

EAST 138TH STREET AFFORDABLE HOUSING

110 EAST 138TH STREET

BRONX, NEW YORK

Draft Remedial Action Work Plan

AKRF Project Number: 210261

NYSDEC BCP Project Number: C203155

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CERTIFICATIONS

I, Rebecca Kinal, certify that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).

NYS Professional Engineer #

Date

Signature

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FINAL REMEDIAL ACTION WORK PLAN

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LIST OF ACRONYMS

Acronym	Definition
AGV	Air Guidance Value
AKRF	AKRF, Inc.
AOC	Area of Concern
AWQSGV	Ambient Water Quality Standard and Guidance Value
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BOA	Brownfield Opportunity Area
BTEX	VOCs associated with petroleum (benzene, toluene, ethylbenzene, and xylenes)
C&D	Construction and Demolition
CAMP	Construction Air Monitoring Plan
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
COC	Certificate of Completion
CPP	Citizen Participation Plan
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECL	Environmental Conservation Law
ECs/ICs	Engineering Controls and Institutional Controls
ELAP	NYS Environmental Laboratory Approval Program
EM	Electromagnetic
ESA	Environmental Site Assessment
FER	Final Engineering Report
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
IRM	Interim Remedial Measure
LBP	Lead-Based Paint
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYC VCP	New York City Voluntary Cleanup Program
NYCDEP	New York City Department of Environmental Protection
NYCRR	New York Codes Rules and Regulations
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation

Acronym	Definition
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Housing
OSHA	United States Occupational Health and Safety Administration
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PE	Professional Engineer
PID	Photo Ionization Detector
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAWP	Remedial Action Work Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RE	Remedial Engineer
RI	Remedial Investigation
RIR	Remedial Investigation Report
RMZ	Residual Management Zone
RRSCOs	Restricted Residential Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SCOs	Soil Cleanup Objectives
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SRI	Supplemental Remedial Investigation
SRIR	Supplemental Remedial Investigation Report
SSDS	Sub-Slab Depressurization System
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SWPP	Storm Water Pollution Prevention
TAL	Target Analyte List
TCL	Target Compound List
USGS	United States Geological Survey
UST	Underground Storage Tank
UUSCOs	Unrestricted Use Soil Cleanup Objectives
VCA	Voluntary Cleanup Agreement
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

Site Description, Physical Setting, and Background

The Site is an approximately 0.67-acre parcel located at 110 East 138th Street in the Mott Haven section of the Bronx, New York, also identified as Borough of Bronx Tax Block 2323, Lot 43 on the New York City Tax Map. On October 31, 2022, East 138th Street JV Associates LLC entered into a Brownfield Cleanup Agreement (BCA) (Index No. C203155) with the New York State Department of Environmental Conservation (NYSDEC) as a Volunteer (the “Volunteer”) to investigate and remediate the Site.

The Site currently consists of a vacant single-story building with a basement, and an adjacent single-story steel shed that most recently housed a used auto sales facility with a repair shop from 2005 through 2019. The Site location is shown on Figure 1, and the Site layout is shown on Figure 2.

The Site is abutted to the north by East 138th Street, followed by the Madison Avenue Bridge; to the south by the Padded Wagon[®] moving company warehouse and associated parking; to the east by East 135th Street, followed by the Major Deegan Expressway; and to the west by a freight train rail line, followed by the Harlem River. The surrounding area is comprised predominantly of commercial and industrial uses, with some parkland to the east. The surrounding area is comprised of predominantly commercial and industrial uses, with some auto-related uses and vacant buildings.

Historic Uses

A review of Historical Sanborn fire insurance maps indicated that in the late 19th and early 20th centuries the Site included a lumber yard and a building materials company. By 1922, the Site was shown as part of the New York State Canal Terminal and included three small single-story structures and undeveloped land. By 1935, the Site was occupied by a building materials business with a 550-gallon gasoline underground storage tank (UST) in the eastern portion of the Site. The Site was shown as vacant land from 1944 to 1951. The building on the eastern side of the Site was used as a coffee roasting and sales business from approximately 1968 through 1993, a warehouse in 1994 to 2004, a shoe factory in 2005, and a used auto sales facility with a repair shop in 2005 to 2019. The Volunteer has owned the Site since March 17, 2022.

Summary of the Previous Investigations

Soil, groundwater, and soil vapor were investigated as part of AKRF Inc.’s (AKRF) August 2021 Phase II Investigation, and AKRF’s August 2023 Remedial Investigation (RI). Soil sample analytical results were compared to NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted Residential Soil Cleanup Objectives (RRSCO). Groundwater sample results were compared to NYSDEC Class GA Ambient Water Quality Standards and Guidance Values (AWQSGVs). Concentrations of perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in soil and groundwater were compared to the guidance values presented in the April 2023 NYSDEC guidance document, *Sampling, Analysis and Assessment of PFAS Under NYSDEC’s Part 375 Remedial Programs*. There are currently no regulatory or published guidance values for volatile organic compounds (VOCs) in soil vapor.

The analytical results for soil, groundwater, and soil vapor data collected during the Phase II Investigation and RI are presented in Tables 2 through 7, 8 through 14, and 15, respectively. Analytes detected in soil above applicable standards are shown on Figures 7A and 7B. Analytes detected in groundwater above applicable standards are shown on Figures 8A and 8B. Analytes detected in soil vapor are shown on Figures 9A and 9B. Below is a summary of the findings of the Phase II Investigation and RI:

Soil

- Acetone was detected in two samples at concentrations above the UUSCOs, but below the RRSCO. Twelve additional VOCs [2-Butanone (MEK), benzene, carbon disulfide, cis-1,2-dichloroethene, cyclohexane, ethylbenzene, m,p-xylenes, n-propylbenzene, o-xylene,

- tetrachloroethylene (PCE), toluene, and trichloroethylene (TCE)] were detected at low levels in one or more samples at concentrations ranging from 0.00034 milligrams per kilogram (mg/kg) to 0.12 mg/kg.
- Seven semi-volatile organic compounds (SVOCs), [Benzo(a)Anthracene, Benzo(a)Pyrene, Benzo(b)Fluoranthene, Benzo(k)Fluoranthene, Chrysene, Dibenz(a,h)Anthracene, and Indeno(1,2,3-c,d)Pyrene] were detected at concentrations above their respective UUSCOs. Each of these SVOCs, with the exception of benzo(k)fluoranthene, were also detected at concentrations above their respective RRSCOs in one or more samples, at concentrations up to 23 mg/kg of benzo(b)fluoranthene in sample SB-08_0-2_20210824.
 - Total polychlorinated biphenyls (PCBs) were not detected above laboratory reporting limits in any soil samples. The pesticides 4,4-DDE and 4,4-DDT were detected at concentrations above their respective UUSCOs, but below their respective RRSCOs in one and four samples, respectively, at concentrations up to 0.014 mg/kg.
 - Eleven metals (arsenic, barium, cadmium, copper, hexavalent chromium, lead, manganese, mercury, nickel, zinc, and mercury) were detected in one or more of the soil samples at concentrations ranging from an estimated 0.0079 to 3,010 mg/kg, above their respective UUSCOs. Five of these metals (arsenic, barium, copper, lead, and mercury) were also detected above their respective RRSCOs.
 - PFOS and PFOA were not detected at concentrations above the NYSDEC restricted residential guidance values of 44 parts per billion (ppb) for PFOS and 33 ppb for PFOA. PFOS was detected above the NYSDEC unrestricted use guidance value of 0.88 ppb in four samples with concentrations ranging from 1.21 ppb in RI-SB-01_8-10_20230810 to 13.8 ppb in RI-SB-06_0-2_20230810. PFOA was detected above the NYSDEC unrestricted use guidance value of 0.66 ppb in RI-SB-06_0-2_20230810 at a concentration of 0.71 ppb. 1,4-Dioxane was not detected above laboratory reporting limits in any of the soil samples.

Groundwater

- VOCs were not detected in the groundwater samples at concentrations above their respective AWQSGVs. PCE, chloromethane, carbon disulfide, and cis-1,2-dichloroethylene were detected at concentrations ranging from 0.029 to 3.5 micrograms per liter (µg/L), below the AWQSGVs.
- The SVOC benzo(a)pyrene was detected in two groundwater samples collected from temporary wells at concentrations above the AWQSGV of non-detect, up to 0.57 µg/L.
- PCBs and pesticides were not detected above laboratory reporting limits in any of the groundwater samples analyzed.
- Iron, lead, magnesium, manganese and sodium were detected above their respective AWQSGVs in one or more of the eight unfiltered groundwater samples, and the associated field duplicate. Of the 23 metals analyzed for, 18 metals were detected at levels below the AWQSGVs in the groundwater samples.
- Sodium was detected above the AWQSGVs in each of the eight filtered groundwater samples, and the associated field duplicate. Aluminum, arsenic, barium, cadmium, calcium, cobalt, copper, lead, magnesium, manganese, mercury, nickel, potassium, selenium, vanadium, and zinc were detected in one or more of the groundwater samples at low levels below the AWQSGVs.
- PFOS was detected above its NYSDEC guidance value for human health of 2.7 parts per trillion (ppt) in four of the seven groundwater samples analyzed for PFAS. PFOA was detected above

its NYSDEC guidance value for human health of 6.7 ppt in two of the seven groundwater samples analyzed for PFAS. 1,4-Dioxane was not detected above laboratory reporting limits.

Soil Vapor

- Forty-six VOCs analyzed for were detected in the soil vapor samples. Solvent-related VOCs [including 1,1,1-trichloroethane (1,1,1-TCE), 1,1,2-trichlorotrifluoroethane, bromodichloromethane, carbon tetrachloride, chlorobenzene, chlorodifluoromethane, chloroethane, chloroform, chloromethane, cis-1,2-dichloroethene, methylene chloride, PCE, TCE, trans-1,2-dichloroethene, and trichlorofluoromethane] were detected in the soil vapor samples at individual concentrations up to 12,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) from a diluted analysis (PCE in sample SV-02_20210825).
- Other VOCs, including compounds typically associated with petroleum [such as 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,3-butadiene, 2,2,4-trimethylpentane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2,2,4-trimethylpentane, 4-ethyltoluene, 4-isopropyltoluene, 4-methyl-2-pentanone, benzyl chloride, carbon disulfide, cyclohexane, isopropanol, methyl butyl ketone, methyl ethyl ketone, naphthalene, n-butane, n-heptane, n-hexane, n-propylbenzene, sec-butylbenzene, styrene, tert-butyl alcohol, tert-butylbenzene, benzene, toluene, ethylbenzene, and m,p- and-o-xylenes (collectively referred to as BTEX)], were detected in the soil vapor samples at individual concentrations up to 2,900 $\mu\text{g}/\text{m}^3$ from a diluted analysis (butane in sample RI-SV-04_20230810).

Qualitative Human Health Exposure Assessment (QHHEA)

The Site is currently vacant. The entirety of the Site is capped with a concrete slab and/or asphalt pavement, which is in good to fair condition. Additionally, with no on-site occupants and no nearby sensitive receptors, inhalation of contaminants via soil vapor intrusion is not a concern. Groundwater is not used for drinking or other potable purposes in the Bronx, and the Site is served by a public water supply that is not affected by Site contamination.

Once redevelopment activities begin, there will be a potential exposure pathway for construction workers and inspectors to come into direct contact with subsurface soil and fill as a result of construction and excavation activities. In addition, on-site construction workers could potentially ingest or inhale particulates from any exposed contaminated soil and fill. Similarly, off-site receptors could be exposed to particulates and vapors from on-site activities. This will be mitigated with proper implementation of a Community Air Monitoring Plan (CAMP) that will prevent migration of particulates and VOCs, and a Health and Safety Plan (HASP) that will dictate safe practices including the wearing of personal protective equipment.

Without remediation, once redevelopment of the Site has been completed, there would be a potential exposure pathway from the potential off-gassing of residual organic vapors in the soil through cracks or openings in the foundations of the new building.

Fish and Wildlife Assessment (FWIA)

Based on the conceptual Site model, no actual impacts to fish and wildlife resources (i.e., the Harlem River) are anticipated from contaminants of concern found at the Site. Two PAHs were detected in groundwater samples collected from temporary monitoring wells at concentrations above the AWQSGVs; however, they were not detected at elevated levels at nearby permanent monitoring wells during the RI, indicating that the PAHs were likely from sediment entrained in the samples. PFOA and PFOS exceedances in groundwater were generally detected site-wide and are likely related to regional groundwater conditions. Exceedances of SVOCs, pesticides, metals, PFOA, and PFOS were generally found in the shallow fill layer, with few hits extending to the groundwater table. It is anticipated that contaminant migration to the Harlem River is mitigated by the bulkhead located along the western Site perimeter.

Summary of the Remedy

1. The proposed remedy is a Track 4 Restricted Residential cleanup.
2. The existing on-site buildings will be demolished and materials that cannot be beneficially reused on-site will be taken off-site for proper disposal in order to implement the remedy.
3. Excavation and off-site disposal of soil to a minimum of 2 feet below grade across the Site plus hotspot removal.
4. Installation of support of excavation (SOE) necessary to enable excavation of deeper contaminated soil/fill. SOE installation will comply with applicable local and state-controlled inspections.
5. Any unknown/unregistered tanks and associated piping, other structures associated with a source of contamination, and/or grossly contaminated soil/fill, if encountered, will be removed in accordance with applicable regulations.
6. A Site-specific HASP and CAMP will be implemented during all ground-intrusive Site activities, which include soil disturbance and loading activities, to monitor levels of VOCs and airborne particulates within the active work zones and around the perimeter of the Site.
7. Screening for indications of contamination (by visual means, odor, and monitoring with a photoionization detector (PID) of soil during all ground-intrusive Site work, including soil disturbance and loading activities.
8. Characterization and off-site disposal of all materials removed from the Site in accordance with all federal, state, and local rules and regulations for handling, transport, and disposal. Waste disposal facilities will be selected based on the data collected to date and the results of the planned waste classification sampling.
9. Importation of clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) to raise the Site grade for the proposed building and construct the Site cover, and as needed for use as backfill. Fill material that does not exceed RRSCOs for any compound may be used on-site to backfill the Site. Soil exceeding the UUSCO for 1,4-dioxane will not be imported, per DER-10: Appendix 5 - Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e). If PFOA or PFOS are detected in any sample at or above the NYSDEC Restricted Residential guidance values, it will also be tested by the Synthetic Precipitation Leaching Procedure (SPLP). If the SPLP concentrations of PFOA and PFOS are at or above 10 ppt, the soil will not be reused or imported. Analytical results will be compared to Table 375-6.8(b) of 6 NYCRR Part 375 and submitted to NYSDEC via a *Request to Import/Reuse Soil or Fill* form for review and approval prior to importation and placement on-site. All imported soil or soil proposed for reuse requires NYSDEC review prior to on-site placement.
10. Collection and laboratory analysis of confirmatory documentation samples across the Site from at a minimum of 2 feet below grade, and endpoint samples from any hotspot areas to document remaining concentrations of contaminants in soil/fill after remedial excavation is complete. Endpoint sampling will occur around hotspots and any additional Areas of Concern (AOCs) identified during the remedial action based on the sampling frequency outlined in Section 5.4 of DER-10. Endpoint samples will not be collected in areas that are excavated down to the bedrock surface.
11. Installation and operation of an active sub-slab depressurization system (SSDS) below the foundation slab of the proposed new building to prevent vapor intrusion.
12. Construction and maintenance of a Site cover to prevent human exposure to residual contaminants in soil/fill remaining under the Site, which will consist of: (1) a minimum of 2 feet of clean fill material placed in landscaped and permeable areas; (2) concrete building foundation underlain by a minimum 20-mil vapor barrier membrane, which doubles as a demarcation barrier, in areas within the building footprint; and (3) paved surfaces underlain by a demarcation barrier in roadway and sidewalk areas.

Any fill material brought to the Site will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d).

13. Dewatering to enable remedial excavation in hot spots that extend below the water table (approximately 7 to 12 feet below grade). Dewatering will be conducted in compliance with city, state, and federal laws and regulations. Extracted groundwater will be either containerized for off-site licensed and permitted disposal or will be treated under a permit from New York City Department of Environmental Protection (NYCDEP) to meet pre-treatment requirements prior to discharge to the sewer system.
14. Recording of an Environmental Easement (EE) with the New York City Register to prevent future exposure to any residual contamination remaining at the Site. The EE will: require the remedial parties/Site owners to complete and submit a periodic certification of ECs and ICs to the Department in accordance with Part 375-1.8 (h)(3); allow the use and development of the Site for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws; restrict the use of groundwater as a source of potable or process water without necessary water quality treatment, as determined by NYSDOH; and require compliance with a Site-specific NYSDEC-approved SMP.
15. Preparation of an SMP for long term management of residual contamination as required by the EE including plans for: (1) ECs and ICs, (2) monitoring, (3) operation and maintenance, and (4) reporting. Inclusion of soil management provisions in the SMP, including an Excavation Work Plan.

REMEDIAL ACTION WORK PLAN

1.0 INTRODUCTION

East 138th Street JV Associates LLC entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in October 2022, to investigate and remediate a 0.67-acre property located at 110 East 138th Street in the Mott Haven section of the Bronx, New York, hereafter referred to as “the Site”. East 138th Street JV Associates LLC is a Volunteer in the Brownfield Cleanup Program (BCP). Residential and commercial use is proposed for the Site. When completed, the Site will contain a one- to 12-story affordable senior housing building with ground floor retail space.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Remedial Investigation (RI), performed by AKRF, Inc. (AKRF) in August 2023, and Phase II Investigation performed by AKRF in August 2021. It provides an evaluation of a Track 1 cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER-10 and complies with all applicable standards, criteria and guidance. The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have determined that this Site does not pose a significant threat to human health and the environment. [The RI for this Site did not identify fish and wildlife resources.](#)

[A formal Remedial Design document will not be prepared.](#)

1.1 Site Location and Description

The Site is located in the Mott Haven section of the Bronx, Bronx County, New York and is identified as Block 2323, Lot 43 on the City of New York Tax Map. The Site is situated on an approximately 0.67-acre area and is currently developed with a vacant single-story building with a basement, and an adjacent single-story steel shed that most recently housed a used auto sales facility with a repair shop from 2005 through 2019. The Site location is shown on Figure 1, and the Site layout is shown on Figure 2. A boundary map is attached to the BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419. The Site survey is provided in Appendix A.

1.2 Contemplated Redevelopment Plan

[The Remedial Action to be performed under the RAWP is intended to make the Site protective of human health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use are described here to provide the basis for this assessment. However, the Remedial Action contemplated under this RAWP may be implemented independent of the proposed redevelopment plan.](#)

The proposed redevelopment plan includes demolition of the existing structures and construction of a one- to 12-story affordable senior affordable housing building with ground floor retail space. Due to the Site’s location in a high-risk flood zone, the new building foundation will be pile-supported with the ground floor raised above the flood elevation. Exterior portions of the Site will consist of paved drop-off areas along Exterior Street and East 138th Street, and a public walkway along the Harlem River, which will include hardscape and landscaped components. Proposed redevelopment plans are provided in Appendix B.

1.3 Description of Surrounding Property

The Site is abutted to the north by East 138th Street, followed by the Madison Avenue Bridge; to the south by the Padded Wagon[®] moving company warehouse and associated parking; to the east

by East 135th Street, followed by the Major Deegan Expressway; and to the west by a freight train rail line, followed by the Harlem River. The surrounding area is comprised predominantly of commercial and industrial uses, with some parkland to the east.

There are no sensitive receptors within 500 feet of the Site. The nearest body of water is the Harlem River, located west-adjacent to the Site.

Surrounding land use is shown on Figure 3.

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The Site was investigated during AKRF's August 2021 Phase II Investigation performed in accordance with a New York City Office of Environmental Remediation (OER)-approved Phase II Work Plan, and August 2023 Remedial Investigation (RI) performed in accordance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP) dated May 2023. The Remedial Investigation Report (RIR) was submitted to NYSDEC in June 2024 and is currently under review.

2.1 Summary of Remedial Investigations Performed

The following scope of work was performed by AKRF in August 2021 during the Phase II Investigation:

1. The performance of a geophysical survey across accessible portions of the Site and utility mark-outs.
2. The advancement of 11 soil borings, with the collection and laboratory analysis of 22 soil samples.
3. The installation of 6 temporary groundwater monitoring wells, with the collection and laboratory analysis of 6 groundwater samples.
4. The installation of 9 temporary soil vapor probes, with the collection and laboratory analysis of 9 soil vapor samples.

The following scope of work was performed by AKRF in August 2023 during the RI:

1. The performance of a geophysical survey across accessible portions of the Site and utility mark-outs.
2. The advancement of 21 soil borings, with the collection and laboratory analysis of 54 soil samples.
3. The installation of 4 groundwater monitoring wells, with the collection and laboratory analysis of 4 groundwater samples.
4. The installation of 7 temporary soil vapor probes, with the collection and laboratory analysis of 7 soil vapor samples.
5. Surveying the elevations and locations of the newly installed monitoring wells.

2.1.1 Soil Borings, Groundwater Monitoring Wells, and Soil Vapor Point Installation.

Soil Borings

Between August 23 and 25, 2021, 11 soil borings (SB-01 through SB-11) were advanced by AARCO Environmental Services Corp. (AARCO) using a Geoprobe[®] direct-push probe (DPP) drill rig. Between August 8 and 11, 2023, 21 soil borings (RI-SB-01 through RI-SB-21) were advanced by Coastal Environmental Solutions, Inc. (Coastal) using a Geoprobe[®] DPP drill rig. All soil boring locations are shown on Figure 2.

Soil borings advanced between August 8 and 11, 2023 were advanced to approximately 2 to 20 feet. The borings were advanced to the groundwater table (approximately 10 to 12 feet below grade), or equipment refusal, whichever was encountered first. Equipment refusal on apparent bedrock was encountered multiple times between 1 and 10 feet below grade at boring locations RI-SB-05, RI-SB-09, RI-SB-16, RI-SB-17, RI-SB-18, RI-SB-19, and RI-SB-20. Soil borings between August 23 and 25, 2021 were advanced between approximately 10 and 20 feet below grade. Equipment refusal on apparent bedrock was

encountered multiple times at 16 and 10 feet below grade at boring locations SB-08 and SB-11, respectively.

Soil cores were obtained in a stainless steel, macro-core sampler with an internal acetate liner. At each boring, AKRF field personnel prepared NYSDEC DER-10 compliant boring logs using the modified Burmister soil classification system. Prior to collecting samples, recovered soil was screened for VOCs using a photoionization detector (PID) and evaluated for visual and olfactory evidence of contamination. All sampling equipment was either dedicated or decontaminated between sampling locations.

The soil boring logs are included in the Phase II Report and RIR, provided in Appendix C of this RAWP. Lithological cross-sections are provided on Figures 4 and 5.

Groundwater Monitoring Wells

Four 2-inch-diameter permanent groundwater monitoring wells (RI-MW-01 through RI-MW-04) were installed by Coastal using a Geoprobe[®] DPP drill rig between August 8 to 10, 2023 and six temporary 1-inch-diameter groundwater monitoring wells (TW-01 through TW-06) were installed by AARCO using a Geoprobe[®] DPP drill rig between August 23 to 25, 2021, at the locations shown on Figure 2.

All permanent groundwater monitoring wells were constructed with 10 feet of 0.020-inch slotted 2-inch diameter polyvinyl chloride (PVC) well screen installed approximately 5 to 10 feet into the observed water table. A No. 2 morie sand pack was installed from the base of the well to approximately two feet above the well screens, followed by two feet of hydrated bentonite, and non-shrinking cement grout to approximately one foot below surface grade. The permanent wells were finished with a locking j-plug, locking flush-mounted protective well cover, and concrete pad. The temporary monitoring wells were constructed with 10 feet of 1-inch diameter PVC with 0.010 slotted well screen. The well screen was installed approximately 5 feet below the water table with solid well riser to the ground surface. The annular space between the well screen and the borehole was backfilled with sand to approximately 1.5 feet below grade. A one-foot bentonite seal was then placed from approximately 0.5 to 1.5 feet below grade. The temporary wells were removed after sampling and the boreholes backfilled and patched.

Following installation, each permanent groundwater monitoring well was developed via pumping and surging with a Waterra pump affixed with dedicated high-density polyethylene (HDPE) tubing and a combined check/foot valve to remove any accumulated fines and establish a hydraulic connection with the surrounding aquifer. Development water was monitored with a Horiba U-52 water quality meter during development. The goal of well development was to reduce turbidity within the well until less than 50 nephelometric turbidity units (NTUs) for three successive readings, and until water quality indicators [pH, temperature, oxidation reduction potential (ORP), dissolved oxygen, and specific conductivity] stabilized to within 10% for three successive readings. All purged groundwater was containerized in New York State Department of Transportation (NYSDOT)-approved 55-gallon drums for off-site disposal.

The groundwater monitoring well installation details, and sampling and development logs are included in the Phase II Report and RIR, provided in Appendix C of this RAWP. A groundwater contour map is provided on Figure 6.

Soil Vapor Points

Between August 8 and 11, 2023 three temporary sub-slab soil vapor points and four temporary soil vapor points (RI-SV-01 through RI-SV-07) were installed throughout the

Site by Coastal, and between August 23 and 25, 2021 nine temporary sub-slab soil vapor points (SV-01 through SV-09) were installed throughout the Site by AARCO, at the locations shown on Figure 2. Sub-slab soil vapor points SV-04 through SV-06, SV-08, RI-SV-04, RI-SV-05, and RI-SV-07 were installed approximately 2 inches beneath the building slab. Soil vapor points SV-01 through SV-03, SV-07, SV-09, RI-SV-01, RI-SV-02, RI-SV-03, and RI-SV-06 were installed at approximately 2 feet above the water table as the former auto repair shop does not have a competent building slab. The soil vapor point locations are shown on Figure 2.

The temporary soil vapor and sub-slab soil vapor sampling points were installed by advancing an expendable drive point into the subsurface. At each point, a 6-inch stainless steel screen implant connected to Teflon™-lined polyethylene tubing was installed through the drilling rods and threaded into the drive point. The sample tubing was extended from the bottom end of the screen to above grade. The rods were then removed, and the borings were backfilled with clean silica sand above the screen. Hydrated bentonite was used to fill the remaining void around the sampling tubing to the ground surface.

The soil vapor sampling logs are included in the Phase II Report and RIR, provided in Appendix C of this RAWP

2.1.2 Samples Collected

Soil

A total of 76 soil samples were collected for laboratory analysis during the Phase II Investigation and RI. A list of soil borings and the soil/fill samples submitted for laboratory analysis from each boring is presented in Table A.

Table A
Soil Sample Summary

Investigation	Soil Boring ID	Termination Depth (feet below grade)	Sample Depth (feet below grade)	Laboratory Analyses
Phase II Investigation	SB-01	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			8-10	
	SB-02	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			8-10	
	SB-03	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			9-11	
	SB-04	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			8-10	
	SB-05	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			12-14	
	SB-06	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			11-13	

Investigation	Soil Boring ID	Termination Depth (feet below grade)	Sample Depth (feet below grade)	Laboratory Analyses
	SB-07	20	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, and PFAS
			12-14	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
	SB-08	16	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			11-13	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
	SB-09	15	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			7-9	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
	SB-10	20	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			13-15	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
	SB-11	10	0-2	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
			8-10	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
Remedial Investigation	RI-SB-01	15	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
			10-12	
	RI-SB-02	20	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			10-12	
			14-16	
	RI-SB-03	15	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-04	15	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-05	2	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
	RI-SB-06	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-07	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-08	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			7-9	
			9-10	

Investigation	Soil Boring ID	Termination Depth (feet below grade)	Sample Depth (feet below grade)	Laboratory Analyses
	RI-SB-09	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-10	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-11	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-12	14	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			7-9	
			10-12	
	RI-SB-13	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-14	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-15	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
	RI-SB-16	10	0-2	PAHs
			2-4	
			4-6	
			8-10	
	RI-SB-17	10	0-2	PAHs
			4-6	
			6-8	
			8-10	
	RI-SB-18	10	0-2	PAHs
			4-6	
			6-8	
			8-10	
	RI-SB-19	6	0-2	PAHs
			2-4	
			4-6	
	RI-SB-20	4	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			2-4	

Investigation	Soil Boring ID	Termination Depth (feet below grade)	Sample Depth (feet below grade)	Laboratory Analyses
	RI-SB-21	10	0-2	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, Hexavalent Chromium, and PFAS
			8-10	
Notes: VOCs – volatile organic compounds SVOCs – semi-volatile organic compounds PCBs – polychlorinated biphenyls TAL – target analyte list PFAS – per- and polyfluoroalkyl substances				

Groundwater

Six groundwater samples were collected from temporary monitoring wells during the Subsurface (Phase II) Investigation, and four groundwater samples were collected from permanent monitoring wells installed during the RI. No field evidence of groundwater contamination was observed during purging or sampling. A list of groundwater monitoring wells and laboratory analysis is presented in Table B.

Table B
Groundwater Sample Summary

Investigation	Monitoring Well ID	Laboratory Analyses
Phase II Investigation	TW-01	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
	TW-02	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
	TW-03	VOCs, SVOCs, PCBs, Pesticides, and TAL Metals
	TW-04	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
	TW-05	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
	TW-06	VOCs, SVOCs, PCBs, Pesticides, 1,4-Dioxane, and TAL Metals
Remedial Investigation	RI-MW-01	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
	RI-MW-02	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
	RI-MW-03	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
	RI-MW-04	VOCs, SVOCs, PCBs, Pesticides, TAL Metals, 1,4-Dioxane, and PFAS
Notes: VOCs – volatile organic compounds SVOCs – semi-volatile organic compounds PCBs – polychlorinated biphenyls TAL – target analyte list PFAS – per- and polyfluoroalkyl substances		

Soil Vapor Points

Nine soil vapor samples were collected from the nine temporary soil vapor probes installed during the Phase II Investigation, and seven soil vapor samples were collected from the seven temporary soil vapor probes installed during the RI.

A list of temporary soil vapor points and the soil vapor samples collected from each point is presented in Table C.

Table C
Soil Vapor Sample Summary

Investigation	Soil Vapor Point ID	Laboratory Analysis
Phase II Investigation	SV-01	VOCs
	SV-02	
	SV-03	
	SV-04	
	SV-05	
	SV-06	
	SV-07	
	SV-08	
	SV-09	
Remedial Investigation	RI-SV-01	
	RI-SV-02	
	RI-SV-03	
	RI-SV-04	
	RI-SV-05	
	RI-SV-06	
	RI-SV-07	

2.1.3 Chemical Analytical Work Performed

A list of Quality Assurance/Quality Control (QA/QC) personnel and the chemical analytical work performed is presented in Table D.

Table D
QA Program

Factor	Description
Quality Assurance Officer	The chemical analytical QA/QC was directed by Deborah Shapiro of AKRF.
Third Party Data Validator	The third-party data validation was performed by Jeri L. Rossi, CEAC
Chemical Analytical Laboratory	The chemical analytical laboratories used in the RI were Eurofins of Edison, New Jersey, Denver, Colorado, and Burlington, Vermont.

Factor	Description
Chemical Analytical Methods	Soil analytical methods: • TCL VOCs by EPA Method 8260D • TCL SVOCs by EPA Method 8270E • TCL Pesticides by EPA Method 8081B • PCBs by EPA Method 8082A • TAL Metals by EPA Method 6000/7000 series • Hexavalent chromium by EPA Method 7196A • Mercury by EPA Method 6010C • 1,4-Dioxane by EPA Method 8270E • PFAS compounds by EPA Method 1633 and 537 (modified) Groundwater analytical methods: • VOCs by EPA Method 8260D • SVOCs by EPA Method 8270E • Pesticides by EPA Method 8081B • PCBs by EPA Method 8082A • TAL Metals (total and dissolved) by EPA Method 6000/7000 series • 1,4-Dioxane by EPA Method 8270E SIM • PFAS compounds by Modified EPA Method 1633 and 537 (modified) Soil vapor analytical method: • VOCs by EPA Method TO-15

2.1.4 Geophysical Survey and Utility Mark-outs

Geophysical surveys were conducted across accessible portions of the Site by Coastal Environmental Solutions, Inc. (Coastal) of Medford, New York and Delta Geophysics, Inc. (Delta) of Catasauqua, Pennsylvania to investigate the presence of potential USTs and subsurface utilities, and to clear the proposed sampling locations. The geophysical survey included ground penetrating radar (GPR) and radio detection methods.

The geophysical surveys identified buried utilities, including floor drains (connected to roof leaders) running to a main collection pit at the southeastern utility room, and a sanitary line running north from a bathroom on the lower level and continuing off-site. The surveys also identified reinforced concrete beneath the western asphalt-paved lot. No evidence of a metallic anomaly consistent with the size and shape of a UST was identified. Based on the GPR surveys, electric and natural gas utility lines entered the Site building from the east and continued overhead. Floor drain locations were marked out with spray paint prior to the commencement of drilling activities, as shown on Figure 2.

The geophysical survey reports are included in the Phase II Report and RIR, provided in Appendix C of this RAWP.

2.1.5 Groundwater Monitoring Well Survey

The four monitoring wells installed during the RI (RI-MW-01 through RI-MW-04) were surveyed on August 18, 2023 by Control Point Associates Inc., P.C, a New York State-licensed surveyor. Elevation measurements were taken at the manhole cover, and on the north side of the top of the PVC casing at each of the groundwater monitoring wells. Horizontal and vertical datum were tied to the North American Vertical Datum of 1988 (NAVD88). Based on the surveyed well elevations and depth to water measurements collected during the RI, groundwater elevations ranged from -0.31 to 2.7 feet NAVD. Although regional groundwater flows to the west, based on the surveyed elevations,

groundwater flow was in a generally easterly direction beneath the Site, but the measurements were likely tidally influenced since the Harlem River is located west-adjacent to the Site and due to variations in depth to bedrock.

The locations of the groundwater monitoring wells are shown on Figure 2. A groundwater elevation contour map is included as Figure 6 and the elevation data is summarized in Table 1.

2.1.6 Subsurface and Remedial Investigation Findings

Soil analytical results are presented in Tables 2 through 7, groundwater analytical results are presented in Tables 8 through 14, and soil vapor analytical results are presented in Table 15. Analytes detected above applicable standards for soil are shown on Figures 7A and 7B. Analytes detected above applicable standards for groundwater are shown on Figures 8A and 8B. Analytes detected above applicable standards in soil vapor are shown on Figure 9A and 9B.

2.2 Significant Threat

The NYSDEC and NYSDOH have determined that this Site does not pose a significant threat to human health and the environment. Notice of that determination has been provided for public review. A copy of the notice is included in Appendix K.

2.3 Site History

2.3.1 Past Uses and Ownership

A review of historical Sanborn fire insurance maps indicated that in the late 19th and early 20th centuries the Site included a lumber yard and a building materials company. By 1922, the Site was shown as part of the New York State Canal Terminal and included three small single-story structures and undeveloped land. By 1935, the Site was occupied by a building materials business with a 550-gallon gasoline underground storage tank (UST) in the eastern portion of the Site. The Site was shown as vacant land from 1944 to 1951. The building on the eastern side of the Site was used as a coffee roasting and sales business from approximately 1968 through 1993, a warehouse in 1994 to 2004, a shoe factory in 2005, and a used auto sales facility with a repair shop in 2005 to 2019. The Volunteer has owned the Site since March 17, 2022.

Known Site owners have included: Rosen Building Corp. prior to 1981, Pratt Industries, Inc. from 1981 to 2000, Ryden Realty, Inc. from 2000 to March 13, 2022, and East 138th Street JV Associates LLC (Volunteer) from March 14, 2022 to present day.

Known Site operators have included: J. Bell Co. in 1908, New York State Canal Terminal from 1922 to 1928, Wholesale Coffee and Roasting from 1968 to 1993, a shoe factory in 2005, and C&M Auto Sales Corp. from 2005 to 2019. The Site is currently unoccupied.

2.3.2 Previous Environmental Reports

Previous environmental reports prepared for the Site are included in Appendix C and summarized below:

Phase I Environmental Site Assessment – 110 East 138th Street, Bronx, NY, Environmental Business Consultants, January 2018

A Phase I Environmental Site Assessment (ESA) of the Site was prepared by Environmental Business Consultants (EBC) for Hershel Silberstein in January 2018 and was provided to AKRF by the Volunteer. At the time of EBC's assessment, the Site was developed with a one-story building with a rooftop structure and a single-story steel shed

used for auto sales and repair, and an asphalt-paved parking lot. The Site buildings were vacant and reportedly heated by natural gas-fired heaters. The Phase I ESA identified the following:

- At various times in its history, the Site was occupied by a lumber yard, a builder's supply business, a coffee roasting business, a warehouse, and used auto sales. The 1935 Sanborn map showed a 550-gallon gasoline UST in the northeastern portion of the Site. The Site was reportedly used for auto sales and repair since approximately 2000.
- Several steel and plastic 55-gallon drums containing waste oil and antifreeze were observed on the Site. Smaller containers of paint and auto maintenance chemicals were also observed.
- The surrounding area was mixed-use throughout its history, and included coal yards, a fuel oil business, a canal and an associated terminal, rail lines, and a filling station.
- The potential presence of polychlorinated biphenyl (PCB)- containing electrical equipment, fluorescent lighting fixtures, caulking, and/or sealants was noted. Hydraulic lifts observed in the auto repair shop were not anticipated to contain PCBs due to their reported date of installation (approximately 2000). The potential presence of asbestos containing material (ACM) and/or lead-based paint was noted.

Phase I Environmental Site Assessment – 110 East 138th Street, Bronx, NY, AKRF, Inc., March 2020

AKRF prepared a Phase I ESA for the Site in March 2020 in accordance with the requirements of American Society for Testing and Materials (ASTM) Standard E1527-13 (the applicable standard at that time). At the time of AKRF's assessment, the Site was occupied by a single-story vacant building with a rooftop structure and a basement, a vacant single story steel shed, and an asphalt-paved outdoor area used for parking and vehicle access. The Phase I ESA included a review of current and historical Sanborn Fire Insurance maps; state and federal environmental regulatory databases; local records; and reconnaissance of the Site and its surroundings. Based on the findings of the Phase I ESA, the following Recognized Environmental Conditions (RECs) were identified:

- Historical Site uses, such as a lumber yard, shoe manufacturing, and used auto sales and repair, may have affected subsurface conditions beneath the Site. A 550-gallon gasoline UST was shown on the eastern side of the Site in 1935, but may have been removed prior to the construction of the existing main building in 1957. During the reconnaissance, eight steel circles (approximately two to three inches in diameter) were observed to be embedded in a 2-foot square area of pavement south of the steel shed. It was not clear whether any of these circles were associated with a UST. An approximately 550-gallon waste oil aboveground storage tank (AST) on a steel rack was also observed in the outdoor area on the western side of the Site.
- Abandoned chemicals were noted throughout the Site. These chemicals included: paint containers up to 5 gallons on the first floor of the main building; auto repair chemicals in containers up to 1-gallon, and an empty 5-gallon gasoline canister, in the steel shed; and three 55-gallon motor oil drums in the main building's basement, the steel shed, and the outdoor parking area. The chemicals in the steel shed did not appear to be properly stored, with numerous stained areas and small puddles of unidentified materials noted on the shed's concrete floor. The drum in the outdoor parking area had one bung hole open, and its top appeared to bulge slightly. Several areas of floor staining were observed on the western side of the main building's basement. Historic

on-site petroleum and chemical storage and usage may have affected subsurface conditions beneath the Site.

- Historical off-site uses with some potential to have affected the Site included: lumber yards, coal and oil yards, factories, a pipe cutting shop, a casket business, a metal smelter and refinery, warehouses, filling stations, auto repair, auto wrecking, and auto sales. The regulatory database identified petroleum bulk storage (PBS) listings, closed-status spill listings, and hazardous waste generators near the Site. During the reconnaissance, a filling station, a taxi maintenance facility with a filling station, and a towing business were observed on blocks to the east and northeast. Two apparent monitoring wells were observed in the East 135th Street sidewalk east-adjacent to the Site.

Tank Closure Report – 110 East 138th Street, Bronx, NY, AKRF, Inc., February 2024

In January 2024, AKRF oversaw the removal of one 550-gallon waste oil AST and two 55-gallon waste oil drums associated with former on-site automotive operations. The field activities were performed in accordance with a NYSDEC-approved RIWP Addendum dated October 2023.

On January 8, 2024, Brookside Environmental Inc. (Brookside), a FDNY-licensed tank removal contractor, emptied one 550-gallon waste oil AST and two 55-gallon waste oil drums using a vacuum (vac) truck prior to cleaning and disposal. A total of 565 gallons of used oil was disposed of at Advanced Waste and Water Technology in Farmingdale, NY. The oily-sludge mixture at the bottom of the AST was containerized in one 55-gallon drum totaling 250 pounds and was disposed of at Clean Water of New York in Staten Island, NY. Once emptied, the tank was cut open for additional cleaning and off-site disposal. The cleaned tank and drum carcasses were removed from the Site and disposed of as scrap metal at Bronx Scrap Metal in the Bronx, New York, on January 8, 2024. Upon completion of the tank removal activities, Brookside submitted an affidavit to the FDNY.

AKRF collected two endpoint soil samples from below the asphalt approximately 15 feet southeast of the AST following its removal to determine the presence of petroleum-contaminated material. Samples could not be collected immediately below the AST due to repeated equipment refusal on concrete due to the presence of the bulkhead and/or support structure just below and immediately surrounding the AST. The samples were analyzed for the VOCs and SVOCs identified in Tables 2 and 3 of the NYSDEC CP-51 Soil Cleanup Guidance, by EPA Methods 8260 and 8270, respectively. VOCs were not detected above laboratory reporting limits in either of the soil samples. SVOCs were detected in both soil samples at concentrations ranging from 0.015 milligrams per kilogram (mg/kg) to 1.6 mg/kg. Benzo(b)fluoranthene and indeno(1,2,3-c,d)pyrene were detected in sample EP-01_20240108 at concentrations slightly above the Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted Residential Soil Cleanup Objectives (RRSCOs).

The Tank Closure Report and associated disposal documentation, photographs, laboratory data, and subcontractor invoices were submitted to the NYSDEC Region 2 PBS unit to properly close-out the tank.

The 2021 Phase II Investigation and 2023 RI were summarized in Section 2.1.

2.3.3 Sanborn Maps

All Sanborn Maps available for this Site were reviewed prior to preparation of the RAWP and are provided in Appendix D. In summary, the Sanborn maps indicated that in the late 19th and early 20th centuries, the Site included part of a lumber yard (undeveloped land

possibly used for storage), and a building materials company with a one-story vacant building. In 1891, the western portion of the Site was part of River Avenue. By 1922, the Site was shown as part of the New York State Canal Terminal, and included three small one-story structures and undeveloped land. By 1935, the Site was occupied by a building materials business with three, one-story office and storage structures, and a 550-gallon gasoline UST was shown on the eastern side of the Site. The Site was shown as vacant land on the 1944-1951 maps. In 1957, a one-story structure with a basement, used for coffee roasting and sales, was built on the eastern side of the Site. This building was subsequently shown as a warehouse on the 1994-2004 maps, and as a used auto sales facility on the 2005-2007 maps. The western side of the Site was shown with a one-story steel storage shed and undeveloped land on the 1968-2007 maps.

2.4 Geological Conditions

The stratigraphy of the Site, from the surface down, generally consists of a surficial layer of asphalt and/or concrete underlain by fill material comprised of sand, silt, and gravel with varying amounts of brick extending from grade to approximately 3 to 20 feet below grade. The fill material is underlain by apparent bedrock in the eastern portion of the Site, and varying amounts of apparent native sand, silt, clay and gravel in the western portion of the Site to boring termination depths (up to 20 feet below grade). Apparent bedrock was encountered at depths ranging from approximately 1 to 16 feet below grade in borings RI-SB-05, RI-SB-09, RI-SB-16, RI-SB-17, RI-SB-18, RI-SB-19, RI-SB-20, SB-08, and SB-11.

Based on Site-specific well point measurements, groundwater beneath the Site ranges from elevation -0.31 to elevation 2.70 (NAVD88), or approximately 7.18 to 12.27 feet below grade surface. Regional groundwater flow is westerly. Site-specific groundwater elevation measurements collected during the RI indicated an easterly groundwater flow, but the measurements were likely tidally influenced since the Harlem River is located west-adjacent to the Site and due to variations in depth to bedrock.

2.5 Contamination Conditions

The data compiled during previous investigations was compared to the following Standards, Criteria, and Guidance (SCGs) to determine the nature and extent of the contamination area associated with the Site:

- **Soil** – NYSDEC Part 375 UUSCOs, RRSCOs, and the NYSDEC April 2023 guidance values for PFAS Compounds;
- **Groundwater** – NYSDEC Class GA Ambient Water Quality Standards and Guidance Values (AWQSGVs) – TOGS 1.1.1, NYSDEC guidance values for human health for perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and 1,4-dioxane; and
- **Soil Vapor** – There are currently no regulatory or published guidance values for VOCs in soil vapor; soil vapor data was used to assess the potential for exposure to receptors and to help define the nature and extent of contamination at the Site.

2.5.1 Conceptual Model of Site Contamination

Based on an evaluation of the data and information in the RIR, the Site is contaminated with: SVOCs, pesticides, metals, PFOA, and PFOS in soil; SVOCs, PFOA, and PFOS in groundwater; and solvent- and petroleum-related VOCs in soil vapor.

The elevated concentrations of SVOCs, pesticides, and metals in soil are likely related to the presence of contaminated soil/historic fill material within the soil and prior Site uses. The concentrations of SVOCs in groundwater are likely related to sediment entrained in

the groundwater samples. Solvent-related and petroleum-related VOCs were detected at varying concentrations in the soil vapor samples collected from the Site. The detections may be related to the Site's historical manufacturing/industrial and automotive uses, as low-levels of PCE were found in the soil (although at concentrations below the UUSCOs).

Exceedances in soil were generally found in the shallow fill layer, with elevated concentrations extending to the groundwater table in few locations. The PFOA/PFOS exceedances in groundwater were generally detected site-wide. The groundwater SVOC exceedances were detected in monitoring wells located within the former auto repair shop and south-adjacent within the parking lot. Elevated concentrations of chlorinated solvent-related VOCs in soil vapor were detected in the areas of the former auto repair shop and south-adjacent parking lot. Elevated concentrations of petroleum VOCs in soil vapor were primarily detected near the former 550-gallon waste oil AST in the northwestern corner and southern portion of the warehouse. Based on the proximity of the elevated soil vapor concentrations to the northern Site boundary, the potential for off-site migration of soil vapor exists.

2.5.2 Description of Areas of Concern

- Historic industrial and automotive uses throughout the Site include auto repair on the north and northwestern portion, shoe manufacturing on the northern portion, and a lumber yard, which formerly occupied the entire the Site. PBS associated with the historic uses included a 550-gallon gasoline UST on the eastern side of the Site shown on a 1935 Sanborn map. The UST may remain beneath the Site or was removed prior to the construction of the existing main building in 1957. In addition, an approximately 550-gallon waste oil AST on a steel rack associated with the historic auto repair shop was located on the western side of the Site. The AST was removed from the Site in January 2024.
- Elevated concentrations of chlorinated solvents and petroleum-related compounds in soil vapor samples collected during previous investigations. The samples exhibiting the highest concentrations were generally encountered within, and around, the former auto repair shop.
- Elevated concentrations of PAHs in soil samples collected during the 2021 Phase II investigation and metals during the RI. The samples exhibiting the highest concentrations of PAHs were generally encountered in the southeastern portion of the Site. The greatest concentration of lead was found in the north-central portion of the Site and the greatest concentration of copper was found in the northeast portion of the Site.

2.5.3 Identification of Standards, Criteria and Guidance

The following remedial SCGs apply to the project and are the performance criteria used to determine whether the Remedial Action Objectives (RAOs) have been met:

- Soil – 6 NYCRR Part 375, UUSCOs and RRSCOs (December 2006); NYCRR Part 371 - Identification and Listing of Hazardous Wastes; 6 NYCRR Part 376 - Land Disposal Restrictions; NYCRR Part 360 - Solid Waste Management Facilities; and *Sampling, Analysis, And Assessment of Per- And Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs* (April 2023).
- Groundwater – 6 NYCRR Parts 700-706 - Water Quality Standards (June 1998), TOGS 1.1.1 AWQSGV and Guidance Values and Groundwater Effluent Limitations; *Sampling, Analysis, And Assessment of Per- And Polyfluoroalkyl Substances (PFAS)*

Under NYSDEC's Part 375 Remedial Programs (April 2023); and the March 2023 Water Quality Guidance Values to Regulate PFOA, PFOS, and 1, 4-Dioxane.

In addition, the following SCGs are applicable to the remedial program at the Site:

- NYSDEC DER-10 – Technical Guidance for Site Investigation and Remediation (May 2010)
- NYSDEC Draft Brownfield Cleanup Program Guide (May 2004)
- NYSDOH Generic Community Air Monitoring Plan (CAMP)
- NYSDEC DER-23 – Citizens Participation Handbook for Remedial Programs (January 2010)
- 6 NYCRR Part 372 – Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998)
- 6 NYCRR Subpart 374-1 – Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998)
- 6 NYCRR Subpart 374-3 – Standards for Universal Waste (November 1998)
- 6 NYCRR Part 375 – Environmental Remediation Programs (December 2006)
- 6 NYCRR Part 612 – Registration of Petroleum Storage Facilities (February 1992)
- 6 NYCRR Part 613 – Handling and Storage of Petroleum (February 1992)
- 6 NYCRR Part 614 – Standards for New and Substantially Modified Petroleum Storage Tanks (February 1992)
- 40 CFR Part 280 – Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks
- 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response
- 40 CFR Part 144 – Underground Injection Control Program
- NYSDEC DER-31- Green Remediation (January 2011)
- NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006), with updates (NYSDOH SVI Guidance).

Additional regulations and guidance may be applicable, relevant, and appropriate to the remedial alternatives and will be complied with during implementation of the remedial program. However, the list above is intended to represent the principal SCGs that should be considered in evaluating the remedial alternatives for the Site. SCGs for the Site are provided in Appendix E.

2.5.4 Soil/Fill Contamination

[Summary of Soil/Fill Data](#)

Based on an evaluation of the data and information from the Phase II Investigation and RI, soil/fill is a media of concern at the Site. The previous investigations documented elevated concentrations of SVOCs, pesticides, metals, PFOA, and PFOS in soil. The vertical and horizontal extent of soil/fill contamination was identified to be Site-wide with exceedances of the UUSCOs between surface grade down to a maximum depth of 16 feet below grade. Exceedances of the UUSCOs were detected down to the groundwater table and/or bedrock

surface in borings RI-SB-04 through RI-SB-09, RI-SB-11, RI-SB-12, RI-SB-14, RI-SB-20, and SB-11. Exceedances of the RRSCOs were detected down to 13 feet below grade, and to the bedrock surface in borings RI-SB-20 and SB-11 at 4 and 10 feet below grade, respectively.

The elevated concentrations of SVOCs, pesticides, and metals in soil are likely related to the presence of contaminated soil/historic fill material within the soil and prior Site uses.

[Comparison of Soil/Fill with SCGs](#)

Soil/fill sample concentrations above their respective UUSCOs, RRSCOs, and PFAS Guidance Values are summarized below in Tables E and F. All soil laboratory results are presented in Tables 2 through 7. Exceedances of the applicable standards are shown on Figures 7A and 7B.

Table E
Comparison of Soil/Fill with SCGs

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
Benzo(a)anthracene	RI-SB-16_0-2_20230808	1	1	1.1
	RI-SB-17_2-4_20230808			3.0
	RI-SB-19_0-2_20230808			2.4
	RI-SB-19_2-4_20230808			2.2
	RI-SB-18_0-2_20230808			1.5
	RI-SB-18_4-6_20230808			3.9
	RI-SB-18_6-8_20230808			2.2
	RI-SB-02_10-12_20230809			2.7
	SB-03_0-2_20230823			2.8
	SB-03_9-11_20230823			3.1
	SB-04_0-2_20230823			3.0
	SB-05_0-2_20230824			1.7
	SB-08_0-2_20230824			19
	SB-08_11-13_20230824			6.2
	SB-09_0-2_20230823			2.9
	SB-11_8-10_20230824			2.7
Benzo(a)pyrene	RI-SB-16_0-2_20230808	1	1	1.1
	RI-SB-16_2-4_20230808			4.6
	RI-SB-17_4-6_20230808			3.0
	RI-SB-19_0-2_20230808			2.4
	RI-SB-19_2-4_20230808			2.2
	RI-SB-18_0-2_20230808			1.6
	RI-SB-18_4-6_20230808			3.8
	RI-SB-18_6-8_20230808			2.0
	RI-SB-02_10-12_20230809			2.9
	RI-SB-14_8-10_20230811			1.1
	SB-03_0-2_20230823			3.0
	SB-03_9-11_20230823			3.2
	SB-04_0-2_20230823			3.2

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
	SB-05_0-2_20230824			1.7
	SB-08_0-2_20230824			19
	SB-08_11-13_20230824			5.7
	SB-09_0-2_20230823			4.1
	SB-11_8-10_20230824			3.0
Benzo(b)fluoranthene	RI-SB-16_0-2_20230808	1	1	1.3
	RI-SB-16_2-4_20230808			6.2
	RI-SB-17_4-6_20230808			3.6
	RI-SB-19_0-2_20230808			2.9
	RI-SB-19_2-4_20230808			2.7
	RI-SB-18_0-2_20230808			1.9
	RI-SB-18_4-6_20230808			4.4
	RI-SB-18_6-8_20230808			2.3
	RI-SB-20_2-4_20230808			1.1
	RI-SB-02_10-12_20230809			3.1
	SB-03_0-2_20230823			3.9
	SB-03_9-11_20230823			3.5
	SB-04_0-2_20230823			4
	SB-05_0-2_20230824			2.1
	SB-08_0-2_20230824			23
	SB-08_11-13_20230824			6.9
	SB-09_0-2_20230823			4.3
	SB-11_8-10_20230824			3.7
Benzo(k)fluoranthene	RI-SB-16_2-4_20230808	0.8	3.9	2.1
	RI-SB-17_4-6_20230808			1.2
	RI-SB-19_0-2_20230808			0.96
	RI-SB-19_2-4_20230808			0.87
	RI-SB-18_4-6_20230808			1.6
	RI-SB-02_10-12_20230809			0.99
	SB-03_0-2_20230823			1.1
	SB-03_9-11_20230823			1.6
	SB-04_0-2_20230823			1.5
	SB-08_0-2_20230824			7.2
	SB-08_11-13_20230824			3.2
	SB-09_0-2_20230823			1.6
	SB-11_8-10_20230824			1.3
Chrysene	RI-SB-16_2-4_20230808	1	3.9	5.6
	RI-SB-17_4-6_20230808			2.9
	RI-SB-19_0-2_20230808			2.4
	RI-SB-19_2-4_20230808			2.2
	RI-SB-18_0-2_20230808			1.5
	RI-SB-18_4-6_20230808			3.8

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
	RI-SB-18_6-8_20230808			2.0
	RI-SB-02_10-12_20230809			2.6
	SB-03_0-2_20230823			2.6
	SB-03_9-11_20230823			3.0
	SB-04_0-2_20230823			2.7
	SB-05_0-2_20230824			1.7
	SB-08_0-2_20230824			18
	SB-08_11-13_20230824			5.7
	SB-09_0-2_20230823			3.5
	SB-11_8-10_20230824			2.7
Dibenz(a,h)anthracene	RI-SB-16_2-4_20230808	0.33	0.33	0.80
	RI-SB-17_4-6_20230808			0.43
	RI-SB-19_0-2_20230808			0.35
	RI-SB-18_4-6_20230808			0.54
	RI-SB-02_10-12_20230809			0.35
	SB-03_0-2_20230823			0.37
	SB-03_9-11_20230823			0.38
	SB-04_0-2_20230823			0.41
	SB-08_0-2_20230824			4.9
	SB-08_11-13_20230824			1.0
	SB-09_0-2_20230823			0.53
	SB-11_8-10_20230824			0.52
Indeno(1,2,3-cd)pyrene	RI-SB-16_0-2_20230808	0.5	0.5	0.88
	RI-SB-16_2-4_20230808			3.3
	RI-SB-17_4-6_20230808			2.4
	RI-SB-19_0-2_20230808			1.9
	RI-SB-19_2-4_20230808			1.6
	RI-SB-18_0-2_20230808			1.3
	RI-SB-18_4-6_20230808			2.9
	RI-SB-18_6-8_20230808			1.4
	RI-SB-20_2-4_20230808			0.68
	RI-SB-11_8-10_20230808			0.80
	RI-SB-02_10-12_20230809			1.9
	RI-SB-14_8-10_20230808			2.2
	SB-03_0-2_20230823			1.5
	SB-03_9-11_20230823			1.3
	SB-04_0-2_20230823			1.7
	SB-05_0-2_20230824			1.1
	SB-08_0-2_20230824			13
	SB-08_11-13_20230824			3.6
	SB-09_0-2_20230823			2.0
	SB-10_0-2_20230824			0.53

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
	SB-11_0-2_20230824			0.52
	SB-11_8-10_20230824			2.1
4,4-DDE	RI-SB-07_0-2_20230808	0.0033	8.90	0.0045 J
4,4-DDT	RI-SB-07_0-2_20230808	0.0033	7.90	0.0095
	RI-SB-20_2-4_20230808			0.012
	SB-04_0-2_20210823			0.014
	SB-11_8-10_20210824			0.013
Arsenic	RI-SB-20_0-2_20230808	16	13	58.7
	RI-SB-04_8-10_20230808			39.5
	RI-SB-13_8-10_20230808			37.5
	RI-SB-08_7-9_20230810			38.8
	RI-SB-12_7-9_20230811			20.8
	SB-01_0-2_20210823			70.3
	SB-09_0-2_20210823			27.5
Barium	RI-SB-07_0-2_20230808	350	400	436
Cadmium	SB-01_0-2_20210823	2.5	4.3	3.5
Copper	RI-SB-21_0-2_20230808	50	270	58.2
	RI-SB-07_0-2_20230808			65.2
	RI-SB-07_8-10_20230808			169
	RI-SB-04_8-10_20230808			170
	RI-SB-13_8-10_20230808			286
	RI-SB-01_8-10_20230810			67.3
	RI-SB-01_10-12_20230810			52.1
	RI-SB-06_8-10_20230810			99.5
	RI-SB-08_7-9_20230810			2,220
	RI-SB-06_0-2_20230810			109
	RI-SB-12_7-9_20230811			61.4
	RI-SB-12_10-12_20230811			84.5
	SB-01_0-2_20210823			3,010
	SB-01_8-10_20210823			58.8
	SB-05_12-14_20210824			120
	SB-06_11-13_20210824			463
	SB-09_0-2_20210823			178
	SB-09_7-9_20210823			116
	SB-10_0-2_20210824			65.1
	SB-11_8-10_20210824			52.9
Hexavalent Chromium	RI-SB-03_0-2_20230809	1	110	1.9 J
	RI-SB-07_0-2_20230808			1.2 J
	RI-SB-10_0-2_20230808			2.7
	RI-SB-15_0-2_20230808			1.4 J
	RI-SB-20_0-2_20230808			1.7 J
Lead	RI-SB-21_0-2_20230808	63	400	249

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
	RI-SB-20_2-4_20230808			289
	RI-SB-07_0-2_20230808			483
	RI-SB-04_0-2_20230808			433
	RI-SB-04_8-10_20230808			194
	RI-SB-13_8-10_20230808			123
	RI-SB-09_8-10_20230809			175
	RI-SB-02_0-2_20230809			128
	RI-SB-02_10-12_20230809			485
	RI-SB-01_0-2_20230810			79.7
	RI-SB-01_8-10_20230810			104
	RI-SB-06_8-10_20230810			208
	RI-SB-08_7-9_20230810			880
	RI-SB-08_9-10_20230810			182
	RI-SB-14_8-10_20230811			79.7
	RI-SB-12_7-9_20230811			1,220
	SB-01_0-2_20210823			180
	SB-01_8-10_20210823			80.7
	SB-03_9-11_20210823			711
	SB-04_0-2_20210823			248
	SB-04_8-10_20210823			116
	SB-05_0-2_20210824			146
	SB-05_12-14_20210824			109
	SB-06_0-2_20210824			67.1
	SB-09_0-2_20210823			333
	SB-04_7-9_20210823			153
	SB-10_0-2_20210824			193
	SB-11_8-10_20210824			260
Manganese	SB-05_12-14_20210824	1,600	2,000	1,930
Nickel	RI-SB-07_8-10_20230808	30	310	31.8
	RI-SB-02_14-16_20230808			30.4
	SB-01_0-2_20210823			34.5
	SB-05_12-14_20210824			47.6
	SB-06_11-13_20210824			49
	SB-09_0-2_20210823			31.5
Zinc	RI-SB-21_0-2_20230808	109	10,000	358
	RI-SB-05_0-2_20230808			188
	RI-SB-20_2-4_20230808			314
	RI-SB-07_0-2_20230808			769
	RI-SB-15_0-2_20230808			111
	RI-SB-04_0-2_20230808			255
	RI-SB-04_8-10_20230808			279
	RI-SB-13_8-10_20230808			629

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
	RI-SB-01_8-10_20230810			181
	RI-SB-01_10-12_20230810			165
	RI-SB-06_8-10_20230810			423
	RI-SB-08_0-2_20230810			144
	RI-SB-08_7-9_20230810			1,260
	RI-SB-08_9-10_20230810			124
	RI-SB-14_0-2_20230811			283
	SB-01_0-2_20210823			1,150
	SB-01_8-10_20210823			274
	SB-03_9-11_20210823			150
	SB-04_0-2_20210823			254
	SB-05_0-2_20210824			120
	SB-05_12-14_20210824			125
	SB-08_0-2_20210824			117
	SB-09_0-2_20210823			470
	SB-09_7-9_20210823			289
	SB-10_0-2_20210824			146
	SB-11_8-10_20210824			303
Mercury	RI-SB-21_0-2_20230808	0.18	0.81	0.46
	RI-SB-05_0-2_20230808			0.23
	RI-SB-20_0-2_20230808			0.73
	RI-SB-20_2-4_20230808			0.37
	RI-SB-07_0-2_20230808			0.51
	RI-SB-13_8-10_20230808			0.19
	RI-SB-03_8-10_20230809			0.22
	RI-SB-02_10-12_20230809			0.19
	RI-SB-02_14-16_20230809			0.36
	RI-SB-06_8-10_20230810			0.71
	RI-SB-08_9-10_20230810			0.75
	RI-SB-14_8-10_20230811			0.42
	RI-SB-12_10-12_20230811			0.21
	SB-02_0-2_20210823			1.9
	SB-03_0-2_20210823			0.43
	SB-03_9-11_20210823			0.45
	SB-04_0-2_20210823			0.62
	SB-04_8-10_20210823			3.5
	SB-05_0-2_20210824			0.32
	SB-05_12-14_20210824			0.24
	SB-06_0-2_20210824			0.26
	SB-07_12-14_20210824			0.20
	SB-08_0-2_20210824			0.58
	SB-09_0-2_20210823			5.3

Analyte	Soil Sample Identification	UUSCO (mg/kg)	RRSCO (mg/kg)	Concentration (mg/kg)
	SB-09_7-9_20210823			0.34
	SB-10_0-2_20210824			0.30
	SB-10_8-10_20210824			0.40
Notes: mg/kg – milligrams per kilogram J – The concentration given is an estimated value. Sample detections that exceed UUSCOs are shown in bold. Sample detections that exceed RRSCOs are shaded gray.				

Table F
Comparison of Soil/Fill with PFAS Guidance Values

Analyte	Soil Sample Identification	UUSCO Guidance Value (ppb)	RRSCO Guidance Value (ppb)	Concentration (ppb)
PFOS	RI-SB-01_8-10_20230810	0.88	44	1.21
	RI-SB-06_0-2_20230810			13.8
	RI-SB-08_0-2_20230810			7.06 J
	RI-SB-14_0-2_20230811			3.25 J
PFOA	RI-SB-06_0-2_20230810	0.66	33	0.71 J
Notes: ppb – parts per billion J – The concentration given is an estimated value. Sample detections that exceed UUSCO Guidance Value are shown in bold.				

2.5.5 On-Site and Off-Site Groundwater Contamination

Summary of Groundwater Data

The SVOC benzo(a)pyrene was detected at low concentrations above its AWQSGV in two groundwater samples (TW-02 and TW-03) collected from temporary monitoring wells. The metals iron, magnesium, manganese, and sodium were detected above their respective AWQSGVs in the filtered groundwater samples. PFOA and PFOS were detected above the guidance values for human health. PCBs and pesticides were not detected above the AWQSGVs.

Comparison of Groundwater with SCGs

Groundwater sample concentrations above the AWQSGVs and Guidance Values for PFAS are summarized below in Tables G and H. All groundwater results are presented in Tables 8 through 14. Groundwater sample exceedances above the applicable standards are presented on Figures 8A and 8B.

Table G
Comparison of Groundwater with SCGs

Analyte	Groundwater Sample Identification	AWQSGV (µg/L)	Concentration (µg/L)
Benzo(a)pyrene	TW-02_20210825	ND	0.57 J
	TW-03_20210825		0.45 J
Iron, Dissolved	TW-01_20210825	300	3,140

Analyte	Groundwater Sample Identification	AWQSGV (µg/L)	Concentration (µg/L)
	TW-05_20210825		807
Sodium, Dissolved	RI-MW-01_20230818	20,000	4,850,000
	RI-MW-02_20230818		4,520,000
	RI-MW-03_20230818		6,200,000
	RI-MW-04_20230818		4,960,000
	RI-MW-X1_20230818		5,170,000
	TW-01_20210825		5,720,000
	TW-04_20210825		6,800,000
	TW-05_20210825		5,630,000
	TW-06_20210825		6,140,000
Magnesium, Dissolved	RI-MW-01_20230818	35,000	577,000
	RI-MW-X1_20230818		617,000
	RI-MW-02_20230818		499,000
	RI-MW-03_20230818		740,000
	RI-MW-04_20230818		594,000
	TW-01_20210825		658,000
	TW-04_20210825		820,000
	TW-05_20210825		459,000
	TW-06_20210825		474,000
Manganese, Dissolved	TW-01_20210825	300	903
Iron, Total	RI-MW-01_20230818	300	499
	RI-MW-02_20230818		2,580
	RI-MW-04_20230818		316
	RI-MW-X1_20230818		432
	TW-01_20210825		4,610
Lead, Total	RI-MW-02_20230818	25	74.4
Sodium, Total	RI-MW-01_20230818	20,000	5,060,000
	RI-MW-02_20230818		4,660,000
	RI-MW-03_20230818		5,740,000
	RI-MW-04_20230818		4,870,000
	RI-MW-X1_20230818		5,190,000
	TW-01_20210825		5,760,000
	TW-04_20210825		5,750,000
	TW-05_20210825		4,070,000
	TW-06_20210825		5,230,000
Manganese, Total	TW-01_20210825	300	958
Magnesium, Total	RI-MW-01_20230818	35,000	586,000
	RI-MW-X1_20230818		605,000
	RI-MW-02_20230818		542,000
	RI-MW-03_20230818		675,000
	RI-MW-X1_20230818		574,000
	TW-01_20210825		675,000
	TW-04_20210825		673,000
	TW-05_20210825		421,000

Analyte	Groundwater Sample Identification	AWQSGV (µg/L)	Concentration (µg/L)
	TW-06_20210825		487,000
Notes: J – The concentration given is an estimated value. µg/L – micrograms per liter			

Table H
Comparison of Groundwater with PFAS Guidance Values

Analyte	Groundwater Sample Identification	NYSDEC PFAS Guidance Value (ppt)	Concentration (ppt)
PFOS	RI-MW-01_20230818	2.7	8.47J
	RI-MW-X1_20230818		8.38J
	RI-MW-02_20230818		3.84J
	RI-MW-04_20230818		7.72J
	TW-01_20210825		10.7
PFOA	RI-MW-01_20230818	6.7	8.33J
	RI-MW-X1_20230818		7.57J
	RI-MW-04_20230818		7.72J
Notes: J – The concentration given is an estimated value. ppt – parts per million			

2.5.6 On-Site and Off-Site Soil Vapor Contamination

Forty-six VOCs analyzed for were detected in the soil vapor samples. Solvent-related VOCs [including 1,1,1-trichloroethane (1,1,1-TCE), 1,1,2-trichlorotrifluoroethane, bromodichloromethane, carbon tetrachloride, chlorobenzene, chlorodifluoromethane, chloroethane, chloroform, chloromethane, cis-1,2-dichloroethene, methylene chloride, PCE, TCE, trans-1,2-dichloroethene, and trichlorofluoromethane] were detected in the soil vapor samples at individual concentrations up to 12,000 µg/m³ from a diluted analysis (PCE in sample SV-02_20210825). Other VOCs, including compounds typically associated with petroleum [such as benzene, toluene, ethylbenzene, and m,p- and o-xylenes (collectively referred to as BTEX), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,3-butadiene, 2,2,4-trimethylpentane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2,2,4-trimethylpentane, 4-ethyltoluene, 4-isopropyltoluene, 4-methyl-2-pentanone, benzyl chloride, carbon disulfide, cyclohexane, isopropanol, methyl butyl ketone, methyl ethyl ketone, naphthalene, n-butane, n-heptane, n-hexane, n-propylbenzene, sec-butylbenzene, styrene, tert-butyl alcohol, and tert-butylbenzene,], were detected in the soil vapor samples at individual concentrations up to 2,900 µg/m³ from a diluted analysis (butane in sample RI-SV-04_20230810).

Soil vapor concentrations are presented in Table 15, and VOC detections are shown on Figures 9A and 9B.

2.6 Environmental and Public Health Assessments

2.6.1 Qualitative Human Health Exposure Assessment

The objective of the Qualitative Human Health Exposure Assessment (QHHEA) is to identify potential receptors and pathways for human exposure to the Contaminants of Concern (COC) that are present at, or migrating from, the Site. The identification of exposure pathways describes the route that the COC takes to travel from the source within different environmental media to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

The Phase II Investigation and RI are sufficient to complete a QHHEA. The QHHEA was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data were evaluated to determine whether there is any health risk by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was prepared in accordance with Appendix 3B and Section 3.3 (b) 8 of the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation. The full QHHEA, which describes the environmental media, contaminants of concern, potential routes of exposure, potential receptors, and existence of human health exposure pathways, is included in Section 6.0 of the RIR, which is provided in Appendix C.

The Site is currently vacant, and demolition of the existing structures is anticipated. The entirety of the Site is capped with a concrete slab and/or asphalt pavement, which is in good to fair condition. Additionally, with no site occupants or nearby sensitive receptors, inhalation of contaminants via soil vapor intrusion is not a concern. Once redevelopment activities begin, there will be a potential exposure pathway from contaminated surface soil/fill to construction workers, as these workers could potentially ingest, inhale, or have dermal contact with any exposed contaminated fill or soil a potential exposure pathway to the surrounding community from contaminants in airborne particulates/vapors; however, these pathways will be mitigated with proper implementation of a CAMP that will prevent migration of particulates and VOCs, and a HASP that will dictate safe practices including the wearing of personal protective equipment.

Without remediation, once redevelopment of the Site has been completed, there would be a potential exposure pathway from the potential off-gassing of residual organic vapors in the soil and/or groundwater through cracks or openings in the foundations; however, it is unlikely that a new building foundation would have significant cracks and/or openings that would allow for the accumulation of vapors within the building.

2.7 Remedial Action Objectives

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) have been identified for this Site.

Include all RAOs that are appropriate, as follows

2.7.1 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

2.7.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.7.3 Soil Vapor

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the Site.

3.0 WASTE CHARACTERIZATION

All work in this section will include implementation of the Quality Assurance Project Plan (QAPP), provided in Appendix F, and the site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP), provided in Appendix G and Appendix H, respectively, which include on-site and community air monitoring procedures.

3.1 Soil Waste Characterization Sampling

It is estimated that approximately 3,630 tons of soil will be excavated for remedial purposes and disposed of at a facility(ies) licensed to accept such material. The proposed remedial excavation areas and associated depths are shown on Figure 12. Soil pre-characterization sampling will be conducted to characterize the soil for acceptance at properly-permitted disposal facilities. The proposed testing will include sampling and laboratory analyses intended to satisfy the analytical requirements of numerous soil disposal/receiving facilities in New Jersey, New York, and Pennsylvania. Typical facilities require one sample per 800 cubic yards of material, consisting of a grab and five-point composite, collected from test pits or borings advanced to varying depths across the Site to characterize the material in-place prior to the start of excavation.

In accordance with the typical requirements of disposal facilities permitted to receive historic fill/soil, the grab soil samples will be analyzed for VOCs plus 10 tentatively identified compounds (TICs) by EPA Method 8260 and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) by EPA method 8015D. The five-point composite samples will be analyzed for SVOCs plus 20 TICs by EPA Method 8270D, diesel range organics (DRO) by EPA Method 8015D, pesticides by EPA Method 8081B, polychlorinated biphenyls (PCBs) by EPA Method 8082A, herbicides by EPA 8151A, TAL metals by EPA Methods 6010D and 7471B, trivalent chromium by EPA Method 7196A, hexavalent chromium by EPA Method 7196A, RCRA list of Toxicity Characteristic Leaching Procedure (TCLP) metals plus copper, nickel, and zinc by EPA Methods 6010D and 7470, New Jersey Extractable Petroleum Hydrocarbons (EPH) non-fractionated by Method NJDEP EPH, total cyanide by EPA Method 9012B, ignitability, corrosivity, and reactivity, and paint filter by EPA Method 9095B (one sample only).

Depending on the acceptance criteria of potential disposal facilities at the time of the excavation, these tests may be modified. Additionally, it is possible that once a specific facility is selected, additional testing and/or laboratory analysis may become necessary.

3.2 Soil Waste Characterization Report

A report will be prepared following completion of the waste classification sampling event and receipt of the laboratory data. The report will be presented to potential disposal facilities and will include a summary of the Site's environmental history and the sampling methodologies, a sample location map, and copies of the analytical results. Disposal facility acceptance letters will be provided to NYSDEC prior to the start of excavation. A copy of the Soil Pre-characterization Report will be included in the Final Engineering Report (FER).

4.0 DESCRIPTION OF REMEDIAL ACTION PLAN

4.1 Evaluation of Remedial Alternatives

This section includes a review of remediation alternatives that were considered for the remedy phase of the BCP. The purpose of completing the alternatives analysis is to identify, evaluate, and select a remedy to address the contamination identified. The RAOs for soil and groundwater include source removal and treatment to prevent the potential for exposure and contaminant migration. The RAOs for soil vapor include preventing soil vapor from entering the proposed new Site building. The following performance measures were used to complete the evaluation of remedial alternatives:

- Protection of human health and the environment;
- Compliance with standards, criteria, and guidelines (SCGs);
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance; and
- Land use.

The following remedial SCGs apply to the project and are the performance criteria used to determine if the RAOs have been met.

- 6 NYCRR Part 375-6 Soil Cleanup Objectives;
- New York State Groundwater Quality Standards – 6 NYCRR Part 703;
- NYSDEC Ambient Water Quality Standards and Guidance Values – TOGS 1.1.1;
- NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation - May 2010 (or later version if available);
- *Sampling, Analysis, And Assessment of Per- And Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs* (April 2023)
- NYSDEC Draft Brownfield Cleanup Program Guide – May 2004;
- New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan;
- NYS Waste Transporter Permits – 6 NYCRR Part 364;
- NYS Solid Waste Management Requirements – 6 NYCRR Part 360 and Part 364;
- NYSDEC DER-23 Citizen Participation handbook for Remedial Programs (January 2010);
- 6 NYCRR Part 372 – Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998);
- 6 NYCRR Subpart 374-1 – Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998);
- 6 NYCRR Subpart 374-3 – Standards for Universal Waste (November 1998);

- 6 NYCRR Part 375 – Environmental Remediation Programs (December 2006);
- 6 NYCRR Part 612 – Registration of Petroleum Storage Facilities (February 1992);
- 6 NYCRR Part 613 – Handling and Storage of Petroleum (February 1992);
- 40 CFR Part 280 – Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks;
- 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response;
- 40 CFR Part 144 – Underground Injection Control Program;
- NYSDOH Soil Vapor Intrusion Matrices – NYSDOH Sub-Slab Vapor Concentration which may require monitoring or mitigation as presented in the Matrix A, Matrix B, Matrix C, Matrix D, Matrix, E, and Matrix F tables of the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006), update February 2024 ("NYSDOH SVI Guidance"); and
- NYSDEC DER-31 – Green Remediation (January 2011)

Additional regulations and guidance may be applicable, relevant, and appropriate to the remedial alternatives and will be complied in connection with implementation of the remedial program. However, the list above is intended to represent the principal SCGs, which should be considered in evaluating the remedial alternatives for the Site.

Remedial Alternative 1 – Track 1 Unrestricted Use Soil Cleanup Objectives (UUSCOs)

Remedial Alternative 1 would include demolition of the existing buildings and removal of all contaminated soil and soil vapor to comply with UUSCOs. This would include, but is not limited to, excavation of all soil above the UUSCOs, including excavation below the groundwater interface and/or down to bedrock as needed.

1. Protection of Human Health and the Environment – Satisfied; as the contaminated soil would be removed, and concentrations of chlorinated solvents and petroleum compounds in soil vapor would be significantly reduced.
2. Compliance with SCGs – Satisfied; all soil above UUSCOs and RRSCOs would be removed, and any on-site soil vapor concentrations would be reduced as a result of removing the soil.
3. Short-term Effectiveness and Impacts – Satisfied; this alternative would be effective in reducing soil contamination in the short-term since all contaminated soil will be removed from the Site. There is, however, a risk of short-term impacts to Site workers and the community, as the process of excavating contaminated soil to comply with UUSCOs may cause the release of particulates and organic vapors. This risk can be controlled by employing health and safety procedures during remediation and construction.
4. Long-term Effectiveness and Permanence – Satisfied; as the RAOs will be achieved.
5. Reduction of Toxicity, Mobility, or Volume of Contaminated Material – As all contaminated soil at the Site would be removed, concentrations of VOCs in soil vapor would be significantly reduced, and the toxicity, mobility, and the on-site volume of contaminants would be greatly reduced.
6. Implementability – Complicated, but implementable. This alternative would require excavation to bedrock and/or below the water table site-wide. Extensive Support of Excavation (SOE) and dewatering would be required.
7. Cost Effectiveness – Not cost-effective; this alternative would require site-wide excavation to bedrock, approximately 1 to 16 feet below grade. Based on the dimensions of the Site, to

achieve Track 1 UUSCOs, it is assumed that approximately 19,500 tons (13,000 cubic yards) of soil would need to be excavated and disposed of as non-hazardous regulated soil at a rate of \$55 per ton for transportation and disposal (T&D). Using these estimates, the soil disposal cost is expected to be approximately \$1,072,500. Additionally, it is estimated that approximately 17,320 cubic yards (25,980 tons) of clean fill would then be imported to backfill the excavated areas and raise the Site grade to meet the design flood elevation. Using a market rate of \$40 per cubic yard of clean fill, backfill import costs would equal approximately \$692,800. Although there are no known registered tanks at the Site, an allowance of \$25,000 is included to account for any unknown/unregistered tanks encountered during excavation. Demolition and abatement costs are estimated at \$500,000. Inspection, oversight, reporting, and engineering design services is estimated to be \$500,000. To perform an excavation of this magnitude, shoring and sheeting, and dewatering would have to be performed for an estimated cost of \$2,300,000. Laboratory analysis and data validation of waste characterization samples, endpoint samples, and import samples is estimated to be \$200,000. This assumes the remedial work would be performed concurrently with the planned redevelopment of the Site and is not inclusive of demolition or abatement costs. The total estimated cost for Remedial Alternative 1 is \$5,290,300.

8. Community Acceptance – Partially satisfied; this alternative would be protective of human health and the environment in the long term; however, the extended construction schedule would increase the time for potential construction-related disruptions to the surrounding community and cause increased noise and traffic disturbances.
9. Land Use – Satisfied; this alternative would result in the cleanup of the Site for unrestricted use, which would allow for redevelopment of the Site.
10. Environmental Footprint Analysis – Partially satisfied, as this alternative would incorporate only limited/standard green and sustainable remediation principles. An environmental footprint analysis for this alternative was performed in accordance with the NYSDEC guidelines, the methodologies used in the EPA Spreadsheets for Environmental Footprint Analysis (SEFA) tool, and the requirements of the Climate Leadership and Community Protection Act (CLCPA), and is provided in Appendix L. A Track 1 alternative would result in a significant fuel and energy use due to the longer construction duration and significant production of waste. Additionally, the greenhouse gas emissions are anticipated to be approximately 586 metric tons of CO₂ for a Track 1 cleanup, compared to 219 metric tons of CO₂ for a Track 4 cleanup. Therefore, this alternative does not maximize green and sustainable remediation practices as compared to Remedial Alternative 2.
11. Climate Change Vulnerability Assessment – Satisfied, the impact of climate change on the Site and the proposed remedy under this alternative was evaluated. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise were identified, and this alternative would incorporate measures to minimize the impact of climate change on potential identified vulnerabilities. The remedy is not expected to be affected by the projected increase in temperature, precipitation levels, or sea level rise. The climate vulnerability assessment for this alternative is included in Appendix L.

Remedial Alternative 2 – Track 4 Restricted Residential Use Soil Cleanup Objectives (RRSCOs)

Remedial Alternative 2 would include demolition of the existing buildings, excavation and off-site disposal to a minimum of 2 feet below grade plus hotspot removal, construction of a Site cover system, and installation of a sub-slab depressurization system (SSDS) under the proposed new building. The Site cover system would include importation of clean fill material as required to install a minimum 2-foot clean soil cover in unpaved areas outside the building footprint,

construction of a concrete building foundation underlain by a minimum 20-mil vapor barrier membrane, which doubles as a demarcation barrier, in areas within the building footprint, and paved surfaces underlain by a demarcation barrier in roadway and sidewalk areas. The SSDS would be installed beneath the proposed building slab.

The Track 4 remedy would allow for ECs and ICs to be implemented for long-term management of the Site and to prevent future exposure to residual contamination. As such, an Environmental Easement (EE) would be recorded for the Site to implement appropriate ECs and ICs, and a Site-specific Site Management Plan (SMP) would be prepared to specify future soil handling requirements, include management and inspection of the ECs that may be necessary, maintenance of Site access controls, Department notification, and land use restrictions. Periodic inspection and reporting would be required to verify that the restrictions and requirements included in the EE remain in place and continue to be effective.

1. Protection of Human Health and the Environment – Satisfied; as on-site contamination would be covered by a permanent Site cover system. Removal of source material from the Site would also reduce residual contaminant mobility into groundwater and soil vapor. Additionally, an active SSDS would be installed beneath the building slab to prevent vapor intrusion into the newly constructed building.
2. Compliance with SCGs – Satisfied; as RAOs would be achieved by preventing the potential for human and environmental exposures to chemical constituents above RRSCOs and the SSDS would mitigate vapor intrusion into the proposed building.
3. Short-term Effectiveness and Impacts – Satisfied; mitigation measures, including a HASP and CAMP, would protect and limit the exposure of workers and the surrounding community to contaminated soil, particulates, and/or vapors during Site redevelopment.
4. Long-term Effectiveness and Permanence – Satisfied; as the implementation of Engineering Controls (ECs) (including a Site cover system and active SSDS) and Institutional Controls (ICs) would address residual contamination and limit the exposure of future occupants to contaminated soil and/or soil vapor in the long term, thus achieving the RAOs.
5. Reduction of Toxicity, Mobility, or Volume of Contaminated Material – Satisfied; as the active SSDS would prevent contaminated soil vapor from migrating into the proposed building.
6. Implementability – Satisfied; contaminated soil removal could be completed in a relatively short timeframe and the equipment and personnel needed to perform the proposed remedial actions are readily available. The equipment and materials necessary to implement the groundwater treatment program are readily available, and each could be performed concurrent with development.
7. Cost Effectiveness – Satisfied; this alternative is the most cost-effective while being implementable. Under this alternative, based on data gathered to date, it is estimated that approximately 3,630 tons of soil will be excavated and disposed of off-site. Using an estimated rate of \$55 per ton, soil disposal is estimated to cost \$199,650. Approximately 4,900 cubic yards of clean fill will be needed to install the Site cover system and backfill hotspots. Using a market rate of \$40 per cubic yard of clean fill, backfill import costs would equal approximately \$196,000. The SSDS is estimated to cost \$319,860, including underground and aboveground components. Demolition and abatement costs are estimated at \$500,000. SOE for hotspot excavation and localized dewatering is estimated to cost \$200,000. Although there are no known registered tanks at the Site, an allowance of \$25,000 is included to account for any unknown/unregistered tanks encountered during excavation. The concrete building slab as part of the Site cover is estimated to cost \$54,600. This assumes the remedial work would be performed concurrently with the planned redevelopment of the Site. Inspection, oversight,

- reporting, and engineering design services is estimated to be \$390,000, and laboratory analysis and third-party data validation for waste characterization samples, endpoint samples, and import/reuse samples is estimated to cost \$100,000. The total estimated cost for Remedial Alternative 2 is \$1,985,110. .
8. Community Acceptance – Satisfied; this alternative would be protective of human health and the environment.
 9. Land use – Satisfied; this alternative would result in the cleanup of the Site for restricted-residential use, which would allow for redevelopment of the Site.
 10. Environmental Footprint Analysis – Satisfied; as this alternative would incorporate more green and sustainable remediation principles compared to a Track 1 cleanup, by requiring fewer truck trips for soil disposal and import, and a shorter period during which heavy equipment is used to complete the work. An environmental footprint analysis for this alternative was performed in accordance with the NYSDEC guidelines, the methodologies used in the EPA SEFA tool, and the requirements of the CLCPA, and is provided in Appendix L. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction, and material use were estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, were incorporated. A Track 4 cleanup would result in less fuel usage and waste, in comparison to the Track 1 alternative. Additionally, the shorter construction duration for Track 4 indicates that there would be less energy consumption and fewer co-pollutant emissions.
 11. Climate Change Vulnerability Assessment – Satisfied, the impact of climate change on the Site and the proposed remedy under this alternative was evaluated. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise were identified, and this alternative would incorporate measures to minimize the impact of climate change on potential identified vulnerabilities. The remedy is not expected to be affected by the projected increase in temperature, precipitation levels, or sea level rise. Additionally, erosion and sediment controls that will be implemented during construction, will be resilient to the current rainfall levels. The climate vulnerability assessment for this alternative is included in Appendix L.

4.2 Selection of the Preferred Remedy

Remedial Alternative 2 (Track 4) achieves the RAOs while being cost-effective. After careful consideration with respect to the evaluation criteria listed, Remedial Alternative 2 is determined to be the preferred remedy, since it adequately addresses the subsurface contamination with the most cost-effective approach and would incorporate more green and sustainable remediation practices.

4.2.1 Zoning

The Site is currently zoned as R7-2 (residential) and C2-4 (commercial) and is located within the Special Harlem River Waterfront District and Inclusionary Housing Designated Area. The Site was rezoned from manufacturing use as part of the Lower Concourse Rezoning in 2009.

4.2.2 Applicable Comprehensive Community Master Plans or Land Use Plans

The Site is located within an Inclusionary Housing Designated Area and the Special Harlem River Waterfront District, which promotes the growth of permanent affordable housing and to maintain and reestablish physical and visual public access to and along the waterfront.

4.2.3 Surrounding Property Uses

The Site is abutted to the north by East 138th Street, followed by the Madison Avenue Bridge; to the south by the Padded Wagon[®] moving company warehouse and associated parking; to the east by East 135th Street, followed by the Major Deegan Expressway; and to the west by a freight train rail line, followed by the Harlem River. The surrounding area is comprised predominantly of commercial and industrial uses, with some parkland to the east.

4.2.4 Citizen Participation

A Citizen Participation Plan (CPP) was prepared by AKRF in February 2023 and approved by NYSDEC in May 2023. The contemplated remedy complies with the CPP. The NYSDEC-approved CPP is included as Appendix I.

4.2.5 Environmental Justice Concerns

The Site is located in a Potential Environmental Justice Area. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Environmental justice efforts focus on improving the environment in communities, specifically minority and low-income communities, and addressing disproportionate adverse environmental impacts that may exist in those communities.

4.2.6 Land Use Designations

There are no federal or state land use designations.

4.2.7 Population Growth Patterns

The population of the Bronx is expected to increase in the future. This project will help provide necessary affordable housing units to meet that need.

4.2.8 Accessibility to Existing Infrastructure

The Site is located within walking distance of the 138th Street-Grand Concourse MTA subway station, and the Bx1 and Bx33 public bus stops. The Major Deegan Expressway (I-87) and Madison Avenue Bridge are located adjacent to the Site to the east and north, respectively. The surrounding area is supplied with municipal sewers and water, electric, telephone, natural gas, and fiber-optic lines.

4.2.9 Proximity to Cultural Resources

There are no cultural resources located adjacent to the Site. The nearest cultural resources include Yankee Stadium, the Hip Hop Museum, and Hostos Center for the Arts & Culture, which are easily accessible by public transportation.

4.2.10 Proximity to Natural Resources

Nearby parks and natural resources include Weston Park, St. Mary's Park, Franz Sigel Park, and Mill Pond Park.

4.2.11 Off-Site Groundwater Impacts

Due to tidal fluctuations and the presence of a bulkhead along the western Site boundary and variations in depth to bedrock, it is unknown if groundwater contamination is migrating off-site. The contaminants identified in groundwater primarily consisted of

SVOCs, PFOA, and PFOS. Groundwater is not used for drinking or other potable purposes in the Bronx. The Site is served by a public water supply that is not affected by Site contamination.

The SVOCs detected in groundwater may be related to sediment entrained in the groundwater samples. The PFOA/PFOS exceedances in groundwater were generally detected site-wide, indicating that the concentrations observed may be indicative of the surrounding area and not of an on-site source; however, it is unknown whether any products containing PFAS were historically used at the Site.

4.2.12 Proximity to Floodplains

The western and southern portions of the Site are located within a Zone A flood zone which is defined as “areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage.” This is considered a high-risk flood zone.

4.2.13 Geography and Geology of the Site

Based on a 2021 architectural survey of the Site by Montrose Surveying Co., LLP, the Site lies at an elevation of 9 to 12 feet above the North American Vertical Datum of 1988 (NAVD88).

The stratigraphy of the Site, from the surface down, generally consists of a surficial layer of asphalt and/or concrete underlain by fill material comprised of sand, silt, and gravel with varying amounts of brick extending from grade to approximately 3 to 20 feet below grade. The fill material is underlain by apparent bedrock in the eastern portion of the Site, and varying amounts of apparent native sand, silt, clay and gravel in the western portion of the Site to boring termination depths (up to 20 feet below grade). Apparent bedrock was encountered at depths ranging from approximately 1 to 16 feet below grade in borings RI-SB-05, RI-SB-09, RI-SB-16, RI-SB-17, RI-SB-18, RI-SB-19, RI-SB-20, SB-08, and SB-11.

Based on Site-specific well point measurements, groundwater beneath the Site ranges from elevation -0.31 to elevation 2.70 (NAVD88), or approximately 7.18 to 12.27 feet below grade surface across the Site.

Regional groundwater flow is westerly. Based on the site-specific well elevation survey, groundwater flow direction was in a generally easterly direction beneath the Site, but the measurements were likely tidally influenced since the Harlem River is located west-adjacent to the Site and due to variations in depth to bedrock.

4.2.14 Current Institutional Controls

Currently, there are no Institutional Controls (ICs) or Engineering Controls (ECs) at the Site.

4.3 Summary of Selected Remedial Actions

Remedial activities will be performed at the Site in accordance with this RAWP and the Department-issued Decision Document (DD). All deviations from this RAWP and/or the DD will be promptly reported to NYSDEC for approval and will be fully explained in the Final Engineering Report (FER). The selected remedial actions include:

1. The proposed remedy is a Track 4 Restricted Residential cleanup.
2. The existing on-site buildings will be demolished and materials that cannot be beneficially reused on-site will be taken off-site for proper disposal in order to implement the remedy.

