides by EPA Method 8081 and PCBs by EPA Method 8082.

Well Sampling Log

Job No:	**22303**	**Client:**	NYCOER	**Well No:**	**MW-3**
Project Location:	**Former Nelson Foundry**	**Sampled By:**	RA/SS/CR		
Date:	9/5/2013	**Sampling Time:**	16:30		
PID at surface:	35.8 ppm				
Total Depth:	17.50 ft. below top of casing	**Water Column (**	9.60 feet	*= 0.163 * WC for 2" wells	
Depth to Water:	7.90 ft. below top of casing	**Well Volume*:**	1.56 gallons	*= 0.653 * WC for 4" wells	
Depth to Product:	ND	**Volume Purged:**	5 gallons	*= 1.469 * WC for 6" wells	
Depth to top of screen:	7.50 ft. below top of casing	**Well Diam.:**	2 inches	Target maximum flow rate is 100 ml/min	
Depth to bottom of screen:	17.40 ft. below top of casing	**Pump type:**	QED Sample Pro Bladder Pump		
Approx. Pump Intake:	14.00 ft. below top of casing	**Field Screening Instrument:**	Horiba U-22		

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity* (NTU)	Comments (problems, odor, sheen)
15:30	7.90	100	22.34	2.73	5.34	6.93	-63	632.0	
15:35	7.90	100	22.31	2.71	5.21	6.90	-61	422.0	
15:40	7.90	100	22.27	2.63	5.10	6.82	-58	323.0	
15:45	7.90	100	22.03	2.60	5.03	6.78	-54	220.0	
15:50	7.90	100	21.97	2.53	4.83	6.75	-51	168.0	
15:55	7.90	100	21.63	2.41	4.76	6.73	-41	109.0	No odor or sheen on purge water
16:00	7.90	100	21.41	2.32	4.68	6.70	-36	82.0	
16:05	7.90	100	20.73	2.20	4.43	6.69	-31	71.0	
16:10	7.90	100	20.09	2.19	4.41	6.61	-25	47.0	
16:15	7.90	100	20.08	2.18	4.40	6.60	-24	46.0	
16:20	7.90	100	20.08	2.19	4.41	6.61	-23	45.0	
16:25	7.90	100	20.07	2.18	4.40	6.60	-24	45.0	
16:45	7.90	100	20.07	2.18	4.40	6.59	-24	44.0	Post Sample
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL Metals (total and dissolved) by EPA Methods 6010 and 7471, pesticides by EPA Method 8081 and PCBs by EPA Method 8082.

AKRF

Well Sampling Log

Job No:	**22302**		**Client:**	NYCOER	**Well No:** MW-4
Project Location:	**Former Nelson Foundry**		**Sampled By:**	RA/SS/CR	
Date:	9/5/2013		**Sampling Time:**	15:15	
PID at surface:	40 ppm				
Total Depth:	17.35 ft. below top of casing		**Water Column (**	9.41 feet	*= 0.163 * WC for 2" wells
Depth to Water:	7.94 ft. below top of casing		**Well Volume*:**	1.53 gallons	*= 0.653 * WC for 4" wells
Depth to Product:	ND		**Volume Purged:**	5 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	7.35 ft. below top of casing		**Well Diam.:**	2 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	17.35 ft. below top of casing		**Pump type:**	QED Sample Pro Bladder Pump	
Approx. Pump Intake:	14.00 ft. below top of casing		**Field Screening Instrument:**	Horiba U-22	

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity* (NTU)	Comments (problems, odor, sheen)
14:15	7.94	100	24.91	8.41	6.32	5.92	-40	722.0	
14:20	7.94	100	24.81	8.32	6.27	5.90	-36	700.0	
14:25	7.94	100	24.80	8.28	6.10	5.89	-34	652.0	
14:30	7.94	100	24.49	8.14	6.05	5.88	-30	432.0	
14:35	7.94	100	24.37	8.03	5.91	5.85	-26	378.0	
14:40	7.94	100	24.10	7.82	5.87	5.80	-25	304.0	
14:45	7.94	100	24.08	7.63	5.53	5.76	-20	203.0	
14:50	7.94	100	24.06	7.52	5.32	5.74	-19	152.0	
14:55	7.94	100	24.05	7.48	5.30	5.73	-18	78.0	
15:00	7.94	100	24.05	7.47	5.29	5.73	-18	43.0	
15:05	7.94	100	24.04	7.47	5.28	5.72	-17	40.0	
15:10	7.94	100	24.04	7.46	5.29	5.72	-17	41.0	
15:30	7.94	100	24.04	7.46	5.28	5.71	-17	40.0	Post Sample
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL Metals (total and dissolved) by EPA Methods 6010 and 7471, pesticides by EPA Method 8081 and PCBs by EPA Method 8082.