3. Excavation and off-site disposal of soil to a minimum of 2 feet below grade across the Site plus hotspot removal in two areas.
4. Installation of support of excavation (SOE) necessary to enable excavation of deeper contaminated soil/fill. SOE installation will comply with applicable local and state-controlled inspections.
5. Any unknown/unregistered tanks and associated piping, other structures associated with a source of contamination, and/or grossly contaminated soil/fill, if encountered, will be removed in accordance with applicable regulations.
6. A Site-specific HASP and CAMP will be implemented during all ground-intrusive Site activities, which includes soil disturbance and loading activities, to monitor levels of VOCs and airborne particulates within the active work zones and around the perimeter of the Site.
7. Screening for indications of contamination (by visual means, odor, and monitoring with a photoionization detector (PID) of soil during all ground-intrusive Site work, including soil disturbance and loading activities.
8. Characterization and off-site disposal of all materials removed from the Site in accordance with all federal, state, and local rules and regulations for handling, transport, and disposal. Waste disposal facilities will be selected based on the data collected to date and the results of the planned waste classification sampling.
9. Importation of clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) to raise the Site grade for the proposed building, construct the Site cover, and as needed for use as backfill. Fill material that does not exceed RRSCOs for any compound may be used on-site to backfill the Site. Soil exceeding the UUSCO for 1,4-dioxane will not be imported, per DER-10: Appendix 5 - Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e). If PFOA or PFOS are detected in any sample at or above the NYSDEC Restricted Residential guidance values, it will also be tested by the Synthetic Precipitation Leaching Procedure (SPLP). If the SPLP concentrations of PFOA and PFOS are at or above 10 ppt, the soil will not be reused or imported. Analytical results will be compared to Table 375-6.8(b) of 6 NYCRR Part 375 and submitted to NYSDEC via a *Request to Import/Reuse Soil or Fill* form for review and approval prior to importation and placement on-site. All imported soil or soil proposed for reuse requires NYSDEC review prior to on-site placement.
10. Collection and laboratory analysis of confirmatory documentation samples across the Site at a minimum of 2 feet below grade, and endpoint samples from any hotspot areas to document remaining concentrations of contaminants in soil/fill after remedial excavation is complete. Endpoint sampling will occur around hotspots and any additional Areas of Concern (AOCs) identified during the remedial action based on the sampling frequency outlined in Section 5.4 of DER-10. Endpoint samples will not be collected in areas that are excavated down to the bedrock surface.
11. Installation and operation of an active sub-slab depressurization system (SSDS) below the foundation slab of the proposed new building to prevent vapor intrusion.
12. Construction and maintenance of a Site cover to prevent human exposure to residual contaminants in soil/fill remaining under the Site, which will consist of: (1) a minimum of 2 feet of clean fill material placed in landscaped and permeable areas; (2) concrete building foundation underlain by a minimum 20-mil vapor barrier membrane, which doubles as a demarcation barrier, in areas within the building footprint; and (3) paved surfaces underlain

- by a demarcation barrier in roadway and sidewalk areas. Any fill material brought to the Site will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d).
13. Dewatering to enable remedial excavation in hot spots that extend below the water table (approximately 7 to 12 feet below grade). Dewatering will be conducted in compliance with city, state, and federal laws and regulations. Extracted groundwater will be either containerized for off-site licensed and permitted disposal or will be treated under a permit from New York City Department of Environmental Protection (NYCDEP) to meet pre-treatment requirements prior to discharge to the sewer system.
 14. Recording of an Environmental Easement (EE) with the New York City Register to prevent future exposure to any residual contamination remaining at the Site. The EE will: require the remedial parties/Site owners to complete and submit a periodic certification of ECs and ICs to the Department in accordance with Part 375-1.8 (h)(3); allow the use and development of the Site for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws; restrict the use of groundwater as a source of potable or process water without necessary water quality treatment, as determined by NYSDOH; and require compliance with a Site-specific NYSDEC-approved SMP.
 15. Preparation of an SMP for long term management of residual contamination as required by the EE including plans for: (1) ECs and ICs, (2) monitoring, (3) operation and maintenance, and (4) reporting. Inclusion of soil management provisions in the SMP, including an Excavation Work Plan.

5.0 REMEDIAL ACTION PROGRAM

5.1 Governing Documents

5.1.1 Standards, Criteria, and Guidance (SCGs)

- 6 NYCRR Part 364 - NYS Waste Transporter Permits
- 6 NYCRR Part 360 - NYS Solid Waste Management Requirements
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
- 6 NYCRR Subpart 374-2 - Standards for the Management of Used Oil
- 6 NYCRR Part 375 - Environmental Remediation Programs
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 613 - Petroleum Bulk Storage
- 6 NYCRR Part 661 - Tidal Wetlands - Land Use Regulations
- 6 NYCRR Part 663 - Freshwater Wetlands - Permit Requirements
- 6 NYCRR Parts 700-706 – Classes and Standards of Quality and Purity
- 6 NYCRR Part 750 - State Pollutant Discharge Elimination System (SPDES) Permits
- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- 40 CFR Part 144 - Underground Injection Control Program
- CP-43 - Commissioner Policy on Groundwater Monitoring Well Decommissioning (December 2009)
- CP-49 – Climate Change and DEC Action (2022)
- CP-51- Soil Cleanup Guidance (2010)
- CP-60 – Screening and Assessment of Contaminated Sediment (2014)
- DER-2 - Making Changes to Selected Remedies (April 2008)
- DER-4 – Management of Coal Tar Waste & Coal Tar Contaminated Soils from Manufactured Gas Plants (2001)
- DER-10 – Technical Guidance for Site Investigation and Remediation (2010)
- DER-13 – Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York (2006)
- DER-23 – Citizen Participation Handbook for Remedial Programs (2010)
- DER-31 – Green Remediation (2010)
- DER-32 – Brownfield Cleanup Program Applications and Agreements (2017)
- DER-33 – Guide to Drafting and Recording Institutional Controls (2010)
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)

- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations (1998, Addenda 2000, 2004 and 2023)
- TOGS 1.3.8 - New Discharges to Publicly Owned Treatment Works (1994)
- TOGS 2.1.2 - Underground Injection/Recirculation (UIR) at Groundwater Remediation Sites (1990)
- New York State Standards and Specifications for Erosion and Sediment Control (2016)
- DAR-1 (formerly Air Guide 1) - Guidelines for the Control of Toxic Ambient Air Contaminants (1997)
- U.S. EPA OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (December 1997)
- New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)
- New York State Climate Act (2019)
- NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (2023)

5.1.1.1 Green and Sustainable Remediation and Climate Resiliency

Green and sustainable remediation metrics will be tracked during implementation of the Remedial Action and reported in the FER, including a comparison to the goals established during the remedial design program.

5.1.2 Site Specific Health & Safety Plan (HASP)

A Site-specific HASP has been prepared for the Site and is included as Appendix G. All remedial work performed under this RAWP will be in compliance with governmental requirements, including Site and worker safety requirements mandated by the federal Occupational Health and Safety Administration (OSHA). Community air monitoring will be conducted during all intrusive Site activities in compliance with the NYSDOH Generic CAMP and the Site-Specific CAMP (included in Appendix H). Work zone monitoring will be performed for the health and safety of workers in accordance with action levels and guidance outlined in the HASP.

The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate HASP and for the appropriate performance of work according to that plan and applicable laws.

The HASP and requirements defined in this RAWP pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion (CoC).

Resumes of key AKRF personnel involved in the RA are included in Appendix A of the QAPP, provided as Appendix F.

Confined space entry will comply with all OSHA requirements to address the potential risk posed by combustible and toxic gasses.

5.1.3 Quality Assurance Project Plan (QAPP)

Any sampling associated with this project will be conducted in accordance with the QAPP included in Appendix F, which details field screening and sampling methodologies, and sample submittal and reporting requirements. The QAPP includes the project team responsible for implementing the remediation requirements and provisions set forth in this RAWP.

5.1.4 Construction Quality Assurance Plan (CQAP)

The CQAP, provided as Appendix J, provides a detailed description of the observation and testing activities that will be used to monitor construction quality and confirm that remedial construction is in conformance with the remediation objectives and specifications.

5.1.5 Soil/Materials Management Plan (SMMP)

An SMMP is included in Section 6.4 of this document. The SMMP includes detailed plans for managing all soils/materials that are disturbed at the Site, including excavation, handling, storage, transport, and disposal. It also includes all procedures that will be applied to assure effective, nuisance-free performance in compliance with all applicable federal, state, and local laws and regulations.

5.1.6 Storm-Water Pollution Prevention Plan (SWPPP)

It is unknown at this time whether a Site-specific SWPPP will be required. Regardless, [the erosion and sediment controls for the Site will be in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control](#). Sediment control measures will be installed at the Site prior to conducting any ground-intrusive work. These measures will be installed according to all applicable or relevant and appropriate federal, state, and local laws. The measures will provide for abatement and control of environmental pollution arising from proposed remediation and construction activities. The control measures will include procedures for perimeter Site controls, stabilized construction pads at each construction entrance, equipment decontamination, drainage inlet protection, and particulate suppression. The Remedial Engineer (RE), or her representative, will conduct routine inspections, and any repairs and/or maintenance of control measures will be completed in a timely fashion to maintain the controls in proper working order. Further, all vehicles leaving the Site will be inspected to ensure that no soil adheres to the wheels or undercarriage, and any such materials will be removed at a tire wash station located at the Site exit. Any situation involving material spilled in transit or mud and particulates tracked off-site will be remedied.

If a SWPPP is required, it will provide further protocols for erosion and sediment controls, including protecting storm drain inlets, maintaining stabilized construction entrances, dust control, equipment washing, and stockpile protection. Maintenance procedures and the inspection frequency by a certified inspector will also be provided. At a minimum, an inspection will be conducted every seven days and within 24 hours of a 0.5-inch rainfall event.

5.1.7 Community Air Monitoring Plan (CAMP)

Community air monitoring will be conducted during all intrusive Site activities in compliance with the NYSDOH Generic CAMP and the Site-Specific CAMP, provided in Appendix H. Two CAMP stations will be utilized during all intrusive activities. The proposed CAMP station locations are shown on Figure 10.

CAMP data summarized will be provided to NYSDEC and NYSDOH in the daily reports, and CAMP action level exceedances will be reported to NYSDEC and NYSDOH within 24 hours.

5.1.8 Contractors Site Operations Plan (SOP)

The Remedial Engineer (RE), or her designated representative, has or will review all plans and submittals for this remedial project (including those listed above and contractor and sub-contractor document submittals) to confirm that they are in compliance with this RAWP. The RE is responsible to ensure that all later document submittals for this remedial project, including contractor and sub-contractor document submittals, are in compliance with this RAWP. All remedial documents will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

5.1.9 Citizen Participation Plan

A certification of mailing will be sent by the Volunteer to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed; (2) the date they were mailed; (3) a copy of the Fact Sheet; (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on (specific date) and that it contained all of applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

The approved CPP for this project is attached in Appendix I. Document repositories have been established at the following locations listed in Table I and contain all applicable project documents:

Table I
Document Repositories

Document Repository	Hours of Operation
Woodstock Library 761 East 160 th Street Bronx, NY 10456 Attn: Daisha Topping, Manager Phone: (718) 665-6255	Monday through Friday: 10 AM–6 PM Saturday: 10 AM–5 PM Sunday: Closed
Bronx Community Board 1 3024 Third Avenue Bronx, NY 10455 Attn: Anthony Jordan, District Manager Phone: (718) 585-7117	Monday-Friday: 9 AM–5 PM (call for appointment)
NYSDEC 625 Broadway, 12 th Floor Albany, New York 12233 DECInfo Locator Site: https://extapps.dec.ny.gov/data/DecDocs/C203155/ Attn: Michael Sollecito Phone: (518) 402-2198	Monday-Friday: 9 AM–5 PM (call for appointment)

5.2 General Remedial Construction Information

5.2.1 Project Organization

A list of the personnel responsible for implementation of the RAWP is presented in Table J.

Table J
Project Organization

Organization	Responsibility	Name
NYSDEC	Project Manager	Michael Sollecito
NYSDOH	Project Manager	Mark Sergott
East 138 th Street JV Associates LLC	Volunteer Representative	Michael Wadman
AKRF	Remedial Engineer	Rebecca A. Kinal, P.E.
	Project Director	Deborah Shapiro, QEP
	QA/QC Officer	Marc Godick, LEP
	Project Manager	Adrianna Bosco
	Project Manager Alternate	Steve Schmid
	Site Safety Officer	Shannon Donohue
	Field Monitors	Chad Walters Jonas Peters

Resumes of key AKRF personnel involved in the RA are included in Attachment A of the QAPP, provided as Appendix F.

5.2.2 Remedial Engineer

The RE for this project will be Rebecca Kinal. The RE is a registered professional engineer licensed by the State of New York. The RE will have primary direct responsibility for implementation of the remedial program for the East 138th Street Affordable Housing Site (NYSDEC BCA Index No. C203155-09-22, Site No. C203155). The RE will certify in the FER that the remedial activities were observed by qualified environmental professionals under her supervision and that the remediation requirements set forth in the RAWP and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other RE certification requirements are listed later in this RAWP.

The RE, or designated personnel under her supervision, will coordinate the work of other contractors and subcontractors involved in all aspects of remedial construction, including soil excavation, stockpiling, characterization, removal and disposal, air monitoring, emergency spill response services, import of back fill material, and management of waste transport and disposal. The RE will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The RE, or designated personnel under her supervision, will review all pre-remedial plans submitted by contractors for compliance with this RAWP and will certify compliance in the FER.

The RE will provide the certifications listed in Section 10.1 in the FER.

5.2.3 Remedial Action Construction Schedule

A schedule for performance of the remedial work is included in Section 13.0.

5.2.4 Work Hours

The hours for operation of remedial construction will conform to the New York City Department of Buildings (NYCDOB) construction code requirements, construction permits, or according to specific variances issued by the NYCDOB. NYSDEC will be notified by the Volunteer of any variances issued by the NYCDOB. NYSDEC reserves the right to deny alternate remedial construction hours.

5.2.5 Site Security and Traffic Control

The Site will be completely closed from public access by using secured construction fencing. No unauthorized personnel will be able to access the Site. During off hours, the Site will be completely enclosed within a locked gate.

It is not anticipated that traffic will be disrupted beyond normal contractor vehicle traffic going to and from the Site during construction. Any sidewalk closures that are required during the course of construction/remediation activities will be conducted in accordance with NYCDOT permits.

5.2.6 Contingency Plan

A contingency plan has been developed to describe the procedures to be followed upon discovery of an unknown source of contamination or AOC that may require remediation (USTs, stained soil, drums, etc.). The identification of an unknown source structure or unexpected contaminated media discovered by waste characterization sampling and/or screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will also be included in daily and periodic reports. Any unknown/unregistered USTs discovered during the course of remedial activities will be managed in accordance with requirements of NYCRR 375-1.12(e). The NYSDEC project manager would be notified immediately before any action is taken. Any sampling will be performed on product, sediment and surrounding soil, etc. Chemical analytical work will be for TCL VOCs, SVOCs, TCL pesticides, PCBs, and TAL metals. These analyses will not be limited to the Commissioner's Policy (CP)-51 parameters where tanks are identified without prior approval by NYSDEC.

5.2.7 Worker Training and Monitoring

All those who enter the work area while intrusive activities are being performed must recognize and understand the potential hazards to health and safety. All construction personnel upon entering the Site must attend a brief training meeting, its purpose being to:

- Make workers aware of the potential hazards they may encounter;
- Instruct workers on how to identify potential hazards;
- Provide the knowledge and skills necessary for them to perform the work with minimal risk to health and safety;
- Make workers aware of the purpose and limitations of safety equipment; and
- Ensure that they can safely avoid or escape from emergencies.

Construction personnel will be responsible for identifying potential hazards in the work zone. The project manager will be responsible for ensuring that the training is conducted. Others who enter the Site must be accompanied by a suitably-trained construction worker. In addition, any site workers within the remediation "work zone" will have received the OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER)

training and will be under a medical monitoring program. Current certifications for key personnel are included in Attachment A of the QAPP, provided as Appendix F.

5.2.8 Agency Approvals

The Volunteer will comply with all City Environmental Quality Review (CEQR) requirements for this Site. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

The planned end use for the Site is in conformance with the current zoning for the Site as determined by New York City Department of Planning. A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

A complete list of all local, regional and national governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work will be provided in the FER.

Although not anticipated, all planned remedial or construction work in regulated wetlands and adjacent areas will be specifically approved by the NYSDEC Division of Natural Resources to ensure that it meets the requirements for substantive compliance with those regulations prior to the start of construction. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

5.2.9 NYSDEC BCP Signage

Signs are optional for BCP sites and will be discussed with the NYSDEC Project Manager. If a sign is displayed, it will follow NYSDEC specifications for design and content, provided by the NYSDEC Project Manager.

5.2.10 Pre-Construction Meeting with NYSDEC

A pre-construction meeting with NYSDEC will be scheduled prior to the start of major construction activities. Representative members of the Volunteer and their foundation contractor, AKRF, NYSDEC, and NYSDOH, will be invited to attend.

5.2.11 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in the Site-specific HASP, provided in Appendix G. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

5.2.12 Remedial Action Costs

The total estimated cost of the Remedial Action is \$1,450,110. An itemized and detailed summary of estimated costs for all remedial activity is included in Table 16. This will be revised based on actual costs and submitted as an Appendix to the FER.

5.3 Site Preparation

Prior to conducting any intrusive activities for Site remediation activities, the work zone(s), designated entry points, soil stockpile staging areas, decontamination zones, and truck routes will be established, as applicable. A truck route map is included as Figure 11. The Site Plan will be updated as necessary to reflect any changes in operations during the course of the intrusive work. Particulate control measures, if necessary, will be implemented. Additional details of Site preparation activities are provided in the following sections.

5.3.1 Mobilization

Site mobilization involving Site security setup, fencing, equipment mobilization, utility mark outs and marking and staking excavation areas will be performed prior to undertaking any Site remediation activities.

5.3.2 Monitoring Well/Vapor Probe Decommissioning

Existing groundwater monitoring wells will either be protected during remediation, if required, or will be properly decommissioned in accordance with NYSDEC Commissioners Policy CP-43. The only exception to this is if the full length of the well is to be excavated during remediation.

There are no permanent soil vapor probes installed at the Site.

5.3.3 Erosion and Sedimentation Controls

Erosion and sedimentation control measures will be installed at the Site prior to conducting any ground-intrusive work. These measures will be installed according to all applicable or relevant and appropriate federal, state, and local laws and the NYCDEP-approved SWPPP (if one is required). The measures will provide for abatement and control of environmental pollution arising from proposed remediation and construction activities. The control measures will include procedures for perimeter Site controls, stabilized construction pads at each construction entrance, equipment decontamination, drainage inlet protection, and particulate suppression. The RE, or her representative, will conduct routine inspections, and any repairs and/or maintenance of control measures required will be completed in a timely fashion to maintain the controls in proper working order. All vehicles leaving the project Site will be inspected to ensure that no soil adheres to the wheels or undercarriage of the vehicle leaving the Site. Any situations involving material spilled in transit or mud and particulate tracked off-site will be remedied. The access routes will be inspected for road conditions, overhead clearance, and weight restrictions.

5.3.4 Stabilized Construction Entrance(s)

A crushed stone path will be constructed by the general contractor at all truck entrances for the Site. All trucks will drive over this path prior to leaving so that they do not get re-contaminated prior to departure from the Site. A laborer with a broom and a hose connected to a NYC fire hydrant will check the trucks as they leave. The broom and/or hose will be used to remove soil/fill from the truck tires and body as it leaves the Site, as necessary.

5.3.5 Utility Marker and Easements Layout

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Volunteer and its contractors must obtain any local, state, or federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

The presence of utilities and easements on the Site has been investigated by the RE. It has been determined that no risk or impediment to the planned work under this RAWP is posed by utilities or easements on the Site.

5.3.6 Sheeting and Shoring

Appropriate management of structural stability of on-site or off-site structures during on-site activities including excavation is the sole responsibility of the Volunteer and its contractors. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Volunteer and its contractors must obtain any local, state, or federal permits or approvals that may be required to perform work under this RAWP. Further, the Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved RAWP.

5.3.7 Equipment and Material Staging

Staging and storage of equipment and materials will be contained within the secured Site or within a secured area on the street/sidewalk in accordance with a NYCDOT permit. By the nature of the work involved in the project, equipment and materials will be moved to different areas within the secured Site as work progresses. Materials will be stored in accordance with applicable federal, state, and local regulations.

5.3.8 Decontamination Area

A decontamination area will be established adjacent to the work areas, as required. The base of the decontamination area will be covered with 6-millimeter plastic sheeting as necessary and bermed to prevent spreading of decontamination fluids or potential discharge to the ground surface.

All equipment in direct contact with known or potentially contaminated material will be either dedicated or decontaminated prior to handling less contaminated material or removal from the Site. All liquids used in the decontamination procedure will be collected, stored, and disposed of in accordance with federal, state, and local regulations. Personnel performing this task will wear the proper personal protective equipment (PPE) as prescribed in the Site-specific HASP, provided in Appendix G.

5.3.9 Site Fencing

The Site will be secured with a locking, wooden construction fence meeting all applicable NYCDOB requirements, that will be placed around the entire perimeter. Entrance gates will be chain link with silt fencing. Both types of fencing will help contain dust and debris generated during demolition and ground intrusive activities from migrating off-site. During all remedial activities, access to the Site will be limited and all persons entering the Site will be required to sign a log book and meet all applicable health and safety requirements. The Site will be secured during non-working hours.

5.3.10 Demobilization

Restoration of the excavation work will include general earthwork and/or backfilling to prepare for construction of the proposed foundation elements, and roadways/pathways/sidewalks. Upon completion of the remedial excavation work, any waste materials (i.e., plastic sheet, absorbent pads, etc.) and the decontamination pad will be removed from the Site for proper disposal.

5.4 Reporting

All daily and monthly Reports will be included in the FER.

5.4.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by noon of each day following the reporting period and will include:

- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the Site;
- References to alpha-numeric map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP finding, including excursions;
- An explanation of notable Site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities keyed to an alpha-numeric map for the Site that identifies work areas. These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and all complaints received from the public.

A Site map that shows a predefined alpha-numeric grid for use in identifying locations described in reports submitted to NYSDEC will be provided in the daily reports.

The NYSDEC assigned project number will appear on all reports.

5.4.2 Monthly Reports

Monthly reports prepared in accordance with DER-10 Section 5.7(b) will be submitted to NYSDEC and NYSDOH Project Managers by the tenth day following the end of the month of the reporting period and will include, at a minimum:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (i.e. tons of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and,
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

5.4.3 Other Reporting

Photographs will be taken of all remedial activities and submitted to NYSDEC in digital (JPEG) format. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos of the Site prior to any Remedial Actions will be provided. Representative photos will be provided of each contaminant source, source area and Site structures before, during and after remediation. Photos will be included in the

daily reports as needed, and a comprehensive collection of photos will be included in the FER.

Green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the FER, including a comparison to any goals established during the remedial program. Regular updates to the metrics used (SEFA, SiteWise™ or otherwise approved method) should be included.

The Climate Screening process and results will be documented in the form of a completed checklist and brief letter report. If the Climate Screening results indicate that a CVA is necessary, a complete CVA Report will be developed. The CVA Report will be included as an Appendix or Attachment in relevant documents and/or submitted as a standalone report.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-Site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

5.4.4 Complaint Management Plan

A log of any complaints from the public regarding nuisance or other Site conditions will be compiled by a member of the AKRF project team, as applicable. All complaints will be documented in the daily reports.

5.4.5 Deviations from the Remedial Action Work Plan

Any deviations from this RAWP will require prior approval from NYSDEC. The deviations will be recorded in both the monthly progress reports and in the FER. At a minimum, the report of the deviations will include the following:

- Reasons for deviating from the approved RAWP;
- Approval process to be followed for changes/editions to the RAWP;
- Effect of the deviations on overall remedy.

6.0 REMEDIAL ACTION: MATERIAL REMOVAL FROM SITE

Removal of materials from the Site will include: (1) demolition of the Site buildings and removal of building debris and/or foundation elements associated with the former Site buildings, if encountered; (2) excavation and off-site disposal of contaminated soil/fill to a minimum of 2 feet below grade across the Site for attainment of a Track 4 cleanup; (3) hotspot excavation and off-site disposal to approximately 10 and 14 feet below grade for a lead and SVOC hotspot, respectively; (4) removal of any unknown petroleum storage tanks, fill ports, vent pipes, and other associated structures, if encountered during excavation; and (5) installation of SOE and dewatering to facilitate soil excavation below the water table (approximately 7 to 12 feet below grade). If bedrock is encountered at shallower depths, further excavation or rock chipping will not be conducted for remediation. Based on the information obtained from the Phase II and RI, approximately 2,420 cubic yards or 3,630 tons of soil is estimated to be removed as part of the remedy. The proposed areas of remedial excavation are shown on Figure 12.

Any excavated contaminated soil will be removed from the Site and disposed of at a facility(ies) licensed to accept the material. Proposed disposal facilities will be selected after completing the waste characterization sampling. The proposed disposal facilities will be submitted to NYSDEC for review and approval prior to off-site disposal.

6.1 Soil Cleanup Objectives

The applicable SCOs for this Site are the Track 4 RRSCOs.

Soil and materials management on-site and off-site will be conducted in accordance with the SMMP as described below.

Tables 2 through 7 summarize all soil samples that exceed the UUSCOs and RRSCOs. A spider map that shows all soil samples that exceed the UUSCOs and RRSCOs is shown on Figures 7A and 7B.

UST closures will, at a minimum, conform to criteria defined in DER-10.

6.2 Remedial Performance Evaluation (Post Excavation End-Point Sampling)

Excavation endpoint samples will be collected at the proposed locations shown on Figure 12. Additional post-excavation soil samples will be collected around any USTs and/or any additional hotspots encountered at the Site during waste characterization sampling or remedial excavation.

6.2.1 Endpoint Sampling Frequency

Based on the sampling frequency outlined in Section 5.4 of DER-10, documentation sampling for the remedial excavation will include one bottom soil sample for every 900 square feet across the Site and one sidewall sample for every 30 linear feet around the perimeter of the Site, plus five endpoint samples (one from each sidewall and one from the bottom) collected at each hotspot. Based on the size of the proposed remedial excavation area at the Site, approximately 60 post-excavation endpoint samples will be collected for laboratory analysis at the approximate locations shown on Figure 12. Endpoint sampling will occur around any additional AOCs identified during the RA based on the sampling frequency outlined in Section 5.4 of DER-10.

6.2.2 Methodology

Documentation samples will be collected using a decontaminated stainless steel sampling trowel or hand auger, or a dedicated wooden tongue depressor and placed directly into pre-sterilized, laboratory-issued containers.

The sample containers will be properly labeled and immediately placed on ice within a cooler. Sample time, date, and location will be recorded on a chain of custody. The samples will be submitted to an ELAP-certified laboratory for analysis of TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, pesticides by EPA Method 8081, PCBs by EPA Method 8082, TAL metals by EPA Method 6000/7000 series, 1,4-dioxane by EPA Method 8270, and PFAS compounds by EPA Method 1633A. The laboratory will follow the NYSDEC Analytical Services Protocol (ASP) dated 1995 using NYSDEC ASP Category B deliverables. Further details regarding the specific sampling methodology and analytical procedures are presented in the QAPP, included as Appendix F.

6.2.3 Reporting of Results

The analytical results of documentation samples will be tabulated and compared to the UUSCOs and RRSCOs. The tabulated data and the laboratory reports will be included in the FER. All analytical data will be submitted to NYSDEC in electronic data deliverable (EDD) format via the Environmental Quality Information System (EQulS™).

6.2.4 QA/QC

The QA objective with respect to accuracy, precision, and sensitivity of analysis for laboratory analytical data is to achieve the QC acceptance of the analytical protocol. The accuracy, precision, and completeness requirements will be addressed by the laboratory for all data generated. Collected samples will be appropriately packaged, placed in coolers, and shipped or delivered directly to the analytical laboratory by the laboratory's courier service. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved to maintain a temperature of 4° C. Decontamination of non-dedicated sampling equipment will consist of the following: gently tap or scrape to remove adhered soil; rinse with tap water; wash with Alconox® detergent solution and scrub; rinse with tap water; rinse with distilled or deionized water; prepare field blanks by pouring distilled or deionized water in laboratory provided containers.

One trip blank, one field blank, one blind duplicate sample, and one MS/MSD will be collected per every 20 samples per media and submitted for analysis during the documentation sampling event. The field blank(s), blind duplicate(s), and MS/MSD(s) will include all of the parameters included in the sample analysis while the trip blank will be analyzed for VOCs only. Additional QA/QC information is provided in the QAPP, included as Appendix F.

6.2.5 DUSR and EDDs

Lori A. Beyer of L.A.B. Validation Corp., a qualified, third-party data validator, will review the documentation sample laboratory reports and prepare a DUSR, for all samples collected under this RAWP. The DUSR will be discussed and included as an appendix to the FER. The validator's resume is included in the QAPP provided as Appendix F.

Validated EDDs will be submitted to NYSDEC via EQulS™.

6.2.6 Reporting of Endpoint Data in FER

Chemical labs used for all endpoint sample results and contingency sampling will be NYSDOH ELAP certified.

Endpoint sampling, including bottom and side-wall sampling, will be performed in accordance with DER-10 sample frequency requirements. Side-wall samples will be collected a minimum of every 30 linear feet. Bottom samples will be collected at a rate of

one for every 900 square feet. The FER will provide a tabular and map summary of all end-point sample results and exceedances of SCOs.

6.3 Estimated Material Removal Quantities

The estimated quantity of soil/fill to be removed from the Site based on the proposed remedial excavation is 2,420 cubic yards (3,630 tons). The estimated quantity of soil to be imported into the Site for backfill and cover soil is 4,900 cubic yards. The estimated quantity of soil/fill expected to be reused/relocated on Site is unknown at this time. The proposed remedial excavation is shown on Figure 12 and summarized below in Table K.

Table K
Remedial Excavation Location Summary

Location On-Site	Contamination Concentration for Hotspots	Approximate Minimum Excavation Depth (feet below grade)	Approximate Excavation Volume (cy)
RI-SB-12 hotspot	Lead (1,220 mg/kg)	10	40
SB-08 hotspot	SVOCs (Total SVOCs = 288.53 mg/kg at 0-2 feet below grade, 93.5 at 11-13 feet below grade)	14	260
Site-wide (outside hotspots)	N/A	2	2,120
Total			2,420

6.4 Soil/Materials Management Plan (SMMP)

The SMMP describes the procedures to be performed during the handling of soil/fill materials on-site during all intrusive work.

6.4.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by a qualified environmental professional or experienced field geologist or other scientist under the direction of the RE during all remedial and development excavations into known or potentially contaminated material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the COC.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during waste characterization, previous subsurface investigations, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York or located with a GPS survey to obtain exact coordinates on the Site. This information will be provided on maps in the Final Engineering Report.

Screening will be performed by qualified environmental professionals, an experienced field geologist, or other scientist. Resumes for all anticipated personnel responsible for field screening (i.e., those representing the Remedial Engineer) of invasive work for

unknown contaminant sources during remediation and development work are provided in the QAPP included as Appendix F.

6.4.2 Stockpile Methods

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Soil stockpiles will be continuously encircled with silt fences. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Water will be available on-site at suitable supply and pressure for use in dust control.

6.4.3 Materials Excavation and Load Out

The RE or a qualified environmental professional, field geologist, or other scientist under her supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP.

The presence of utilities and easements on the Site has been investigated by the RE. It has been determined that no risk or impediment to the planned work under this RAWP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate federal, state, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site. The RE will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the remedial construction is complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.

The RE or designated personnel under her supervision will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

The Volunteer and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The RE will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this RAWP.

Each hotspot and structure to be remediated (USTs, vaults and associated piping, transformers, etc.) will be removed and end-point remedial performance sampling completed before excavations related to Site development commence proximal to the hotspot or structure.

Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-site is prohibited.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during waste characterization, subsurface investigations, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York or located with a GPS survey to obtain exact coordinates on the Site. The survey information will be shown on maps to be reported in the FER.

6.4.4 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Proposed truck transport routes are shown in Figure 11 and are as follows:

- Trucks entering the Site will take I-95 North to Exit 3 toward East 138th Street/Madison Avenue Bridge; merge onto Exterior Street; and continue onto East 135th Street.
- Trucks exiting the Site will continue east on East 138th Street; turn left onto Exterior Street; keep left onto I-87 N/Major Deegan Expressway ramp; and take Exit 7 to merge onto I-95 South.

All trucks loaded with Site materials will exit the vicinity of the Site using only these approved truck routes; however, the truck routes may vary depending on local street closures and/or approved truck route changes made into effect during implementation of the RAWP. Proposed in-bound and out-bound truck routes to the Site are shown on Figure 11. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

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

Queuing of trucks will be performed on-site in order to minimize off-Site disturbance. Off-Site queuing will be prohibited.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

6.4.5 Materials Disposal Off-Site

For any materials to be disposed of off-site, based on the waste characterization results, a properly permitted waste disposal facility will be selected for off-site disposal. The disposal information will be reported to the NYSDEC Project Manager prior to commencing the disposal activities.

Any soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6 NYCRR Part 360) and federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-site management of materials from this Site is prohibited without formal NYSDEC approval. Material that does not meet Track 1 unrestricted SCOs (UUSCOs) is prohibited from being taken to a New York State recycling facility (6 NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the RE for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the RE or BCP Volunteer to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of the RE. The letter will include as an attachment a summary of all chemical data for the material being transported (including waste characterization data); and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6 NYCRR Part 360-1.2. Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the Division of Materials Management (DMM) in NYSDEC to be Construction and Demolition (C&D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C&D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DMM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C&D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-site or off-site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the RE. The letter will include as an attachment a summary of all chemical data for the material being transported.

The FER will include an accounting of the destination of all material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER. Bill of Lading system or equivalent will be used for off-site movement of non-hazardous wastes and contaminated soils. This information will be reported in the FER.

Hazardous wastes derived from on-site will be stored, transported, and disposed of in full compliance with applicable local, state, and federal regulations.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, state, and federal regulations.

Waste characterization will be performed for off-site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

6.4.6 Materials Reuse On-Site

Chemical criteria for on-site reuse of material must be approved by NYSDEC prior to reuse. Materials planned for reuse (if any) will be segregated and stockpiled from materials slated for off-site disposal. Stockpiles will be placed on and covered with polyethylene sheeting. The stockpiled soil will be sampled and analyzed in accordance with Table 5.4(e)10 on page 161 of DER-10 Technical Guidance for Investigation and Remediation. All of the materials to be reused on the Site will comply with the RRSCOs. This criteria is listed in Table 17. The RE will ensure that procedures defined for materials reuse in this RAWP are followed and that unacceptable material will not remain on-site.

Demolition material will not be reused on-site. Concrete crushing or processing on-site is prohibited. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site is prohibited for reuse on-site. Contaminated on-site material, including historic fill and contaminated soil, removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. This will be expressed in the final Site Management Plan (SMP).

6.4.7 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, state, and federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP.

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-site. Discharge of water generated during remedial construction to surface waters (i.e., a local pond, stream or river) is prohibited without a SPDES permit.

6.4.8 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling or placement of the clean soil cover, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of orange snow fencing material or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP. The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute the physical and written record of the upper surface of the 'Residuals Management Zone' in the SMP. A map showing the survey results will be included in the FER and the SMP.

6.4.9 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the RE and NYSDEC Project Manager, and will be in compliance with provisions in this RAWP prior to receipt at the Site. Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The FER will include the following certification by the RE: “I certify that all import of soils from off-site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan”. Prior to import, soil will be segregated and tested at the source facility for analysis of VOCs, SVOCs, PCBs, pesticides, TAL Metals, 1,4-dioxane, and PFAS compounds at the frequency outlined in Table 5.4(e)10 in DER-10 on page 161 of the DER-10 Technical Guidance for Investigation and Remediation. The analytical results will be compared to Table 375-6.8(b) of 6 NYCRR Part 375 for VOC, SVOCs, PCBs, pesticides, and TAL Metals and to the April 2023 Guidance Values for PFOA and PFOS and submitted to NYSDEC for review and approval prior to importation and placement on-site. In accordance with DER-10, gravel, rock or stone consisting of virgin material from a permitted mine or quarry with less than 10% fines will not require testing

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site. These NYSDEC approved backfill or cover soil quality objectives are the RRSCOs as set forth in Table 375-6.8(b) of 6 NYCRR Part 375 and listed in Table 17. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet ‘exempt’ fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this RAWP should be construed as an approval for this purpose. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

A “Request to Import/Reuse Fill Material” form will be filed with the NYSDEC project manager for review and approval prior to import to the site. A copy of the form is presented in Appendix M.

6.4.10 Stormwater Pollution Prevention

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the RAWP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they

shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters

Silt fencing or hay bales will be installed around the entire perimeter of the remedial construction area.

6.4.11 Contingency Plan

If USTs or other previously unidentified contaminant sources are found during on-site remedial excavation or development related construction, sampling will be performed on product, sediment and surrounding soils, etc. Chemical analytical work will be for full scan parameters (TAL metals, TCL VOCs, TCL SVOCs, TCL pesticides, and PCBs). These analyses will not be limited to the NYSDEC Commissioner's Policy (CP)-51 parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

6.4.11.1 Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the Volunteer will undertake the following steps for Site preparedness prior to the event and response after the event.

Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the Site; loose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from excavated areas, trenches and depressions on the Site to high ground or removed from the Site; an inventory of the Site with photographs will be performed to establish conditions and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the Site; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, hay bales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the Site, a complete inspection of the Site will be performed. A site inspection report will be submitted to NYSDEC at the completion of site inspection and after the site security is assessed. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute

public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911.

Petroleum spills will be reported to NYSDEC within 2 hours of identification and consistent with state regulations. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed.

Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will be collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Stormwater control systems and structures will be inspected and maintained as necessary.

If soil or fill materials are discharged off-site to adjacent properties, property owners and NYSDEC will be notified, and corrective measure plan designed to remove and clean dislocated material will be submitted to NYSDEC and implemented following approval by NYSDEC and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of NYSDEC.

If on-site petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYSDEC's spill hotline at (800) 457-7362 within statutory defined timelines. If the source of the spill is ongoing and can be identified, it should be stopped if this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYSDEC.

Storm Response Reporting

A site inspection report will be submitted to NYSDEC at the completion of the Site inspection. An inspection report will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the NYSDEC project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number.

Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the Site was dislocated and whether any of the soil left the Site; estimates of the volume of soil that left the Site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or offsite exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYSDEC; description of corrective actions; and schedule for corrective actions.

This report should be completed and submitted to NYSDEC project manager with photographs within 24 hours of the time of safe entry to the Site after the storm event.

6.4.12 Community Air Monitoring Plan

A Site-specific HASP and a CAMP have been prepared for this Site and are enclosed as Appendix G and Appendix H, respectively. Community air monitoring and real-time air monitoring at the perimeter of the exclusion zone will be conducted during all intrusive Site activities in accordance with the NYSDOH Generic CAMP and as described in Appendix H. The CAMP requirements may be modified in consultation with NYSDEC and NYSDOH for activities involving minimal soil disturbance (e.g., site preparation, pile installation, etc.). All readings will be recorded and available for NYSDEC and NYSDOH personnel to review. The CAMP station locations may vary depending on wind direction and location of work activities. [A map showing the proposed locations of CAMP stations is shown on Figure 10.](#) Mobile air monitoring using handheld equipment will be conducted around workers and locations will vary based on the work zone(s).

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report.

6.4.13 Odor, Dust, and Nuisance Control Plan

The FER will include the following certification by the RE: “I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan.”

Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include the use of a PID to screen for VOCs and olfactory observations by a field technician. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified within 24 hours of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Volunteer’s RE, who is responsible for certifying the FER.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils (such as BioSolve® Pinkwater or RusFoam®). If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work, will include, at a minimum, the items listed below:

- Water will be available on-site at suitable supply and pressure for use in dust control.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water spraying.

Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work and will conform, at a minimum, to NYCDEP noise control standards.

7.0 RESIDUAL CONTAMINATION TO REMAIN ON-SITE

Since residual contaminated soil and soil vapor will exist beneath the Site after the remedy is complete, Engineering and Institutional Controls (ECs and ICs) are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site-specific SMP that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have two primary EC systems. These are: (1) a Site cover system, and (2) an active SSDS installed beneath the new building slab.

The FER will report residual contamination on the Site in tabular and map form, with comparison to the UUSCOs and RRSCOs.

8.0 ENGINEERING CONTROL: SITE COVER SYSTEM

Exposure to residual contaminated soils will be prevented by an engineered, Site cover system that will be built on the Site. This Site cover system will be comprised of (1) a minimum of 2 feet of clean fill placed across landscaped and permeable areas of the Site, underlain by a demarcation barrier; (2) paved surfaces for roads and walkways, underlain by a demarcation barrier; and (3) the concrete building foundation underlain by a minimum 20-mil vapor barrier membrane and underground components of the SSDS, including a gas permeable aggregate layer.

Green remediation Best Management Practices will be evaluated for designing and installing the cover system.

A diagram showing the design detail and aerial distribution of the Site cover system is shown on Figure 13.

An Excavation Work Plan will be included in the SMP and will outline the procedures to be followed if the Site cover system and underlying residual contamination are disturbed after the Remedial Action is complete. The components of the Site cover system will be documented in the FER. Maintenance of this Site cover system will be described in the SMP.

9.0 ENGINEERING CONTROL: SUB-SLAB DEPRESSURIZATION SYSTEM

9.1 Sub-Slab Depressurization System (SSDS)

An SSDS will be installed to mitigate the potential for sub-slab vapor intrusion into the proposed new building. The SSDS will induce a negative pressure (i.e., vacuum) beneath the proposed building slab. Slotted piping will extend horizontally throughout the sub-slab and will be connected, via solid aboveground piping, to a roof-mounted blower(s) and ultimately the effluent vapors will be exhausted to the atmosphere via a discharge stack(s). The design also includes the installation of a sufficient number of vacuum monitoring points to verify that there is negative pressure underneath the entire building slab.

Although the architectural and structural plans are still being developed, a schematic SSDS design plan is shown on Figure 14. The SSDS layout is subject to change depending on any changes to the building plans. The proposed SSDS layout and standard design details are further discussed below. Final SSDS design plans and specifications will be provided to NYSDEC and NYSDOH for review, prior to approval of the RAWP.

9.1.1 SSDS Components

The proposed SSDS to be installed as part of the Site remedy consists of, but is not limited to:

1. 0.02-inch slotted and solid, 4-inch diameter Schedule 40 PVC pipe lengths beneath the building slab;
2. A pipe manifold, which combines the PVC pipe sections into a 4-inch or 6-inch galvanized steel riser pipe;
3. A riser pipe, which extends from the manifold to the roof of the building;
4. A roof-mounted blower with a shut-off alarm connected to a local alarm panel installed in the building;
5. One galvanized steel rooftop exhaust stack fitted with a rain cap, terminating at least 7 feet above the finished roof;
6. Communication and pipe sleeves through concrete foundation elements;
7. A minimum 6-inch thick gas-permeable aggregate stratum underlain by a non-woven geotextile fabric beneath the entire SSDS area;
8. Condensate drains, as necessary;
9. Four vacuum monitoring points (VMPs) installed beneath the building slab;
10. Accessories, including: cleanouts, sample ports, vacuum indicators/pressure gauges, flow meters, butterfly valves, and differential pressure switches; and
11. A control panel equipped with a telemetry system to notify select personnel of alarm conditions.

During construction, non-woven geotextile fabric overlain by a minimum 6-inch layer of $\frac{3}{4}$ -inch gas permeable aggregate (GPA) stone bedding meeting the gradation requirements of #5 aggregate in ASTM C33 will be installed below the building slab, and under, around, and above all SSDS piping to promote favorable conditions for ventilation of vapors. Four VMPs will be installed to monitor and confirm the presence of induced vacuum across the building slab. A minimum 20-mil vapor barrier will be installed above the GPA layer under

the building slab to enhance vacuum capabilities beneath the building and further assist in the prevention of sub-slab vapor infiltration into indoor air.

An approximately 250 or 350 cubic feet per minute (CFM) blower will be installed on the building roof. The SSDS effluent vapors will exit the blower via a discharge stack terminating at least 7 feet above the finished roof and at least 25 feet away from any air intakes or windows, in accordance with local and state building codes.

9.1.2 SSDS Start-up

SSDS startup testing including balancing the system and the collection of vacuum readings at the four VMPs, will be conducted to assess induced vacuum conditions under the building slab and determine the efficacy of the SSDS. Adequate sub-slab vacuum will be determined via VMP vacuum readings of -0.004 inH₂O. If sub-slab vacuum readings indicate minimum vacuum readings less than the target operating conditions, the SSDS will be rebalanced by adjusting the applied vacuum and air flow rate conditions at the individual SSDS lines until acceptable induced vacuum conditions are observed at each of the VMPs.

SSDS operations and maintenance requirements will be outlined in the SMP. As-built drawings, diagrams, calculations, manufacturer documentation for the SSDS will be presented in the FER.

10.0 CRITERIA FOR COMPLETION OF REMEDIATION/TERMINATION OF REMEDIAL SYSTEMS

10.1 Site Cover System

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

10.2 Sub-slab Depressurization System (SSDS)

The active SSDS will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue the active SSDS may be submitted by the property owner based on confirmatory data that justifies such request. The system will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH.

11.0 INSTITUTIONAL CONTROLS

After the remedy is complete, the Site will have residual contamination remaining in place. ECs for the residual contamination have been incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and a SMP.

All as-built drawings, diagrams, calculations, and manufacturer documentation for treatment systems will be presented in the FER. A Site-specific Environmental Easement will be recorded with the New York City Department of Finance Office of the City Register to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all ECs/ICs placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

11.1 Environmental Easement

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-site after the Remedial Action is complete. As part of this remedy, an Environmental Easement approved by NYSDEC will be filed and recorded with the New York City Department of Finance Office of the City Register. The Environmental Easement will be submitted as part of the FER.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with the New York City Department of Finance Office of the City Register before the Certificate of Completion can be issued by NYSDEC. A series of ICs are required under this remedy to implement, maintain and monitor these EC systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site to restricted residential, commercial, or industrial use(s) only. These ICs are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. ICs can, generally, be subdivided between controls that support ECs, and those that place general restrictions on Site usage or other requirements. ICs in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

The ICs that support ECs are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All ECs must be operated and maintained as specified in this SMP;
- A Site cover system consisting of a minimum of 2 feet of clean fill material in landscaped areas, concrete or impervious paved walkways, and concrete building slabs must be inspected, certified and maintained as required in the SMP;
- A soil vapor mitigation system consisting of a SSDS under all building structures must be inspected, certified, operated and maintained as required by the SMP;
- All ECs on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;

- Soil vapor and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- On-site environmental monitoring devices, including but not limited to, vacuum monitoring points, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP; and
- ECs may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these ICs for the Site is mandated by the Environmental Easement and will be implemented under the SMP (discussed in the next section). The Controlled Property (the Site) will also have a series of ICs in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

- In-ground vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;
- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;
- The Controlled Property may be used for restricted residential, commercial, or industrial use(s) only, provided the long-term ECs and ICs included in the SMP are employed;
- The Controlled Property may not be used for a higher level of use, such as unrestricted use without an amendment or extinguishment of this Environmental Easement; and
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

11.2 Site Management Plan

Site Management is the last phase of remediation and begins with the approval of the FER and issuance of the Certificate of Completion (COC) for the Remedial Action. The SMP is submitted as part of the FER but will be written in a manner that allows its removal and use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the Site Management Plan are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any

treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annually. The SMP will be based on a calendar year and will be due for submission to NYSDEC by March 1 of the year following the reporting period.

No exclusions for handling of residual contaminated soils will be provided in the SMP. All handling of residual contaminated material will be subject to provisions contained in the SMP.

12.0 FINAL ENGINEERING REPORT

A FER will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The FER will include as-built drawings for all constructed elements, calculation and manufacturer documentation for treatment systems, certifications, manifests, bills of lading as well as the complete Site Management Plan (formerly the Operation and Maintenance Plan). The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the SMP and Environmental Easement. This determination will be made by NYSDEC in the context of the FER review.

The FER will include written and photographic documentation of all remedial work performed under this remedy. The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6 NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

The FER will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a Certificate of Completion, all project reports must be submitted in digital form on electronic media (PDF).

12.1 Certifications

The following certification will appear in front of the Executive Summary of the FER. The FER will be prepared, stamped and the following certification signed by an individual licensed or otherwise authorized in accordance with article 145 of the education law to practice the profession of engineering. The certification will include the following statements:

I, Rebecca Kinal, am currently a registered Professional Engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan was implemented and that all construction

activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.

If the RAWP identifies time frames to be achieved by the remedial program:

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

If financial assurance is required:

I certify that any financial assurance mechanisms required by the Department pursuant to Environmental Conservation Law have been executed.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Rebecca Kinal, of AKRF, Inc. at 440 Park Avenue South, New York, NY York 10016, am certifying as Owner's Designated Site Representative or the Site.

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

13.0 SCHEDULE

Table L
Proposed Project Schedule

Activity	Time To Complete
Draft RAWP Submitted to NYSDEC	April 2025
NYSDEC Issues Comments on the Draft RAWP	May 2025
Revised RAWP Submitted to NYSDEC	October 2025
45-Day Public Comment Period for RAWP is Initiated	November 2025
Public Comment Period for RAWP Ends	December 2025
NYSDEC/NYSDOH Comments Received/Submittal of Final RAWP	January-February 2026
Issuance of Decision Document	March 2026
Issue Remedial/Construction Notice Fact Sheet	May 2026
Building Demolition	February-April 2026
Begin Redevelopment (Construction) with Implementation of RAWP	June 2026
Submit Draft Environmental Easement	February 2027
Execution of Environmental Easement	June 2027
Draft SMP Submitted to NYSDEC	August 1, 2027
Remedial Activities Completed	By September 30, 2027
Draft FER and Fact Sheet	October 1, 2027
Certificate of Completion and Fact Sheet	December 2027
Completion of Building (first occupancy)	November 2029

TABLES

Table 1
110 East 138th Street
Bronx, NY
Groundwater Elevation Data

Well ID	Top of Casing Elevation (ft.)	Depth to Groundwater (ft. below TOC)	Groundwater Elevation (ft.)
RI-MW-01	9.24	6.86	2.38
RI-MW-02	11.38	11.26	0.12
RI-MW-03	11.38	11.98	-0.6
RI-MW-04	10.1	10.62	-0.52

Notes:

ft. = feet

TOC = top of casing

Elevation = feet above mean sea level based on the North American Vertical Datum of 1988 (NAVD88).

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		SB-01_0-2_20210823 460-241420-1 8/23/2021 mg/kg 1	SB-01_8-10_20210823 460-241420-2 8/23/2021 mg/kg 1	SB-02_0-2_20210823 460-241420-9 8/23/2021 mg/kg 1	SB-02_8-10_20210823 460-241420-10 8/23/2021 mg/kg 1	SB-03_0-2_20210823 460-241420-3 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0012 U	0.0012 U	0.0012 UJ	0.001 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,1,2-Trichloroethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,1-Dichloroethane	0.27	26	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,1-Dichloroethene	0.33	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2,3-Trichlorobenzene	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2,4-Trichlorobenzene	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2,4-Trimethylbenzene	3.6	52	0.0012 U	0.0027	0.0012 U	0.001 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2-Dichlorobenzene	1.1	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2-Dichloroethane	0.02	3.1	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,2-Dichloropropane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0012 U	0.00082 J	0.0012 U	0.001 U
1,3-Dichlorobenzene	2.4	49	0.0012 U	0.0012 U	0.0012 U	0.001 U
1,4-Dichlorobenzene	1.8	13	0.0012 U	0.0012 U	0.0012 U	0.001 U
2-Hexanone	NS	NS	0.0061 U	0.006 U	0.0059 U	0.0051 U
Acetone	0.05	100	0.059	0.049	0.007 U	0.0061 U
Benzene	0.06	4.8	0.0012 U	0.0087	0.0012 U	0.001 U
Bromochloromethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Bromodichloromethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Bromoform	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Bromomethane	NS	NS	0.0024 U	0.0024 U	0.0023 U	0.002 U
Carbon Disulfide	NS	NS	0.0089	0.0043	0.0012 U	0.001 U
Carbon Tetrachloride	0.76	2.4	0.0012 U	0.0012 U	0.0012 U	0.001 U
Chlorobenzene	1.1	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
Chloroethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Chloroform	0.37	49	0.0012 U	0.0012 U	0.0012 U	0.001 U
Chloromethane	NS	NS	0.0012 U	0.0012 U	0.0012 UJ	0.001 U
Cis-1,2-Dichloroethylene	0.25	100	0.0012 U	0.0012 U	0.013	0.001 U
Cis-1,3-Dichloropropene	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Cyclohexane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Dibromochloromethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Dichlorodifluoromethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Ethylbenzene	1	41	0.0012 U	0.024	0.0012 U	0.001 U
Isopropylbenzene (Cumene)	NS	NS	0.0012 U	0.0045	0.0012 U	0.001 U
M,P-Xylenes	NS	NS	0.0012 U	0.014	0.0012 U	0.001 U
Methyl Acetate	NS	NS	0.0061 U	0.006 U	0.0059 U	0.0051 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.013	0.02	0.0059 U	0.0051 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0061 U	0.006 U	0.0059 U	0.0051 U
Methylcyclohexane	NS	NS	0.0012 U	0.0046	0.0012 U	0.001 U
Methylene Chloride	0.05	100	0.0024 U	0.0024 U	0.0023 U	0.002 U
N-Butylbenzene	12	100	0.0012 U	0.0036	0.0012 U	0.001 U
N-Propylbenzene	3.9	100	0.0012 U	0.011	0.0012 U	0.001 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0012 U	0.0084	0.0012 U	0.001 U
Sec-Butylbenzene	11	100	0.0012 U	0.0023	0.0012 UJ	0.001 U
Styrene	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
T-Butylbenzene	5.9	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
Tert-Butyl Methyl Ether	0.93	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
Tetrachloroethylene (PCE)	1.3	19	0.0012 U	0.0012 U	0.053	0.001 U
Toluene	0.7	100	0.00033 J	0.029	0.0012 U	0.001 U
Trans-1,2-Dichloroethene	0.19	100	0.0012 U	0.0012 U	0.0012 U	0.001 U
Trans-1,3-Dichloropropene	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Trichloroethylene (TCE)	0.47	21	0.0012 U	0.0012 U	0.0036	0.001 U
Trichlorofluoromethane	NS	NS	0.0012 U	0.0012 U	0.0012 U	0.001 U
Vinyl Chloride	0.02	0.9	0.0012 U	0.0012 U	0.0012 U	0.001 U
Xylenes, Total	0.26	100	0.0024 U	0.022	0.0023 U	0.002 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-03_9-11_20210823 460-241420-4 8/23/2021 mg/kg 1	SB-04_0-2_20210823 460-241420-7 8/23/2021 mg/kg 1	SB-04_8-10_20210823 460-241420-8 8/23/2021 mg/kg 1	SB-05_0-2_20210824 460-241522-5 8/24/2021 mg/kg 1	SB-05_12-14_20210824 460-241522-6 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0011 U	0.0012 UJ	0.0012 UJ	0.0012 U	0.00096 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,1,2-Trichloroethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,1-Dichloroethane	0.27	26	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,1-Dichloroethene	0.33	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2,3-Trichlorobenzene	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2,4-Trichlorobenzene	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2,4-Trimethylbenzene	3.6	52	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2-Dichlorobenzene	1.1	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2-Dichloroethane	0.02	3.1	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,2-Dichloropropane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,3-Dichlorobenzene	2.4	49	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
1,4-Dichlorobenzene	1.8	13	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
2-Hexanone	NS	NS	0.0055 U	0.006 U	0.0061 U	0.0059 UJ	0.0048 UJ
Acetone	0.05	100	0.0095	0.0072 U	0.0073 U	0.0071 UJ	0.0058 UJ
Benzene	0.06	4.8	0.0011 U	0.0012 U	0.0012 U	0.00049 J	0.00096 U
Bromochloromethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Bromodichloromethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Bromoform	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Bromomethane	NS	NS	0.0022 U	0.0024 U	0.0024 U	0.0024 UJ	0.0019 UJ
Carbon Disulfide	NS	NS	0.00039 J	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Carbon Tetrachloride	0.76	2.4	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Chlorobenzene	1.1	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Chloroethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Chloroform	0.37	49	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Chloromethane	NS	NS	0.0011 U	0.0012 UJ	0.0012 UJ	0.0012 U	0.00096 U
Cis-1,2-Dichloroethylene	0.25	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Cis-1,3-Dichloropropene	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Cyclohexane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.00033 J	0.00096 U
Dibromochloromethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Dichlorodifluoromethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 UJ	0.00096 UJ
Ethylbenzene	1	41	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Isopropylbenzene (Cumene)	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
M,P-Xylenes	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.00029 J	0.00096 U
Methyl Acetate	NS	NS	0.0055 U	0.006 U	0.0061 U	0.0059 U	0.0048 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0055 U	0.006 U	0.0061 U	0.0059 U	0.0048 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0055 U	0.006 U	0.0061 U	0.0059 UJ	0.0048 UJ
Methylcyclohexane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Methylene Chloride	0.05	100	0.0022 U	0.0024 U	0.0024 U	0.0024 U	0.0019 U
N-Butylbenzene	12	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
N-Propylbenzene	3.9	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.00023 J	0.00096 U
Sec-Butylbenzene	11	100	0.0011 U	0.0012 UJ	0.0012 UJ	0.0012 U	0.00096 U
Styrene	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
T-Butylbenzene	5.9	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Tert-Butyl Methyl Ether	0.93	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Tetrachloroethylene (PCE)	1.3	19	0.0018	0.0005 J	0.00045 J	0.0012 U	0.00096 U
Toluene	0.7	100	0.0011 U	0.0012 U	0.0012 U	0.00084 J	0.00096 U
Trans-1,2-Dichloroethene	0.19	100	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Trans-1,3-Dichloropropene	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Trichloroethylene (TCE)	0.47	21	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Trichlorofluoromethane	NS	NS	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Vinyl Chloride	0.02	0.9	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.00096 U
Xylenes, Total	0.26	100	0.0022 U	0.0024 U	0.0024 U	0.0024 U	0.0019 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-06_0-2_20210824 460-241522-7 8/24/2021 mg/kg 1	SB-06_11-13_20210824 460-241522-8 8/24/2021 mg/kg 1	SB-07_0-2_20210824 460-241522-11 8/24/2021 mg/kg 1	SB-07_12-14_20210824 460-241522-12 8/24/2021 mg/kg 1	SB-08_0-2_20210824 460-241522-9 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,1,2-Trichloroethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,1-Dichloroethane	0.27	26	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,1-Dichloroethene	0.33	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2,3-Trichlorobenzene	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2,4-Trichlorobenzene	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2,4-Trimethylbenzene	3.6	52	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2-Dichlorobenzene	1.1	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2-Dichloroethane	0.02	3.1	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,2-Dichloropropane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,3-Dichlorobenzene	2.4	49	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
1,4-Dichlorobenzene	1.8	13	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
2-Hexanone	NS	NS	0.0055 UJ	0.0049 UJ	0.0082 UJ	0.0058 UJ	0.0053 UJ
Acetone	0.05	100	0.0082 L	0.006 L	0.0098 UJ	0.026 L	0.0063 UJ
Benzene	0.06	4.8	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Bromochloromethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Bromodichloromethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Bromoform	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Bromomethane	NS	NS	0.0022 UJ	0.002 UJ	0.0033 UJ	0.0023 UJ	0.0021 UJ
Carbon Disulfide	NS	NS	0.0011 U	0.00081 J	0.0016 U	0.00073 J	0.0011 U
Carbon Tetrachloride	0.76	2.4	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Chlorobenzene	1.1	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Chloroethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Chloroform	0.37	49	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Chloromethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Cis-1,2-Dichloroethylene	0.25	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Cis-1,3-Dichloropropene	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Cyclohexane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Dibromochloromethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Dichlorodifluoromethane	NS	NS	0.0011 UJ	0.00098 UJ	0.0016 UJ	0.0012 UJ	0.0011 UJ
Ethylbenzene	1	41	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Isopropylbenzene (Cumene)	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
M,P-Xylenes	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Methyl Acetate	NS	NS	0.0055 U	0.0049 U	0.0082 U	0.0058 U	0.0053 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0055 U	0.0049 U	0.0082 U	0.0035 J	0.0053 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0055 UJ	0.0049 UJ	0.0082 UJ	0.0058 UJ	0.0053 U
Methylcyclohexane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Methylene Chloride	0.05	100	0.0022 U	0.002 U	0.0033 U	0.0023 U	0.0021 U
N-Butylbenzene	12	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
N-Propylbenzene	3.9	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Sec-Butylbenzene	11	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Styrene	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
T-Butylbenzene	5.9	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Tert-Butyl Methyl Ether	0.93	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Tetrachloroethylene (PCE)	1.3	19	0.0011 U	0.00098 U	0.068	0.0014	0.0011 U
Toluene	0.7	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Trans-1,2-Dichloroethene	0.19	100	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Trans-1,3-Dichloropropene	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Trichloroethylene (TCE)	0.47	21	0.0011 U	0.00098 U	0.00068 J	0.0012 U	0.0011 U
Trichlorofluoromethane	NS	NS	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Vinyl Chloride	0.02	0.9	0.0011 U	0.00098 U	0.0016 U	0.0012 U	0.0011 U
Xylenes, Total	0.26	100	0.0022 U	0.002 U	0.0033 U	0.0023 U	0.0021 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-08_11-13_20210824 460-241522-10 8/24/2021 mg/kg 1	SB-09_0-2_20210823 460-241420-5 8/23/2021 mg/kg 1	SB-09_7-9_20210823 460-241420-6 8/23/2021 mg/kg 1	SB-10_0-2_20210824 460-241522-3 8/24/2021 mg/kg 1	SB-10_13-15_20210824 460-241522-4 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,1,2,2-Tetrachloroethane	NS	NS	0.0013 U	0.0011 UJ	0.0011 U	0.0016 U	0.0011 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,1,2-Trichloroethane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,1-Dichloroethane	0.27	26	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,1-Dichloroethene	0.33	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2,3-Trichlorobenzene	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2,4-Trichlorobenzene	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2,4-Trimethylbenzene	3.6	52	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2-Dibromo-3-Chloropropane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2-Dichlorobenzene	1.1	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2-Dichloroethane	0.02	3.1	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,2-Dichloropropane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,3-Dichlorobenzene	2.4	49	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
1,4-Dichlorobenzene	1.8	13	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
2-Hexanone	NS	NS	0.0064 UJ	0.0057 U	0.0055 U	0.0081 UJ	0.0053 UJ
Acetone	0.05	100	0.0076 UJ	0.0069 U	0.0066 U	0.0097 UJ	0.0063 UJ
Benzene	0.06	4.8	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Bromochloromethane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Bromodichloromethane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Bromoform	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Bromomethane	NS	NS	0.0025 UJ	0.0023 U	0.0022 U	0.0032 UJ	0.0021 UJ
Carbon Disulfide	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.00029 J
Carbon Tetrachloride	0.76	2.4	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Chlorobenzene	1.1	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Chloroethane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Chloroform	0.37	49	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Chloromethane	NS	NS	0.0013 U	0.0011 UJ	0.0011 U	0.0016 U	0.0011 UJ
Cis-1,2-Dichloroethylene	0.25	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Cis-1,3-Dichloropropene	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Cyclohexane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Dibromochloromethane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Dichlorodifluoromethane	NS	NS	0.0013 UJ	0.0011 U	0.0011 U	0.0016 UJ	0.0011 UJ
Ethylbenzene	1	41	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Isopropylbenzene (Cumene)	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
M,P-Xylenes	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Methyl Acetate	NS	NS	0.0064 U	0.0057 U	0.0055 U	0.0081 U	0.0053 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0064 U	0.0057 U	0.0055 U	0.0081 U	0.0053 UJ
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0064 U	0.0057 U	0.0055 U	0.0081 UJ	0.0053 UJ
Methylcyclohexane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Methylene Chloride	0.05	100	0.0025 U	0.0023 U	0.0022 U	0.0032 U	0.0021 UJ
N-Butylbenzene	12	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
N-Propylbenzene	3.9	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Sec-Butylbenzene	11	100	0.0013 U	0.0011 UJ	0.0011 U	0.0016 U	0.0011 UJ
Styrene	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
T-Butylbenzene	5.9	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Tert-Butyl Methyl Ether	0.93	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Tetrachloroethylene (PCE)	1.3	19	0.0013 U	0.0011 U	0.0011 U	0.00051 J	0.0011 UJ
Toluene	0.7	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Trans-1,2-Dichloroethene	0.19	100	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Trans-1,3-Dichloropropene	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Trichloroethylene (TCE)	0.47	21	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Trichlorofluoromethane	NS	NS	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Vinyl Chloride	0.02	0.9	0.0013 U	0.0011 U	0.0011 U	0.0016 U	0.0011 UJ
Xylenes, Total	0.26	100	0.0025 U	0.0023 U	0.0022 U	0.0032 U	0.0021 UJ

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-11_0-2_20210824 460-241522-1 8/24/2021 mg/kg 1	SB-11_8-10_20210824 460-241522-2 8/24/2021 mg/kg 1	RI-SB-01_0-2_20230810 460-285947-1 8/10/2023 mg/kg 1	RI-SB-01_8-10_20230810 460-285947-2 8/10/2023 mg/kg 1	RI-SB-01_10-12_20230810 460-285947-3 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,1,2-Trichloroethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,1-Dichloroethane	0.27	26	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,1-Dichloroethene	0.33	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2,3-Trichlorobenzene	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2,4-Trichlorobenzene	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2,4-Trimethylbenzene	3.6	52	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2-Dichlorobenzene	1.1	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2-Dichloroethane	0.02	3.1	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,2-Dichloropropane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,3-Dichlorobenzene	2.4	49	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
1,4-Dichlorobenzene	1.8	13	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
2-Hexanone	NS	NS	0.0057 UJ	0.0054 UJ	0.011 U	0.0058 U	0.0049 U
Acetone	0.05	100	0.0069 UJ	0.012 L	0.013 U	0.0069 U	0.0059 U
Benzene	0.06	4.8	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00061 J
Bromochloromethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Bromodichloromethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Bromoform	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Bromomethane	NS	NS	0.0023 UJ	0.0021 UJ	0.0043 U	0.0023 U	0.002 U
Carbon Disulfide	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.00031 J	0.00099 U
Carbon Tetrachloride	0.76	2.4	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Chlorobenzene	1.1	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Chloroethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Chloroform	0.37	49	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Chloromethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Cis-1,2-Dichloroethylene	0.25	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Cis-1,3-Dichloropropene	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Cyclohexane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Dibromochloromethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Dichlorodifluoromethane	NS	NS	0.0011 UJ	0.0011 UJ	0.0022 U	0.0012 U	0.00099 U
Ethylbenzene	1	41	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Isopropylbenzene (Cumene)	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
M,P-Xylenes	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Methyl Acetate	NS	NS	0.0057 U	0.0054 U	0.011 UJ	0.0058 UJ	0.0049 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0057 U	0.0054 U	0.011 U	0.0058 U	0.0049 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0057 UJ	0.0054 UJ	0.011 U	0.0058 U	0.0049 U
Methylcyclohexane	NS	NS	0.0011 U	0.0011 U	0.0022 UJ	0.0012 UJ	0.00099 UJ
Methylene Chloride	0.05	100	0.0023 U	0.0012 J	0.0043 U	0.0023 U	0.002 U
N-Butylbenzene	12	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
N-Propylbenzene	3.9	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Sec-Butylbenzene	11	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Styrene	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
T-Butylbenzene	5.9	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Tert-Butyl Methyl Ether	0.93	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Tetrachloroethylene (PCE)	1.3	19	0.0011 U	0.0011 U	0.029	0.0012 U	0.00099 U
Toluene	0.7	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00033 J
Trans-1,2-Dichloroethene	0.19	100	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Trans-1,3-Dichloropropene	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Trichloroethylene (TCE)	0.47	21	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Trichlorofluoromethane	NS	NS	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Vinyl Chloride	0.02	0.9	0.0011 U	0.0011 U	0.0022 U	0.0012 U	0.00099 U
Xylenes, Total	0.26	100	0.0023 U	0.0021 U	0.0043 U	0.0023 U	0.002 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-02_0-2_20230809 460-285841-7 8/09/2023 mg/kg 1	RI-SB-02_10-12_20230809 460-285841-8 8/09/2023 mg/kg 1	RI-SB-02_14-16_20230809 460-285841-9 8/09/2023 mg/kg 1	RI-SB-03_0-2_20230809 460-285841-5 8/09/2023 mg/kg 1	RI-SB-03_8-10_20230809 460-285841-6 8/09/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,1,2-Trichloroethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,1-Dichloroethane	0.27	26	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,1-Dichloroethene	0.33	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,2,3-Trichlorobenzene	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,2,4-Trichlorobenzene	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,2,4-Trimethylbenzene	3.6	52	0.0014 U	0.0013 U	0.00075 J	0.0016 UJ	0.0011 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,2-Dichlorobenzene	1.1	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,2-Dichloroethane	0.02	3.1	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
1,2-Dichloropropane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,3-Dichlorobenzene	2.4	49	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
1,4-Dichlorobenzene	1.8	13	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
2-Hexanone	NS	NS	0.0069 U	0.0067 U	0.0058 U	0.0081 U	0.0056 U
Acetone	0.05	100	0.0083 U	0.0081 U	0.007 U	0.0097 U	0.0067 U
Benzene	0.06	4.8	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Bromochloromethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Bromodichloromethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Bromoform	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Bromomethane	NS	NS	0.0028 U	0.0027 U	0.0023 U	0.0032 UJ	0.0022 U
Carbon Disulfide	NS	NS	0.0014 U	0.0024	0.00055 J	0.0016 UJ	0.0011 U
Carbon Tetrachloride	0.76	2.4	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Chlorobenzene	1.1	100	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Chloroethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Chloroform	0.37	49	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Chloromethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Cis-1,2-Dichloroethylene	0.25	100	0.0014 U	0.0013 U	0.00046 J	0.0013 J	0.0011 U
Cis-1,3-Dichloropropene	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Cyclohexane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Dibromochloromethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Dichlorodifluoromethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Ethylbenzene	1	41	0.0014 U	0.0013 U	0.00043 J	0.0016 UJ	0.0011 U
Isopropylbenzene (Cumene)	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
M,P-Xylenes	NS	NS	0.0014 U	0.0013 U	0.00099 J	0.0016 UJ	0.0011 U
Methyl Acetate	NS	NS	0.0069 UJ	0.0067 UJ	0.0058 UJ	0.0081 UJ	0.0056 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0069 U	0.0067 U	0.0058 U	0.0081 U	0.0056 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0069 U	0.0067 U	0.0058 U	0.0081 U	0.0056 U
Methylcyclohexane	NS	NS	0.0014 UJ	0.0013 UJ	0.0012 UJ	0.0016 UJ	0.0011 UJ
Methylene Chloride	0.05	100	0.0028 U	0.0027 U	0.0023 U	0.0032 U	0.0022 U
N-Butylbenzene	12	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
N-Propylbenzene	3.9	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0014 U	0.0013 U	0.00041 J	0.0016 UJ	0.0011 U
Sec-Butylbenzene	11	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Styrene	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
T-Butylbenzene	5.9	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Tert-Butyl Methyl Ether	0.93	100	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Tetrachloroethylene (PCE)	1.3	19	0.016	0.0077	0.0012 U	0.12	0.0011 U
Toluene	0.7	100	0.0014 U	0.0013 U	0.0021	0.0016 UJ	0.0011 U
Trans-1,2-Dichloroethene	0.19	100	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Trans-1,3-Dichloropropene	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 UJ	0.0011 U
Trichloroethylene (TCE)	0.47	21	0.0014 U	0.0013 U	0.0012 U	0.0021	0.0011 U
Trichlorofluoromethane	NS	NS	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Vinyl Chloride	0.02	0.9	0.0014 U	0.0013 U	0.0012 U	0.0016 U	0.0011 U
Xylenes, Total	0.26	100	0.0028 U	0.0027 U	0.0014 J	0.0032 UJ	0.0022 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-04_0-2_20230808 460-285743-29 8/08/2023 mg/kg 1	RI-SB-X1_20230808 460-285743-33 8/08/2023 mg/kg 1	RI-SB-04_8-10_20230808 460-285743-30 8/08/2023 mg/kg 1	RI-SB-05_0-2_20230808 460-285743-22 8/08/2023 mg/kg 1	RI-SB-06_0-2_20230810 460-285947-11 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,1,2,2-Tetrachloroethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,1,2-Trichloroethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,1-Dichloroethane	0.27	26	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,1-Dichloroethene	0.33	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2,3-Trichlorobenzene	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2,4-Trichlorobenzene	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2,4-Trimethylbenzene	3.6	52	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2-Dichlorobenzene	1.1	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2-Dichloroethane	0.02	3.1	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,2-Dichloropropane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,3-Dichlorobenzene	2.4	49	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
1,4-Dichlorobenzene	1.8	13	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
2-Hexanone	NS	NS	0.005 U	0.0052 U	0.0061 U	0.0072 U	0.0057 U
Acetone	0.05	100	0.006 U	0.0063 U	0.0073 U	0.0086 U	0.0068 U
Benzene	0.06	4.8	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Bromochloromethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Bromodichloromethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Bromoform	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Bromomethane	NS	NS	0.002 U	0.0021 U	0.0024 U	0.0029 U	0.0023 U
Carbon Disulfide	NS	NS	0.001 UJ	0.001 UJ	0.0012 UJ	0.0014 UJ	0.0011 U
Carbon Tetrachloride	0.76	2.4	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Chlorobenzene	1.1	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Chloroethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Chloroform	0.37	49	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Chloromethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Cis-1,2-Dichloroethylene	0.25	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Cis-1,3-Dichloropropene	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Cyclohexane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Dibromochloromethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Dichlorodifluoromethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Ethylbenzene	1	41	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Isopropylbenzene (Cumene)	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
M,P-Xylenes	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Methyl Acetate	NS	NS	0.005 UJ	0.0052 UJ	0.0061 UJ	0.0072 UJ	0.0057 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.005 U	0.0052 U	0.0061 U	0.0072 U	0.0057 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.005 U	0.0052 U	0.0061 U	0.0072 U	0.0057 U
Methylcyclohexane	NS	NS	0.001 UJ	0.001 UJ	0.0012 UJ	0.0014 UJ	0.0011 UJ
Methylene Chloride	0.05	100	0.002 U	0.0021 U	0.0024 U	0.0029 U	0.0023 U
N-Butylbenzene	12	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
N-Propylbenzene	3.9	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Sec-Butylbenzene	11	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Styrene	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
T-Butylbenzene	5.9	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Tert-Butyl Methyl Ether	0.93	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Tetrachloroethylene (PCE)	1.3	19	0.00063 J	0.0015 J	0.0012 U	0.00058 J	0.0011 U
Toluene	0.7	100	0.001 U	0.0003 J	0.0012 U	0.0014 U	0.0011 U
Trans-1,2-Dichloroethene	0.19	100	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Trans-1,3-Dichloropropene	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Trichloroethylene (TCE)	0.47	21	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Trichlorofluoromethane	NS	NS	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Vinyl Chloride	0.02	0.9	0.001 U	0.001 U	0.0012 U	0.0014 U	0.0011 U
Xylenes, Total	0.26	100	0.002 U	0.0021 U	0.0024 U	0.0029 U	0.0023 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-06_8-10_20230810 460-285947-4 8/10/2023 mg/kg 1	RI-SB-07_0-2_20230808 460-285743-25 8/08/2023 mg/kg 1	RI-SB-07_8-10_20230808 460-285743-26 8/08/2023 mg/kg 1	RI-SB-08_0-2_20230810 460-285947-5 8/10/2023 mg/kg 1	RI-SB-08_7-9_20230810 460-285947-6 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,1,2-Trichloroethane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,1-Dichloroethane	0.27	26	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,1-Dichloroethene	0.33	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2,3-Trichlorobenzene	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2,4-Trichlorobenzene	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2,4-Trimethylbenzene	3.6	52	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.00048 J
1,2-Dibromo-3-Chloropropane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2-Dichlorobenzene	1.1	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2-Dichloroethane	0.02	3.1	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,2-Dichloropropane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,3-Dichlorobenzene	2.4	49	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
1,4-Dichlorobenzene	1.8	13	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
2-Hexanone	NS	NS	0.007 U	0.0066 U	0.0051 U	0.0062 U	0.007 U
Acetone	0.05	100	0.0084 U	0.0079 U	0.0061 U	0.0074 U	0.04
Benzene	0.06	4.8	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Bromochloromethane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Bromodichloromethane	NS	NS	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Bromoform	NS	NS	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Bromomethane	NS	NS	0.0028 U	0.0026 U	0.002 U	0.0025 U	0.0028 U
Carbon Disulfide	NS	NS	0.0014 U	0.0013 UJ	0.00048 L	0.0012 U	0.0033
Carbon Tetrachloride	0.76	2.4	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Chlorobenzene	1.1	100	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Chloroethane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Chloroform	0.37	49	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Chloromethane	NS	NS	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Cis-1,2-Dichloroethylene	0.25	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Cis-1,3-Dichloropropene	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Cyclohexane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Dibromochloromethane	NS	NS	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Dichlorodifluoromethane	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Ethylbenzene	1	41	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0012 J
Isopropylbenzene (Cumene)	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
M,P-Xylenes	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.00086 J
Methyl Acetate	NS	NS	0.007 UJ	0.0066 UJ	0.0051 UJ	0.0062 UJ	0.007 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.007 U	0.0066 U	0.0051 U	0.0062 U	0.012
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.007 U	0.0066 U	0.0051 U	0.0062 U	0.007 U
Methylcyclohexane	NS	NS	0.0014 UJ	0.0013 UJ	0.001 UJ	0.0012 UJ	0.0014 UJ
Methylene Chloride	0.05	100	0.0028 U	0.0026 UJ	0.002 U	0.0025 U	0.0028 U
N-Butylbenzene	12	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
N-Propylbenzene	3.9	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.00034 J
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.00087 J
Sec-Butylbenzene	11	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Styrene	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
T-Butylbenzene	5.9	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Tert-Butyl Methyl Ether	0.93	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Tetrachloroethylene (PCE)	1.3	19	0.00044 J	0.0013 UJ	0.001 U	0.0005 J	0.0014 U
Toluene	0.7	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.00099 J
Trans-1,2-Dichloroethene	0.19	100	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Trans-1,3-Dichloropropene	NS	NS	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Trichloroethylene (TCE)	0.47	21	0.0014 U	0.0013 UJ	0.001 U	0.0012 U	0.0014 U
Trichlorofluoromethane	NS	NS	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Vinyl Chloride	0.02	0.9	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U
Xylenes, Total	0.26	100	0.0028 U	0.0026 UJ	0.002 U	0.0025 U	0.0017 J

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-08_9-10_20230810 460-285947-7 8/10/2023 mg/kg 1	RI-SB-09_0-2_20230809 460-285841-1 8/09/2023 mg/kg 1	RI-SB-09_8-10_20230809 460-285841-2 8/09/2023 mg/kg 1	RI-SB-10_0-2_20230808 460-285743-34 8/08/2023 mg/kg 1	RI-SB-10_8-10_20230808 460-285743-35 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,1,2-Trichloroethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,1-Dichloroethane	0.27	26	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,1-Dichloroethene	0.33	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2,3-Trichlorobenzene	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2,4-Trichlorobenzene	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2,4-Trimethylbenzene	3.6	52	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2-Dichlorobenzene	1.1	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2-Dichloroethane	0.02	3.1	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,2-Dichloropropane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,3-Dichlorobenzene	2.4	49	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
1,4-Dichlorobenzene	1.8	13	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
2-Hexanone	NS	NS	0.0056 U	0.0058 U	0.0068 U	0.0048 U	0.0053 U
Acetone	0.05	100	0.011	0.007 U	0.0082 U	0.0057 U	0.0063 U
Benzene	0.06	4.8	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Bromochloromethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Bromodichloromethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Bromoform	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Bromomethane	NS	NS	0.0022 U	0.0023 U	0.0027 U	0.0019 U	0.0021 U
Carbon Disulfide	NS	NS	0.0029	0.0012 U	0.0014 U	0.00096 UJ	0.0011 UJ
Carbon Tetrachloride	0.76	2.4	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Chlorobenzene	1.1	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Chloroethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Chloroform	0.37	49	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Chloromethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Cis-1,2-Dichloroethylene	0.25	100	0.0011 U	0.029	0.0014 U	0.00082 J	0.0011 U
Cis-1,3-Dichloropropene	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Cyclohexane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Dibromochloromethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Dichlorodifluoromethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Ethylbenzene	1	41	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Isopropylbenzene (Cumene)	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
M,P-Xylenes	NS	NS	0.0011 U	0.00033 J	0.0014 U	0.00027 J	0.0011 U
Methyl Acetate	NS	NS	0.0056 UJ	0.0058 UJ	0.0068 UJ	0.0048 UJ	0.0053 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0056 U	0.0058 U	0.0068 U	0.0048 U	0.0053 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0056 U	0.0058 U	0.0068 U	0.0048 U	0.0053 U
Methylcyclohexane	NS	NS	0.0011 UJ	0.0012 UJ	0.0014 UJ	0.00096 UJ	0.0011 UJ
Methylene Chloride	0.05	100	0.0022 U	0.0023 U	0.0027 U	0.0019 U	0.0021 U
N-Butylbenzene	12	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
N-Propylbenzene	3.9	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Sec-Butylbenzene	11	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Styrene	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
T-Butylbenzene	5.9	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Tert-Butyl Methyl Ether	0.93	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Tetrachloroethylene (PCE)	1.3	19	0.0011 U	0.018	0.00074 J	0.0031	0.0023
Toluene	0.7	100	0.0011 U	0.00048 J	0.0014 U	0.00096 U	0.0011 U
Trans-1,2-Dichloroethene	0.19	100	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Trans-1,3-Dichloropropene	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Trichloroethylene (TCE)	0.47	21	0.0011 U	0.0023	0.0014 U	0.00096 U	0.0011 U
Trichlorofluoromethane	NS	NS	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Vinyl Chloride	0.02	0.9	0.0011 U	0.0012 U	0.0014 U	0.00096 U	0.0011 U
Xylenes, Total	0.26	100	0.0022 U	0.00033 J	0.0027 U	0.00027 J	0.0021 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-11_0-2_20230809 460-285841-3 8/09/2023 mg/kg 1	RI-SB-11_8-10_20230809 460-285841-4 8/09/2023 mg/kg 1	RI-SB-12_0-2_20230811 460-286022-3 8/11/2023 mg/kg 1	RI-SB-12_7-9_20230811 460-286022-4 8/11/2023 mg/kg 1	RI-SB-12_10-12_20230811 460-286022-5 8/11/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,1,2-Trichloroethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,1-Dichloroethane	0.27	26	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,1-Dichloroethene	0.33	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2,3-Trichlorobenzene	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2,4-Trichlorobenzene	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2,4-Trimethylbenzene	3.6	52	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2-Dichlorobenzene	1.1	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2-Dichloroethane	0.02	3.1	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,2-Dichloropropane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,3-Dichlorobenzene	2.4	49	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
1,4-Dichlorobenzene	1.8	13	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
2-Hexanone	NS	NS	0.006 U	0.0067 U	0.007 U	0.0078 U	0.0058 U
Acetone	0.05	100	0.0071 U	0.008 U	0.0084 U	0.0099	0.0069 U
Benzene	0.06	4.8	0.0012 U	0.0013 U	0.0014 U	0.00099 J	0.0012 U
Bromochloromethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Bromodichloromethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Bromoform	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Bromomethane	NS	NS	0.0024 U	0.0027 U	0.0028 U	0.0031 U	0.0023 U
Carbon Disulfide	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0089	0.0012 U
Carbon Tetrachloride	0.76	2.4	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Chlorobenzene	1.1	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Chloroethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Chloroform	0.37	49	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Chloromethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Cis-1,2-Dichloroethylene	0.25	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Cis-1,3-Dichloropropene	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Cyclohexane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Dibromochloromethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Dichlorodifluoromethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Ethylbenzene	1	41	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Isopropylbenzene (Cumene)	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
M,P-Xylenes	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Methyl Acetate	NS	NS	0.006 UJ	0.0067 UJ	0.007 U	0.0078 U	0.0058 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.006 U	0.0067 U	0.007 U	0.02	0.0058 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.006 U	0.0067 U	0.007 U	0.0078 U	0.0058 U
Methylcyclohexane	NS	NS	0.0012 UJ	0.0013 UJ	0.0014 U	0.0016 U	0.0012 U
Methylene Chloride	0.05	100	0.0024 U	0.0027 U	0.0028 U	0.0031 U	0.0023 U
N-Butylbenzene	12	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
N-Propylbenzene	3.9	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Sec-Butylbenzene	11	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Styrene	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
T-Butylbenzene	5.9	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Tert-Butyl Methyl Ether	0.93	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Tetrachloroethylene (PCE)	1.3	19	0.00045 J	0.003	0.0076	0.00047 J	0.0012 U
Toluene	0.7	100	0.0012 U	0.0013 U	0.0014 U	0.00057 J	0.0012 U
Trans-1,2-Dichloroethene	0.19	100	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Trans-1,3-Dichloropropene	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Trichloroethylene (TCE)	0.47	21	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Trichlorofluoromethane	NS	NS	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Vinyl Chloride	0.02	0.9	0.0012 U	0.0013 U	0.0014 U	0.0016 U	0.0012 U
Xylenes, Total	0.26	100	0.0024 U	0.0027 U	0.0028 U	0.0031 U	0.0023 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-13_0-2_20230808 460-285743-31 8/08/2023 mg/kg 1	RI-SB-13_8-10_20230808 460-285743-32 8/08/2023 mg/kg 1	RI-SB-14_0-2_20230811 460-286022-1 8/11/2023 mg/kg 1	RI-SB-X2_20230811 460-286022-6 8/11/2023 mg/kg 1	RI-SB-14_8-10_20230811 460-286022-2 8/11/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,1,2-Trichloroethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,1-Dichloroethane	0.27	26	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,1-Dichloroethene	0.33	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2,3-Trichlorobenzene	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2,4-Trichlorobenzene	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2,4-Trimethylbenzene	3.6	52	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2-Dichlorobenzene	1.1	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2-Dichloroethane	0.02	3.1	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,2-Dichloropropane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,3-Dichlorobenzene	2.4	49	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
1,4-Dichlorobenzene	1.8	13	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
2-Hexanone	NS	NS	0.0056 U	0.0073 U	0.0057 U	0.0059 U	0.005 U
Acetone	0.05	100	0.0068 U	0.0088 U	0.0069 U	0.0071 U	0.006 U
Benzene	0.06	4.8	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Bromochloromethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Bromodichloromethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Bromoform	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Bromomethane	NS	NS	0.0023 U	0.0029 U	0.0023 U	0.0024 U	0.002 U
Carbon Disulfide	NS	NS	0.0011 UJ	0.0015 UJ	0.0011 U	0.0012 U	0.00099 U
Carbon Tetrachloride	0.76	2.4	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Chlorobenzene	1.1	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Chloroethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Chloroform	0.37	49	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Chloromethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Cis-1,2-Dichloroethylene	0.25	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Cis-1,3-Dichloropropene	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Cyclohexane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Dibromochloromethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Dichlorodifluoromethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Ethylbenzene	1	41	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Isopropylbenzene (Cumene)	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
M,P-Xylenes	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.00099 J	0.00099 U
Methyl Acetate	NS	NS	0.0056 UJ	0.0073 UJ	0.0057 UJ	0.0059 U	0.005 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0056 U	0.0073 U	0.0057 U	0.0059 U	0.005 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0056 U	0.0073 U	0.0057 U	0.0059 U	0.005 U
Methylcyclohexane	NS	NS	0.0011 UJ	0.0015 UJ	0.0011 UJ	0.0012 U	0.00099 UJ
Methylene Chloride	0.05	100	0.0023 U	0.0029 U	0.0023 U	0.0024 U	0.002 U
N-Butylbenzene	12	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
N-Propylbenzene	3.9	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.00079 J	0.00099 U
Sec-Butylbenzene	11	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Styrene	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
T-Butylbenzene	5.9	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Tert-Butyl Methyl Ether	0.93	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Tetrachloroethylene (PCE)	1.3	19	0.0069	0.0015 U	0.0011 UJ	0.0012 U	0.00099 U
Toluene	0.7	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Trans-1,2-Dichloroethene	0.19	100	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Trans-1,3-Dichloropropene	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Trichloroethylene (TCE)	0.47	21	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Trichlorofluoromethane	NS	NS	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Vinyl Chloride	0.02	0.9	0.0011 U	0.0015 U	0.0011 U	0.0012 U	0.00099 U
Xylenes, Total	0.26	100	0.0023 U	0.0029 U	0.0023 U	0.0018 J	0.002 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-15_0-2_20230808 460-285743-27 8/08/2023 mg/kg 1	RI-SB-15_8-10_20230808 460-285743-28 8/08/2023 mg/kg 1	RI-SB-20_0-2_20230808 460-285743-23 8/08/2023 mg/kg 1	RI-SB-20_2-4_20230808 460-285743-24 8/08/2023 mg/kg 1	RI-SB-21_0-2_20230808 460-285743-20 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,1,2-Trichloroethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,1-Dichloroethane	0.27	26	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,1-Dichloroethene	0.33	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2,3-Trichlorobenzene	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2,4-Trichlorobenzene	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2,4-Trimethylbenzene	3.6	52	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2-Dichlorobenzene	1.1	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2-Dichloroethane	0.02	3.1	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,2-Dichloropropane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,3-Dichlorobenzene	2.4	49	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
1,4-Dichlorobenzene	1.8	13	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
2-Hexanone	NS	NS	0.0084 U	0.0055 U	0.0064 U	0.0092 U	0.0071 U
Acetone	0.05	100	0.012	0.0066 U	0.0077 U	0.011 U	0.0089
Benzene	0.06	4.8	0.00046 J	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Bromochloromethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Bromodichloromethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Bromoform	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Bromomethane	NS	NS	0.0033 U	0.0022 U	0.0026 U	0.0037 U	0.0028 U
Carbon Disulfide	NS	NS	0.0017 UJ	0.0011 UJ	0.0013 UJ	0.0018 UJ	0.0014 UJ
Carbon Tetrachloride	0.76	2.4	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Chlorobenzene	1.1	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Chloroethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Chloroform	0.37	49	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Chloromethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Cis-1,2-Dichloroethylene	0.25	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Cis-1,3-Dichloropropene	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Cyclohexane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.00041 J	0.0014 U
Dibromochloromethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Dichlorodifluoromethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Ethylbenzene	1	41	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Isopropylbenzene (Cumene)	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
M,P-Xylenes	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.00046 J	0.00049 J
Methyl Acetate	NS	NS	0.0084 UJ	0.0055 UJ	0.0064 UJ	0.0092 UJ	0.0071 UJ
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0084 U	0.0055 U	0.0064 U	0.0092 U	0.0071 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0084 U	0.0055 U	0.0064 U	0.0092 U	0.0071 U
Methylcyclohexane	NS	NS	0.0017 UJ	0.0011 UJ	0.0013 UJ	0.0018 UJ	0.0014 UJ
Methylene Chloride	0.05	100	0.0033 U	0.0022 U	0.0026 U	0.0037 U	0.0028 U
N-Butylbenzene	12	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
N-Propylbenzene	3.9	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.00036 J	0.0014 U
Sec-Butylbenzene	11	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Styrene	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
T-Butylbenzene	5.9	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Tert-Butyl Methyl Ether	0.93	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Tetrachloroethylene (PCE)	1.3	19	0.0017 U	0.0011 U	0.0083	0.015	0.0014 U
Toluene	0.7	100	0.00048 J	0.0011 U	0.0013 U	0.00071 J	0.00039 J
Trans-1,2-Dichloroethene	0.19	100	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Trans-1,3-Dichloropropene	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Trichloroethylene (TCE)	0.47	21	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Trichlorofluoromethane	NS	NS	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Vinyl Chloride	0.02	0.9	0.0017 U	0.0011 U	0.0013 U	0.0018 U	0.0014 U
Xylenes, Total	0.26	100	0.0033 U	0.0022 U	0.0026 U	0.00082 J	0.00049 J

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-21_8-10_20230808 460-285743-21 8/08/2023 mg/kg 1	RI-FB-S-01_20230809 460-285841-11 8/09/2023 µg/L 1	RI-FB-S-02_20230810 460-285947-9 8/09/2023 µg/L 1	RI-FB-S-03_20230810 460-285947-10 8/09/2023 µg/L 1	TB-01_20210824 460-241522-19 8/23/2021 µg/L 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	0.0012 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	0.27	26	0.0012 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	0.33	100	0.0012 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	NS	NS	0.0012 U	1 U	1 U	1 U	NR
1,2,4-Trimethylbenzene	3.6	52	0.0012 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	1.1	100	0.0012 U	1 U	1 U	1 U	NR
1,2-Dichloroethane	0.02	3.1	0.0012 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0012 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	2.4	49	0.0012 U	1 U	1 U	1 U	NR
1,4-Dichlorobenzene	1.8	13	0.0012 U	1 U	1 U	1 U	NR
2-Hexanone	NS	NS	0.0058 U	5 U	5 U	5 U	5 U
Acetone	0.05	100	0.007 U	5 U	5 U	5 U	5 U
Benzene	0.06	4.8	0.0012 U	1 U	1 U	1 U	1 U
Bromochloromethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Bromodichloromethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Bromoform	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Bromomethane	NS	NS	0.0023 U	1 U	1 U	1 U	1 UJ
Carbon Disulfide	NS	NS	0.0012 UJ	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.76	2.4	0.0012 U	1 U	1 U	1 U	1 U
Chlorobenzene	1.1	100	0.0012 U	1 U	1 U	1 U	1 U
Chloroethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 UJ
Chloroform	0.37	49	0.0012 U	1 U	1 U	1 U	1 U
Chloromethane	NS	NS	0.0012 U	0.54 J	1 U	0.65 J	1 UJ
Cis-1,2-Dichloroethylene	0.25	100	0.0012 U	1 U	1 U	1 U	1 U
Cis-1,3-Dichloropropene	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Cyclohexane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Dibromochloromethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Ethylbenzene	1	41	0.0012 U	1 U	1 U	1 U	1 U
Isopropylbenzene (Cumene)	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
M,P-Xylenes	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Methyl Acetate	NS	NS	0.0058 UJ	5 U	5 U	5 U	5 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.0058 U	5 U	5 U	5 U	5 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	0.0058 U	5 U	5 U	5 U	5 U
Methylcyclohexane	NS	NS	0.0012 UJ	1 U	1 U	1 U	1 U
Methylene Chloride	0.05	100	0.0023 U	1 U	1 U	1 U	1 U
N-Butylbenzene	12	100	0.0012 U	1 U	1 U	1 U	1 U
N-Propylbenzene	3.9	100	0.0012 U	1 U	1 U	1 U	1 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Sec-Butylbenzene	11	100	0.0012 U	1 U	1 U	1 U	1 U
Styrene	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
T-Butylbenzene	5.9	100	0.0012 U	1 U	1 U	1 U	1 U
Tert-Butyl Methyl Ether	0.93	100	0.0012 U	1 U	1 U	1 U	1 U
Tetrachloroethylene (PCE)	1.3	19	0.0012 U	1 U	1 U	1 U	1 U
Toluene	0.7	100	0.0012 U	1 U	1 U	1 U	1 U
Trans-1,2-Dichloroethene	0.19	100	0.0012 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Trichloroethylene (TCE)	0.47	21	0.0012 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	NS	NS	0.0012 U	1 U	1 U	1 U	1 U
Vinyl Chloride	0.02	0.9	0.0012 U	1 U	1 U	1 U	1 U
Xylenes, Total	0.26	100	0.0023 U	2 U	2 U	2 U	2 U

Table 2
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Volatile Organic Compounds (VOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-TB-S-01_20230809 460-285841-10 8/09/2023 µg/L 1	RI-TB-S-02_20230810 460-285947-8 8/10/2023 µg/L 1	RI-TB-S-03_20230811 460-286022-7 8/11/2023 µg/L 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q
1,1,1-Trichloroethane	0.68	100	1 U	1 U
1,1,2,2-Tetrachloroethane	NS	NS	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS	NS	1 U	1 U
1,1,2-Trichloroethane	NS	NS	1 U	1 U
1,1-Dichloroethane	0.27	26	1 U	1 U
1,1-Dichloroethene	0.33	100	1 U	1 U
1,2,3-Trichlorobenzene	NS	NS	1 U	1 U
1,2,4-Trichlorobenzene	NS	NS	1 U	1 U
1,2,4-Trimethylbenzene	3.6	52	1 U	1 U
1,2-Dibromo-3-Chloropropane	NS	NS	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	NS	NS	1 U	1 U
1,2-Dichlorobenzene	1.1	100	1 U	1 U
1,2-Dichloroethane	0.02	3.1	1 U	1 U
1,2-Dichloropropane	NS	NS	1 U	1 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	1 U	1 U
1,3-Dichlorobenzene	2.4	49	1 U	1 U
1,4-Dichlorobenzene	1.8	13	1 U	1 U
2-Hexanone	NS	NS	5 U	5 U
Acetone	0.05	100	5 U	5 U
Benzene	0.06	4.8	1 U	1 U
Bromochloromethane	NS	NS	1 U	1 U
Bromodichloromethane	NS	NS	1 U	1 U
Bromoform	NS	NS	1 U	1 U
Bromomethane	NS	NS	1 UJ	1 UJ
Carbon Disulfide	NS	NS	1 UJ	1 UJ
Carbon Tetrachloride	0.76	2.4	1 U	1 U
Chlorobenzene	1.1	100	1 U	1 U
Chloroethane	NS	NS	1 U	1 U
Chloroform	0.37	49	1 U	1 U
Chloromethane	NS	NS	1 U	0.41 J
Cis-1,2-Dichloroethylene	0.25	100	1 U	1 U
Cis-1,3-Dichloropropene	NS	NS	1 U	1 U
Cyclohexane	NS	NS	1 U	1 U
Dibromochloromethane	NS	NS	1 U	1 U
Dichlorodifluoromethane	NS	NS	1 UJ	1 UJ
Ethylbenzene	1	41	1 U	1 U
Isopropylbenzene (Cumene)	NS	NS	1 U	1 U
M,P-Xylenes	NS	NS	1 U	1 U
Methyl Acetate	NS	NS	5 U	5 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	5 U	5 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	NS	5 U	5 U
Methylcyclohexane	NS	NS	1 U	1 U
Methylene Chloride	0.05	100	1 U	1 U
N-Butylbenzene	12	100	1 U	1 U
N-Propylbenzene	3.9	100	1 U	1 U
O-Xylene (1,2-Dimethylbenzene)	NS	NS	1 U	1 U
Sec-Butylbenzene	11	100	1 U	1 U
Styrene	NS	NS	1 U	1 U
T-Butylbenzene	5.9	100	1 U	1 U
Tert-Butyl Methyl Ether	0.93	100	1 U	1 U
Tetrachloroethylene (PCE)	1.3	19	1 U	1 U
Toluene	0.7	100	1 U	1 U
Trans-1,2-Dichloroethene	0.19	100	1 U	1 U
Trans-1,3-Dichloropropene	NS	NS	1 U	1 U
Trichloroethylene (TCE)	0.47	21	1 U	1 U
Trichlorofluoromethane	NS	NS	1 U	1 U
Vinyl Chloride	0.02	0.9	1 U	1 U
Xylenes, Total	0.26	100	2 U	2 U

Table 3
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-01 0-2 20210823 460-241420-1 8/23/2021 mg/kg 1	SB-01 8-10 20210823 460-241420-2 8/23/2021 mg/kg 1	SB-02 0-2 20210823 460-241420-9 8/23/2021 mg/kg 2	SB-02 8-10 20210823 460-241420-10 8/23/2021 mg/kg 1	SB-03 0-2 20210823 460-241420-3 8/23/2021 mg/kg 1	SB-03 9-11 20210823 460-241420-4 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.036 UJ	0.04 U	0.073 UJ	0.038 U	0.037 U	0.038 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
2,4,5-Trichlorophenol	NS	NS	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
2,4,6-Trichlorophenol	NS	NS	0.14 U	0.16 U	0.29 U	0.15 U	0.15 U	0.15 U
2,4-Dichlorophenol	NS	NS	0.14 U	0.16 U	0.29 U	0.15 U	0.15 U	0.15 U
2,4-Dimethylphenol	NS	NS	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
2,4-Dinitrophenol	NS	NS	0.29 UJ	0.32 U	0.59 U	0.3 U	0.3 U	0.3 U
2,4-Dinitrotoluene	NS	NS	0.073 U	0.081 U	0.15 UJ	0.076 U	0.075 U	0.077 U
2,6-Dinitrotoluene	NS	NS	0.073 U	0.081 U	0.15 UJ	0.076 U	0.075 U	0.077 U
2-Chloronaphthalene	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
2-Chlorophenol	NS	NS	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
2-Methylnaphthalene	NS	NS	0.36 U	0.02 J	0.73 UJ	0.013 J	0.037 J	0.18 J
2-Methylphenol (O-Cresol)	0.33	100	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
2-Nitroaniline	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
2-Nitrophenol	NS	NS	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
3- And 4- Methylphenol (Total)	NS	NS	0.071 J	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
3,3'-Dichlorobenzidine	NS	NS	0.14 U	0.16 U	0.29 UJ	0.15 U	0.15 U	0.15 U
3-Nitroaniline	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.29 UJ	0.32 U	0.59 U	0.3 U	0.3 U	0.3 U
4-Bromophenyl Phenyl Ether	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
4-Chloro-3-Methylphenol	NS	NS	0.36 U	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
4-Chloroaniline	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
4-Methylphenol (P-Cresol)	0.33	100	0.071 J	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
4-Nitroaniline	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
4-Nitrophenol	NS	NS	0.73 U	0.81 U	1.5 U	0.76 U	0.75 U	0.77 U
Acenaphthene	20	100	0.36 U	0.014 J	0.024 J	0.38 U	0.33 J	0.85
Acenaphthylene	100	100	0.36 U	0.0083 J	0.026 J	0.38 U	0.028 J	0.1 J
Acetophenone	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Anthracene	100	100	0.018 J	0.029 J	0.088 J	0.38 U	1.1	1.8
Atrazine	NS	NS	0.14 U	0.16 U	0.29 UJ	0.15 U	0.15 U	0.15 U
Benzaldehyde	NS	NS	0.36 UJ	0.4 UJ	0.73 UJ	0.38 UJ	0.37 UJ	0.38 UJ
Benzo(a)Anthracene	1	1	0.08	0.11	0.38 L	0.054	2.8	3.1
Benzo(a)Pyrene	1	1	0.085	0.11	0.34 L	0.051	3	3.2
Benzo(b)Fluoranthene	1	1	0.098	0.12	0.39 L	0.067	3.9	3.5
Benzo(g,h,i)Perylene	100	100	0.058 J	0.06 J	0.17 J	0.026 J	1.3	1.1
Benzo(k)Fluoranthene	0.8	3.9	0.036	0.05	0.14 L	0.024 J	1.1	1.6
Benzyl Butyl Phthalate	NS	NS	0.36 U	0.4 U	0.73 UJ	0.043 J	0.37 U	0.38 U
Biphenyl (Diphenyl)	NS	NS	0.36 U	0.01 J	0.73 UJ	0.38 U	0.015 J	0.069 J
Bis(2-Chloroethoxy) Methane	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.036 U	0.04 U	0.073 UJ	0.038 U	0.037 U	0.038 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.069 J	0.4 U	0.73 UJ	0.071 J	0.065 J	0.38 U
Caprolactam	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Carbazole	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.15 J	0.76
Chrysene	1	3.9	0.077 J	0.11 J	0.39 J	0.057 J	2.6	3
Dibenz(a,h)Anthracene	0.33	0.33	0.036 U	0.019 J	0.058 J	0.038 U	0.37	0.38
Dibenzofuran	7	59	0.0056 J	0.018 J	0.011 J	0.38 U	0.15 J	0.5
Diethyl Phthalate	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Dimethyl Phthalate	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Di-N-Butyl Phthalate	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Di-N-Octylphthalate	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Fluoranthene	100	100	0.14 J	0.23 J	0.52 J	0.079 J	6.4	7.3
Fluorene	30	100	0.0056 J	0.013 J	0.042 J	0.0091 J	0.32 J	0.79
Hexachlorobenzene	0.33	1.2	0.036 U	0.04 U	0.073 UJ	0.038 U	0.037 U	0.038 U
Hexachlorobutadiene	NS	NS	0.073 U	0.081 U	0.15 UJ	0.076 U	0.075 U	0.077 U
Hexachlorocyclopentadiene	NS	NS	0.36 UJ	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Hexachloroethane	NS	NS	0.036 U	0.04 U	0.073 UJ	0.038 U	0.037 U	0.038 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.057	0.067	0.17 L	0.025 J	1.5	1.3
Isophorone	NS	NS	0.14 U	0.16 U	0.29 UJ	0.15 U	0.15 U	0.15 U
Naphthalene	12	100	0.014 J	0.06 J	0.016 J	0.0099 J	0.069 J	0.33 J
Nitrobenzene	NS	NS	0.036 U	0.04 U	0.073 UJ	0.038 U	0.037 U	0.038 U
N-Nitrosodi-N-Propylamine	NS	NS	0.036 U	0.04 U	0.073 UJ	0.038 U	0.037 U	0.038 U
N-Nitrosodiphenylamine	NS	NS	0.36 U	0.4 U	0.73 UJ	0.38 U	0.37 U	0.38 U
Pentachlorophenol	0.8	6.7	0.29 U	0.32 U	0.59 U	0.3 U	0.3 U	0.3 U
Phenanthrene	100	100	0.089 J	0.17 J	0.44 J	0.059 J	4.1	7.5
Phenol	0.33	100	0.36 UJ	0.4 U	0.73 U	0.38 U	0.37 U	0.38 U
Pyrene	100	100	0.14 J	0.23 J	0.57 J	0.077 J	5.5	6.3

Table 3
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-04_0-2_20210823 460-241420-7 8/23/2021 mg/kg 1	SB-04_8-10_20210823 460-241420-8 8/23/2021 mg/kg 1	SB-05_0-2_20210824 460-241522-5 8/24/2021 mg/kg 1	SB-05_12-14_20210824 460-241522-6 8/24/2021 mg/kg 1	SB-06_0-2_20210824 460-241522-7 8/24/2021 mg/kg 1	SB-06_11-13_20210824 460-241522-8 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.036 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2,4,5-Trichlorophenol	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2,4,6-Trichlorophenol	NS	NS	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U
2,4-Dichlorophenol	NS	NS	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U
2,4-Dimethylphenol	NS	NS	0.036 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2,4-Dinitrophenol	NS	NS	0.29 U	0.3 U	0.28 U	0.3 U	0.3 U	0.3 U
2,4-Dinitrotoluene	NS	NS	0.073 U	0.077 U	0.072 U	0.076 U	0.076 U	0.075 U
2,6-Dinitrotoluene	NS	NS	0.073 U	0.077 U	0.072 U	0.076 U	0.076 U	0.075 U
2-Chloronaphthalene	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2-Chlorophenol	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2-Methylnaphthalene	NS	NS	0.047 J	0.38 U	0.18 J	0.013 J	0.37 U	0.37 U
2-Methylphenol (O-Cresol)	0.33	100	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2-Nitroaniline	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
2-Nitrophenol	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
3- And 4- Methylphenol (Total)	NS	NS	0.13 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
3,3'-Dichlorobenzidine	NS	NS	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U
3-Nitroaniline	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.29 U	0.3 U	0.28 U	0.3 U	0.3 U	0.3 U
4-Bromophenyl Phenyl Ether	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4-Chloro-3-Methylphenol	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4-Chloroaniline	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4-Methylphenol (P-Cresol)	0.33	100	0.13 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4-Nitroaniline	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
4-Nitrophenol	NS	NS	0.73 U	0.77 U	0.72 U	0.76 U	0.76 U	0.75 U
Acenaphthene	20	100	0.25 J	0.38 U	0.42	0.38 U	0.016 J	0.37 U
Acenaphthylene	100	100	0.19 J	0.38 U	0.086 J	0.38 U	0.011 J	0.37 U
Acetophenone	NS	NS	0.1 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Anthracene	100	100	0.87	0.02 J	0.92	0.38 U	0.053 J	0.37 U
Atrazine	NS	NS	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U
Benzaldehyde	NS	NS	0.1 J	0.38 UJ	0.35 UJ	0.38 UJ	0.37 UJ	0.37 UJ
Benzo(a)Anthracene	1	1	3	0.092	1.7	0.022 J	0.25	0.037 U
Benzo(a)Pyrene	1	1	3.2	0.11	1.7	0.02 J	0.27	0.037 U
Benzo(b)Fluoranthene	1	1	4	0.13	2.1	0.022 J	0.29	0.037 U
Benzo(g,h,i)Perylene	100	100	1.4	0.087 J	0.93	0.013 J	0.16 J	0.37 U
Benzo(k)Fluoranthene	0.8	3.9	1.5	0.047	0.62	0.0094 J	0.14	0.037 U
Benzyl Butyl Phthalate	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Biphenyl (Diphenyl)	NS	NS	0.025 J	0.38 U	0.049 J	0.38 U	0.37 U	0.37 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.036 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.032 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Caprolactam	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Carbazole	NS	NS	0.3 J	0.38 U	0.35	0.38 U	0.02 J	0.37 U
Chrysene	1	3.9	2.7	0.09 J	1.7	0.017 J	0.23 J	0.37 U
Dibenz(a,h)Anthracene	0.33	0.33	0.41	0.021 J	0.3	0.038 U	0.044	0.037 U
Dibenzofuran	7	59	0.17 J	0.0055 J	0.34 J	0.38 U	0.0089 J	0.37 U
Diethyl Phthalate	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Dimethyl Phthalate	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Di-N-Butyl Phthalate	NS	NS	0.052 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Di-N-Octylphthalate	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Fluoranthene	100	100	6.3	0.18 J	3.6	0.029 J	0.49	0.37 U
Fluorene	30	100	0.24 J	0.38 U	0.38	0.38 U	0.015 J	0.37 U
Hexachlorobenzene	0.33	1.2	0.036 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U
Hexachlorobutadiene	NS	NS	0.073 U	0.077 U	0.072 U	0.076 U	0.075 U	0.075 U
Hexachlorocyclopentadiene	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Hexachloroethane	NS	NS	0.036 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	1.7	0.097	1.1	0.038 U	0.18	0.037 U
Isophorone	NS	NS	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U
Naphthalene	12	100	0.084 J	0.012 J	0.31 J	0.015 J	0.011 J	0.37 U
Nitrobenzene	NS	NS	0.036 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U
N-Nitrosodi-N-Propylamine	NS	NS	0.036 U	0.038 U	0.035 U	0.038 U	0.037 U	0.037 U
N-Nitrosodiphenylamine	NS	NS	0.36 U	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Pentachlorophenol	0.8	6.7	0.29 U	0.3 U	0.28 U	0.3 U	0.3 U	0.3 U
Phenanthrene	100	100	4.2	0.11 J	3.5	0.02 J	0.25 J	0.37 U
Phenol	0.33	100	0.035 J	0.38 U	0.35 U	0.38 U	0.37 U	0.37 U
Pyrene	100	100	5.5	0.18 J	3.2	0.031 J	0.46	0.37 U

Table 3
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Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-07 0-2 20210824 460-241522-11 8/24/2021 mg/kg 1	SB-07 12-14 20210824 460-241522-12 8/24/2021 mg/kg 1	SB-08 0-2 20210824 460-241522-9 8/24/2021 mg/kg 1	SB-08 0-2 20210824 460-241522-9 8/24/2021 mg/kg 10	SB-08 11-13 20210824 460-241522-10 8/24/2021 mg/kg 1	SB-08 11-13 20210824 460-241522-10 8/24/2021 mg/kg 5
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
1,4-Dioxane (P-Dioxane)	0.1	13	0.038 U	0.038 U	0.035 U	NR	0.037 U	NR
2,3,4,6-Tetrachlorophenol	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2,4,5-Trichlorophenol	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2,4,6-Trichlorophenol	NS	NS	0.15 U	0.15 U	0.14 U	NR	0.15 U	NR
2,4-Dichlorophenol	NS	NS	0.15 U	0.15 U	0.14 U	NR	0.15 U	NR
2,4-Dimethylphenol	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2,4-Dinitrophenol	NS	NS	0.31 U	0.3 U	0.28 U	NR	0.3 U	NR
2,4-Dinitrotoluene	NS	NS	0.077 U	0.076 U	0.071 U	NR	0.075 U	NR
2,6-Dinitrotoluene	NS	NS	0.077 U	0.076 U	0.071 U	NR	0.075 U	NR
2-Chloronaphthalene	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2-Chlorophenol	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2-Methylnaphthalene	NS	NS	0.013 J	0.037 J	1.1	NR	0.5	NR
2-Methylphenol (O-Cresol)	0.33	100	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2-Nitroaniline	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
2-Nitrophenol	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
3- And 4- Methylphenol (Total)	NS	NS	0.38 U	0.033 J	0.35 U	NR	0.37 U	NR
3,3'-Dichlorobenzidine	NS	NS	0.15 U	0.15 U	0.14 U	NR	0.15 U	NR
3-Nitroaniline	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
4,6-Dinitro-2-Methylphenol	NS	NS	0.31 U	0.3 U	0.28 U	NR	0.3 U	NR
4-Bromophenyl Phenyl Ether	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
4-Chloro-3-Methylphenol	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
4-Chloroaniline	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
4-Chlorophenyl Phenyl Ether	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
4-Methylphenol (P-Cresol)	0.33	100	0.38 U	0.033 J	0.35 U	NR	0.37 U	NR
4-Nitroaniline	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
4-Nitrophenol	NS	NS	0.77 U	0.76 U	0.71 U	NR	0.75 U	NR
Acenaphthene	20	100	0.024 J	0.074 J	5.5	NR	1.9	NR
Acenaphthylene	100	100	0.38 U	0.026 J	0.13 J	NR	0.039 J	NR
Acetophenone	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Anthracene	100	100	0.084 J	0.14 J	NR	12	NR	3.8
Atrazine	NS	NS	0.15 U	0.15 U	0.14 U	NR	0.15 U	NR
Benzaldehyde	NS	NS	0.38 UJ	0.38 UJ	0.35 UJ	NR	0.37 UJ	NR
Benzo(a)Anthracene	1	1	0.23	0.44	NR	19	NR	6.2
Benzo(a)Pyrene	1	1	0.22	0.46	NR	19	NR	5.7
Benzo(b)Fluoranthene	1	1	0.27	0.56	NR	23	NR	6.9
Benzo(g,h,i)Perylene	100	100	0.14 J	0.29 J	NR	11	NR	3.3
Benzo(k)Fluoranthene	0.8	3.9	0.093	0.18	7.2	NR	3.2	NR
Benzyl Butyl Phthalate	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Biphenyl (Diphenyl)	NS	NS	0.38 U	0.015 J	0.51	NR	0.18 J	NR
Bis(2-Chloroethoxy) Methane	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.038 U	0.038 U	0.035 U	NR	0.037 U	NR
Bis(2-Chloroisopropyl) Ether	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.064 J	NR
Caprolactam	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Carbazole	NS	NS	0.38 U	0.045 J	5.2	NR	1.6	NR
Chrysene	1	3.9	0.21 J	0.42	NR	18	NR	5.7
Dibenz(a,h)Anthracene	0.33	0.33	0.034 J	0.083	4.9	NR	1	NR
Dibenzofuran	7	59	0.016 J	0.052 J	4.1	NR	1.4	NR
Diethyl Phthalate	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Dimethyl Phthalate	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Di-N-Butyl Phthalate	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Di-N-Octylphthalate	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Fluoranthene	100	100	0.5	0.89	NR	48	NR	15
Fluorene	30	100	0.023 J	0.072 J	5.3	NR	1.8	NR
Hexachlorobenzene	0.33	1.2	0.038 U	0.038 U	0.035 U	NR	0.037 U	NR
Hexachlorobutadiene	NS	NS	0.077 U	0.076 U	0.071 U	NR	0.075 U	NR
Hexachlorocyclopentadiene	NS	NS	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Hexachloroethane	NS	NS	0.038 U	0.038 U	0.035 U	NR	0.037 U	NR
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.15	0.31	NR	13	NR	3.6
Isophorone	NS	NS	0.15 U	0.15 U	0.14 U	NR	0.15 U	NR
Naphthalene	12	100	0.014 J	0.11 J	1.3	NR	0.63	NR
Nitrobenzene	NS	NS	0.038 U	0.038 U	0.035 U	NR	0.037 U	NR
N-Nitrosodi-N-Propylamine	NS	NS	0.038 U	0.038 U	0.035 U	NR	0.037 U	NR
N-Nitrosodiphenylamine	NS	NS	0.38 U	0.38 U	0.29 J	NR	0.37 U	NR
Pentachlorophenol	0.8	6.7	0.31 U	0.3 U	0.28 U	NR	0.3 U	NR
Phenanthrene	100	100	0.33 J	0.67	NR	50	NR	18
Phenol	0.33	100	0.38 U	0.38 U	0.35 U	NR	0.37 U	NR
Pyrene	100	100	0.45	0.91	NR	40	NR	13

Table 3
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-09_0-2_20210823 460-241420-5 8/23/2021 mg/kg 1	SB-09_7-9_20210823 460-241420-6 8/23/2021 mg/kg 1	SB-10_0-2_20210824 460-241522-3 8/24/2021 mg/kg 1	SB-10_13-15_20210824 460-241522-4 8/24/2021 mg/kg 1	SB-11_0-2_20210824 460-241522-1 8/24/2021 mg/kg 1	SB-11_8-10_20210824 460-241522-2 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.045 U	0.039 U	0.037 U	0.04 U	0.035 U	0.036 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2,4,5-Trichlorophenol	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2,4,6-Trichlorophenol	NS	NS	0.18 U	0.16 U	0.15 U	0.16 U	0.14 U	0.15 U
2,4-Dichlorophenol	NS	NS	0.18 U	0.16 U	0.15 U	0.16 U	0.14 U	0.15 U
2,4-Dimethylphenol	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2,4-Dinitrophenol	NS	NS	0.36 U	0.31 U	0.3 U	0.32 U	0.28 U	0.29 U
2,4-Dinitrotoluene	NS	NS	0.092 U	0.079 U	0.075 U	0.081 U	0.071 U	0.074 U
2,6-Dinitrotoluene	NS	NS	0.092 U	0.079 U	0.075 U	0.081 U	0.071 U	0.074 U
2-Chloronaphthalene	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2-Chlorophenol	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2-Methylnaphthalene	NS	NS	0.73	0.018 J	0.038 J	0.4 U	0.025 J	0.086 J
2-Methylphenol (O-Cresol)	0.33	100	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2-Nitroaniline	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
2-Nitrophenol	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
3- And 4- Methylphenol (Total)	NS	NS	0.038 J	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
3,3'-Dichlorobenzidine	NS	NS	0.18 U	0.16 U	0.15 U	0.16 U	0.14 U	0.15 U
3-Nitroaniline	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.36 U	0.31 U	0.3 U	0.32 U	0.28 U	0.29 U
4-Bromophenyl Phenyl Ether	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4-Chloro-3-Methylphenol	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4-Chloroaniline	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4-Methylphenol (P-Cresol)	0.33	100	0.038 J	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4-Nitroaniline	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
4-Nitrophenol	NS	NS	0.92 U	0.79 U	0.75 U	0.81 U	0.71 U	0.74 U
Acenaphthene	20	100	0.15 J	0.02 J	0.031 J	0.4 U	0.063 J	0.18 J
Acenaphthylene	100	100	0.94	0.052 J	0.13 J	0.4 U	0.055 J	0.41
Acetophenone	NS	NS	0.067 J	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Anthracene	100	100	0.84	0.1 J	0.11 J	0.4 U	0.22 J	0.8
Atrazine	NS	NS	0.18 U	0.16 U	0.15 U	0.16 U	0.14 U	0.15 U
Benzaldehyde	NS	NS	0.098 J	0.39 UJ	0.37 UJ	0.4 UJ	0.35 UJ	0.36 UJ
Benzo(a)Anthracene	1	1	2.9	0.57	0.48	0.04 U	0.82	2.7
Benzo(a)Pyrene	1	1	4.1	0.66	0.63	0.04 U	0.9	3
Benzo(b)Fluoranthene	1	1	4.3	0.8	0.72	0.04 U	1	3.7
Benzo(g,h,i)Perylene	100	100	1.9	0.28 J	0.81	0.4 U	0.47	1.9
Benzo(k)Fluoranthene	0.8	3.9	1.6	0.32	0.25	0.04 U	0.37	1.3
Benzyl Butyl Phthalate	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Biphenyl (Diphenyl)	NS	NS	0.22 J	0.0057 J	0.02 J	0.4 U	0.007 J	0.035 J
Bis(2-Chloroethoxy) Methane	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.045 U	0.039 U	0.037 U	0.04 U	0.035 U	0.036 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Caprolactam	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Carbazole	NS	NS	0.12 J	0.033 J	0.034 J	0.4 U	0.064 J	0.39
Chrysene	1	3.9	3.5	0.53	0.5	0.4 U	0.74	2.7
Dibenz(a,h)Anthracene	0.33	0.33	0.53	0.083	0.1	0.04 U	0.11	0.52
Dibenzofuran	7	59	0.12 J	0.018 J	0.02 J	0.4 U	0.037 J	0.28 J
Diethyl Phthalate	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Dimethyl Phthalate	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Di-N-Butyl Phthalate	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Di-N-Octylphthalate	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Fluoranthene	100	100	4.2	1	0.79	0.4 U	1.4	5.6
Fluorene	30	100	0.22 J	0.023 J	0.039 J	0.4 U	0.061 J	0.23 J
Hexachlorobenzene	0.33	1.2	0.045 U	0.039 U	0.037 U	0.04 U	0.035 U	0.036 U
Hexachlorobutadiene	NS	NS	0.092 U	0.079 U	0.075 U	0.081 U	0.071 U	0.074 U
Hexachlorocyclopentadiene	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Hexachloroethane	NS	NS	0.045 U	0.039 U	0.037 U	0.04 U	0.035 U	0.036 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	2	0.31	0.53	0.04 U	0.52	2.1
Isophorone	NS	NS	0.18 U	0.16 U	0.15 U	0.16 U	0.14 U	0.15 U
Naphthalene	12	100	1.2	0.044 J	0.14 J	0.4 U	0.048 J	0.17 J
Nitrobenzene	NS	NS	0.045 U	0.039 U	0.037 U	0.04 U	0.035 U	0.036 U
N-Nitrosodi-N-Propylamine	NS	NS	0.045 U	0.039 U	0.037 U	0.04 U	0.035 U	0.036 U
N-Nitrosodiphenylamine	NS	NS	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Pentachlorophenol	0.8	6.7	0.36 U	0.31 U	0.3 U	0.32 U	0.28 U	0.29 U
Phenanthrene	100	100	2.8	0.42	0.57	0.012 J	0.9	4.8
Phenol	0.33	100	0.45 U	0.39 U	0.37 U	0.4 U	0.35 U	0.36 U
Pyrene	100	100	4.4	0.92	1.1	0.012 J	1.4	5.4

Table 3
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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-01_0-2_20230810 460-285947-1 8/10/2023 mg/kg 1	RI-SB-01_8-10_20230810 460-285947-2 8/10/2023 mg/kg 1	RI-SB-01_10-12_20230810 460-285947-3 8/10/2023 mg/kg 1	RI-SB-02_0-2_20230809 460-285841-7 8/09/2023 mg/kg 1	RI-SB-02_10-12_20230809 460-285841-8 8/09/2023 mg/kg 1	RI-SB-02_14-16_20230809 460-285841-9 8/09/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.036 U	0.037 U	0.038 U	0.034 U	0.037 U	0.039 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2,4,5-Trichlorophenol	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2,4,6-Trichlorophenol	NS	NS	0.15 U	0.15 U	0.15 U	0.14 U	0.15 U	0.16 U
2,4-Dichlorophenol	NS	NS	0.15 U	0.15 U	0.15 U	0.14 U	0.15 U	0.16 U
2,4-Dimethylphenol	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2,4-Dinitrophenol	NS	NS	0.29 UJ	0.3 U	0.3 U	0.27 U	0.3 U	0.32 U
2,4-Dinitrotoluene	NS	NS	0.073 U	0.075 U	0.076 U	0.069 U	0.075 U	0.08 U
2,6-Dinitrotoluene	NS	NS	0.073 U	0.075 U	0.076 U	0.069 U	0.075 U	0.08 U
2-Chloronaphthalene	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2-Chlorophenol	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2-Methylnaphthalene	NS	NS	0.36 U	0.012 J	0.38 U	0.025 J	0.17 J	0.013 J
2-Methylphenol (O-Cresol)	0.33	100	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2-Nitroaniline	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
2-Nitrophenol	NS	NS	0.36 UJ	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
3- And 4- Methylphenol (Total)	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
3,3'-Dichlorobenzidine	NS	NS	0.15 U	0.15 U	0.15 U	0.14 U	0.15 U	0.16 U
3-Nitroaniline	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.29 R	0.3 U	0.3 U	0.27 U	0.3 U	0.32 U
4-Bromophenyl Phenyl Ether	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4-Chloro-3-Methylphenol	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4-Chloroaniline	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4-Methylphenol (P-Cresol)	0.33	100	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4-Nitroaniline	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
4-Nitrophenol	NS	NS	0.73 UJ	0.75 U	0.76 U	0.69 U	0.75 U	0.8 U
Acenaphthene	20	100	0.027 J	0.014 J	0.38 U	0.11 J	0.7	0.015 J
Acenaphthylene	100	100	0.36 U	0.035 J	0.021 J	0.34 U	0.27 J	0.39 U
Acetophenone	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Anthracene	100	100	0.094 J	0.055 J	0.38 U	0.28 J	1.1	0.036 J
Atrazine	NS	NS	0.15 U	0.15 U	0.15 U	0.14 U	0.15 U	0.16 U
Benzaldehyde	NS	NS	0.36 UJ	0.37 UJ	0.38 UJ	0.34 UJ	0.37 UJ	0.39 UJ
Benzo(a)Anthracene	1	1	0.39	0.26	0.029 J	0.59	2.7	0.061
Benzo(a)Pyrene	1	1	0.4	0.3	0.027 J	0.6	2.9	0.064
Benzo(b)Fluoranthene	1	1	0.46	0.33	0.027 J	0.67	3.1	0.066
Benzo(g,h,i)Perylene	100	100	0.25 J	0.27 J	0.072 J	0.37	1.7	0.043 J
Benzo(k)Fluoranthene	0.8	3.9	0.17	0.13	0.0093 J	0.26	0.99	0.03 J
Benzyl Butyl Phthalate	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Biphenyl (Diphenyl)	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.13 J	0.39 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.036 U	0.037 U	0.038 U	0.034 U	0.037 U	0.039 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.36 U	0.37 U	0.38 U	0.025 J	0.036 J	0.39 U
Caprolactam	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Carbazole	NS	NS	0.36 U	0.37 U	0.38 U	0.046 J	0.25 J	0.39 U
Chrysene	1	3.9	0.38	0.27 J	0.02 J	0.56	2.6	0.055 J
Dibenz(a,h)Anthracene	0.33	0.33	0.058	0.042	0.038 U	0.079	0.35	0.039 U
Dibenzofuran	7	59	0.36 U	0.015 J	0.38 U	0.069 J	0.26 J	0.013 J
Diethyl Phthalate	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Dimethyl Phthalate	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Di-N-Butyl Phthalate	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Di-N-Octylphthalate	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Fluoranthene	100	100	0.75	0.44	0.033 J	1.4	6.1	0.14 J
Fluorene	30	100	0.019 J	0.013 J	0.38 U	0.1 J	0.44	0.016 J
Hexachlorobenzene	0.33	1.2	0.036 U	0.037 U	0.038 U	0.034 U	0.037 U	0.039 U
Hexachlorobutadiene	NS	NS	0.073 U	0.075 U	0.076 U	0.069 U	0.075 U	0.08 U
Hexachlorocyclopentadiene	NS	NS	0.36 UJ	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Hexachloroethane	NS	NS	0.036 U	0.037 U	0.038 U	0.034 U	0.037 U	0.039 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.28	0.22	0.038 U	0.42	1.9	0.044
Isophorone	NS	NS	0.15 U	0.15 U	0.15 U	0.14 U	0.15 U	0.16 U
Naphthalene	12	100	0.36 U	0.039 J	0.027 J	0.028 J	0.75	0.03 J
Nitrobenzene	NS	NS	0.036 U	0.037 U	0.038 U	0.034 U	0.037 U	0.039 U
N-Nitrosodi-N-Propylamine	NS	NS	0.036 U	0.037 U	0.038 U	0.034 U	0.037 U	0.039 U
N-Nitrosodiphenylamine	NS	NS	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Pentachlorophenol	0.8	6.7	0.29 U	0.3 U	0.3 U	0.27 U	0.3 U	0.32 U
Phenanthrene	100	100	0.38	0.21 J	0.03 J	1	3.8	0.11 J
Phenol	0.33	100	0.36 U	0.37 U	0.38 U	0.34 U	0.37 U	0.39 U
Pyrene	100	100	0.78	0.55	0.051 J	1.2	6.3	0.13 J

Table 3
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-03_0-2_20230809 460-285841-5 8/09/2023 mg/kg 1	RI-SB-03_8-10_20230809 460-285841-6 8/09/2023 mg/kg 1	RI-SB-04_0-2_20230808 460-285743-29 8/08/2023 mg/kg 1	RI-SB-X1_20230808 460-285743-33 8/08/2023 mg/kg 1	RI-SB-04_8-10_20230808 460-285743-30 8/08/2023 mg/kg 1	RI-SB-05_0-2_20230808 460-285743-22 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.036 UJ	0.033 U	NR	NR	NR	NR
2,3,4,6-Tetrachlorophenol	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2,4,5-Trichlorophenol	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2,4,6-Trichlorophenol	NS	NS	0.14 U	0.13 U	0.14 U	0.14 U	0.15 U	0.15 U
2,4-Dichlorophenol	NS	NS	0.14 U	0.13 U	0.14 U	0.14 U	0.15 U	0.15 U
2,4-Dimethylphenol	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2,4-Dinitrophenol	NS	NS	0.29 UJ	0.27 U	0.27 U	0.28 U	0.3 U	0.3 U
2,4-Dinitrotoluene	NS	NS	0.073 U	0.067 U	0.068 U	0.071 U	0.076 U	0.075 U
2,6-Dinitrotoluene	NS	NS	0.073 U	0.067 U	0.068 U	0.071 U	0.076 U	0.075 U
2-Chloronaphthalene	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2-Chlorophenol	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2-Methylnaphthalene	NS	NS	0.014 J	0.33 U	0.034 J	0.026 J	0.38 U	0.021 J
2-Methylphenol (O-Cresol)	0.33	100	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2-Nitroaniline	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
2-Nitrophenol	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
3- And 4- Methylphenol (Total)	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
3,3'-Dichlorobenzidine	NS	NS	0.14 U	0.13 U	0.14 U	0.14 U	0.15 U	0.15 U
3-Nitroaniline	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.29 UJ	0.27 U	0.27 U	0.28 U	0.3 U	0.3 U
4-Bromophenyl Phenyl Ether	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4-Chloro-3-Methylphenol	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4-Chloroaniline	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4-Methylphenol (P-Cresol)	0.33	100	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4-Nitroaniline	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
4-Nitrophenol	NS	NS	0.73 U	0.67 U	0.68 U	0.71 U	0.76 U	0.75 U
Acenaphthene	20	100	0.029 J	0.33 U	0.34 U	0.067 J	0.38 U	0.036 J
Acenaphthylene	100	100	0.024 J	0.33 U	0.34 U	0.05 J	0.38 U	0.017 J
Acetophenone	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Anthracene	100	100	0.12 J	0.33 U	0.34 U	0.18 J	0.38 U	0.089 J
Atrazine	NS	NS	0.14 U	0.13 U	0.14 U	0.14 U	0.15 U	0.15 U
Benzaldehyde	NS	NS	0.36 UJ	0.33 UJ	0.34 UJ	0.35 UJ	0.38 UJ	0.37 UJ
Benzo(a)Anthracene	1	1	0.74	0.033 U	0.034 U	0.65	0.038 U	0.46
Benzo(a)Pyrene	1	1	0.74	0.033 U	0.027 J	0.7	0.01 J	0.51
Benzo(b)Fluoranthene	1	1	0.85	0.0094 J	0.036	0.81	0.012 J	0.57
Benzo(g,h,i)Perylene	100	100	0.42	0.33 U	0.033 J	0.43	0.38 U	0.3 J
Benzo(k)Fluoranthene	0.8	3.9	0.28	0.033 U	0.0081 J	0.31	0.038 U	0.2
Benzyl Butyl Phthalate	NS	NS	0.36 U	0.33 U	0.054 J	0.35 U	0.38 U	0.37 U
Biphenyl (Diphenyl)	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.036 U	0.033 U	0.034 U	0.035 U	0.038 U	0.037 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.12 J	0.33 U	0.23 J	0.046 J	0.38 U	0.37 U
Caprolactam	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Carbazole	NS	NS	0.024 J	0.33 U	0.34 U	0.058 J	0.38 U	0.033 J
Chrysene	1	3.9	0.73	0.33 U	0.041 J	0.66	0.38 U	0.5
Dibenz(a,h)Anthracene	0.33	0.33	0.11	0.033 U	0.034 U	0.12	0.038 U	0.083
Dibenzofuran	7	59	0.015 J	0.33 U	0.34 U	0.041 J	0.38 U	0.023 J
Diethyl Phthalate	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Dimethyl Phthalate	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Di-N-Butyl Phthalate	NS	NS	0.36 U	0.33 U	0.028 J	0.35 U	0.38 U	0.37 U
Di-N-Octylphthalate	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Fluoranthene	100	100	1.3	0.012 J	0.034 J	1.3	0.38 U	0.81
Fluorene	30	100	0.027 J	0.33 U	0.34 U	0.06 J	0.38 U	0.028 J
Hexachlorobenzene	0.33	1.2	0.036 U	0.033 U	0.034 U	0.035 U	0.038 U	0.037 U
Hexachlorobutadiene	NS	NS	0.073 U	0.067 U	0.068 U	0.071 U	0.076 U	0.075 U
Hexachlorocyclopentadiene	NS	NS	0.36 UJ	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Hexachloroethane	NS	NS	0.036 U	0.033 U	0.034 U	0.035 U	0.038 U	0.037 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.47	0.033 U	0.016 J	0.53	0.038 U	0.36
Isophorone	NS	NS	0.14 U	0.13 U	0.14 U	0.14 U	0.15 U	0.15 U
Naphthalene	12	100	0.022 J	0.33 U	0.01 J	0.042 J	0.38 U	0.032 J
Nitrobenzene	NS	NS	0.036 U	0.033 U	0.034 U	0.035 U	0.038 U	0.037 U
N-Nitrosodi-N-Propylamine	NS	NS	0.036 U	0.033 U	0.034 U	0.035 U	0.038 U	0.037 U
N-Nitrosodiphenylamine	NS	NS	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Pentachlorophenol	0.8	6.7	0.29 U	0.27 U	0.27 U	0.28 U	0.3 U	0.3 U
Phenanthrene	100	100	0.47	0.33 U	0.032 J	0.88	0.38 U	0.47
Phenol	0.33	100	0.36 U	0.33 U	0.34 U	0.35 U	0.38 U	0.37 U
Pyrene	100	100	1.2	0.011 J	0.052 J	1.4	0.012 J	0.89

Table 3
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-06 0-2 20230810 460-285947-11 8/10/2023 mg/kg 1	RI-SB-06 8-10 20230810 460-285947-4 8/10/2023 mg/kg 1	RI-SB-07 0-2 20230808 460-285743-25 8/08/2023 mg/kg 1	RI-SB-07 8-10 20230808 460-285743-26 8/08/2023 mg/kg 1	RI-SB-08 0-2 20230810 460-285947-5 8/10/2023 mg/kg 1	RI-SB-08 7-9 20230810 460-285947-6 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.034 U	0.041 U	NR	NR	0.035 U	0.036 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
2,4,5-Trichlorophenol	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
2,4,6-Trichlorophenol	NS	NS	0.14 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
2,4-Dichlorophenol	NS	NS	0.14 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
2,4-Dimethylphenol	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
2,4-Dinitrophenol	NS	NS	0.27 U	0.33 U	0.29 U	0.29 U	0.28 U	0.29 U
2,4-Dinitrotoluene	NS	NS	0.069 U	0.084 U	0.073 U	0.073 U	0.07 U	0.072 U
2,6-Dinitrotoluene	NS	NS	0.069 U	0.084 U	0.073 U	0.073 U	0.07 U	0.072 U
2-Chloronaphthalene	NS	NS	0.34 U	0.029 J	0.36 U	0.36 U	0.35 U	0.36 U
2-Chlorophenol	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
2-Methylnaphthalene	NS	NS	0.34 U	0.033 J	0.077 J	0.011 J	0.012 J	0.36 U
2-Methylphenol (O-Cresol)	0.33	100	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
2-Nitroaniline	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
2-Nitrophenol	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
3- And 4- Methylphenol (Total)	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.024 J
3,3'-Dichlorobenzidine	NS	NS	0.14 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
3-Nitroaniline	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.27 U	0.33 U	0.29 U	0.29 U	0.28 U	0.29 U
4-Bromophenyl Phenyl Ether	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
4-Chloro-3-Methylphenol	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
4-Chloroaniline	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
4-Methylphenol (P-Cresol)	0.33	100	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.024 J
4-Nitroaniline	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
4-Nitrophenol	NS	NS	0.69 U	0.84 U	0.73 U	0.73 U	0.7 U	0.72 U
Acenaphthene	20	100	0.34 U	0.029 J	0.13 J	0.36 U	0.35 U	0.36 U
Acenaphthylene	100	100	0.014 J	0.046 J	0.051 J	0.093 J	0.021 J	0.36 U
Acetophenone	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Anthracene	100	100	0.014 J	0.09 J	0.35 J	0.026 J	0.022 J	0.36 U
Atrazine	NS	NS	0.14 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
Benzaldehyde	NS	NS	0.34 UJ	0.41 UJ	0.36 UJ	0.36 UJ	0.35 UJ	0.36 UJ
Benzo(a)Anthracene	1	1	0.071	0.53	0.78	0.044	0.12	0.036 U
Benzo(a)Pyrene	1	1	0.073	0.56	0.7	0.43	0.15	0.014 J
Benzo(b)Fluoranthene	1	1	0.1	0.73	0.8	0.25	0.2	0.017 J
Benzo(g,h,i)Perylene	100	100	0.031 J	0.4 J	0.45	1.1	0.068 J	0.36 U
Benzo(k)Fluoranthene	0.8	3.9	0.037	0.27	0.3	0.059	0.072	0.036 U
Benzyl Butyl Phthalate	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Biphenyl (Diphenyl)	NS	NS	0.34 U	0.018 J	0.026 J	0.36 U	0.35 U	0.36 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.034 U	0.041 U	0.036 U	0.036 U	0.035 U	0.036 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.34 U	0.41 U	0.12 J	0.36 U	0.054 J	0.36 U
Caprolactam	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Carbazole	NS	NS	0.34 U	0.029 J	0.057 J	0.36 U	0.35 U	0.36 U
Chrysene	1	3.9	0.07 J	0.63	0.76	0.091 J	0.14 J	0.016 J
Dibenz(a,h)Anthracene	0.33	0.33	0.034 U	0.09	0.13	0.077	0.02 J	0.036 U
Dibenzofuran	7	59	0.34 U	0.043 J	0.067 J	0.36 U	0.35 U	0.36 U
Diethyl Phthalate	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Dimethyl Phthalate	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Di-N-Butyl Phthalate	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Di-N-Octylphthalate	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Fluoranthene	100	100	0.1 J	0.87	1.5	0.037 J	0.17 J	0.036 J
Fluorene	30	100	0.34 U	0.023 J	0.14 J	0.011 J	0.35 U	0.36 U
Hexachlorobenzene	0.33	1.2	0.034 U	0.041 U	0.036 U	0.036 U	0.035 U	0.036 U
Hexachlorobutadiene	NS	NS	0.069 U	0.084 U	0.073 U	0.073 U	0.07 U	0.072 U
Hexachlorocyclopentadiene	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Hexachloroethane	NS	NS	0.034 U	0.041 U	0.036 U	0.036 U	0.035 U	0.036 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.038	0.42	0.49	0.5	0.081	0.036 U
Isophorone	NS	NS	0.14 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
Naphthalene	12	100	0.34 U	0.16 J	0.19 J	0.03 J	0.014 J	0.054 J
Nitrobenzene	NS	NS	0.034 U	0.041 U	0.036 U	0.036 U	0.035 U	0.036 U
N-Nitrosodi-N-Propylamine	NS	NS	0.034 U	0.041 U	0.036 U	0.036 U	0.035 U	0.036 U
N-Nitrosodiphenylamine	NS	NS	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Pentachlorophenol	0.8	6.7	0.27 U	0.33 U	0.29 U	0.29 U	0.28 U	0.29 U
Phenanthrene	100	100	0.044 J	0.47	1.5	0.044 J	0.062 J	0.035 J
Phenol	0.33	100	0.34 U	0.41 U	0.36 U	0.36 U	0.35 U	0.36 U
Pyrene	100	100	0.11 J	1.1	1.7	0.1 J	0.2 J	0.05 J

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-08_9-10_20230810 460-285947-7 8/10/2023 mg/kg 1	RI-SB-09_0-2_20230809 460-285841-1 8/09/2023 mg/kg 1	RI-SB-09_8-10_20230809 460-285841-2 8/09/2023 mg/kg 1	RI-SB-10_0-2_20230808 460-285743-34 8/08/2023 mg/kg 1	RI-SB-10_8-10_20230808 460-285743-35 8/08/2023 mg/kg 1	RI-SB-11_0-2_20230809 460-285841-3 8/09/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.38 U	0.38 U	0.38 U	0.34 U	0.37 U	0.34 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.038 U	0.034 U	0.038 U	NR	NR	0.034 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2,4,5-Trichlorophenol	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2,4,6-Trichlorophenol	NS	NS	0.15 U	0.14 U	0.15 U	0.14 U	0.15 U	0.14 U
2,4-Dichlorophenol	NS	NS	0.15 U	0.14 U	0.15 U	0.14 U	0.15 U	0.14 U
2,4-Dimethylphenol	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2,4-Dinitrophenol	NS	NS	0.31 U	0.27 U	0.3 U	0.27 U	0.3 U	0.27 U
2,4-Dinitrotoluene	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U	0.069 U
2,6-Dinitrotoluene	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U	0.069 U
2-Chloronaphthalene	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2-Chlorophenol	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2-Methylnaphthalene	NS	NS	0.073 J	0.019 J	0.38 U	0.019 J	0.37 U	0.34 U
2-Methylphenol (O-Cresol)	0.33	100	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2-Nitroaniline	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
2-Nitrophenol	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
3- And 4- Methylphenol (Total)	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
3,3'-Dichlorobenzidine	NS	NS	0.15 U	0.14 U	0.15 U	0.14 U	0.15 U	0.14 U
3-Nitroaniline	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.31 U	0.27 U	0.3 U	0.27 U	0.3 U	0.27 U
4-Bromophenyl Phenyl Ether	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4-Chloro-3-Methylphenol	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4-Chloroaniline	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4-Methylphenol (P-Cresol)	0.33	100	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4-Nitroaniline	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
4-Nitrophenol	NS	NS	0.78 U	0.69 U	0.76 U	0.68 U	0.74 U	0.69 U
Acenaphthene	20	100	0.15 J	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Acenaphthylene	100	100	0.055 J	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Acetophenone	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Anthracene	100	100	0.22 J	0.02 J	0.38 U	0.34 U	0.37 U	0.029 J
Atrazine	NS	NS	0.15 U	0.14 U	0.15 U	0.14 U	0.15 U	0.14 U
Benzaldehyde	NS	NS	0.38 UJ	0.34 UJ	0.38 UJ	0.34 UJ	0.37 UJ	0.34 UJ
Benzo(a)Anthracene	1	1	0.4	0.045	0.038 U	0.03 J	0.037 U	0.17
Benzo(a)Pyrene	1	1	0.39	0.044	0.013 J	0.02 J	0.017 J	0.17
Benzo(b)Fluoranthene	1	1	0.42	0.063	0.018 J	0.038	0.019 J	0.21
Benzo(g,h,i)Perylene	100	100	0.22 J	0.036 J	0.38 U	0.038 J	0.016 J	0.12 J
Benzo(k)Fluoranthene	0.8	3.9	0.15	0.021 J	0.038 U	0.01 J	0.0089 J	0.079
Benzyl Butyl Phthalate	NS	NS	0.38 U	0.34 U	0.38 U	0.29 J	0.37 U	0.34 U
Biphenyl (Diphenyl)	NS	NS	0.028 J	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.038 U	0.034 U	0.038 U	0.034 U	0.037 U	0.034 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.38 U	0.055 J	0.38 U	1.9	0.37 U	0.031 J
Caprolactam	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Carbazole	NS	NS	0.059 J	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Chrysene	1	3.9	0.4	0.073 J	0.38 U	0.032 J	0.022 J	0.19 J
Dibenz(a,h)Anthracene	0.33	0.33	0.052	0.034 U	0.038 U	0.034 U	0.037 U	0.028 J
Dibenzofuran	7	59	0.088 J	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Diethyl Phthalate	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Dimethyl Phthalate	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Di-N-Butyl Phthalate	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Di-N-Octylphthalate	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Fluoranthene	100	100	0.84	0.093 J	0.024 J	0.037 J	0.023 J	0.3 J
Fluorene	30	100	0.11 J	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Hexachlorobenzene	0.33	1.2	0.038 U	0.034 U	0.038 U	0.034 U	0.037 U	0.034 U
Hexachlorobutadiene	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U	0.069 U
Hexachlorocyclopentadiene	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Hexachloroethane	NS	NS	0.038 U	0.034 U	0.038 U	0.034 U	0.037 U	0.034 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.23	0.033 J	0.038 U	0.017 J	0.016 J	0.12
Isophorone	NS	NS	0.15 U	0.14 U	0.15 U	0.14 U	0.15 U	0.14 U
Naphthalene	12	100	1.8	0.013 J	0.38 U	0.0099 J	0.37 U	0.0098 J
Nitrobenzene	NS	NS	0.038 U	0.034 U	0.038 U	0.034 U	0.037 U	0.034 U
N-Nitrosodi-N-Propylamine	NS	NS	0.038 U	0.034 U	0.038 U	0.034 U	0.037 U	0.034 U
N-Nitrosodiphenylamine	NS	NS	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Pentachlorophenol	0.8	6.7	0.31 U	0.27 U	0.3 U	0.27 U	0.3 U	0.27 U
Phenanthrene	100	100	0.77	0.077 J	0.019 J	0.071 J	0.024 J	0.12 J
Phenol	0.33	100	0.38 U	0.34 U	0.38 U	0.34 U	0.37 U	0.34 U
Pyrene	100	100	1	0.08 J	0.02 J	0.081 J	0.024 J	0.27 J

Table 3
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-11 8-10_20230809 460-285841-4 8/09/2023 mg/kg 1	RI-SB-12 0-2_20230811 460-286022-3 8/11/2023 mg/kg 1	RI-SB-12 7-9_20230811 460-286022-4 8/11/2023 mg/kg 1	RI-SB-12 10-12_20230811 460-286022-5 8/11/2023 mg/kg 1	RI-SB-13 0-2_20230808 460-285743-31 8/08/2023 mg/kg 1	RI-SB-13 8-10_20230808 460-285743-32 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.036 U	0.034 U	0.037 U	0.039 U	NR	NR
2,3,4,6-Tetrachlorophenol	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2,4,5-Trichlorophenol	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2,4,6-Trichlorophenol	NS	NS	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	0.16 U
2,4-Dichlorophenol	NS	NS	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	0.16 U
2,4-Dimethylphenol	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2,4-Dinitrophenol	NS	NS	0.29 U	0.27 U	0.3 U	0.32 U	0.27 U	0.32 U
2,4-Dinitrotoluene	NS	NS	0.072 U	0.069 U	0.076 U	0.08 U	0.069 U	0.08 U
2,6-Dinitrotoluene	NS	NS	0.072 U	0.069 U	0.076 U	0.08 U	0.069 U	0.08 U
2-Chloronaphthalene	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2-Chlorophenol	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2-Methylnaphthalene	NS	NS	0.094 J	0.028 J	0.37 U	0.39 U	0.021 J	0.4 U
2-Methylphenol (O-Cresol)	0.33	100	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2-Nitroaniline	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
2-Nitrophenol	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
3- And 4- Methylphenol (Total)	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
3,3'-Dichlorobenzidine	NS	NS	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	0.16 U
3-Nitroaniline	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.29 U	0.27 U	0.3 U	0.32 U	0.27 U	0.32 U
4-Bromophenyl Phenyl Ether	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4-Chloro-3-Methylphenol	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4-Chloroaniline	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4-Methylphenol (P-Cresol)	0.33	100	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4-Nitroaniline	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
4-Nitrophenol	NS	NS	0.72 U	0.69 U	0.76 U	0.8 U	0.69 U	0.8 U
Acenaphthene	20	100	0.012 J	0.068 J	0.37 U	0.39 U	0.34 U	0.4 U
Acenaphthylene	100	100	0.39	0.017 J	0.37 U	0.39 U	0.34 U	0.4 U
Acetophenone	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Anthracene	100	100	0.12 J	0.2 J	0.37 U	0.023 J	0.34 U	0.4 U
Atrazine	NS	NS	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	0.16 U
Benzaldehyde	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Benzo(a)Anthracene	1	1	0.18	0.56	0.073	0.083	0.034 U	0.04 U
Benzo(a)Pyrene	1	1	0.42	0.63	0.07	0.085	0.026 J	0.019 J
Benzo(b)Fluoranthene	1	1	0.34	0.77	0.075	0.11	0.034	0.026 J
Benzo(g,h,i)Perylene	100	100	2.4	0.32 J	0.042 J	0.054 J	0.038 J	0.018 J
Benzo(k)Fluoranthene	0.8	3.9	0.1	0.25	0.033 J	0.037 J	0.01 J	0.01 J
Benzyl Butyl Phthalate	NS	NS	0.36 U	0.038 J	0.37 U	0.39 U	0.024 J	0.4 U
Biphenyl (Diphenyl)	NS	NS	0.023 J	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.036 U	0.034 U	0.037 U	0.039 U	0.034 U	0.04 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.36 U	0.12 J	0.37 U	0.39 U	0.45	0.4 U
Caprolactam	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Carbazole	NS	NS	0.36 U	0.046 J	0.37 U	0.39 U	0.34 U	0.4 U
Chrysene	1	3.9	0.19 J	0.59	0.069 J	0.082 J	0.021 J	0.021 J
Dibenz(a,h)Anthracene	0.33	0.33	0.099	0.063	0.037 U	0.039 U	0.034 U	0.04 U
Dibenzofuran	7	59	0.36 U	0.033 J	0.37 U	0.39 U	0.34 U	0.4 U
Diethyl Phthalate	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Dimethyl Phthalate	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Di-N-Butyl Phthalate	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Di-N-Octylphthalate	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Fluoranthene	100	100	0.24 J	1.2	0.089 J	0.12 J	0.035 J	0.036 J
Fluorene	30	100	0.039 J	0.045 J	0.37 U	0.39 U	0.34 U	0.4 U
Hexachlorobenzene	0.33	1.2	0.036 U	0.034 U	0.037 U	0.039 U	0.034 U	0.04 U
Hexachlorobutadiene	NS	NS	0.072 U	0.069 U	0.076 U	0.08 U	0.069 U	0.08 U
Hexachlorocyclopentadiene	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Hexachloroethane	NS	NS	0.036 U	0.034 U	0.037 U	0.039 U	0.034 U	0.04 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.8	0.33	0.037	0.062	0.023 J	0.016 J
Isophorone	NS	NS	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U	0.16 U
Naphthalene	12	100	0.22 J	0.048 J	0.37 U	0.022 J	0.017 J	0.016 J
Nitrobenzene	NS	NS	0.036 U	0.034 U	0.037 U	0.039 U	0.034 U	0.04 U
N-Nitrosodi-N-Propylamine	NS	NS	0.036 U	0.034 U	0.037 U	0.039 U	0.034 U	0.04 U
N-Nitrosodiphenylamine	NS	NS	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Pentachlorophenol	0.8	6.7	0.29 U	0.27 U	0.3 U	0.32 U	0.27 U	0.32 U
Phenanthrene	100	100	0.28 J	0.82	0.04 J	0.088 J	0.034 J	0.031 J
Phenol	0.33	100	0.36 U	0.34 U	0.37 U	0.39 U	0.34 U	0.4 U
Pyrene	100	100	0.36	1.2	0.13 J	0.16 J	0.05 J	0.041 J

Table 3
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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-14_0-2_20230811 460-286022-1 8/11/2023 mg/kg 1	RI-SB-X2_20230811 460-286022-6 8/11/2023 mg/kg 1	RI-SB-14_8-10_20230811 460-286022-2 8/11/2023 mg/kg 1	RI-SB-15_0-2_20230808 460-285743-27 8/08/2023 mg/kg 1	RI-SB-15_8-10_20230808 460-285743-28 8/08/2023 mg/kg 1	RI-SB-16_0-2_20230808 460-285743-1 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
1,4-Dioxane (P-Dioxane)	0.1	13	0.034 U	0.034 U	0.038 U	NR	NR	NR
2,3,4,6-Tetrachlorophenol	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2,4,5-Trichlorophenol	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2,4,6-Trichlorophenol	NS	NS	0.14 U	0.14 U	0.15 U	0.15 U	0.14 U	NR
2,4-Dichlorophenol	NS	NS	0.14 U	0.14 U	0.15 U	0.15 U	0.14 U	NR
2,4-Dimethylphenol	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2,4-Dinitrophenol	NS	NS	0.27 U	0.28 U	0.31 U	0.29 U	0.27 U	NR
2,4-Dinitrotoluene	NS	NS	0.069 U	0.069 U	0.077 U	0.073 U	0.068 U	NR
2,6-Dinitrotoluene	NS	NS	0.069 U	0.069 U	0.077 U	0.073 U	0.068 U	NR
2-Chloronaphthalene	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2-Chlorophenol	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2-Methylnaphthalene	NS	NS	0.022 J	0.045 J	0.018 J	0.05 J	0.34 U	NR
2-Methylphenol (O-Cresol)	0.33	100	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2-Nitroaniline	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
2-Nitrophenol	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
3- And 4- Methylphenol (Total)	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
3,3'-Dichlorobenzidine	NS	NS	0.14 U	0.14 U	0.15 U	0.15 U	0.14 U	NR
3-Nitroaniline	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
4,6-Dinitro-2-Methylphenol	NS	NS	0.27 U	0.28 U	0.31 U	0.29 U	0.27 U	NR
4-Bromophenyl Phenyl Ether	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
4-Chloro-3-Methylphenol	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
4-Chloroaniline	NS	NS	0.34 UJ	0.34 UJ	0.38 UJ	0.36 U	0.34 U	NR
4-Chlorophenyl Phenyl Ether	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
4-Methylphenol (P-Cresol)	0.33	100	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
4-Nitroaniline	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
4-Nitrophenol	NS	NS	0.69 U	0.69 U	0.77 U	0.73 U	0.68 U	NR
Acenaphthene	20	100	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	0.07 J
Acenaphthylene	100	100	0.01 J	0.013 J	0.67	0.36 U	0.34 U	0.02 J
Acetophenone	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Anthracene	100	100	0.028 J	0.03 J	0.14 J	0.36 U	0.34 U	0.24 J
Atrazine	NS	NS	0.14 U	0.14 U	0.15 U	0.15 U	0.14 U	NR
Benzaldehyde	NS	NS	0.34 UJ	0.34 UJ	0.38 UJ	0.36 UJ	0.34 UJ	NR
Benzo(a)Anthracene	1	1	0.24	0.23	0.087	0.03 J	0.034 U	1
Benzo(a)Pyrene	1	1	0.27	0.26	1.1	0.026 J	0.014 J	1.1
Benzo(b)Fluoranthene	1	1	0.33	0.4	0.45	0.039	0.012 J	1.3
Benzo(g,h,i)Perylene	100	100	0.18 J	0.16 J	4.3	0.017 J	0.015 J	0.77
Benzo(k)Fluoranthene	0.8	3.9	0.13	0.13	0.093	0.013 J	0.011 J	0.47
Benzyl Butyl Phthalate	NS	NS	0.34 U	0.34 U	0.38 U	0.025 J	0.34 U	NR
Biphenyl (Diphenyl)	NS	NS	0.34 U	0.014 J	0.38 U	0.36 U	0.34 U	NR
Bis(2-Chloroethoxy) Methane	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.034 U	0.034 U	0.038 U	0.036 U	0.034 U	NR
Bis(2-Chloroisopropyl) Ether	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.037 J	0.34 U	0.38 U	0.36	0.022 J	NR
Caprolactam	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Carbazole	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Chrysene	1	3.9	0.28 J	0.36	0.12 J	0.044 J	0.34 U	1
Dibenz(a,h)Anthracene	0.33	0.33	0.043	0.048	0.24	0.036 U	0.034 U	0.16
Dibenzofuran	7	59	0.34 U	0.019 J	0.38 U	0.013 J	0.34 U	NR
Diethyl Phthalate	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Dimethyl Phthalate	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Di-N-Butyl Phthalate	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Di-N-Octylphthalate	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.021 J	NR
Fluoranthene	100	100	0.32 J	0.32 J	0.072 J	0.056 J	0.34 U	2.1
Fluorene	30	100	0.34 U	0.34 U	0.044 J	0.36 U	0.34 U	0.053 J
Hexachlorobenzene	0.33	1.2	0.034 U	0.034 U	0.038 U	0.036 U	0.034 U	NR
Hexachlorobutadiene	NS	NS	0.069 U	0.069 U	0.077 U	0.073 U	0.068 U	NR
Hexachlorocyclopentadiene	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Hexachloroethane	NS	NS	0.034 U	0.034 U	0.038 U	0.036 U	0.034 U	NR
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.2	0.2	2.2	0.019 J	0.016 J	0.88
Isophorone	NS	NS	0.14 U	0.14 U	0.15 U	0.15 U	0.14 U	NR
Naphthalene	12	100	0.021 J	0.046 J	0.054 J	0.041 J	0.34 U	0.059 J
Nitrobenzene	NS	NS	0.034 U	0.034 U	0.038 U	0.036 U	0.034 U	NR
N-Nitrosodi-N-Propylamine	NS	NS	0.034 U	0.034 U	0.038 U	0.036 U	0.034 U	NR
N-Nitrosodiphenylamine	NS	NS	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Pentachlorophenol	0.8	6.7	0.27 U	0.28 U	0.31 U	0.29 U	0.27 U	NR
Phenanthrene	100	100	0.13 J	0.19 J	0.06 J	0.053 J	0.34 U	1.1
Phenol	0.33	100	0.34 U	0.34 U	0.38 U	0.36 U	0.34 U	NR
Pyrene	100	100	0.44	0.39	0.17 J	0.058 J	0.34 U	2

Table 3
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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-16 2-4 20230808 460-285743-2 8/08/2023 mg/kg 1	RI-SB-16 2-4 20230808 460-285743-2 8/08/2023 mg/kg 5	RI-SB-16 4-6 20230808 460-285743-3 8/08/2023 mg/kg 1	RI-SB-16 8-10 20230808 460-285743-5 8/08/2023 mg/kg 1	RI-SB-17 0-2 20230808 460-285743-6 8/08/2023 mg/kg 1	RI-SB-17 4-6 20230808 460-285743-8 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	NR	NR	NR	NR	NR	NR
1,4-Dioxane (P-Dioxane)	0.1	13	NR	NR	NR	NR	NR	NR
2,3,4,6-Tetrachlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4,5-Trichlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4,6-Trichlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dichlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dimethylphenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dinitrophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dinitrotoluene	NS	NS	NR	NR	NR	NR	NR	NR
2,6-Dinitrotoluene	NS	NS	NR	NR	NR	NR	NR	NR
2-Chloronaphthalene	NS	NS	NR	NR	NR	NR	NR	NR
2-Chlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2-Methylnaphthalene	NS	NS	NR	NR	NR	NR	NR	NR
2-Methylphenol (O-Cresol)	0.33	100	NR	NR	NR	NR	NR	NR
2-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	NR
2-Nitrophenol	NS	NS	NR	NR	NR	NR	NR	NR
3- And 4- Methylphenol (Total)	NS	NS	NR	NR	NR	NR	NR	NR
3,3'-Dichlorobenzidine	NS	NS	NR	NR	NR	NR	NR	NR
3-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	NR
4,6-Dinitro-2-Methylphenol	NS	NS	NR	NR	NR	NR	NR	NR
4-Bromophenyl Phenyl Ether	NS	NS	NR	NR	NR	NR	NR	NR
4-Chloro-3-Methylphenol	NS	NS	NR	NR	NR	NR	NR	NR
4-Chloroaniline	NS	NS	NR	NR	NR	NR	NR	NR
4-Chlorophenyl Phenyl Ether	NS	NS	NR	NR	NR	NR	NR	NR
4-Methylphenol (P-Cresol)	0.33	100	NR	NR	NR	NR	NR	NR
4-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	NR
4-Nitrophenol	NS	NS	NR	NR	NR	NR	NR	NR
Acenaphthene	20	100	0.46	NR	0.36 U	0.35 U	0.34 U	0.3 J
Acenaphthylene	100	100	0.052 J	NR	0.018 J	0.35 U	0.34 U	0.034 J
Acetophenone	NS	NS	NR	NR	NR	NR	NR	NR
Anthracene	100	100	2.1	NR	0.015 J	0.35 U	0.34 U	1
Atrazine	NS	NS	NR	NR	NR	NR	NR	NR
Benzaldehyde	NS	NS	NR	NR	NR	NR	NR	NR
Benzo(a)Anthracene	1	1	5.5	NR	0.059	0.035 U	0.034 U	3
Benzo(a)Pyrene	1	1	4.6	NR	0.098	0.035 U	0.014 J	3
Benzo(b)Fluoranthene	1	1	6.2	NR	0.11	0.035 U	0.015 J	3.6
Benzo(g,h,i)Perylene	100	100	2.7	NR	0.12 J	0.35 U	0.34 U	2.1
Benzo(k)Fluoranthene	0.8	3.9	2.1	NR	0.034 J	0.035 U	0.034 U	1.2
Benzyl Butyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Biphenyl (Diphenyl)	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Chloroethoxy) Methane	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Chloroisopropyl) Ether	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Ethylhexyl) Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Caprolactam	NS	NS	NR	NR	NR	NR	NR	NR
Carbazole	NS	NS	NR	NR	NR	NR	NR	NR
Chrysene	1	3.9	5.6	NR	0.063 J	0.35 U	0.016 J	2.9
Dibenz(a,h)Anthracene	0.33	0.33	0.8	NR	0.036 U	0.035 U	0.034 U	0.43
Dibenzofuran	7	59	NR	NR	NR	NR	NR	NR
Diethyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Dimethyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Di-N-Butyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Di-N-Octylphthalate	NS	NS	NR	NR	NR	NR	NR	NR
Fluoranthene	100	100	NR	12	0.077 J	0.35 U	0.035 J	6.9
Fluorene	30	100	0.46	NR	0.36 U	0.35 U	0.34 U	0.2 J
Hexachlorobenzene	0.33	1.2	NR	NR	NR	NR	NR	NR
Hexachlorobutadiene	NS	NS	NR	NR	NR	NR	NR	NR
Hexachlorocyclopentadiene	NS	NS	NR	NR	NR	NR	NR	NR
Hexachloroethane	NS	NS	NR	NR	NR	NR	NR	NR
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	3.3	NR	0.12	0.035 U	0.034 U	2.4
Isophorone	NS	NS	NR	NR	NR	NR	NR	NR
Naphthalene	12	100	0.031 J	NR	0.044 J	0.35 U	0.34 U	0.073 J
Nitrobenzene	NS	NS	NR	NR	NR	NR	NR	NR
N-Nitrosodi-N-Propylamine	NS	NS	NR	NR	NR	NR	NR	NR
N-Nitrosodiphenylamine	NS	NS	NR	NR	NR	NR	NR	NR
Pentachlorophenol	0.8	6.7	NR	NR	NR	NR	NR	NR
Phenanthrene	100	100	NR	9.8	0.049 J	0.35 U	0.032 J	4.2
Phenol	0.33	100	NR	NR	NR	NR	NR	NR
Pyrene	100	100	NR	9.7	0.08 J	0.35 U	0.028 J	6.2

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-17 6-8 20230808 460-285743-9 8/08/2023 mg/kg 1	RI-SB-17 8-10 20230808 460-285743-10 8/08/2023 mg/kg 1	RI-SB-18 0-2 20230808 460-285743-14 8/08/2023 mg/kg 1	RI-SB-18 4-6 20230808 460-285743-16 8/08/2023 mg/kg 1	RI-SB-18 4-6 20230808 460-285743-16 8/08/2023 mg/kg 2	RI-SB-18 6-8 20230808 460-285743-17 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	NR	NR	NR	NR	NR	NR
1,4-Dioxane (P-Dioxane)	0.1	13	NR	NR	NR	NR	NR	NR
2,3,4,6-Tetrachlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4,5-Trichlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4,6-Trichlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dichlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dimethylphenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dinitrophenol	NS	NS	NR	NR	NR	NR	NR	NR
2,4-Dinitrotoluene	NS	NS	NR	NR	NR	NR	NR	NR
2,6-Dinitrotoluene	NS	NS	NR	NR	NR	NR	NR	NR
2-Chloronaphthalene	NS	NS	NR	NR	NR	NR	NR	NR
2-Chlorophenol	NS	NS	NR	NR	NR	NR	NR	NR
2-Methylnaphthalene	NS	NS	NR	NR	NR	NR	NR	NR
2-Methylphenol (O-Cresol)	0.33	100	NR	NR	NR	NR	NR	NR
2-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	NR
2-Nitrophenol	NS	NS	NR	NR	NR	NR	NR	NR
3- And 4- Methylphenol (Total)	NS	NS	NR	NR	NR	NR	NR	NR
3,3'-Dichlorobenzidine	NS	NS	NR	NR	NR	NR	NR	NR
3-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	NR
4,6-Dinitro-2-Methylphenol	NS	NS	NR	NR	NR	NR	NR	NR
4-Bromophenyl Phenyl Ether	NS	NS	NR	NR	NR	NR	NR	NR
4-Chloro-3-Methylphenol	NS	NS	NR	NR	NR	NR	NR	NR
4-Chloroaniline	NS	NS	NR	NR	NR	NR	NR	NR
4-Chlorophenyl Phenyl Ether	NS	NS	NR	NR	NR	NR	NR	NR
4-Methylphenol (P-Cresol)	0.33	100	NR	NR	NR	NR	NR	NR
4-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	NR
4-Nitrophenol	NS	NS	NR	NR	NR	NR	NR	NR
Acenaphthene	20	100	0.05 J	0.34 U	0.081 J	0.66	NR	0.48
Acenaphthylene	100	100	0.34 U	0.34 U	0.03 J	0.038 J	NR	0.014 J
Acetophenone	NS	NS	NR	NR	NR	NR	NR	NR
Anthracene	100	100	0.15 J	0.34 U	0.28 J	1.7	NR	1.1
Atrazine	NS	NS	NR	NR	NR	NR	NR	NR
Benzaldehyde	NS	NS	NR	NR	NR	NR	NR	NR
Benzo(a)Anthracene	1	1	0.4	0.034 U	1.5	3.9	NR	2.2
Benzo(a)Pyrene	1	1	0.39	0.034 U	1.6	3.8	NR	2
Benzo(b)Fluoranthene	1	1	0.48	0.034 U	1.9	4.4	NR	2.3
Benzo(g,h,i)Perylene	100	100	0.24 J	0.34 U	1.1	2.6	NR	1.2
Benzo(k)Fluoranthene	0.8	3.9	0.15	0.034 U	0.65	1.6	NR	0.78
Benzyl Butyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Biphenyl (Diphenyl)	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Chloroethoxy) Methane	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Chloroisopropyl) Ether	NS	NS	NR	NR	NR	NR	NR	NR
Bis(2-Ethylhexyl) Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Caprolactam	NS	NS	NR	NR	NR	NR	NR	NR
Carbazole	NS	NS	NR	NR	NR	NR	NR	NR
Chrysene	1	3.9	0.39	0.34 U	1.5	3.8	NR	2
Dibenz(a,h)Anthracene	0.33	0.33	0.057	0.034 U	0.24	0.54	NR	0.26
Dibenzofuran	7	59	NR	NR	NR	NR	NR	NR
Diethyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Dimethyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Di-N-Butyl Phthalate	NS	NS	NR	NR	NR	NR	NR	NR
Di-N-Octylphthalate	NS	NS	NR	NR	NR	NR	NR	NR
Fluoranthene	100	100	0.96	0.34 U	2.7	NR	9.3	5.1
Fluorene	30	100	0.035 J	0.34 U	0.059 J	0.53	NR	0.42
Hexachlorobenzene	0.33	1.2	NR	NR	NR	NR	NR	NR
Hexachlorobutadiene	NS	NS	NR	NR	NR	NR	NR	NR
Hexachlorocyclopentadiene	NS	NS	NR	NR	NR	NR	NR	NR
Hexachloroethane	NS	NS	NR	NR	NR	NR	NR	NR
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.28	0.034 U	1.3	2.9	NR	1.4
Isophorone	NS	NS	NR	NR	NR	NR	NR	NR
Naphthalene	12	100	0.011 J	0.34 U	0.039 J	0.068 J	NR	0.045 J
Nitrobenzene	NS	NS	NR	NR	NR	NR	NR	NR
N-Nitrosodi-N-Propylamine	NS	NS	NR	NR	NR	NR	NR	NR
N-Nitrosodiphenylamine	NS	NS	NR	NR	NR	NR	NR	NR
Pentachlorophenol	0.8	6.7	NR	NR	NR	NR	NR	NR
Phenanthrene	100	100	0.68	0.34 U	1.1	7	NR	4.6
Phenol	0.33	100	NR	NR	NR	NR	NR	NR
Pyrene	100	100	0.84	0.34 U	2.6	8.1	NR	4.6

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-18 8-10_20230808 460-285743-18 8/08/2023 mg/kg 1	RI-SB-19 0-2_20230808 460-285743-11 8/08/2023 mg/kg 1	RI-SB-X3 20230808 460-285743-19 8/08/2023 mg/kg 1	RI-SB-19 2-4_20230808 460-285743-12 8/08/2023 mg/kg 1	RI-SB-19 4-6_20230808 460-285743-13 8/08/2023 mg/kg 1	RI-SB-20 0-2_20230808 460-285743-23 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	NR	NR	NR	NR	NR	0.35 U
1,4-Dioxane (P-Dioxane)	0.1	13	NR	NR	NR	NR	NR	NR
2,3,4,6-Tetrachlorophenol	NS	NS	NR	NR	NR	NR	NR	0.35 U
2,4,5-Trichlorophenol	NS	NS	NR	NR	NR	NR	NR	0.35 U
2,4,6-Trichlorophenol	NS	NS	NR	NR	NR	NR	NR	0.14 U
2,4-Dichlorophenol	NS	NS	NR	NR	NR	NR	NR	0.14 U
2,4-Dimethylphenol	NS	NS	NR	NR	NR	NR	NR	0.35 U
2,4-Dinitrophenol	NS	NS	NR	NR	NR	NR	NR	0.28 U
2,4-Dinitrotoluene	NS	NS	NR	NR	NR	NR	NR	0.07 U
2,6-Dinitrotoluene	NS	NS	NR	NR	NR	NR	NR	0.07 U
2-Chloronaphthalene	NS	NS	NR	NR	NR	NR	NR	0.35 U
2-Chlorophenol	NS	NS	NR	NR	NR	NR	NR	0.35 U
2-Methylnaphthalene	NS	NS	NR	NR	NR	NR	NR	0.2 J
2-Methylphenol (O-Cresol)	0.33	100	NR	NR	NR	NR	NR	0.35 U
2-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	0.35 U
2-Nitrophenol	NS	NS	NR	NR	NR	NR	NR	0.35 U
3- And 4- Methylphenol (Total)	NS	NS	NR	NR	NR	NR	NR	0.35 U
3,3'-Dichlorobenzidine	NS	NS	NR	NR	NR	NR	NR	0.14 U
3-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	0.35 U
4,6-Dinitro-2-Methylphenol	NS	NS	NR	NR	NR	NR	NR	0.28 U
4-Bromophenyl Phenyl Ether	NS	NS	NR	NR	NR	NR	NR	0.35 U
4-Chloro-3-Methylphenol	NS	NS	NR	NR	NR	NR	NR	0.35 U
4-Chloroaniline	NS	NS	NR	NR	NR	NR	NR	0.35 U
4-Chlorophenyl Phenyl Ether	NS	NS	NR	NR	NR	NR	NR	0.35 U
4-Methylphenol (P-Cresol)	0.33	100	NR	NR	NR	NR	NR	0.35 U
4-Nitroaniline	NS	NS	NR	NR	NR	NR	NR	0.35 U
4-Nitrophenol	NS	NS	NR	NR	NR	NR	NR	0.7 U
Acenaphthene	20	100	0.34 U	0.21 J	0.16 J	0.58	0.34 U	0.35 U
Acenaphthylene	100	100	0.34 U	0.037 J	0.025 J	0.028 J	0.34 U	0.35 U
Acetophenone	NS	NS	NR	NR	NR	NR	NR	0.35 U
Anthracene	100	100	0.34 U	0.81	0.6	1.1	0.34 U	0.013 J
Atrazine	NS	NS	NR	NR	NR	NR	NR	0.14 U
Benzaldehyde	NS	NS	NR	NR	NR	NR	NR	0.35 UJ
Benzo(a)Anthracene	1	1	0.034 U	2.4	1.7	2.2	0.034 U	0.049
Benzo(a)Pyrene	1	1	0.034 U	2.4 J	1.7 J	2.2	0.034 U	0.046
Benzo(b)Fluoranthene	1	1	0.034 U	2.9 J	2.1 J	2.7	0.034 U	0.068
Benzo(g,h,i)Perylene	100	100	0.34 U	1.6 J	1.2 J	1.3	0.34 U	0.028 J
Benzo(k)Fluoranthene	0.8	3.9	0.034 U	0.96 J	0.74 J	0.87	0.034 U	0.022 J
Benzyl Butyl Phthalate	NS	NS	NR	NR	NR	NR	NR	0.034 J
Biphenyl (Diphenyl)	NS	NS	NR	NR	NR	NR	NR	0.025 J
Bis(2-Chloroethoxy) Methane	NS	NS	NR	NR	NR	NR	NR	0.35 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	NR	NR	NR	NR	NR	0.035 U
Bis(2-Chloroisopropyl) Ether	NS	NS	NR	NR	NR	NR	NR	0.35 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	NR	NR	NR	NR	NR	0.17 J
Caprolactam	NS	NS	NR	NR	NR	NR	NR	0.35 U
Carbazole	NS	NS	NR	NR	NR	NR	NR	0.35 U
Chrysene	1	3.9	0.34 U	2.4 J	1.7 J	2.2	0.34 U	0.08 J
Dibenz(a,h)Anthracene	0.33	0.33	0.034 U	0.35	0.25	0.3	0.034 U	0.035 U
Dibenzofuran	7	59	NR	NR	NR	NR	NR	0.052 J
Diethyl Phthalate	NS	NS	NR	NR	NR	NR	NR	0.35 U
Dimethyl Phthalate	NS	NS	NR	NR	NR	NR	NR	0.35 U
Di-N-Butyl Phthalate	NS	NS	NR	NR	NR	NR	NR	0.35 U
Di-N-Octylphthalate	NS	NS	NR	NR	NR	NR	NR	0.35 U
Fluoranthene	100	100	0.34 U	5.2	3.9	5.3	0.34 U	0.092 J
Fluorene	30	100	0.34 U	0.17 J	0.11 J	0.48	0.34 U	0.35 U
Hexachlorobenzene	0.33	1.2	NR	NR	NR	NR	NR	0.035 U
Hexachlorobutadiene	NS	NS	NR	NR	NR	NR	NR	0.07 U
Hexachlorocyclopentadiene	NS	NS	NR	NR	NR	NR	NR	0.35 U
Hexachloroethane	NS	NS	NR	NR	NR	NR	NR	0.035 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.034 U	1.9 J	1.4 J	1.6	0.034 U	0.026 J
Isophorone	NS	NS	NR	NR	NR	NR	NR	0.14 U
Naphthalene	12	100	0.34 U	0.045 J	0.023 J	0.21 J	0.34 U	0.13 J
Nitrobenzene	NS	NS	NR	NR	NR	NR	NR	0.035 U
N-Nitrosodi-N-Propylamine	NS	NS	NR	NR	NR	NR	NR	0.035 U
N-Nitrosodiphenylamine	NS	NS	NR	NR	NR	NR	NR	0.35 U
Pentachlorophenol	0.8	6.7	NR	NR	NR	NR	NR	0.28 U
Phenanthrene	100	100	0.34 U	3.3 J	2.6 J	5.3	0.34 U	0.14 J
Phenol	0.33	100	NR	NR	NR	NR	NR	0.35 U
Pyrene	100	100	0.34 U	4.7	3.3	4.7	0.34 U	0.085 J

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Semivolatile Organic Compounds (SVOCs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-20 2-4 20230808 460-285743-24 8/08/2023 mg/kg 1	RI-SB-21 0-2 20230808 460-285743-20 8/08/2023 mg/kg 1	RI-SB-21 8-10 20230808 460-285743-21 8/08/2023 mg/kg 1	RI-FB-S-01 20230809 460-285841-11 8/09/2023 µg/L 1	RI-FB-S-02 20230810 460-285947-9 8/09/2023 µg/L 1	RI-FB-S-03 20230810 460-285947-10 8/09/2023 µg/L 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
1,4-Dioxane (P-Dioxane)	0.1	13	NR	NR	NR	0.2 U	0.2 U	0.2 U
2,3,4,6-Tetrachlorophenol	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	NS	NS	0.14 U	0.14 U	0.14 U	10 U	10 U	10 U
2,4-Dichlorophenol	NS	NS	0.14 U	0.14 U	0.14 U	10 U	10 U	10 U
2,4-Dimethylphenol	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2,4-Dinitrophenol	NS	NS	0.29 U	0.28 U	0.27 U	40 U	40 U	40 U
2,4-Dinitrotoluene	NS	NS	0.073 U	0.071 U	0.069 U	10 U	10 U	10 U
2,6-Dinitrotoluene	NS	NS	0.073 U	0.071 U	0.069 U	2 U	2 U	2 U
2-Chloronaphthalene	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2-Chlorophenol	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2-Methylnaphthalene	NS	NS	0.096 J	0.09 J	0.34 U	10 U	10 U	10 U
2-Methylphenol (O-Cresol)	0.33	100	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2-Nitroaniline	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
2-Nitrophenol	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
3- And 4- Methylphenol (Total)	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	NS	NS	0.14 U	0.14 U	0.14 U	10 U	10 U	10 U
3-Nitroaniline	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4,6-Dinitro-2-Methylphenol	NS	NS	0.29 U	0.28 U	0.27 U	20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4-Chloro-3-Methylphenol	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4-Chloroaniline	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4-Chlorophenyl Phenyl Ether	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4-Methylphenol (P-Cresol)	0.33	100	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4-Nitroaniline	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
4-Nitrophenol	NS	NS	0.73 U	0.71 U	0.69 U	20 U	20 U	20 U
Acenaphthene	20	100	0.14 J	0.018 J	0.34 U	10 U	10 U	10 U
Acenaphthylene	100	100	0.068 J	0.028 J	0.34 U	10 U	10 U	10 U
Acetophenone	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Anthracene	100	100	0.32 J	0.067 J	0.34 U	10 U	10 U	10 U
Atrazine	NS	NS	0.14 U	0.14 U	0.14 U	2 U	2 U	2 U
Benzaldehyde	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Benzo(a)Anthracene	1	1	0.96	0.35	0.034 U	1 U	1 U	1 U
Benzo(a)Pyrene	1	1	0.96	0.36	0.034 U	1 U	1 U	1 U
Benzo(b)Fluoranthene	1	1	1.1	0.45	0.034 U	2 U	2 U	2 U
Benzo(g,h,i)Perylene	100	100	0.56	0.23 J	0.34 U	10 U	10 U	10 U
Benzo(k)Fluoranthene	0.8	3.9	0.39	0.16	0.034 U	1 U	1 U	1 U
Benzyl Butyl Phthalate	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Biphenyl (Diphenyl)	NS	NS	0.022 J	0.014 J	0.34 U	10 U	10 U	10 U
Bis(2-Chloroethoxy) Methane	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS	NS	0.036 U	0.035 U	0.034 U	1 U	1 U	1 U
Bis(2-Chloroisopropyl) Ether	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Bis(2-Ethylhexyl) Phthalate	NS	NS	0.36 U	0.35 U	0.34 U	2 U	2 U	2 U
Caprolactam	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Carbazole	NS	NS	0.093 J	0.024 J	0.34 U	10 U	10 U	10 U
Chrysene	1	3.9	0.96	0.36	0.34 U	2 U	2 U	2 U
Dibenz(a,h)Anthracene	0.33	0.33	0.16	0.054	0.034 U	1 U	1 U	1 U
Dibenzofuran	7	59	0.096 J	0.031 J	0.34 U	10 U	10 U	10 U
Diethyl Phthalate	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Dimethyl Phthalate	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Di-N-Butyl Phthalate	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Di-N-Octylphthalate	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Fluoranthene	100	100	2	0.65	0.34 U	10 U	10 U	10 U
Fluorene	30	100	0.11 J	0.017 J	0.34 U	10 U	10 U	10 U
Hexachlorobenzene	0.33	1.2	0.036 U	0.035 U	0.034 U	1 U	1 U	1 U
Hexachlorobutadiene	NS	NS	0.073 U	0.071 U	0.069 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Hexachloroethane	NS	NS	0.036 U	0.035 U	0.034 U	2 U	2 U	2 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	0.68	0.27	0.034 U	2 U	2 U	2 U
Isophorone	NS	NS	0.14 U	0.14 U	0.14 U	10 U	10 U	10 U
Naphthalene	12	100	0.14 J	0.072 J	0.34 U	2 U	2 U	2 U
Nitrobenzene	NS	NS	0.036 U	0.035 U	0.034 U	1 U	1 U	1 U
N-Nitrosodi-N-Propylamine	NS	NS	0.036 U	0.035 U	0.034 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	NS	NS	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Pentachlorophenol	0.8	6.7	0.29 U	0.28 U	0.27 U	20 U	20 U	20 U
Phenanthrene	100	100	1.4	0.34 J	0.34 U	10 U	10 U	10 U
Phenol	0.33	100	0.36 U	0.35 U	0.34 U	10 U	10 U	10 U
Pyrene	100	100	2	0.59	0.34 U	10 U	10 U	10 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-01_0-2_20210823 460-241420-1 8/23/2021 mg/kg 1	SB-01_8-10_20210823 460-241420-2 8/23/2021 mg/kg 1	SB-02_0-2_20210823 460-241420-9 8/23/2021 mg/kg 1	SB-02_8-10_20210823 460-241420-10 8/23/2021 mg/kg 1	SB-03_0-2_20210823 460-241420-3 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1221 (Aroclor 1221)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1232 (Aroclor 1232)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1242 (Aroclor 1242)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1248 (Aroclor 1248)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1254 (Aroclor 1254)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1260 (Aroclor 1260)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1262 (Aroclor 1262)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
PCB-1268 (Aroclor 1268)	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U
Total PCBs	0.1	1	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U

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Subsurface (Phase II) and Remedial Investigations
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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-03_9-11_20210823 460-241420-4 8/23/2021 mg/kg 1	SB-04_0-2_20210823 460-241420-7 8/23/2021 mg/kg 1	SB-04_8-10_20210823 460-241420-8 8/23/2021 mg/kg 1	SB-05_0-2_20210824 460-241522-5 8/24/2021 mg/kg 1	SB-05_12-14_20210824 460-241522-6 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1221 (Aroclor 1221)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1232 (Aroclor 1232)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1242 (Aroclor 1242)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1248 (Aroclor 1248)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1254 (Aroclor 1254)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1260 (Aroclor 1260)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1262 (Aroclor 1262)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
PCB-1268 (Aroclor 1268)	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U
Total PCBs	0.1	1	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-06_0-2_20210824 460-241522-7 8/24/2021 mg/kg 1	SB-06_11-13_20210824 460-241522-8 8/24/2021 mg/kg 1	SB-07_0-2_20210824 460-241522-11 8/24/2021 mg/kg 1	SB-07_12-14_20210824 460-241522-12 8/24/2021 mg/kg 1	SB-08_0-2_20210824 460-241522-9 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1221 (Aroclor 1221)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1232 (Aroclor 1232)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1242 (Aroclor 1242)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1248 (Aroclor 1248)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1254 (Aroclor 1254)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1260 (Aroclor 1260)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1262 (Aroclor 1262)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
PCB-1268 (Aroclor 1268)	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U
Total PCBs	0.1	1	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-08_11-13_20210824 460-241522-10 8/24/2021 mg/kg 1	SB-09_0-2_20210823 460-241420-5 8/23/2021 mg/kg 1	SB-09_7-9_20210823 460-241420-6 8/23/2021 mg/kg 1	SB-10_0-2_20210824 460-241522-3 8/24/2021 mg/kg 1	SB-10_13-15_20210824 460-241522-4 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1221 (Aroclor 1221)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1232 (Aroclor 1232)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1242 (Aroclor 1242)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1248 (Aroclor 1248)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1254 (Aroclor 1254)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1260 (Aroclor 1260)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1262 (Aroclor 1262)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
PCB-1268 (Aroclor 1268)	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U
Total PCBs	0.1	1	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-11_0-2_20210824 460-241522-1 8/24/2021 mg/kg 1	SB-11_8-10_20210824 460-241522-2 8/24/2021 mg/kg 1	RI-SB-01_0-2_20230810 460-285947-1 8/10/2023 mg/kg 1	RI-SB-01_8-10_20230810 460-285947-2 8/10/2023 mg/kg 1	RI-SB-01_10-12_20230810 460-285947-3 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1221 (Aroclor 1221)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1232 (Aroclor 1232)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1242 (Aroclor 1242)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1248 (Aroclor 1248)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1254 (Aroclor 1254)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1260 (Aroclor 1260)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1262 (Aroclor 1262)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
PCB-1268 (Aroclor 1268)	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U
Total PCBs	0.1	1	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-02_0-2_20230809 460-285841-7 8/09/2023 mg/kg 1	RI-SB-02_10-12_20230809 460-285841-8 8/09/2023 mg/kg 1	RI-SB-02_14-16_20230809 460-285841-9 8/09/2023 mg/kg 1	RI-SB-03_0-2_20230809 460-285841-5 8/09/2023 mg/kg 1	RI-SB-03_8-10_20230809 460-285841-6 8/09/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1221 (Aroclor 1221)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1232 (Aroclor 1232)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1242 (Aroclor 1242)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1248 (Aroclor 1248)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1254 (Aroclor 1254)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1260 (Aroclor 1260)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1262 (Aroclor 1262)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
PCB-1268 (Aroclor 1268)	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U
Total PCBs	0.1	1	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-04_0-2_20230808 460-285743-29 8/08/2023 mg/kg 1	RI-SB-X1_20230808 460-285743-33 8/08/2023 mg/kg 1	RI-SB-04_8-10_20230808 460-285743-30 8/08/2023 mg/kg 1	RI-SB-05_0-2_20230808 460-285743-22 8/08/2023 mg/kg 1	RI-SB-06_0-2_20230810 460-285947-11 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1221 (Aroclor 1221)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1232 (Aroclor 1232)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1242 (Aroclor 1242)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1248 (Aroclor 1248)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1254 (Aroclor 1254)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1260 (Aroclor 1260)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1262 (Aroclor 1262)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
PCB-1268 (Aroclor 1268)	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U
Total PCBs	0.1	1	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-06_8-10_20230810 460-285947-4 8/10/2023 mg/kg 1	RI-SB-07_0-2_20230808 460-285743-25 8/08/2023 mg/kg 1	RI-SB-07_8-10_20230808 460-285743-26 8/08/2023 mg/kg 1	RI-SB-08_0-2_20230810 460-285947-5 8/10/2023 mg/kg 1	RI-SB-08_7-9_20230810 460-285947-6 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1221 (Aroclor 1221)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1232 (Aroclor 1232)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1242 (Aroclor 1242)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1248 (Aroclor 1248)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1254 (Aroclor 1254)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1260 (Aroclor 1260)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1262 (Aroclor 1262)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
PCB-1268 (Aroclor 1268)	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U
Total PCBs	0.1	1	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U