Well Sampling Log

Job No:	**22303**		**Client:**	NYCOER	**Well No:** MW-5
Project Location:	**Former Nelson Foundry**		**Sampled By:**	SS/CR/RA	
Date:	9/5/2013		**Sampling Time:**	14:40	
PID at surface:	2.8 ppm				
Total Depth:	10.60	ft. below top of casing	**Water Column (**	9.22 feet	*= 0.163 * WC for 2" wells
Depth to Water:	7.38	ft. below top of casing	**Well Volume*:**	1.50 gallons	*= 0.653 * WC for 4" wells
Depth to Product:	ND		**Volume Purged:**	5 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	6.60	ft. below top of casing	**Well Diam.:**	2 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	16.60	ft. below top of casing	**Pump type:**	QED Sample Pro Bladder Pump	
Approx. Pump Intake:	14.00	ft. below top of casing	**Field Screening Instrument:**	Horiba U-22	

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity* (NTU)	Comments (problems, odor, sheen)
13:40	7.38	100	23.21	2.51	2.49	6.10	-73	>999	
13:45	7.38	100	22.25	2.92	2.50	6.21	-79	873.0	
13:50	7.38	100	21.36	3.41	2.46	6.37	-84	729.0	
13:55	7.38	100	20.14	4.73	2.41	6.45	-93	632.0	
14:00	7.38	100	19.96	5.34	2.39	6.55	-102	591.0	
14:05	7.38	100	19.96	5.28	2.42	6.56	-109	322.0	
14:10	7.38	100	19.96	5.17	2.43	6.59	-111	221.0	
14:15	7.38	100	19.95	5.06	2.44	6.59	-114	107.0	
14:20	7.38	100	19.94	5.08	2.45	6.59	-117	46.0	
14:25	7.38	100	19.94	5.09	2.46	6.59	-118	44.0	
14:30	7.38	100	19.94	5.10	2.47	6.59	-117	42.0	
14:35	7.38	100	19.94	5.11	2.47	6.60	-118	42.0	
14:50	7.38	100	19.94	5.11	2.47	6.60	-118	42.0	Post Sample
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL Metals (total and dissolved) by EPA Methods 6010 and 7471, pesticides by EPA Method 8081 and PCBs by EPA Method 8082.

Well Sampling Log

Job No:	**22303**	**Client:**	NYCOER	**Well No:**
Project Location:	**Former Nelson Foundry**	**Sampled By:**	RA/SS/CR	**MW-6**
Date:	9/5/2013	**Sampling Time:**	13:55	
PID at surface:	0.8 ppm			
Total Depth:	15.52 ft. below top of casing	**Water Column (**	7.71 feet	*= 0.163 * WC for 2" wells
Depth to Water:	8.81 ft. below top of casing	**Well Volume*:**	1.25 gallons	*= 0.653 * WC for 4" wells
Depth to Product:	ND	**Volume Purged:**	4 gallons	*= 1.469 * WC for 6" wells
Depth to top of screen:	6.52 ft. below top of casing	**Well Diam.:**	2 inches	Target maximum flow rate is 100 ml/min
Depth to bottom of screen:	16.52 ft. below top of casing	**Pump type:**	QED Sample Pro Bladder Pump	
Approx. Pump Intake:	14.00 ft. below top of casing	**Field Screening Instrument:**	Horiba U-22	

Time	Depth to Water (Ft.)	Purge Rate (ml/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity* (NTU)	Comments (problems, odor, sheen)
13:10	8.81	100	23.02	2.38	12.64	6.95	-70	135.0	No sheen or odors noted on purge water
13:15	8.81	100	25.62	2.28	7.79	6.72	-49	42.2	
13:20	8.81	100	23.40	2.30	8.09	6.62	-37	18.1	
13:25	8.81	100	23.26	2.31	7.73	6.55	-28	10.6	
13:30	8.81	100	23.02	2.32	7.06	6.49	-23	7.8	
13:35	8.81	100	23.16	2.31	6.09	6.43	-15	0.4	
13:40	8.81	100	22.99	2.32	5.34	6.41	-13	0.0	
13:45	8.81	100	23.08	2.32	5.19	6.40	-12	0.0	
13:50	8.81	100	23.19	2.31	5.07	6.39	-11	0.0	
14:15	8.81	100	23.19	2.31	5.07	6.39	-11	0.0	Post Sample
Stabilization Criteria:				**+/- 3 mS/cm**	**+/- 0.3 mg/L**	**+/- 0.1 pH units**	**+/- 10 mV**	**<50 NTU**	If water quality parameters do not stabilize and/or turbidity is greater than 50 NTU within two hours, discontinue purging and collect sample.

Groundwater samples analyzed for: TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL Metals (total and dissolved) by EPA Methods 6010 and 7471, pesticides by EPA Method 8081 and PCBs by EPA Method 8082.