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Soil Analytical Results of Polychlorinated Biphenyls (PCBs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-08_9-10_20230810 460-285947-7 8/10/2023 mg/kg 1	RI-SB-09_0-2_20230809 460-285841-1 8/09/2023 mg/kg 1	RI-SB-09_8-10_20230809 460-285841-2 8/09/2023 mg/kg 1	RI-SB-10_0-2_20230808 460-285743-34 8/08/2023 mg/kg 1	RI-SB-10_8-10_20230808 460-285743-35 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1221 (Aroclor 1221)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1232 (Aroclor 1232)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1242 (Aroclor 1242)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1248 (Aroclor 1248)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1254 (Aroclor 1254)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1260 (Aroclor 1260)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1262 (Aroclor 1262)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
PCB-1268 (Aroclor 1268)	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U
Total PCBs	0.1	1	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U

Table 4
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Polychlorinated Biphenyls (PCBs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-11_0-2_20230809 460-285841-3 8/09/2023 mg/kg 1	RI-SB-11_8-10_20230809 460-285841-4 8/09/2023 mg/kg 1	RI-SB-12_0-2_20230811 460-286022-3 8/11/2023 mg/kg 1	RI-SB-12_7-9_20230811 460-286022-4 8/11/2023 mg/kg 1	RI-SB-12_10-12_20230811 460-286022-5 8/11/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1221 (Aroclor 1221)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1232 (Aroclor 1232)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1242 (Aroclor 1242)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1248 (Aroclor 1248)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1254 (Aroclor 1254)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1260 (Aroclor 1260)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1262 (Aroclor 1262)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
PCB-1268 (Aroclor 1268)	NS	NS	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U
Total PCBs	0.1	1	0.069 U	0.073 U	0.069 U	0.076 UJ	0.08 U

Table 4
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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Polychlorinated Biphenyls (PCBs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-13_0-2_20230808 460-285743-31 8/08/2023 mg/kg 1	RI-SB-13_8-10_20230808 460-285743-32 8/08/2023 mg/kg 1	RI-SB-14_0-2_20230811 460-286022-1 8/11/2023 mg/kg 1	RI-SB-X2_20230811 460-286022-6 8/11/2023 mg/kg 1	RI-SB-14_8-10_20230811 460-286022-2 8/11/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1221 (Aroclor 1221)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1232 (Aroclor 1232)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1242 (Aroclor 1242)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1248 (Aroclor 1248)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1254 (Aroclor 1254)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1260 (Aroclor 1260)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1262 (Aroclor 1262)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
PCB-1268 (Aroclor 1268)	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ
Total PCBs	0.1	1	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ

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Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Polychlorinated Biphenyls (PCBs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-15_0-2_20230808 460-285743-27 8/08/2023 mg/kg 1	RI-SB-15_8-10_20230808 460-285743-28 8/08/2023 mg/kg 1	RI-SB-20_0-2_20230808 460-285743-23 8/08/2023 mg/kg 1	RI-SB-20_2-4_20230808 460-285743-24 8/08/2023 mg/kg 1	RI-SB-21_0-2_20230808 460-285743-20 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1221 (Aroclor 1221)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1232 (Aroclor 1232)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1242 (Aroclor 1242)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1248 (Aroclor 1248)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1254 (Aroclor 1254)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1260 (Aroclor 1260)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1262 (Aroclor 1262)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
PCB-1268 (Aroclor 1268)	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U
Total PCBs	0.1	1	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U

Table 4
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Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Polychlorinated Biphenyls (PCBs)

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-21_8-10_20230808 460-285743-21 8/08/2023 mg/kg 1	RI-FB-S-01_20230809 460-285841-11 8/09/2023 µg/L 1	RI-FB-S-02_20230810 460-285947-9 8/09/2023 µg/L 1	RI-FB-S-03_20230810 460-285947-10 8/09/2023 µg/L 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1221 (Aroclor 1221)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1232 (Aroclor 1232)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1242 (Aroclor 1242)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1248 (Aroclor 1248)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1254 (Aroclor 1254)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1260 (Aroclor 1260)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1262 (Aroclor 1262)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
PCB-1268 (Aroclor 1268)	NS	NS	0.069 U	0.4 U	0.4 U	0.4 U
Total PCBs	0.1	1	0.069 U	0.4 U	0.4 U	0.4 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-01_0-2_20210823 460-241420-1 8/23/2021 mg/kg 1	SB-01_8-10_20210823 460-241420-2 8/23/2021 mg/kg 1	SB-02_0-2_20210823 460-241420-9 8/23/2021 mg/kg 1	SB-02_8-10_20210823 460-241420-10 8/23/2021 mg/kg 1	SB-03_0-2_20210823 460-241420-3 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0022 U	0.0024 U	0.0022 U	0.0023 U	0.0022 U
Alpha Endosulfan	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0022 U	0.0024 U	0.0022 U	0.0023 U	0.0022 U
Beta Endosulfan	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
cis-Chlordane	0.094	4.2	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0022 U	0.0024 U	0.0022 U	0.0023 U	0.0022 U
Dieldrin	0.005	0.2	0.0022 U	0.0024 U	0.0022 U	0.0023 U	0.0022 U
Endosulfan Sulfate	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Endrin Aldehyde	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Endrin Ketone	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Gamma Bhc (Lindane)	0.1	1.3	0.0022 U	0.0024 U	0.0022 U	0.0023 U	0.0022 U
Heptachlor	0.042	2.1	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Heptachlor Epoxide	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Methoxychlor	NS	NS	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
P,P'-DDD	0.0033	13	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
P,P'-DDE	0.0033	8.9	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
P,P'-DDT	0.0033	7.9	0.0073 U	0.0081 U	0.0074 U	0.0076 U	0.0075 U
Toxaphene	NS	NS	0.073 U	0.081 U	0.074 U	0.076 U	0.075 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-03_9-11_20210823 460-241420-4 8/23/2021 mg/kg 1	SB-04_0-2_20210823 460-241420-7 8/23/2021 mg/kg 1	SB-04_8-10_20210823 460-241420-8 8/23/2021 mg/kg 1	SB-05_0-2_20210824 460-241522-5 8/24/2021 mg/kg 1	SB-05_12-14_20210824 460-241522-6 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0023 U	0.0022 U	0.0023 U	0.0021 U	0.0023 U
Alpha Endosulfan	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0023 U	0.0022 U	0.0023 U	0.0021 U	0.0023 U
Beta Endosulfan	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
cis-Chlordane	0.094	4.2	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0023 U	0.0022 U	0.0023 U	0.0021 U	0.0023 U
Dieldrin	0.005	0.2	0.0023 U	0.0022 U	0.0023 U	0.0021 U	0.0023 U
Endosulfan Sulfate	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Endrin Aldehyde	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Endrin Ketone	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Gamma Bhc (Lindane)	0.1	1.3	0.0023 U	0.0022 U	0.0023 U	0.0021 U	0.0023 U
Heptachlor	0.042	2.1	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Heptachlor Epoxide	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
Methoxychlor	NS	NS	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
P,P'-DDD	0.0033	13	0.0077 U	0.0073 U	0.0077 U	0.0072 U	0.0076 U
P,P'-DDE	0.0033	8.9	0.0077 U	0.0028 J	0.0077 U	0.0072 U	0.0076 U
P,P'-DDT	0.0033	7.9	0.0077 U	0.014	0.0077 U	0.0072 U	0.0076 U
Toxaphene	NS	NS	0.077 U	0.073 U	0.077 U	0.072 U	0.076 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-06_0-2_20210824 460-241522-7 8/24/2021 mg/kg 1	SB-06_11-13_20210824 460-241522-8 8/24/2021 mg/kg 1	SB-07_0-2_20210824 460-241522-11 8/24/2021 mg/kg 1	SB-07_12-14_20210824 460-241522-12 8/24/2021 mg/kg 1	SB-08_0-2_20210824 460-241522-9 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0023 U	0.0022 U	0.0023 U	0.0023 U	0.0021 U
Alpha Endosulfan	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0023 U	0.0022 U	0.0023 U	0.0023 U	0.0021 U
Beta Endosulfan	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
cis-Chlordane	0.094	4.2	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0023 U	0.0022 U	0.0023 U	0.0023 U	0.0021 U
Dieldrin	0.005	0.2	0.0023 U	0.0022 U	0.0023 U	0.0023 U	0.0021 U
Endosulfan Sulfate	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Endrin Aldehyde	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Endrin Ketone	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Gamma Bhc (Lindane)	0.1	1.3	0.0023 U	0.0022 U	0.0023 U	0.0023 U	0.0021 U
Heptachlor	0.042	2.1	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Heptachlor Epoxide	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Methoxychlor	NS	NS	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
P,P'-DDD	0.0033	13	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
P,P'-DDE	0.0033	8.9	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
P,P'-DDT	0.0033	7.9	0.0076 U	0.0075 U	0.0077 U	0.0076 U	0.0071 U
Toxaphene	NS	NS	0.076 U	0.075 U	0.077 U	0.076 U	0.071 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-08_11-13_20210824 460-241522-10 8/24/2021 mg/kg 1	SB-09_0-2_20210823 460-241420-5 8/23/2021 mg/kg 1	SB-09_7-9_20210823 460-241420-6 8/23/2021 mg/kg 1	SB-10_0-2_20210824 460-241522-3 8/24/2021 mg/kg 1	SB-10_13-15_20210824 460-241522-4 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0022 U	0.0027 U	0.0023 U	0.0023 U	0.0024 U
Alpha Endosulfan	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0022 U	0.0027 U	0.0023 U	0.0023 U	0.0024 U
Beta Endosulfan	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
cis-Chlordane	0.094	4.2	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0022 U	0.0027 U	0.0023 U	0.0023 U	0.0024 U
Dieldrin	0.005	0.2	0.0022 U	0.0027 U	0.0023 U	0.0023 U	0.0024 U
Endosulfan Sulfate	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Endrin Aldehyde	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Endrin Ketone	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Gamma Bhc (Lindane)	0.1	1.3	0.0022 U	0.0027 U	0.0023 U	0.0023 U	0.0024 U
Heptachlor	0.042	2.1	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Heptachlor Epoxide	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Methoxychlor	NS	NS	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
P,P'-DDD	0.0033	13	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
P,P'-DDE	0.0033	8.9	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
P,P'-DDT	0.0033	7.9	0.0075 U	0.0092 U	0.0079 U	0.0075 U	0.0081 U
Toxaphene	NS	NS	0.075 U	0.092 U	0.079 U	0.075 U	0.081 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-11_0-2_20210824 460-241522-1 8/24/2021 mg/kg 1	SB-11_8-10_20210824 460-241522-2 8/24/2021 mg/kg 1	RI-SB-01_0-2_20230810 460-285947-1 8/10/2023 mg/kg 1	RI-SB-01_8-10_20230810 460-285947-2 8/10/2023 mg/kg 1	RI-SB-01_10-12_20230810 460-285947-3 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0021 U	0.0022 U	0.0022 U	0.0022 U	0.0023 U
Alpha Endosulfan	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0021 U	0.0022 U	0.0022 U	0.0022 U	0.0023 U
Beta Endosulfan	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
cis-Chlordane	0.094	4.2	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0021 U	0.0022 U	0.0022 U	0.0022 U	0.0023 U
Dieldrin	0.005	0.2	0.0021 U	0.0022 U	0.0022 U	0.0022 U	0.0023 U
Endosulfan Sulfate	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Endrin Aldehyde	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Endrin Ketone	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Gamma Bhc (Lindane)	0.1	1.3	0.0021 U	0.0022 U	0.0022 U	0.0022 U	0.0023 U
Heptachlor	0.042	2.1	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Heptachlor Epoxide	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
Methoxychlor	NS	NS	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
P,P'-DDD	0.0033	13	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
P,P'-DDE	0.0033	8.9	0.0071 U	0.0074 U	0.0074 U	0.0075 U	0.0076 U
P,P'-DDT	0.0033	7.9	0.0071 U	0.013	0.0074 U	0.0075 U	0.0076 U
Toxaphene	NS	NS	0.071 U	0.074 U	0.074 U	0.075 U	0.076 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-02_0-2_20230809 460-285841-7 8/09/2023 mg/kg 1	RI-SB-02_10-12_20230809 460-285841-8 8/09/2023 mg/kg 1	RI-SB-02_14-16_20230809 460-285841-9 8/09/2023 mg/kg 1	RI-SB-03_0-2_20230809 460-285841-5 8/09/2023 mg/kg 1	RI-SB-03_8-10_20230809 460-285841-6 8/09/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0021 U	0.0022 U	0.0024 U	0.0022 U	0.002 U
Alpha Endosulfan	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0021 U	0.0022 U	0.0024 U	0.0022 U	0.002 U
Beta Endosulfan	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
cis-Chlordane	0.094	4.2	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0021 U	0.0022 U	0.0024 U	0.0022 U	0.002 U
Dieldrin	0.005	0.2	0.0021 U	0.0022 U	0.0024 U	0.0022 U	0.002 U
Endosulfan Sulfate	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Endrin Aldehyde	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Endrin Ketone	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Gamma Bhc (Lindane)	0.1	1.3	0.0021 U	0.0022 U	0.0024 U	0.0022 U	0.002 U
Heptachlor	0.042	2.1	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Heptachlor Epoxide	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Methoxychlor	NS	NS	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
P,P'-DDD	0.0033	13	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
P,P'-DDE	0.0033	8.9	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
P,P'-DDT	0.0033	7.9	0.0069 U	0.0075 U	0.008 U	0.0073 U	0.0067 U
Toxaphene	NS	NS	0.069 U	0.075 U	0.08 U	0.073 U	0.067 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-04_0-2_20230808 460-285743-29 8/08/2023 mg/kg 1	RI-SB-X1_20230808 460-285743-33 8/08/2023 mg/kg 1	RI-SB-04_8-10_20230808 460-285743-30 8/08/2023 mg/kg 1	RI-SB-05_0-2_20230808 460-285743-22 8/08/2023 mg/kg 1	RI-SB-06_0-2_20230810 460-285947-11 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.002 U	0.0021 U	0.0023 U	0.0022 U	0.0021 U
Alpha Endosulfan	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.002 U	0.0021 U	0.0023 U	0.0022 U	0.0021 U
Beta Endosulfan	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
cis-Chlordane	0.094	4.2	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.002 U	0.0021 U	0.0023 U	0.0022 U	0.0021 U
Dieldrin	0.005	0.2	0.002 U	0.0021 U	0.0023 U	0.0022 U	0.0021 U
Endosulfan Sulfate	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Endrin Aldehyde	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Endrin Ketone	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Gamma Bhc (Lindane)	0.1	1.3	0.002 U	0.0021 U	0.0023 U	0.0022 U	0.0021 U
Heptachlor	0.042	2.1	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Heptachlor Epoxide	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
Methoxychlor	NS	NS	0.0068 U	0.0071 U	0.0076 U	0.0075 U	0.0069 U
P,P'-DDD	0.0033	13	0.0021 J	0.0071 U	0.0076 U	0.0075 U	0.0069 U
P,P'-DDE	0.0033	8.9	0.0026 J	0.0071 U	0.0076 U	0.0075 U	0.0069 U
P,P'-DDT	0.0033	7.9	0.0025 J	0.0031 J	0.0076 U	0.0075 U	0.0026 J
Toxaphene	NS	NS	0.068 U	0.071 U	0.076 U	0.075 U	0.069 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-06_8-10_20230810 460-285947-4 8/10/2023 mg/kg 1	RI-SB-07_0-2_20230808 460-285743-25 8/08/2023 mg/kg 1	RI-SB-07_8-10_20230808 460-285743-26 8/08/2023 mg/kg 1	RI-SB-08_0-2_20230810 460-285947-5 8/10/2023 mg/kg 1	RI-SB-08_7-9_20230810 460-285947-6 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0025 U	0.0022 U	0.0022 U	0.0021 U	0.0022 U
Alpha Endosulfan	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0025 U	0.0022 U	0.0022 U	0.0021 U	0.0022 U
Beta Endosulfan	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
cis-Chlordane	0.094	4.2	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0025 U	0.0022 U	0.0022 U	0.0021 U	0.0022 U
Dieldrin	0.005	0.2	0.0025 U	0.0022 U	0.0022 U	0.0021 U	0.0022 U
Endosulfan Sulfate	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Endrin Aldehyde	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Endrin Ketone	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Gamma Bhc (Lindane)	0.1	1.3	0.0025 U	0.0022 U	0.0022 U	0.0021 U	0.0022 U
Heptachlor	0.042	2.1	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Heptachlor Epoxide	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
Methoxychlor	NS	NS	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
P,P'-DDD	0.0033	13	0.0084 U	0.0072 U	0.0073 U	0.0071 U	0.0072 U
P,P'-DDE	0.0033	8.9	0.0084 U	0.0045 J	0.0073 U	0.0071 U	0.0072 U
P,P'-DDT	0.0033	7.9	0.0084 U	0.0095	0.0073 U	0.0071 U	0.0072 U
Toxaphene	NS	NS	0.084 U	0.072 U	0.073 U	0.071 U	0.072 U

Table 5
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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-08_9-10_20230810 460-285947-7 8/10/2023 mg/kg 1	RI-SB-09_0-2_20230809 460-285841-1 8/09/2023 mg/kg 1	RI-SB-09_8-10_20230809 460-285841-2 8/09/2023 mg/kg 1	RI-SB-10_0-2_20230808 460-285743-34 8/08/2023 mg/kg 1	RI-SB-10_8-10_20230808 460-285743-35 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0023 U	0.0021 U	0.0023 U	0.002 U	0.0022 U
Alpha Endosulfan	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0023 U	0.0021 U	0.0023 U	0.002 U	0.0022 U
Beta Endosulfan	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
cis-Chlordane	0.094	4.2	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0023 U	0.0021 U	0.0023 U	0.002 U	0.0022 U
Dieldrin	0.005	0.2	0.0023 U	0.0021 U	0.0023 U	0.002 U	0.0022 U
Endosulfan Sulfate	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Endrin Aldehyde	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Endrin Ketone	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Gamma Bhc (Lindane)	0.1	1.3	0.0023 U	0.0021 U	0.0023 U	0.002 U	0.0022 U
Heptachlor	0.042	2.1	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Heptachlor Epoxide	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Methoxychlor	NS	NS	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
P,P'-DDD	0.0033	13	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
P,P'-DDE	0.0033	8.9	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
P,P'-DDT	0.0033	7.9	0.0078 U	0.0069 U	0.0076 U	0.0068 U	0.0074 U
Toxaphene	NS	NS	0.078 U	0.069 U	0.076 U	0.068 U	0.074 U

Table 5
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Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-11_0-2_20230809 460-285841-3 8/09/2023 mg/kg 1	RI-SB-11_8-10_20230809 460-285841-4 8/09/2023 mg/kg 1	RI-SB-12_0-2_20230811 460-286022-3 8/11/2023 mg/kg 1	RI-SB-12_7-9_20230811 460-286022-4 8/11/2023 mg/kg 1	RI-SB-12_10-12_20230811 460-286022-5 8/11/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0021 U	0.0022 U	0.002 U	0.0023 U	0.0024 U
Alpha Endosulfan	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0021 U	0.0022 U	0.002 U	0.0023 U	0.0024 U
Beta Endosulfan	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
cis-Chlordane	0.094	4.2	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0021 U	0.0022 U	0.002 U	0.0023 U	0.0024 U
Dieldrin	0.005	0.2	0.0021 U	0.0022 U	0.002 U	0.0023 U	0.0024 U
Endosulfan Sulfate	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Endrin Aldehyde	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Endrin Ketone	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Gamma Bhc (Lindane)	0.1	1.3	0.0021 U	0.0022 U	0.002 U	0.0023 U	0.0024 U
Heptachlor	0.042	2.1	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Heptachlor Epoxide	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Methoxychlor	NS	NS	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
P,P'-DDD	0.0033	13	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
P,P'-DDE	0.0033	8.9	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
P,P'-DDT	0.0033	7.9	0.0069 U	0.0073 U	0.0069 U	0.0076 U	0.008 U
Toxaphene	NS	NS	0.069 U	0.073 U	0.069 U	0.076 U	0.08 U

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-13_0-2_20230808 460-285743-31 8/08/2023 mg/kg 1	RI-SB-13_8-10_20230808 460-285743-32 8/08/2023 mg/kg 1	RI-SB-14_0-2_20230811 460-286022-1 8/11/2023 mg/kg 1	RI-SB-X2_20230811 460-286022-6 8/11/2023 mg/kg 1	RI-SB-14_8-10_20230811 460-286022-2 8/11/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0021 U	0.0024 U	0.0021 U	0.0021 U	0.0023 UJ
Alpha Endosulfan	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0021 U	0.0024 U	0.0021 U	0.0021 U	0.0023 UJ
Beta Endosulfan	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
cis-Chlordane	0.094	4.2	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0021 U	0.0024 U	0.0021 U	0.0021 U	0.0023 UJ
Dieldrin	0.005	0.2	0.0021 U	0.0024 U	0.0021 U	0.0021 U	0.0023 UJ
Endosulfan Sulfate	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 UJ
Endrin	0.014	11	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Endrin Aldehyde	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Endrin Ketone	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Gamma Bhc (Lindane)	0.1	1.3	0.0021 U	0.0024 U	0.0021 U	0.0021 U	0.0023 UJ
Heptachlor	0.042	2.1	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Heptachlor Epoxide	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Methoxychlor	NS	NS	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
P,P'-DDD	0.0033	13	0.0069 U	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
P,P'-DDE	0.0033	8.9	0.0028 J	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
P,P'-DDT	0.0033	7.9	0.0017 J	0.008 U	0.0069 U	0.0069 U	0.0077 UJ
Toxaphene	NS	NS	0.069 U	0.08 U	0.069 U	0.069 U	0.077 UJ

Table 5
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-15_0-2_20230808 460-285743-27 8/08/2023 mg/kg 1	RI-SB-15_8-10_20230808 460-285743-28 8/08/2023 mg/kg 1	RI-SB-20_0-2_20230808 460-285743-23 8/08/2023 mg/kg 1	RI-SB-20_2-4_20230808 460-285743-24 8/08/2023 mg/kg 1	RI-SB-21_0-2_20230808 460-285743-20 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.0021 U
Alpha Endosulfan	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.0021 U
Beta Endosulfan	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
cis-Chlordane	0.094	4.2	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.0021 U
Dieldrin	0.005	0.2	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.0021 U
Endosulfan Sulfate	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Endrin Aldehyde	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Endrin Ketone	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Gamma Bhc (Lindane)	0.1	1.3	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.0021 U
Heptachlor	0.042	2.1	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Heptachlor Epoxide	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
Methoxychlor	NS	NS	0.0073 U	0.0068 U	0.007 U	0.0073 U	0.0071 U
P,P'-DDD	0.0033	13	0.0073 U	0.0068 U	0.007 U	0.0027 J	0.0071 U
P,P'-DDE	0.0033	8.9	0.0073 U	0.0068 U	0.007 U	0.0028 J	0.0071 U
P,P'-DDT	0.0033	7.9	0.0073 U	0.0068 U	0.007 U	0.012	0.0032 J
Toxaphene	NS	NS	0.073 U	0.068 U	0.07 U	0.073 U	0.071 U

Table 5
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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-21_8-10_20230808 460-285743-21 8/08/2023 mg/kg 1	RI-FB-S-01_20230809 460-285841-11 8/09/2023 µg/L 1	RI-FB-S-02_20230810 460-285947-9 8/09/2023 µg/L 1	RI-FB-S-03_20230810 460-285947-10 8/09/2023 µg/L 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	0.005	0.097	0.0069 U	0.02 U	0.02 U	0.02 U
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.02	0.48	0.0021 U	0.02 U	0.02 U	0.02 U
Alpha Endosulfan	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	0.0021 U	0.02 U	0.02 U	0.02 U
Beta Endosulfan	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
cis-Chlordane	0.094	4.2	0.0069 U	0.02 U	0.02 U	0.02 U
Delta BHC (Delta Hexachlorocyclohexane)	0.04	100	0.0021 U	0.02 U	0.02 U	0.02 U
Dieldrin	0.005	0.2	0.0021 U	0.02 U	0.02 U	0.02 U
Endosulfan Sulfate	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
Endosulfans ABS	2.4	24	0 U	0 U	0 U	0 U
Endrin	0.014	11	0.0069 U	0.02 U	0.02 U	0.02 U
Endrin Aldehyde	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
Endrin Ketone	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
Gamma Bhc (Lindane)	0.1	1.3	0.0021 U	0.02 U	0.02 U	0.02 U
Heptachlor	0.042	2.1	0.0069 U	0.02 U	0.02 U	0.02 U
Heptachlor Epoxide	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
Methoxychlor	NS	NS	0.0069 U	0.02 U	0.02 U	0.02 U
P,P'-DDD	0.0033	13	0.0069 U	0.02 U	0.02 U	0.02 U
P,P'-DDE	0.0033	8.9	0.0069 U	0.02 U	0.02 U	0.02 U
P,P'-DDT	0.0033	7.9	0.0069 U	0.02 U	0.02 U	0.02 U
Toxaphene	NS	NS	0.069 U	0.5 U	0.5 U	0.5 U

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-01_0-2_20210823 460-241420-1 8/23/2021 mg/kg 1	SB-01_0-2_20210823 460-241420-1 8/23/2021 mg/kg 5	SB-01_8-10_20210823 460-241420-2 8/23/2021 mg/kg 1	SB-01_8-10_20210823 460-241420-2 8/23/2021 mg/kg 5	SB-02_0-2_20210823 460-241420-9 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	4,580	NR	4,090	NR	5,330
Antimony	NS	NS	0.57 J	NR	0.83 J	NR	1 UJ
Arsenic	13	16	70.3	NR	11.3	NR	2.2
Barium	350	400	26	NR	22.8	NR	50
Beryllium	7.2	72	0.25 J	NR	0.15 J	NR	0.2 J
Cadmium	2.5	4.3	3.5	NR	1.4	NR	1 U
Calcium	NS	NS	NR	56,700	1,220	NR	51,400
Chromium, Hexavalent	1	110	NR	NR	NR	NR	NR
Chromium, Total	NS	NS	28	NR	15.2	NR	16.4
Cobalt	NS	NS	27.6	NR	6	NR	2.9
Copper	50	270	NR	3,010	58.8	NR	12.5
Iron	NS	NS	NR	88,700	NR	108,000	7,370
Lead	63	400	180	NR	80.7	NR	61
Magnesium	NS	NS	4,840	NR	1,520	NR	3,610 H
Manganese	1,600	2,000	622	NR	552	NR	157
Mercury	0.18	0.81	0.15	NR	0.039	NR	NR
Nickel	30	310	34.5	NR	15.1	NR	7.3
Potassium	NS	NS	825	NR	736	NR	642 H
Selenium	3.9	180	0.61 J	NR	1.8	NR	0.26 J
Silver	2	180	0.63 J	NR	0.33 J	NR	1 U
Sodium	NS	NS	508	NR	808	NR	526
Thallium	NS	NS	0.055 J	NR	0.13 J	NR	0.42 U
Vanadium	NS	NS	116	NR	27.4	NR	11 H
Zinc	109	10,000	1,150	NR	274	NR	32.8

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-02_0-2_20210823 460-241420-9 8/23/2021 mg/kg 10	SB-02_8-10_20210823 460-241420-10 8/23/2021 mg/kg 1	SB-02_8-10_20210823 460-241420-10 8/23/2021 mg/kg 2	SB-03_0-2_20210823 460-241420-3 8/23/2021 mg/kg 1	SB-03_9-11_20210823 460-241420-4 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	NR	7,240	NR	6,380	9,330
Antimony	NS	NS	NR	1.1 UJ	NR	0.16 J	1.1 UJ
Arsenic	13	16	NR	2.7	NR	3.6	7.8
Barium	350	400	NR	61.5	NR	57.5	123
Beryllium	7.2	72	NR	0.36 J	NR	0.28 J	0.4 J
Cadmium	2.5	4.3	NR	1.1 U	NR	1.1 U	0.2 J
Calcium	NS	NS	NR	NR	62,800	38,500	7,180
Chromium, Hexavalent	1	110	NR	NR	NR	NR	NR
Chromium, Total	NS	NS	NR	16.6	NR	24.5	18.4
Cobalt	NS	NS	NR	6.8	NR	6.7	6.9
Copper	50	270	NR	27.6	NR	42.1	23.6
Iron	NS	NS	NR	9,880	NR	14,100	16,700
Lead	63	400	NR	28	NR	37.9	711
Magnesium	NS	NS	NR	15,700	NR	19,400	3,090
Manganese	1,600	2,000	NR	453	NR	234	262
Mercury	0.18	0.81	1.9	0.064	NR	0.43	0.45
Nickel	30	310	NR	15.4	NR	17.8	15.3
Potassium	NS	NS	NR	1,090	NR	1,610	1,560
Selenium	3.9	180	NR	0.16 J	NR	0.23 J	0.33 J
Silver	2	180	NR	1.1 U	NR	1.1 U	0.2 J
Sodium	NS	NS	NR	564	NR	393	1,170
Thallium	NS	NS	NR	0.052 J	NR	0.096 J	0.12 J
Vanadium	NS	NS	NR	12.9	NR	25.5	23.7
Zinc	109	10,000	NR	39.6	NR	46.2	150

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-04_0-2_20210823 460-241420-7 8/23/2021 mg/kg 1	SB-04_8-10_20210823 460-241420-8 8/23/2021 mg/kg 1	SB-04_8-10_20210823 460-241420-8 8/23/2021 mg/kg 10	SB-05_0-2_20210824 460-241522-5 8/24/2021 mg/kg 1	SB-05_0-2_20210824 460-241522-5 8/24/2021 mg/kg 3
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	8,120	7,750	NR	14,700	NR
Antimony	NS	NS	0.4 J	1.1 UJ	NR	0.16 J	NR
Arsenic	13	16	5.3	3.1	NR	6.3	NR
Barium	350	400	197	69	NR	102	NR
Beryllium	7.2	72	0.42	0.27 J	NR	0.61	NR
Cadmium	2.5	4.3	0.53 J	1.1 U	NR	0.25 J	NR
Calcium	NS	NS	45,800	22,700	NR	NR	79,600
Chromium, Hexavalent	1	110	NR	NR	NR	NR	NR
Chromium, Total	NS	NS	16	14.5	NR	20.2 B	NR
Cobalt	NS	NS	7	7.1	NR	9.7	NR
Copper	50	270	43.9	48.4	NR	33.8	NR
Iron	NS	NS	17,700	17,200	NR	21,900	NR
Lead	63	400	248	116	NR	146	NR
Magnesium	NS	NS	5,410	6,700	NR	8,590	NR
Manganese	1,600	2,000	347	240	NR	454	NR
Mercury	0.18	0.81	0.62	NR	3.5	0.32	NR
Nickel	30	310	17	14	NR	21.6	NR
Potassium	NS	NS	2,010	2,370	NR	3,470	NR
Selenium	3.9	180	0.43 J	0.26 J	NR	0.23 J	NR
Silver	2	180	0.24 J	1.1 U	NR	0.99 UJ	NR
Sodium	NS	NS	648	701	NR	1,030	NR
Thallium	NS	NS	0.14 J	0.11 J	NR	0.22 J	NR
Vanadium	NS	NS	22.8	27	NR	26.7	NR
Zinc	109	10,000	254	59.8	NR	120	NR

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-05_12-14_20210824 460-241522-6 8/24/2021 mg/kg 1	SB-05_12-14_20210824 460-241522-6 8/24/2021 mg/kg 10	SB-06_0-2_20210824 460-241522-7 8/24/2021 mg/kg 1	SB-06_0-2_20210824 460-241522-7 8/24/2021 mg/kg 3	SB-06_11-13_20210824 460-241522-8 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	15,000	NR	5,770	NR	16,400
Antimony	NS	NS	0.3 J	NR	0.18 J	NR	1.1 U
Arsenic	13	16	10	NR	2.7	NR	0.33 J
Barium	350	400	161	NR	84.2	NR	237
Beryllium	7.2	72	0.73	NR	0.26 J	NR	0.34 J
Cadmium	2.5	4.3	1.1 U	NR	0.16 J	NR	1.1 U
Calcium	NS	NS	2,590	NR	NR	55,900	3,020
Chromium, Hexavalent	1	110	NR	NR	NR	NR	NR
Chromium, Total	NS	NS	28 B	NR	17.4 B	NR	34.5 B
Cobalt	NS	NS	19.3	NR	3.8	NR	16.7
Copper	50	270	120	NR	15.3	NR	463
Iron	NS	NS	29,100	NR	10,400	NR	35,300
Lead	63	400	109	NR	67.1	NR	4.9
Magnesium	NS	NS	7,910	NR	4,450	NR	9,010
Manganese	1,600	2,000	NR	1,930	263	NR	251
Mercury	0.18	0.81	0.24	NR	0.26	NR	0.01 J
Nickel	30	310	47.6	NR	9.3	NR	49
Potassium	NS	NS	7,940	NR	1,240	NR	11,100
Selenium	3.9	180	0.15 J	NR	0.13 J	NR	1.3 U
Silver	2	180	1.1 UJ	NR	1.1 UJ	NR	0.12 J
Sodium	NS	NS	1,750	NR	318	NR	848
Thallium	NS	NS	0.36 J	NR	0.061 J	NR	0.44
Vanadium	NS	NS	42.9	NR	13.3	NR	55.4
Zinc	109	10,000	125	NR	108	NR	87.5

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-07_0-2_20210824 460-241522-11 8/24/2021 mg/kg 1	SB-07_12-14_20210824 460-241522-12 8/24/2021 mg/kg 1	SB-08_0-2_20210824 460-241522-9 8/24/2021 mg/kg 1	SB-08_11-13_20210824 460-241522-10 8/24/2021 mg/kg 1	SB-09_0-2_20210823 460-241420-5 8/23/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	4,430	8,540	17,500	13,900	13,100
Antimony	NS	NS	0.17 J	0.16 J	0.16 J	1.1 U	0.61 J
Arsenic	13	16	3.3	4.2	5.7	0.84 J	27.5
Barium	350	400	78.4	31.4	105	91.8	219
Beryllium	7.2	72	0.32 J	0.37 J	0.68	0.29 J	0.71
Cadmium	2.5	4.3	0.13 J	1.1 U	0.19 J	1.1 U	1.6
Calcium	NS	NS	46,500	5,540	43,500	45,000	29,800
Chromium, Hexavalent	1	110	NR	NR	NR	NR	NR
Chromium, Total	NS	NS	9.6 B	15.9 B	21.7 B	21.8 B	51.5
Cobalt	NS	NS	5.2	6.7	6.4	16.3	11.5
Copper	50	270	16	19.4	25.4	6.8	178
Iron	NS	NS	6,630	13,800	21,200	25,200	34,000
Lead	63	400	48.1	62.8	62.8	11.3	333
Magnesium	NS	NS	1,760	3,660	8,560	6,570	8,590
Manganese	1,600	2,000	109	304	425	302	544
Mercury	0.18	0.81	0.035	0.2	0.58	0.024	NR
Nickel	30	310	9.6	14.3	18.2	26.6	31.5
Potassium	NS	NS	423	1,160	2,980	7,270	3,390
Selenium	3.9	180	0.5 J	0.59 J	0.17 J	1.4 U	0.79 J
Silver	2	180	1.1 UJ	1.1 UJ	1 UJ	1.1 UJ	1.7
Sodium	NS	NS	968	949	1,500	1,700	367
Thallium	NS	NS	0.43 U	0.13 J	0.1 J	0.27 J	0.39 J
Vanadium	NS	NS	9.1	21.8	22	31.8	37.3
Zinc	109	10,000	51.4	40	117	70.8	470

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-09_0-2_20210823 460-241420-5 8/23/2021 mg/kg 10	SB-09_7-9_20210823 460-241420-6 8/23/2021 mg/kg 1	SB-10_0-2_20210824 460-241522-3 8/24/2021 mg/kg 1	SB-10_0-2_20210824 460-241522-3 8/24/2021 mg/kg 3	SB-10_13-15_20210824 460-241522-4 8/24/2021 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	NR	12,200	5,700	NR	17,000
Antimony	NS	NS	NR	0.21 J	0.2 J	NR	1.2 UJ
Arsenic	13	16	NR	4.1	9.5	NR	2.1
Barium	350	400	NR	137	96	NR	76.9
Beryllium	7.2	72	NR	0.47	0.32 J	NR	0.78
Cadmium	2.5	4.3	NR	0.72 J	0.57 J	NR	1.2 U
Calcium	NS	NS	NR	27,800	NR	57,800	38,300
Chromium, Hexavalent	1	110	NR	NR	NR	NR	NR
Chromium, Total	NS	NS	NR	23.5	12.6 B	NR	21.8 B
Cobalt	NS	NS	NR	10.1	6.3	NR	12.7
Copper	50	270	NR	116	65.1	NR	24.2
Iron	NS	NS	NR	20,500	22,400	NR	24,000
Lead	63	400	NR	153	193	NR	15.8
Magnesium	NS	NS	NR	14,400	3,250	NR	11,000
Manganese	1,600	2,000	NR	361	244	NR	727
Mercury	0.18	0.81	5.3	0.34	0.3	NR	0.018
Nickel	30	310	NR	20.8	14.4	NR	23.4
Potassium	NS	NS	NR	4,130	1,420	NR	5,080
Selenium	3.9	180	NR	0.16 J	0.65 J	NR	1.5 U
Silver	2	180	NR	0.22 J	0.16 J	NR	1.2 UJ
Sodium	NS	NS	NR	1,180	843	NR	2,760
Thallium	NS	NS	NR	0.28 J	0.12 J	NR	0.26 J
Vanadium	NS	NS	NR	31	15.4	NR	27.1
Zinc	109	10,000	NR	289	146	NR	59.7

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			SB-11_0-2_20210824 460-241522-1 8/24/2021 mg/kg 1	SB-11_0-2_20210824 460-241522-1 8/24/2021 mg/kg 10	SB-11_8-10_20210824 460-241522-2 8/24/2021 mg/kg 1	RI-SB-01_0-2_20230810 460-285947-1 8/10/2023 mg/kg 1	RI-SB-01_0-2_20230810 460-285947-1 8/10/2023 mg/kg 2
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	18,500	NR	8,980	5,240	NR
Antimony	NS	NS	1 U	NR	0.35 J	0.67 J	NR
Arsenic	13	16	1.4	NR	5.3	12.1	NR
Barium	350	400	55	NR	298	68.6	NR
Beryllium	7.2	72	0.61	NR	0.61	0.31 J	NR
Cadmium	2.5	4.3	0.14 J	NR	0.49 J	0.29 J	NR
Calcium	NS	NS	NR	198,000	29,200	NR	102,000
Chromium, Hexavalent	1	110	NR	NR	NR	2.2 U	NR
Chromium, Total	NS	NS	24.5 B	NR	14.1 B	9.9	NR
Cobalt	NS	NS	5.9	NR	9	5.8	NR
Copper	50	270	22.5	NR	52.9	32.2	NR
Iron	NS	NS	14,600	NR	16,000	12,100	NR
Lead	63	400	58.5	NR	260	79.7	NR
Magnesium	NS	NS	12,200	NR	6,500	35,100	NR
Manganese	1,600	2,000	283	NR	342	193	NR
Mercury	0.18	0.81	0.088	NR	0.4	0.16	NR
Nickel	30	310	13.8	NR	18.5	12.3	NR
Potassium	NS	NS	5,990	NR	2,680	1,340	NR
Selenium	3.9	180	0.12 J	NR	0.81 J	0.45 J	NR
Silver	2	180	1 UJ	NR	0.28 J	0.93	NR
Sodium	NS	NS	1,970	NR	358	NR	308
Thallium	NS	NS	0.24 J	NR	0.18 J	0.14 J	NR
Vanadium	NS	NS	22.1	NR	22.9	23.3	NR
Zinc	109	10,000	80.2	NR	303	99.2	NR

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Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-01_8-10_20230810 460-285947-2 8/10/2023 mg/kg 1	RI-SB-01_10-12_20230810 460-285947-3 8/10/2023 mg/kg 1	RI-SB-02_0-2_20230809 460-285841-7 8/09/2023 mg/kg 1	RI-SB-02_10-12_20230809 460-285841-8 8/09/2023 mg/kg 1	RI-SB-02_10-12_20230809 460-285841-8 8/09/2023 mg/kg 2
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	6,150	13,800	4,160	7,430	NR
Antimony	NS	NS	0.89	0.73 J	0.22 J	NR	1.3 J
Arsenic	13	16	8.6	3.1	2.3	6.5	NR
Barium	350	400	80.3	183	58.3	64.9	NR
Beryllium	7.2	72	0.38	0.31 J	0.21 J	0.4	NR
Cadmium	2.5	4.3	0.35 J	0.18 J	0.14 J	0.099 J	NR
Calcium	NS	NS	24,600	2,740	57,600	NR	88,400
Chromium, Hexavalent	1	110	2.2 U	2.3 U	2 U	2.2 U	NR
Chromium, Total	NS	NS	10.7	25.9	9.9	11.1	NR
Cobalt	NS	NS	4.7	15	3	4.9	NR
Copper	50	270	67.3	52.1	8.9	19	NR
Iron	NS	NS	13,000	30,000	6,700	12,100	NR
Lead	63	400	104	37.7	128	485	NR
Magnesium	NS	NS	2,500	7,070	5,720	3,230	NR
Manganese	1,600	2,000	324	570	124	248	NR
Mercury	0.18	0.81	0.18	0.13	0.11	0.19	NR
Nickel	30	310	12.4	28.6	8.6	10.5	NR
Potassium	NS	NS	1,100	9,560	738	1,630	NR
Selenium	3.9	180	0.43 J	0.11 J	0.13 J	0.54 J	NR
Silver	2	180	0.11 J	0.34 U	0.33 U	0.091 J	NR
Sodium	NS	NS	575	948	487	1,530	NR
Thallium	NS	NS	0.12 J	0.35	0.046 J	0.13 J	NR
Vanadium	NS	NS	16.6	42.1	10	18.1	NR
Zinc	109	10,000	181	165	51.3	42	NR

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-02_14-16_20230809 460-285841-9 8/09/2023 mg/kg 1	RI-SB-03_0-2_20230809 460-285841-5 8/09/2023 mg/kg 1	RI-SB-03_8-10_20230809 460-285841-6 8/09/2023 mg/kg 1	RI-SB-04_0-2_20230808 460-285743-29 8/08/2023 mg/kg 1	RI-SB-X1_20230808 460-285743-33 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	14,400	6,520	10,900	7,780	5,380
Antimony	NS	NS	0.26 J	0.61 J	0.19 J	1.1	0.97
Arsenic	13	16	2.7	3.8	2.7	4.9	6
Barium	350	400	199	48.5	42	209	134
Beryllium	7.2	72	0.43	0.4	0.42	0.4	0.32 J
Cadmium	2.5	4.3	0.96 U	0.19 J	0.78 U	0.42 J	0.55 J
Calcium	NS	NS	1,690	66,500	3,430	30,500 J	81,800 J
Chromium, Hexavalent	1	110	2.4 U	1.9 J	2 U	2 U	2.1 U
Chromium, Total	NS	NS	43.3	12.5	15.9	17.2	12.5
Cobalt	NS	NS	16.8	5.4 L	6	6.6	5.6
Copper	50	270	20	28.7 J	15.2	37.3 J	99.8 J
Iron	NS	NS	38,200	9,880	14,700	15,200	16,000
Lead	63	400	47.9	33.3 L	38	433 J	162 J
Magnesium	NS	NS	7,510	6,580	6,060	6,960 J	38,000 J
Manganese	1,600	2,000	222	208	286	238	250
Mercury	0.18	0.81	0.36	0.075 L	0.22	0.02 J	0.74 J
Nickel	30	310	30.4	11.1	12.3	15.6 J	13 J
Potassium	NS	NS	10,400	620 H	1,230	1,590	1,210
Selenium	3.9	180	0.22 J	0.94 J	0.29 J	0.47 J	0.41 J
Silver	2	180	0.19 J	0.34 U	0.31 U	0.23 J	0.15 J
Sodium	NS	NS	1,580	645	306	551	409
Thallium	NS	NS	0.37 J	0.058 J	0.11 J	0.15 J	0.11 J
Vanadium	NS	NS	54	17.1	21.2	27	19
Zinc	109	10,000	87.3	63.3 L	40.6	255	229

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-04_8-10_20230808 460-285743-30 8/08/2023 mg/kg 1	RI-SB-05_0-2_20230808 460-285743-22 8/08/2023 mg/kg 1	RI-SB-06_0-2_20230810 460-285947-11 8/10/2023 mg/kg 1	RI-SB-06_0-2_20230810 460-285947-11 8/10/2023 mg/kg 2	RI-SB-06_8-10_20230810 460-285947-4 8/10/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	9,140	13,400	3,040	NR	11,500
Antimony	NS	NS	1.2	0.49 J	0.42 J	NR	1.8
Arsenic	13	16	39.5	12.6	2.7	NR	6.4
Barium	350	400	81.4	105	24.5	NR	149
Beryllium	7.2	72	0.34 J	0.85	0.42	NR	0.46
Cadmium	2.5	4.3	1	0.14 J	0.83	NR	0.37 J
Calcium	NS	NS	9,430	52,000	NR	135,000	16,900
Chromium, Hexavalent	1	110	2.3 U	2.2 U	2 U	NR	2.5 U
Chromium, Total	NS	NS	29.3	34.2	4.3	NR	20.1
Cobalt	NS	NS	17	6.1	6.6	NR	10.3
Copper	50	270	170	22.6	109	NR	99.5
Iron	NS	NS	52.8 U	26,900	8,450	NR	22,700
Lead	63	400	194	37.7	39.9	NR	208
Magnesium	NS	NS	3,720	3,540	NR	45,200	6,210
Manganese	1,600	2,000	1,030	137	210	NR	302
Mercury	0.18	0.81	0.049	0.23	0.021	NR	0.71
Nickel	30	310	26.3	15.8	9.1	NR	28.5
Potassium	NS	NS	2,400	1,650	366	NR	5,080
Selenium	3.9	180	0.35 J	2.2	0.38 J	NR	0.36 J
Silver	2	180	0.12 J	0.08 J	0.17 J	NR	0.14 J
Sodium	NS	NS	1,130	396	NR	315	707
Thallium	NS	NS	0.14 J	0.32 J	0.065 J	NR	0.32 J
Vanadium	NS	NS	71	23.7	30.5	NR	33.6
Zinc	109	10,000	279	188	100	NR	423

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-07_0-2_20230808 460-285743-25 8/08/2023 mg/kg 1	RI-SB-07_8-10_20230808 460-285743-26 8/08/2023 mg/kg 1	RI-SB-08_0-2_20230810 460-285947-5 8/10/2023 mg/kg 1	RI-SB-08_7-9_20230810 460-285947-6 8/10/2023 mg/kg 1	RI-SB-08_7-9_20230810 460-285947-6 8/10/2023 mg/kg 2
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	8,940	15,900	2,260	5,590	NR
Antimony	NS	NS	2	0.84 U	0.7 J	1.6	NR
Arsenic	13	16	9 H	0.71 J	10.7	38.8	NR
Barium	350	400	436	263	27.8	25.9	NR
Beryllium	7.2	72	0.75	0.42	0.31 J	0.3 J	NR
Cadmium	2.5	4.3	0.92	0.84 U	0.46 J	2.2	NR
Calcium	NS	NS	49,200	1,210	54,600	10,700	NR
Chromium, Hexavalent	1	110	1.2 J	2.2 U	2.1 U	2.2 U	NR
Chromium, Total	NS	NS	24.1 H	37.1	7.2	24.2	NR
Cobalt	NS	NS	9.1	19.9	5.6	14.6	NR
Copper	50	270	65.2	169	24.1	NR	2,220
Iron	NS	NS	23,100	38,200	14,300	NR	129,000
Lead	63	400	483	6.7	38.1	880	NR
Magnesium	NS	NS	7,920	8,130	30,400	1,310	NR
Manganese	1,600	2,000	289	252	86.6	769	NR
Mercury	0.18	0.81	0.51	0.021	0.14	0.064	NR
Nickel	30	310	23.2	31.8	14.1	24.2	NR
Potassium	NS	NS	2,560	11,400	231	331	NR
Selenium	3.9	180	0.71 J	1 U	0.39 J	0.63 J	NR
Silver	2	180	0.85	0.34 U	0.072 J	1.6	NR
Sodium	NS	NS	320	429	375	NR	232
Thallium	NS	NS	0.2 J	0.44	0.2 J	0.044 J	NR
Vanadium	NS	NS	38.1	57.7	15.5	49.3	NR
Zinc	109	10,000	769	79.2	144	1,260	NR

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Subsurface (Phase II) and Remedial Investigations
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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-08_9-10_20230810 460-285947-7 8/10/2023 mg/kg 1	RI-SB-09_0-2_20230809 460-285841-1 8/09/2023 mg/kg 1	RI-SB-09_8-10_20230809 460-285841-2 8/09/2023 mg/kg 1	RI-SB-10_0-2_20230808 460-285743-34 8/08/2023 mg/kg 1	RI-SB-10_0-2_20230808 460-285743-34 8/08/2023 mg/kg 4
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	10,000	2,770	12,800	3,120	NR
Antimony	NS	NS	0.29 J	0.22 J	0.86 U	0.2 J	NR
Arsenic	13	16	4.4	6.7	2.2	1.8	NR
Barium	350	400	43.5	48.7	61.7	16.4	NR
Beryllium	7.2	72	0.38	0.25 J	0.45	0.18 J	NR
Cadmium	2.5	4.3	0.18 J	0.36 J	0.13 J	0.78 U	NR
Calcium	NS	NS	13,700	74,300	13,100	NR	70,600
Chromium, Hexavalent	1	110	2.3 U	2 U	2.2 U	2.7	NR
Chromium, Total	NS	NS	14.6	4.4	24.4	3.6	NR
Cobalt	NS	NS	6.4	5.6	9	2.9	NR
Copper	50	270	28.3	29.7	34.9	25.7	NR
Iron	NS	NS	15,200	12,600	22,900	7,170	NR
Lead	63	400	182	16.7	175	7.4	NR
Magnesium	NS	NS	7,940	29,500	18,000	36,200	NR
Manganese	1,600	2,000	267	116	469	141	NR
Mercury	0.18	0.81	0.75	0.017 U	0.084	0.011 J	NR
Nickel	30	310	14	9.2	18.8	4.8	NR
Potassium	NS	NS	2,400	368	3,640	408	NR
Selenium	3.9	180	0.77 J	0.33 J	0.15 J	0.13 J	NR
Silver	2	180	0.36 U	0.33 U	0.35 U	0.31 U	NR
Sodium	NS	NS	1,840	524	860	247	NR
Thallium	NS	NS	0.19 J	0.087 J	0.23 J	0.038 J	NR
Vanadium	NS	NS	24.5	28.7	34.8	16.8	NR
Zinc	109	10,000	124	93.5	72.7	22.2	NR

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-10_8-10_20230808 460-285743-35 8/08/2023 mg/kg 1	RI-SB-11_0-2_20230809 460-285841-3 8/09/2023 mg/kg 1	RI-SB-11_8-10_20230809 460-285841-4 8/09/2023 mg/kg 1	RI-SB-12_0-2_20230811 460-286022-3 8/11/2023 mg/kg 1	RI-SB-12_0-2_20230811 460-286022-3 8/11/2023 mg/kg 5
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	13,100	3,750	13,800	3,450	NR
Antimony	NS	NS	0.22 J	0.76 U	0.86 U	0.64 J	NR
Arsenic	13	16	2.3	2.2	1.5	3.8	NR
Barium	350	400	61.6	21.5	36.2	83	NR
Beryllium	7.2	72	0.51	0.19 J	0.49	0.38	NR
Cadmium	2.5	4.3	0.12 J	0.76 U	0.86 U	0.24 J	NR
Calcium	NS	NS	6,150	61,800	19,000	NR	107,000
Chromium, Hexavalent	1	110	2.2 U	2 U	2.2 U	2 U	NR
Chromium, Total	NS	NS	23.6	6.2	21.7	8.1	NR
Cobalt	NS	NS	7.9	2.2	8.9	6.9	NR
Copper	50	270	22.5	6.7	25.8	27.4	NR
Iron	NS	NS	18,200	7,720	20,600	10,900	NR
Lead	63	400	46.3	6.7	7.1	44.8	NR
Magnesium	NS	NS	9,000	23,300	16,500	NR	53,500
Manganese	1,600	2,000	527	142	251	206	NR
Mercury	0.18	0.81	0.17	0.017 U	0.15	0.05	NR
Nickel	30	310	18.6	5.2	18.1	12.5	NR
Potassium	NS	NS	3,440	658	4,650	578	NR
Selenium	3.9	180	0.16 J	0.12 J	1.1 U	0.39 J	NR
Silver	2	180	0.35 U	0.31 U	0.34 U	0.07 J	NR
Sodium	NS	NS	576	162	2,710	272	NR
Thallium	NS	NS	0.25 J	0.043 J	0.26 J	0.072 J	NR
Vanadium	NS	NS	31.8	8.4	32.4	15.3	NR
Zinc	109	10,000	45.9	13.7	48.5	106	NR

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-12_7-9_20230811 460-286022-4 8/11/2023 mg/kg 1	RI-SB-12_10-12_20230811 460-286022-5 8/11/2023 mg/kg 1	RI-SB-13_0-2_20230808 460-285743-31 8/08/2023 mg/kg 1	RI-SB-13_0-2_20230808 460-285743-31 8/08/2023 mg/kg 2	RI-SB-13_8-10_20230808 460-285743-32 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	2,270	13,300	3,980	NR	3,440
Antimony	NS	NS	0.79 J	0.65 J	0.26 J	NR	0.69 J
Arsenic	13	16	20.8	8.2	2.1	NR	37.7
Barium	350	400	13.8	80.5	24.3	NR	34
Beryllium	7.2	72	0.11 J	0.54	0.21 J	NR	0.2 J
Cadmium	2.5	4.3	0.11 J	0.95 U	0.81 U	NR	1.7
Calcium	NS	NS	4,000	3,260	NR	92,200	2,440
Chromium, Hexavalent	1	110	2.2 U	2.4 U	2 U	NR	2.4 U
Chromium, Total	NS	NS	14.2	33.8	5.7	NR	15.4
Cobalt	NS	NS	8.2	10.8	3.6	NR	19.4
Copper	50	270	61.4	84.5	29.2	NR	286
Iron	NS	NS	34,500	25,800	9,740	NR	57.3 U
Lead	63	400	1,220	61.7	13.5	NR	123
Magnesium	NS	NS	645	6,420	37,100	NR	1,070
Manganese	1,600	2,000	433	1,050	144	NR	518
Mercury	0.18	0.81	0.14	0.21	0.021	NR	0.19
Nickel	30	310	14.3	24.3	6.2	NR	23.6
Potassium	NS	NS	343	3,900	553	NR	559
Selenium	3.9	180	0.29 J	0.4 J	0.13 J	NR	0.72 J
Silver	2	180	0.34 U	0.5	0.33 U	NR	0.1 J
Sodium	NS	NS	671	3,010	512	NR	1,060
Thallium	NS	NS	0.34 U	0.16 J	0.05 J	NR	0.082 J
Vanadium	NS	NS	36.1	32	21.7	NR	52.1
Zinc	109	10,000	36.3	107	29.7	NR	629

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-14_0-2_20230811 460-286022-1 8/11/2023 mg/kg 1	RI-SB-14_0-2_20230811 460-286022-1 8/11/2023 mg/kg 5	RI-SB-X2_20230811 460-286022-6 8/11/2023 mg/kg 1	RI-SB-14_8-10_20230811 460-286022-2 8/11/2023 mg/kg 1	RI-SB-15_0-2_20230808 460-285743-27 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	2,480	NR	6,190 J	11,400	5,670 J
Antimony	NS	NS	0.46 J	NR	1.3 J	0.19 J	0.23 J
Arsenic	13	16	2.9	NR	5.8 J	3	6.7 J
Barium	350	400	35.7	NR	93.9 J	50.9	77 J
Beryllium	7.2	72	0.2 J	NR	0.48 J	0.44	0.62 J
Cadmium	2.5	4.3	0.5 J	NR	1.7 J	0.9 U	0.86 UJ
Calcium	NS	NS	NR	109,000	33,300 J	4,800	46,300 J
Chromium, Hexavalent	1	110	2 U	NR	2.1 U	2.3 U	1.4 J
Chromium, Total	NS	NS	5.2	NR	10.8 J	15.3	14.3 J
Cobalt	NS	NS	3.2	NR	8.7 J	5.9	3.8 J
Copper	50	270	18.7	NR	54.2 J	17.8	21.5 J
Iron	NS	NS	8,730	NR	9,310	13,900	18,200
Lead	63	400	46.3	NR	154 J	79.7	17.4 J
Magnesium	NS	NS	NR	50,300	4,030 J	2,980	2,000 J
Manganese	1,600	2,000	137	NR	177	394	208
Mercury	0.18	0.81	0.14	NR	0.17	0.42	0.049
Nickel	30	310	7.1	NR	13 J	12.6	10.1 J
Potassium	NS	NS	380	NR	814 J	883	1,290 J
Selenium	3.9	180	0.2 J	NR	0.72 J	0.26 J	0.31 J
Silver	2	180	0.32 U	NR	0.16 J	0.36 U	0.35 U
Sodium	NS	NS	140	NR	208	280	589
Thallium	NS	NS	0.045 J	NR	0.11 J	0.12 J	0.13 J
Vanadium	NS	NS	15.4	NR	15.5	21.1	17.2
Zinc	109	10,000	283	NR	545 J	49.8	111 J

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-15_8-10_20230808 460-285743-28 8/08/2023 mg/kg 1	RI-SB-20_0-2_20230808 460-285743-23 8/08/2023 mg/kg 1	RI-SB-20_0-2_20230808 460-285743-23 8/08/2023 mg/kg 2	RI-SB-20_2-4_20230808 460-285743-24 8/08/2023 mg/kg 1	RI-SB-21_0-2_20230808 460-285743-20 8/08/2023 mg/kg 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	17,400	5,210	NR	7,820	7,990
Antimony	NS	NS	0.78 U	0.47 J	NR	2	2.1
Arsenic	13	16	0.4 J	58.7	NR	6	6.6
Barium	350	400	69.7	125	NR	231	194
Beryllium	7.2	72	0.61	0.57	NR	0.66	1
Cadmium	2.5	4.3	0.78 U	0.81 U	NR	0.57 J	0.4 J
Calcium	NS	NS	78.3 U	19,200	NR	39,100	31,800
Chromium, Hexavalent	1	110	2 U	1.7 J	NR	2.2 U	2.1 U
Chromium, Total	NS	NS	16.8	66.3	NR	14.9	33.4
Cobalt	NS	NS	5.2	3.5	NR	9	8
Copper	50	270	5.9	43.9	NR	48	58.2
Iron	NS	NS	11,200	NR	38,900	15,900	19,000
Lead	63	400	9.9	22.9	NR	289	249
Magnesium	NS	NS	9,710	1,200	NR	5,190	4,220
Manganese	1,600	2,000	216	69.9	NR	333	238
Mercury	0.18	0.81	0.0079 J	0.73	NR	0.37	0.46
Nickel	30	310	12.4	14.3	NR	19.3	18.5
Potassium	NS	NS	5,680	1,630	NR	1,380	2,090
Selenium	3.9	180	0.98 U	3.1	NR	0.5 J	0.51 J
Silver	2	180	0.31 U	0.079 J	NR	0.22 J	0.2 J
Sodium	NS	NS	2,580	625	NR	484	514
Thallium	NS	NS	0.19 J	0.96	NR	0.13 J	0.23 J
Vanadium	NS	NS	19	25.9	NR	21.7	21.7
Zinc	109	10,000	30.1	103	NR	314	358

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AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor			RI-SB-21_8-10_20230808 460-285743-21 8/08/2023 mg/kg 1	RI-FB-S-01_20230809 460-285841-11 8/09/2023 µg/L 1	RI-FB-S-02_20230810 460-285947-9 8/09/2023 µg/L 1	RI-FB-S-03_20230810 460-285947-10 8/09/2023 µg/L 1
Compound	NYSDEC UUSCO	NYSDEC RRSCO	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NS	12,600	40 U	40 U	40 U
Antimony	NS	NS	0.79 U	2 U	2 U	2 U
Arsenic	13	16	0.53 J	2 U	2 U	2 U
Barium	350	400	116	4 U	4 U	4 U
Beryllium	7.2	72	0.49	0.8 U	0.8 U	0.8 U
Cadmium	2.5	4.3	0.79 U	2 U	2 U	2 U
Calcium	NS	NS	64,200	500 U	500 U	500 U
Chromium, Hexavalent	1	110	2.1 U	10 U	10 U	10 U
Chromium, Total	NS	NS	17.5	4 U	4 U	4 U
Cobalt	NS	NS	10.7	4 U	4 U	4 U
Copper	50	270	31.8	4 U	4 U	4 U
Iron	NS	NS	15,400	120 U	120 U	120 U
Lead	63	400	7.5	1.2 U	1.2 U	1.2 U
Magnesium	NS	NS	14,700	200 U	200 U	200 U
Manganese	1,600	2,000	525	8 U	8 U	8 U
Mercury	0.18	0.81	0.014 J	0.2 U	0.2 U	0.2 U
Nickel	30	310	18.7	4 U	4 U	4 U
Potassium	NS	NS	5,910	200 U	200 U	200 U
Selenium	3.9	180	0.98 U	2.5 U	2.5 U	2.5 U
Silver	2	180	0.31 U	2 U	2 U	2 U
Sodium	NS	NS	1,500	500 U	500 U	500 U
Thallium	NS	NS	0.24 J	0.8 U	0.8 U	0.8 U
Vanadium	NS	NS	28.5	4 U	4 U	4 U
Zinc	109	10,000	53	16 U	16 U	16 U

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Per- and Polyfluoroalkyl Substances (PFAS)

AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			SB-07_0-2_20210824 460-241523-1 8/24/2021 1 ppb	RI-SB-01_0-2_20230810 460-285938-1 8/10/2023 1 ppb	RI-SB-01_8-10_20230810 460-285938-2 8/10/2023 1 ppb	RI-SB-01_10-12_20230810 460-285938-3 8/10/2023 1 ppb	RI-SB-02_0-2_20230809 460-285863-7 8/09/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	NR	0.88 U	0.98 U	0.86 U	0.87 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	NR	0.88 U	0.98 U	0.86 U	0.87 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	NR	5.47 U	6.14 U	5.36 U	5.45 U
3-Perfluoroheptyl propanoic acid	NS	NS	NR	5.47 U	6.14 U	5.36 U	5.45 U
3-Perfluoropropyl propanoic acid	NS	NS	NR	1.09 U	1.23 U	1.07 U	1.09 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	NR	0.88 U	0.98 U	0.86 U	0.87 U
6:2 Fluorotelomer sulfonate	NS	NS	2.09 U	0.88 U	0.98 U	0.86 U	0.87 U
8:2 Fluorotelomer sulfonate	NS	NS	3.13 U	0.88 U	0.98 U	0.86 U	0.87 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	NR	0.88 U	0.98 U	0.86 U	0.87 U
Hexafluoropropylene oxide dimer acid	NS	NS	NR	0.88 U	0.98 U	0.86 U	0.87 U
N-ethyl perfluorooctanesulfonamide	NS	NS	NR	0.22 U	0.25 U	0.21 U	0.22 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	2.09 U	0.22 U	0.25 U	0.21 U	0.22 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	NR	2.19 U	2.46 U	2.15 U	2.18 U
N-methyl perfluorooctanesulfonamide	NS	NS	NR	0.22 U	0.25 U	0.21 U	0.22 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	2.09 U	0.22 U	0.25 U	0.21 U	0.22 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	NR	2.19 U	2.46 U	2.15 U	2.18 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	NR	0.44 U	0.49 U	0.43 U	0.44 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	NR	0.44 U	0.49 U	0.43 U	0.44 U
Perfluoro-3-methoxypropanoic acid	NS	NS	NR	0.44 U	0.49 U	0.43 U	0.44 U
Perfluoro-4-methoxybutanoic acid	NS	NS	NR	0.44 U	0.49 U	0.43 U	0.44 U
Perfluorobutanesulfonic acid	NS	NS	2.09 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorobutanoic acid	NS	NS	2.09 U	0.88 U	0.98 U	0.86 U	0.87 U
Perfluorodecanesulfonic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.15 J	0.22 U
Perfluorodecanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorododecanesulfonic acid	NS	NS	NR	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorododecanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluoroheptanesulfonic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluoroheptanoic acid	NS	NS	0.63 U	0.074 J	0.25 U	0.046 J	0.032 J
Perfluorohexanesulfonic acid	NS	NS	0.63 U	0.025 J	0.031 J	0.21 U	0.22 U
Perfluorohexanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorononanesulfonic acid	NS	NS	NR	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorononanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorooctanesulfonamide	NS	NS	0.63 U	0.22 U	0.25 U	0.014 J	0.057 J
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.63 U	0.32	1.21	0.27	0.12 J
Perfluorooctanoic acid (PFOA)	0.66	33	0.63 U	0.45	0.18 J	0.15 J	0.2 J
Perfluoropentanoic acid	NS	NS	0.63 U	0.054 J	0.061 J	0.055 J	0.044 J
Perfluoropentanesulfonic acid	NS	NS	NR	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorotetradecanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.21 U	0.22 U
Perfluorotridecanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.041 J	0.22 U
Perfluoroundecanoic acid	NS	NS	0.63 U	0.22 U	0.25 U	0.13 J	0.22 U

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Per- and Polyfluoroalkyl Substances (PFAS)

AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-02_10-12_20230809 460-285863-8 8/09/2023 1 ppb	RI-SB-02_14-16_20230809 460-285863-9 8/09/2023 1 ppb	RI-SB-03_0-2_20230809 460-285863-5 8/09/2023 1 ppb	RI-SB-03_8-10_20230809 460-285863-6 8/09/2023 1 ppb	RI-SB-04_0-2_20230808 460-285744-10 8/08/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	5.81 U	7.44 U	5.12 UJ	5.04 U	5.28 U
3-Perfluoroheptyl propanoic acid	NS	NS	5.81 U	7.44 U	5.12 UJ	5.04 U	5.28 U
3-Perfluoropropyl propanoic acid	NS	NS	1.16 U	1.49 U	1.02 UJ	1.01 U	1.06 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
6:2 Fluorotelomer sulfonate	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
8:2 Fluorotelomer sulfonate	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	2.32 U	2.98 U	2.05 U	2.02 U	2.11 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	2.32 U	2.98 U	2.05 U	2.02 U	2.11 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.46 U	0.6 U	0.41 U	0.4 U	0.42 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.46 U	0.6 U	0.41 U	0.4 U	0.42 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.46 U	0.6 U	0.41 U	0.4 U	0.42 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.46 U	0.6 U	0.41 U	0.4 U	0.42 U
Perfluorobutanesulfonic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorobutanoic acid	NS	NS	0.93 U	1.19 U	0.82 U	0.81 U	0.85 U
Perfluorodecanesulfonic acid	NS	NS	0.23 U	0.11 J	0.2 U	0.2 U	0.21 U
Perfluorodecanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorododecanesulfonic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorododecanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluoroheptanesulfonic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluoroheptanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorohexanesulfonic acid	NS	NS	0.23 U	0.3 U	0.021 J	0.2 U	0.21 U
Perfluorohexanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorononanesulfonic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorononanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorooctanesulfonamide	NS	NS	0.23 U	0.3 U	0.2 U	0.017 J	0.21 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.23 U	0.13 J	0.2 U	0.17 J	0.074 J
Perfluorooctanoic acid (PFOA)	0.66	33	0.23 U	0.3 U	0.082 J	0.048 J	0.21 U
Perfluoropentanoic acid	NS	NS	0.04 J	0.04 J	0.039 J	0.4 U	0.42 U
Perfluoropentanesulfonic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorotetradecanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluorotridecanoic acid	NS	NS	0.23 U	0.3 U	0.2 U	0.2 U	0.21 U
Perfluoroundecanoic acid	NS	NS	0.23 U	0.091 J	0.2 U	0.2 U	0.21 U

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Soil Analytical Results of Per- and Polyfluoroalkyl Substances (PFAS)

AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-X1_20230808 460-285744-16 8/08/2023 1 ppb	RI-SB-04_8-10_20230808 460-285744-11 8/08/2023 1 ppb	RI-SB-05_0-2_20230808 460-285744-3 8/08/2023 1 ppb	RI-SB-06_0-2_20230810 460-285938-4 8/10/2023 1 ppb	RI-SB-06_8-10_20230810 460-285938-5 8/10/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	5.15 U	5.59 U	5.41 U	5.94 U	5.63 U
3-Perfluoroheptyl propanoic acid	NS	NS	5.15 U	5.59 U	5.41 U	5.94 U	5.63 U
3-Perfluoropropyl propanoic acid	NS	NS	1.03 U	1.12 U	1.08 U	1.19 U	1.13 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
6:2 Fluorotelomer sulfonate	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
8:2 Fluorotelomer sulfonate	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	2.06 U	2.24 U	2.16 U	2.37 U	2.25 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	2.06 U	2.24 U	2.16 U	2.37 U	2.25 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.41 U	0.45 U	0.43 U	0.47 U	0.45 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.41 U	0.45 U	0.43 U	0.47 U	0.45 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.41 U	0.45 U	0.43 U	0.47 U	0.45 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.41 U	0.45 U	0.43 U	0.47 U	0.45 U
Perfluorobutanesulfonic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorobutanoic acid	NS	NS	0.82 U	0.89 U	0.87 U	0.95 U	0.9 U
Perfluorodecanesulfonic acid	NS	NS	0.053 J	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorodecanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorododecanesulfonic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorododecanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluoroheptanesulfonic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluoroheptanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.076 J	0.07 J
Perfluorohexanesulfonic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.17 J	0.11 J
Perfluorohexanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorononanesulfonic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorononanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.048 J	0.23 U
Perfluorooctanesulfonamide	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.14 J	0.084 J	0.22 U	13.8	0.39
Perfluorooctanoic acid (PFOA)	0.66	33	0.21 U	0.07 J	0.086 J	0.71	0.39
Perfluoropentanoic acid	NS	NS	0.034 J	0.035 J	0.43 U	0.089 J	0.078 J
Perfluoropentanesulfonic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorotetradecanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluorotridecanoic acid	NS	NS	0.21 U	0.22 U	0.22 U	0.24 U	0.23 U
Perfluoroundecanoic acid	NS	NS	0.029 J	0.04 J	0.22 U	0.24 U	0.23 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-07_0-2_20230808 460-285744-6 8/08/2023 1 ppb	RI-SB-07_8-10_20230808 460-285744-7 8/08/2023 1 ppb	RI-SB-08_0-2_20230810 460-285938-6 8/10/2023 1 ppb	RI-SB-08_7-9_20230810 460-285938-7 8/10/2023 1 ppb	RI-SB-08_9-10_20230810 460-285938-8 8/10/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	5.6 U	5.23 U	5.43 UJ	5.51 U	6.05 U
3-Perfluoroheptyl propanoic acid	NS	NS	5.6 U	5.23 U	5.43 UJ	5.51 U	6.05 U
3-Perfluoropropyl propanoic acid	NS	NS	1.12 U	1.05 U	1.09 UJ	1.1 U	1.21 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
6:2 Fluorotelomer sulfonate	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
8:2 Fluorotelomer sulfonate	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	2.24 U	2.09 U	2.17 UJ	2.2 U	2.42 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	2.24 U	2.09 U	2.17 UJ	2.2 U	2.42 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.45 U	0.42 U	0.43 UJ	0.44 U	0.48 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.45 U	0.42 U	0.43 UJ	0.44 U	0.48 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.45 U	0.42 U	0.43 UJ	0.44 U	0.48 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.45 U	0.42 U	0.43 UJ	0.44 U	0.48 U
Perfluorobutanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorobutanoic acid	NS	NS	0.9 U	0.84 U	0.87 UJ	0.88 U	0.97 U
Perfluorodecanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorodecanoic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorododecanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorododecanoic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluoroheptanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluoroheptanoic acid	NS	NS	0.22 U	0.037 J	0.064 J	0.22 U	0.24 U
Perfluorohexanesulfonic acid	NS	NS	0.22 U	0.21 U	0.16 J	0.22 U	0.12 J
Perfluorohexanoic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorononanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorononanoic acid	NS	NS	0.22 U	0.027 J	0.076 J	0.22 U	0.24 U
Perfluorooctanesulfonamide	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.22 U	0.21 U	7.06 J	0.22 U	0.62
Perfluorooctanoic acid (PFOA)	0.66	33	0.22 U	0.17 J	0.5 J	0.22 U	0.083 J
Perfluoropentanoic acid	NS	NS	0.032 J	0.078 J	0.035 J	0.44 U	0.48 U
Perfluoropentanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorotetradecanoic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluorotridecanoic acid	NS	NS	0.22 U	0.21 U	0.22 UJ	0.22 U	0.24 U
Perfluoroundecanoic acid	NS	NS	0.22 U	0.041 J	0.22 UJ	0.22 U	0.24 U

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Soil Analytical Results of Per- and Polyfluoroalkyl Substances (PFAS)

AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-09_0-2_20230809 460-285863-1 8/09/2023 1 ppb	RI-SB-09_8-10_20230809 460-285863-2 8/09/2023 1 ppb	RI-SB-10_0-2_20230808 460-285744-14 8/08/2023 1 ppb	RI-SB-10_8-10_20230808 460-285744-15 8/08/2023 1 ppb	RI-SB-11_0-2_20230809 460-285863-3 8/09/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	5.89 U	5.61 U	6.45 U	5.57 U	5.29 U
3-Perfluoroheptyl propanoic acid	NS	NS	5.89 U	5.61 U	6.45 U	5.57 U	5.29 U
3-Perfluoropropyl propanoic acid	NS	NS	1.18 U	1.12 U	1.29 U	1.11 U	1.06 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
6:2 Fluorotelomer sulfonate	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
8:2 Fluorotelomer sulfonate	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	2.36 U	2.24 U	2.58 U	2.23 U	2.12 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	2.36 U	2.24 U	2.58 U	2.23 U	2.12 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.47 U	0.45 U	0.52 U	0.45 U	0.42 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.47 U	0.45 U	0.52 U	0.45 U	0.42 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.47 U	0.45 U	0.52 U	0.45 U	0.42 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.47 U	0.45 U	0.52 U	0.45 U	0.42 U
Perfluorobutanesulfonic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorobutanoic acid	NS	NS	0.94 U	0.9 U	1.03 U	0.89 U	0.85 U
Perfluorodecanesulfonic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorodecanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorododecanesulfonic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorododecanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluoroheptanesulfonic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluoroheptanoic acid	NS	NS	0.043 J	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorohexanesulfonic acid	NS	NS	0.033 J	0.089 J	0.26 U	0.22 U	0.21 U
Perfluorohexanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorononanesulfonic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorononanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorooctanesulfonamide	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.12 J	0.88	0.26 U	0.18 J	0.21 U
Perfluorooctanoic acid (PFOA)	0.66	33	0.19 J	0.099 J	0.1 J	0.05 J	0.21 U
Perfluoropentanoic acid	NS	NS	0.051 J	0.024 J	0.12 J	0.45 U	0.42 U
Perfluoropentanesulfonic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorotetradecanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluorotridecanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U
Perfluoroundecanoic acid	NS	NS	0.24 U	0.22 U	0.26 U	0.22 U	0.21 U

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Subsurface (Phase II) and Remedial Investigations
Soil Analytical Results of Per- and Polyfluoroalkyl Substances (PFAS)

AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-11_8-10_20230809 460-285863-4 8/09/2023 1 ppb	RI-SB-12_0-2_20230811 460-286063-3 8/11/2023 1 ppb	RI-SB-12_7-9_20230811 460-286063-4 8/11/2023 1 ppb	RI-SB-12_10-12_20230811 460-286063-5 8/11/2023 1 ppb	RI-SB-13_0-2_20230808 460-285744-12 8/08/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	5.52 U	5.34 U	5.57 U	5.6 U	5.49 U
3-Perfluoroheptyl propanoic acid	NS	NS	5.52 U	5.34 U	5.57 U	5.6 U	5.49 U
3-Perfluoropropyl propanoic acid	NS	NS	1.1 U	1.07 U	1.11 U	1.12 U	1.1 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
6:2 Fluorotelomer sulfonate	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
8:2 Fluorotelomer sulfonate	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.88 U	0.85 U	0.89 U	0.9 U	0.88 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	2.21 U	2.14 U	2.23 U	2.24 U	2.2 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	2.21 U	2.14 U	2.23 U	2.24 U	2.2 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.44 U	0.43 U	0.45 U	0.45 U	0.44 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.44 U	0.43 U	0.45 U	0.45 U	0.44 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.44 U	0.43 U	0.45 U	0.45 U	0.44 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.44 U	0.43 U	0.45 U	0.45 U	0.44 U
Perfluorobutanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorobutanoic acid	NS	NS	0.88 U	0.85 U	0.051 J	0.041 J	0.88 U
Perfluorodecanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.18 J	0.22 U
Perfluorodecanoic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.14 J	0.22 U
Perfluorododecanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorododecanoic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.074 J	0.22 U
Perfluoroheptanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluoroheptanoic acid	NS	NS	0.22 U	0.064 J	0.22 U	0.12 J	0.22 U
Perfluorohexanesulfonic acid	NS	NS	0.028 J	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorohexanoic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.19 J	0.22 U
Perfluorononanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorononanoic acid	NS	NS	0.033 J	0.21 U	0.22 U	0.083 J	0.22 U
Perfluorooctanesulfonamide	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.35	0.21 U	0.22 U	0.36	0.24
Perfluorooctanoic acid (PFOA)	0.66	33	0.076 J	0.19 J	0.088 J	0.24	0.056 J
Perfluoropentanoic acid	NS	NS	0.032 J	0.045 J	0.043 J	0.15 J	0.025 J
Perfluoropentanesulfonic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorotetradecanoic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.22 U	0.22 U
Perfluorotridecanoic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.1 J	0.22 U
Perfluoroundecanoic acid	NS	NS	0.22 U	0.21 U	0.22 U	0.19 J	0.22 U

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Soil Analytical Results of Per- and Polyfluoroalkyl Substances (PFAS)

AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-13_8-10_20230808 460-285744-13 8/08/2023 1 ppb	RI-SB-14_0-2_20230811 460-286063-1 8/11/2023 1 ppb	RI-SB-X2_20230811 460-286063-6 8/11/2023 1 ppb	RI-SB-14_8-10_20230811 460-286063-2 8/11/2023 1 ppb	RI-SB-15_0-2_20230808 460-285744-8 8/08/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	5.68 U	5.63 U	5.32 U	5.73 U	5.45 U
3-Perfluoroheptyl propanoic acid	NS	NS	5.68 U	5.63 U	5.32 U	5.73 U	5.45 U
3-Perfluoropropyl propanoic acid	NS	NS	1.14 U	1.13 U	1.06 U	1.15 U	1.09 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
6:2 Fluorotelomer sulfonate	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
8:2 Fluorotelomer sulfonate	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.18 J
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	2.27 U	2.25 U	2.13 U	2.29 U	2.18 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	2.27 U	2.25 U	2.13 U	2.29 U	0.16 J
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.45 U	0.45 U	0.43 U	0.46 U	0.44 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.45 U	0.45 U	0.43 U	0.46 U	0.44 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.45 U	0.45 U	0.43 U	0.46 U	0.44 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.45 U	0.45 U	0.43 U	0.46 U	0.44 U
Perfluorobutanesulfonic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.03 J
Perfluorobutanoic acid	NS	NS	0.91 U	0.9 U	0.85 U	0.92 U	0.87 U
Perfluorodecanesulfonic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluorodecanoic acid	NS	NS	0.23 U	0.13 J	0.21 U	0.23 U	0.22 U
Perfluorododecanesulfonic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluorododecanoic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluoroheptanesulfonic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluoroheptanoic acid	NS	NS	0.23 U	0.027 J	0.029 J	0.04 J	0.029 J
Perfluorohexanesulfonic acid	NS	NS	0.034 J	0.23 U	0.21 U	0.23 U	0.13 J
Perfluorohexanoic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluorononanesulfonic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluorononanoic acid	NS	NS	0.23 U	0.084 J	0.026 J	0.23 U	0.22 U
Perfluorooctanesulfonamide	NS	NS	0.23 U	0.033 J	0.017 J	0.23 U	0.22 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.18 J	3.25 J	1.1 J	0.19 J	0.24
Perfluorooctanoic acid (PFOA)	0.66	33	0.22 J	0.056 J	0.21 U	0.062 J	0.18 J
Perfluoropentanoic acid	NS	NS	0.046 J	0.025 J	0.43 U	0.043 J	0.037 J
Perfluoropentanesulfonic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluorotetradecanoic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluorotridecanoic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U
Perfluoroundecanoic acid	NS	NS	0.23 U	0.23 U	0.21 U	0.23 U	0.22 U

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AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-SB-15_8-10_20230808 460-285744-9 8/08/2023 1 ppb	RI-SB-20_0-2_20230808 460-285744-4 8/08/2023 1 ppb	RI-SB-20_2-4_20230808 460-285744-5 8/08/2023 1 ppb	RI-SB-21_0-2_20230808 460-285744-1 8/08/2023 1 ppb	RI-SB-21_8-10_20230808 460-285744-2 8/08/2023 1 ppb
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	4.98 U	5.3 U	5.53 U	5.26 U	4.92 U
3-Perfluoroheptyl propanoic acid	NS	NS	4.98 U	5.3 U	5.53 U	5.26 U	4.92 U
3-Perfluoropropyl propanoic acid	NS	NS	1 U	1.06 U	1.11 U	1.05 U	0.98 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
6:2 Fluorotelomer sulfonate	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
8:2 Fluorotelomer sulfonate	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
Hexafluoropropylene oxide dimer acid	NS	NS	0.8 U	0.85 U	0.89 U	0.84 U	0.79 U
N-ethyl perfluorooctanesulfonamide	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.2 U	0.16 J	0.22 U	0.1 J	0.2 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	1.99 U	2.12 U	2.21 U	2.1 U	1.97 U
N-methyl perfluorooctanesulfonamide	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	1.99 U	2.12 U	2.21 U	0.1 J	1.97 U
Nonafluoro-3,6-dioxaheptanoic acid	NS	NS	0.4 U	0.42 U	0.44 U	0.42 U	0.39 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	0.4 U	0.42 U	0.44 U	0.42 U	0.39 U
Perfluoro-3-methoxypropanoic acid	NS	NS	0.4 U	0.42 U	0.44 U	0.42 U	0.39 U
Perfluoro-4-methoxybutanoic acid	NS	NS	0.4 U	0.42 U	0.44 U	0.42 U	0.39 U
Perfluorobutanesulfonic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorobutanoic acid	NS	NS	0.8 U	0.85 U	0.89 U	0.077 J	0.79 U
Perfluorodecanesulfonic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorodecanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorododecanesulfonic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorododecanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluoroheptanesulfonic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluoroheptanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.074 J	0.2 U
Perfluorohexanesulfonic acid	NS	NS	0.2 U	0.037 J	0.22 U	0.035 J	0.2 U
Perfluorohexanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorononanesulfonic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorononanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorooctanesulfonamide	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	0.2 U	0.093 J	0.22 U	0.099 J	0.2 U
Perfluorooctanoic acid (PFOA)	0.66	33	0.2 U	0.07 J	0.051 J	0.15 J	0.2 U
Perfluoropentanoic acid	NS	NS	0.4 U	0.42 U	0.44 U	0.14 J	0.39 U
Perfluoropentanesulfonic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorotetradecanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluorotridecanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U
Perfluoroundecanoic acid	NS	NS	0.2 U	0.21 U	0.22 U	0.21 U	0.2 U

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Subsurface (Phase II) and Remedial Investigations
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AKRF Sample ID Laboratory Sample ID Date Sampled Dilution Factor Unit			RI-FB-S-01_20230809 460-285863-10 8/09/2023 1 ppt	RI-FB-S-02_20230810 460-285938-9 8/09/2023 1 ppt	RI-FB-S-03_20230810 460-285938-10 8/09/2023 1 ppt
Compound	NYSDEC UUGV	NYSDEC RRGV	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NS	6.86 U	6.91 U	6.97 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NS	6.86 U	6.91 U	6.97 U
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NS	42.9 U	43.2 U	43.6 U
3-Perfluoroheptyl propanoic acid	NS	NS	42.9 U	43.2 U	43.6 U
3-Perfluoropropyl propanoic acid	NS	NS	8.58 U	8.63 U	8.72 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NS	6.86 U	6.91 U	6.97 U
6:2 Fluorotelomer sulfonate	NS	NS	6.86 U	6.91 U	6.97 U
8:2 Fluorotelomer sulfonate	NS	NS	6.86 U	6.91 U	6.97 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NS	6.86 U	6.91 U	6.97 U
Hexafluoropropylene oxide dimer acid	NS	NS	6.86 U	6.91 U	6.97 U
N-ethyl perfluorooctanesulfonamide	NS	NS	1.72 U	1.73 U	1.74 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	NS	1.72 U	1.73 U	1.74 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NS	17.2 U	17.3 U	17.4 U
N-methyl perfluorooctanesulfonamide	NS	NS	1.72 U	1.73 U	1.74 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	NS	3.43 U	3.45 U	3.49 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NS	17.2 U	17.3 U	17.4 U
Nonafluoro-3,6-dioxahexanoic acid	NS	NS	3.43 U	3.45 U	3.49 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NS	3.43 U	3.45 U	3.49 U
Perfluoro-3-methoxypropanoic acid	NS	NS	3.43 U	3.45 U	3.49 U
Perfluoro-4-methoxybutanoic acid	NS	NS	3.43 U	3.45 U	3.49 U
Perfluorobutanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorobutanoic acid	NS	NS	6.86 U	6.91 U	6.97 U
Perfluorodecanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorodecanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorododecanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorododecanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluoroheptanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluoroheptanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorohexanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorohexanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorononanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorononanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorooctanesulfonamide	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorooctanesulfonic acid (PFOS)	0.88	44	1.72 U	1.73 U	1.74 U
Perfluorooctanoic acid (PFOA)	0.66	33	1.72 U	1.73 U	1.74 U
Perfluoropentanoic acid	NS	NS	3.43 U	3.45 U	3.49 U
Perfluoropentanesulfonic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorotetradecanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluorotridecanoic acid	NS	NS	1.72 U	1.73 U	1.74 U
Perfluoroundecanoic acid	NS	NS	1.72 U	1.73 U	1.74 U

Table 8
110 East 138th Street
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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	TW-01_20210825 460-241613-1 8/25/2021 µg/L 1	TW-02_20210825 460-241613-5 8/25/2021 µg/L 1	TW-03_20210825 460-241613-6 8/25/2021 µg/L 1	TW-04_20210825 460-241613-2 8/25/2021 µg/L 1	TW-05_20210825 460-241613-3 8/25/2021 µg/L 1	TW-06_20210825 460-241613-4 8/25/2021 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
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-Trichloro-1,2,2-Trifluoroethane (Freon TF)	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
1,2,3-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	5	NR	NR	NR	NR	NR
1,2,4-Trimethylbenzene	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 (Ethylene Dibromide)	0.0006	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	NR	NR	NR	NR	NR
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
1,3,5-Trimethylbenzene (Mesitylene)	5	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	NR	NR	NR	NR	NR
1,4-Dichlorobenzene	3	NR	NR	NR	NR	NR
2-Hexanone	50	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Acetone	50	5 U	5.5	6.6	5 U	5 U
Benzene	1	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	5	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	50	1 U	1 U	1 U	1 U	1 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	60	1 U	3.5	1.6	1 U	1 U
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	1 U	1 U
Chloromethane	5	1 U	1 U	0.47 J	1.1	0.45 J
Cis-1,2-Dichloroethylene	5	1 U	0.51 J	0.65 J	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	1 U	1 U
Dibromochloromethane	50	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene (Cumene)	5	1 U	1 U	1 U	1 U	1 U
M,P-Xylenes	5	1 U	1 U	1 U	1 U	1 U
Methyl Acetate	NS	5 U	5 U	5 U	5 U	5 U
Methyl Ethyl Ketone (2-Butanone)	50	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	NS	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U
N-Butylbenzene	5	1 U	1 U	1 U	1 U	1 U
N-Propylbenzene	5	1 U	1 U	1 U	1 U	1 U
O-Xylene (1,2-Dimethylbenzene)	5	1 U	1 U	1 U	1 U	1 U
Sec-Butylbenzene	5	1 U	1 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	1 U	1 U
T-Butylbenzene	5	1 U	1 U	1 U	1 U	1 U
Tert-Butyl Methyl Ether	10	1 U	1 U	1 U	1 U	1 U
Tetrachloroethylene (PCE)	5	1 U	1.5	1.6	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 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
Trichloroethylene (TCE)	5	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Vinyl Chloride	2	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	NS	2 U	2 U	2 U	2 U	2 U

Table 8
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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 1	RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 1	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 1	RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 1	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q
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-Trichloro-1,2,2-Trifluoroethane (Freon TF)	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
1,2,3-Trichlorobenzene	5	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	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 (Ethylene Dibromide)	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
1,3,5-Trimethylbenzene (Mesitylene)	5	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	NR	NR	NR	NR
1,4-Dichlorobenzene	3	1 U	1 U	1 U	1 U
2-Hexanone	50	5 U	5 U	5 U	5 U
Acetone	50	5 U	5 U	5 U	5 U
Benzene	1	1 U	1 U	1 U	1 U
Bromochloromethane	5	1 U	1 U	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	1 U	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	1 U
Chloromethane	5	1 U	1 U	0.45 J	1 U
Cis-1,2-Dichloroethylene	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 UJ	1 UJ	1 UJ	1 UJ
Ethylbenzene	5	1 U	1 U	1 U	1 U
Isopropylbenzene (Cumene)	5	1 U	1 U	1 U	1 U
M,P-Xylenes	5	1 U	1 U	1 U	1 U
Methyl Acetate	NS	5 U	5 U	5 U	5 U
Methyl Ethyl Ketone (2-Butanone)	50	5 U	5 U	5 U	5 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	5 U	5 U	5 U	5 U
Methylcyclohexane	NS	1 U	1 U	1 U	1 U
Methylene Chloride	5	1 U	1 U	1 U	1 U
N-Butylbenzene	5	1 U	1 U	1 U	1 U
N-Propylbenzene	5	1 U	1 U	1 U	1 U
O-Xylene (1,2-Dimethylbenzene)	5	1 U	1 U	1 U	1 U
Sec-Butylbenzene	5	1 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	1 U
T-Butylbenzene	5	1 U	1 U	1 U	1 U
Tert-Butyl Methyl Ether	10	1 U	1 U	1 U	1 U
Tetrachloroethylene (PCE)	5	1 U	0.59 J	0.29 J	1 U
Toluene	5	1 U	1 U	1 U	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
Trichloroethylene (TCE)	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	NS	2 U	2 U	2 U	2 U

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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	RI-FB-GW-01_20230818 460-286558-5 8/18/2023 µg/L 1	TB-02_20210825 460-241613-7 8/25/2021 µg/L 1	RI-TB-GW-01_20230818 460-286558-6 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q
1,1,1-Trichloroethane	5	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	5	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U
1,1-Dichloroethene	5	1 U	1 U
1,2,3-Trichlorobenzene	5	1 UJ	1 U
1,2,4-Trichlorobenzene	5	1 U	NR
1,2,4-Trimethylbenzene	5	1 U	1 U
1,2-Dibromo-3-Chloropropane	0.04	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	0.0006	1 U	1 U
1,2-Dichlorobenzene	3	1 U	NR
1,2-Dichloroethane	0.6	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U
1,3,5-Trimethylbenzene (Mesitylene)	5	1 U	1 U
1,3-Dichlorobenzene	3	1 U	NR
1,4-Dichlorobenzene	3	1 U	NR
2-Hexanone	50	5 U	5 UJ
Acetone	50	5 U	5 U
Benzene	1	1 U	1 U
Bromochloromethane	5	1 U	1 U
Bromodichloromethane	50	1 U	1 U
Bromoform	50	1 U	1 U
Bromomethane	5	1 U	1 U
Carbon Disulfide	60	1 U	1 U
Carbon Tetrachloride	5	1 U	1 U
Chlorobenzene	5	1 U	1 U
Chloroethane	5	1 U	1 U
Chloroform	7	1 U	1 U
Chloromethane	5	1 U	1 U
Cis-1,2-Dichloroethylene	5	1 U	1 U
Cis-1,3-Dichloropropene	NS	1 U	1 U
Cyclohexane	NS	1 U	1 U
Dibromochloromethane	50	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 UJ
Ethylbenzene	5	1 U	1 U
Isopropylbenzene (Cumene)	5	1 U	1 U
M,P-Xylenes	5	1 U	1 U
Methyl Acetate	NS	5 U	5 U
Methyl Ethyl Ketone (2-Butanone)	50	5 U	5 UJ
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS	5 U	5 U
Methylcyclohexane	NS	1 U	1 UJ
Methylene Chloride	5	1 U	1 U
N-Butylbenzene	5	1 U	1 U
N-Propylbenzene	5	1 U	1 U
O-Xylene (1,2-Dimethylbenzene)	5	1 U	1 U
Sec-Butylbenzene	5	1 U	1 U
Styrene	5	1 U	1 U
T-Butylbenzene	5	1 U	1 U
Tert-Butyl Methyl Ether	10	1 U	1 U
Tetrachloroethylene (PCE)	5	1 U	1 U
Toluene	5	1 U	1 U
Trans-1,2-Dichloroethene	5	1 U	1 U
Trans-1,3-Dichloropropene	NS	1 U	1 U
Trichloroethylene (TCE)	5	1 U	1 U
Trichlorofluoromethane	5	1 U	1 UJ
Vinyl Chloride	2	1 U	1 U
Xylenes, Total	NS	2 U	2 U

Table 9
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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of SVOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-01_20210825 460-241613-1 8/25/2021 µg/L 1	TW-02_20210825 460-241613-5 8/25/2021 µg/L 1	TW-03_20210825 460-241613-6 8/25/2021 µg/L 1	TW-04_20210825 460-241613-2 8/25/2021 µg/L 1	TW-05_20210825 460-241613-3 8/25/2021 µg/L 1	TW-06_20210825 460-241613-4 8/25/2021 µg/L 1	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dioxane (P-Dioxane)	0.35	0.2 U	NR	NR	0.2 U	0.2 U	0.2 U	0.2 U
2,3,4,6-Tetrachlorophenol	NS	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
2,4,6-Trichlorophenol	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
2,4-Dichlorophenol	5	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
2,4-Dimethylphenol	50	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
2,4-Dinitrophenol	10	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	40 U
2,4-Dinitrotoluene	5	2 U	2 U	2 U	2 U	2 U	2 U	10 U
2,6-Dinitrotoluene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chloronaphthalene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
2-Methylnaphthalene	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol (O-Cresol)	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
2-Nitroaniline	5	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
2-Nitrophenol	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
3- And 4- Methylphenol (Total)	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
3,3'-Dichlorobenzidine	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-Methylphenol	NS	20 U	20 UJ	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-Methylphenol	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
4-Chloroaniline	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl Phenyl Ether	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (P-Cresol)	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
4-Nitroaniline	5	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 U
4-Nitrophenol	NS	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
Acenaphthene	20	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetophenone	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Atrazine	7.5	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzaldehyde	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Benzo(a)Anthracene	0.002	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)Pyrene	ND	1 U	0.57 J	0.45 J	1 U	1 U	1 U	1 U
Benzo(b)Fluoranthene	0.002	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzo(g,h,i)Perylene	NS	10 U	1.4 J	0.98 J	10 U	10 U	10 U	10 U
Benzo(k)Fluoranthene	0.002	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzyl Butyl Phthalate	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Biphenyl (Diphenyl)	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy) Methane	5	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bis(2-Chloroisopropyl) Ether	5	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Ethylhexyl) Phthalate	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Caprolactam	NS	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Carbazole	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	0.002	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibenz(a,h)Anthracene	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibenzofuran	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethyl Phthalate	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl Phthalate	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-N-Butyl Phthalate	50	10 U	10 U	10 U	10 U	10 U	10 U	12 J
Di-N-Octylphthalate	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.04	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	5	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Hexachloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Indeno(1,2,3-c,d)Pyrene	0.002	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Isophorone	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Nitrobenzene	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodi-N-Propylamine	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	NS	20 U	20 UJ	20 U	20 U	20 U	20 U	20 UJ
Phenanthrene	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	1	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Pyrene	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 9
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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of SVOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 1	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 1	RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 1	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 1	RI-FB-GW-01_20230818 460-286558-5 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q
1,2,4,5-Tetrachlorobenzene	5	10 U	10 U	10 U	10 U
1,4-Dioxane (P-Dioxane)	0.35	0.1 U	0.2 U	0.2 U	0.1 U
2,3,4,6-Tetrachlorophenol	NS	10 U	10 UJ	10 U	10 U
2,4,5-Trichlorophenol	NS	10 U	10 UJ	10 U	10 U
2,4,6-Trichlorophenol	NS	10 U	10 UJ	10 U	10 U
2,4-Dichlorophenol	5	10 U	10 UJ	10 U	10 U
2,4-Dimethylphenol	50	10 U	10 UJ	10 U	10 U
2,4-Dinitrophenol	10	40 U	40 UJ	40 U	40 U
2,4-Dinitrotoluene	5	10 U	10 UJ	10 U	10 U
2,6-Dinitrotoluene	5	2 U	2 UJ	2 U	2 U
2-Chloronaphthalene	10	10 U	10 U	10 U	10 U
2-Chlorophenol	NS	10 U	10 UJ	10 U	10 U
2-Methylnaphthalene	NS	10 U	10 U	10 U	10 U
2-Methylphenol (O-Cresol)	NS	10 U	10 UJ	10 U	10 U
2-Nitroaniline	5	10 UJ	10 UJ	10 UJ	10 UJ
2-Nitrophenol	NS	10 U	10 UJ	10 U	10 U
3- And 4- Methylphenol (Total)	NS	10 U	10 UJ	10 U	10 U
3,3'-Dichlorobenzidine	5	10 U	10 UJ	10 U	10 U
3-Nitroaniline	5	10 U	10 UJ	10 U	10 U
4,6-Dinitro-2-Methylphenol	NS	20 U	20 UJ	20 U	20 U
4-Bromophenyl Phenyl Ether	NS	10 U	10 UJ	10 U	10 U
4-Chloro-3-Methylphenol	NS	10 U	10 UJ	10 U	10 U
4-Chloroaniline	5	10 U	10 UJ	10 U	10 U
4-Chlorophenyl Phenyl Ether	NS	10 U	10 UJ	10 U	10 U
4-Methylphenol (P-Cresol)	NS	10 U	10 UJ	10 U	10 U
4-Nitroaniline	5	10 U	10 UJ	10 U	10 U
4-Nitrophenol	NS	20 UJ	20 UJ	20 UJ	20 UJ
Acenaphthene	20	10 U	10 UJ	10 U	10 U
Acenaphthylene	NS	10 U	10 UJ	10 U	10 U
Acetophenone	NS	10 U	10 UJ	10 U	10 U
Anthracene	50	10 U	10 UJ	10 U	10 U
Atrazine	7.5	2 U	2 UJ	2 U	2 U
Benzaldehyde	NS	10 UJ	10 UJ	10 UJ	10 UJ
Benzo(a)Anthracene	0.002	1 U	1 UJ	1 U	1 U
Benzo(a)Pyrene	ND	1 U	1 UJ	1 U	1 U
Benzo(b)Fluoranthene	0.002	2 U	2 UJ	2 U	2 U
Benzo(g,h,i)Perylene	NS	10 U	10 UJ	10 U	10 U
Benzo(k)Fluoranthene	0.002	1 U	1 UJ	1 U	1 U
Benzyl Butyl Phthalate	50	10 U	10 U	10 U	10 U
Biphenyl (Diphenyl)	5	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy) Methane	5	10 UJ	10 UJ	10 UJ	10 UJ
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1	1 U	1 UJ	1 U	1 U
Bis(2-Chloroisopropyl) Ether	5	10 U	10 U	10 U	10 U
Bis(2-Ethylhexyl) Phthalate	5	2 U	2 UJ	2 U	2 U
Caprolactam	NS	10 UJ	10 UJ	4.3 J	2.3 J
Carbazole	NS	10 U	10 UJ	10 U	10 U
Chrysene	0.002	2 U	2 UJ	2 U	2 U
Dibenz(a,h)Anthracene	NS	1 U	1 UJ	1 U	1 U
Dibenzofuran	NS	10 U	10 U	10 U	10 U
Diethyl Phthalate	50	10 U	10 UJ	10 U	10 U
Dimethyl Phthalate	50	10 U	10 U	10 U	10 U
Di-N-Butyl Phthalate	50	10 UJ	10 U	10 U	10 U
Di-N-Octylphthalate	50	10 U	10 U	10 U	10 U
Fluoranthene	50	10 U	10 UJ	10 U	10 U
Fluorene	50	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.04	1 U	1 UJ	1 U	1 U
Hexachlorobutadiene	0.5	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	5	10 UJ	10 UJ	10 UJ	10 UJ
Hexachloroethane	5	2 U	2 U	2 U	2 U
Indeno(1,2,3-c,d)Pyrene	0.002	2 U	2 UJ	2 U	2 U
Isophorone	50	10 U	10 UJ	10 U	10 U
Naphthalene	10	2 U	2 U	2 U	2 U
Nitrobenzene	0.4	1 U	1 UJ	1 U	1 U
N-Nitrosodi-N-Propylamine	NS	1 U	1 UJ	1 U	1 U
N-Nitrosodiphenylamine	50	10 U	10 UJ	10 U	10 U
Pentachlorophenol	NS	20 UJ	20 UJ	20 UJ	20 UJ
Phenanthrene	50	10 U	10 U	10 U	10 U
Phenol	1	10 UJ	10 UJ	10 UJ	10 UJ
Pyrene	50	10 U	10 U	10 U	10 U

Table 10
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of PCBs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-01_20210825 460-241613-1 8/25/2021 µg/L 1	TW-04_20210825 460-241613-2 8/25/2021 µg/L 1	TW-05_20210825 460-241613-3 8/25/2021 µg/L 1	TW-06_20210825 460-241613-4 8/25/2021 µg/L 1	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1221 (Aroclor 1221)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1232 (Aroclor 1232)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1242 (Aroclor 1242)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1248 (Aroclor 1248)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1254 (Aroclor 1254)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1260 (Aroclor 1260)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1262 (Aroclor 1262)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
PCB-1268 (Aroclor 1268)	NS	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
Total PCBs	0.09	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ

Table 10
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of PCBs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 1	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 1	RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 1	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 1	RI-FB-GW-01_20230818 460-286558-5 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
PCB-1016 (Aroclor 1016)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1221 (Aroclor 1221)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1232 (Aroclor 1232)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1242 (Aroclor 1242)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1248 (Aroclor 1248)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1254 (Aroclor 1254)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1260 (Aroclor 1260)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1262 (Aroclor 1262)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
PCB-1268 (Aroclor 1268)	NS	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
Total PCBs	0.09	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ

Table 11
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-01_20210825 460-241613-1 8/25/2021 µg/L 1	TW-04_20210825 460-241613-2 8/25/2021 µg/L 1	TW-05_20210825 460-241613-3 8/25/2021 µg/L 1	TW-06_20210825 460-241613-4 8/25/2021 µg/L 1	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	ND	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.01	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Alpha Endosulfan	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Beta Bhc (Beta Hexachlorocyclohexane)	0.04	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Beta Endosulfan	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
cis-Chlordane	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Delta BHC (Delta Hexachlorocyclohexane)	0.04	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Dieldrin	0.004	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Endosulfan Sulfate	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Endosulfans ABS	NS	0 U	0 U	0 U	0 U	0 UJ
Endrin	ND	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Endrin Aldehyde	5	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Endrin Ketone	5	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Gamma Bhc (Lindane)	0.05	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Heptachlor	0.04	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Heptachlor Epoxide	0.03	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Methoxychlor	35	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
P,P'-DDD	0.3	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
P,P'-DDE	0.2	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
P,P'-DDT	0.2	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Toxaphene	0.06	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ

Table 11
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Pesticides

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 1	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 1	RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 1	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 1	RI-FB-GW-01_20230818 460-286558-5 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aldrin	ND	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.01	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Alpha Endosulfan	NS	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Beta Bhc (Beta Hexachlorocyclohexane)	0.04	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Beta Endosulfan	NS	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
cis-Chlordane	NS	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Delta BHC (Delta Hexachlorocyclohexane)	0.04	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Dieldrin	0.004	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Endosulfan Sulfate	NS	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Endosulfans ABS	NS	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
Endrin	ND	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Endrin Aldehyde	5	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Endrin Ketone	5	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Gamma Bhc (Lindane)	0.05	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Heptachlor	0.04	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Heptachlor Epoxide	0.03	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Methoxychlor	35	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
P,P'-DDD	0.3	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
P,P'-DDE	0.2	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
P,P'-DDT	0.2	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ	0.02 UJ
Toxaphene	0.06	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ

Table 12
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Dissolved Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-01_20210825 460-241613-1 8/25/2021 µg/L 1	TW-01_20210825 460-241613-1 8/25/2021 µg/L 20	TW-04_20210825 460-241613-2 8/25/2021 µg/L 1	TW-04_20210825 460-241613-2 8/25/2021 µg/L 20	TW-05_20210825 460-241613-3 8/25/2021 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	40 U	NR	40 U	NR	371
Antimony	3	2 U	NR	2 U	NR	2 U
Arsenic	25	2.9	NR	1.7 J	NR	2.1 J
Barium	1,000	53.3	NR	21.8	NR	24.9 J
Beryllium	3	0.8 U	NR	0.8 U	NR	0.8 U
Cadmium	5	2 U	NR	2 U	NR	2 U
Calcium	NS	212,000	NR	205,000	NR	162,000
Chromium, Total	50	4 U	NR	4 U	NR	4 U
Cobalt	NS	1.8 J	NR	4 U	NR	4 U
Copper	200	4 U	NR	3.5 J	NR	11.8 J
Iron	300	3,140	NR	120 U	NR	807 J
Lead	25	1.2 U	NR	1.2 U	NR	9.3 J
Magnesium	35,000	NR	658,000	NR	820,000	459,000
Manganese	300	903	NR	26.7	NR	102 J
Mercury	0.7	0.2 U	NR	0.2 U	NR	0.12 J
Nickel	100	1.6 J	NR	4 U	NR	1.7 J
Potassium	NS	172,000	NR	172,000	NR	137,000
Selenium	10	2.5 U	NR	2.5 U	NR	2.5 U
Silver	50	2 U	NR	2 U	NR	2 U
Sodium	20,000	NR	5,720,000	NR	6,800,000 J	NR
Thallium	0.5	0.8 U	NR	0.8 U	NR	0.8 U
Vanadium	NS	4 U	NR	1.5 J	NR	2.9 J
Zinc	2,000	7.5 J	NR	16 U	NR	10 J

Table 12
110 East 138th Street
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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Dissolved Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-05_20210825 460-241613-3 8/25/2021 µg/L 20	TW-06_20210825 460-241613-4 8/25/2021 µg/L 1	TW-06_20210825 460-241613-4 8/25/2021 µg/L 20	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 1	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 20
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NR	40 U	NR	40 U	NR
Antimony	3	NR	1.5 J	NR	2 U	NR
Arsenic	25	NR	3.4	NR	1.2 J	NR
Barium	1,000	NR	29.7	NR	31.3	NR
Beryllium	3	NR	0.8 U	NR	0.8 U	NR
Cadmium	5	NR	2 U	NR	0.94 J	NR
Calcium	NS	NR	169,000	NR	225,000	NR
Chromium, Total	50	NR	4 U	NR	4 U	NR
Cobalt	NS	NR	4 U	NR	4 U	NR
Copper	200	NR	4	NR	15.5	NR
Iron	300	NR	120 U	NR	120 U	NR
Lead	25	NR	1.2 U	NR	1.2 U	NR
Magnesium	35,000	NR	474,000	NR	NR	577,000
Manganese	300	NR	50.3	NR	20.4	NR
Mercury	0.7	NR	0.2 U	NR	0.2 U	NR
Nickel	100	NR	1.3 J	NR	1.5 J	NR
Potassium	NS	NR	146,000	NR	192,000	NR
Selenium	10	NR	2.5 U	NR	0.59 J	NR
Silver	50	NR	2 U	NR	2 U	NR
Sodium	20,000	5,630,000 J	NR	6,140,000 J	NR	4,850,000
Thallium	0.5	NR	0.8 U	NR	0.8 U	NR
Vanadium	NS	NR	2.8 J	NR	1 J	NR
Zinc	2,000	NR	16 U	NR	136	NR

Table 12
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Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Dissolved Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 1	RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 20	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 1	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 20	RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	40 U	NR	40 U	NR	40 U
Antimony	3	2 U	NR	2 UJ	NR	2 U
Arsenic	25	1.3 J	NR	1.9 J	NR	1.7 J
Barium	1,000	32.2	NR	30.9	NR	22.3
Beryllium	3	0.8 U	NR	0.8 U	NR	0.8 U
Cadmium	5	0.93 J	NR	2 U	NR	2 U
Calcium	NS	223,000	NR	182,000	NR	245,000
Chromium, Total	50	4 U	NR	4 U	NR	4 U
Cobalt	NS	4 U	NR	4 U	NR	4 U
Copper	200	14.7	NR	2.7 J	NR	3.4 J
Iron	300	120 U	NR	120 U	NR	120 U
Lead	25	1.2 U	NR	3.7	NR	1.2 U
Magnesium	35,000	NR	617,000	499,000	NR	NR
Manganese	300	18.7	NR	22.4	NR	20.1
Mercury	0.7	0.2 U	NR	0.2 U	NR	0.2 U
Nickel	100	1.2 J	NR	0.97 J	NR	4 U
Potassium	NS	189,000 B	NR	159,000 B	NR	224,000 B
Selenium	10	0.7 J	NR	2.5 U	NR	2.5 U
Silver	50	2 U	NR	2 U	NR	2 U
Sodium	20,000	NR	5,170,000	NR	4,520,000	NR
Thallium	0.5	0.8 U	NR	0.8 U	NR	0.8 U
Vanadium	NS	0.99 J	NR	1.2 J	NR	1.3 J
Zinc	2,000	127	NR	15.6 J	NR	6.8 J

Table 12
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Dissolved Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 20	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 1	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 20
Compound	AWQSGV	CONC Q	CONC Q	CONC Q
Aluminum	NS	NR	40 U	NR
Antimony	3	NR	2 U	NR
Arsenic	25	NR	1.9 J	NR
Barium	1,000	NR	29.9	NR
Beryllium	3	NR	0.8 U	NR
Cadmium	5	NR	2 U	NR
Calcium	NS	NR	207,000	NR
Chromium, Total	50	NR	4 U	NR
Cobalt	NS	NR	4 U	NR
Copper	200	NR	4.3	NR
Iron	300	NR	120 U	NR
Lead	25	NR	1.2 U	NR
Magnesium	35,000	740,000	NR	594,000
Manganese	300	NR	13.4	NR
Mercury	0.7	NR	0.2 U	NR
Nickel	100	NR	1.1 J	NR
Potassium	NS	NR	178,000 B	NR
Selenium	10	NR	2.5 U	NR
Silver	50	NR	2 U	NR
Sodium	20,000	6,200,000	NR	4,960,000
Thallium	0.5	NR	0.8 U	NR
Vanadium	NS	NR	1.3 J	NR
Zinc	2,000	NR	8.6 J	NR

Table 13
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Total Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-01_20210825 460-241613-1 8/25/2021 µg/L 1	TW-01_20210825 460-241613-1 8/25/2021 µg/L 20	TW-04_20210825 460-241613-2 8/25/2021 µg/L 1	TW-04_20210825 460-241613-2 8/25/2021 µg/L 20	TW-05_20210825 460-241613-3 8/25/2021 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	419	NR	24.1 J	NR	40 U
Antimony	3	2 U	NR	2 U	NR	2 U
Arsenic	25	4.1	NR	1.9 J	NR	1.6 J
Barium	1,000	53	NR	21.5	NR	16.4 J
Beryllium	3	0.8 U	NR	0.8 U	NR	0.8 U
Cadmium	5	2 U	NR	2 U	NR	2 U
Calcium	NS	217,000	NR	200,000	NR	147,000
Chromium, Total	50	4 U	NR	4 U	NR	4 U
Cobalt	NS	2.4 J	NR	4 U	NR	4 U
Copper	200	7.7	NR	4.4	NR	4.9 J
Iron	300	4,610	NR	120 U	NR	120 UJ
Lead	25	15.1	NR	0.96 J	NR	1.2 UJ
Magnesium	35,000	NR	675,000	NR	673,000	421,000
Manganese	300	958	NR	30.7	NR	14 J
Mercury	0.7	0.2 U	NR	0.2 U	NR	0.2 U
Nickel	100	2.7 J	NR	4 U	NR	4 U
Potassium	NS	178,000	NR	169,000	NR	126,000
Selenium	10	2.5 U	NR	2.5 U	NR	2.5 U
Silver	50	2 U	NR	2 U	NR	2 U
Sodium	20,000	NR	5,760,000	NR	5,750,000 J	NR
Thallium	0.5	0.8 U	NR	0.8 U	NR	0.8 U
Vanadium	NS	1.7 J	NR	1.5 J	NR	1.5 J
Zinc	2,000	14.5 J	NR	16 U	NR	6.5 J

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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Total Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-05_20210825 460-241613-3 8/25/2021 µg/L 10	TW-06_20210825 460-241613-4 8/25/2021 µg/L 1	TW-06_20210825 460-241613-4 8/25/2021 µg/L 20	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 1	RI-MW-01_20230818 460-286558-1 8/18/2023 µg/L 20
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NR	192	NR	266	NR
Antimony	3	NR	1.5 J	NR	2 U	NR
Arsenic	25	NR	3.9	NR	1.8 J	NR
Barium	1,000	NR	31.1	NR	34.6	NR
Beryllium	3	NR	0.8 U	NR	0.8 U	NR
Cadmium	5	NR	2 U	NR	0.98 J	NR
Calcium	NS	NR	173,000	NR	218,000	NR
Chromium, Total	50	NR	4 U	NR	4 U	NR
Cobalt	NS	NR	4 U	NR	4 U	NR
Copper	200	NR	5.5	NR	25	NR
Iron	300	NR	297	NR	499	NR
Lead	25	NR	4.1	NR	7.5	NR
Magnesium	35,000	NR	487,000	NR	NR	586,000
Manganese	300	NR	65.8	NR	26.3	NR
Mercury	0.7	NR	0.2 U	NR	0.2 U	NR
Nickel	100	NR	2 J	NR	1.8 J	NR
Potassium	NS	NR	145,000	NR	186,000	NR
Selenium	10	NR	2.5 U	NR	2.5 U	NR
Silver	50	NR	2 U	NR	2 U	NR
Sodium	20,000	4,070,000 J	NR	5,230,000 J	NR	5,060,000
Thallium	0.5	NR	0.8 U	NR	0.8 U	NR
Vanadium	NS	NR	3.3 J	NR	2.6 J	NR
Zinc	2,000	NR	10 J	NR	147	NR

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Groundwater Analytical Results of Total Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 1	RI-MW-X1_20230818 460-286558-7 8/18/2023 µg/L 20	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 1	RI-MW-02_20230818 460-286558-2 8/18/2023 µg/L 20	RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	215	NR	1,920	NR	194
Antimony	3	2 U	NR	2 U	NR	2 U
Arsenic	25	1.8 J	NR	2.4	NR	1.5 J
Barium	1,000	33.5	NR	55.2	NR	23.3
Beryllium	3	0.8 U	NR	0.8 U	NR	0.8 U
Cadmium	5	1 J	NR	2 U	NR	2 U
Calcium	NS	220,000	NR	201,000	NR	233,000
Chromium, Total	50	4 U	NR	4.4	NR	4 U
Cobalt	NS	4 U	NR	1.3 J	NR	4 U
Copper	200	23.1	NR	9.9	NR	3 J
Iron	300	432	NR	2,580	NR	245
Lead	25	6.5	NR	74.4 L	NR	1.4
Magnesium	35,000	NR	605,000	NR	542,000	NR
Manganese	300	25.3	NR	82.7	NR	36.8
Mercury	0.7	0.2 U	NR	0.2	NR	0.2 U
Nickel	100	1.8 J	NR	3.9 J	NR	1.3 J
Potassium	NS	190,000	NR	170,000	NR	208,000
Selenium	10	2.5 U	NR	2.5 U	NR	2.5 U
Silver	50	2 U	NR	2 U	NR	2 U
Sodium	20,000	NR	5,190,000	NR	4,660,000	NR
Thallium	0.5	0.8 U	NR	0.8 U	NR	0.8 U
Vanadium	NS	2.4 J	NR	5.8	NR	2.4 J
Zinc	2,000	146	NR	44.1	NR	9.5 J

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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of Total Metals

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		RI-MW-03_20230818 460-286558-3 8/18/2023 µg/L 20	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 1	RI-MW-04_20230818 460-286558-4 8/18/2023 µg/L 20	RI-FB-GW-01_20230818 460-286558-5 8/18/2023 µg/L 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q
Aluminum	NS	NR	196	NR	40 U
Antimony	3	NR	2 U	NR	2 U
Arsenic	25	NR	1.9 J	NR	2 U
Barium	1,000	NR	30.8	NR	4 U
Beryllium	3	NR	0.8 U	NR	0.8 U
Cadmium	5	NR	2 U	NR	2 U
Calcium	NS	NR	207,000	NR	500 U
Chromium, Total	50	NR	4 U	NR	4 U
Cobalt	NS	NR	4 U	NR	4 U
Copper	200	NR	8.5	NR	4 U
Iron	300	NR	316	NR	120 U
Lead	25	NR	3.5	NR	1.2 U
Magnesium	35,000	675,000	NR	574,000	200 U
Manganese	300	NR	21.9	NR	8 U
Mercury	0.7	NR	0.2 U	NR	0.2 U
Nickel	100	NR	1.9 J	NR	4 U
Potassium	NS	NR	177,000	NR	200 U
Selenium	10	NR	2.5 U	NR	2.5 U
Silver	50	NR	2 U	NR	2 U
Sodium	20,000	5,740,000	NR	4,870,000	500 U
Thallium	0.5	NR	0.8 U	NR	0.8 U
Vanadium	NS	NR	2.6 J	NR	4 U
Zinc	2,000	NR	20.2	NR	16 U

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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of PFAS

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		TW-01_20210825 460-241584-1 8/25/2021 ppt 1	TW-04_20210825 460-241584-2 8/25/2021 ppt 1	TW-05_20210825 460-241584-3 8/25/2021 ppt 1	RI-MW-01_20230818 460-286564-1 8/18/2023 ppt 1	RI-MW-X1_20230818 460-286564-7 8/18/2023 ppt 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	NR	NR	NR	40.1 UJ	39.9 UJ
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	NR	NR	NR	40.1 UJ	39.9 UJ
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	NS	NR	NR	NR	100 UJ	99.8 UJ
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	NS	NR	NR	NR	100 UJ	99.8 UJ
2H,2H,3H,3H-Perfluorooctanoic acid	NS	NR	NR	NR	251 UJ	250 UJ
3-Perfluoroheptyl propanoic acid	NS	NR	NR	NR	251 UJ	250 UJ
3-Perfluoropropyl propanoic acid	NS	NR	NR	NR	50.2 UJ	49.9 UJ
4,8-Dioxa-3H-perfluorononanoic acid	NS	NR	NR	NR	NR	NR
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NS	NR	NR	NR	40.1 UJ	39.9 UJ
6:2 Fluorotelomer sulfonate	NS	49.6 U	48.8 U	48.4 U	40.1 UJ	39.9 UJ
8:2 Fluorotelomer sulfonate	NS	29.8 U	29.3 U	29.1 U	40.1 UJ	39.9 UJ
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	NR	NR	NR	40.1 UJ	39.9 UJ
Hexafluoropropylene oxide dimer acid	NS	NR	NR	NR	NR	NR
N-ethyl perfluorooctanesulfonamide	NS	NR	NR	NR	10 UJ	9.98 UJ
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	29.8 U	29.3 U	29.1 U	10 UJ	9.98 UJ
N-ethyl perfluorooctanesulfonamidoethanol	NS	NR	NR	NR	NR	NR
N-methyl perfluorooctanesulfonamide	NS	NR	NR	NR	10 UJ	9.98 UJ
N-methyl perfluorooctanesulfonamidoacetic acid	NS	19.8 U	19.5 U	19.4 U	20.1 UJ	20 UJ
N-methyl perfluorooctanesulfonamidoethanol	NS	NR	NR	NR	NR	NR
Nonafluoro-3,6-dioxaheptanoic acid	NS	NR	NR	NR	20.1 UJ	20 UJ
Perfluoro(2-ethoxyethane)sulfonic acid	NS	NR	NR	NR	20.1 UJ	20 UJ
Perfluoro(2-Propoxypropanoic) Acid	NS	NR	NR	NR	40.1 UJ	39.9 UJ
Perfluoro-3-methoxypropanoic acid	NS	NR	NR	NR	20.1 UJ	20 UJ
Perfluoro-4-methoxybutanoic acid	NS	NR	NR	NR	20.1 UJ	20 UJ
Perfluorobutanesulfonic acid	NS	19.8 U	19.5 U	19.4 U	3.25 J	2.58 J
Perfluorobutanoic acid	NS	49.6 U	48.8 U	48.4 U	40.1 UJ	39.9 UJ
Perfluorodecanesulfonic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluorodecanoic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluorododecanesulfonic acid	NS	NR	NR	NR	10 UJ	9.98 UJ
Perfluorododecanoic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluoroheptanesulfonic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluoroheptanoic acid	NS	19.8 U	19.5 U	19.4 U	3.27 J	9.98 UJ
Perfluorohexanesulfonic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluorohexanoic acid	NS	19.8 U	19.5 U	19.4 U	5.17 J	5.14 J
Perfluorononanesulfonic acid	NS	NR	NR	NR	10 UJ	9.98 UJ
Perfluorononanoic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluorooctanesulfonamide	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluorooctanesulfonic acid (PFOS)	2.7	10.7 J	19.5 U	19.4 U	8.47 J	8.38 J
Perfluorooctanoic acid (PFOA)	6.7	5.64 J	19.5 U	5.15 J	8.33 J	7.57 J
Perfluoropentanoic acid	NS	5.61 J	19.5 U	19.4 U	6.17 J	6.06 J
Perfluoropentansulfonic acid	NS	NR	NR	NR	10 UJ	9.98 UJ
Perfluorotetradecanoic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluorotridecanoic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ
Perfluoroundecanoic acid	NS	19.8 U	19.5 U	19.4 U	10 UJ	9.98 UJ

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Subsurface (Phase II) and Remedial Investigations
Groundwater Analytical Results of PFAS

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	RI-MW-02_20230818 460-286564-2 8/18/2023 ppt 1	RI-MW-03_20230818 460-286564-3 8/18/2023 ppt 1	RI-MW-04_20230818 460-286564-4 8/18/2023 ppt 1	RI-EB-GW-01_20230818 460-286564-5 8/18/2023 ppt 1	RI-FB-GW-01_20230818 460-286564-6 8/18/2023 ppt 1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS	16 UJ	40.1 UJ	40.1 UJ	7.2 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS	16 UJ	40.1 UJ	40.1 UJ	7.2 U
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	NS	39.9 UJ	100 UJ	100 UJ	NR
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	NS	39.9 UJ	100 UJ	100 UJ	NR
2H,2H,3H,3H-Perfluorooctanoic acid	NS	99.8 UJ	251 UJ	251 UJ	45 U
3-Perfluoroheptyl propanoic acid	NS	99.8 UJ	251 UJ	251 UJ	45 U
3-Perfluoropropyl propanoic acid	NS	20 UJ	50.2 UJ	50.1 UJ	8.99 U
4,8-Dioxa-3H-perfluorononanoic acid	NS	NR	NR	NR	7.2 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NS	16 UJ	40.1 UJ	40.1 UJ	NR
6:2 Fluorotelomer sulfonate	NS	16 UJ	40.1 UJ	40.1 UJ	7.2 U
8:2 Fluorotelomer sulfonate	NS	16 UJ	40.1 UJ	40.1 UJ	7.2 U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS	16 UJ	40.1 UJ	40.1 UJ	7.2 U
Hexafluoropropylene oxide dimer acid	NS	NR	NR	NR	7.2 U
N-ethyl perfluorooctanesulfonamide	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
N-ethyl perfluorooctanesulfonamidoethanol	NS	NR	NR	NR	18 U
N-methyl perfluorooctanesulfonamide	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
N-methyl perfluorooctanesulfonamidoacetic acid	NS	7.99 UJ	20.1 UJ	20 UJ	3.6 U
N-methyl perfluorooctanesulfonamidoethanol	NS	NR	NR	NR	18 U
Nonafluoro-3,6-dioxahexanoic acid	NS	7.99 UJ	20.1 UJ	20 UJ	3.6 U
Perfluoro(2-ethoxyethane)sulfonic acid	NS	7.99 UJ	20.1 UJ	20 UJ	3.6 U
Perfluoro(2-Propoxypropanoic) Acid	NS	16 UJ	40.1 UJ	40.1 UJ	NR
Perfluoro-3-methoxypropanoic acid	NS	7.99 UJ	20.1 UJ	20 UJ	3.6 U
Perfluoro-4-methoxybutanoic acid	NS	7.99 UJ	20.1 UJ	20 UJ	3.6 U
Perfluorobutanesulfonic acid	NS	1.53 J	10 UJ	2.34 J	1.8 U
Perfluorobutanoic acid	NS	16 UJ	40.1 UJ	40.1 UJ	7.2 U
Perfluorodecanesulfonic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorodecanoic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorododecanesulfonic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorododecanoic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluoroheptanesulfonic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluoroheptanoic acid	NS	1.86 J	10 UJ	3.02 J	1.8 U
Perfluorohexanesulfonic acid	NS	1.17 J	10 UJ	10 UJ	1.8 U
Perfluorohexanoic acid	NS	4.26 L	10 UJ	6.85 J	1.8 U
Perfluorononanesulfonic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorononanoic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorooctanesulfonamide	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorooctanesulfonic acid (PFOS)	2.7	3.84 J	10 UJ	7.72 J	1.8 U
Perfluorooctanoic acid (PFOA)	6.7	5.66 L	10 UJ	7.72 J	1.8 U
Perfluoropentanoic acid	NS	4.25 J	20.1 UJ	8.7 J	3.6 U
Perfluoropentansulfonic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorotetradecanoic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluorotridecanoic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U
Perfluoroundecanoic acid	NS	3.99 UJ	10 UJ	10 UJ	1.8 U

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Subsurface (Phase II) and Remedial Investigations
Soil Vapor Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	RI-SV-01_20230811 200-69524-2 8/11/2023 µg/m ³ 2	RI-SV-01_20230811 200-69524-2 8/11/2023 µg/m ³ 10	SV-01_20210825 200-59874-1 8/25/2021 µg/m ³ 10	SV-01_20210825 200-59874-1 8/25/2021 µg/m ³ 40.6	RI-SV-02_20230810 200-69498-2 8/10/2023 µg/m ³ 20	RI-SV-02_20230810 200-69498-2 8/10/2023 µg/m ³ 100	SV-02_20210825 200-59874-2 8/25/2021 µg/m ³ 39.9
Compound	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	37 J	NR	11 UJ	NR	110 J	NR	42 J
1,1,2,2-Tetrachloroethane	2.7 UJ	NR	14 UJ	NR	27 UJ	NR	55 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	3.1 UJ	NR	15 UJ	NR	31 UJ	NR	61 UJ
1,1,2-Trichloroethane	2.2 UJ	NR	11 UJ	NR	22 UJ	NR	44 UJ
1,1-Dichloroethane	1.6 UJ	NR	8.1 UJ	NR	16 UJ	NR	32 UJ
1,1-Dichloroethene	0.4 UJ	NR	2 UJ	NR	4 UJ	NR	8 UJ
1,2,4-Trichlorobenzene	7.4 UJ	NR	37 UJ	NR	74 UJ	NR	150 UJ
1,2,4-Trimethylbenzene	5.4 J	NR	95 J	NR	20 UJ	NR	31 J
1,2-Dibromoethane (Ethylene Dibromide)	3.1 UJ	NR	15 UJ	NR	31 UJ	NR	61 UJ
1,2-Dichlorobenzene	2.4 UJ	NR	12 UJ	NR	24 UJ	NR	48 UJ
1,2-Dichloroethane	1.6 UJ	NR	8.1 UJ	NR	16 UJ	NR	32 UJ
1,2-Dichloropropane	1.8 UJ	NR	9.2 UJ	NR	18 UJ	NR	37 UJ
1,2-Dichlorotetrafluoroethane	2.8 UJ	NR	14 UJ	NR	28 UJ	NR	56 UJ
1,3,5-Trimethylbenzene (Mesitylene)	1.3 J	NR	160 J	NR	20 UJ	NR	19 J
1,3-Butadiene	0.38 J	NR	4.4 UJ	NR	5.8 J	NR	18 UJ
1,3-Dichlorobenzene	13 J	NR	12 UJ	NR	24 UJ	NR	48 UJ
1,4-Dichlorobenzene	2.4 UJ	NR	12 UJ	NR	24 UJ	NR	48 UJ
2,2,4-Trimethylpentane	1.7 J	NR	9.3 UJ	NR	19 UJ	NR	37 UJ
2-Chlorotoluene	2.1 UJ	NR	10 UJ	NR	21 UJ	NR	41 UJ
2-Hexanone	4.6 J	NR	20 UJ	NR	41 UJ	NR	82 UJ
4-Ethyltoluene	1.1 J	NR	17 J	NR	20 UJ	NR	39 UJ
Acetone	NR	480 J	680 J	NR	240 UJ	NR	470 UJ
Allyl Chloride (3-Chloropropene)	3.1 UJ	NR	16 UJ	NR	31 UJ	NR	62 UJ
Benzene	2.5 J	NR	320 J	NR	7.9 J	NR	25 UJ
Benzyl Chloride	2.1 UJ	NR	10 UJ	NR	21 UJ	NR	41 UJ
Bromodichloromethane	2.7 UJ	NR	13 UJ	NR	27 UJ	NR	53 UJ
Bromoform	4.1 UJ	NR	21 UJ	NR	41 UJ	NR	82 UJ
Bromomethane	1.6 UJ	NR	7.8 UJ	NR	16 UJ	NR	31 UJ
Butane	NR	450 J	NR	1,500 J	120 J	NR	47 UJ
Carbon Disulfide	31 J	NR	24 J	NR	63 J	NR	62 UJ
Carbon Tetrachloride	0.44 UJ	NR	2.2 UJ	NR	4.4 UJ	NR	8.8 UJ
Chlorobenzene	1.8 UJ	NR	9.2 UJ	NR	18 UJ	NR	37 UJ
Chlorodifluoromethane	3.5 UJ	NR	18 UJ	NR	35 UJ	NR	71 UJ
Chloroethane	2.6 UJ	NR	13 UJ	NR	26 UJ	NR	53 UJ
Chloroform	1.3 J	NR	9.8 UJ	NR	15 J	NR	20 J
Chloromethane	0.65 J	NR	10 UJ	NR	21 UJ	NR	41 UJ
Cis-1,2-Dichloroethylene	0.4 UJ	NR	2 UJ	NR	66 J	NR	3,900 J
Cis-1,3-Dichloropropene	1.8 UJ	NR	9.1 UJ	NR	18 UJ	NR	36 UJ
Cyclohexane	2.8 J	NR	6.9 UJ	NR	7.7 J	NR	27 UJ
Cymene	12 J	NR	2.9 J	NR	22 UJ	NR	44 UJ
Dibromochloromethane	3.4 UJ	NR	17 UJ	NR	34 UJ	NR	68 UJ
Dichlorodifluoromethane	2.7 J	NR	25 UJ	NR	49 UJ	NR	99 UJ
Ethylbenzene	3.1 J	NR	190 J	NR	17 UJ	NR	35 UJ
Hexachlorobutadiene	4.3 UJ	NR	21 UJ	NR	43 UJ	NR	85 UJ
Isopropanol	8.1 J	NR	120 UJ	NR	250 UJ	NR	490 UJ
Isopropylbenzene (Cumene)	1.5 J	NR	24 J	NR	20 UJ	NR	39 UJ
M,P-Xylenes	12 J	NR	2,100 J	NR	43 UJ	NR	87 UJ
Methyl Ethyl Ketone (2-Butanone)	68 J	NR	82 J	NR	29 UJ	NR	59 UJ
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	7.3 J	NR	20 UJ	NR	41 UJ	NR	82 UJ
Methyl Methacrylate	4.1 UJ	NR	20 UJ	NR	41 UJ	NR	82 UJ
Methylene Chloride	1.4 J	NR	17 UJ	NR	35 UJ	NR	69 UJ
Naphthalene	5.2 UJ	NR	26 UJ	NR	52 UJ	NR	100 UJ
N-Butylbenzene	2.2 UJ	NR	11 UJ	NR	22 UJ	NR	44 UJ
N-Heptane	76 J	NR	NR	2,700 J	8.9 J	NR	11 J
N-Hexane	180 J	NR	880 J	NR	21 J	NR	70 UJ
N-Propylbenzene	0.79 J	NR	12 J	NR	20 UJ	NR	39 UJ
O-Xylene (1,2-Dimethylbenzene)	3.8 J	NR	1,100 J	NR	17 UJ	NR	17 J
Sec-Butylbenzene	2.2 UJ	NR	11 UJ	NR	22 UJ	NR	44 UJ
Styrene	0.71 J	NR	120 J	NR	17 UJ	NR	34 UJ
T-Butylbenzene	2.2 UJ	NR	11 UJ	NR	22 UJ	NR	44 UJ
Tert-Butyl Alcohol	11 J	NR	150 UJ	NR	300 UJ	NR	600 UJ
Tert-Butyl Methyl Ether	1.4 UJ	NR	7.2 UJ	NR	14 UJ	NR	29 UJ
Tetrachloroethylene (PCE)	21 J	NR	70 J	NR	NR	9,900 J	NR
Tetrahydrofuran	29 UJ	NR	150 UJ	NR	290 UJ	NR	590 UJ
Toluene	9.6 J	NR	900 J	NR	18 J	NR	30 UJ
Trans-1,2-Dichloroethene	1.6 UJ	NR	7.9 UJ	NR	5.3 J	NR	86 J
Trans-1,3-Dichloropropene	1.8 UJ	NR	9.1 UJ	NR	18 UJ	NR	36 UJ
Trichloroethylene (TCE)	0.4 UJ	NR	2 UJ	NR	100 J	NR	670 J
Trichlorofluoromethane	3.2 J	NR	11 UJ	NR	22 UJ	NR	45 UJ
Vinyl Bromide	1.7 UJ	NR	8.7 UJ	NR	17 UJ	NR	35 UJ
Vinyl Chloride	0.4 UJ	NR	2 UJ	NR	4 UJ	NR	8 UJ

Table 15
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Vapor Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	SV-02_20210825 200-59874-2 8/25/2021 µg/m ³ 98.85	RI-SV-03_20230810 200-59874-3 8/10/2023 µg/m ³ 1	SV-03_20210825 200-59874-3 8/25/2021 µg/m ³ 1	SV-03_20210825 200-59874-3 8/25/2021 µg/m ³ 20	RI-SV-04_20230810 200-69498-4 8/10/2023 µg/m ³ 10	RI-SV-04_20230810 200-69498-4 8/10/2023 µg/m ³ 50	SV-04_20210825 200-59874-4 8/25/2021 µg/m ³ 1
Compound	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	NR	2 J	38 J	NR	11 UJ	NR	2.4 J
1,1,2,2-Tetrachloroethane	NR	1.4 UJ	1.4 UJ	NR	14 UJ	NR	1.4 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NR	0.51 J	1.5 UJ	NR	15 UJ	NR	0.43 J
1,1,2-Trichloroethane	NR	1.1 UJ	1.1 UJ	NR	11 UJ	NR	1.1 UJ
1,1-Dichloroethane	NR	0.81 UJ	0.81 UJ	NR	8.1 UJ	NR	0.81 UJ
1,1-Dichloroethene	NR	0.2 UJ	0.2 UJ	NR	2 UJ	NR	0.2 UJ
1,2,4-Trichlorobenzene	NR	3.7 UJ	3.7 UJ	NR	37 UJ	NR	3.7 UJ
1,2,4-Trimethylbenzene	NR	9.9 J	60 J	NR	7.3 J	NR	15 J
1,2-Dibromoethane (Ethylene Dibromide)	NR	1.5 UJ	1.5 UJ	NR	15 UJ	NR	1.5 UJ
1,2-Dichlorobenzene	NR	1.2 UJ	1.2 UJ	NR	12 UJ	NR	1.2 UJ
1,2-Dichloroethane	NR	0.81 UJ	0.81 UJ	NR	8.1 UJ	NR	0.81 UJ
1,2-Dichloropropane	NR	0.92 UJ	0.92 UJ	NR	9.2 UJ	NR	0.92 UJ
1,2-Dichlorotetrafluoroethane	NR	1.4 UJ	1.4 UJ	NR	14 UJ	NR	1.4 UJ
1,3,5-Trimethylbenzene (Mesitylene)	NR	2.4 J	37 J	NR	9.8 UJ	NR	6 J
1,3-Butadiene	NR	0.1 J	0.77 J	NR	4.4 UJ	NR	0.44 UJ
1,3-Dichlorobenzene	NR	2.2 J	1.2 UJ	NR	12 UJ	NR	1.2 UJ
1,4-Dichlorobenzene	NR	1.2 UJ	1.2 UJ	NR	12 UJ	NR	1.2 UJ
2,2,4-Trimethylpentane	NR	5 J	1.2 J	NR	16 J	NR	0.52 J
2-Chlorotoluene	NR	1 UJ	1 UJ	NR	10 UJ	NR	1 UJ
2-Hexanone	NR	1.8 J	140 J	NR	20 UJ	NR	4.4 J
4-Ethyltoluene	NR	2.6 J	7.9 J	NR	9.8 UJ	NR	3.7 J
Acetone	NR	63 J	NR	1,500 J	120 UJ	NR	NR
Allyl Chloride (3-Chloropropene)	NR	1.6 UJ	1.6 UJ	NR	16 UJ	NR	1.6 UJ
Benzene	NR	4.6 J	3 J	NR	6 J	NR	1.7 J
Benzyl Chloride	NR	1 UJ	1 UJ	NR	10 UJ	NR	1 UJ
Bromodichloromethane	NR	0.43 J	1.3 UJ	NR	13 UJ	NR	0.82 J
Bromoform	NR	2.1 UJ	2.1 UJ	NR	21 UJ	NR	2.1 UJ
Bromomethane	NR	0.78 UJ	0.78 UJ	NR	7.8 UJ	NR	0.78 UJ
Butane	NR	6.1 J	22 J	NR	NR	2,900 J	1.1 J
Carbon Disulfide	NR	80 J	9.3 J	NR	36 J	NR	1.8 J
Carbon Tetrachloride	NR	0.4 J	0.22 UJ	NR	2.2 UJ	NR	0.82 J
Chlorobenzene	NR	0.92 UJ	0.25 J	NR	9.2 UJ	NR	0.92 UJ
Chlorodifluoromethane	NR	0.62 J	0.65 J	NR	18 UJ	NR	0.96 J
Chloroethane	NR	1.3 UJ	1.3 UJ	NR	5.1 J	NR	1.3 UJ
Chloroform	NR	10 J	3.7 J	NR	9.8 UJ	NR	4.6 J
Chloromethane	NR	0.35 J	1.6 J	NR	10 UJ	NR	0.32 J
Cis-1,2-Dichloroethylene	NR	0.2 UJ	4.3 J	NR	2 UJ	NR	0.2 UJ
Cis-1,3-Dichloropropene	NR	0.91 UJ	0.91 UJ	NR	9.1 UJ	NR	0.91 UJ
Cyclohexane	NR	3.1 J	0.69 UJ	NR	6.9 UJ	NR	2.4 J
Cymene	NR	18 J	2.1 J	NR	11 UJ	NR	0.62 J
Dibromochloromethane	NR	1.7 UJ	1.7 UJ	NR	17 UJ	NR	1.7 UJ
Dichlorodifluoromethane	NR	2.2 J	1.9 J	NR	25 UJ	NR	1.8 J
Ethylbenzene	NR	14 J	5.3 J	NR	7.3 J	NR	2.7 J
Hexachlorobutadiene	NR	2.1 UJ	2.1 UJ	NR	21 UJ	NR	2.1 UJ
Isopropanol	NR	17 J	5.8 J	NR	120 UJ	NR	12 J
Isopropylbenzene (Cumene)	NR	18 J	1.6 J	NR	6.4 J	NR	0.79 J
M,P-Xylenes	NR	52 J	31 J	NR	26 J	NR	7.9 J
Methyl Ethyl Ketone (2-Butanone)	NR	87 J	NR	410 J	17 J	NR	32 J
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NR	4.5 J	5.7 J	NR	20 UJ	NR	4.2 J
Methyl Methacrylate	NR	2 UJ	2 UJ	NR	20 UJ	NR	2 UJ
Methylene Chloride	NR	0.92 J	1.7 UJ	NR	17 UJ	NR	0.73 J
Naphthalene	NR	3.8 J	1.7 J	NR	26 UJ	NR	2.6 UJ
N-Butylbenzene	NR	1.1 UJ	1.6 J	NR	11 UJ	NR	0.53 J
N-Heptane	NR	8.7 J	9.6 J	NR	1,200 J	NR	1.7 J
N-Hexane	NR	8.7 J	6.9 J	NR	NR	2,400 J	4.3 J
N-Propylbenzene	NR	1.8 J	5.2 J	NR	9.8 UJ	NR	2.5 J
O-Xylene (1,2-Dimethylbenzene)	NR	16 J	19 J	NR	8.8 J	NR	4.2 J
Sec-Butylbenzene	NR	0.25 J	1.1 UJ	NR	11 UJ	NR	0.64 J
Styrene	NR	1.1 J	6.2 J	NR	8.5 UJ	NR	5.4 J
T-Butylbenzene	NR	1.1 UJ	1.1 UJ	NR	11 UJ	NR	1.1 UJ
Tert-Butyl Alcohol	NR	4.5 J	44 J	NR	150 UJ	NR	15 J
Tert-Butyl Methyl Ether	NR	0.72 UJ	0.72 UJ	NR	7.2 UJ	NR	0.72 UJ
Tetrachloroethylene (PCE)	12,000 J	92 J	NR	390 J	75 J	NR	26 J
Tetrahydrofuran	NR	13 J	15 UJ	NR	150 UJ	NR	15 UJ
Toluene	NR	46 J	12 J	NR	22 J	NR	8.1 J
Trans-1,2-Dichloroethene	NR	0.79 UJ	0.79 UJ	NR	7.9 UJ	NR	0.79 UJ
Trans-1,3-Dichloropropene	NR	0.91 UJ	0.91 UJ	NR	9.1 UJ	NR	0.91 UJ
Trichloroethylene (TCE)	NR	1.6 J	4.4 J	NR	2 UJ	NR	0.25 J
Trichlorofluoromethane	NR	1.7 J	2.1 J	NR	11 UJ	NR	1.5 J
Vinyl Bromide	NR	0.87 UJ	0.87 UJ	NR	8.7 UJ	NR	0.87 UJ
Vinyl Chloride	NR	0.2 UJ	0.2 UJ	NR	2 UJ	NR	0.2 UJ

Table 15
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Soil Vapor Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	SV-04_20210825 200-59874-4 8/25/2021 µg/m ³ 2	RI-SV-05_20230808 200-59874-1 8/08/2023 µg/m ³ 1	SV-05_20210825 200-59874-5 8/25/2021 µg/m ³ 1	RI-SV-06_20230810 200-69524-3 8/10/2023 µg/m ³ 1	SV-06_20210825 200-59874-6 8/25/2021 µg/m ³ 1	RI-SV-07_20230811 200-69524-1 8/11/2023 µg/m ³ 1	RI-SV-07_20230811 200-69524-1 8/11/2023 µg/m ³ 2
Compound	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	NR	4.9 J	30 J	0.3 J	12 J	8.3 J	NR
1,1,2,2-Tetrachloroethane	NR	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	NR
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NR	1.5 UJ	1.5 UJ	0.45 J	0.44 J	0.6 J	NR
1,1,2-Trichloroethane	NR	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	NR
1,1-Dichloroethane	NR	0.81 UJ	0.81 UJ	0.81 UJ	0.81 UJ	0.81 UJ	NR
1,1-Dichloroethene	NR	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	NR
1,2,4-Trichlorobenzene	NR	3.7 UJ	3.7 UJ	3.7 UJ	3.7 UJ	3.7 UJ	NR
1,2,4-Trimethylbenzene	NR	9.7 J	13 J	2.7 J	15 J	4.2 J	NR
1,2-Dibromoethane (Ethylene Dibromide)	NR	1.5 UJ	1.5 UJ	1.5 UJ	1.5 UJ	1.5 UJ	NR
1,2-Dichlorobenzene	NR	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	NR
1,2-Dichloroethane	NR	0.81 UJ	0.81 UJ	0.81 UJ	0.81 UJ	0.81 UJ	NR
1,2-Dichloropropane	NR	0.92 UJ	0.92 UJ	0.92 UJ	0.92 UJ	0.92 UJ	NR
1,2-Dichlorotetrafluoroethane	NR	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	NR
1,3,5-Trimethylbenzene (Mesitylene)	NR	2.2 J	3.8 J	0.53 J	4.1 J	0.91 J	NR
1,3-Butadiene	NR	0.34 J	0.44 UJ	1.8 J	0.44 UJ	1.3 J	NR
1,3-Dichlorobenzene	NR	3.4 J	1.2 UJ	10 J	1.2 UJ	1.3 J	NR
1,4-Dichlorobenzene	NR	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	NR
2,2,4-Trimethylpentane	NR	1.8 J	2.6 J	1.1 J	2.6 J	3.3 J	NR
2-Chlorotoluene	NR	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	NR
2-Hexanone	NR	2.3 J	3.1 J	3 J	2.8 J	0.99 J	NR
4-Ethyltoluene	NR	2.3 J	3 J	0.5 J	3.4 J	0.93 J	NR
Acetone	130 J	38 J	81 J	55 J	66 J	57 J	NR
Allyl Chloride (3-Chloropropene)	NR	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	NR
Benzene	NR	3.4 J	30 J	1.9 J	34 J	2.4 J	NR
Benzyl Chloride	NR	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	NR
Bromodichloromethane	NR	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ	NR
Bromoform	NR	2.1 UJ	2.1 UJ	2.1 UJ	2.1 UJ	2.1 UJ	NR
Bromomethane	NR	0.78 UJ	0.78 UJ	0.78 UJ	0.78 UJ	0.78 UJ	NR
Butane	NR	4.3 J	23 J	24 J	14 J	NR	110 J
Carbon Disulfide	NR	6.9 J	11 J	4 J	21 J	6.2 J	NR
Carbon Tetrachloride	NR	0.23 J	0.22 UJ	0.29 J	0.22 UJ	0.96 J	NR
Chlorobenzene	NR	0.92 UJ	0.92 UJ	0.92 J	0.92 UJ	0.92 UJ	NR
Chlorodifluoromethane	NR	0.48 J	0.96 J	2.1 J	1.1 J	1 J	NR
Chloroethane	NR	1.3 UJ	0.8 J	1.3 UJ	1.3 UJ	0.49 J	NR
Chloroform	NR	4 J	2.1 J	0.84 J	2.3 J	2.7 J	NR
Chloromethane	NR	1 UJ	0.86 J	1.7 J	0.37 J	1.1 J	NR
Cis-1,2-Dichloroethylene	NR	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	NR
Cis-1,3-Dichloropropene	NR	0.91 UJ	0.91 UJ	0.91 UJ	0.91 UJ	0.91 UJ	NR
Cyclohexane	NR	4 J	65 J	1.7 J	50 J	11 J	NR
Cymene	NR	3.7 J	0.55 J	1.5 J	0.65 J	0.43 J	NR
Dibromochloromethane	NR	1.7 UJ	1.7 UJ	1.7 UJ	1.7 UJ	1.7 UJ	NR
Dichlorodifluoromethane	NR	1.6 J	1.7 J	2.4 J	1.7 J	2.3 J	NR
Ethylbenzene	NR	5 J	3.3 J	2.8 J	3.2 J	4.6 J	NR
Hexachlorobutadiene	NR	2.1 UJ	2.1 UJ	2.1 UJ	2.1 UJ	2.1 UJ	NR
Isopropanol	NR	63 J	19 J	4.4 J	15 J	12 UJ	NR
Isopropylbenzene (Cumene)	NR	2.3 J	0.78 J	0.98 UJ	0.7 J	0.98 UJ	NR
M,P-Xylenes	NR	20 J	8.6 J	9.5 J	8.5 J	19 J	NR
Methyl Ethyl Ketone (2-Butanone)	NR	9.5 J	16 J	18 J	14 J	9.1 J	NR
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NR	12 J	6.8 J	5 J	2 UJ	2 UJ	NR
Methyl Methacrylate	NR	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	NR
Methylene Chloride	NR	0.67 J	1.7 UJ	1.6 J	1.7 UJ	0.73 J	NR
Naphthalene	NR	1.6 J	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	NR
N-Butylbenzene	NR	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	NR
N-Heptane	NR	3.8 J	12 J	14 J	9.5 J	4.2 J	NR
N-Hexane	NR	3.6 J	27 J	29 J	23 J	15 J	NR
N-Propylbenzene	NR	1.6 J	2 J	0.4 J	2.3 J	0.67 J	NR
O-Xylene (1,2-Dimethylbenzene)	NR	7.5 J	4.4 J	3.2 J	3.9 J	4.5 J	NR
Sec-Butylbenzene	NR	0.26 J	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	NR
Styrene	NR	1.1 J	4.3 J	0.28 J	5.1 J	0.39 J	NR
T-Butylbenzene	NR	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	NR
Tert-Butyl Alcohol	NR	36 J	20 J	15 J	19 J	15 UJ	NR
Tert-Butyl Methyl Ether	NR	0.72 UJ	0.72 UJ	0.72 UJ	0.72 UJ	0.72 UJ	NR
Tetrachloroethylene (PCE)	NR	43 J	11 J	27 J	2 J	12 J	NR
Tetrahydrofuran	NR	15 UJ	15 UJ	15 UJ	15 UJ	15 UJ	NR
Toluene	NR	26 J	22 J	6.8 J	26 J	9.7 J	NR
Trans-1,2-Dichloroethene	NR	0.14 J	0.79 UJ	0.79 UJ	0.79 UJ	0.79 UJ	NR
Trans-1,3-Dichloropropene	NR	0.91 UJ	0.91 UJ	0.91 UJ	0.91 UJ	0.91 UJ	NR
Trichloroethylene (TCE)	NR	0.38 J	0.2 UJ	0.36 J	0.2 UJ	0.94 J	NR
Trichlorofluoromethane	NR	1.1 J	1.5 J	1.3 J	1.3 J	2.1 J	NR
Vinyl Bromide	NR	0.87 UJ	0.87 UJ	0.87 UJ	0.87 UJ	0.87 UJ	NR
Vinyl Chloride	NR	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	NR

Table 15
110 East 138th Street
Bronx, NY

Subsurface (Phase II) and Remedial Investigations
Soil Vapor Analytical Results of VOCs

AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor	SV-07_20210825 200-59874-7 8/25/2021 µg/m ³ 1	SV-07_20210825 200-59874-7 8/25/2021 µg/m ³ 25	SV-08_20210825 200-59874-8 8/25/2021 µg/m ³ 1	SV-08_20210825 200-59874-8 8/25/2021 µg/m ³ 2	SV-09_20210825 200-59874-9 8/25/2021 µg/m ³ 1	SV-09_20210825 200-59874-9 8/25/2021 µg/m ³ 20
Compound	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	5.1 J	NR	1.4 J	NR	4.3 J	NR
1,1,2,2-Tetrachloroethane	1.4 UJ	NR	1.4 UJ	NR	1.4 UJ	NR
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	0.48 J	NR	1.5 UJ	NR	0.51 J	NR
1,1,2-Trichloroethane	1.1 UJ	NR	1.1 UJ	NR	1.1 UJ	NR
1,1-Dichloroethane	0.81 UJ	NR	0.81 UJ	NR	0.81 UJ	NR
1,1-Dichloroethene	0.2 UJ	NR	0.2 UJ	NR	0.2 UJ	NR
1,2,4-Trichlorobenzene	3.7 UJ	NR	3.7 UJ	NR	3.7 UJ	NR
1,2,4-Trimethylbenzene	16 J	NR	18 J	NR	17 J	NR
1,2-Dibromoethane (Ethylene Dibromide)	1.5 UJ	NR	1.5 UJ	NR	1.5 UJ	NR
1,2-Dichlorobenzene	1.2 UJ	NR	1.2 UJ	NR	1.2 UJ	NR
1,2-Dichloroethane	0.81 UJ	NR	0.81 UJ	NR	0.81 UJ	NR
1,2-Dichloropropane	0.92 UJ	NR	0.92 UJ	NR	0.92 UJ	NR
1,2-Dichlorotetrafluoroethane	1.4 UJ	NR	1.4 UJ	NR	1.4 UJ	NR
1,3,5-Trimethylbenzene (Mesitylene)	4.6 J	NR	8 J	NR	4.1 J	NR
1,3-Butadiene	0.44 UJ	NR	0.44 UJ	NR	0.19 J	NR
1,3-Dichlorobenzene	1.2 UJ	NR	1.2 UJ	NR	1.2 UJ	NR
1,4-Dichlorobenzene	1.2 UJ	NR	1.2 UJ	NR	1.2 UJ	NR
2,2,4-Trimethylpentane	0.74 J	NR	1.7 J	NR	0.71 J	NR
2-Chlorotoluene	1 UJ	NR	1 UJ	NR	1 UJ	NR
2-Hexanone	5.7 J	NR	1.6 J	NR	34 J	NR
4-Ethyltoluene	3.6 J	NR	2.4 J	NR	3.5 J	NR
Acetone	NR	180 J	NR	110 J	NR	490 J
Allyl Chloride (3-Chloropropene)	1.6 UJ	NR	1.6 UJ	NR	1.6 UJ	NR
Benzene	1.9 J	NR	3.7 J	NR	1.4 J	NR
Benzyl Chloride	1 UJ	NR	1 UJ	NR	1 UJ	NR
Bromodichloromethane	1.3 UJ	NR	1.3 UJ	NR	1.3 UJ	NR
Bromoform	2.1 UJ	NR	2.1 UJ	NR	2.1 UJ	NR
Bromomethane	0.78 UJ	NR	0.78 UJ	NR	0.78 UJ	NR
Butane	17 J	NR	9 J	NR	12 J	NR
Carbon Disulfide	7.8 J	NR	22 J	NR	14 J	NR
Carbon Tetrachloride	0.22 UJ	NR	0.42 J	NR	0.22 UJ	NR
Chlorobenzene	0.92 UJ	NR	0.92 UJ	NR	0.92 UJ	NR
Chlorodifluoromethane	0.82 J	NR	1.4 J	NR	1.1 J	NR
Chloroethane	1.3 UJ	NR	1.3 UJ	NR	1.3 UJ	NR
Chloroform	6.1 J	NR	0.96 J	NR	6.2 J	NR
Chloromethane	0.6 J	NR	0.97 J	NR	0.72 J	NR
Cis-1,2-Dichloroethylene	16 J	NR	0.53 J	NR	0.2 UJ	NR
Cis-1,3-Dichloropropene	0.91 UJ	NR	0.91 UJ	NR	0.91 UJ	NR
Cyclohexane	1.4 J	NR	1.8 J	NR	1 J	NR
Cymene	2.5 J	NR	1.5 J	NR	0.88 J	NR
Dibromochloromethane	1.7 UJ	NR	1.7 UJ	NR	1.7 UJ	NR
Dichlorodifluoromethane	1.5 J	NR	2 J	NR	1.9 J	NR
Ethylbenzene	0.87 UJ	NR	2.7 J	NR	2.4 J	NR
Hexachlorobutadiene	2.1 UJ	NR	2.1 UJ	NR	2.1 UJ	NR
Isopropanol	16 J	NR	3.3 J	NR	13 J	NR
Isopropylbenzene (Cumene)	0.98 UJ	NR	0.98 UJ	NR	0.98 UJ	NR
M,P-Xylenes	8.1 J	NR	12 J	NR	6.1 J	NR
Methyl Ethyl Ketone (2-Butanone)	18 J	NR	11 J	NR	100 J	NR
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	1.3 J	NR	5.2 J	NR	2 UJ	NR
Methyl Methacrylate	2 UJ	NR	2 UJ	NR	2 UJ	NR
Methylene Chloride	0.78 J	NR	1.7 UJ	NR	2.2 J	NR
Naphthalene	2.6 UJ	NR	1 J	NR	2.6 UJ	NR
N-Butylbenzene	1.1 UJ	NR	1.1 UJ	NR	1.1 UJ	NR
N-Heptane	7.4 J	NR	4 J	NR	3.1 J	NR
N-Hexane	11 J	NR	3 J	NR	8.3 J	NR
N-Propylbenzene	0.98 UJ	NR	1.6 J	NR	2.4 J	NR
O-Xylene (1,2-Dimethylbenzene)	3.4 J	NR	7 J	NR	2.9 J	NR
Sec-Butylbenzene	1.1 UJ	NR	0.33 J	NR	0.34 J	NR
Styrene	5.9 J	NR	2.7 J	NR	3.9 J	NR
T-Butylbenzene	1.1 UJ	NR	1.1 UJ	NR	1.1 UJ	NR
Tert-Butyl Alcohol	21 J	NR	8.2 J	NR	33 J	NR
Tert-Butyl Methyl Ether	0.72 UJ	NR	0.72 UJ	NR	0.72 UJ	NR
Tetrachloroethylene (PCE)	NR	2,500 J	31 J	NR	16 J	NR
Tetrahydrofuran	15 UJ	NR	15 UJ	NR	15 UJ	NR
Toluene	7 J	NR	11 J	NR	4.2 J	NR
Trans-1,2-Dichloroethene	3.7 J	NR	0.79 UJ	NR	0.79 UJ	NR
Trans-1,3-Dichloropropene	0.91 UJ	NR	0.91 UJ	NR	0.91 UJ	NR
Trichloroethylene (TCE)	47 J	NR	1.6 J	NR	0.61 J	NR
Trichlorofluoromethane	1.6 J	NR	1.1 J	NR	1.3 J	NR
Vinyl Bromide	0.87 UJ	NR	0.87 UJ	NR	0.87 UJ	NR
Vinyl Chloride	0.2 UJ	NR	0.2 UJ	NR	0.2 UJ	NR

Tables 2-15
110 East 138th Street
Bronx, NY
Subsurface (Phase II) and Remedial Investigations
Notes

DEFINITIONS

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

H : Sample result is estimated and biased high.

J : The concentration given is an estimated value.

L : Sample result is estimated and biased low.

ND : The standard is a non-detectable concentration by the approved analytical method.

NR : Not reported.

NS : No standard.

R : Indicates the reported result is unusable (note: the analyte may or may not be present).

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

mg/kg : milligrams per kilogram

ppb : parts per billion

ppt : parts per trillion

µg/L : micrograms per liter

µg/m³ : micrograms per cubic meter of air

STANDARDS

Part 375 Soil Cleanup Objectives : Soil Cleanup Objectives listed in New York State Department of Environmental Conservation (NYSDEC) "Part 375" Regulations [6 New York Codes, Rules and Regulations (NYCRR) Part 375].

Note: Endosulfans ABS represents the detected sum of Endosulfan I, Endosulfan II, and Endosulfan Sulfate.

Exceedances of Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) are highlighted in bold font.
Exceedances of Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs) are highlighted in gray shading.

NYSDEC Part 375 PFAS Guidance Values : New York State Department of Environmental Conservation (NYSDEC) Sampling, Analysis and Assessment Of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDCE's Part 375 Remedial Programs Issued April 2023.

Exceedances of NYSDCE PFAS Unrestricted Use Guidance Values (UUGVs) are highlighted in bold font.
Exceedances of NYSDCE PFAS Restricted Residential Guidance Values (RRGVs) are highlighted in gray shading.

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

Exceedances of NYSDCE Class GA AWQSGVs are highlighted in bold font.

DUPLICATES

RI-SB-X1_20230808 is a blind duplicate of sample RI-SB-04_0-2_20230808
RI-SB-X2_20230811 is a blind duplicate of sample RI-SB-14_0-2_20230811
RI-SB-X3_20230808 is a blind duplicate of sample RI-SB-19_0-2_20230808
RI-MW-X1_20230818 is a blind duplicate of sample RI-MW-01_20230818

Table 16
110 East 138th Street
Bronx, NY
Estimated Remedial Costs

	Quantity	Units	Unit Rate	Cost
Demolition and Abatement				
- Asbestos abatement and demolition	1	Lump Sum	\$500,000	\$500,000
Demolition and Abatement Subtotal				\$500,000
Soil Excavation and Backfill ¹				
- Soil disposal (estimated non-haz waste until waste characterization completed)	3,630	Tons	\$55	\$199,650
- Backfill	4,900	CY	\$40	\$196,000
Soil Excavation and Disposal Subtotal				\$395,650
Support of Excavation (SOE)				
- SOE for hotspot excavation	1	Estimated Total	\$50,000	\$50,000
SOE Subtotal				\$50,000
Dewatering				
- Localized dewatering during excavation	1	Estimated Total	\$150,000	\$150,000
Dewatering Subtotal				\$150,000
USTs Removal				
- Unknown/Unregistered Tank Removal (tank and liquids)	1	Estimated	\$25,000	\$25,000
UST Removal Subtotal				\$25,000
Sub-Slab Depressurization System (SSDS) and Vapor Barrier ¹				
- Filter fabric, gravel layer, underground piping	13,493	Square Feet	\$8	\$107,944
- Vapor Barrier	13,493	Square Feet	\$12	\$161,916
- Aboveground piping, blowers, accessories & electrical	1	Lump Sum	\$50,000	\$50,000
SSDS Subtotal				\$319,860
Concrete Building Slab for Site Cover				
- Concrete for building slab	420	CY	\$130	\$54,600
Concrete Cover Subtotal				\$54,600
Consulting Services				
- Engineering/Environmental Oversight, Design, Reporting, and Coordination	1	Estimated Total	\$390,000	\$390,000
Site Preparation Subtotal				\$390,000
Analytical Laboratory Fees				
- Laboratory analysis for waste characterization, endpoint samples, import/reuse, and data validation	1	Estimated Total	\$100,000	\$100,000
Site Preparation Subtotal				\$100,000
Estimated Total				\$1,985,110

Notes/Assumptions:

¹ SSDS

Approximate building footprint

13,493 Square Feet

Table 17
110 East 138th Street
Bronx, NY

NYSDEC Part 375 Restricted Residential SCOs

Volatile Organic Compounds (VOCs)	NYSDEC RRSCO (mg/kg)
1,1,1-Trichloroethane	100
1,1,2,2-Tetrachloroethane	NS
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF)	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	26
1,1-Dichloroethene	100
1,2,3-Trichlorobenzene	NS
1,2,4-Trichlorobenzene	NS
1,2,4-Trimethylbenzene	52
1,2-Dibromo-3-Chloropropane	NS
1,2-Dibromoethane (Ethylene Dibromide)	NS
1,2-Dichlorobenzene	100
1,2-Dichloroethane	3.1
1,2-Dichloropropane	NS
1,3,5-Trimethylbenzene (Mesitylene)	52
1,3-Dichlorobenzene	49
1,4-Dichlorobenzene	13
2-Hexanone	NS
Acetone	100
Benzene	4.8
Bromochloromethane	NS
Bromodichloromethane	NS
Bromoform	NS
Bromomethane	NS
Carbon Disulfide	NS
Carbon Tetrachloride	2.4
Chlorobenzene	100
Chloroethane	NS
Chloroform	49
Chloromethane	NS
Cis-1,2-Dichloroethylene	100
Cis-1,3-Dichloropropene	NS
Cyclohexane	NS
Dibromochloromethane	NS
Dichlorodifluoromethane	NS
Ethylbenzene	41
Isopropylbenzene (Cumene)	NS
M,P-Xylenes	NS
Methyl Acetate	NS
Methyl Ethyl Ketone (2-Butanone)	100
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NS
Methylcyclohexane	NS
Methylene Chloride	100
N-Butylbenzene	100
N-Propylbenzene	100
O-Xylene (1,2-Dimethylbenzene)	NS
Sec-Butylbenzene	100
Styrene	NS
T-Butylbenzene	100

Table 17
110 East 138th Street
Bronx, NY

NYSDEC Part 375 Restricted Residential SCOs

Volatile Organic Compounds (VOCs)	NYSDEC RRSCO (mg/kg)
Tert-Butyl Methyl Ether	100
Tetrachloroethylene (PCE)	19
Toluene	100
Trans-1,2-Dichloroethene	100
Trans-1,3-Dichloropropene	NS
Trichloroethylene (TCE)	21
Trichlorofluoromethane	NS
Vinyl Chloride	0.9
Xylenes, Total	100
Semi-volatile Organic Compounds (SVOCs)	NYSDEC RRSCO (mg/kg)
1,2,4,5-Tetrachlorobenzene	NS
1,4-Dioxane (P-Dioxane)	13
2,3,4,6-Tetrachlorophenol	NS
2,4,5-Trichlorophenol	NS
2,4,6-Trichlorophenol	NS
2,4-Dichlorophenol	NS
2,4-Dimethylphenol	NS
2,4-Dinitrophenol	NS
2,4-Dinitrotoluene	NS
2,6-Dinitrotoluene	NS
2-Chloronaphthalene	NS
2-Chlorophenol	NS
2-Methylnaphthalene	NS
2-Methylphenol (O-Cresol)	100
2-Nitroaniline	NS
2-Nitrophenol	NS
3- And 4- Methylphenol (Total)	NS
3,3'-Dichlorobenzidine	NS
3-Nitroaniline	NS
4,6-Dinitro-2-Methylphenol	NS
4-Bromophenyl Phenyl Ether	NS
4-Chloro-3-Methylphenol	NS
4-Chloroaniline	NS
4-Chlorophenyl Phenyl Ether	NS
4-Methylphenol (P-Cresol)	100
4-Nitroaniline	NS
4-Nitrophenol	NS
Acenaphthene	100
Acenaphthylene	100
Acetophenone	NS
Anthracene	100
Atrazine	NS
Benzaldehyde	NS
Benzo(a)Anthracene	1
Benzo(a)Pyrene	1
Benzo(b)Fluoranthene	1
Benzo(g,h,i)Perylene	100
Benzo(k)Fluoranthene	3.9

Table 17
110 East 138th Street
Bronx, NY

NYSDEC Part 375 Restricted Residential SCOs

Semi-volatile Organic Compounds (SVOCs)	NYSDEC RRSCO (mg/kg)
Benzyl Butyl Phthalate	NS
Biphenyl (Diphenyl)	NS
Bis(2-Chloroethoxy) Methane	NS
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	NS
Bis(2-Chloroisopropyl) Ether	NS
Bis(2-Ethylhexyl) Phthalate	NS
Caprolactam	NS
Carbazole	NS
Chrysene	3.9
Dibenz(a,h)Anthracene	0.33
Dibenzofuran	59
Diethyl Phthalate	NS
Dimethyl Phthalate	NS
Di-N-Butyl Phthalate	NS
Di-N-Octylphthalate	NS
Fluoranthene	100
Fluorene	100
Hexachlorobenzene	1.2
Hexachlorobutadiene	NS
Hexachlorocyclopentadiene	NS
Hexachloroethane	NS
Indeno(1,2,3-c,d)Pyrene	0.5
Isophorone	NS
Naphthalene	100
Nitrobenzene	NS
N-Nitrosodi-N-Propylamine	NS
N-Nitrosodiphenylamine	NS
Pentachlorophenol	6.7
Phenanthrene	100
Phenol	100
Pyrene	100
Polychlorinated Biphenyls (PCBs)	NYSDEC RRSCO (mg/kg)
PCB-1016 (Aroclor 1016)	NS
PCB-1221 (Aroclor 1221)	NS
PCB-1232 (Aroclor 1232)	NS
PCB-1242 (Aroclor 1242)	NS
PCB-1248 (Aroclor 1248)	NS
PCB-1254 (Aroclor 1254)	NS
PCB-1260 (Aroclor 1260)	NS
PCB-1262 (Aroclor 1262)	NS
PCB-1268 (Aroclor 1268)	NS
Total PCBs	1
Pesticides	NYSDEC RRSCO (mg/kg)
Aldrin	0.097
Alpha Bhc (Alpha Hexachlorocyclohexane)	0.48
Alpha Endosulfan	NS
Beta Bhc (Beta Hexachlorocyclohexane)	0.36

Table 17
110 East 138th Street
Bronx, NY
NYSDEC Part 375 Restricted Residential SCOs

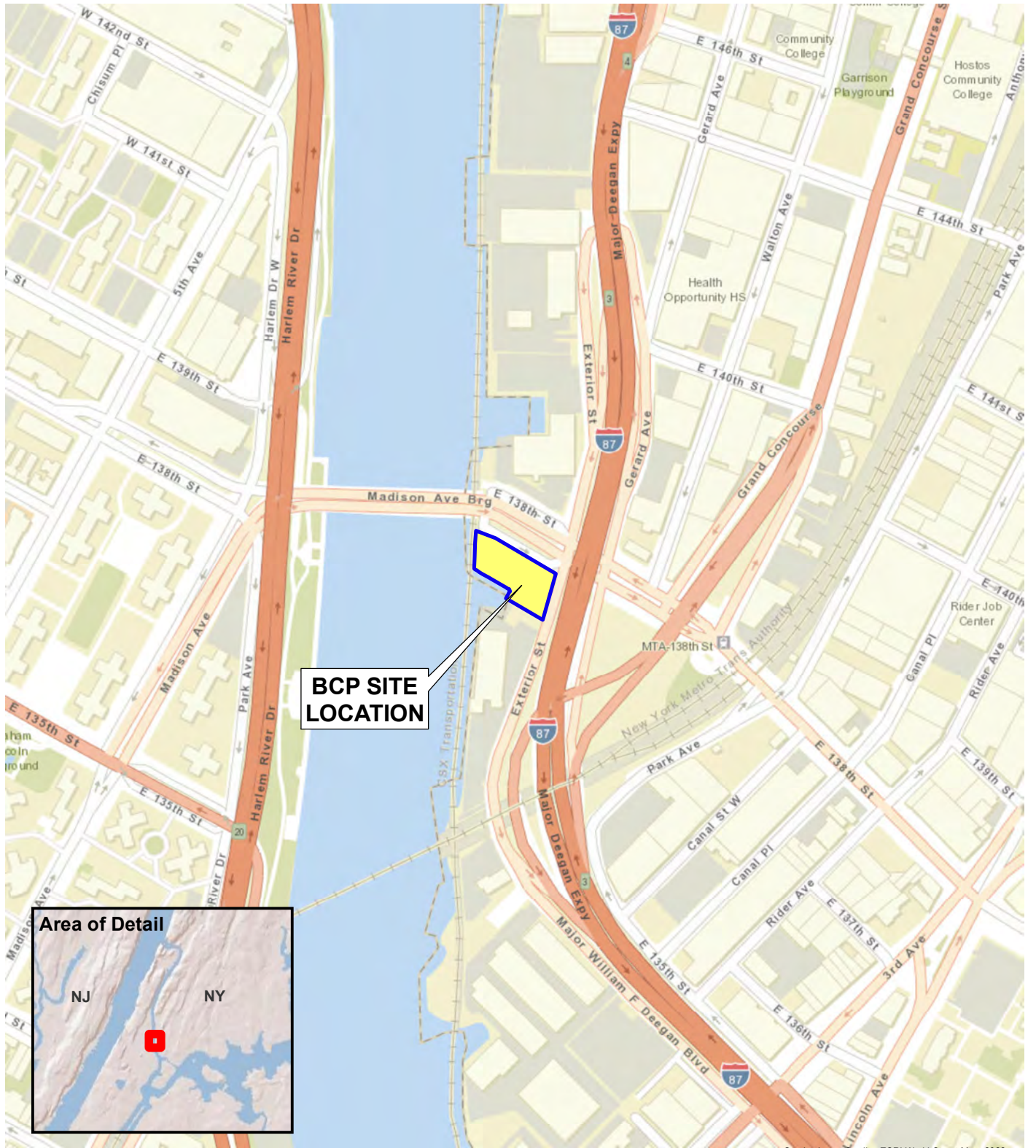
Pesticides	NYSDEC RRSCO (mg/kg)
Beta Endosulfan	NS
cis-Chlordane	4.2
Delta BHC (Delta Hexachlorocyclohexane)	100
Dieldrin	0.2
Endosulfan Sulfate	NS
Endosulfans ABS	24
Endrin	11
Endrin Aldehyde	NS
Endrin Ketone	NS
Gamma Bhc (Lindane)	1.3
Heptachlor	2.1
Heptachlor Epoxide	NS
Methoxychlor	NS
P,P'-DDD	13
P,P'-DDE	8.9
P,P'-DDT	7.9
Toxaphene	NS
TAL Metals	NYSDEC RRSCO (mg/kg)
Aluminum	NS
Antimony	NS
Arsenic	16
Barium	400
Beryllium	72
Cadmium	4.3
Calcium	NS
Chromium, Hexavalent	110
Chromium, Total	NS
Cobalt	NS
Copper	270
Iron	NS
Lead	400
Magnesium	NS
Manganese	2,000
Mercury	0.81
Nickel	310
Potassium	NS
Selenium	180
Silver	180
Sodium	NS
Thallium	NS
Vanadium	NS
Zinc	10,000

Table 17
110 East 138th Street
Bronx, NY

NYSDEC Part 375 Restricted Residential SCOs

Per- and Polyfluoroalkyl Substances (PFAS)	NYSDEC RRGV (ppb)
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NS
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NS
2H,2H,3H,3H-Perfluorooctanoic acid	NS
3-Perfluoroheptyl propanoic acid	NS
3-Perfluoropropyl propanoic acid	NS
4,8-Dioxa-3H-perfluorononanoic acid	NS
6:2 Fluorotelomer sulfonate	NS
8:2 Fluorotelomer sulfonate	NS
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NS
Hexafluoropropylene oxide dimer acid	NS
N-ethyl perfluorooctanesulfonamide	NS
N-ethyl perfluorooctanesulfonamidoacetic acid	NS
N-ethyl perfluorooctanesulfonamidoethanol	NS
N-methyl perfluorooctanesulfonamide	NS
N-methyl perfluorooctanesulfonamidoacetic acid	NS
N-methyl perfluorooctanesulfonamidoethanol	NS
Nonafluoro-3,6-dioxaheptanoic acid	NS
Perfluoro(2-ethoxyethane)sulfonic acid	NS
Perfluoro-3-methoxypropanoic acid	NS
Perfluoro-4-methoxybutanoic acid	NS
Perfluorobutanesulfonic acid	NS
Perfluorobutanoic acid	NS
Perfluorodecanesulfonic acid	NS
Perfluorodecanoic acid	NS
Perfluorododecanesulfonic acid	NS
Perfluorododecanoic acid	NS
Perfluoroheptanesulfonic acid	NS
Perfluoroheptanoic acid	NS
Perfluorohexanesulfonic acid	NS
Perfluorohexanoic acid	NS
Perfluorononanesulfonic acid	NS
Perfluorononanoic acid	NS
Perfluorooctanesulfonamide	NS
Perfluorooctanesulfonic acid (PFOS)	44
Perfluorooctanoic acid (PFOA)	33
Perfluoropentanoic acid	NS
Perfluoropentansulfonic acid	NS
Perfluorotetradecanoic acid	NS
Perfluorotridecanoic acid	NS
Perfluoroundecanoic acid	NS
Notes: mg/kg: milligrams per kilogram ppb: parts per billion NS: No standard RRSCOs: Restricted Residential Soil Cleanup Objectives listed in NYSDEC "Part 375" Regulations (6 NYCRR Part 375). RRGV: Restricted Residential Guidance Value listed in the NYSDEC Sampling, Analysis and Assessment Of PFAS Under NYSDEC's Part 375 Remedial Programs Issued April 2023.	

FIGURES



Service Layer Credits: ESRI World Street Map, 2022.



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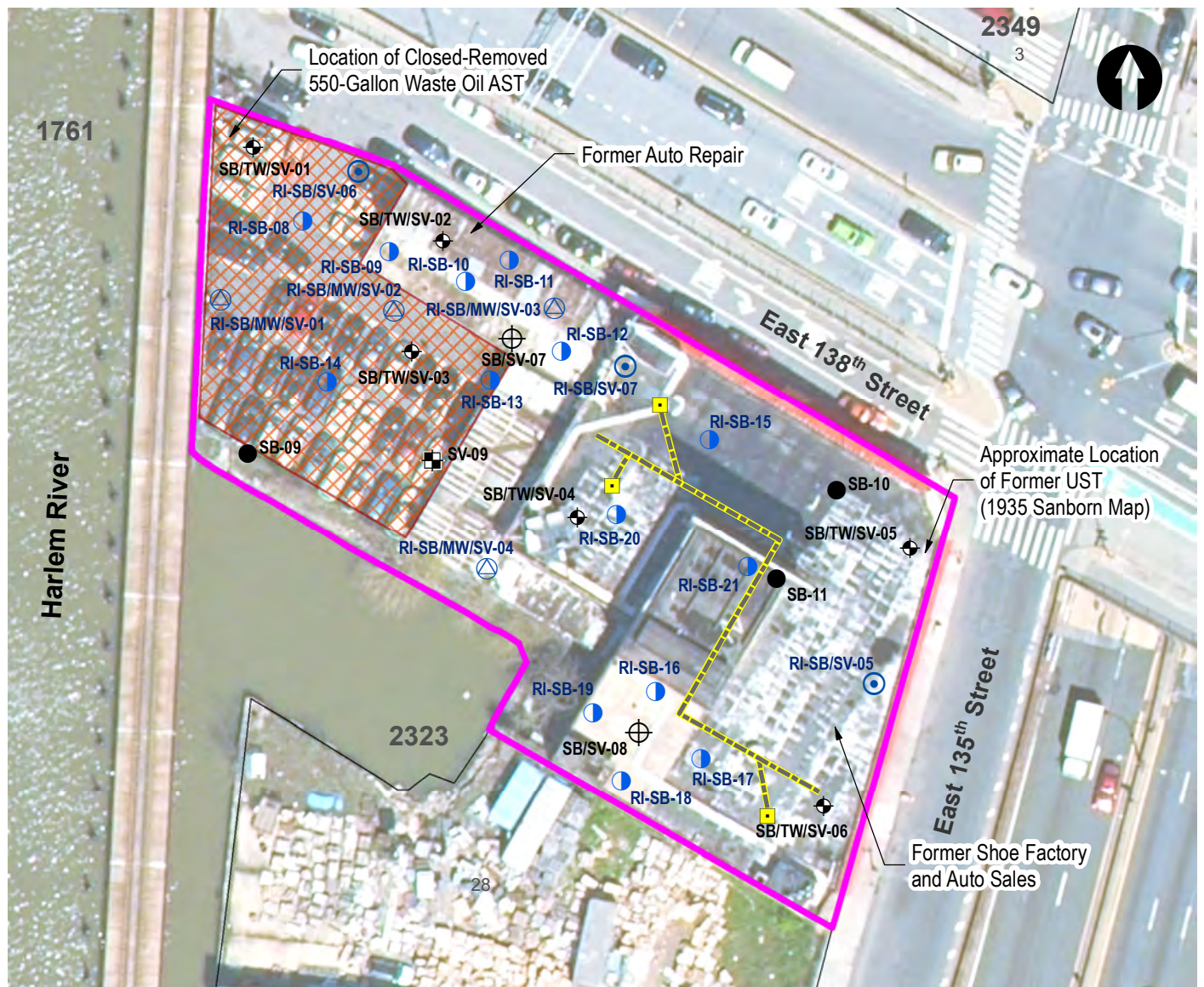
440 Park Avenue South, New York, NY 10016

110 East 138th Street
Bronx, New York

BCP SITE LOCATION

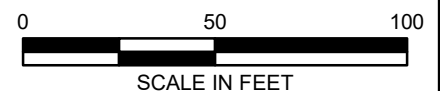
DATE
9/26/2025
PROJECT NO.
210261
FIGURE
1

© 2025 AKRF Q:\Projects\210261 - 110 East 138th Street\Technical\GIS and Graphics\110 East 138th st\RAW\210261 Fig 2 BCP Site and Sample Location Plan.mxd 9/26/2025 11:55:13 AM mvelleux



LEGEND

- BCP SITE BOUNDARY
 - REINFORCED CONCRETE AREA
 - LOT BOUNDARY AND TAX LOT NUMBER
 - 2323** BLOCK NUMBER
 - PHASE II SOIL BORING LOCATION
 - PHASE II SOIL BORING/SOIL VAPOR POINT LOCATION
 - PHASE II SOIL BORING/TEMPORARY WELL/SOIL VAPOR POINT LOCATION
 - PHASE II SOIL VAPOR POINT LOCATION
 - RI SOIL BORING LOCATION
 - RI SOIL BORING/MONITORING WELL/SOIL VAPOR POINT LOCATION
 - RI SOIL BORING/SOIL VAPOR POINT LOCATION
 - APPROXIMATE LOCATION OF SEWER LINE
 - APPROXIMATE LOCATION OF FLOOR DRAIN
- AST: ABOVEGROUND STORAGE TANK
UST: UNDERGROUND STORAGE TANK



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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.