APPENDIX C

SOIL VAPOR SAMPLING LOGS

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No: 22303 **Client:** NYCOER

Project Location: Nelson Foundry **Sampled By:** EN

Date: 2013-08-27

Sample ID: NF-AA-1

Canister ID: 4924

Flow Controller ID: 10300

Purging

Time Started: N/A

Time Stopped: N/A

Vol. Purged: N/A liters

Flow Rate: N/A L/min

Laboratory Sample (Summa Canister)

Time Started: 12:11 **Vacuum:** -30 inHg

Time Stopped: 14:11 **Vacuum:** -6 inHg

Field Sample

PID Calibration: N/A (Ambient air sample)

Time Started: N/A

Time Stopped: N/A

PID Reading: N/A ppm

He Reading N/A %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No: 22303 **Client:** NYCOER

Project Location: Nelson Foundry **Sampled By:** EN/CR

Date: 2013-08-27

Sample ID: SV-1

Canister ID: 2951

Flow Controller ID: 10295

Purging

Time Started: 10:10

Time Stopped: 10:15

Vol. Purged: 1 liters

Flow Rate: 0.2 L/min

Laboratory Sample (Summa Canister)

Time Started: 10:24 **Vacuum:** -30 inHg

Time Stopped: 12:24 **Vacuum:** -9 inHg

Field Sample

PID Calibration: 100 ppm

Time Started: 10:15

Time Stopped: 10:16

PID Reading: 1.8 ppm

He Reading 0 %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	22303	**Client:**	NYC OER
Project Location:	Nelson Foundry	**Sampled By:**	EN/CR
Date:	2013-08-27		

Sample ID: SV-2
Canister ID: 3273
Flow Controller ID: 10296

Purging

Time Started: 10:32
Time Stopped: 10:37
Vol. Purged: 1 liters
Flow Rate: 0.2 L/min

Laboratory Sample (Summa Canister)

Time Started:	10:40	**Vacuum:**	-30 inHg
Time Stopped:	12:00	**Vacuum:**	-8 inHg

Field Sample

PID Calibration: 100 ppm
Time Started: 10:35
Time Stopped: 10:36
PID Reading: 3.6 ppm
He Reading 0 %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No: 22303 **Client:** NYC OER

Project Location: Nelson Foundry **Sampled By:** EN

Date: 2013-08-27

Sample ID: SV-3

Canister ID: 3462

Flow Controller ID: 10305

Purging

Time Started: 10:46

Time Stopped: 10:51

Vol. Purged: 1 liters

Flow Rate: 0.2 L/min

Laboratory Sample (Summa Canister)

Time Started: 10:53 **Vacuum:** -27 inHg

Time Stopped: 12:53 **Vacuum:** -6 inHg

Field Sample

PID Calibration: 100 ppm

Time Started: 10:49

Time Stopped: 10:50

PID Reading: 58.7 ppm

He Reading 0 %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No: 22303 **Client:** NYC OER

Project Location: Nelson Foundry **Sampled By:** EN

Date: 2013-08-27

Sample ID: SV-4

Canister ID: 3553

Flow Controller ID: 10303

Purging

Time Started: 10:58

Time Stopped: 11:03

Vol. Purged: 1 liters

Flow Rate: 0.2 L/min

Laboratory Sample (Summa Canister)

Time Started: 11:07 **Vacuum:** -30 inHg

Time Stopped: 13:07 **Vacuum:** -8 inHg

Field Sample

PID Calibration: 100 ppm

Time Started: 11:01

Time Stopped: 11:02

PID Reading: 37.7 ppm

He Reading 0 %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No: 22303 **Client:** NYC OER

Project Location: Nelson Foundry **Sampled By:** EN/CR

Date: 2013-08-27

Sample ID: SV-5

Canister ID: 4440

Flow Controller ID: 10301

Purging

Time Started: 11:16

Time Stopped: 11:21

Vol. Purged: 1 liters

Flow Rate: 0.2 L/min

Laboratory Sample (Summa Canister)

Time Started: 11:23 **Vacuum:** -29 inHg

Time Stopped: 13:23 **Vacuum:** -4 inHg

Field Sample

PID Calibration: 100 ppm

Time Started: 11:19

Time Stopped: 11:20

PID Reading: 12.8 ppm

He Reading 0 %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	22303	**Client:**	NYC OER
Project Location:	Nelson Foundry	**Sampled By:**	EN/CR
Date:	2013-08-27		

Sample ID: SV-6
Canister ID: 5044
Flow Controller ID: 10293

Purging

Time Started: 11:32
Time Stopped: 11:37
Vol. Purged: 1 liters
Flow Rate: 0.2 L/min

Laboratory Sample (Summa Canister)

Time Started:	11:38	**Vacuum:**	-29 inHg
Time Stopped:	13:38	**Vacuum:**	-7 inHg

Field Sample

PID Calibration: 100 ppm
Time Started: 11:35
Time Stopped: 11:36
PID Reading: 9.4 ppm
He Reading 0 %

APPENDIX D

LABORATORY DATA DELIVERABLES AND DUSRS FOR SOIL, GROUNDWATER AND SOIL VAPOR ANALYSES