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440 Park Avenue South, New York, NY 10016

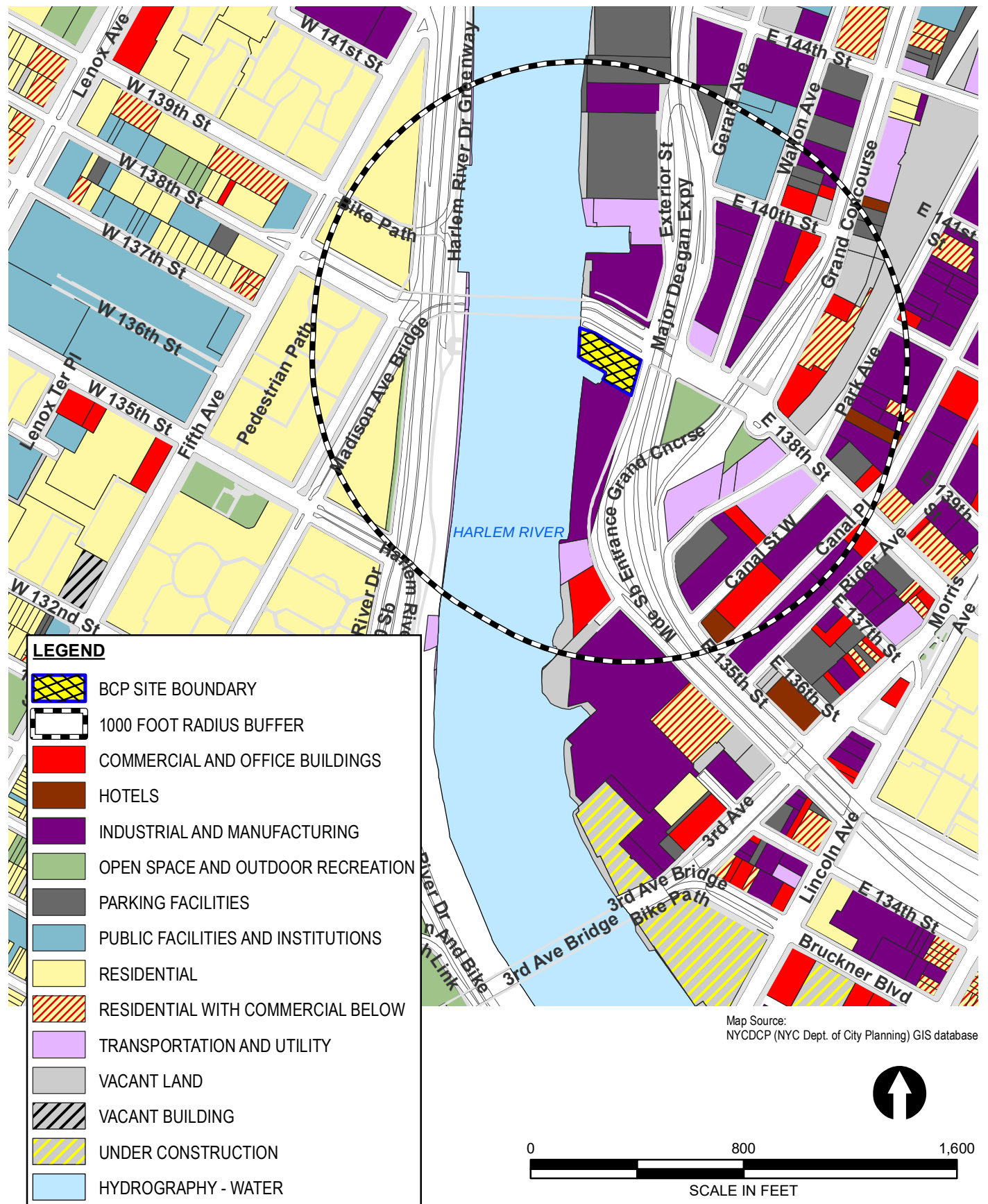
110 East 138th Street
Bronx, New York

BCP SITE AND SAMPLE LOCATION PLAN

DATE
9/26/2025

PROJECT NO.
210261

FIGURE
2



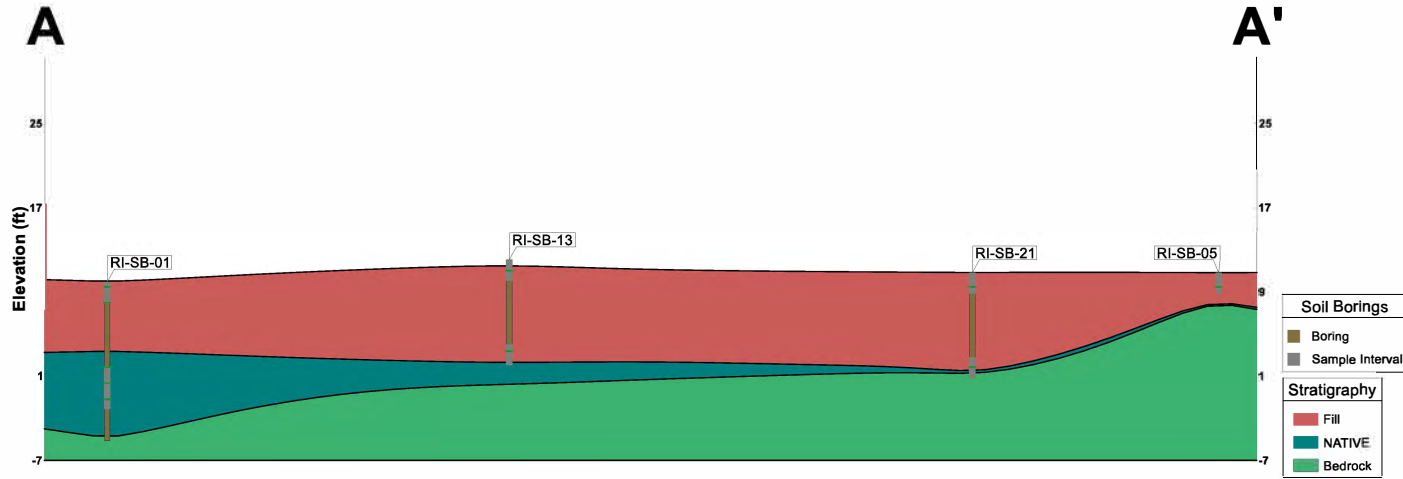
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440 Park Avenue South, New York, NY 10016

110 East 138th Street
Bronx, New York

SURROUNDING LAND USAGE

DATE	9/26/2025
PROJECT NO.	210261
FIGURE	3



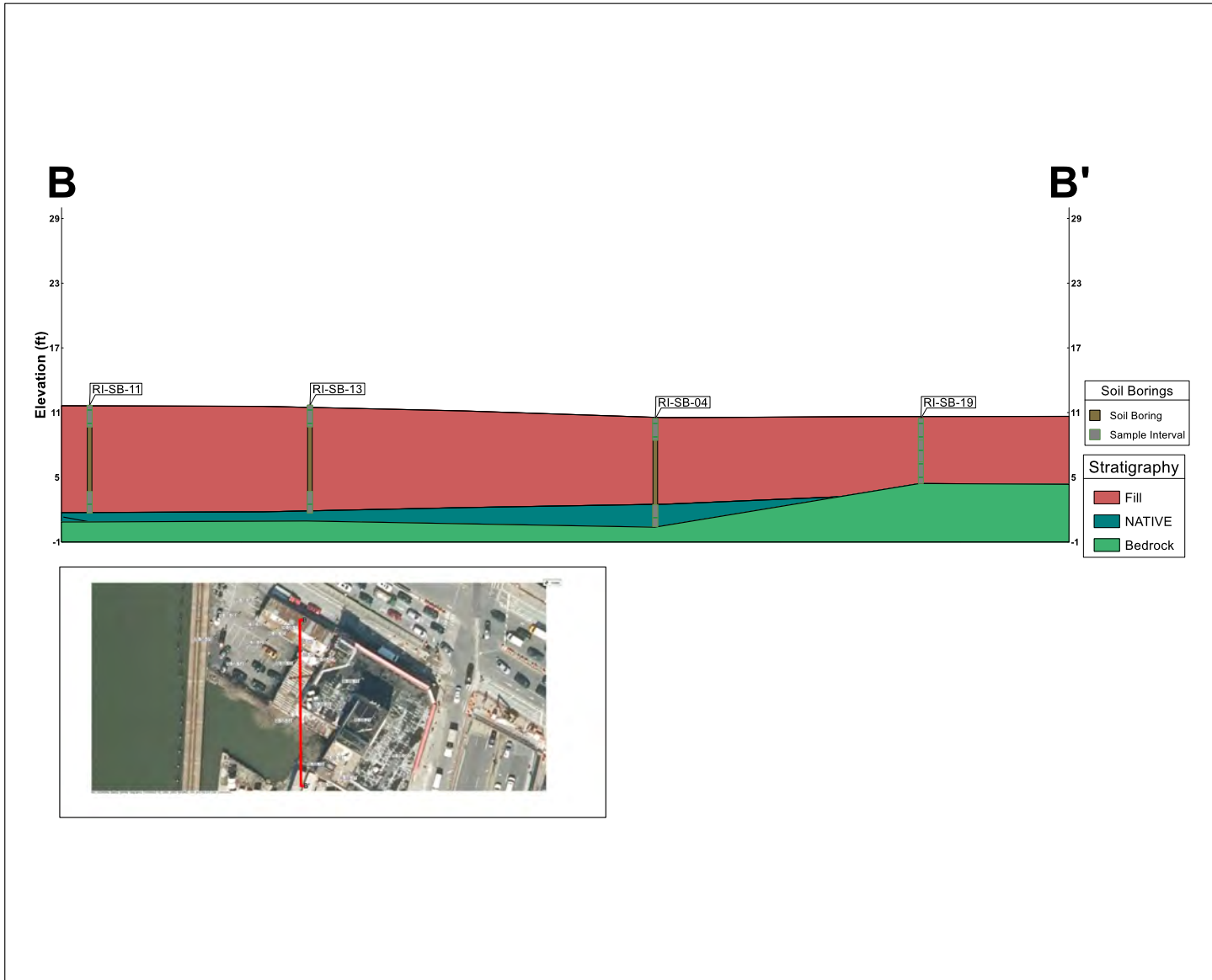
110 East 138th Street
Bronx, NY

East-West Lithology Cross Section

Date
11/20/2023

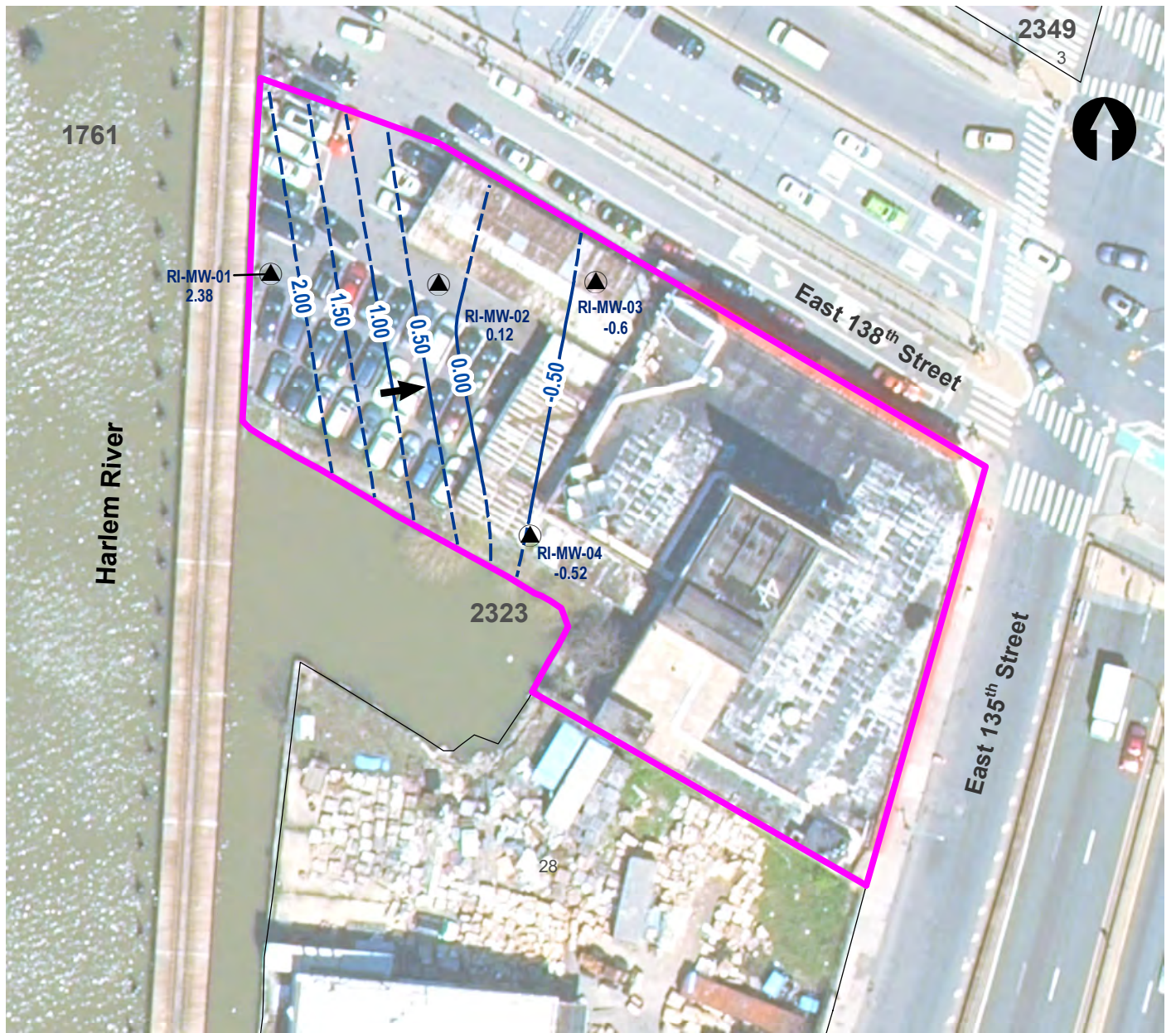
Project No.
210261

Figure
4



AKRF 440 Park Avenue South, New York, NY 10016	
110 East 138th Street Bronx, NY	North-South Lithology Cross Section
Date 03/21/2024	
Project No. 210261	
Figure 5	

©2025 AKRF Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\GIS and Graphics\ISAR\110 East 138th st\RAWP\210261 Fig 6 Groundwater Contour Map.mxd 9/26/2025 11:58:10 AM mvellieux



LEGEND



BCP SITE BOUNDARY



43

LOT BOUNDARY AND TAX LOT NUMBER

2323

BLOCK NUMBER



RI SOIL BORING/MONITORING WELL LOCATION



GROUNDWATER ELEVATION CONTOUR LINE
(DASHED WHERE INFERRED)



GROUNDWATER FLOW DIRECTION

Well ID	Top of Casing Elevation (ft.)	Depth to Groundwater (ft. below TOC)	Groundwater Elevation (ft.)
RI-MW-01	9.24	6.86	2.38
RI-MW-02	11.38	11.26	0.12
RI-MW-03	11.38	11.98	-0.6
RI-MW-04	10.1	10.62	-0.52

Notes:

ft. = feet

TOC = top of casing

Elevation = feet above mean sea level based on the North American Vertical
Datum of 1988 (NAVD88).

0 50 100



SCALE IN FEET

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440 Park Avenue South, New York, NY 10016

110 East 138th Street
Bronx, New York

GROUNDWATER CONTOUR MAP
AUGUST 18, 2023

DATE

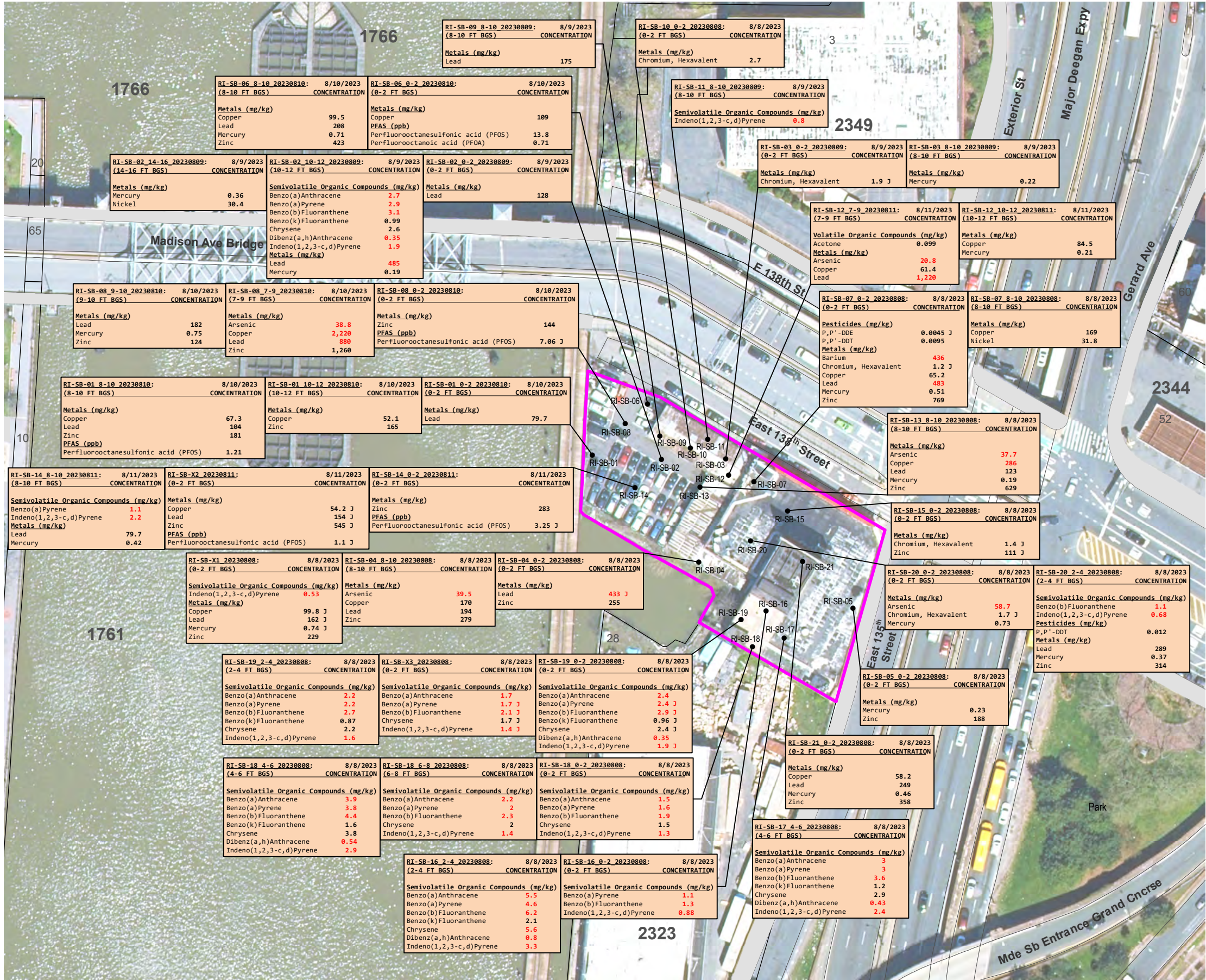
9/26/2025

PROJECT NO.

210261

FIGURE

6



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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.

LEGEND

- BCP SITE BOUNDARY
- LOT BOUNDARY AND TAX LOT NUMBER

2323 BLOCK NUMBER

- RI SOIL BORING LOCATION

SOIL

Exceedances of NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs) are presented in bold font.

Exceedances of NYSDEC Restricted Residential Soil Cleanup Objectives (RRSCOs) are presented in red.

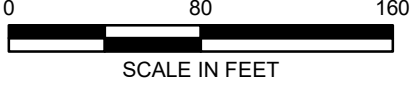
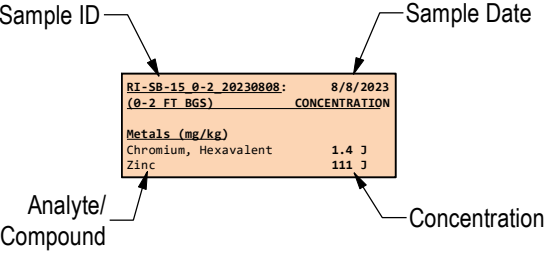
mg/kg: milligrams per kilogram = parts per million

(ppm)

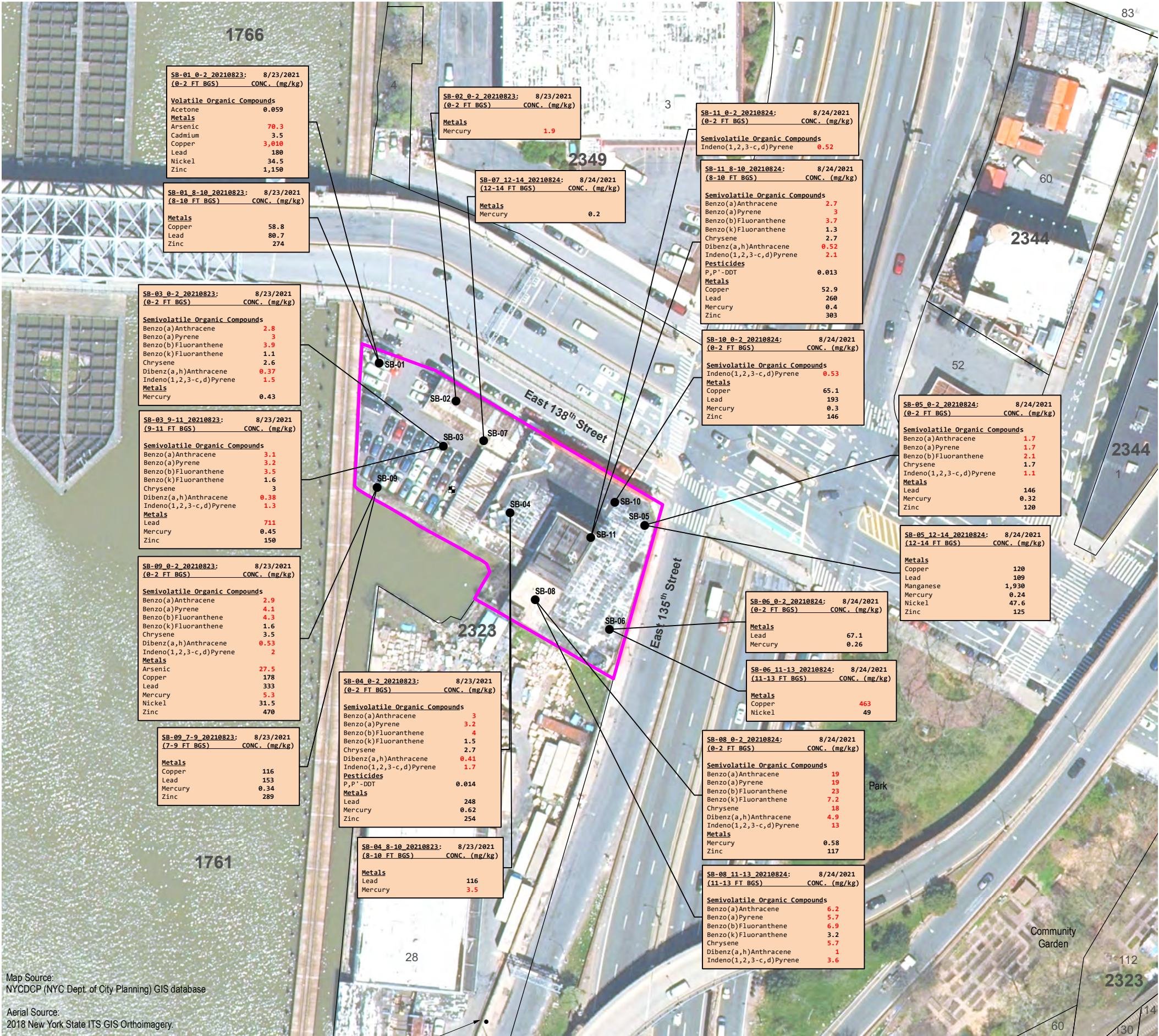
ppb = parts per billion

J: The concentration given is an estimated value.

	UUGVs ppb	RRGVs ppb	RRSCOs mg/kg	UUSCOs mg/kg
Volatile Organic Compounds				
Acetone				100
Semivolatile Organic Compounds				
Benzo(a)Anthracene				1
Benzo(a)Pyrene				1
Benzo(b)Fluoranthene				1
Benzo(k)Fluoranthene				0.8
Chrysene				1
Dibenz(a,h)Anthracene				0.33
Indeno(1,2,3-c,d)Pyrene				0.5
Pesticides				
P,P'-DDE				0.0033
P,P'-DDT				0.0033
Metals				
Arsenic				16
Barium				400
Chromium, Hexavalent				110
Copper				270
Lead				400
Mercury				0.81
Nickel				310
Zinc				10,000
PFAS				
Perfluorooctanesulfonic acid (PFOS)		0.88	44	
Perfluorooctanoic acid (PFOA)		0.66	33	



110 East 138th Street
Bronx, New York



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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.

LEGEND

- BCP SITE BOUNDARY
- LOT BOUNDARY AND TAX LOT NUMBER
- BLOCK NUMBER
- PHASE II SOIL BORING LOCATION

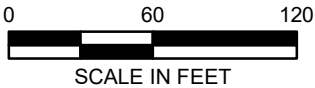
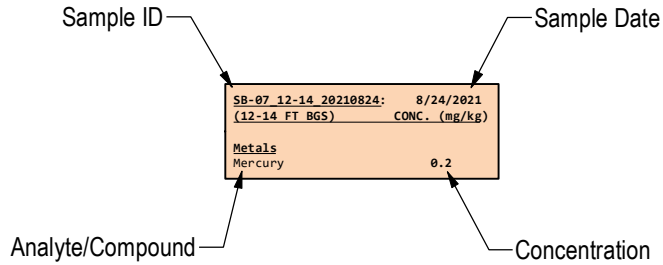
SOIL

Exceedances of NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs) are presented in bold font.

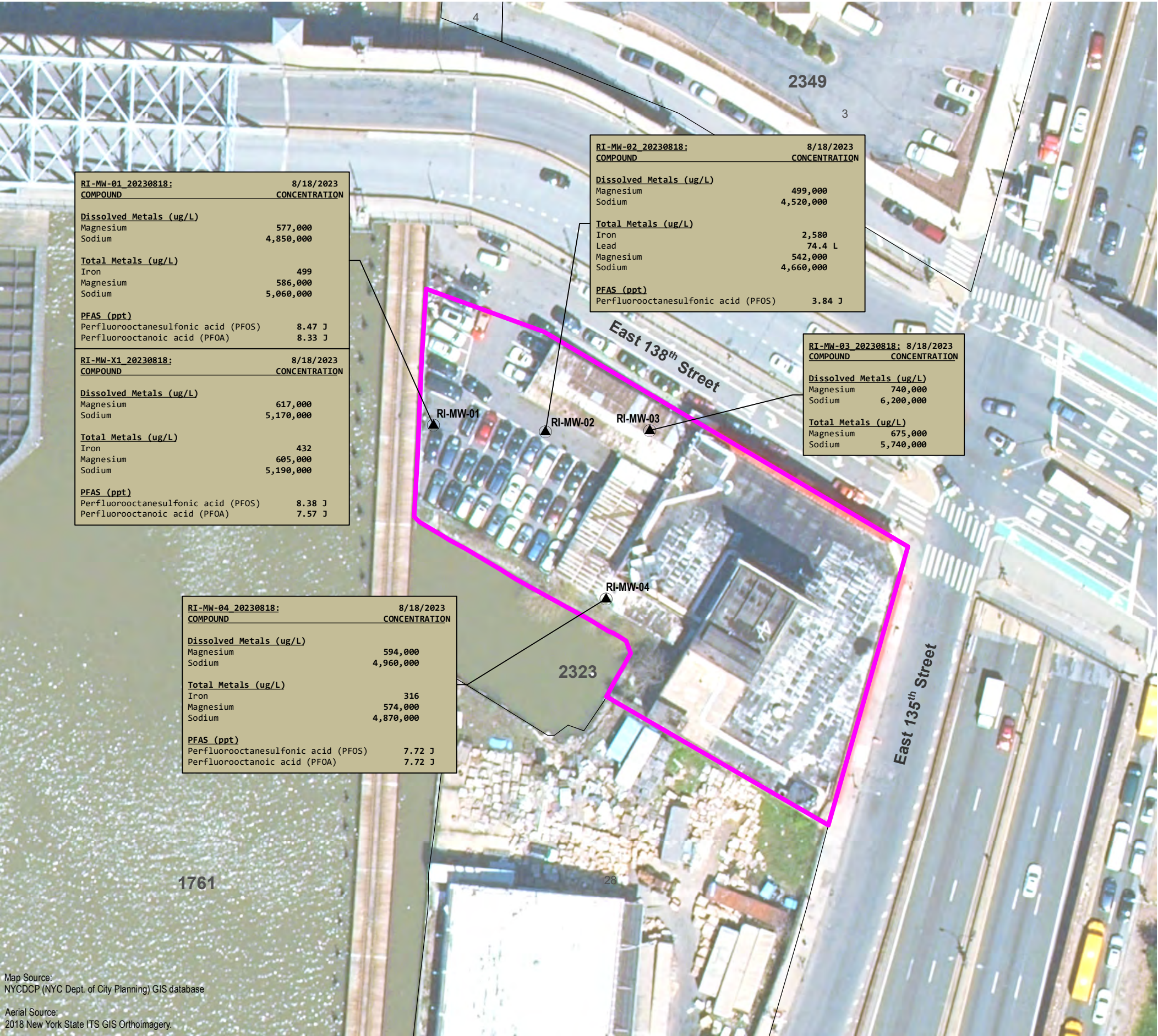
Exceedances of NYSDEC Restricted Residential Soil Cleanup Objectives (RRSCOs) are presented in red.

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

	PART 375 UNRESTRICTED mg / kg	PART 375 RESTRICTED RESIDENTIAL mg / kg
Volatile Organic Compounds		
Acetone	0.05	100
Semivolatile Organic Compounds		
Benzo(a)Anthracene	1	1
Benzo(a)Pyrene	1	1
Benzo(b)Fluoranthene	1	1
Benzo(k)Fluoranthene	0.8	3.9
Chrysene	1	3.9
Dibenz(a,h)Anthracene	0.33	0.33
Indeno(1,2,3-c,d)Pyrene	0.5	0.5
Pesticides		
P,P'-DDT	0.0033	7.9
Metals		
Arsenic	13	16
Cadmium	2.5	4.3
Copper	50	270
Lead	63	400
Manganese	1600	2000
Mercury	0.18	0.81
Nickel	30	310
Zinc	109	10000



110 East 138th Street
Bronx, New York



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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.



LEGEND

- BCP SITE BOUNDARY
- LOT BOUNDARY AND TAX LOT NUMBER
- 2323** BLOCK NUMBER
- RI MONITORING WELL LOCATION

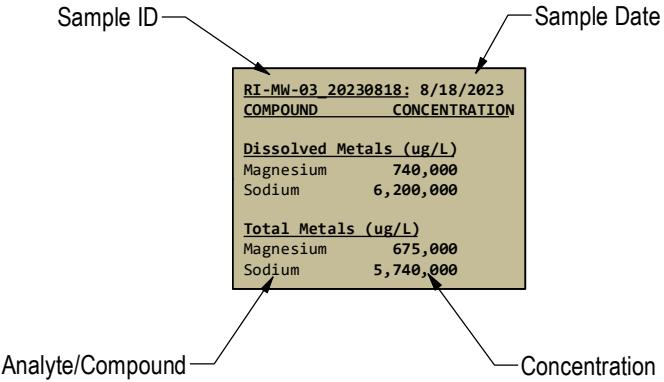
NYSDEC TOGS Class GA Ambient Water Quality Standard and Guidance Values (AWQSGVs):
New York State Department of Environmental Conservation (NYSDEC)
Technical and Operational Guidance Series (TOGS) (1.1.1):

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

Only Exceedances of NYSDEC AWQSGVs or April 2023 Guidance Values for PFOA/PFOS are shown in bold font.

J: The concentration given is an estimated value.
L: Sample result is estimated and biased low.

NYSDEC AWQSGVs	
Metals	ug/l
Iron	300
Lead	25
Magnesium	35,000
Sodium	20,000
PFAS	ppt
Perfluorooctanesulfonic acid (PFOS)	2.7
Perfluorooctanoic acid (PFOA)	6.7



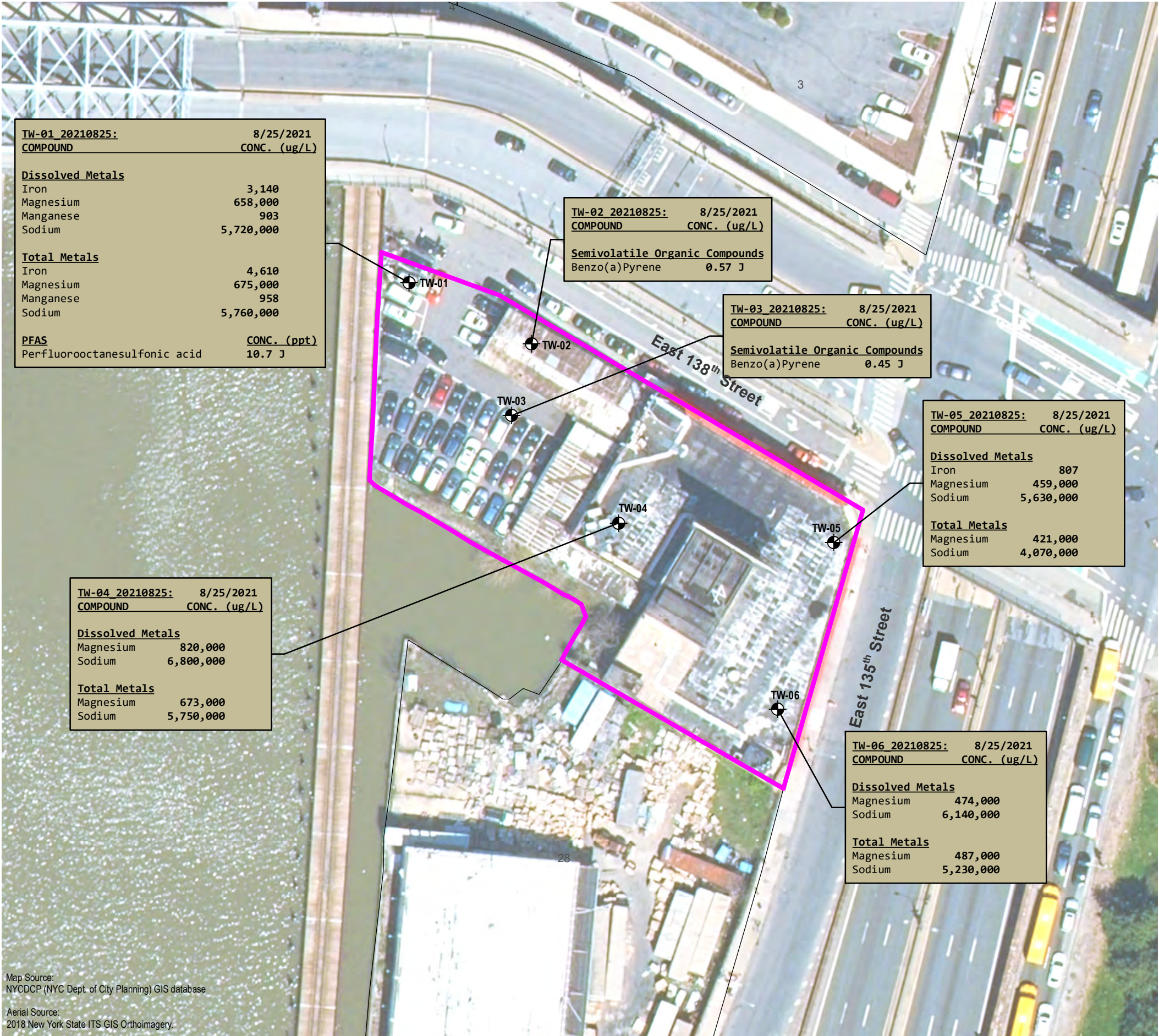
110 East 138th Street
Bronx, New York

RI GROUNDWATER SAMPLE CONCENTRATIONS ABOVE
AWQSGVs AND PFAS GUIDANCE VALUES

akrf

440 Park Avenue South, New York, NY 10016

DATE	9/26/2025
PROJECT NO.	210261
FIGURE	8A



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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.

LEGEND

- BCP SITE BOUNDARY
- LOT BOUNDARY AND TAX LOT NUMBER
- 2323** BLOCK NUMBER
- PHASE II TEMPORARY WELL LOCATION

NYSDEC TOGS Class GA Ambient Water Quality Standard and Guidance Values (AWQSGVs):
New York State Department of Environmental Conservation (NYSDEC)
Technical and Operational Guidance Series (TOGS) (1.1.1):

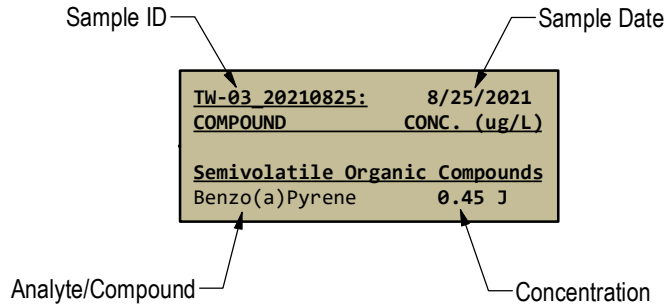
µg/L: micrograms per Liter = parts per billion (ppb)
ppt: parts per trillion (ppt)

Only Exceedances of NYSDEC AWQSGVs or April 2023 guidance values for PFOA/PFOS are shown in bold font.

J: The concentration given is an estimated value.

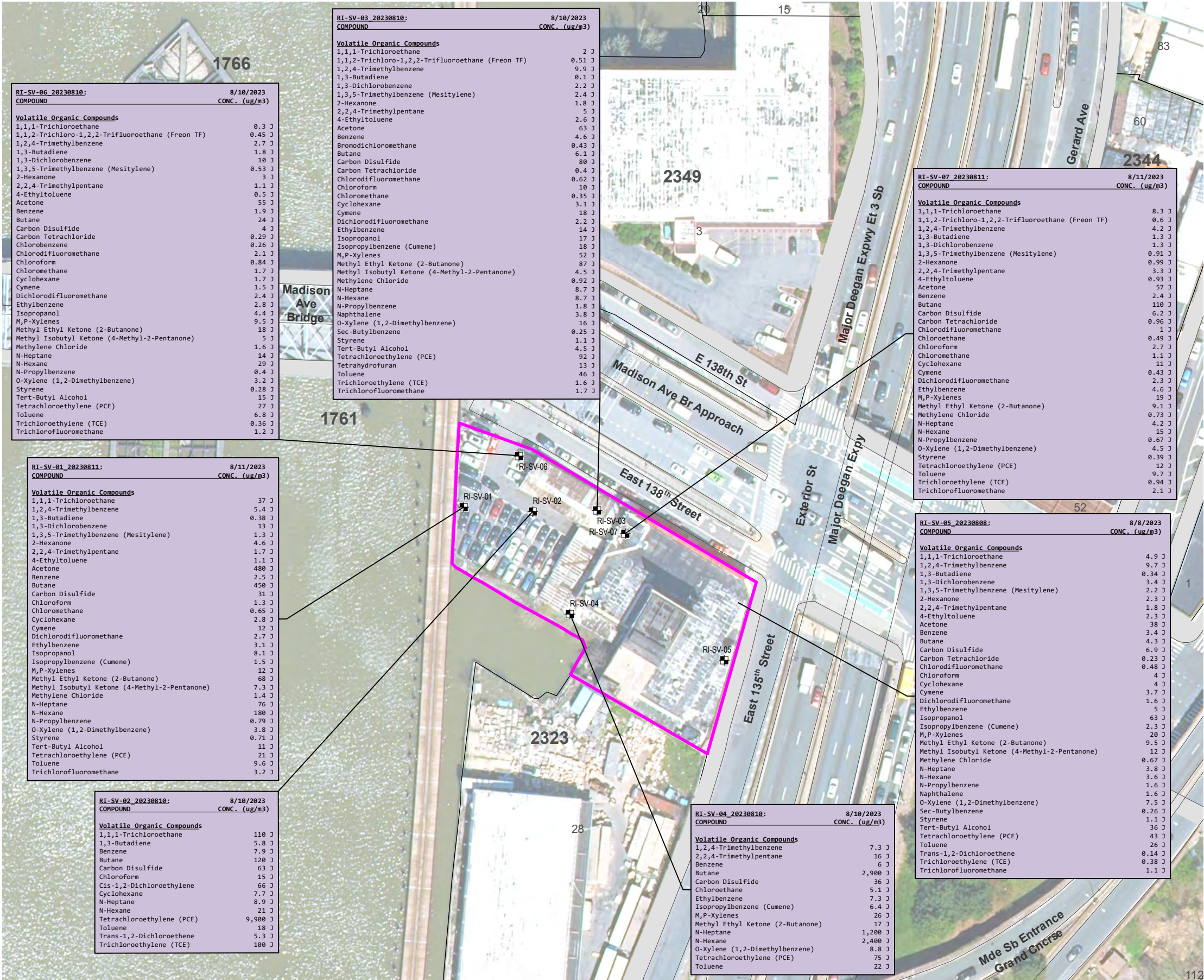
	NYSDEC AWQSGVs ug/l	NYSDEC PFAS Guidance Value ug/l
Semivolatile Organic Compounds		
Benzo(a)Pyrene	ND	NS
Metals		
Iron	300	NS
Magnesium	35000	NS
Manganese	300	NS
Sodium	20000	NS
PFAS	ppt	ppt
Perfluorooctanesulfonic acid (PFOS)	NS	10

ND: Non-Detect
NS: No Standard



110 East 138th Street
Bronx, New York

PHASE II GROUNDWATER SAMPLE CONCENTRATIONS ABOVE
NYSDEC AWQSGVs AND PFAS GUIDANCE VALUES



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

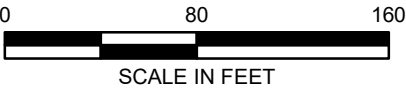
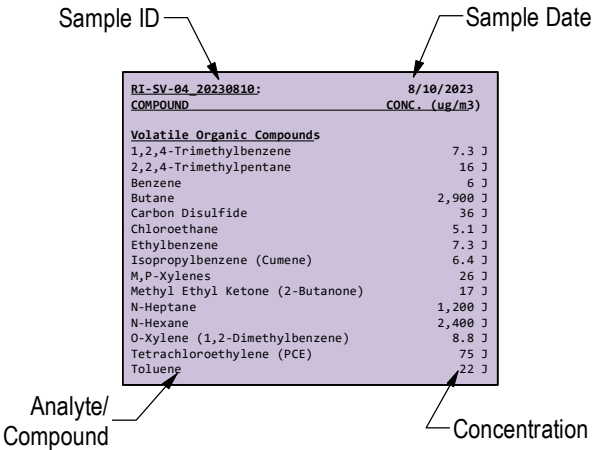
Aerial Source:
2018 New York State ITS GIS Orthoimagery.

LEGEND

- BCP SITE BOUNDARY
- 43 LOT BOUNDARY AND TAX LOT NUMBER
- 2323 BLOCK NUMBER
- RI SOIL VAPOR POINT LOCATION

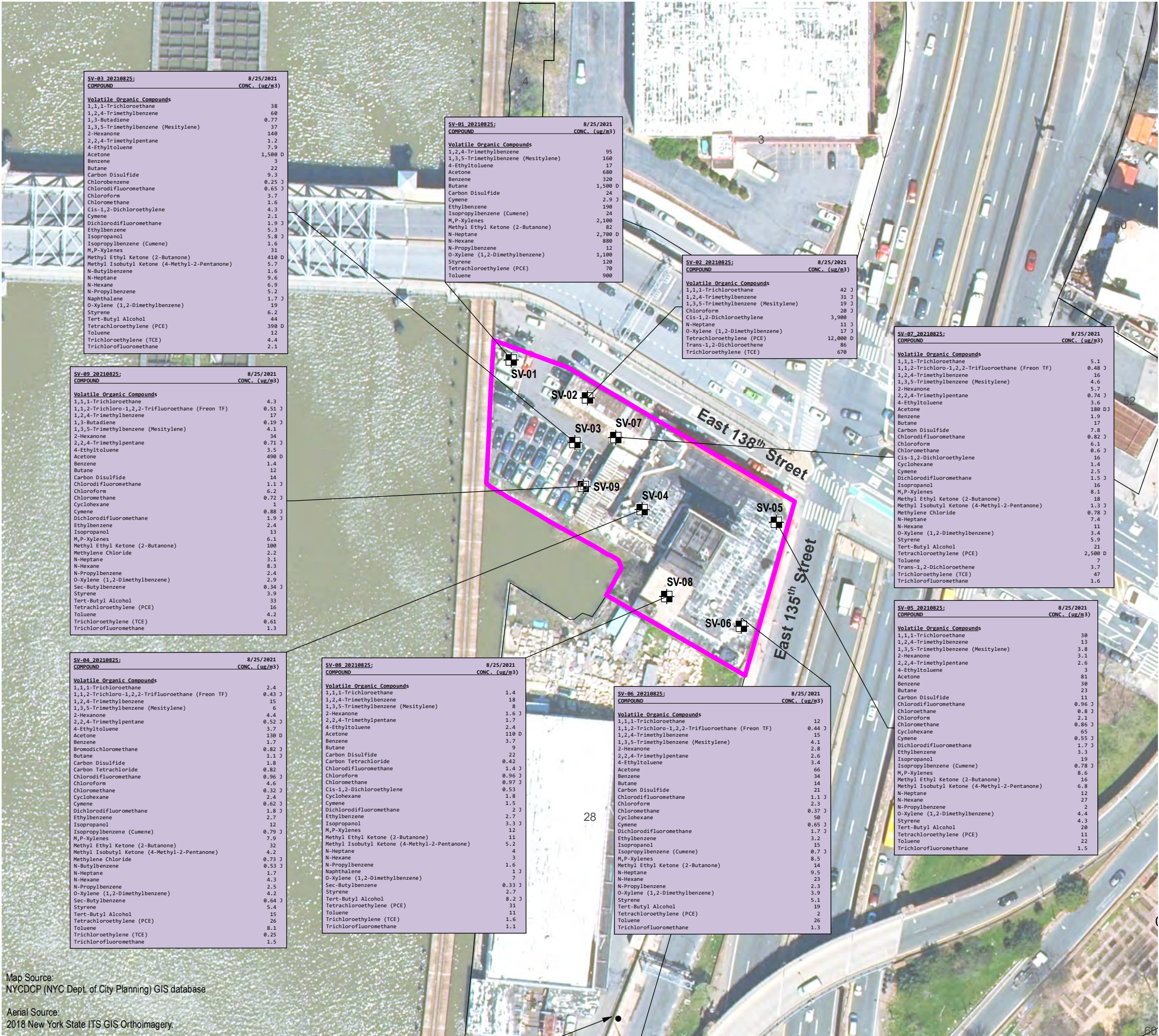
SOIL VAPOR

µg/m³- micrograms per cubic meter
D: Analyte concentration obtained from dilution.
J: The reported value is estimated.



110 East 138th Street
Bronx, New York

RI SOIL VAPOR DETECTONS



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

Aerial Source:
2018 New York State ITS GIS Orthomagey.

LEGEND

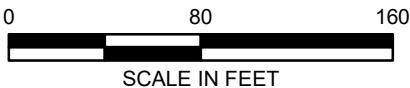
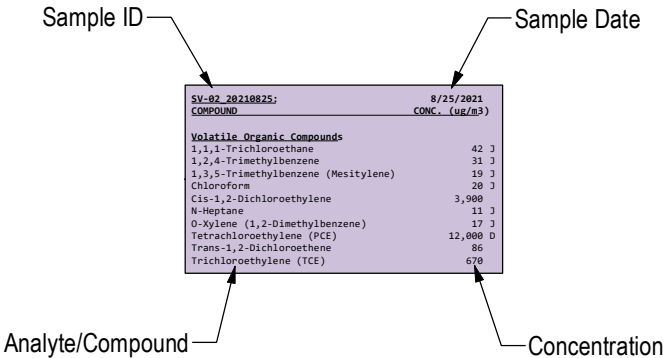
- BCP SITE BOUNDARY
- 43 LOT BOUNDARY AND TAX LOT NUMBER
- 2323** BLOCK NUMBER
- PHASE II SOIL VAPOR POINT LOCATION

SOIL VAPOR

µg/m³- micrograms per cubic meter

D: Analyte concentration obtained from dilution.

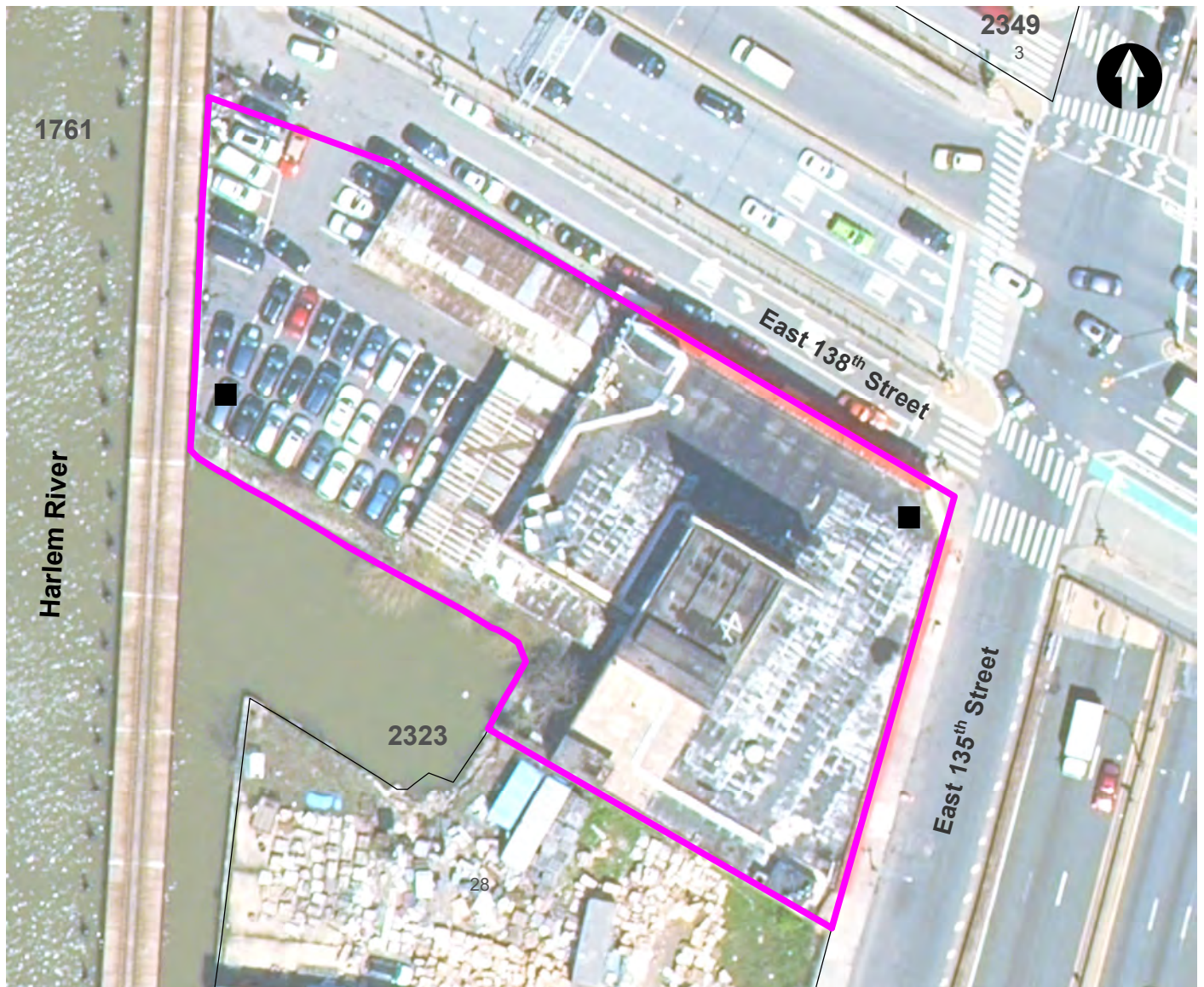
J: The reported value is estimated.



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Bronx, New York

PHASE II SOIL VAPOR SAMPLE CONCENTRATIONS

©2025 AKRF Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\GIS and Graphics\110 East 138th st\RAWP\210261 Fig 10 Proposed Camp Station Locations.mxd 9/26/2025 12:22:55 PM mveilleux



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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.

LEGEND

-  BCP SITE BOUNDARY
-  LOT BOUNDARY AND TAX LOT NUMBER
- 2323** BLOCK NUMBER
-  PROPOSED CAMP STATION LOCATION

NOTE: CAMP STATION LOCATIONS ARE APPROXIMATE AND
MAY VARY BASED ON ON-SITE WORK ZONES AND WIND DIRECTION.



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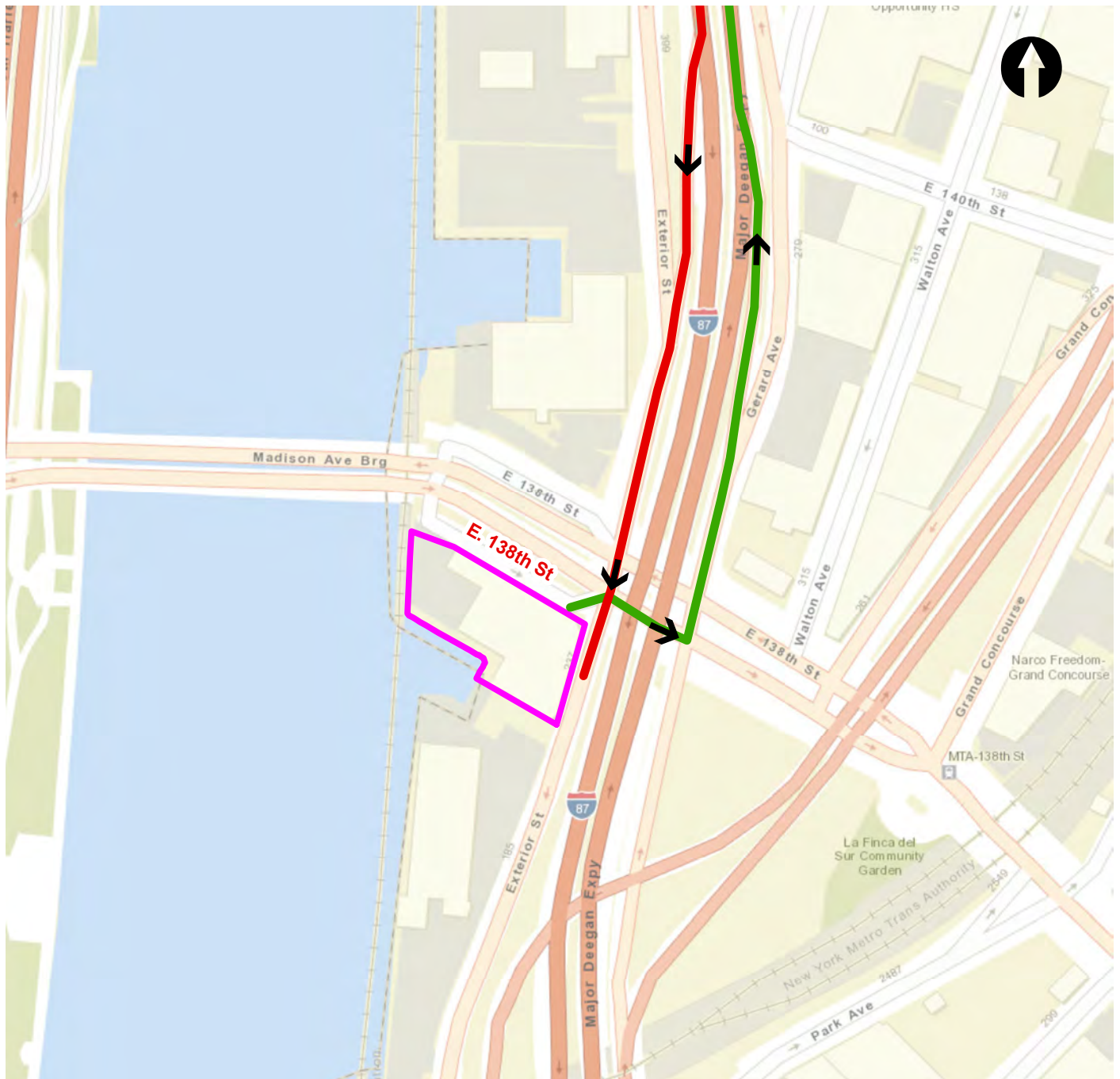
440 Park Avenue South, New York, NY 10016

110 East 138th Street
Bronx, New York

PROPOSED CAMP STATION LOCATIONS

DATE 9/26/2025
PROJECT NO. 210261
FIGURE 10

©2025 AKRF Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\GIS and Graphics\ISAR\110 East 138th st\RAWP\210261 Fig 11 Truck Route Map.mxd 9/26/2025 12:26:33 PM mvelieux



Service Layer Credits: ESRI World Street Map 2021

LEGEND

-  BCP SITE BOUNDARY
-  TRUCK ROUTE FROM GEORGE WASHINGTON BRIDGE TO SITE
-  TRUCK ROUTE FROM SITE TO GEORGE WASHINGTON BRIDGE



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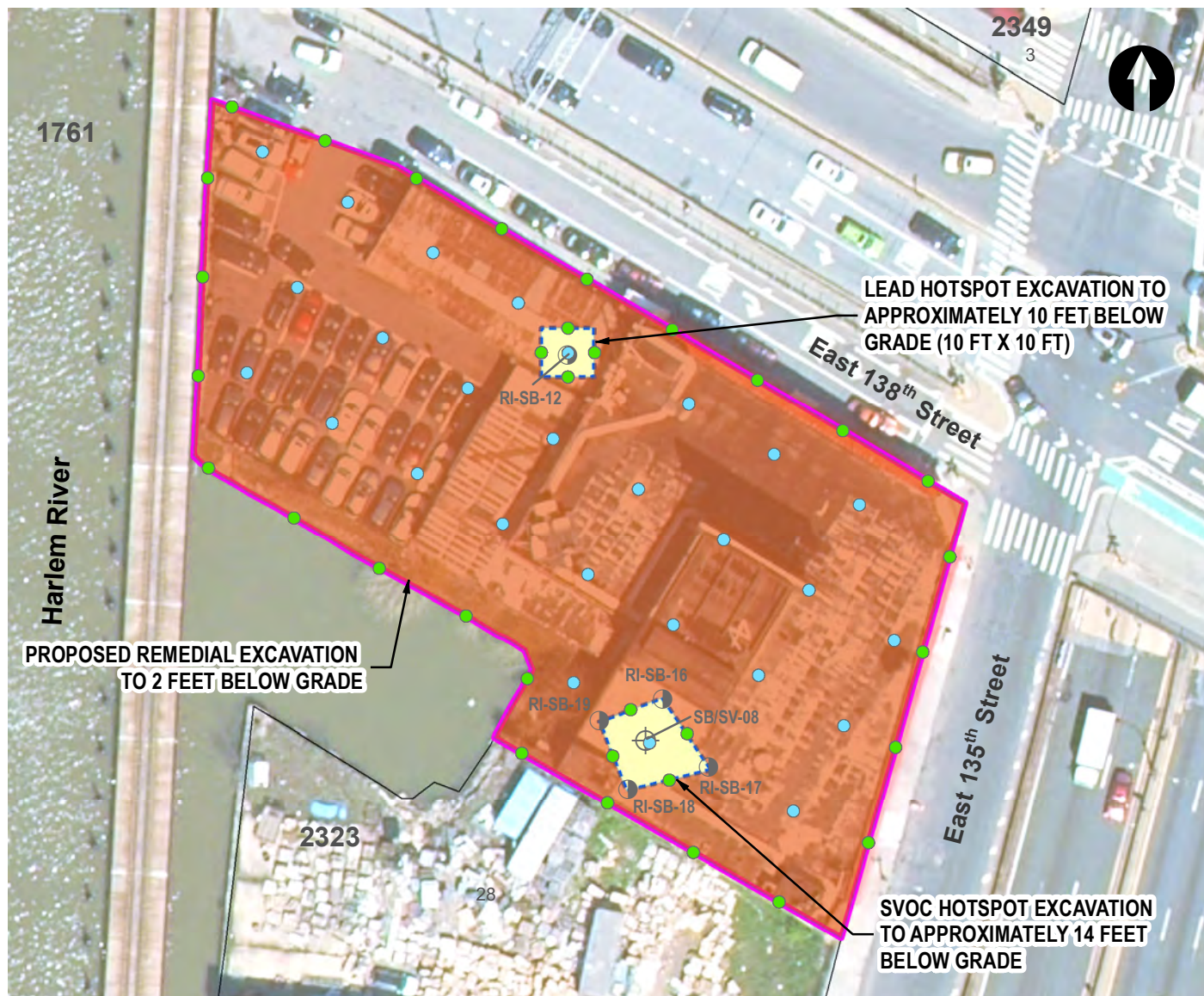
440 Park Avenue South, New York, NY 10016

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TRUCK ROUTE MAP

DATE
9/26/2025
PROJECT NO.
210261
FIGURE
11

© 2025 AKRF Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\GIS and Graphics\SAR\110 East 138th st\RAW\210261 Fig 12 Proposed Remedial ExcavationPlan.mxd9/30/2025 12:45:32 PM mveilleux



LEGEND



BCP SITE BOUNDARY



LOT BOUNDARY AND TAX LOT NUMBER

2323

BLOCK NUMBER



PHASE II SOIL BORING/SOIL VAPOR POINT LOCATION



RI SOIL BORING LOCATION



PROPOSED BOTTOM ENDPOINT SAMPLE LOCATION



PROPOSED SIDEWALL ENDPOINT SAMPLE LOCATION

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

Aerial Source:
2018 New York State ITS GIS Orthoimagery.



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110 East 138th Street
Bronx, New York

PROPOSED REMEDIAL EXCAVATION PLAN

DATE

9/30/2025

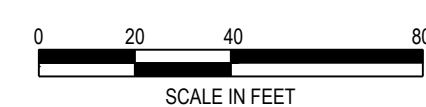
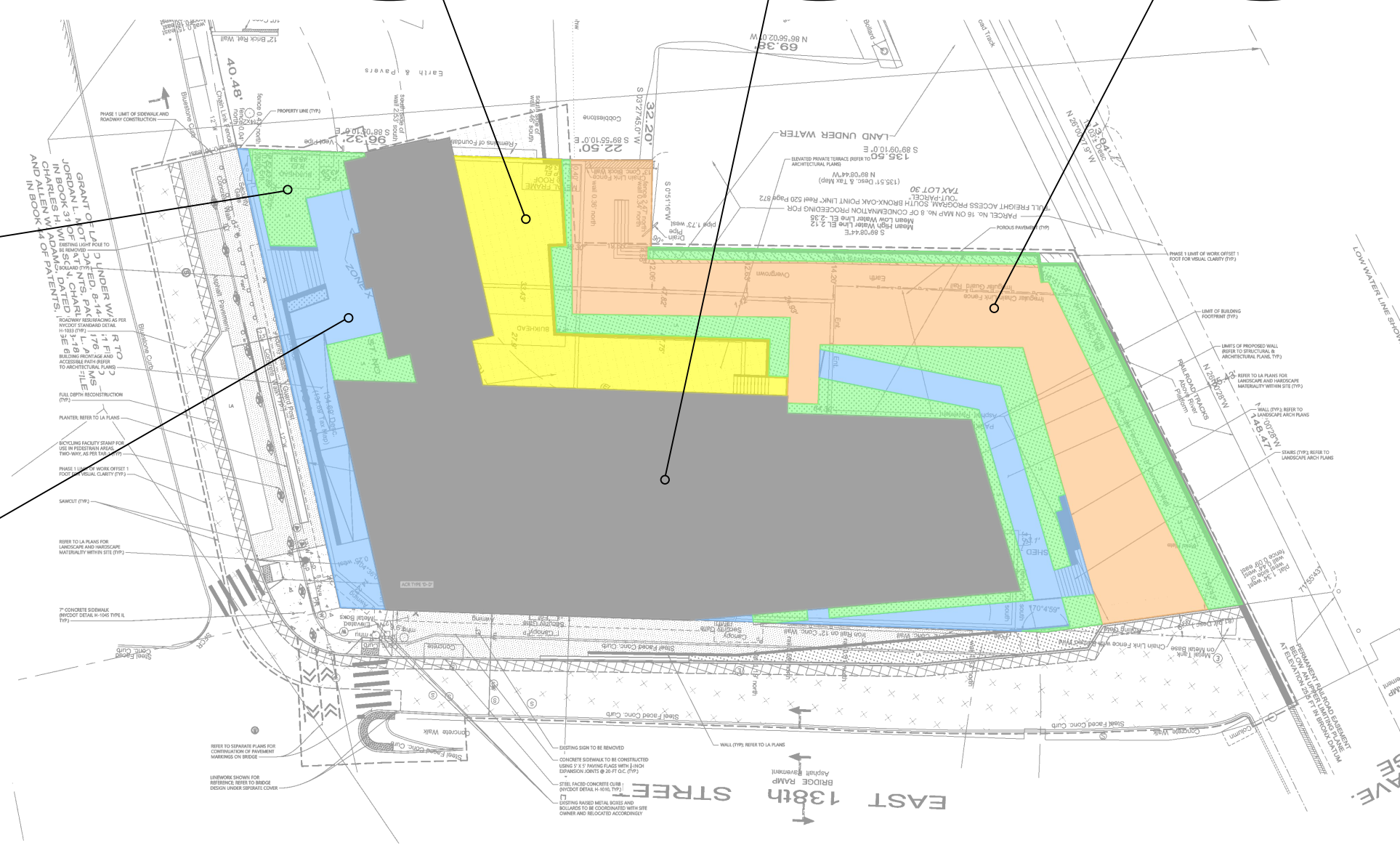
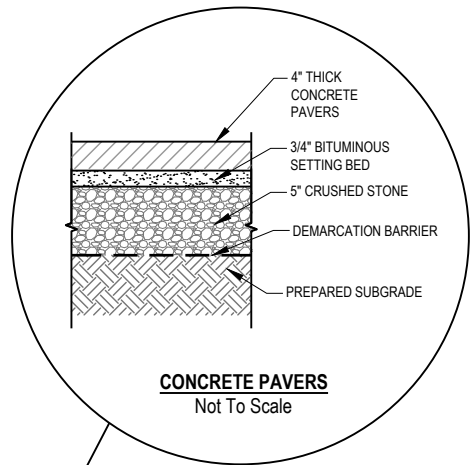
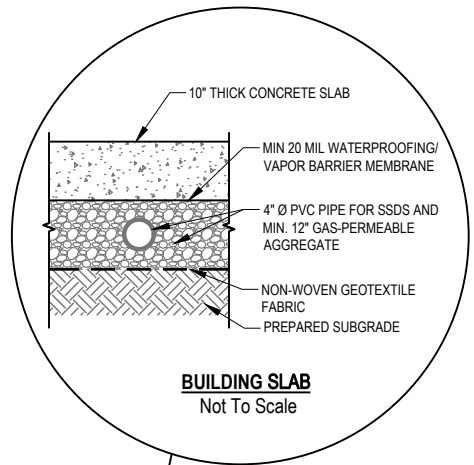
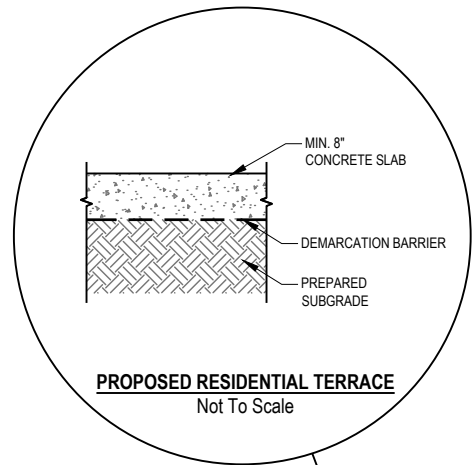
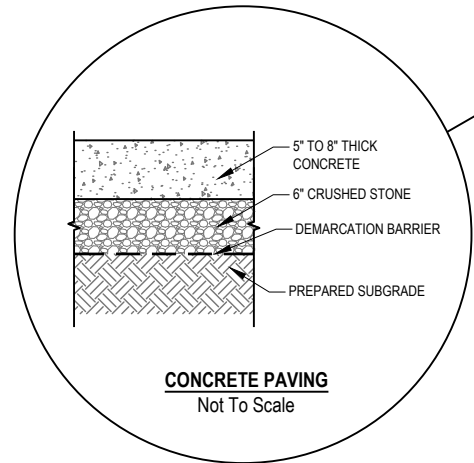
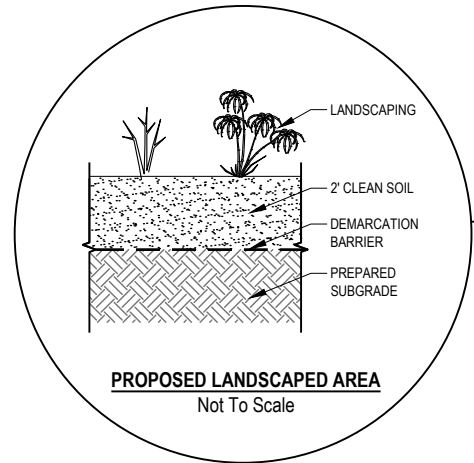
PROJECT NO.

210261

FIGURE

12

- LEGEND**
- CONCRETE PAVING
 - CONCRETE PAVERS
 - PROPOSED LANDSCAPED AREA
 - PROPOSED RESIDENTIAL TERRACE
 - BUILDING SLAB



Map Source:
Dattner Architects, "Layout and Materials Plan", Sheet No. C-101.00, Dated 08/01/25.

110 East 138th Street
Bronx, New York

PROPOSED SITE COVER

DATE
10/1/2025

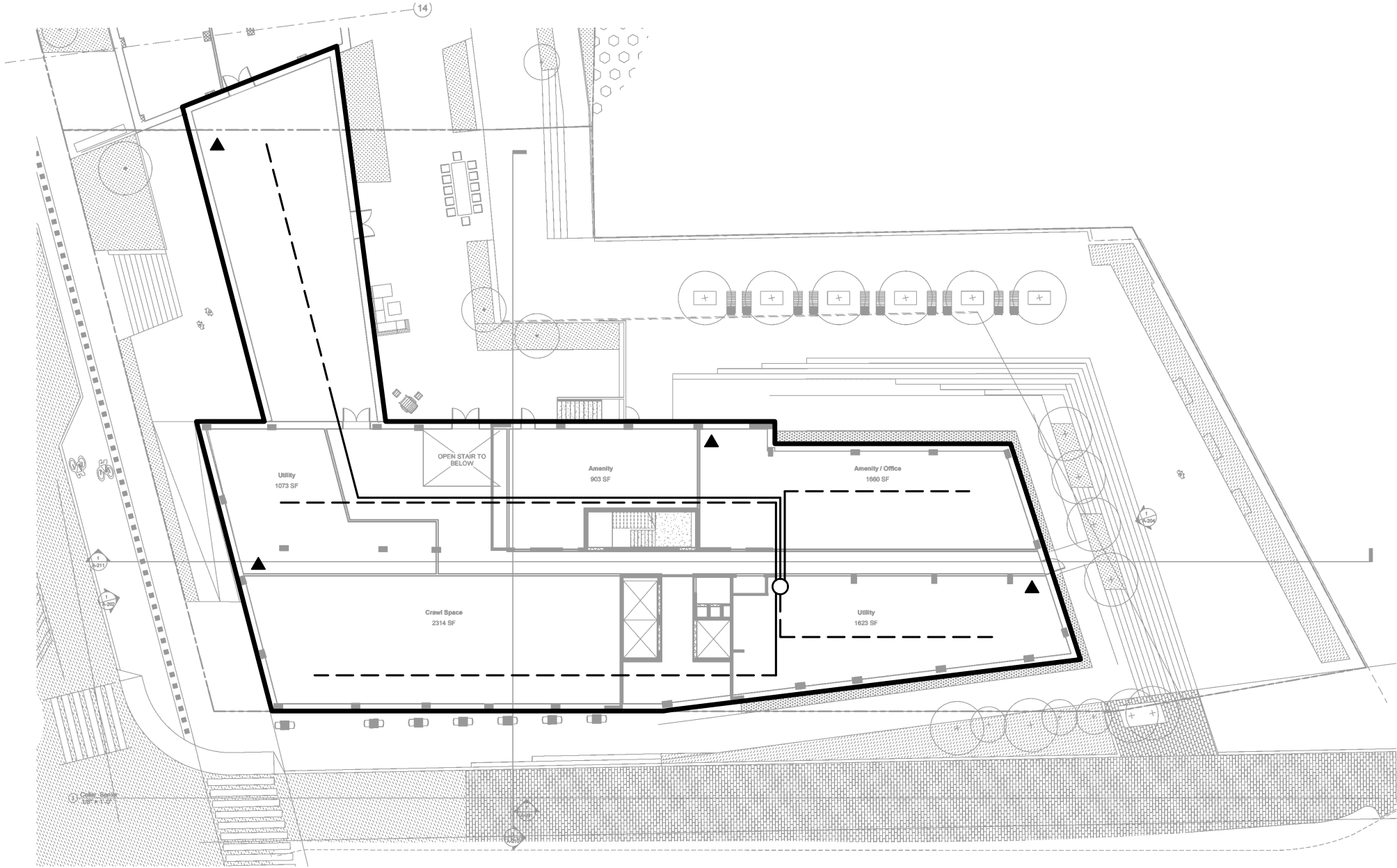
PROJECT NO.
210261

FIGURE
13

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440 Park Avenue South, New York, NY 10016

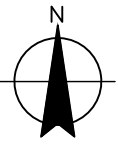
©2025 AKRF, Inc. Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\Hazmat\CAD\RAWP\210261 Fig 14 Schematic SSDS Plan.dwg last save: mveilleux 9/26/2025 12:31 PM

Map Source:
Dattner Architects, "Floor Plan - Senior Cellar", Sheet No. A-110.00, Dated 05/02/24.



LEGEND

- EXTENT OF VAPOR BARRIER UNDER SLAB
- MANIFOLD AND RISER LOCATIONS
- 4" Ø SOLID SCHEDULE 40 PVC PIPE
- - - 4" Ø SLOTTED SCHEDULE 40 PVC PIPE
- ▲ VACUUM MONITORING POINT



110 East 138th Street
Bronx, New York

SCHEMATIC SSDS PLAN

DATE
9/26/2025

PROJECT NO.
210261

FIGURE
14

akrf

440 Park Avenue South, New York, NY 10016

APPENDIX A
SITE SURVEY



1. ELEVATIONS AND LOCATIONS OF GAS LINES SHOWN HEREON REFER TO NAVD 1988 WHICH IS 508 FEET BELOW THE BRONX TOPOGRAPHICAL BUREAU OF THE CITY OF NEW YORK.
2. ESTABLISHED GAS LINES SHOWN HEREON REFER TO TOP OF CURB. IF ESTABLISHED GAS VARY SUBSTANTIALLY WITH EXISTING ELEVATIONS CONSULT WITH THE HIGHWAY DEPARTMENT BEFORE DEPENDABLE CONSTRUCTION.
3. SIZES AND LOCATIONS OF WATER MAINS SHOWN HEREON AS SUPPLIED BY THE DEPARTMENT OF WATER SUPPLY, BOROUGH OF THE BRONX. LOCATIONS OF WATER SUPPLY MANHOLES, HYDRANTS AND WATER VALVES AS OBTAINED FROM THE DEPARTMENT OF WATER SUPPLY.
4. SIZES AND TYPES OF SEWERS SHOWN HEREON AS OBTAINED FROM THE BOROUGH OF THE BRONX SEWER DEPARTMENT RECORDS. SEWER MANHOLE RIM AND INVERT ELEVATIONS SHOWN HEREON OBTAINED BY FIELD MEASUREMENTS UNLESS INDICATED OTHERWISE. INDICATED INVERT NACESSARY FOR MANHOLE NOT SHOWN IN FIELD INFORMATION. SHOWN IN THIS MANNER IS AS OBTAINED FROM THE BOROUGH OF THE BRONX SEWER DEPARTMENT RECORDS.
5. ELECTRIC AND GAS INFORMATION SHOWN HEREON AS SUPPLIED BY THE COMSO. THE COMSO EDISON COMPANY OF NEW YORK CITY (CONSOLIDATED EDISON COMPANY DOES NOT PROVIDE UNDERGROUND ELECTRIC & GAS INFORMATION).
6. TELEPHONE INFORMATION SHOWN HEREON AS SUPPLIED BY THE EMPIRE CITY TELEPHONE COMPANY.
7. FIRE ALARM INFORMATION SHOWN HEREON AS SUPPLIED BY THE NEW YORK CITY FIRE DEPARTMENT.
8. CABLE TELEVISION INFORMATION SHOWN HEREON AS SUPPLIED BY THE TIME WARNER CABLE COMPANY OF NEW YORK.
9. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED AS TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY FOR FURTHER INFORMATION.
10. THE OWNER, CONTRACTOR AND/OR HIS AGENTS MUST NOTIFY THE APPROPRIATE UTILITY COMPANIES AND/OR AGENCIES AT LEAST 72 HOURS BEFORE ANY CONSTRUCTION IN ACCORDANCE WITH INDUSTRIAL CODE RULE 753.
11. NO EVIDENCE OF EXISTING STREAMS, CREEKS, DITCHES OR WATER COURSES OR CROSSING PROPERTY SURVEYED, OTHER THAN THOSE SHOWN.
12. NOT ALL SUBSURFACE INFORMATION PLOTTED.

UTILITY NOTE:
ELECTRIC, GAS, TELEPHONE, FIRE ALARM &
CABLE TELEVISION INFORMATIONS NOT INDICATED.

ASPH... ASPHALT	PR... PEDESTRIAN RAMP
BK... SPOCK	RET... RETAINING
BSEMT... BASEMENT	RM... RM ELEVATION SEWER MANHOLE
CC... CURB CUT	STPC... STEEL FACED CURB RAMP
CCR... CONCRETE CURB RAMP	STR... STORY
CD... CELLAR DOOR	TB... TOP OF BANK ELEVATION
CLF... CHAIN LINK FENCE	TR... TRAFFIC LIGHT
CCB... CATCH BASIN CLEAN OUT	TEL... TELEPHONE
CONC... CONCRETE	TRF... TREE FT
CHRP... CHAIN ROPE FENCE	TRF... TRAFFIC SIGN
CWA... CELLAR WINDOW AREA	TDW... ELEVATION AT TOP OF WALL
DR... DRAIN	UTL... UTILITY POLE
TEL... ELEVATION	VAL... VALVE UNKNOWN
FAB... FIRE ALARM BOX	VLU... VALVE UNKNOWN
FILL... FILL CAP	VPT... VENT PIPE
FL EL... FLOOR ELEVATION	WV... WATER VALVE
GP... GUARD POLE	12G... GAS MAIN WITH SIZE
GV... GAS VALVE	12S... SEWER MAIN WITH SIZE
IR... IRON FENCE	12W... WATER MAIN WITH SIZE
INEL... CATCH BASIN INLET ELEVATION	ISW... CATCH BASIN
INV... SEWER INVERT ELEVATION	 ELECTRIC MANHOLE / VAULT
LL... LIGHT POLE	 FIRE MANHOLE
ML... MAIL BOX	 GAS MANHOLE
MIS... UNKNOWN MANHOLE	 SEWER MANHOLE
OF... OIL FILL	 TELEPHONE MANHOLE
OH... OVERHEAD WIRES	 WATER MANHOLE
P... POLE	 STEAM MANHOLE
PAVT... PAVEMENT	 STEAM VALVE
PM... PARKING METER	 TRAFFIC VAULT
PRMLT... POLE MULTIPLE USAGE	 HYDRANT
SP... SPRINKLER	 TREE WITH SIZE
CATV... CABLE TV BOX	 ESTABLISH LEGAL GRADE
BA... BASEBEE	 TRAFFIC FLOW
(RIR 12-42) ELEVATIONS IN (R/W-6)	 MONITORING WELL
BRUSHING DATUM	

12"V - SEWER MAIN WITH SIZE
12"V - WATER MAIN WITH SIZE
CATCH BASIN
ELECTRIC MANHOLE / VALVE
FIRE MANHOLE
GAS MANHOLE
SEWER MANHOLE
TELEPHONE MANHOLE
WATER MANHOLE
STEAM MANHOLE
STEAM VALVE
TRAFFIC VALVE
HATCH
TREE WITH SIZE
ESTABLISHED/LEGAL GRADE
TRAFFIC FLOW
MONITORING WELL

THE PARCEL SURVEYED IS COMPRISED OF AREAS DESIGNATED AS
ZONE X (LESS THAN 0.2% CHANCE OF FLOODING)
ZONE X (SHADED) AREA BETWEEN 0.2% & 1% CHANCE OF FLOODING
ZONE AE (EL. 11 NAVD 1985, EL. 9.0 NAVD 88)
FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
COMMUNITY PANEL NUMBERS 30047 005 F
EFFECTIVE DATE SEPTEMBER 5, 2007

PRELIMINARY FLOOD HAZARD NOTE

THE PARCEL SURVEYED IS COMPRISED OF AREAS DESIGNATED AS
ZONE X (LESS THAN 0.2% CHANCE OF FLOODING)
ZONE AE (EL. 11 NAVD 1988)
ZONE AE (EL. 11 NAVD 88)
FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
COMMUNITY PANEL NUMBERS 30047 0083 G
EFFECTIVE DATE DECEMBER 5, 2013

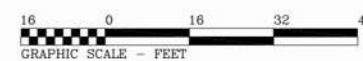
PRELIMINARY FLOOD HAZARD NOTE
THE PARCEL SURVEYED IS COMPRISED OF AREAS DESIGNATED AS
ZONE X (LESS THAN 0.2% CHANCE OF FLOODING)
ZONE AE (EL. 10 NAVD 1988)
ZONE AE (EL. 11 NAVD 1988)
FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
COMMUNITY PANEL NUMBERS 38049 0083 G
EFFECTIVE DATE DECEMBER 5, 2013

TOTAL LOT AREA	29,142 SQ. FT.
UPLAND LOT	29,142 SQ. FT.
SEAWARD LOT	0 SQ. FT.
LANDWARD OF SHORELINE	28,658 SQ. FT.
SEAWARD OF SHORELINE	484 SQ. FT.

TAX LOT AREA = 35,373 Sq. Ft.
OR 0.81205 ACRE

PARCEL NO. 16 AREA = 6,231 Sq. Ft.
OR 0.14304 ACRE

PARCEL AREA = 29,142 Sq. Ft.
OR 0.66901 ACRE



BRONX TOPO BUREAU DATUM

MEAN SEA LEVEL 0.00 (NAVD 1988)

MEAN SEA LEVEL 0.00 (NGVD 1929)

1.508

1.1

2.608

NAVD 1988 DATUM IS 1.508 FEET BELOW THE BRONX TOPO BUREAU DATUM

DRAWN: GP

ESTABLISHED 1876 • SUCCESSOR TO:

[illegible]

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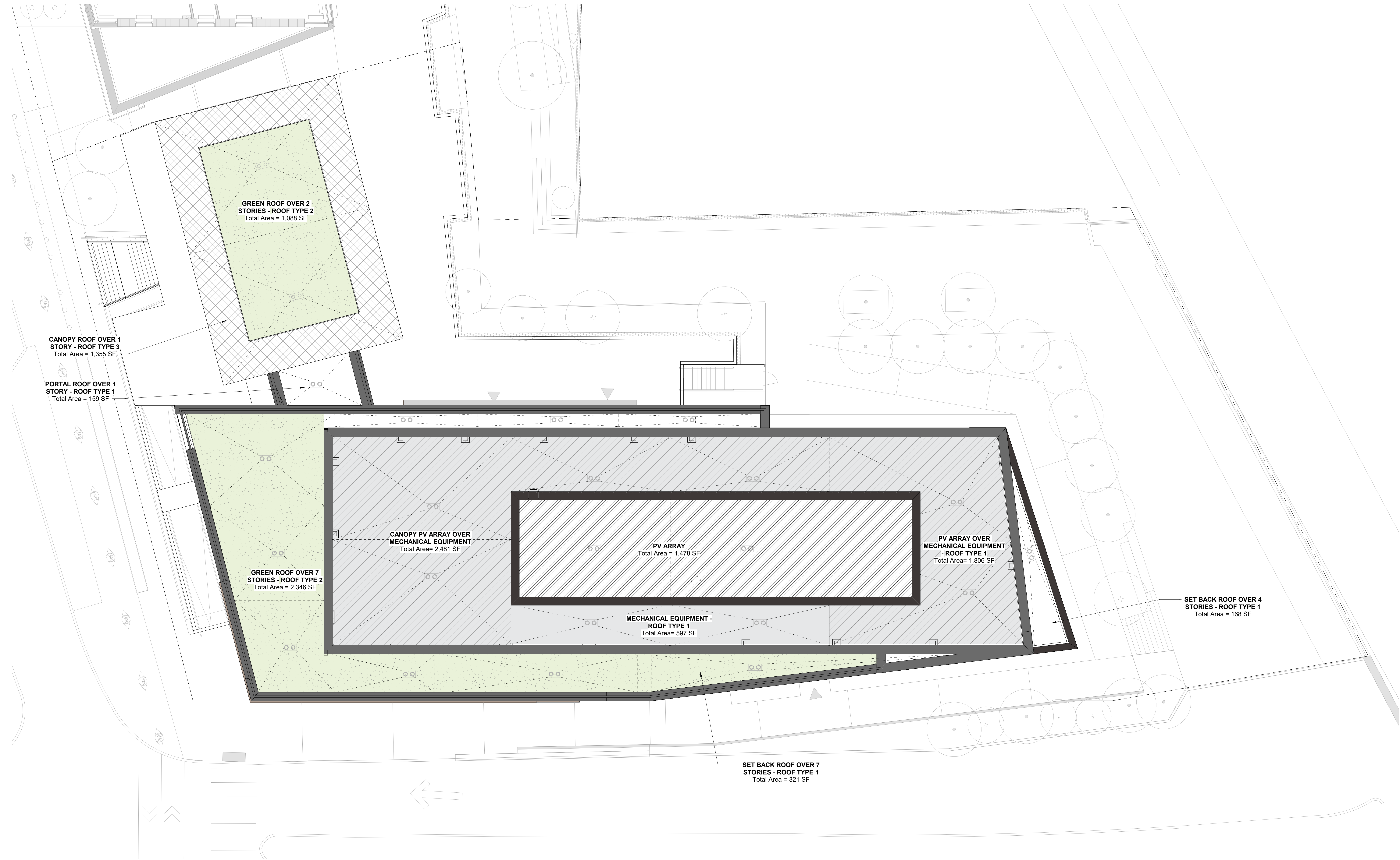
MONTROSE
SURVEYING CO., LLP.
CITY & LAND SURVEYORS
116 20 METROPOLITAN AVE. • RICHMOND HILL, NY 11418-1090 • (718) 849-0600

CITY OF NEW YORK
COUNTY THE BRONX
TAX BLOCK 2323
PART OF TAX LOT 43

SCALE: 1" = 16'

APPENDIX B
PROPOSED REDEVELOPMENT PLAN

1
2
3
4
5
6
A
B
C
D
E



1 Composite Roof Slab Plan
1/8" = 1'-0"

- GREEN ROOF
BC 1504.9
EXCEPTION 2
- METAL PANEL
ROOF TYPE 3
- MECHANICAL
BC 1504.5
EXCEPTION 5

- SOLAR PHOTOVOLTAIC
PANELS
- SOLAR PHOTOVOLTAIC
PANELS - PERGOLA
OVER MEP EQUIPMENT
- FDNY ACCESS PATH
PER BC 504.5

NOTE:

- SLOPE ALL ROOFS TO DRAIN TO PROVIDE POSITIVE DRAINAGE PER BC 1507.10.1
- SLOPE AT 1/4" PER 1'-0" ON NON-IRMA ROOF TYPES, WHERE FEASIBLE & UON.
- REFER TO A-300 FOR ROOF TYPES

East 138th Street Senior Building

110 E 138th St
The Bronx, NY 10451

Phipps Houses
902 Broadway, 13th Floor
New York, NY 10010

Douglaston Development
7 Penn Plaza, Suite 900
New York, NY 10001

DattnerArchitects

498 Seventh Ave 20 Fl
New York NY 10018
t: 212.247.2860
www.dattner.com

Structural Engineers

McNamara Salvia
45 West 48th Street, 10th Floor
New York, NY 10036

Mechanical/Electrical/Plumbing Engineers

Cosentini Associates
498 Seventh Avenue
New York, NY 10018

Landscape Architects

W Architecture and Landscape Architecture
374 Fulton Street, 4th Floor
Brooklyn, NY 11201

Environmental Consultants

AKRF
400 Park Avenue South, 7th Floor
New York, NY 10016

Civil Engineers

VHB
One Penn Plaza, Suite 715
New York, NY 10119

Waterfront, Geotechnical, SOE Engineers

Langan
360 West 31st Street, 8th Floor
New York, NY 10001

Geothermal Consultant

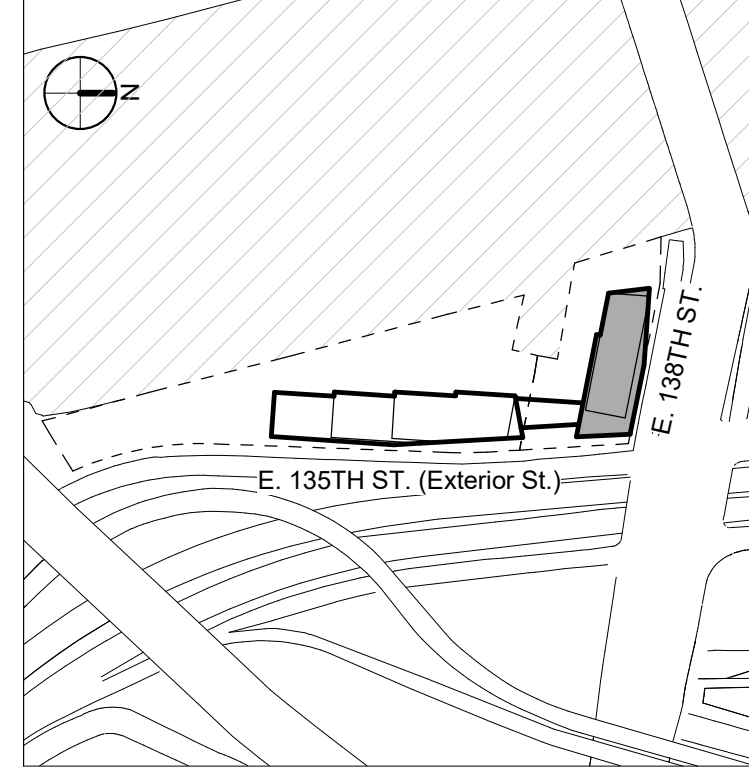
ZBF Geothermal
667 Larkfield Road
Long Island, NY 11725

Sustainability Consultant

MaGrann
701 E. Galle Dr
Mt Laurel Township, NJ 08054

Revisions

Issue: 100% DD SUBMISSION



Key Plan

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COMPOSITE ROOF SLAB PLAN

Date: 08/01/2025

Scale: As indicated

Drawn By: MM

Checked By: RGB

Project No.: 2132

Sheet No.: Seal

12 of 36
A-002.00

APPENDIX C
PREVIOUS ENVIRONMENTAL REPORTS
(PROVIDED UNDER SEPARATE COVER)

APPENDIX D
SANBORN MAPS



Exterior Street
63 Exterior Street
Bronx, NY 10451

Inquiry Number: 5997739.1

March 05, 2020

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

03/05/20

Site Name:

Exterior Street
63 Exterior Street
Bronx, NY 10451
EDR Inquiry # 5997739.1

Client Name:

AKRF, Inc.
440 Park Avenue, South 7th Floor
New York, NY 10016
Contact: Asya Bychkov



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by AKRF, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 453F-435A-A77A

PO # 200094-0002

Project Exterior Street

Maps Provided:

2007	1996	1984	1947
2006	1995	1981	1946
2005	1994	1980	1944
2004	1993	1978	1935
2003	1992	1977	1928
2002	1991	1969	1922
2001	1989	1968	1908
1998	1986	1951	1903



Sanborn® Library search results

1891

Certification #: 453F-435A-A77A

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☒ Library of Congress
- ☒ University Publications of America
- ☒ EDR Private Collection

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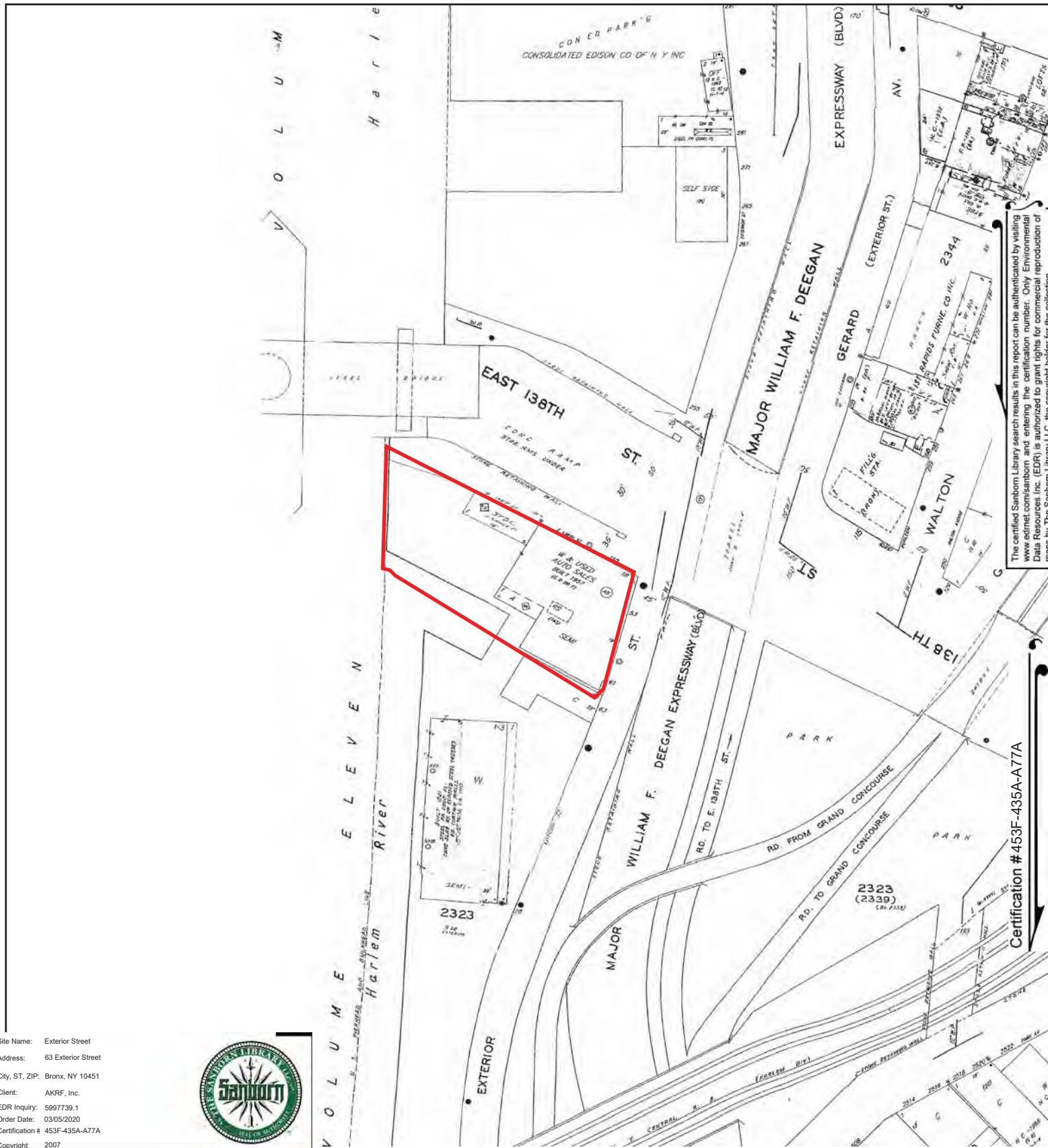
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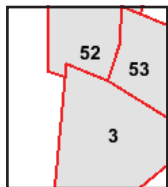
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 Address: 63 Exterior Street
 City, ST, ZIP: Bronx, NY 10451
 Client: AKRF, Inc.
 EDR Inquiry: 5997739.1
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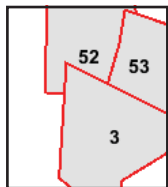
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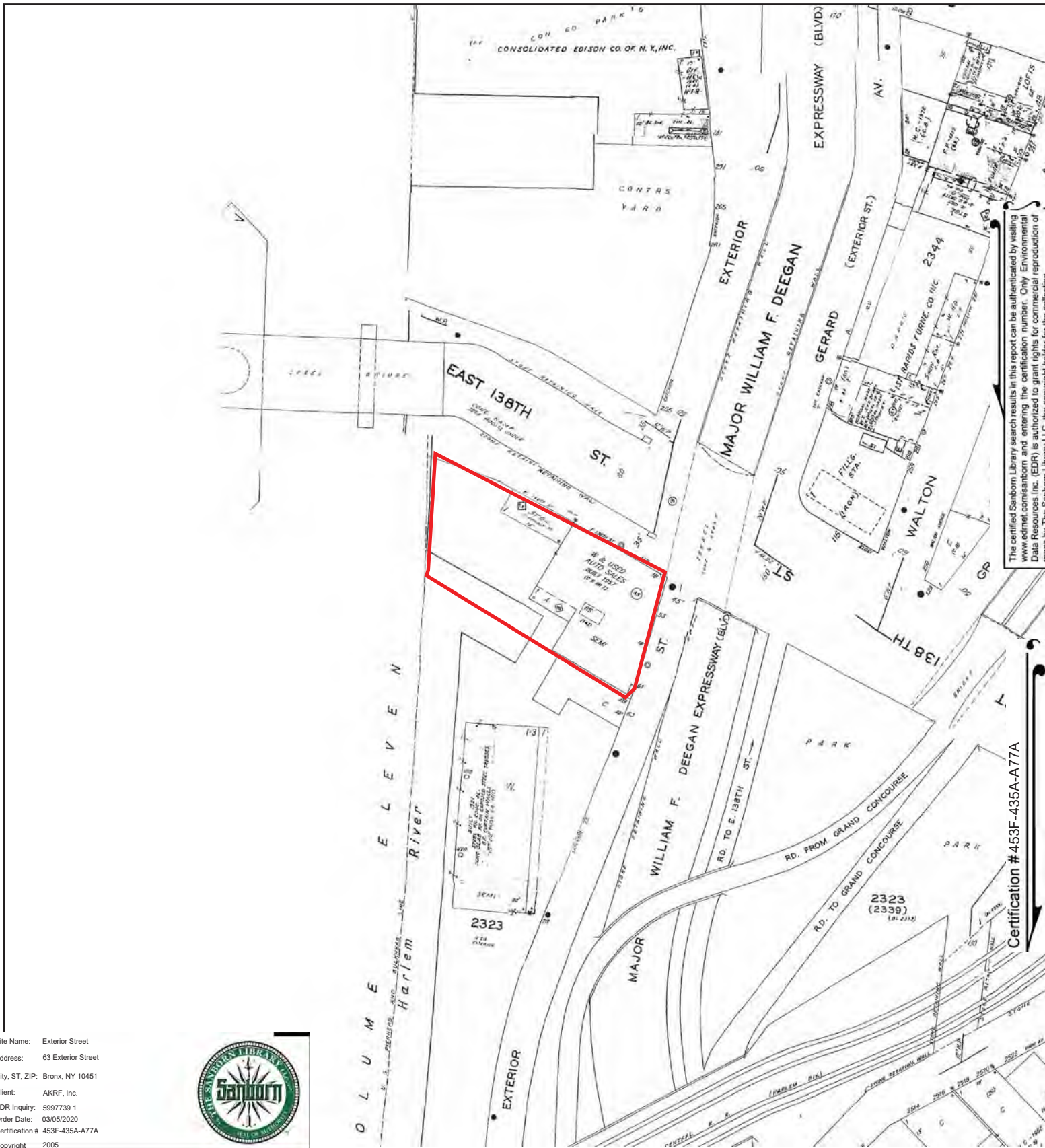
Volume 9S, Sheet 3
 Volume 9N, Sheet 53
 Volume 9N, Sheet 52



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Volume 9N, Sheet 53
Volume 9N, Sheet 52
Volume 9S, Sheet 3



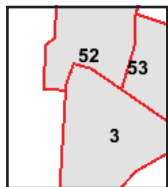
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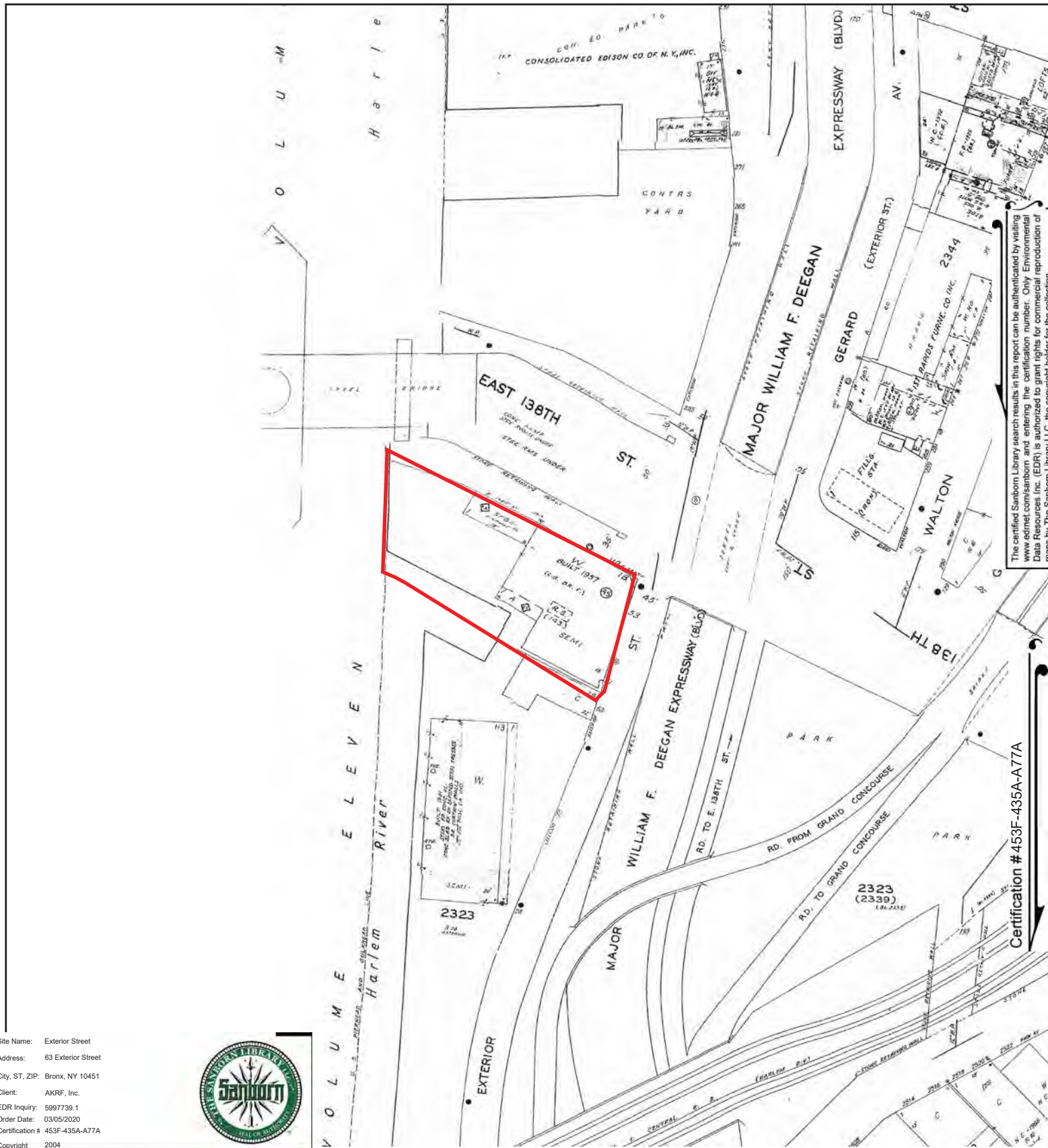
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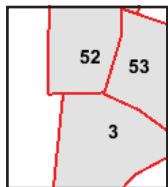
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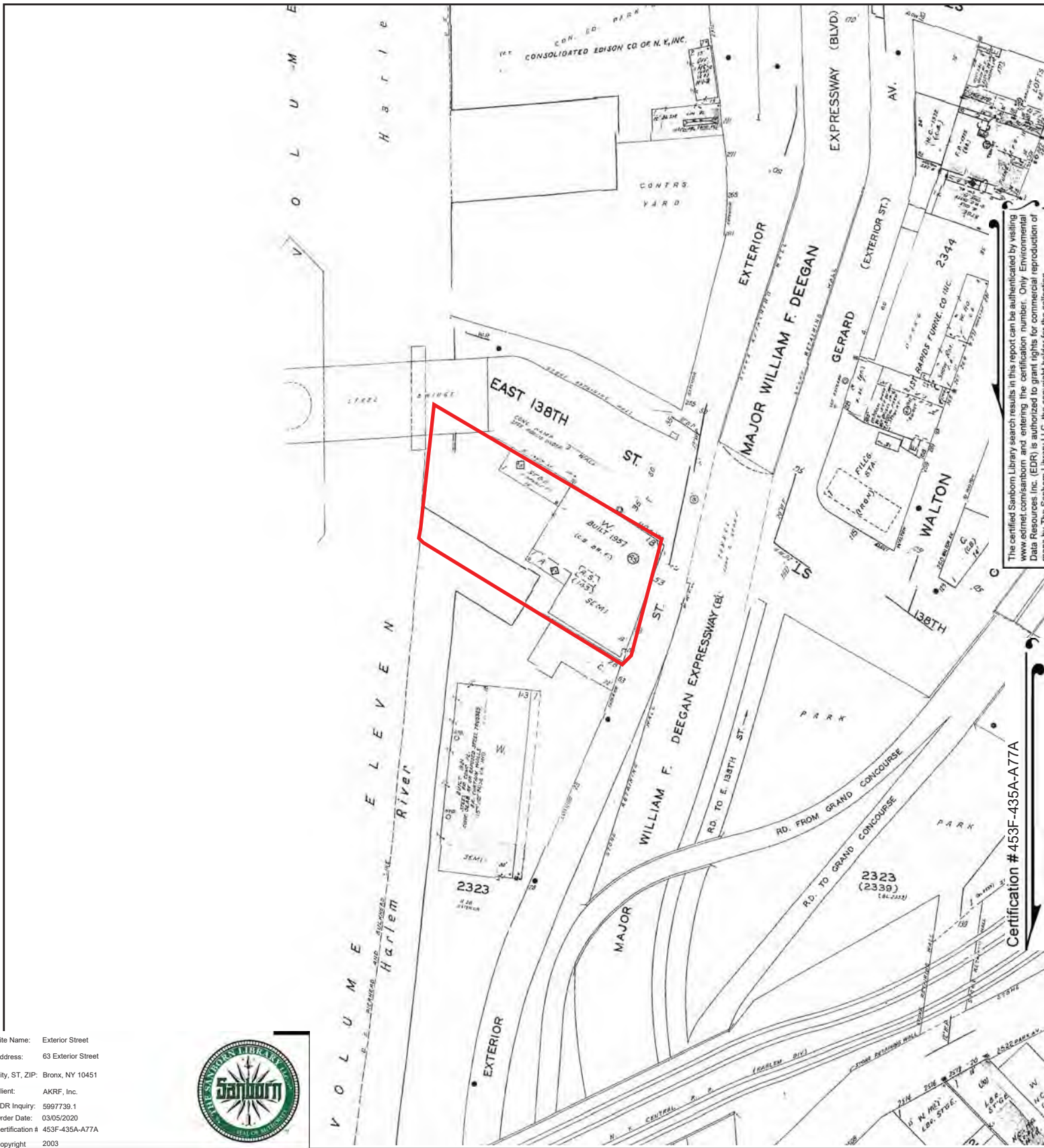
Volume 9S, Sheet 3
Volume 9N, Sheet 52
Volume 9N, Sheet 53



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Volume 9S, Sheet 3
 Volume 9N, Sheet 53
 Volume 9N, Sheet 52



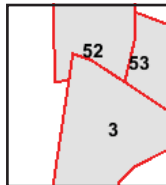
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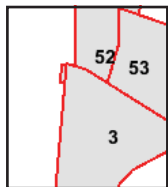
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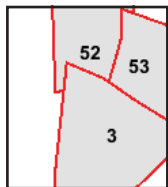
Volume 9S, Sheet 3
Volume 9N, Sheet 52
Volume 9N, Sheet 53



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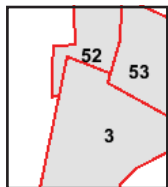
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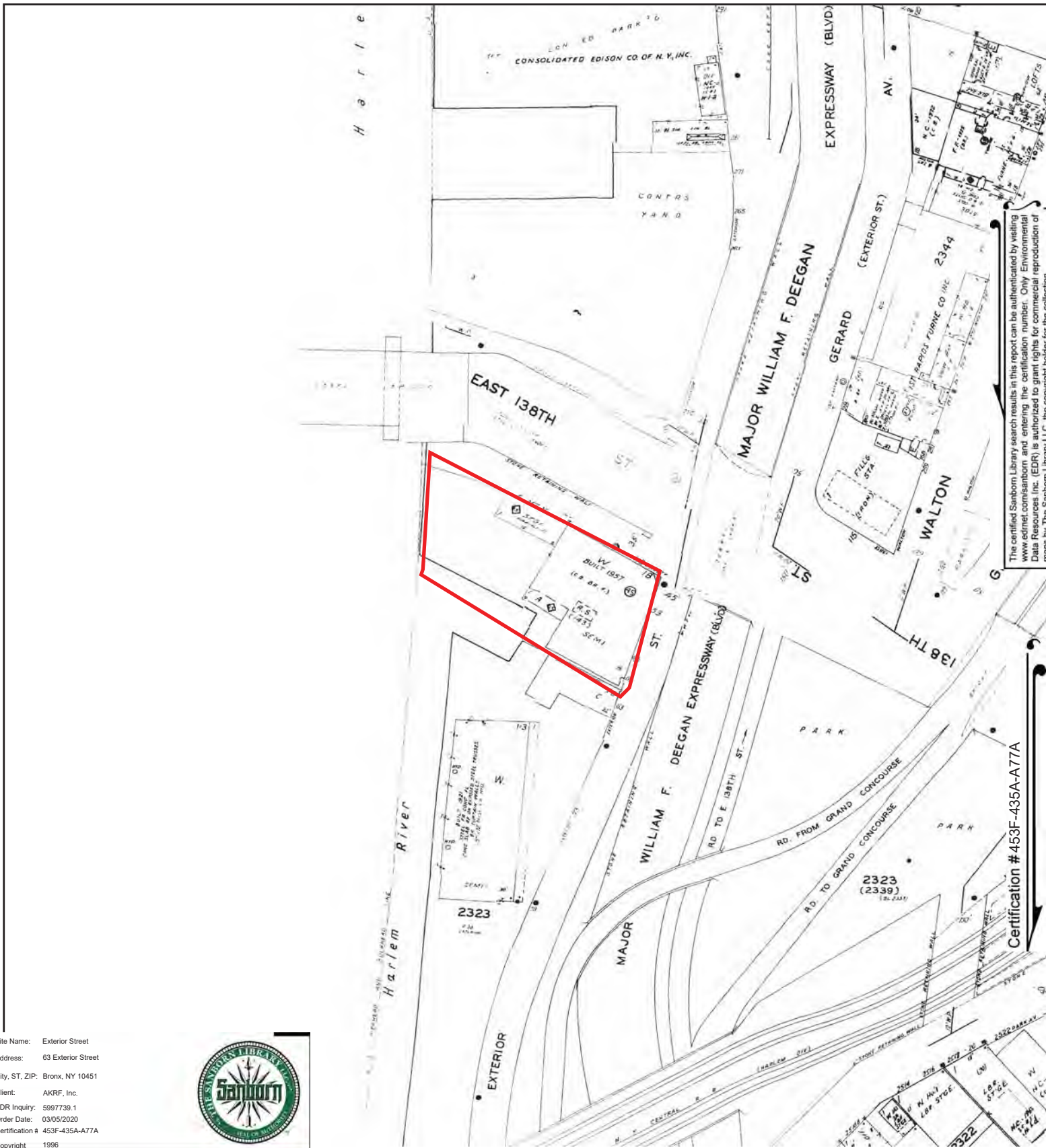
5997739 - 1 page 18



A horizontal number line with tick marks at 0, 150, 300, and 600. A rectangle is drawn from 150 to 300, with a smaller rectangle inside it from 175 to 275.



5997739 - 1 page 19



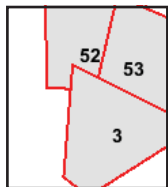
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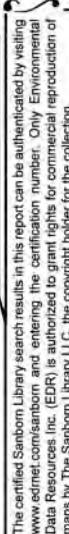
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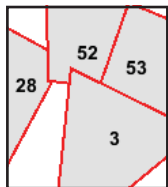


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Volume 9N, Sheet 53
Volume 9N, Sheet 52

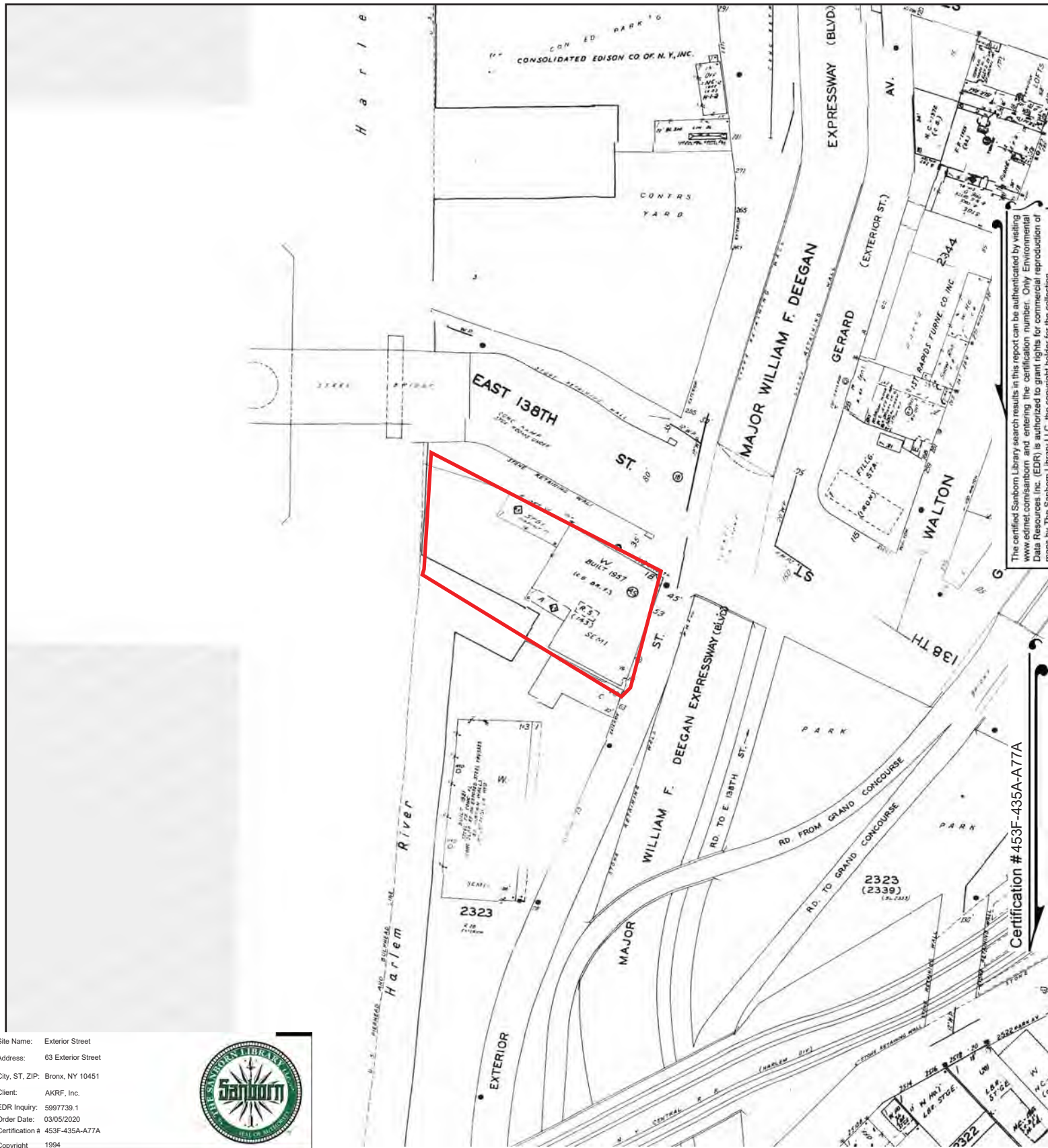


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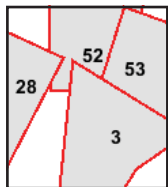
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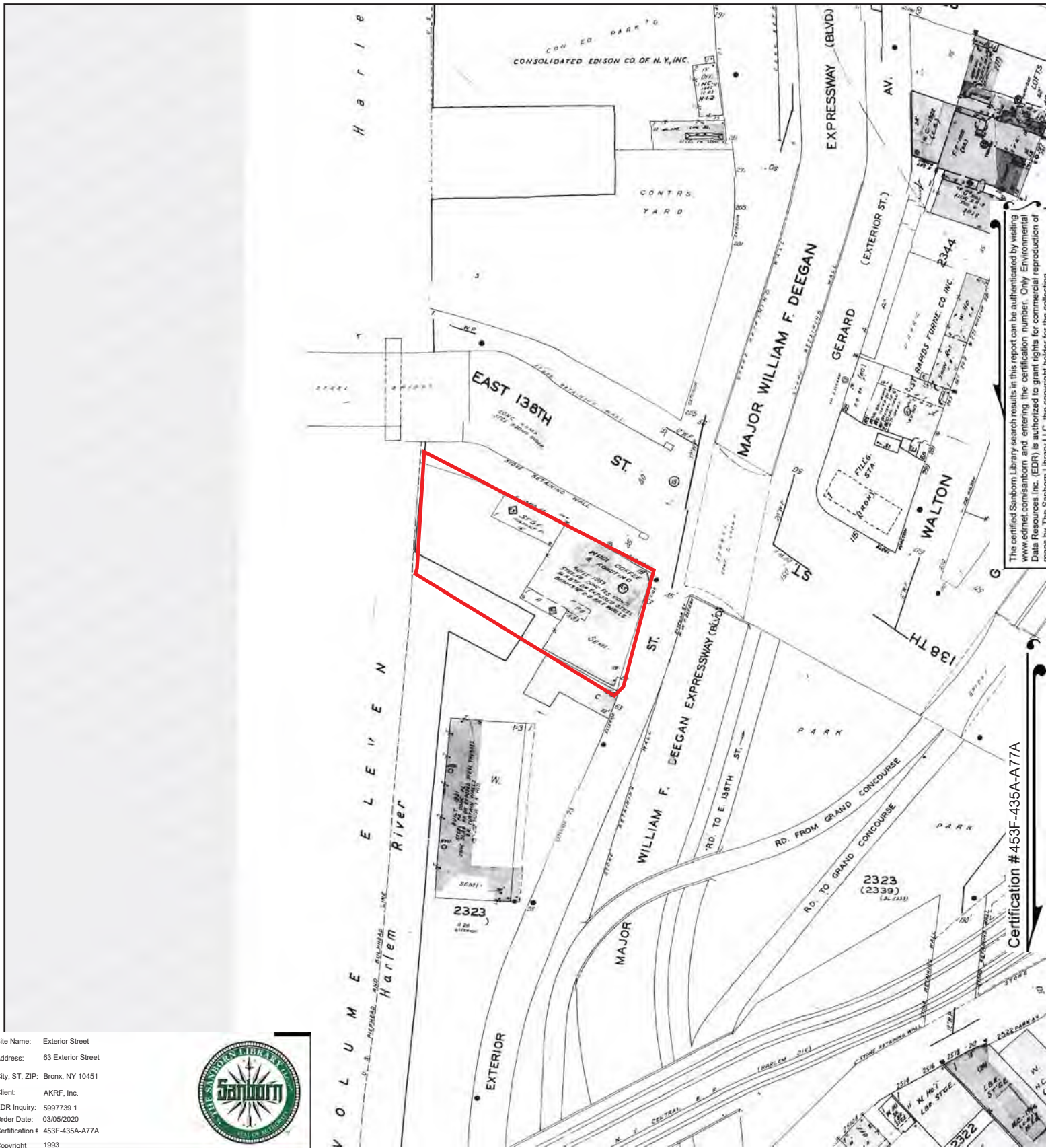
5997739 - 1 page 21



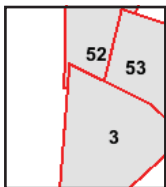
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Volume 9S, Sheet 3
Volume 9N, Sheet 53
Volume 9N, Sheet 52

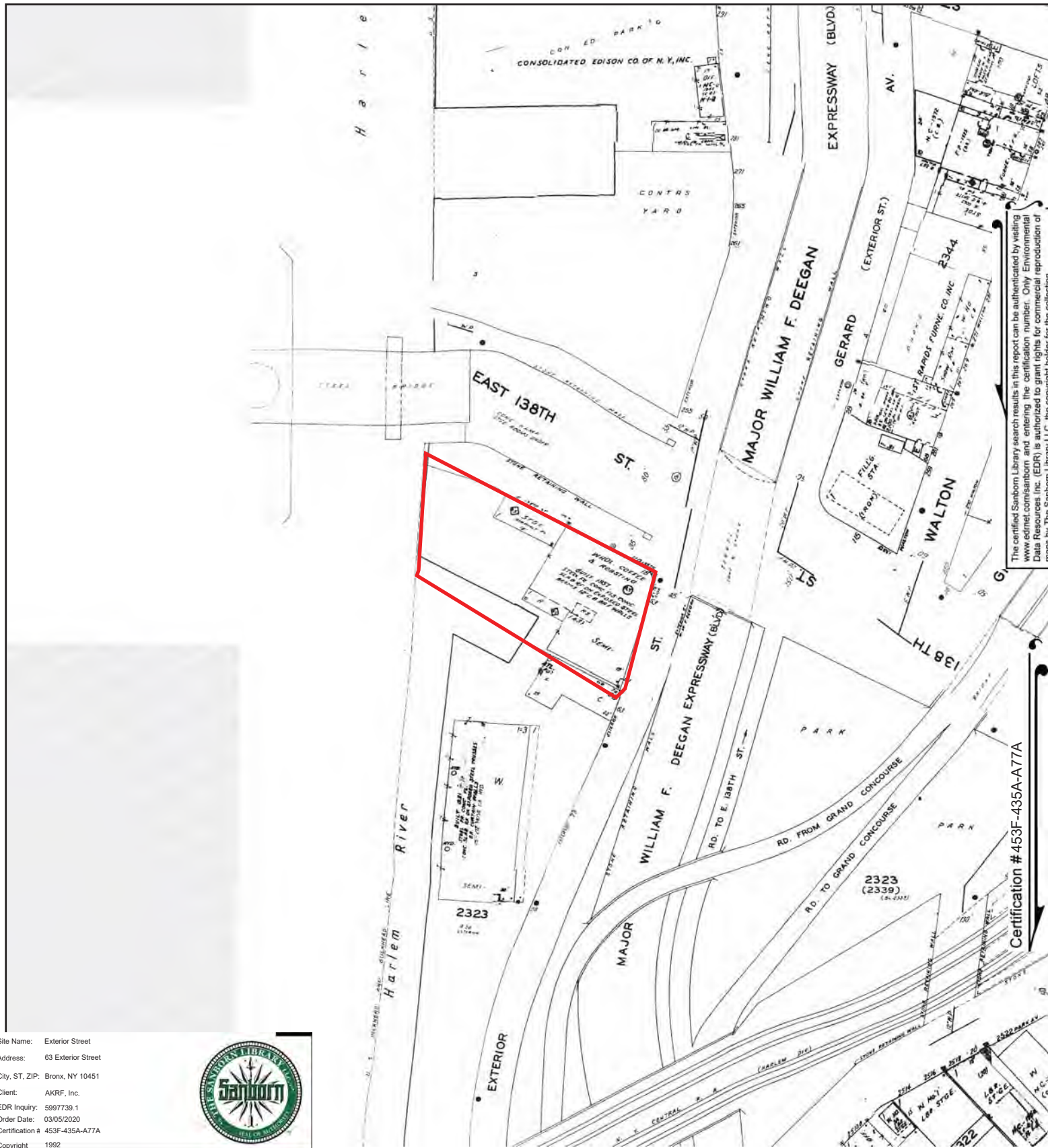


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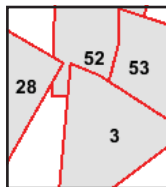
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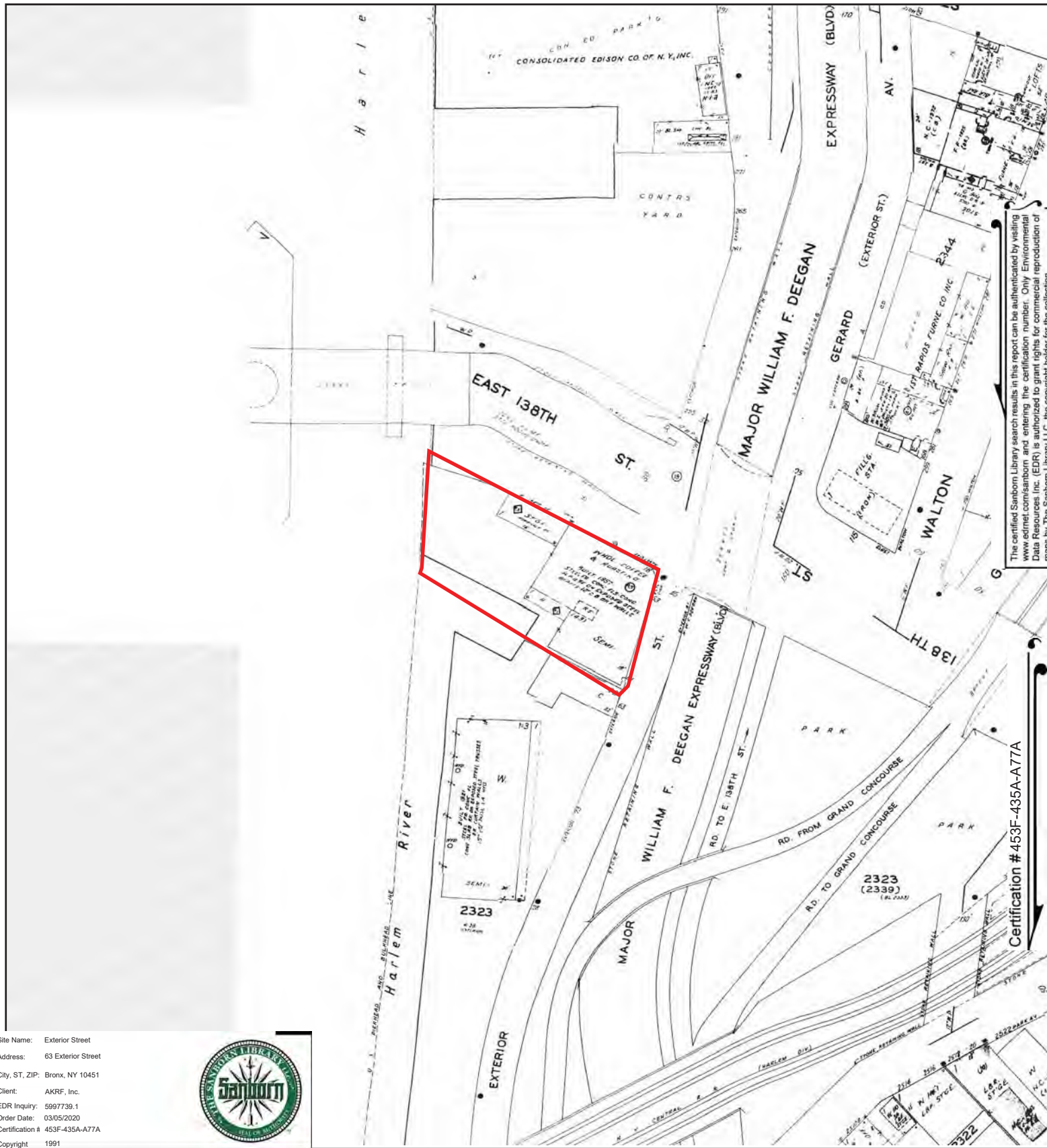
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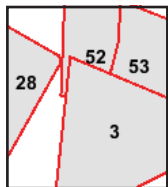
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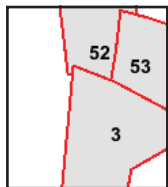
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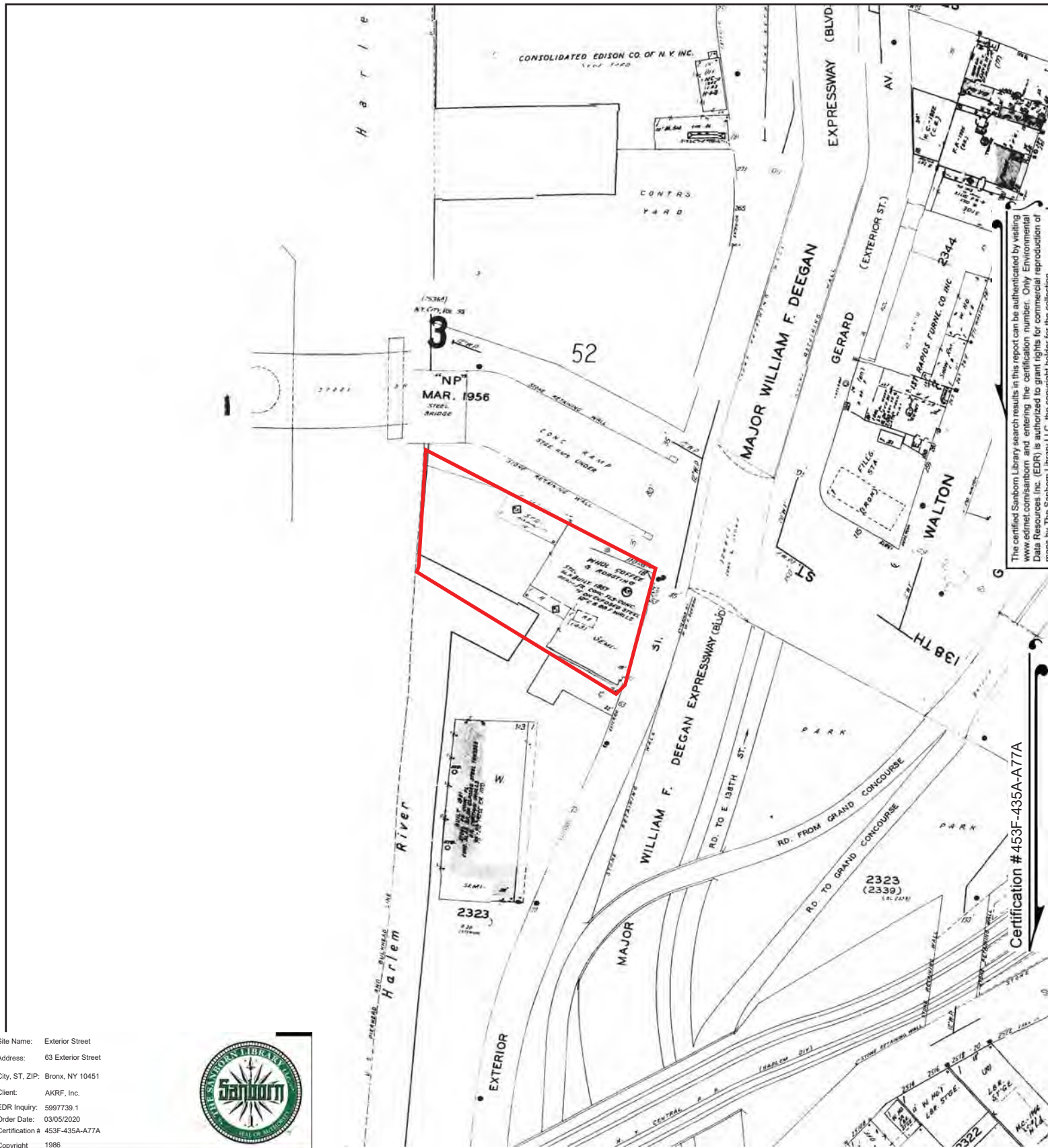
Volume 9N, Sheet 53
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 Volume 11S, Sheet 28

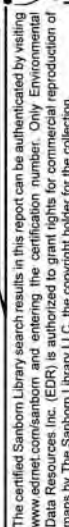


A horizontal number line representing distance in feet. The line has tick marks at 0, 150, 300, and 600. Below the line, there are three brackets indicating distances: a bracket from 0 to 150 is labeled "150 feet", a bracket from 150 to 300 is labeled "150 feet", and a bracket from 300 to 600 is labeled "300 feet".

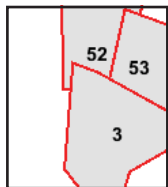


Volume 9S, Sheet 3
Volume 9N, Sheet 53
Volume 9N, Sheet 52

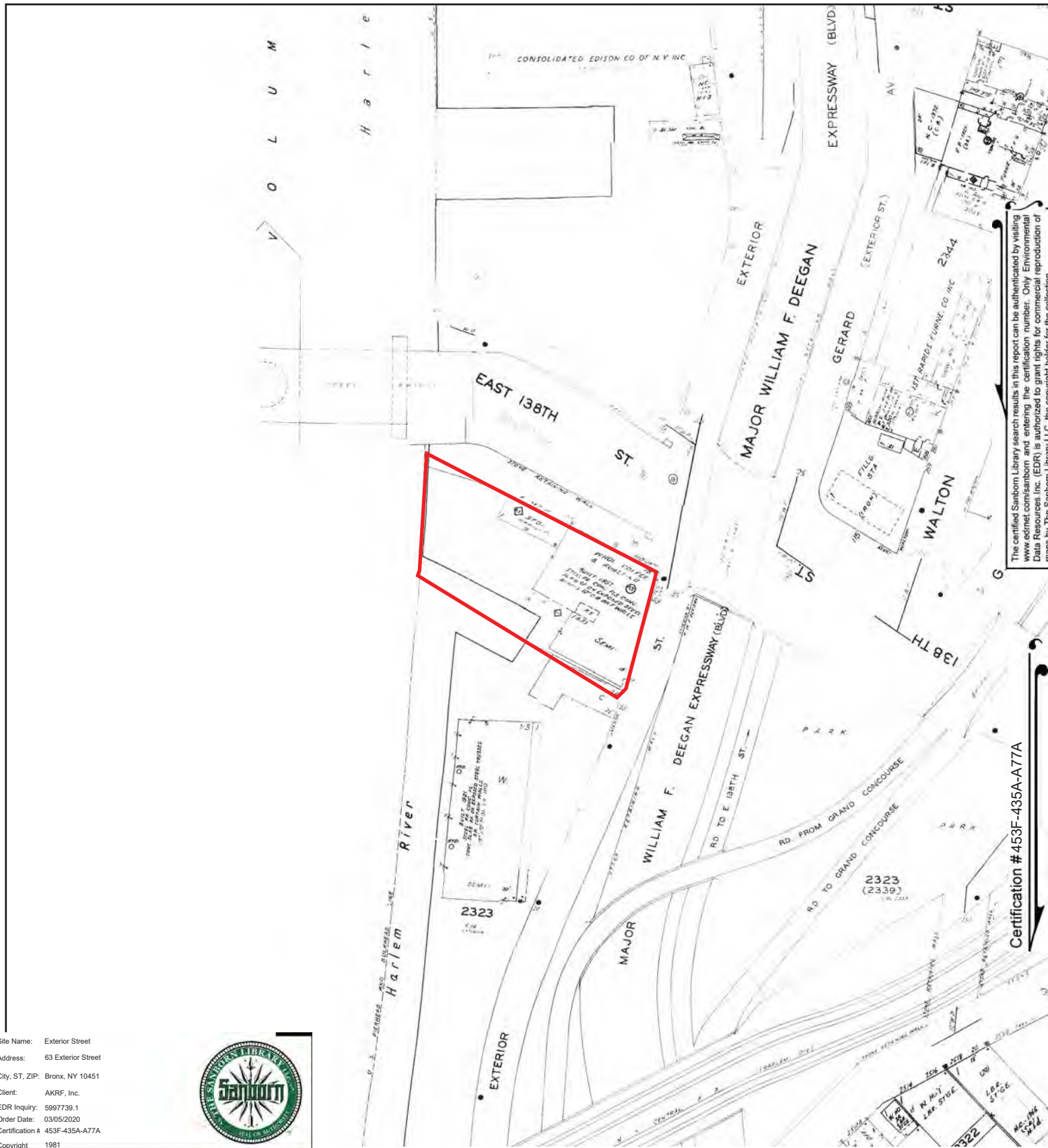




A horizontal number line with tick marks at 0, 150, 300, and 600. A rectangle is drawn from 0 to 150, and another rectangle is drawn from 150 to 300.



5997739 - 1 page 28



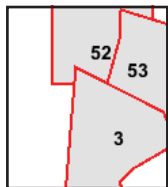
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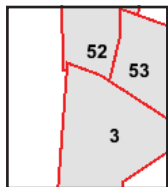
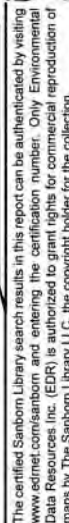
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 City, ST, ZIP: Bronx, NY 10451
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 Order Date: 03/05/2020
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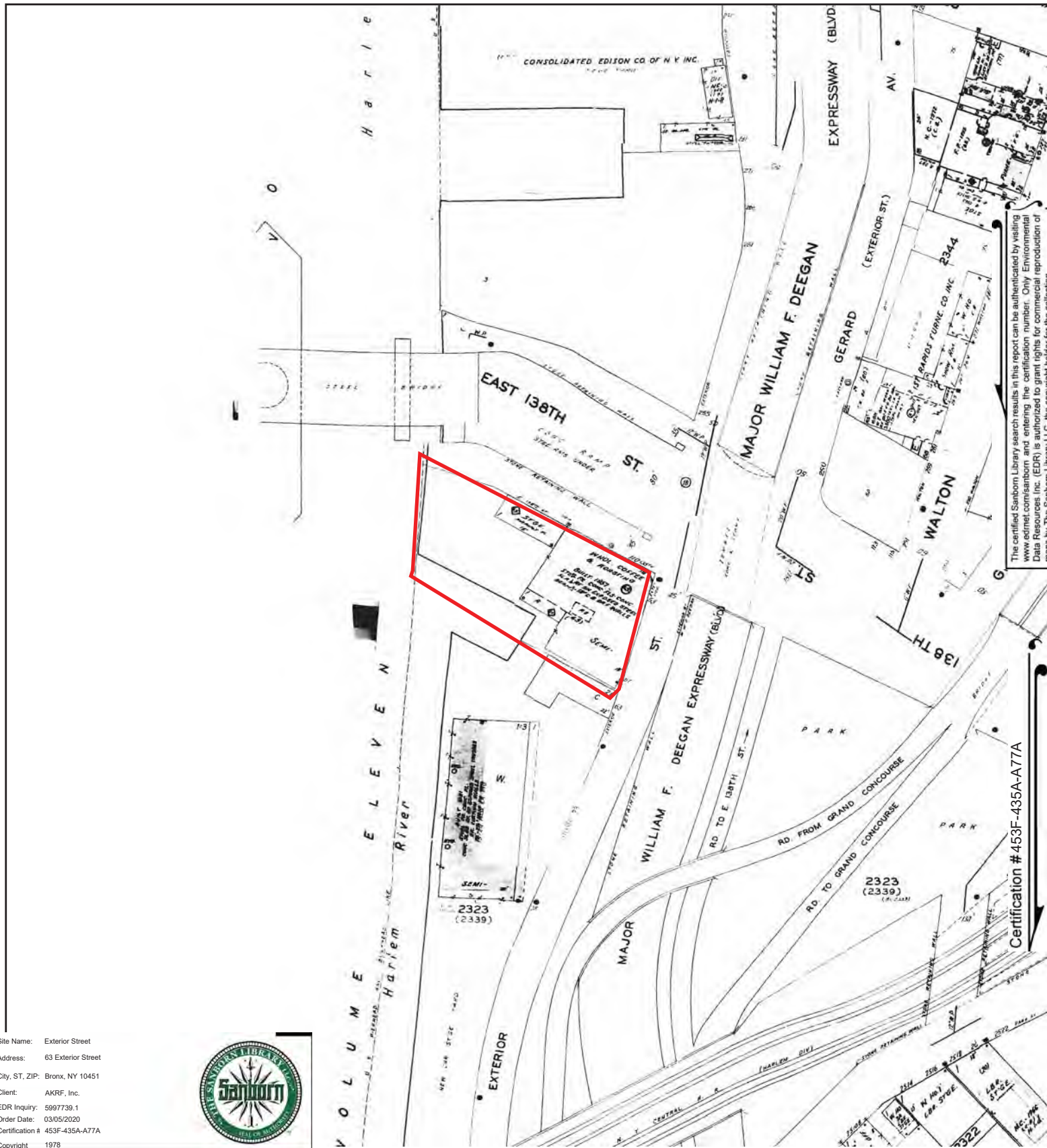
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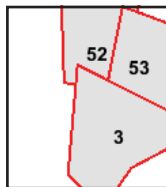
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 Volume 9N, Sheet 52
 Volume 9S, Sheet 3



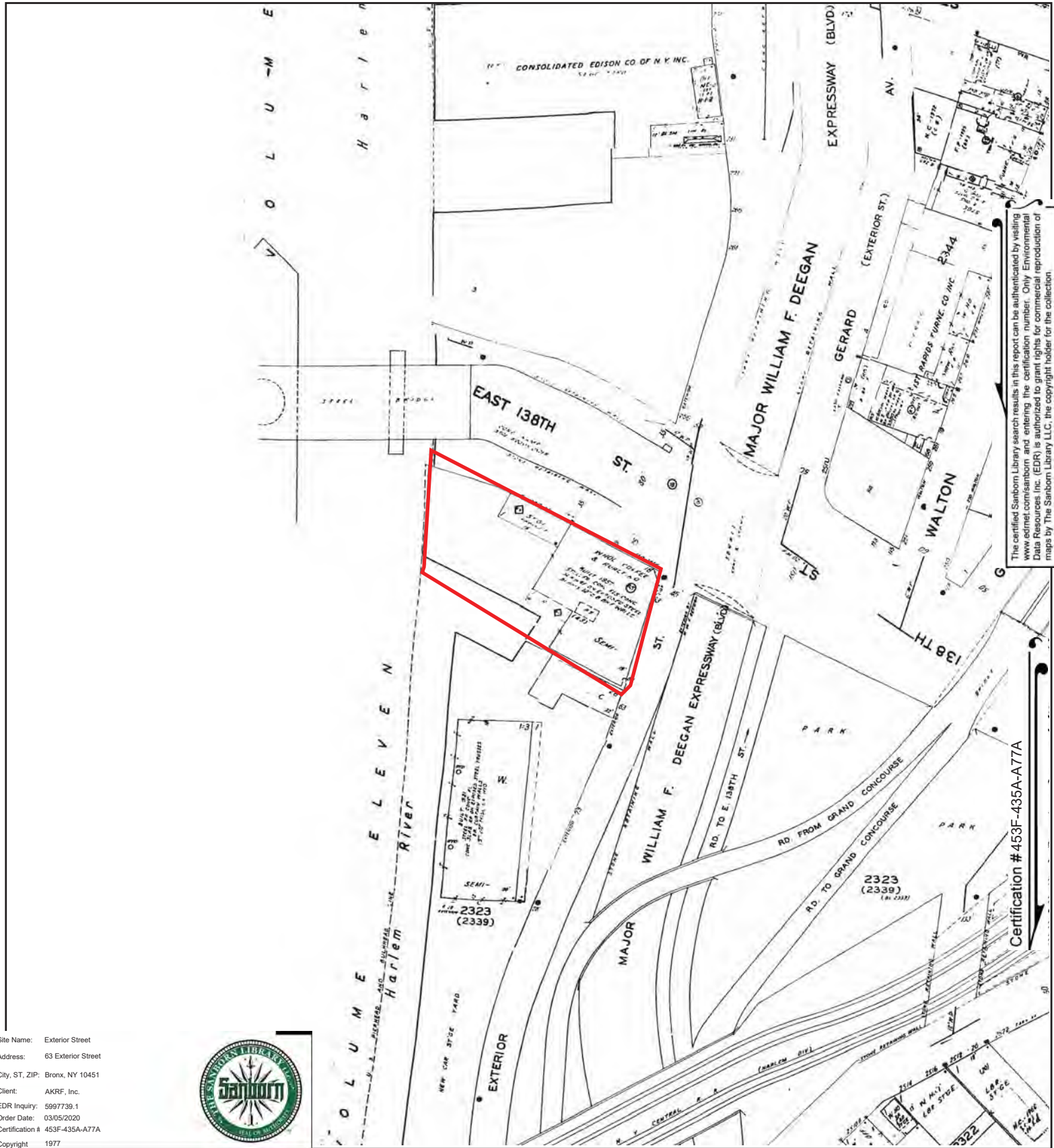
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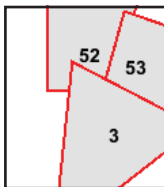
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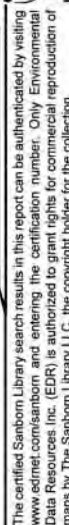
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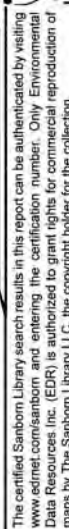
Volume 9S, Sheet 3
 Volume 9N, Sheet 53
 Volume 9N, Sheet 52



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A horizontal number line is shown with tick marks at 0 Feet, 150, 300, and 600. A bracket is drawn above the line, starting at the 150 mark and ending at the 300 mark.

A square with a shaded triangle inside. The triangle has vertices at the bottom-left corner, the top-right corner, and a point on the right side. The number 3 is inside the triangle.

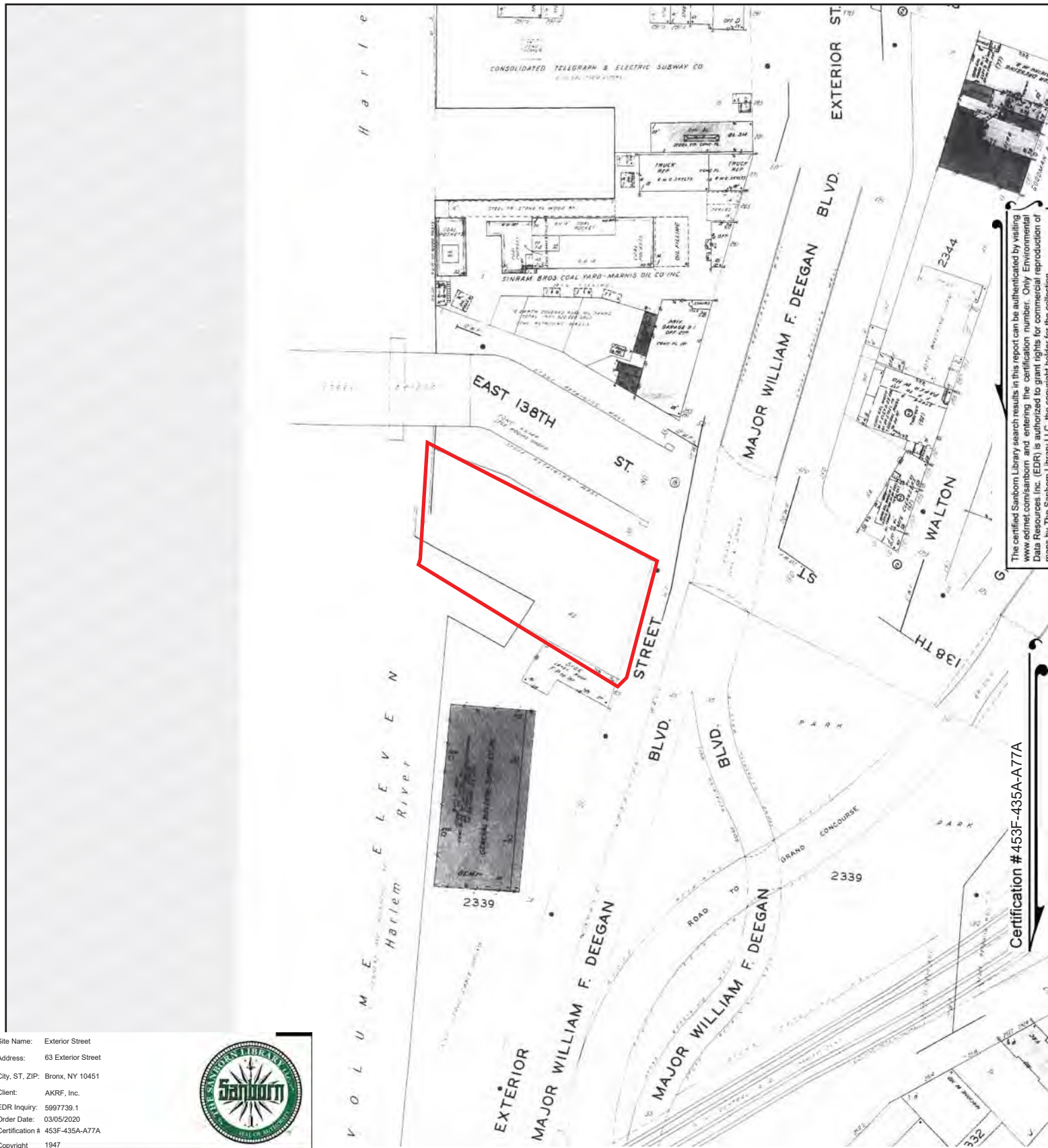


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A diagram showing a shaded region labeled 3. The region is bounded by a red line and a black line, with a curved boundary on the right side.

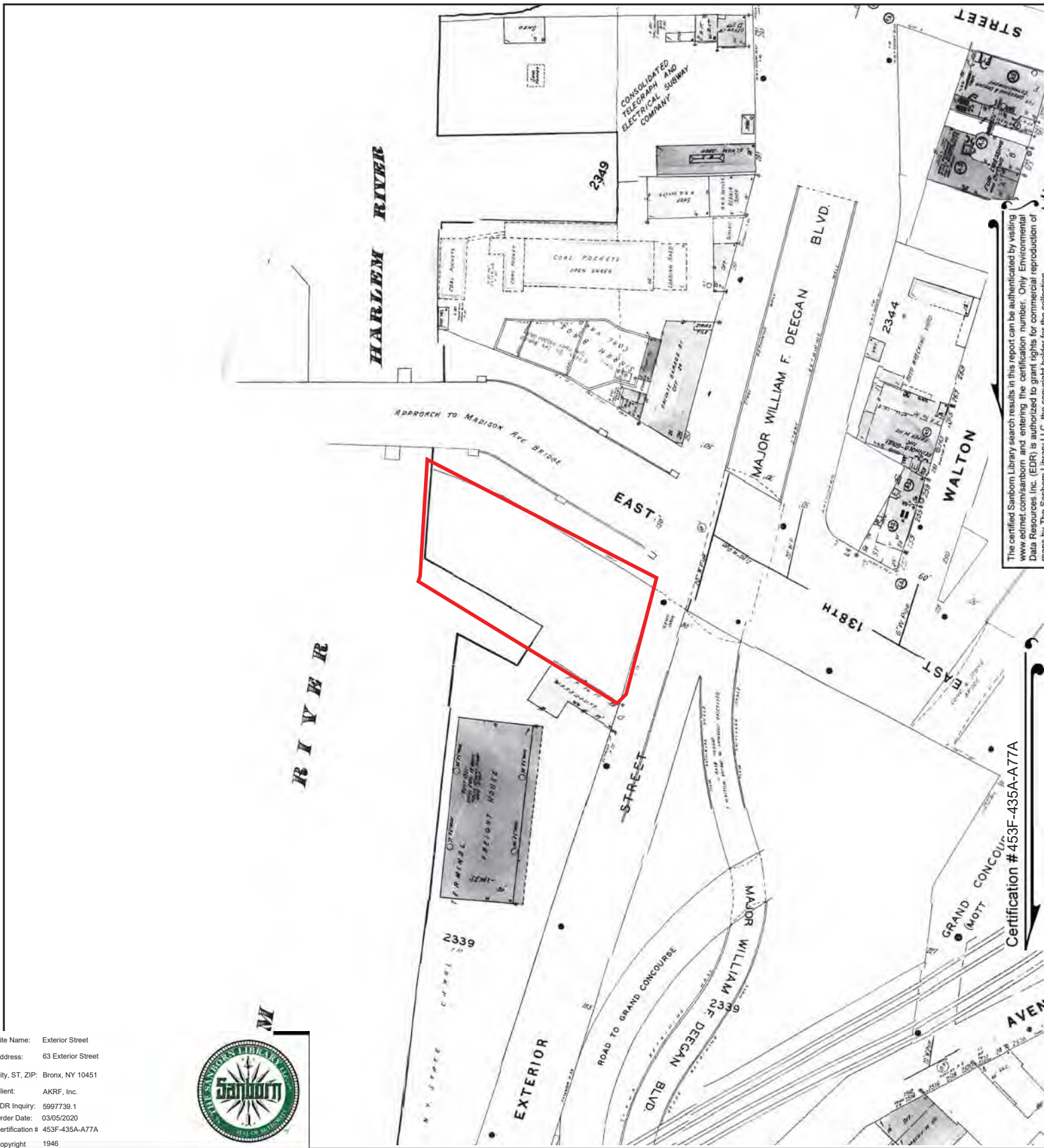


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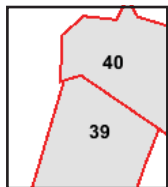


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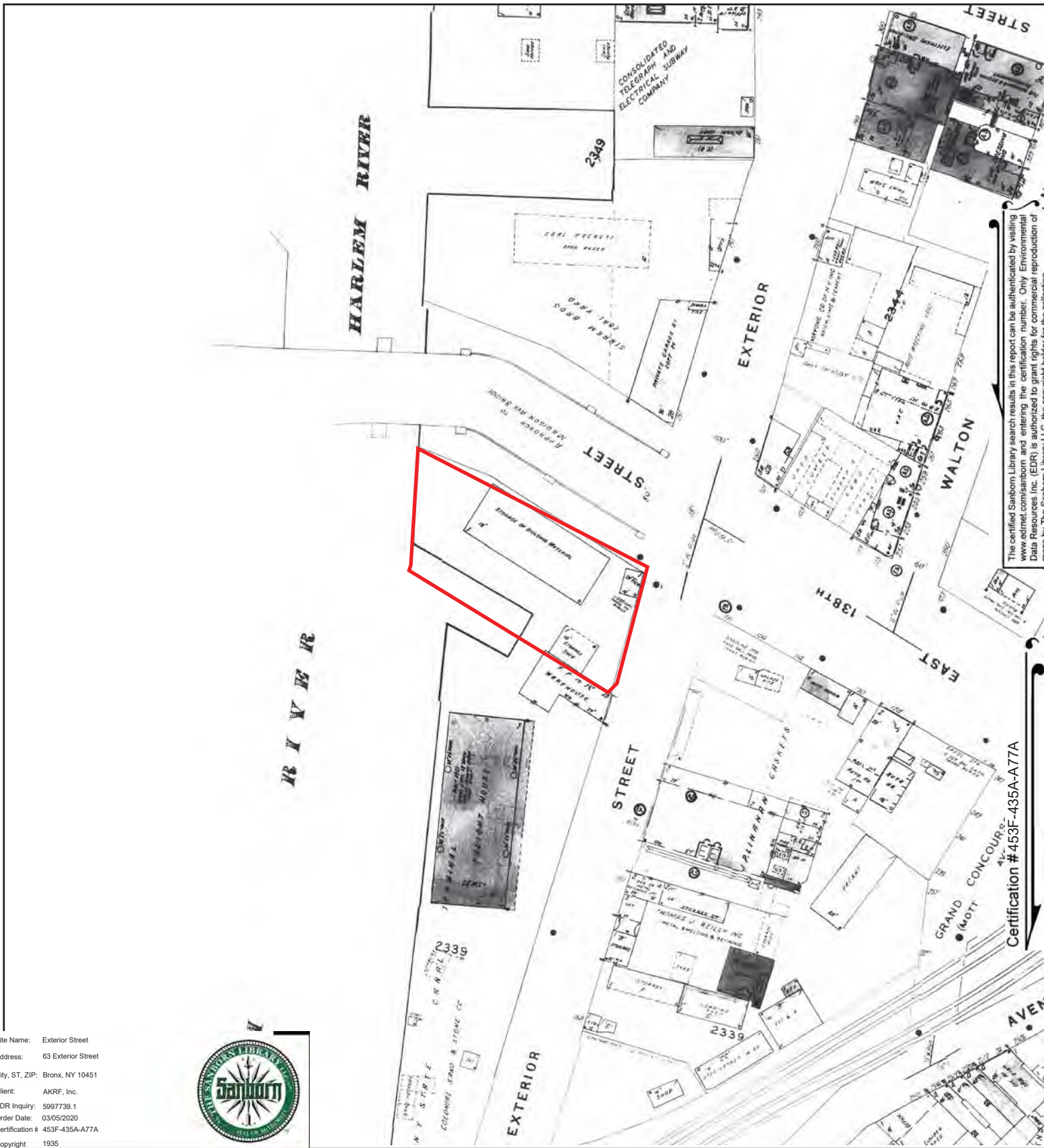
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5997739 - 1 page 38



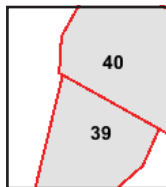
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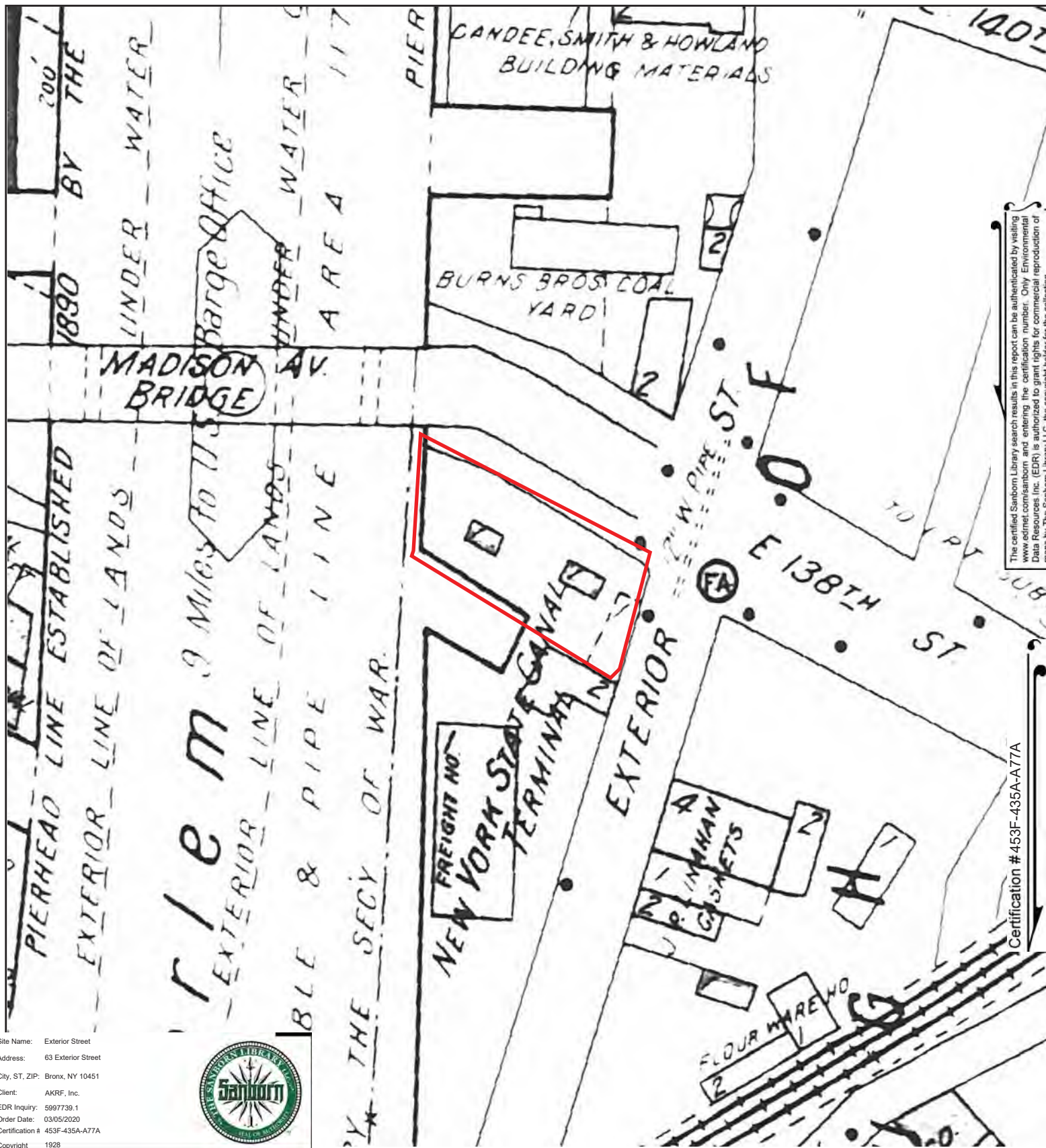
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Client: AKRF, Inc.
EDR Inquiry: 5997739.1
Order Date: 03/05/2020
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Volume 9, Sheet 39



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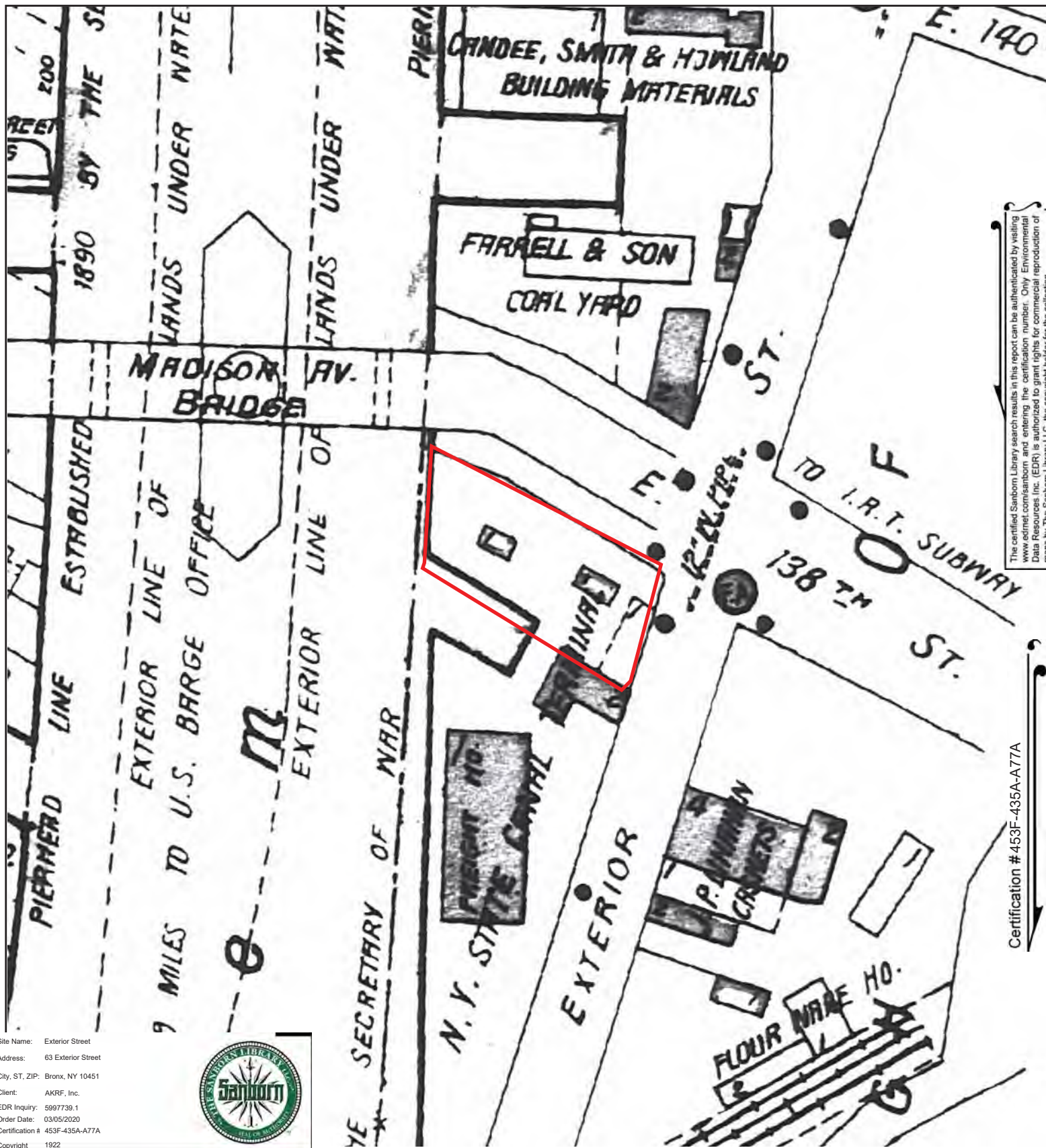
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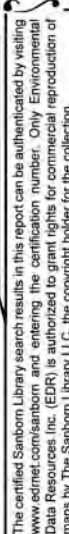
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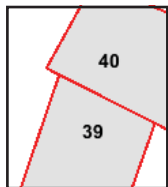


Volume Pier Maps, Sheet 23

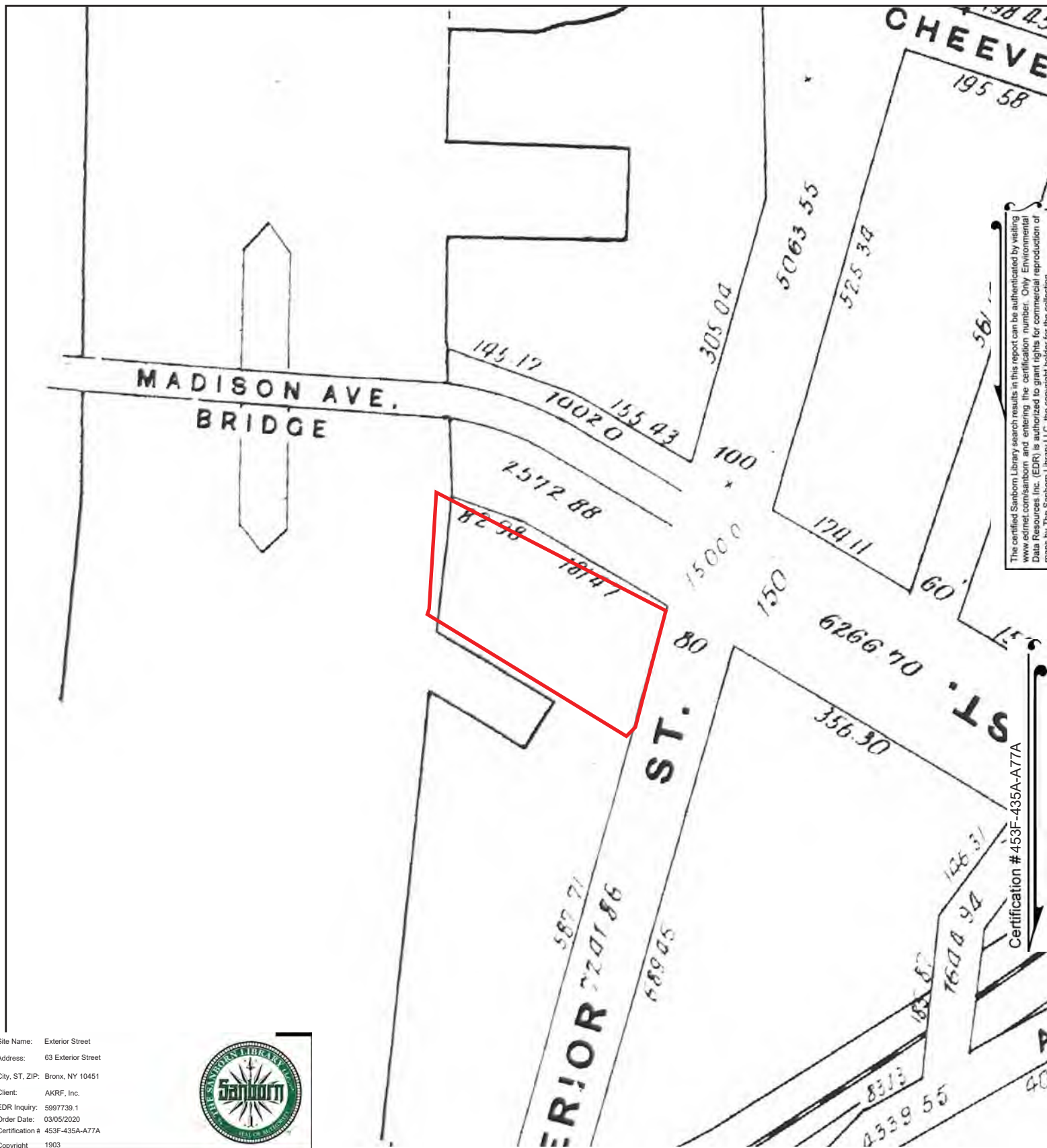


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A horizontal number line representing distance in feet. The line starts at 0 and ends at 600. There are tick marks at 0, 150, 300, and 600. The segments between the tick marks are labeled 0 Feet, 150, 300, and 600.



5997739 - 1 page 42



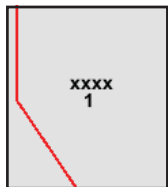
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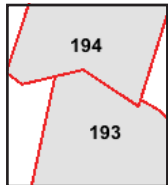
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Volume 9, Sheet 194
 Volume 9, Sheet 193

APPENDIX E
STANDARDS, CRITERIA, AND GUIDANCE

1.0 SCGS FOR SITE CHARACTERIZATION AND REMEDIAL INVESTIGATION

The following standards and criteria typically will apply to Site Characterizations and Remedial Investigations conducted in New York State:

- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 375 – Environmental Remediation Programs
- 6 NYCRR Parts 700-706 - Water Quality Standards
- 6 NYCRR Part 182 - Endangered & Threatened Species of Fish & Wildlife
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Part 661 - Tidal Wetlands - Land Use Regulations
- 6 NYCRR Part 663 - Freshwater Wetlands Maps and Classification
- 6 NYCRR Part 257 - Air Quality Standards
- 10 NYCRR Part 5 of the State Sanitary Code - Drinking Water Supplies (May 1998)
- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- 6 NYCRR Part 175 - Special Licenses and Permits--Definitions and Uniform Procedures
- Sampling, Analysis, And Assessment of Per- And Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (April 2023)

The following guidance typically applies to Site Characterizations and Remedial Investigations conducted in New York State:

- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (October 1994)
- Technical Guidance for Screening Contaminated Sediments (January 1999)
- Niagara River Biota Contamination Project: Fish Flesh Criteria for Piscivorous Wildlife (July 1987)
- Wildlife Toxicity Assessment for Cadmium in Soils (May 1999)
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006)

2.0 SCGS FOR REMEDY SELECTION

The following standards and criteria typically apply to the remedy selection process conducted in New York State:

- 6 NYCRR Part 375 - Environmental Remediation Programs
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Part 661 - Tidal Wetlands - Land Use Regulations
- 6 NYCRR Part 663 - Freshwater Wetlands - Permit Requirements
- 6 NYCRR Parts 700-706 - Water Quality Standards
- 19 NYCRR Part 600 - Waterfront Revitalization and Coastal Resources

The following guidance typically applies to the remedy selection process conducted in New York State:

- TAGM 4044 - Accelerated Remedial Actions at Class 2, Non-RCRA Regulated Landfills (March 1992)
- TAGM 4051 - Early Design Strategy (August 1993)
- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook (June 1998)
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- Freshwater Wetlands Regulations - Guidelines on Compensatory Mitigation (October 1993)
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants
- Technical Guidance for Screening Contaminated Sediments (January 1999)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.047FS Presumptive Remedies: Policy and Procedures (September 1993)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.048FS Presumptive Remedies:
- Site Characterization and Technology Selection for CERCLA sites with Volatile Organic Compounds in Soils (September 1993)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.049FS Presumptive Remedy for CERCLA Municipal Landfills (September 1993)
- *Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs* (April 2023)

3.0 SCGS FOR UNDERGROUND STORAGE TANK CLOSURE

The following standards and criteria typically apply to UST closures conducted in New York State:

- 6 NYCRR Part 612 - Registration of Petroleum Storage Facilities (February 1992)
- 6 NYCRR Part 613 - Handling and Storage of Petroleum (February 1992)
- 6 NYCRR Part 614 - Standards for New and Substantially Modified Petroleum Storage Tanks (February 1992)
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes (November 1998)
- 6 NYCRR Subpart 374-2 - Standards for the Management of Used Oil
- 6 NYCRR Parts 700-706 - Water Quality Standards
- 40 CFR Part 280 - Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks

The following guidance typically applies to UST closures conducted in New York State:

- Spill Response Guidance Manual
- Permanent Closure of Petroleum Storage Tanks
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants
- NYSDOH Environmental Health Manual CSFP-530 - "Individual Water Supplies - Activated Carbon Treatment Systems"

4.0 SCGS FOR REMEDIAL ACTION

The following standards and criteria typically apply to Remedial Actions conducted in New York State:

- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- 40 CFR Part 144 - Underground Injection Control Program
- 10 NYCRR Part 67 – Lead
- 12 NYCRR Part 56 - Industrial Code Rule 56 (Asbestos)
- 6 NYCRR Part 175 - Special Licenses and Permits-Definitions and Uniform Procedures
- 6 NYCRR Part 361 - Siting of Industrial Hazardous Waste Facilities
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes (November 1998)
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998)
- 6 NYCRR Subpart 373-4 - Facility Standards for the Collection of Household Hazardous Waste and Hazardous Waste from Conditionally Exempt Small Quantity Generators (November 1998)
- 6 NYCRR Subpart 374-1 - Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998)
- 6 NYCRR Subpart 374-3 - Standards for Universal Waste (November 1998)
- 6 NYCRR Part 375 - Inactive Hazardous Waste Disposal Sites (as amended January 1998)
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 19 NYCRR Part 600 - Waterfront Revitalization and Coastal Resources
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Part 661 - Tidal Wetlands - Land Use Regulations
- 6 NYCRR Part 663 - Freshwater Wetlands - Permit Requirements
- 6 NYCRR Parts 700-706 - Water Quality Standards (June 1998)
- 6 NYCRR Part 750 through 758 - Implementation of NPDES Program in NYS (“SPDES Regulations”)
- Technical Guidance for Screening Contaminated Sediments (January 1999)
- DER-31 Green Remediation (January 2011)

The following guidance typically applies to Remedial Actions conducted in New York State:

- TAGM 4013 - Emergency Hazardous Waste Drum Removal/ Surficial Cleanup Procedures (March 1996)
- TAGM 4046 - Determination of Soil Cleanup Objectives and Cleanup Levels (January 1994)
- TAGM 4059 - Making Changes To Selected Remedies (May 1998)
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)

- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook (June 1998)
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- TOGS 1.3.8 - New Discharges to Publicly Owned Treatment Works
- TOGS 2.1.2 - Underground Injection/Recirculation (UIR) at Groundwater Remediation Sites
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants
- State Coastal Management Policies
- OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (November 1997)
- NYSDOH Environmental Health Manual CSFP-530 - "Individual Water Supplies - Activated Carbon Treatment Systems"

5.0 SCGS FOR SITE MANAGEMENT

The following standards and criteria typically apply to Site Management activities conducted in New York State:

- 6 NYCRR Part 175 - Special Licenses and Permits--Definitions and Uniform Procedures

The following guidance typically applies to Site Management activities conducted in New York State:

- Groundwater Monitoring Well Decommissioning Procedures (May 1995)
- The activity is a component of a program selected by a process complying with the public participation requirements of section 1.10, to the extent applicable.
- NYSDOH Environmental Health Manual CSFP-530 - “Individual Water Supplies - Activated Carbon Treatment Systems”

APPENDIX F
QUALITY ASSURANCE PROJECT PLAN

EAST 138TH STREET AFFORDABLE HOUSING
110 EAST 138TH STREET
BRONX, NEW YORK

Quality Assurance Project Plan

NYSDEC BCP Site Number: C203155
AKRF Project Number: 210261

Prepared For:

New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor
Albany, New York 12233

Prepared On Behalf Of:

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SEPTEMBER 2025

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Attachment A –	Resumes for Remedial Engineer, Project Director, QA/QC Officer, Project Manager, Field Team Leader, Site Safety Officers, and Third-Party Data Validator

1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) describes the protocols and procedures that will be followed during implementation of the Remedial Action Work Plan (RAWP) for the East 138th Street Affordable Housing site located at 110 East 138th Street in the Mott Haven section of the Bronx, New York, hereafter referred to as the “Site.” The Site is identified by the City of New York as Borough of the Bronx, Block 2323, Lot 43. The objective of this QAPP is to provide for Quality Assurance (QA) and maintain Quality Control (QC) of environmental investigative and sampling activities conducted under the New York State Department of Environmental Conservation (NYSDEC) oversight in the Brownfield Cleanup Program (BCP) (BCP Site No. C203155). Adherence to this QAPP will ensure that defensible data will be obtained during environmental work at the Site.

2.0 PROJECT TEAM

The project team will be drawn from AKRF professional and technical personnel, and AKRF's subcontractors. All field personnel and subcontractors will have completed a 40-hour training course and updated 8-hour refresher course that meet the Occupational Safety and Health Administration (OSHA) requirements of 29 CFR Part 1910. The following sections describe the key project personnel and their responsibilities.

2.1 Remedial Engineer

Ms. Rebecca Kinal P.E. will serve as the Remedial Engineer (RE) for the RAWP. As the RE, Ms. Kinal will oversee the design and implementation of all Institutional Controls (ICs) and Engineering Controls (ECs) at the Site. Ms. Kinal's resume is included in Attachment A.

2.2 Project Director

Ms. Deborah Shapiro, QEP, will serve as project director and will be responsible for the general oversight of all aspects of the project, including scheduling, budgeting, data management, and decision-making regarding the field program. The project director will communicate regularly with all members of the AKRF project team and the New York State Department of Environmental Conservation (NYSDEC) to ensure a smooth flow of information between involved parties. Ms. Shapiro's resume is included in Attachment A.

2.3 Quality Assurance/Quality Control Officer

Mr. Marc Godick, LEP, will serve as the quality assurance/quality control (QA/QC) officer and will be responsible for adherence to the QAPP including QA/QC. The QA/QC officer will review the procedures with all personnel prior to commencing any fieldwork and will conduct periodic Site visits to assess implementation of the procedures. The QA/QC officer will also be responsible for reviewing the Data Usability Summary Reports (DUSRs) prepared by a third-party data validator for soil, groundwater, and soil vapor analytical results. Mr. Godick's resume is included in Attachment A.

2.4 Project Manager

The project manager will be responsible for directing and coordinating all elements of the RAWP. The project manager will prepare reports and participate in meetings with the Site owner/Applicant, and/or the NYSDEC. Adrianna Bosco will serve as the project manager and Stephen Schmid will serve as the project manager alternate for the RAWP. Ms. Bosco's and Mr. Schmid's resumes are included in Attachment A.

2.5 Field Team Leader, Field Technician, Site Safety Officer (SSO), and Alternates

The field team leader will be responsible for supervising the daily sampling and health and safety activities in the field and will ensure adherence to the work plan and Health and Safety Plan (HASP), included as Appendix G of the RAWP. The field team leader will also act as the field technician and Site Safety Officer (SSO) and will report to the project manager or project manager alternate on a regular basis regarding daily progress and any deviations from the work plan. The field team leader will be a qualified and responsible person able to act professionally and promptly during environmental work at the Site. Shannon Donohue will be the field team leader. The field team leader alternates are Chad Walters and Jonas Peters of AKRF. Ms. Donohue's, Mr. Walters, and Mr. Peter's resumes are included in Attachment A.

2.6 Laboratory Quality Assurance/Quality Control (QA/QC) Officer

The laboratory QA/QC officer will be responsible for quality control procedures and checks in the laboratory and ensuring adherence to laboratory protocols. The QA/QC officer will track the movement of samples from the time they are checked in at the laboratory to the time that analytical results are issued, and will conduct a final check on the analytical calculations and sign off on the laboratory reports. The laboratory QA/QC officer will be Carl Ambruster of Eurofins Environment Testing Northeast LLC (Eurofins) of Edison, New Jersey, the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory being employed for all environmental sampling at the Site.

2.7 Thirty-Party Data Validator

The third-party data validator will be responsible for reviewing the final data packages for soil, groundwater, and soil vapor and preparing a DUSR that will provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the laboratory analyses for the investigation. The third-party data validator will be Lori Beyer of L.A.B. Validation Corporation of East Northport, New York. Ms. Beyer's resume is included in Attachment A.

3.0 DATA QUALITY USABILITY OBJECTIVES

The objectives for the sampling include:

- During implementation of the RAWP soil, and soil vapor samples, if required will be collected from soil borings and/or post-excavation locations, and temporary soil vapor points, respectively.
- Samples will be collected to delineate the extent of on-site contamination and identify contamination remaining in-place following completion of the Remedial Action.

Who will use the data?

- The collected data will be used by NYSDEC, NYSDOH, the Volunteer, and AKRF as part of the Site's enrollment in the BCP.

What types of data are needed?

- Soil samples will be collected from the Site, either as part of waste characterization or as a post-remedial documentation sample. Samples will be analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, pesticides by EPA Method 8081, target analyte list (TAL) metals by EPA Method 6000/7000 series, per- and polyfluorinated compounds (PFAS) by EPA Method 1633A, and 1,4-dioxane by EPA Method 8270, using Category B deliverables.
- Indoor air or soil vapor samples (if required) will be analyzed for VOCs by Method TO-15 using Category B deliverables.

How much data are needed?

- Post-excavation endpoint soil samples will be collected at a frequency of one per 900-square feet from the bottom of the Site surface and along the sidewalls.
- Waste characterization samples will be collected at a frequency of one per 800 cubic yards.
- It is unknown how many soil vapor or indoor air samples are needed at this time.

Where, when, and how should the data be collected/generated?

- Post-excavation endpoint soil samples will be collected from the bottom and sidewalls of remedial excavation areas across the Site. Soil samples will be collected using decontaminated stainless steel sampling trowel or hand auger. Soil samples will be placed directly into pre-sterilized, laboratory-issued containers by AKRF personnel and shipped to the laboratory via a courier with chain-of-custody (COC) documentation in accordance with appropriate EPA protocols to a NYSDOH ELAP-certified laboratory.
- The location of soil vapor/indoor air samples is unknown at this time. Soil vapor sampling will be performed in accordance with the guidelines provided in the NYSDOH document entitled, "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," (October 2006, revised 2024)." The soil vapor samples will be collected over a 2- or 8-hour time period using a 6-Liter, batch-certified SUMMA[®] canister equipped with a vacuum gauge and flow regulator set at a maximum rate of 0.2 liter per minute. After two or eight hours, the flow controller valve will be closed, the final vacuum noted, and the canister placed in a shipping carton for delivery to the laboratory.

Who will collect and generate the data?

- AKRF, and any subcontractor, will be responsible for performing the sampling. All samples will be analyzed by Eurofins Edison or Eurofins Burlington (subcontracted by AKRF), NYSDOH-certified laboratories. AKRF will be responsible for collecting, reviewing, assessing, and disseminating validated data. Third-party data validation and the preparation of a DUSR will be prepared by Ms. Lori Beyer of L.A.B. Validation Corporation.

How will the data be reported?

- The data will be reported in the Final Engineering Report (FER), and as EQUIS-compatible electronic data deliverables (EDDs) submitted to NYSDEC.

How will the data be archived?

- All hard-copy data will be maintained at AKRF offices for a minimum of one year. Field logbooks and forms/sampling logs will be scanned and all electronic data will be archived on the AKRF corporate server.

4.0 STANDARD OPERATING PROCEDURES (SOPS)

The following sections describe the SOPs for the remedial activities included in the RAWP. During these activities, safety monitoring will be performed as described in the HASP, included as Appendix G of the RAWP.

4.1 Decontamination of Sampling Equipment

All sampling equipment (augers, drilling rods, split spoon samplers, probe rods, pumps, etc.) will be either dedicated or decontaminated between sampling locations. Decontamination will be conducted on plastic sheeting (or equivalent) that is bermed to prevent discharge to the ground. The decontamination procedure will be as follows:

1. Scrub using tap water/Alconox[®] mixture and bristle brush.
2. Rinse with tap water.
3. Scrub again with tap water/Alconox[®] mixture and bristle brush.
4. Rinse with tap water.
5. Rinse with distilled water.
6. Air-dry the equipment, if possible.

4.2 Management of Investigation-Derived Waste (IDW)

IDW will be containerized in New York State Department of Transportation (NYSDOT)-approved 55-gallon drums. The drums will be sealed at the end of each work day and labeled with the date, the excavation grid(s), the type of waste (i.e., drill cuttings), and the name and phone number of an AKRF point-of-contact. All IDW exhibiting field evidence of contamination will be disposed of or treated according to applicable local, state, and federal regulations.

5.0 SAMPLING AND LABORATORY PROCEDURES

5.1 Soil Sampling

Soil sampling will be conducted according to the following procedures:

- Characterize the sample according to the modified Burmister soil classification system.
- Field screen the sample for evidence of contamination (e.g., odors, staining, etc.) using visual and olfactory methods and screen for volatile organic compounds (VOCs) using a photoionization detector (PID) equipped with a 10.6 electron Volt (eV) lamp.
- Collect an aliquot of soil from each proposed sample location, place in laboratory-supplied glassware, label the sample in accordance with Section 4.6.1, and place in an ice-filled cooler for shipment to the laboratory. Samples analyzed for the emerging contaminants, per- and polyfluorinated compounds (PFAS), should be contained in a separate cooler and the sample containers should be labeled with ballpoint pen, not permanent marker.
- A list of acceptable sampling equipment is provided below, but other equipment may be considered as appropriate based on sampling conditions.
 - Stainless steel spoon
 - Stainless steel bowl
 - Steel hand auger or shovel without coatings
- Complete the proper chain of custody (COC) paperwork and seal the cooler.
- Record sample location, sample depth, and sample observations (evidence of contamination, PID readings, soil classification, etc.) in field log book and boring log data sheet, if applicable.
- Decontaminate any soil sampling equipment between sample locations as described in Section 3.1 of this QAPP. Standard two-step decontamination using detergent (Alconox) and clean, PFAS-free water will be used for sampling equipment (when analyzing for PFAS).

5.2 Soil Vapor Sampling

Soil vapor sampling will be conducted according to the following procedures:

- Field screen the sample for evidence of contamination (e.g., odors, etc.) using olfactory methods and screen the purged vapors for VOCs using a PID equipped with an 10.6 eV lamp.
- Collect the soil vapor samples from each proposed sample locations in laboratory-supplied SUMMA[®] canisters, label the sample in accordance with Section 4.6.1, and place in shipment container for shipment to the laboratory.
- Prior to sample collection, the soil vapor sampling points will be purged of three sample volumes using a GilAir air sampling pump. During purging, a shroud will be placed over the sampling point and helium gas will be introduced to saturate the atmosphere around the sample port with helium gas. Purged vapors will be collected into a Tedlar[™] bag and field-screened for organic vapors using a PID. The purged air will also be monitored using a portable helium detector to check for short-circuiting of ambient air into the vapor

sampling point. If the purged soil vapor contains greater than 10% helium, additional bentonite will be used to enhance the surface seal, and the point will be retested.

- Following purging, a soil vapor sample will be collected using the vacuum from the SUMMA[®] canister. Immediately after opening the flow control valve equipped with a two-hour regulator, the initial SUMMA[®] canister vacuum (inches of mercury) will be noted. After two hours, the flow controller valve will be closed, the final vacuum noted, and the canister placed in a shipping carton for delivery to the laboratory.
- Complete the proper COC paperwork and seal the shipment container.
- Record sample location, sample depth, and sample observations (odors, PID readings, etc.) in field log book and boring log data sheet, if applicable.

5.3 Laboratory Methods

Table 1 summarizes the laboratory methods that will be used to analyze field samples and the sample container type, preservation, and applicable holding times. TestAmerica of Edison, New Jersey, a NYSDOH ELAP-certified laboratory subcontracted to AKRF, will be used for all chemical analyses in accordance with the Division of Environmental Remediation (DER)-10 2.1(b) and 2.1(f) with Category B Deliverables.

Table 1
Laboratory Analytical Methods for Analysis Groups

Matrix	Analysis	EPA Method	Bottle Type	Preservative	Hold Time
Soil and Soil QA/QC	Volatile Organic Compounds (VOCs)	8260C	EnCore [®] samplers (3) and 2 oz. plastic jar	≤ 6 °C	48 hours to extract; 14 days to analyze
	Semivolatile Organic Compounds (SVOCs)	8270D	8 oz. Glass Jar	≤ 6 °C	14 days to extract; 40 days to analyze
	1,4-Dioxane	8270D; 0.1 mg/kg RL	4 oz. Glass Jar	≤ 6 °C	14 days to extract; 40 days to analyze
	Total Analyte List (TAL) Metals, and Hexavalent Chromium	6000/7000 Series, 6010C, and 7196A	8 oz. Glass Jar	≤ 6 °C	6 months holding time; Mercury 28 days holding time; Hexavalent chromium 30 days to extract, 7 days to analyze
	Pesticides	8081B	8 oz. Glass Jar	≤ 6 °C	14 days to extract; 40 days to analyze
	Polychlorinated Biphenyls (PCBs)	8082A	8 oz. Glass Jar	≤ 6 °C	14 days to extract; 40 days to analyze
	Per- and Polyfluorinated Compounds (PFAS)	1633A	4 oz. HDPE Container	≤ 6 °C	90 days to extract; 28 days to analyze
Soil Vapor/Indoor Air	VOCs	TO-15	6L SUMMA [®] Canister	None	14 days

Notes:

QA/QC samples will be analyzed for the same parameters as the parent sample, with the exception of the trip blank(s), which will be analyzed for VOCs by EPA Method 8260C only.

EPA – Environmental Protection Agency

5.4 Quality Control (QC) Sampling

In addition to the laboratory analysis of the soil and groundwater samples, additional analysis will be included for QC measures, as required by the Category B sampling techniques. These samples will include a field blank, trip blank, matrix spike/matrix spike duplicate (MS/MSD), and blind duplicate samples at a frequency of one sample per 20 field samples collected. QC samples will be analyzed for the same parameters as the accompanying samples, with the exception of any trip blanks, which will be analyzed for the VOC list only. Additionally, one equipment blank will be collected per day during collection of groundwater samples for analysis of PFAS only.

5.5 Sample Handling

5.5.1 Sample Identification

All samples will be consistently identified in all field documentation, chain-of-custody (COC) documents, and laboratory reports. All samples will be amended with the collection date at the end of the sample name in a year, month, day (YYYYMMDD) format. Blind duplicate sample nomenclature will consist of the sample type, followed by an “X”; MS/MSD samples nomenclature will consist of the parent sample name only, but triplicate sample volume will be collected and the COC comment section will explain that the additional volume is for running the MS/MSD; and trip and field blanks will consist of “TB-” and “FB-”, respectively, and a sequential number of the trip/field blanks collected within the sample set. Special characters, including primes/apostrophes (’), will not be used for sample nomenclature.

5.5.1.1. Import Soil Sampling

In addition to the nomenclature detailed above, soil import samples will be identified with the “ISP-” and the import sample number in sequential order that the import sample was collected. Table 2 provides examples of the sampling identification scheme for import soil samples.

Table 2
Import Sample Nomenclature

Sample Description	Sample Designation
Import soil sample ISP-01 collected on March 1, 2026	ISP-01_20260301
Blind duplicate of import soil sample ISP-01 collected on March 1, 2026	ISP-X_20260301
Field blank associated with import soil sample ISP-01 collected on March 1, 2026	ISP-01-FB_20260301
Trip blank associated with import soil sample ISP-01 collected on March 1, 2026	ISP-01-TB_20260301

5.5.1.2. Endpoint Soil Sampling

In addition to the nomenclature detailed above, soil endpoint samples will be identified with the “EP-” and the endpoint sample number in sequential order that the endpoint sample was collected, and the depth below grade the sample was collected from in parentheses. Table 3 provides examples of the sampling identification scheme for the post-excavation endpoint samples.

Table 3
Endpoint and Post-Remedial Groundwater Sample Nomenclature

Sample Description	Sample Designation
Hotspot excavation endpoint soil sample EP-01 collected from 4 feet below grade on April 6, 2026	EP-01_4_20260406
Blind duplicate of excavation endpoint soil sample EP-01 collected from 4 feet below grade on April 6, 2026	EP-X_4_20260406
Second blind duplicate of hotspot excavation endpoint soil sample EP-05 collected from 6 feet below grade on April 15, 2026	EP-X2_6_20260415
Trip blank associated with endpoint samples collected on April 15, 2026	EP-TB-01_20260415
Second field blank associated with endpoint samples collected on April 15, 2026	EP-FB-02_20260415

5.5.1.3. Waste Classification/Tank Excavation Sample Nomenclature

In addition to the nomenclature detailed above, any confirmatory endpoint samples collected from a previously unknown tank excavation will be identified by the excavation grid area and the cardinal direction of the sidewalls. The sample(s) collected from the bottom of the excavation will be amended with a “B-”, followed by the number of bottom samples collected from the excavation in sequential order. Waste classification samples will be amended with “WC-” and the alphanumeric grid identification. Five-point composite samples will be amended with “C-” and grab samples to be analyzed for VOCs will be amended with “G-”. Additionally, samples will be amended with the depth the sample was collected in feet below grade in parentheses. Table 4 provides examples of the sampling identification scheme for proposed waste classification samples and any hotspot or tank excavation samples.

Table 4
Waste Classification/Tank Excavation Sample Nomenclature

Sample Description	Sample Designation
Waste classification composite sample collected between grade and 8 feet below grade in Grid A1 on April 1, 2024	WC-A1-C_0-8_20251101
Waste classification grab sample collected between grade and 8 feet below grade in Grid A1 on April 1, 2024	WC-A1-G_0-8_20251101
Soil sample collected from the southern sidewall of the first tank grave encountered at 8 feet below grade on April 1, 2024	UST-1S_8_20251101
Blind duplicate sample collected from the southern sidewall of the first tank grave encountered at 8 feet below grade on April 1, 2024	UST-X_8_20251101

Soil sample collected from the northern sidewall of the second tank grave encountered at 4 feet below grade on April 1, 2024	UST-2N_4_20251101
Soil sample collected from the bottom of the second tank grave at 15 feet below grade on April 1, 2024	UST-2B_15_20251101

5.5.1.4. Sample Labeling and Shipping

All sample containers will be provided with labels containing the following information:

- Project identification, including Site name, BCP Site number, Site address
- Sample identification
- Date and time of collection
- Analysis(es) to be performed
- Sampler's initials

Once the samples are collected and labeled, they will be placed in chilled coolers and stored in a cool area away from direct sunlight to await shipment to the laboratory. All samples will be shipped to the laboratory at least twice per week. At the start and end of each workday, field personnel will add ice to the cooler(s) as needed.

The samples will be prepared for shipment by placing each sample in laboratory-supplied glassware, then wrapping each container in bubble wrap to prevent breakage, and adding freezer packs and/or fresh ice in sealable plastic bags. The COC form will be properly completed by the sampler in ink, and all sample shipment transactions will be documented with signatures, and the date and time of custody transfer. Samples will be shipped overnight (e.g., Federal Express) or transported by a laboratory courier. All coolers shipped to the laboratory will be sealed with mailing tape and a COC seal to ensure that the samples remain under strict COC protocol.

5.5.1.5. Sample Custody

Field personnel will be responsible for maintaining the sample coolers in a secured location until they are picked up and/or sent to the laboratory. The record of possession of samples from the time they are obtained in the field to the time they are delivered to the laboratory or shipped off-site will be documented on COC forms. The COC forms will contain the following information: project name; names of sampling personnel; sample number; date and time of collection and matrix; and signatures of individuals involved in sample transfer, and the dates and times of transfers. Laboratory personnel will note the condition of the custody seal and sample containers at sample check-in.

5.6 Field Instrumentation

Field personnel will be trained in the proper operation of all field instruments at the start of the field program. Instruction manuals for the equipment will be on file at the Site for referencing proper operation, maintenance, and calibration procedures. The equipment will be calibrated according to manufacturer specifications at the start of each day of fieldwork. If an instrument fails calibration, the project manager or QA/QC officer will be contacted immediately to obtain a replacement instrument. A calibration log will be maintained to record the date of each calibration, any failure to calibrate and corrective actions taken. The PID will be equipped with an 10.6 eV lamp and will be calibrated each day using 100 parts per million (ppm) isobutylene

standard gas and the particulate meter will be calibrated each day using a zero filter, in accordance with the manufacturer's standards for the respective equipment.

5.7 Quality Assurance (QA)

All soil, groundwater, and soil vapor laboratory analytical data will be reviewed by a third-party validator and a Data Usability Summary Report (DUSR) will be prepared to document the usability and validity of the data. The Remedial Investigation Report (RIR) will include a detailed description of endpoint sampling activities, data summary tables, concentration map showing sample locations and concentrations, DUSR, and laboratory reports.

ATTACHMENT A

**RESUMES FOR REMEDIAL ENGINEER, PROJECT DIRECTOR, QA/QC OFFICER, PROJECT MANAGER,
FIELD TEAM LEADER, SITE SAFETY OFFICER, AND THIRD-PARTY DATA VALIDATOR**

REBECCA KINAL, P.E.

VICE PRESIDENT

Rebecca Kinal has over 20 years of experience in the assessment and remediation of soil and groundwater contamination and other hazardous/non-hazardous waste problems. Ms. Kinal's experience includes environmental due diligence, soil and groundwater investigations, leaking underground storage tank studies, soil gas/vapor intrusion surveys, and oversight of small- and large-scale remediation programs, including design of groundwater remediation systems and vapor mitigation systems. She has directed numerous Phase I and Phase II investigations and remediation programs, many of them in conjunction with commercial/residential developers, law firms, lending institutions, and public agencies. She is experienced in the cleanup of contaminated properties under New York State Brownfield Cleanup Program (BCP) regulations and the New York City "E-designation" program. As a part of this work, her duties have included technical and report review, proposal writing, scheduling, budgeting, and acting as liaison between clients and regulatory agencies, and project coordination with federal, state, and local authorities.

BACKGROUND

Education

M.S., Hydrogeology, Rensselaer Polytechnic Institute, 1995

B.S., Civil Engineering, Lafayette College, 1992

Licenses/Certifications

State of New York, P.E. Registration No. 082046, 2004

Years of Experience

Year started in company: 2000

Year started in industry: 1996

RELEVANT EXPERIENCE

White Plains Mall/Hamilton Green

Ms. Kinal managed environmental due diligence and remediation planning for the project, which included Phase I and II environmental assessments, a petroleum Spill investigation, preparation of remediation cost estimates, and application to the NYSDEC BCP.

New York City School Construction Authority On-Call Contracts for Environmental Consulting Services, Various Sites, NY

Ms. Kinal serves as the project manager for AKRF's on-call hazardous materials consulting contract with the New York City School Construction Authority for over 8 years. For potential new school sites, assignments include initial due diligence, Phase I environmental site assessments, (ESAs) and subsurface investigation of soil, groundwater, and soil vapor to determine the suitability of a site for development as a school, likely remediation requirements, and associated costs. For sites undergoing design and development, assignments include preparation of remediation plan, contract specifications, and design drawings. The work has also included conducting indoor air quality testing, vapor intrusion assessments, preparation of specifications, supervision of storage tank removals, and investigation and remediation of spills for existing schools. Due to the sensitivity of school sites, work under this contract is often conducted on short notice and during non-school hours.



REBECCA KINAL, P.E.

**VICE PRESIDENT-ENVIRONMENTAL
ENGINEER** | p. 2

USTA National Tennis Center, Queens, NY

AKRF prepared an EIS for the New York City Departments of City Planning (DCP) and Environmental Protection (DEP) as co-lead agencies to analyze the expansion of the National Tennis Center, which includes multiple improvements and construction projects at the USTA campus over several years. As part of the EIS requirements, AKRF prepared a Remedial Action Plan for implementation during the proposed project's construction. In accordance with the RAP, vapor mitigation systems were incorporated into the design for several of the proposed structures at the facility, including two new stadiums, a new transportation center, and several practice court facilities. Ms. Kinal prepared the specifications and design drawings for the vapor mitigation and is providing on-going construction support to review contractor submittals and inspect the vapor barrier and sub-slab depressurization system installations.

Montefiore Medical Center, Various Locations, NY

Ms. Kinal provides due diligence assistance to Montefiore Medical Center (MMC) for the ongoing expansion of their facilities, primarily in the Bronx and Westchester County. She conducts and manages environmental due diligence tasks related to their property transactions, including Phase I Environmental Site Assessments (ESAs), Phase II investigations, and geophysical surveys. She also assists MMC in making decisions with respect to environmental risk issues.

Queens West Development Project, Long Island City, NY

For over 20 years, AKRF has played a key role in advancing the Queens West development, which promises to transform an underused industrial waterfront property into one of largest and most vibrant mixed-use communities just across the East River from the United Nations. AKRF has prepared an Environmental Impact Statement that examines issues pertaining to air quality, land use and community character, economic impacts, historic and archaeological resources, and infrastructure. As part of the project, AKRF also undertook the largest remediation ventures completed to date under the NYSDEC Brownfields Cleanup Program (BCP). Ms. Kinal helped prepare the Remedial Work Plan (RWP) and oversaw the remediation of Parcel 9, a 1.8-acre former industrial site. Remediation includes installation of a sheet pile containment wall, excavation of coal tar- and petroleum-contaminated soil under a temporary structure to control odors during remediation, vapor mitigation for the future buildings, and institutional controls. Upon completion of the remediation activities, Ms. Kinal managed the preparation of a Final Engineering Report (FER) to document the clean-up activities. The NYSDEC issued a Certificate of Completion (COC) for the Parcel 9 site in December 2006. Ms. Kinal continues to oversee post-remediation monitoring and site management activities to ensure that the remedy remains in-place and effective.

Roosevelt Union Free School District, Roosevelt, NY

Ms. Kinal managed environmental investigation and remediation activities for the sites of three new elementary schools and a new middle school in Roosevelt, New York. Remediation activities include removal/closure of contaminated dry wells and underground petroleum storage tanks, and excavation and off-site disposal of petroleum- and pesticide-contaminated soil. Remediation of the new middle school site, which also included a sub-slab depressurization system, was conducted through coordination with the NYSDEC, NYSDOH, New York State Education Department (NYSED), and the local school district. Upon completion of the remediation and school construction, Ms. Kinal managed confirmatory indoor air testing and preparation of a Final Engineering Report to document the site clean-up. The NYSDEC issued a Certificate of Completion and the school was open for the Fall 2008 semester as planned.

Proposed NYC Public School Campus, Bronx, NY

Ms. Kinal provided environmental consulting services to the selected environmental remediation contractor for this former manufactured gas plant in the Mott Haven neighborhood of the Bronx, which was remediated under the NYSDEC BCP. These services included: preparation of an in situ sampling plan and excavation plan for waste



REBECCA KINAL, P.E.

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characterization and disposal; supervision of waste characterization sampling activities; development and implementation of a community air monitoring program during all remediation activities; and daily reporting to the NYC School Construction Authority.

National Grid – Halesite Manufactured Gas Plant Site, Town of Huntington, NY

Ms. Kinal served as the project manager for the remedial design and engineering work associated with remediation of National Grid's former manufactured gas plant (MGP) located in the Town of Huntington. The site is situated in a sensitive location along the waterfront, surround by commercial and residential properties, and half the property where the remediation was conducted is a steep slope. The remedy consisted of soil removal, oxygen injection, and non-aqueous phase liquid recovery. Ms. Kinal developed the remedial work plans, design/construction documents, and managed environmental oversight of the remedial work, including waste characterization and tracking, confirmatory endpoint sampling, air monitoring, and reporting to the NYSDEC. After the remediation work was completed, Ms. Kinal prepared appropriate close-out documentation in accordance with NYSDEC requirements.

Shell Service Station, Millwood, NY

Ms. Kinal planned and oversaw a Phase I Environmental Site Assessment and Phase II Subsurface Investigation of this active gasoline station in northern Westchester County. The Phase I/Phase II investigations were performed for the potential buyer of the property who wished to redevelop it with a more modern service station and convenience store. Ms. Kinal also prepared a conceptual remediation plan to address several areas of petroleum contamination identified during the Phase II. The plan, which was approved by NYSDEC, will be implemented in conjunction with the site redevelopment activities to achieve closure for several spills reported at the site.

Pelham Plaza Shopping Center Site Investigation & Remediation, Pelham Manor, NY

Ms. Kinal managed a Site Investigation at Pelham Plaza, an approximately ten-acre site that formerly contained a manufactured gas plant. The site was investigated under a voluntary clean-up agreement entered into with the NYSDEC by the site owner. The site investigation included advancing over 100 soil borings with continuous soil sampling to bedrock, installing monitoring and recovery wells, and conducting test pitting both indoor and outdoor locations to collect soil and groundwater samples and determine the extent of Non-Aqueous Phase Liquid (NAPL). The investigation also included: soil gas sampling to determine contaminant concentrations in the vapors beneath the foundation of an on-site retail store; sediment sampling in an adjacent creek to identify off-site impacts; and a tidal survey to determine tidal influence on groundwater levels at the site. Ms. Kinal also oversaw interim remedial measures, which include biweekly pumping of recovery wells to remove dense NAPL (DNAPL) from the site subsurface.

Shaws Supermarket Redevelopment Project, New Fairfield, CT

Ms. Kinal managed the Remedial Investigation (RI) for an approximately nine-acre shopping center site that was contaminated by releases from former dry cleaning operations. The site was being redeveloped with a new supermarket and separate retail stores. The investigation included the installation of monitoring wells in the intermediate overburden aquifer and bedrock aquifer, sampling of existing and newly installed wells, geophysical logging in bedrock wells, and pump testing in intermediate and bedrock wells. Ms. Kinal prepared a Remedial Action Work Plan (RAWP) based on results from the RI, which included a groundwater pump and treat system to contain a plume of perchlorethylene (PCE)-contaminated groundwater, and excavation and disposal of contaminated soil in the presumed source area. Following CTDEP approval of the RAWP, Ms. Kinal prepared bid specifications for soil excavation and remediation system installation, and oversaw their implementation. Ms. Kinal also prepared NPDES permit applications for discharges from construction dewatering and the groundwater remediation system, and conducted associated discharge monitoring.



REBECCA KINAL, P.E.

**VICE PRESIDENT-ENVIRONMENTAL
ENGINEER** | p. 4

Yankee Stadium, Bronx, NY

Ms. Kinal performed the hazardous materials analysis for the Draft Environmental Impact Statement for the proposed new Yankee Stadium. The analysis included a Phase I Environmental Site Assessment of the entire project area and Subsurface (Phase II) Investigation in areas where environmental conditions were identified. The Phase II investigation included geophysical surveys to search for potential underground storage tanks; and soil, soil gas, and groundwater sampling at over 40 locations to determine potential environmental impacts during and after the proposed construction. Ms. Kinal also developed an extensive community air monitoring plan and oversaw its implementation during deconstruction of the old Yankee Stadium.

Avalon on the Sound, New Rochelle, NY

Ms. Kinal oversaw environmental investigation and soil remediation during the construction of two luxury high-rise apartment buildings and an associated parking garage. Investigation activities included an electromagnetic survey to search for possible underground storage tanks, and subsurface sampling to characterize soil and groundwater. Remediation activities included removing underground storage tanks, excavating and disposing of soil contaminated with volatile and semi-volatile organic compounds, and collecting end-of-excavation confirmation samples.

Dauids Island Environmental Audit, New Rochelle, NY

Ms. Kinal managed the hazardous materials portion of the audit of this undeveloped island site, including a Phase I Environmental Site Assessment (ESA) and Subsurface (Phase II) Investigation in areas where environmental conditions were identified. The Phase II investigation included collecting soil samples from more than 100 locations and analyzing them for targeted compounds, including volatile organic compounds, semi-volatile compounds, metals, pesticides, and polychlorinated biphenyls (PCBs). Ms. Kinal also oversaw an electromagnetic (EM) survey conducted to identify the location of suspected underground storage tanks on the island. Based on soil sample results, Ms. Kinal estimated the volume of contaminated soil requiring remediation and prepared cost estimates for soil excavation and for transportation and disposal of contaminated soil and hazardous materials.

Outlet City Site Investigation, Queens, NY

Ms. Kinal prepared a work plan for remedial investigation of the Outlet City site, a property in Long Island City that was formerly occupied by a manufacturer of industrial cleaners and pharmaceuticals. The site is being investigated and remediated under the NYSDEC voluntary clean-up program. In preparing the work plan, Ms. Kinal evaluated results from several previous investigations and conducted a limited groundwater sampling program to determine future data needs for designing remediation of creosote-contaminated soil and groundwater. The work plan included additional soil and groundwater sampling, a tidal survey to determine tidal influence on groundwater levels, and pilot free product recovery testing. Ms. Kinal also helped design a venting system for an on-site basement and performed exposure calculations for the vented vapors.

Yonkers Waterfront Redevelopment Project, Yonkers, NY

For this redevelopment along Yonkers' Hudson River waterfront, Ms. Kinal supervised the remediation of Parcels H and I that were contaminated with hazardous soil. During the remediation process, she reviewed the subcontractor health and safety plans, delineated the areas of excavation, and oversaw field activities to ensure compliance with the specifications and appropriate regulations. This property was remediated under the NYSDEC Environmental Restoration Program (ERP).



DEBORAH SHAPIRO, QEP

SENIOR VICE PRESIDENT

Deborah Shapiro is a Senior Vice President in the Site Assessment and Remediation Department. Ms. Shapiro supervises project teams and manages all aspects of assessment and remediation projects across the New York Metropolitan Area. Ms. Shapiro works with developers, non-profit organizations, architects, local community groups, local businesses, and government agencies. Her projects fall under the regulatory oversight of NYSDEC, NYCDEP, and NYCOER including the New York State Brownfield Cleanup Program (BCP), New York City Voluntary Cleanup Program (VCP), NYSDEC petroleum spills program, RCRA/UIC closures, and NYCOER's E-designation program. Ms. Shapiro has also assisted commercial and industrial property owners with maintaining the integrity of their portfolios by providing compliance related cleanup and chemical storage management services. Ms. Shapiro has also been a moderator and panelist at numerous conferences.

Ms. Shapiro manages all aspects of redevelopment projects from the initial Phase I ESA, Phase II, and remediation through post-remedial site management. In addition, her experience includes groundwater investigations, monitoring, and sampling programs; Brownfield and hazardous waste site investigations; In-Situ Chemical Oxidation; underground storage tank studies, including soil contamination delineation, classification, removal and disposal; waste characterization sampling; exposure assessments; on-going remedial action (especially AS/SVE), and permitting.

BACKGROUND

Education

M.S., Environmental Science, American University, 2001

B.A., Environmental Studies, American University, 1998

Professional Licenses/Certifications

Qualified Environmental Professional

Health and Safety Operations at Hazardous Materials Sites 29 CFR 1910.120

OSHA 8 Hour HAZWOPER Supervisor

OSHA 10 Hour Occupational Construction Safety and Health

CPR

Professional Memberships

Past President, New York City Brownfield Partnership

Board Member, Residents for a More Beautiful Port Washington

Member, Institute of Professional Environmental Practitioners (IPEP)

Awards

Big Apple Brownfield Award recipient as part of the Elton Crossing redevelopment team 2017

Big Apple Brownfield Award recipient as part of the Courtlandt Crescent redevelopment team 2013

Big Apple Brownfield Award recipient as part of the Via Verde redevelopment team 2012

Big Apple Brownfield Award recipient as part of the Cornerstone B1 (LaTerraza) redevelopment team 2011

Years of Experience

Year started in company: 2013

Year started in industry: 1998



DEBORAH SHAPIRO, QEP

SENIOR VICE PRESIDENT

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RELEVANT EXPERIENCE

Elton Crossing, Bronx, NY

AKRF provided environmental consulting services in connection with the purchase and redevelopment of the Elton Crossing site at 899 Elton Avenue in the Bronx, NY. The work initially involved the preparation of a Phase II subsurface investigation including soil and soil vapor testing to determine if the site would be eligible for the New York State Brownfield Cleanup Program (NYSBCP). Upon completion of the investigation, AKRF prepared a NYCBCP Application and the site was accepted into the NYSBCP. AKRF managed all aspects of the brownfield cleanup including; development of Investigation Work Plans, performing Remedial Investigations and Reports, preparation of Phase I ESAs, preparation of a Citizen Participation Plan, distribution of public notices, preparation and implementation of a Remedial Action Work Plan (RAWP), design of a sub-slab depressurization system, preparation of the Final Engineering Report and Site Management Plan, and sampling and management of soil disposal. AKRF is in the midst of implementing the Site Management Plan. As project manager, Ms. Shapiro was responsible for managing all technical components of the project, communication with NYSDEC and the Client, and managing the budget.

Second Farms, Bronx, NY

AKRF, Inc. was initially contracted by the New York City Office of Environmental Remediation (NYCOER) to conduct a subsurface investigation of a 1.12-acre parcel in the Bronx, New York under the United States Environmental Protection Agency (USEPA) Brownfield Assessment Grant program. The investigation included a geophysical survey and utility mark-outs, and the collection and analysis of soil, groundwater, soil vapor, indoor air and ambient air samples. AKRF continued working on the project for the developer by preparing a Remedial Action Plan and Environmental Assessment Statement. AKRF is in the midst of implementing the remedy. As project manager, Ms. Shapiro was responsible for managing all technical components of the project, communication with OER, NYCDEP, and the Client, and managing the budget.

Bradhurst Cornerstone II Residences, Manhattan, NY

AKRF, Inc. prepared a Part 58 Environmental Assessment and a City Environmental Quality Review Environmental Assessment Statement for the Bradhurst Cornerstone II Apartments project. Issues of concern for the environmental review included the identification of project commitments for certain of the four sites related to historic resources, hazardous materials, air quality, and building attenuation. As part of the mitigation of hazardous materials, AKRF conducted a Phase II investigation, and prepared a Remedial Action Plan and Construction Health and Safety Plan. As project manager, Ms. Shapiro was responsible for managing all technical components of the hazardous materials portion of the project, communication with the regulatory agency and the Client, and managing the budget.

Lambert Houses, Bronx, NY

AKRF performed an EIS of the Lambert Houses affordable housing complex located in the West Farms section of the Bronx, NY. Lambert Houses consisted of multi-story apartment buildings, parking garage, and a multi-tenant retail/commercial building alongside the elevated NYC subway. AKRF also conducted a Phase I ESA with a vapor intrusion screen of the Property to satisfy HUD's vapor intrusion requirements. The Phase I and vapor intrusion screens were prepared in accordance with ASTM E1527-05, ASTM E2600, and EPA's All Appropriate Inquiry (AAI) rule. After completion of the EIS, an E designation for hazardous materials was placed on the Site. A Subsurface Investigation was conducted and a Remedial Action Work Plan was prepared under OER oversight. The Site was subsequently entered in the NYC Voluntary Cleanup Program. AKRF is in the midst of implementing the RAWP, which included remediation of a hydraulic oil spill. As project manager, Ms. Shapiro was responsible for managing all technical components of the hazardous materials portion of the project, communication with the regulatory agency and the Client, and managing the budget.



DEBORAH SHAPIRO, QEP

SENIOR VICE PRESIDENT

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Brook 156, Bronx, NY

AKRF was retained to provide environmental consulting services in connection with the purchase and development of the Site. AKRF prepared a Phase I Environmental Site Assessment (ESA) of the NYC-owned former gasoline service station and a former railroad. A Tier 1 Vapor Encroachment Screening was also conducted to satisfy HUD's vapor intrusion requirements. AKRF prepared a Remedial Investigation Work Plan (RIWP) and conducted a Remedial Investigation (RI) at the site, which included the collection and analysis of soil, soil vapor, and groundwater. The results of the RI, which were documented in a Remedial Investigation Report (RIR), were used to prepare a New York City Brownfield Cleanup Program (NYCBCP) application. The site was accepted into the New York State Brownfield Cleanup Program (NYSBCP). AKRF prepared a Citizen Participation Plan (CPP), distributed public notices, and conducted multiple Remedial Investigations to further investigate soil, soil vapor, and groundwater at the site prior to redevelopment. The results of the investigations were used to prepare a Remedial Action Work Plan (RAWP), which is undergoing review and approval by NYSDEC. The proposed remedy includes excavation of soil, design and installation of a soil vapor extraction system and sub-slab depressurization system, contingent groundwater treatment program, and installation of a vapor barrier and composite cover system. As project manager, Ms. Shapiro is responsible for managing all technical components of the project, communication with NYSDEC and the Client, and managing the budget.

On-Call Environmental Consulting Services (Various Locations), New York City Mayor's Office of Environmental Remediation (OER) (administered by NYCEDC)

Ms. Shapiro is managing an on-call contract with the OER for brownfields environmental assessment and remediation. The work has included conducting Phase I environmental site assessments (ESAs) and multi-media sampling of soil, groundwater, and soil vapor for various sites funded by EPA grants. The work plans and investigation reports were completed in accordance with OER and EPA requirements. AKRF also implemented a remedial plan for capping a park site in Staten Island. In addition, AKRF provided support to OER and an affordable housing developer to expedite an application for entry into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP), as well as preparation and implementation of the remedial investigation and remedial plan.

Atlantic Chestnut, Brooklyn, NY

AKRF was retained to provide environmental consulting services in connection with the purchase and redevelopment of former burned manufacturing buildings encompassing an entire city block in Brooklyn, New York. As part of due diligence, AKRF prepared a Phase I Environmental Site Assessment (ESA) Report for the property. After acquisition, the property was divided into three separate sites (3264 Fulton Street, 235 Chestnut Street, and 3301 Atlantic Avenue). AKRF prepared a Subsurface (Phase II) Investigation Work Plans and conducted Phase IIs at each of the sites, which included the collection and analysis of soil, soil vapor, and groundwater samples. Based on the results of the Phase IIs, which were documented in Subsurface (Phase II) Reports, New York State Brownfield Cleanup Program (NYSBCP) applications were prepared for each of the sites. After acceptance into the NYSBCP, AKRF prepared Citizen Participation Plans (CPPs) and distributed public notices. AKRF prepared Remedial Investigation (RI) Work Plans (RIWPs) and implemented numerous Remediation Investigations for each of the sites to further investigate contaminated media at the site prior to redevelopment, and prepared the RI Reports (RIRs). AKRF is in the midst of preparing Interim Remedial Work Plans for each Site, which include installation of a Soil Vapor Extraction to prevent the off-site migration of contaminants. As project manager, Ms. Shapiro was responsible for managing all technical components of the project, communication with NYSDEC and the Client, and managing the budget.



MARC S. GODICK, LEP

SENIOR VICE PRESIDENT

Marc Godick, a Senior Vice President of the firm, has over 30 years of experience in the environmental consulting industry. He has broad-based environmental experience includes expertise in brownfield redevelopment, site assessment, remedial investigation, design and implementation of remedial measures, compliance assessment, and litigation support.

BACKGROUND

Education

M.E., Engineering Science/Environmental Engineering, Pennsylvania State University, 1998

B.S., Chemical Engineering, Carnegie Mellon University, 1989

Licenses/Certifications

Licensed Environmental Professional (License # 396), State of Connecticut: 2003–Present

40 Hour HAZWOPER and Annual Refresher Training, 1990–Present

Supervisors of Hazardous Waste Operations (8 Hour), 1990

Professional Memberships

Member, Westchester County Stormwater Advisory Board, 2011–2020

Member, Westchester County Soil and Water Conservation District, 2005–2010, 2019–2020

Member, Village of Larchmont Planning Board, 2018–2019

Chair/Member, Village of Larchmont/Town of Mamaroneck Coastal Zone Management Commission, 1997–2018

Board of Directors, Sheldrake Environmental Center, Larchmont, New York, 2006–2008

Member, NYSDEC Risk-Based Corrective Action (RBCA) Advisory Group for Petroleum-Impacted Sites, 1997

Community Leadership Alliance, Pace University School of Law, 2001

Years of Experience

32 years in the industry

20 years with AKRF

RELEVANT EXPERIENCE

On-Call Environmental Consulting Services (Various Locations), New York City Mayor's Office of Environmental Remediation (NYCOER) (administered by NYCEDC)

Marc is the Principal-in-Charge of an on-call contract with the NYCOER for brownfields environmental assessment and remediation. The work has included conducting Phase I environmental site assessments (ESAs) and multi-media (Phase II) sampling of soil, groundwater, and soil vapor for various sites funded by EPA grants. The work plans and investigation reports were completed in accordance with NYCOER and EPA requirements. AKRF also developed a remedial plan for a former gas station site in the Bronx and implemented a remedial plan for capping a park site in Staten Island. In addition, Marc provided support to OER and an affordable housing developer to expedite an application for entry into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and preparation and implementation of the remedial investigation and remedial plan.

New York City Department of Design and Construction, East Side Coastal Resiliency, Manhattan, NY

Marc led the environmental investigation, remedial design, and related support for a multidisciplinary design team selected by the New York City agency partnership of DDC, DPR, and ORR for the design of the East Side Coastal Resiliency (ESCR) project. The AKRF Team provided design services, for 100+ year storm protection with anticipated sea level rise along the east side of Lower Manhattan. The ESCR subsurface exploration program involved a review of



MARC S. GODICK, LEP

SENIOR VICE PRESIDENT

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available utility plans and environmental reports involving manufactured gas plant (MGP) and potential petroleum-related contamination along a 2.5-mile study area from Montgomery Street to East 25th Street to develop a Subsurface Investigation Work Plan, which was approved by the NYCDEP. The program included both public and private utility mark-out services across vast areas of the project site containing critical infrastructure to enable the installation of numerous shallow and deep borings and groundwater wells. Marc supervised the implementation of the investigation, which was completed in multiple phases. He was also responsible for the interpreting the wide range of chemical parameters to evaluate critical cost and environmental impacts for the City and design team, and to prepare technical reports for submission and approval by the NYCDEP to satisfy for City Environmental Quality Review (CEQR) requirements. Marc also supported the design and environmental review team, including preparation of the Hazardous Materials chapter for the Environmental Impact Statement, estimating cost impacts to the project for design and cost recovery purposes (from Con Edison), and developing a Soil Management Plan. He also managed the evaluation of potential hydraulic and contaminant migration impacts associated with construction of the proposed flood control structure.

Remedial Design, Gowanus Canal First Street Turning Basin, New York City Department of Design and Construction (NYCDDC), Brooklyn, NY

Marc managed the remedial design for restoration of the filled-in former First Street Turning Basin in Brooklyn, New York. The remediation is being conducted as part of an Order of Consent between the City of New York and EPA for the Gowanus Canal Superfund Site. The remedial design includes removal of fill and sediment within the fill-in basing in an approximately 475-by-50-foot area. Design considerations included geotechnical concerns related to adjacent buildings and new and existing bulkheads; soil and water management; landscape design; and access/construction logistics. Marc is providing ongoing design support to the Responsibility Party for construction of the restored turning basin.

On-Call Environmental Consulting (Various Locations), New York City School Construction Authority, New York, NY

Marc is managing an on-call contract with the SCA for environmental assessment, remedial design, and plumbing disinfection. For new school sites, initial due diligence involves conducting Phase I ESAs and multi-media sampling of soil, groundwater, and soil vapor to determine the suitability of a site for development as a school and remediation requirements and associated costs. Once design for a school is underway, AKRF would prepare remediation plans and construction specifications and oversee the construction activities. For existing school sites, the work can involve conducting Phase I ESAs and indoor air quality testing, preparation of specifications, supervision of storage tank removals, investigation and remediation of spills, and development of remediation cost estimates. AKRF also conducts potable water sampling (for lead) and oversees plumbing disinfection work, which is required prior to new plumbing being placed into service. The assignments involve reviewing and commenting on disinfection plans, supervision of the disinfection and confirmation testing, and preparation of a report documenting the work was conducted in accordance with the specifications and applicable requirements. Due to the sensitivity of school sites, work under this contract is often conducted on short notice and during non-school hours.

Remediation & Litigation Support, 3200 Jerome Avenue, Bronx, NY (Former PS 151)

Marc managed the investigation and remediation of a former public school in the Bronx under the New York State Department of Environmental Conservation (NYSDEC) Brownfields Cleanup Program (BCP). The site was contaminated with trichloroethylene (TCE) from historic operations at the property prior to use as a school. The remedial investigation included soil, groundwater, and vapor intrusion assessment both on-site and off-site. The remedial design included excavation of the source area, in-situ chemical oxidation of groundwater, and installation of a sub-slab depressurization system (SSDS) to address to potential vapor intrusion. Implementation of the remedy was complete in late 2014. The completed remediation allows for multi-family residential, educational, childcare, and/or medical uses. Marc has also provided litigation support in connection with a cost recovery claim against the former operator of the site.



MARC S. GODICK, LEP

SENIOR VICE PRESIDENT

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Remediation, Former Industrial Laundry/Dry Cleaning Plant, 2350 Fifth Avenue. New York, NY

Marc managed the assessment, cleanup and post-remedial operations, maintenance and monitoring of the only NYSDEC listed inactive hazardous waste (State Superfund) site in Manhattan, a former laundry/dry cleaning plant in Harlem. Remedial investigation included evaluation of soil, groundwater, soil vapor, indoor air, and building materials. Interim remediation included the removal of contaminated building materials and operation of a sub-slab vapor extraction system retrofitted into the existing building. Marc coordinated with the regulatory agencies, site owner and occupants; and managed the investigation, remedial design, and remedial implementation activities. Phase 1 of the Remedial Action Work Plan consisted of further removal of contaminated building materials. Phase 2 of the remediation included an SSDS retrofitted into the existing building, soil vapor extraction (SVE) system, and chemical oxidation injection. Remedial action work was completed in 2014 and documented in a Final Engineering Report. NYSDEC issued Certificate of Completion in January 2015 and the site has been reclassified to a “Class 4” site (site properly closed – requires continued management). Marc continues to manage the project, including operations, maintenance and monitoring of the SSDS and SVE systems under the NYSDEC-approved Site Management Plan.

606 West 57th Street, New York, NY, TF Cornerstone

Marc was responsible for the elements of the EIS pertaining to hazardous materials, including coordination of a Phase I ESA and summarizing pertinent site information for the hazardous materials and construction chapters. He provided pre-acquisition support to TF Cornerstone, which included development of a remedial cost estimate report to outline remediation cost during site development. Marc also managed work related to the subsurface investigation, localized remediation (chemical injection and limited excavation beneath the building basement) and regulatory closure of a petroleum spill on a portion of the project site to satisfy NYSDEC requirements. After EIS certification, Marc coordinated approvals with NYCOER, the regulatory agency overseeing remedial measures related to the redevelopment of the site. The Site has an (E) Designation and participated in the New York City Voluntary Cleanup Program. He managed the preparation of a Phase II Investigation Work Plan, Remedial Investigation Report, Remedial Action Work Plan, and contractor specifications for soil management and tank and hydraulic lift removal. Marc also managed the project during remediation and construction, and a Notice of Satisfaction has been issued by NYCOER.

ADRIANNA BOSCO

SENIOR PROFESSIONAL

Adrianna Bosco is a Senior Professional in AKRF's Site Assessment and Remediation Department. She has experience in navigating redevelopment projects through regulatory requirements under local and state programs. Ms. Bosco has worked closely with projects enrolled in the NYSDEC Brownfield Cleanup Program, the New York City Voluntary Cleanup Program (VCP), and NYSDEC petroleum spills program, from initial stages of investigation and remediation, through site closure and post-remedial management. Ms. Bosco also has experience in preparing Phase I Environmental Site Assessments and Subsurface (Phase II) Investigations, in addition to conducting environmental/construction oversight and the associated reporting elements. Prior to joining AKRF, she worked as an Environmental Scientist for PS&S Engineering, Inc.

BACKGROUND

Education

B.S., Environmental Engineering, Manhattan College, Bronx, New York, 2011

Licenses/Certifications

40 Hour OSHA HAZWOPER Certified, September 2011

10 Hour OSHA Construction Program Certified, October 2013

Years of Experience

Date started at AKRF: July 2014

Prior industry experience: PS&S Engineering, Inc. December 2011 – July 2014 (2 years, 7 months)

RELEVANT EXPERIENCE – AKRF

147-25 94th Avenue, Queens, NY

This historical meat refrigeration facility is enrolled in the Brownfield Cleanup Program to remediate the property and construct a 23-story affordable residential building. Although the site has an E-Designation for hazardous materials, noise, and air quality, AKRF assisted with applying for entry into the NYSDEC Brownfield Cleanup Program, due to the presence of contaminated soil and soil vapor beneath the site. AKRF is providing environmental consulting services throughout the project. As the Deputy Project Manager, Ms. Bosco prepared the Brownfield Cleanup Program application and Remedial Work Plan. Ms. Bosco also managed field activities associated with the Remedial Investigation, to determine the vertical and horizontal extent of on-site contamination. Once construction begins, Ms. Bosco will also manage the on-site remediation and prepare NYSDEC-required submittals and reports.

1888 Bathgate Avenue Redevelopment Site, Bronx, NY

AKRF is providing environmental consulting services in connection to the investigation and remediation of an approximately 36,000-square foot parcel enrolled in the Brownfield Cleanup Program. This former steel door manufacturing facility is contaminated with chlorinated solvents, including tetrachloroethene. The selected remedy included site-wide excavation of soil and bedrock, continuous air monitoring, collection of post-excavation endpoint samples, and implementation of an in-situ groundwater treatment program. As the Deputy Project Manager for this project, Ms. Bosco is managing various field efforts, including a Remedial Design Investigation to develop the groundwater treatment program and implementation of the Remedial Action Work Plan. Upon



ADRIANNA BOSCO

SENIOR PROFESSIONAL

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completion of the remediation, Ms. Bosco will prepare the Final Engineering Report and Site Management Plan for submission to the NYSDEC.

East Side Coastal Resiliency, Manhattan, NY

Ms. Bosco served as an Environmental Scientist and conducted a portion of the 2016 subsurface investigation of the 2.5 mile study area from Montgomery Street to East 23rd Street. The ESCR subsurface exploration program involved a review of available utility plans and environmental reports involving manufactured gas plant (MGP) and petroleum-related contamination. Responsibilities included groundwater sampling, soil boring and temporary well installation, and compliance with the Supplemental Subsurface Investigation Work Plan.

Elton Crossing, Bronx, NY

AKRF's work includes the implementation of the NYSDEC-approved Remedial Action Work Plan for this former industrial property, including: in-situ testing, off-site transport, the closure of two petroleum spills; the registration, removal, and closure of five petroleum storage tanks encountered during excavation; and the delineation of soil contaminants, including hazardous lead, petroleum, and pesticides. As the Environmental Scientist, Ms. Bosco provided remedial oversight during soil excavation, confirmatory endpoint sampling, SSDS piping installation and inspections, vapor barrier installation, and air monitoring for particulates and volatile organic compounds (VOCs).

145 West Street, Greenpoint, Brooklyn, NY

As the Environmental Scientist and Deputy Project Manager for this project, Ms. Bosco conducted a supplemental remedial investigation, including soil and groundwater sampling, and several rounds of waste characterization soil sampling. Ms. Bosco also performed remedial oversight during activities such as soil excavation and off-site disposal, underground storage tank (UST) removal, SSDS piping installation and testing, and routine air monitoring. Ms. Bosco also aided in the preparation of the Final Engineering Report (FER) and Site Management Plan (SMP).

Former Laundry/Dry Cleaning Plant, New York, NY

Ms. Bosco served as the Environmental Scientist of the only New York State Department of Environmental Conservation's (NYSDEC) listed inactive hazardous waste (State Superfund) site in Manhattan, a former laundry/dry cleaning plant in Harlem. Remedial investigation included evaluation of soil, groundwater, soil vapor, indoor air, and building materials. Interim remediation included the removal of contaminated building materials and operation of an innovative sub-slab vapor extraction system retrofitted into the existing building. As the Environmental Scientist, Ms. Bosco performed remedial action oversight, including SSDS piping installation inspections and Health and Safety Plan (HASP) air monitoring for volatiles and particulates. Remedial action work was completed in 2014 and documented in a Final Engineering Report. NYSDEC issued Certificate of Completion in January 2015 and the site has been reclassified to a "Class 4" site (site properly closed – requires continued management). Ongoing activities continue under the NYSDEC-approved Site Management Plan, including operations, maintenance and monitoring of the SSDS and SVE system.

RELEVANT EXPERIENCE – OTHER

PS&S Engineering, Inc. (PS&S), Yonkers, NY

Before joining AKRF, Ms. Bosco was an Environmental Scientist in the Environmental Department at PS&S. She was responsible for conducting site investigations and providing construction oversight for remediation projects in New York and New Jersey. As a staff scientist, she was responsible for sampling and analysis of various media, preparing technical reports and work plans, and conducting Phase I Environmental Site Assessments.



STEPHEN SCHMID

ENVIRONMENTAL SCIENTIST

Stephen Schmid is an Environmental Scientist in AKRF's Hazardous Materials Department with ten years of experience. He has experience in Phase I and II site assessments, asbestos surveying and monitoring, and construction/remediation. Mr. Schmid is a 2011 graduate from the University of New Hampshire, where he studied marine and freshwater biology, and environmental conservation. Prior to joining AKRF Mr. Schmid conducted fieldwork, water sampling and analysis in addition to assisting in a study of lakes in the North Eastern United States.

BACKGROUND

Education

BS Marine & Freshwater Biology, University of New Hampshire, Durham, NH

Licenses/Certifications

40 Hour OSHA HAZWOPER

30 Hour OSHA Construction Health and Safety

10 Hour OSHA Construction Health and Safety

10 Hour OSHA NYC Site Safety Training

Asbestos Project Monitor, Air Sampling Technician, Inspector and Investigator

Years of Experience

Year started in company: 2012

Year started in industry: 2011

RELEVANT EXPERIENCE

Willets Point, Queens, NY

AKRF supported the New York City Economic Development Corporation (EDC) with Phase 1 of the Willets Point Redevelopment Plan, which includes the demolition of existing structures. Mr. Schmid performed pre-demolition asbestos-containing materials and universal waste surveys of approximately 70 structures throughout the 23-acre area site in Queens along with an AKRF licensed NYC asbestos investigator.

Adelaar, Monticello, NY

The project is a multi-phase development consisting of approximately 1,700 acres. The project site has been developed with a mixed-use residential-commercial hotel, casino, water park and entertainment village. AKRF provided acquisition and development support, including performing Phase I and II environmental site assessments. Mr. Schmid provided assistance with Phase I assessments, oversight during remedial soil handling activities and conducted inspections in accordance with the Stormwater Pollution and Prevention Plans.

NYCHA Randolph Houses, W 114th Street, Harlem, NY

AKRF was directed to survey 14 five story affordable housing apartment buildings for potential asbestos containing materials prior to the renovation of the buildings. Mr. Schmid along with AKRF licensed NYC asbestos



STEPHEN SCHMID

ENVIRONMENTAL SCIENTIST | p. 2

investigators performed the collection of bulk samples throughout the building's main floors, basements and roofs to confirm the presence of asbestos in some of the building materials.

25 Broad Street, Manhattan, NY

AKRF was contracted by LCOR during the demolition of a residential building on a property which will eventually be redeveloped. AKRF was responsible for creating and implementing a community air monitoring program during demolition activities. As the environmental scientist Mr. Schmid was the on-site monitor responsible for calibrating equipment and monitoring levels of volatile organic compounds and particulate matter for the surrounding area and construction personnel. Reports of the daily activity including data collected throughout the day were prepared for submittal to the client.

Kent Avenue, Brooklyn, NY (AKA Northside Piers and 1 North 4th Place)

The project was a multi-phase development consisting of a waterfront block in the Williamsburg Rezoning Area. The project site has been developed with a mixed-use residential-commercial high rise towers with an esplanade and a pier along the East River. AKRF provided acquisition and development support, including performing Phase I and II environmental site assessments, and preparation of Remedial Action Plans (RAPs) and Construction Health and Safety Plan (CHASPs) for approval by DEP and OER. As the environmental scientist Mr. Schmid provided assistance with construction oversight during soil handling activities and managing the Community Air Monitoring Plan (CAMP) activities.

Residential Redevelopment Site, Brooklyn, NY

AKRF was retained to investigate and remediate this former industrial property in the Williamsburg section of Brooklyn, New York in connection with site redevelopment. The site is approximately 50,000 square feet, and redevelopment included a six story residential building and parking garage. The work was completed to satisfy the requirements of the NYC E-designation Program and NYC Voluntary Cleanup Program (NYC VCP). AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation included removal of underground storage tanks, more than 7,500 tons of contaminated soil, and installation of a vapor barrier and site cap across the entire property. The remediation was completed under oversight of the NYC Office of Environmental Remediation (OER), and in a manner that has rendered the Site protective of public health and the environment consistent with residential use of the property. As the environmental scientist Mr. Schmid conducted construction oversight and community air monitoring during the removal of contaminated soil.

Pier 40, 353 West Street, New York, NY

AKRF was directed to survey the property for potential asbestos containing materials prior to renovations and upgrades to multiple rooms. As the environmental scientist Mr. Schmid collected bulk samples to test for asbestos along with an AKRF licensed NYC asbestos investigator. Results confirmed the presence of asbestos in some of the rooms and Mr. Schmid subsequently provided project monitoring and the collection of air samples during the abatement.

137-44 94th Avenue, Queens, NY

AKRF was contracted to survey the building for potential asbestos containing materials prior to demolition. As the environmental scientist Mr. Schmid collected bulk samples to test for asbestos along with an AKRF licensed NYC asbestos investigator. Results confirmed the presence of asbestos in an office, trailer and the roof. During abatement Mr. Schmid served as the project monitor and collected daily air samples.

The Home Depot, Rego Park, NY



STEPHEN SCHMID

ENVIRONMENTAL SCIENTIST

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AKRF has designed, installed and performed upgrades to an air sparging and soil vapor extraction system being used to remediate tetrachloroethene contamination at this site under the NYSDEC Voluntary Cleanup Program. As the environmental scientist Mr. Schmid has performed low flow, indoor air and effluent sampling as part of ongoing monitoring activities to assess the progress of the cleanup.

AP-Williamsburg, LLC, 50 North 5th Street Development, Brooklyn, NY

AKRF directed the remedial program at a 55,000-square foot site located in the Williamsburg section of Brooklyn, New York. The site had an industrial and manufacturing history for over 100 years that included a barrel making factory, use of kilns, and a carpet and flooring materials warehouse. AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation included removal of more than 5,000 tons of contaminated soil, and installation of a vapor barrier and sub-slab depressurization system (SSDS) beneath the site building. The remediation was completed in a manner that has rendered the Site protective of public health and the environment consistent with commercial and residential use of the property, and in accordance with the requirements of the NYC OER E-designation program. The site includes a seven story residential apartment building with street level retail space and a parking garage. As the environmental scientist Mr. Schmid provided oversight and community air monitoring during construction activities.

Gedney Way Leaf and Yard Waste Composting Facility, White Plains, NY

AKRF directed the remediation and landfill closure project at the existing composting facility. The project included investigation to document disposal history, extent of landfill materials and a solvent plume, preparation of a landfill closure plan, and management of landfill closure and cap construction. The landfill investigation and closure activities were completed to satisfy the requirements of a New York State Department of Environmental Conservation's (NYSDEC) consent order, and were completed in compliance with NYSDEC DER-10 and 6NYCRR Part 360. As the environmental scientist Mr. Schmid performed construction oversight and low-flow groundwater sampling during construction activities.

443 Greenwich Street, New York, NY

AKRF was retained to investigate and remediate this property in the Tribeca section of Manhattan, New York in connection with site redevelopment for a multi-story residential building. AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation included removal of contaminated soil and installation of a vapor barrier. The remediation was completed under oversight of the NYC Office of Environmental Remediation (OER), and in a manner that has rendered the Site protective of public health and the environment consistent with residential use of the property. As the environmental scientist Mr. Schmid conducted construction oversight and community air monitoring during the removal of contaminated soil.

606 W 57th Street, New York, NY

AKRF was retained to investigate and remediate this property in Manhattan, New York in connection with site redevelopment for a multi-story residential structure. The work is being completed to satisfy the requirements of the NYC E-designation Program. AKRF completed a Remedial Investigation (RI) to evaluate the nature and extent of site contamination, and developed a Remedial Action Work Plan (RAWP) to properly address site contamination during redevelopment. Remediation includes removal of underground storage tanks and contaminated soil. The remediation is being completed under oversight of the NYC Office of Environmental Remediation (OER), and in a manner that has rendered the Site protective of public health and the environment consistent with residential use of the property. As the environmental scientist Mr. Schmid conducted construction oversight and community air monitoring during the removal of contaminated soil.



STEPHEN SCHMID

ENVIRONMENTAL SCIENTIST | p. 4

NYCEDC Office of Environmental Remediation (OER) On-Call Environmental Consulting Services

Second Farms, Bronx, NY

AKRF, Inc. was contracted by OER to conduct a subsurface investigation of a 1.12-acre parcel in the Bronx, New York under the United States Environmental Protection Agency (USEPA) Brownfield Assessment Grant program. As the environmental scientist Mr. Schmid assisted in the investigation which included a geophysical survey and utility mark-outs, and the collection and analysis of soil, groundwater, soil vapor, indoor air and ambient air samples.

Former Nelson Foundry, Long Island City, NY

AKRF, Inc. was contracted by OER to conduct a subsurface investigation around the perimeter of a former foundry property in Long Island City, New York under the USEPA Brownfield Assessment Grant program. The work included preparation of a rigorous investigation work plan, Quality Assurance Project Plan, and Health and Safety Plan. The investigation will include a geophysical survey and utility mark-outs and the collection and analysis of soil, groundwater, soil vapor, and ambient air samples. The project also requires careful coordination of investigation-derived waste due to lack of on-site storage and daily drum pick-ups. As the environmental scientist Mr. Schmid conducted low flow sampling for the analysis of groundwater.



Background

Education

MS, Agricultural & Biological Engineering, Purdue University

BA, Psychology, State University of New York College at Oneonta

BS, Environmental Science, State University of New York College at Oneonta

Shannon Donohue

Environmental Engineer

Shannon is an Environmental Scientist at AKRF. Her experience includes soil and water sampling; data analysis and technical report writing; project management, supervision and public speaking; and laboratory analyses (gas chromatography, inductively coupled plasma [OES], spectrophotometers and other instruments). Shannon is proficient with Microsoft Office, ArcGISTM and R statistical software.

Relevant Experience

Cloudburst Parkchester, Bronx, NY

Shannon performed an environmental site assessment for three properties in the Parkchester neighborhood of the Bronx to facilitate the development of green infrastructure aimed at reducing stormwater runoff. She also worked closely with engineers and DEP staff to produce a Phase II investigation work plan aimed at assessing soil and groundwater conditions at the sites. This work is ongoing, and Shannon is expected to carry out the work plan including soil and groundwater sampling across the sites.

Fresh Kills Monitoring, Staten Island, NY

Shannon provided remedial oversight during construction of the new DSNY garage. This included inspecting remedial systems (SSDS) during installation, documenting daily activities and air quality on site, and writing daily and weekly reports to submit to the DEC.

346 Powers Avenue (323 Jackson Avenue), Bronx, NY

Shannon provided site assessment/remediation services for the redevelopment of 346 Powers Avenue in the Mott Haven neighborhood of the Bronx. Shannon oversaw remedial excavation including the removal and proper closure of undocumented underground storage tanks on site. She assisted with delineating contamination associated with the storage tanks by taking field measurements of soil vapor until contamination was no longer evident and collecting confirmatory endpoint soil samples for laboratory analysis.

Wilson Houses, New York, NY

Shannon served on the AKRF team providing environmental consulting services to several NYCHA properties undergoing renovations. Her role included writing a Phase II investigation work plan, coordinating with subcontractors to perform soil, soil vapor, and groundwater sampling on site, and summarizing the findings in a Phase II Report. Based on the findings, Shannon wrote a remedial action plan for submission to the DEC to address lead contaminated soil.

221 Glenmore Avenue, Brooklyn, NY

Shannon served on the AKRF team performing remedial investigation and providing environmental consulting services for the development of the new HELP Women's Shelter. This included sampling soil, groundwater, and soil vapor to quantify and delineate PCE/TCE contamination on site as part of the Brownfield Cleanup Program. Shannon continues to provide oversight during remediation and construction including shipment of hazardous waste, coordination of groundwater treatment activities (in-situ chemical oxidation), inspection during the installation of remedial systems (SSDS, SVE, injection wells), community air monitoring, and writing daily reports to submit to the DEC.

Chad Walters

Environmental Scientist



Education

BS, Environmental Studies, Emory University

MS, Energy Management, New York Institute for Technology, (expected December 2024)

Chad Walters is an Environmental Scientist in AKRF's Site Assessment and Remediation Department. His experience includes implementing Phase I Environmental Site Assessments, Subsurface (Phase II) Investigations and/or Remedial Investigations. He is proficient in overseeing remedial action programs under the New York State Department of Environmental Conservation (NYSDEC), Brownfield Cleanup Program (BCP), and NYC Office of Environmental Remediation (OER) E-Designation program, including soil excavation, community air monitoring, remedial system installation, and collection of soil, groundwater, and soil vapor samples.

Relevant Experience

Colden Avenue, the Bronx, NY

Chad served on the AKRF Team involved in the remedial construction for an approximately 9,000-sf site in the Bronx with E-Designations for Hazardous Materials and Air Quality conducted under NYCOER and within NYCOER's Volunteer Cleanup Program (VCP). He was responsible for environmental oversight monitoring, which included overseeing soil management and outgoing waste tracking, implementing the Community Air Monitoring Program (CAMP), and preparation of daily and weekly reports for submittal to NYCOER.

Starhill at 1600 Macombs Road, Bronx, NY

Chad was responsible for environmental oversight monitoring on the AKRF Team providing site assessment/remediation services for Starhill, a proposed 14-story affordable housing and community facility development in the Bronx. Chad's responsibilities included overseeing soil management and outgoing waste tracking, implementing the CAMP, and preparation of daily reports for Phases I and II of Starhill. He also performed waste classification sampling for Phase II of Starhill. AKRF is also preparing the Environmental Assessment Statement pursuant to CEQR requirements.

New York City Public Health Laboratory, New York, NY

Chad performed remedial oversight for soil excavation and acted as agent for generator to sign off on soil export and import trucks as part of AKRF's assessment /remediation services for a new 10-story, 240,000-sf laboratory. AKRF is implementing a CAMP during the demolition of existing structures and will oversee site work for construction of the new \$454 million building in accordance with a NYCDEP-approved Remedial Action Plan. The building's topping-out ceremony was September 2023.

1559 Boone Avenue, Bronx, NY

Chad was responsible for performing remedial oversight and conducting soil, groundwater, and soil vapor sample collection for a new eight-story, 66-unit supportive housing building at 1559 Boone Avenue in the Bronx. He was also responsible for the oversight of the sub-slab depressurization system (SSDS) and preparation of the Final Engineering Report.

Lori A. Beyer

SUMMARY:

General Manager/Laboratory Director with a solid technical background combined with Management experience in environmental testing industry. Outstanding organizational, leadership, communication and technical skills. Customer focused, quality oriented professional with consistently high marks in customer/employee satisfaction.

EXPERIENCE:

1998-Present L.A.B. Validation Corporation, 14 West Point Drive, East Northport, NY

President

- Perform Data Validation activities relating to laboratory generated Organic and Inorganic Environmental Data.

1998-Present American Analytical Laboratories, LLC. 56 Toledo Street, Farmingdale, NY

Laboratory Director/Technical Director

- Plan, direct and control the operation, development and implementation of programs for the entire laboratory to meet AAL's financial and operational performance standards.
- Ensures that all operations follow AAL's QA manual and other appropriate regulatory requirements.
- Actively maintains a safe and healthy working environmental that is demanded by local laws/regulations.
- Monitors and manages group's performance with respect to data quality, on time delivery, safety, analyst development/goal achievement and any other key performance indices.
- Reviews work for accuracy and completeness prior to release of results to customers.

1996-1998 Nytest Environmental, Inc. (NEI) Port Washington, New York

General Manager

- Responsible for controlling the operation of an 18,000-square foot facility to meet NEI's financial and operational performance standards.
- Management of 65 FTEs including Sales and Operations
- Ensure that all operations follow NEI's QA procedures
- Ensures that productivity indicators, staffing levels and other cost factors are held within established guidelines
- Maintains a quantified model of laboratory's capacity and uses this model as the basis for controlling the flow of work into and through the lab to ensure that customer requirements and lab's revenue and contribution targets are achieved.

1994-1996 Nytest Environmental, Inc. (NEI) Port Washington, New York

Technical Project Manager

- Responsible for the coordination and implementation of environmental testing programs requirements between NEI and their customers
- Supervise Customer Service Department
- Assist in the development of major proposals
- Complete management of all Federal and State Contracts and assigned commercial contracts
- Provide technical assistance to the customer, including data validation and interpretation
- Review and implement Project specific QAPP's.

1995 Nytest Environmental, Inc. (NEI) Port Washington, New York

Corporate QA/QC Officer

- Responsible for the implementation of QA practices as required in the NJDEP and EPA Contracts
- Primary contact for NJDEP QA/QC issues including SOP preparation, review and approval
- Responsible for review, verification and adherence to the Contract requirements and NEI QA Plan

1992-1994 Nytest Environmental, Inc. (NEI) Port Washington, New York

Data Review Manager

- Responsible for the accurate compilation, review and delivery of analytical data to the company's customers. Directly and effectively supervised a department of 22 personnel.
- Managed activities of the data processing software including method development, form creation, and production
- Implement new protocol requirements for report and data management formats
- Maintained control of data storage/archival areas as EPA/CLP document control officer

1987-1991 Nytest Environmental, Inc. (NEI) Port Washington, New York

Data Review Specialist

- Responsible for the review of GC, GC/MS, Metals and Wet Chemistry data in accordance with regulatory requirements
- Proficient with USEPA, NYSDEC, NJDEP and NEESA requirements
- Review data generated in accordance with SW846, NYSDEC ASP, EPA/CLP and 40 CFR Methodologies

1986-1987 Nytest Environmental, Inc (NEI) Port Washington, New York

GC/MS VOA Analyst

EDUCATION:

1982-1985 State University of New York at Stony Brook, New York; BS Biology/Biochemistry

1981-1982 University of Delaware; Biology/Chemistry

5/91 Rutgers University; Mass Spectral Data Interpretation Course, GC/MS Training

8/92 Westchester Community College; Organic Data Validation Course

9/93 Westchester Community College; Inorganic Data Validation Course

Qualifications Summary

Mr. Armbruster began his career in the environmental testing business in 1983. His experience in the environmental laboratory and engineering industry includes extensive technical, management/leadership experience in all aspects of the laboratory business. He is an action-oriented manager dedicated to ensuring the laboratory maintains a quality program that values data integrity, continuous improvement and customer satisfaction. His unique experience lends itself to working successfully with employees, managers and clients at all levels.

Professional Experience

Quality Assurance Manager – Eurofins Edison - 2005 to Present

Mr. Armbruster is responsible for establishment and implementation of the quality assurance program at the Edison facility; and for interfacing with the corporate Quality Assurance Director to ensure adherence with the overall Quality Management Plan. He is also responsible for monitoring implementation and compliance with NELAC and the company's QMP, conducting annual management system audits and data audits, as well as providing regulatory updates and technical support to the Laboratory Director, Operations Manager, Client Services and Sales department.

Project Manager/Assistant Technical Director – 2000 to 2005**Laboratory Director – 1998 to 2000****Account Manager – Clean Harbors Environmental Services – 1997 to 1998****Laboratory Manager – Waste Management Inc., and Chemical Waste Management Inc – 1988 to 1997****Environmental Scientist – ICF Technology – 1987 to 1988****Analytical Chemist – IT Corporation – 1985 to 1987****Analytical Chemist – Hess Environmental Laboratories – 1983 to 1985****Education**

- ♦ MS in Biology – East Stroudsburg University, 1984
- ♦ BS in Environmental Studies - East Stroudsburg University, 1980

APPENDIX G
HEALTH AND SAFETY PLAN

EAST 138TH STREET AFFORDABLE HOUSING

BRONX, NEW YORK

Health and Safety Plan

NYSDEC BCP Site No: C203155
AKRF Project Number: 210261

Prepared For:

New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor
Albany, New York 12233

Prepared On Behalf Of:

East 138th Street JV Associates LLC
257 Park Avenue South, 12th Floor
New York, NY 10010

Prepared by:

akrf

AKRF, Inc.
440 Park Avenue South, 7th Floor
New York, New York 10016
212-696-0670

SEPTEMBER 2025

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Attachment A – Potential Health Effects from On-Site Contaminants
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Attachment C – Emergency Hand Signals

1.0 INTRODUCTION

This environmental Health and Safety Plan (HASP) has been developed for the implementation of a Remedial Action Work Plan (RAWP) by AKRF, Inc. (AKRF) personnel and its subcontractors at the property located at 110 East 138th Street in the Mott Haven section of the Bronx, New York, hereafter referred to as the “Site.” The Site is identified by the City of New York as Borough of the Bronx Block 2323, Lot 43 on the New York City Tax Map. The Volunteer is enrolled in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) as a Volunteer under BCP Site No. C203155.

The Site currently consists of a vacant one-story building with a basement and an adjacent one-story steel shed that most recently housed a used auto sales facility with a repair shop from 2005 through 2019. The Site location is shown on Figure 1, and the Site layout is shown on Figure 2. The Site is abutted to the north by East 138th Street, followed by the Madison Avenue Bridge; to the south by the Padded Wagon[®] moving company warehouse and associated parking; to the east by Exterior Street, followed by the Major Deegan Expressway; and to the west by a freight train rail line, followed by the Harlem River. The surrounding area is comprised of predominantly commercial and industrial uses, with some parkland to the east. Surrounding land use is shown on Figure 3.

This HASP does not discuss routine health and safety issues common to general construction and excavation, including, but not, limited to slips, trips, falls, shoring, and other physical hazards. All AKRF employees are directed that all work must be performed in accordance with AKRF's Generic HASP and all Occupation Safety and Health Administration (OSHA)-applicable regulations for the work activities required for the project. All project personnel are furthermore directed that they are not permitted to enter Permit Required Confined Spaces (as defined by OSHA). For issues unrelated to contaminated materials, all non-AKRF employees are to be bound by all applicable OSHA regulations as well as any more stringent requirements specified by their employer in their corporate HASP or otherwise. AKRF is not responsible for providing oversight for issues unrelated to contaminated materials for non-employees. This oversight shall be the responsibility of the employer of that worker or other official designated by that employer.

2.0 HEALTH AND SAFETY GUIDELINES AND PROCEDURES

2.1 Hazard Evaluation

2.1.1 Hazards of Concern

Hazards of concern include: organic and inorganic chemicals, and heat and/or cold stress.

2.1.2 Physical Characteristics

Physical characteristics of the hazards of concern include solid, aqueous, and vapor states.

2.1.3 Hazardous Materials

The Site-specific hazardous materials that may be encountered during RAWP implementation include: historical fill material, solvent- and petroleum-related volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and/or metals.

2.1.4 Chemicals of Concern

Chemical	REL/PEL/STEL	Health Hazards
Acetone	NIOSH REL TWA 250 ppm (590 mg/m ³) OSHA PEL TWA 1000 ppm (2400 mg/m ³)	Irritation eyes, nose, throat; headache, dizziness, central nervous system depression; dermatitis
Arsenic	REL C: 0.002 mg/m ³ PEL: 0.010 mg/m ³	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, resp irritation, hyperpigmentation of skin, [potential occupational carcinogen].
Barium	The Occupational Safety and Health Administration (OSHA) has set Permissible Exposure Limits (PELs) of 0.5 milligrams of soluble barium compounds per cubic meter of workplace air (0.5 mg/m³) for 8 hour shifts and 40 hour work weeks. The OSHA limits for barium sulfate dust are 15 mg/m³ of total dust and 5 mg/m³ for respirable fraction. The National Institute for Occupational Safety and Health (NIOSH) has set Recommended Exposure Limits (RELs) of 0.5 mg/m³ for soluble barium compounds. The NIOSH has set RELs of 10 mg/m³ (total dust) for barium sulfate and 5 mg/m³ (respirable fraction).	Barium has been found to potentially cause gastrointestinal disturbances and muscular weakness when people are exposed to it at levels above the EPA drinking water standards for relatively short periods of time. Some people who eat or drink amounts of barium above background levels found in food and water for a short period may experience vomiting, abdominal cramps, diarrhea, difficulties in breathing, increased or decreased blood pressure, numbness around the face, and muscle weakness. Eating or drinking very large amounts of barium compounds that easily dissolve can cause changes in heart rhythm or paralysis and possibly death. Animals that drank barium over long periods had damage to the kidneys, decreases in body weight, and some died

Chemical	REL/PEL/STEL	Health Hazards
Cadmium	REL: 0.005 mg/m ³	Pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen].
Chromium	REL: 0.5 mg/m ³ PEL: 1 mg/m ³	Irritation eyes, skin; lung fibrosis (histologic).
Copper	REL: 1 mg/m ³ PEL: 1 mg/m ³	Irritation eyes, nose, pharynx; nasal septum perforation; metallic taste; dermatitis; In Animals: lung, liver, kidney damage; anemia.
DDD, DDE, & DDT	REL: 0.5 mg/m ³ PEL: 1 mg/m ³	Irritation eyes, skin; paresthesia tongue, lips, face; tremor; anxiety, dizziness, confusion, malaise (vague feeling of discomfort), headache, lassitude (weakness, exhaustion); convulsions; paresis hands; vomiting; [potential occupational carcinogen].
Lead	REL: 0.050 mg/m ³ PEL: 0.050 mg/m ³	Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension.
Manganese	REL: 1 mg/m ³ N STEL: 3 mg/m ³ PEL C: 5 mg/m ³	Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like fever; low-back pain; vomiting; malaise (vague feeling of discomfort); lassitude (weakness, exhaustion); kidney damage.
Mercury	REL: 0.05 mg/m ³ REL C: 0.1 mg/m ³ PEL: 0.1 mg/m ³	Irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria.
Nickel	REL: 0.015 mg/m ³ PEL: 1 mg/m ³	Sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen].

Chemical	REL/PEL/STEL	Health Hazards
PAHs	REL: 0.1 mg/m ³ PEL: 0.2 mg/m ³	Effects reported from occupational exposure to PAHs include chronic bronchitis, chronic cough irritation, bronchogenic cancer, dermatitis, cutaneous photosensitization, and pilosebaceous reactions. Reported health effects associated with chronic exposure to coal tar and its by-products (e.g., PAHs): Skin: erythema, burns, and warts on sun-exposed areas with progression to cancer. The toxic effects of coal tar are enhanced by exposure to ultraviolet light. Eyes: irritation and photosensitivity. Respiratory system: cough, bronchitis, and bronchogenic cancer. Gastrointestinal system: leukoplakia, buccal-pharyngeal cancer, and cancer of the lip. Hematopoietic system: leukemia (inconclusive) and lymphoma. Genitourinary system: hematuria and kidney and bladder cancers.
Tetrachloroethylene	PEL: 100 ppm PEL C: 200 ppm; max peak: 300 ppm	Irritation eyes, skin, nose, throat; respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen].
Toluene	REL: 100 ppm N STEL: 150 ppm PEL: 200 ppm PEL C: 300 ppm; 10-min max peak: 500 ppm	Irritation eyes, nose; lassitude (weakness, exhaustion), confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage.
Trichloroethylene	PEL: 100 ppm PEL C: 200 ppm; 5-min max peak: 300 ppm	Irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen].
Xylene	REL: 100 ppm N STEL: 150 ppm PEL: 100 ppm	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis.
Zinc	REL: 5 mg/m ³ REL C: 15 mg/m ³ N STEL: 10 mg/m ³ PEL: 5 mg/m ³ (ZnO fume); 15 mg/m ³ (ZnO dust)	Chills, elevated body temperature, myalgia, cough, fatigue, chest pain, stomach cramps, nausea, anemia, changes in cholesterol levels, and vomiting.
Notes: REL: Recommended exposure limit (NIOSH) PEL: Permissible exposure limits (OSHA) STEL: Short-term exposure limit N: NIOSH O: OSHA C: Ceiling		

The potential health effects from these known and suspected on-site contaminants are provided in Attachment A.

2.2 Designated Personnel

AKRF will appoint one of its on-site personnel as the Site Safety Officer (SSO). This individual will be responsible for the implementation of the HASP. The SSO will work under the direction of a Qualified Environmental Professional (QEP) and will be experienced in the implementation of air monitoring and hazardous materials sampling programs. Health and safety training required for the SSO and all field personnel are outlined in Section 2.3 of this HASP.

2.3 Training

All personnel who enter the work area while intrusive activities are being performed will have completed a 40-hour training course that meets OSHA requirements of 29 CFR Part 1910, Occupational Safety and Health Standards. In addition, all personnel will have up-to-date 8-hour refresher training. The training will allow personnel to recognize and understand the potential hazards to health and safety. All field personnel must attend a training program, whose purpose is to:

- Make them aware of the potential hazards they may encounter;
- Provide the knowledge and skills necessary for them to perform the work with minimal risk to health and safety;
- Make them aware of the purpose and limitations of safety equipment; and
- Ensure that they can safely avoid or escape from emergencies.

Each member of the field crew will be instructed in these objectives before work begins. A Site safety meeting will be conducted at the start of the project work. Additional meetings shall be conducted, as necessary, for new personnel working at the Site.

2.4 Medical Surveillance Program

All AKRF and subcontractor personnel performing field work involving subsurface disturbance at the Site are required to have passed a complete medical surveillance examination in accordance with 29 CFR 1910.120 (f). A physician's medical release for work will be confirmed by the SSO before an employee can begin Site activities. The medical release shall consider the type of work to be performed and the required personal protective equipment (PPE). The medical examination will, at a minimum, be provided annually and upon termination of hazardous waste Site work.

2.5 Site Work Zones

During any activities involving subsurface disturbance, the work area must be divided into various zones to prevent the spread of any contamination, ensure that proper PPE is donned, and provide an area for decontamination.

The Exclusion Zone is defined as the area where exposure to impacted media could be encountered. The Contamination Reduction Zone (CRZ) is the area where decontamination procedures take place and is located next to the Exclusion Zone. The Support is the zone area where support facilities such as vehicles, fire extinguisher, and first aid supplies are located. The emergency staging area (part of the Support Zone) is the area where all workers on-site would assemble in the event of an emergency. A summary of these areas is provided below. These zones may be changed by the SSO, depending on that day's activities. All field personnel will be informed of the location of these zones before work begins. The exclusion zone and CRZ are 10

and 25 feet from the excavator, respectively. Control measures such as caution tape and/or traffic cones will be placed around the perimeter of the work area when needed.

2.6 Personal Protection Equipment (PPE)

The PPE required for various kinds of tasks are based on 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, Appendix B, “General Description and Discussion of the Levels of Protection and Protective Gear.”

AKRF field personnel and other site personnel shall wear, at a minimum, Level D PPE. The protection will be based on the air monitoring described in the Community Air Monitoring Plan (CAMP).

Level D PPE includes donning of the following during excavation and sampling:

- Steel Toed Boots
- Hard Hat
- Work Gloves
- Safety Glasses
- Ear Plugs
- Nitrile Gloves
- Tyvek Suit [if non-aqueous phase liquid (NAPL) is present]

If PID readings exceed 5 ppm in the breathing zone, personnel will don Level C PPE, which includes Level D PPE and a half- or full-face respirator with a dual organic and particulate cartridge.

2.7 General Work Practices

To protect the health and safety of the field personnel, field personnel will adhere to the guidelines listed below during activities involving subsurface disturbance:

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited, except in designated areas on the Site. These areas will be designated by the SSO.
- Workers must wash their hands thoroughly on leaving the work area and before eating, drinking, or any other such activity.
- The workers should shower as soon as possible after leaving the Site. Contact with contaminated or suspected surfaces should be avoided.
- The buddy system should always be used; each buddy should watch for signs of fatigue, exposure, and heat/cold stress.

3.0 EMERGENCY PROCEDURES AND EMERGENCY RESPONSE PLAN

The field crew will be equipped with emergency equipment, such as a first aid kit and disposable eye washes. In the case of a medical emergency, the SSO will determine the nature of the emergency and he/she will have someone call for an ambulance, if needed. If the nature of the injury is not serious, i.e., the person can be moved without expert emergency medical personnel, he/she should be taken to a hospital by on-site personnel. Directions to the hospital are provided below, and a Hospital Location Map showing the more direct route to the hospital is included as Figure 2.

3.1 Hospital Information

Hospital Name:	NYC Health + Hospitals/Lincoln
Phone Number:	(718) 579-5000
Address:	234 East 149 th Street, Bronx, NY 10451. Emergency Room is located on Park Avenue between East 146 th Street and East 149 th Street.
Directions:	1. Continue EAST on East 138 th Street towards Exterior Street. 2. Turn LEFT onto Park Avenue 3. CONTINUE onto Park Avenue The emergency room will be on the RIGHT between East 146 th Street and East 149 th Street.

3.2 Emergency Contacts

Company	Individual Name	Title	Contact Number
AKRF	Rebecca Kinal	Remedial Engineer	(914) 922-2362
	Deborah Shapiro	Project Director	(646) 388-9544
	Marc Godick	QA/QC Officer	(914) 922-2356
	Adrianna Bosco	Project Manager	(646) 388-9576
	Stephen Schmid	Alternate Project Manager	(914) 400-9736 (cell)
	Shannon Donohue	Field Team Leader/SSO	(845) 784-9326 (cell)
	Chad Walters	Alternate Field Team Leader/SSO	(929) 428-2998 (cell)
	Jonas Peters	Alternate Field Team Leader/SSO	(914) 443-0672 (cell)
138 th Street JV Associates LLC	Michael Wadman	Volunteer's Representative	(212) 243-9090
Ambulance, Fire Department & Police Department	-	-	911
NYSDEC Spill Hotline	-	-	800-457-7362

4.0 APPROVAL & ACKNOWLEDGMENTS OF HASP

4.1 Approval

Signed: _____ Date: _____
AKRF Project Manager

Signed: _____ Date: _____
AKRF Health and Safety Officer

Below is an affidavit that must be signed by all workers who enter the site. A copy of the HASP must be on-site at all times and will be kept by the SSO.

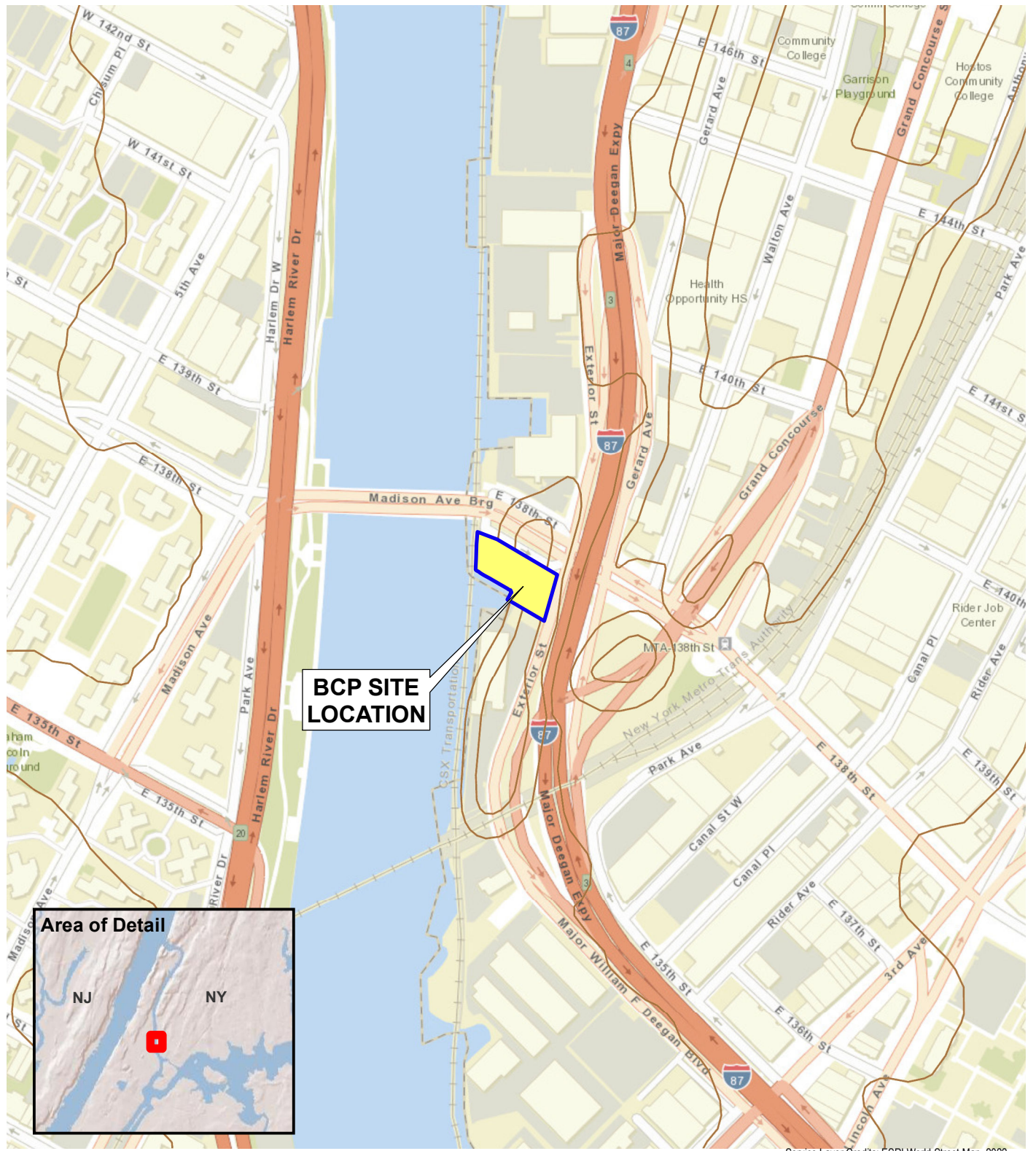
4.2 Affidavit

I have read the Health and Safety Plan (HASP) for the project located at 110 East 138th Street, Bronx, NY. I agree to conduct all on-site work in accordance with the requirements set forth in this HASP and understand that failure to comply with this HASP could lead to my removal from the site.

Signed: _____	Company: _____	Date: _____
Signed: _____	Company: _____	Date: _____
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Signed: _____	Company: _____	Date: _____
Signed: _____	Company: _____	Date: _____
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Signed: _____	Company: _____	Date: _____

FIGURES

© 2023 AKRF Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\GIS and Graphics\110 East 138th Street\210261 Fig. 1 Site Location Map.mxd 11/9/2023 10:05:22 AM mveilleux



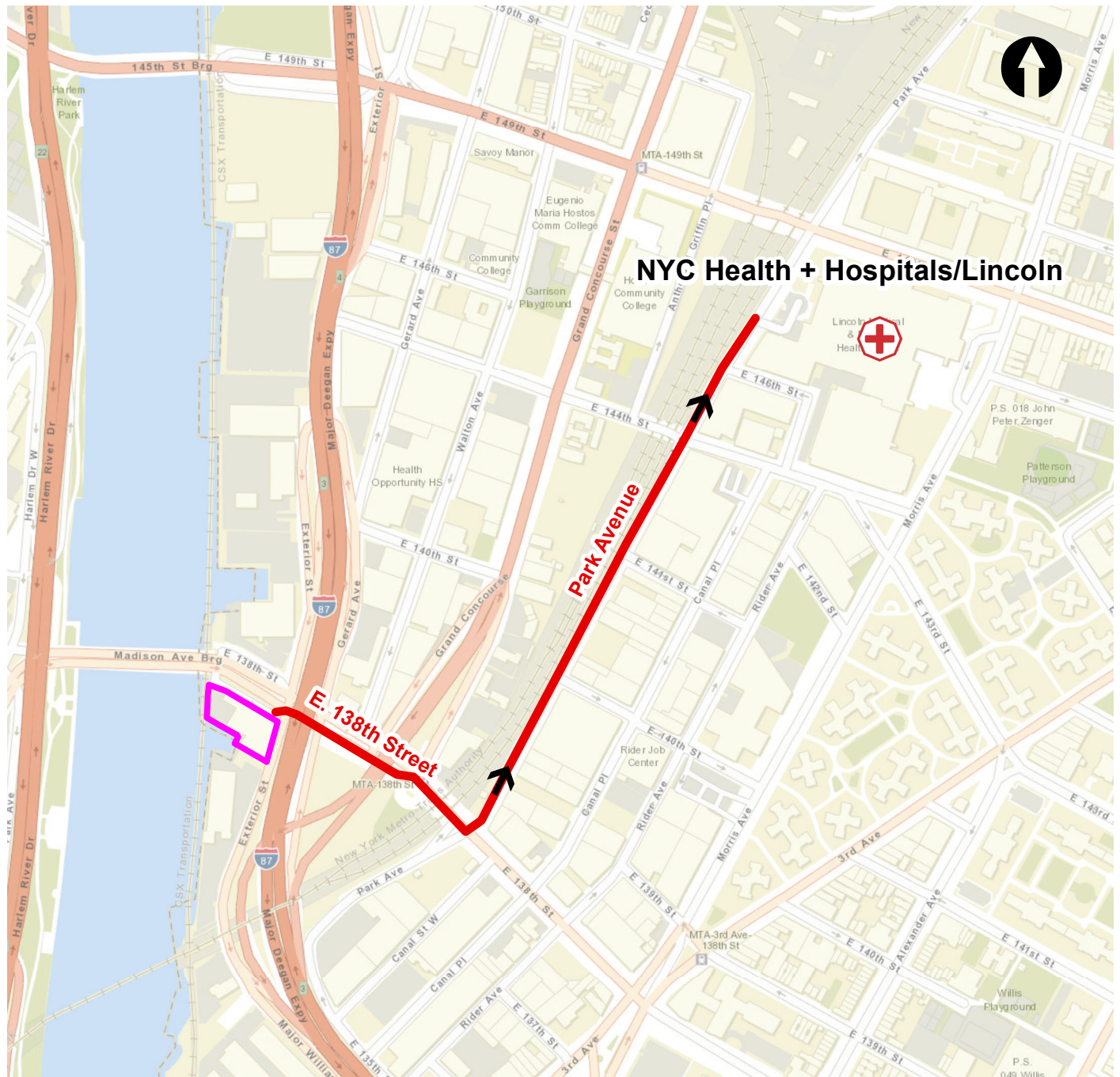
440 Park Avenue South, New York, NY 10016

110 East 138th Street
Bronx, New York

BCP SITE LOCATION

DATE
11/9/2023
PROJECT NO.
210261
FIGURE
1

© 2023 AKRF Q:\Projects\210261 - 110 EAST 138TH STREET\Technical\GIS and Graphics\110 East 138th St\210261 - 110 East 138th Street Route Map.mxd 11/02/2023 11:02:41 AM mvelieux



Service Layer Credits: ESRI World Street Map 2021

LEGEND

-  BCP SITE BOUNDARY
-  ROUTE TO HOSPITAL
-  HOSPITAL LOCATION

NYC Health + Hospitals/Lincoln
234 East 149th Street
Bronx, New York 10451
(718) 579-5000



440 Park Avenue South, New York, NY 10016

110 East 138th Street
Bronx, New York

HOSPITAL ROUTE MAP

DATE
8/20/2024

PROJECT NO.
210261

FIGURE
2

ATTACHMENT A
POTENTIAL HEALTH EFFECTS FROM ON-SITE CONTAMINANTS

Mercury - ToxFAQs™

What is mercury?

Mercury is a naturally occurring element with a chemical symbol of Hg. Elemental mercury is a silver liquid at room temperature that can also evaporate into the air as a gas or become a solid at very low temperatures. It can combine with other substances to form solid compounds that are categorized into two groups: inorganic mercury salts and organic mercury compounds. Mercury and mercury compounds are odorless.



Mercury is used in a number of industries and products. It is primarily used in the manufacture of electronics, fluorescent-lighting, and production of chlorine-caustic soda. It is also used in dental products (fillings), although uses in dentistry are being phased-out. Other historical uses of mercury (batteries; thermometers and other scientific and medical devices; electronic switches and lighting applications; paints and pigments; fungicides and pesticides) have been eliminated or drastically reduced.

What happens to mercury in the environment?

Because mercury is a naturally occurring element, it can be found in the air, water, or soil. It can also be found in the environment due to industrial releases to air and water. Industrial releases to air have steadily decreased over the past few decades.

Mercury does not break down in the environment. In air, mercury may spread far from where it was released. Mercury seldom appears as a silver liquid in the environment. In water, mercury can evaporate into the air. In soil, it can adhere (stick) to soil and sediments (dirt deposits at the bottom of bodies of water). One type of organic mercury compound called methylmercury can build up in plants and fish.

How can I be exposed to mercury?

Most people are exposed to organic mercury compounds (typically methylmercury) in food (such as fish, seafood, rice) or to elemental mercury from dental fillings. Food is the most common form of exposure. Most people are not exposed to inorganic mercury salts. Industrial and dental workers who use mercury are primarily exposed to elemental mercury. Some cultures use mercury in traditional medicines or religious practices, although this is not recommended or approved for use in the United States.

How can mercury affect my health?

All forms of mercury can affect the nervous system and the kidneys. Workers exposed to elemental mercury vapor and people who eat foods with high levels of methylmercury experienced tremors, incoordination, impaired vision, impaired learning and memory, and mood changes. Some children born in communities that ate food with high levels of organic mercury had learning, sensory, and movement problems. In people exposed to high levels of methylmercury in their diets, birth defects have occurred. Some humans and animals that ate mercury compounds had high blood pressure and alterations in their immune systems. Animals that breathed elemental mercury vapor or ate organic or inorganic mercury compounds in their diets showed nervous system effects and/or kidney damage. Animals that ate high levels of mercury compounds showed decreased fertility and/or birth defects.

Mercury can affect the nervous system and kidneys. The health effects from exposure to mercury depend on a number of factors including the amount and form of mercury, route and length of exposure, and age.

Mercury

Can mercury cause cancer?

Rats that ate an inorganic mercury compound for a long period of time developed stomach or thyroid cancer. Rats and mice that ate organic mercury compounds for a long period of time developed kidney cancer.

The [U.S. Department of Health and Human Services \(DHHS\)](#) has not evaluated the potential of mercury or mercury compounds to cause cancer in people.

The [U.S. Environmental Protection Agency \(EPA\)](#) has determined that mercuric chloride (inorganic mercury salt) and methylmercury (organic mercury compound) are possible human carcinogens (cause cancer). The EPA did not classify the potential of elemental mercury to cause cancer in humans.

The [International Agency for Research on Cancer \(IARC\)](#) classified methylmercury compounds as possibly carcinogenic to humans. IARC designated inorganic mercury and elemental mercury as not classifiable for causing cancer in humans.

Can I get a medical test to check for mercury?

Mercury can be measured in your blood, urine, hair, or toenails. However, tests cannot determine which form of mercury you were exposed to. Tests also cannot predict whether you will have health problems. If you think you have been exposed to mercury, call your doctor, nurse, or poison control center.

How can I protect myself and my family from mercury?

People should avoid eating fish that contain high levels of methylmercury. This is particularly important for pregnant women and children. Follow your state's health advisories that tell you about whether it is okay to eat fish or wildlife caught in contaminated areas. Avoid all contact with spills of the liquid form of elemental mercury (the type of mercury found in old thermometers). If a spill occurs, refer to <https://www.atsdr.cdc.gov/dontmesswithmercury> for safe clean-up practices. Most people don't need to take any special steps to avoid exposure to inorganic mercury salts in their daily lives. Keep children from playing in areas near hazardous waste sites to avoid coming in contact with mercury.

For more information:



Call **CDC-INFO** at 1-800-232-4636, or submit your question online at

<https://wwwn.cdc.gov/dcs/ContactUs/Form>

Go to ATSDR's Toxicological Profile for mercury:

<https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=115&tid=24>

Go to ATSDR's Toxic Substances Portal: <https://wwwn.cdc.gov/TSP/index.aspx>

Find & contact your ATSDR Regional Representative at http://www.atsdr.cdc.gov/DRO/dro_org.html

Acetone - ToxFAQs™



What is acetone?

Acetone is a man-made chemical that can also be found naturally in the environment. It is a colorless liquid with a distinct smell and taste. It evaporates easily in air, is flammable, and dissolves in water. Acetone is used by humans to dissolve other substances and produce plastics, paints and coatings, cleaning products, and personal care products. Other man-made sources of acetone are vehicle exhaust, tobacco smoke, and landfills. Acetone is also released naturally by plants, trees, insects, microbes (germs), volcanic eruptions, and forest fires, and can be found naturally in many fruits and vegetables. Low levels of acetone are produced naturally by the human body, and some health conditions can cause these levels to increase.

What happens to acetone in the environment?

- Most acetone in the environment exists as vapor in the air, and it can travel long distances this way.
- About half of the total acetone in air is broken down by sunlight or other chemicals within 22 days.
- Acetone moves from the air into water and soil by rain and snow, and moves quickly from water and soil back into the air. It does not bind to soil or build up in animals.
- Acetone can enter surface water as manufacturing waste and seep into groundwater from landfills.
- Acetone is broken down by microbes or chemicals in water and soil.

A strong scent of acetone and irritation in your eyes, nose, and throat are warning signs of moderate exposure. Noticing these signals can help you avoid exposure to damaging levels of acetone.

How can I be exposed to acetone?

- Low levels of acetone are in the air, so most people are exposed to very small amounts through breathing, but these are rarely at levels that are harmful to your health.
- Workers in certain industries, such as commercial painting, plastic manufacturing, household cleaning, and beauty salons, may be exposed by breathing air with higher levels of acetone in the workplace.
- You may be exposed by drinking water or eating food that is contaminated with acetone.
- Exposure may occur by smoking tobacco products or breathing in secondhand tobacco smoke.
- You may be exposed to acetone by using products that contain acetone (such as nail polish remover) or being in enclosed environments where these products are used.

How can acetone affect my health?

If you are exposed to acetone, it enters your blood, which carries it to all organs in the body. When there is only a small amount, your liver breaks it down into harmless chemicals. Breathing or swallowing high amounts of acetone over a short period of time can cause headaches, confusion, nausea, racing pulse, changes in the size and amount of blood cells, unconsciousness (passing out), or coma. Breathing a moderate to high amount of acetone can also cause nose, throat, lung, and eye irritation. Skin contact with acetone can cause your skin to become dry, irritated, and cracked. The effects of long-term acetone exposure have been mostly studied in animals, and include kidney, liver, and nerve damage; birth defects; and male infertility. It is not known if long-term exposure to acetone affects people in these ways.

Acetone - ToxFAQs™

Can acetone cause cancer?

The [U.S. Environmental Protection Agency \(EPA\)](#) has concluded that there is not sufficient evidence to assess whether acetone is carcinogenic (causing cancer) to humans.

The [International Agency for Research on Cancer \(IARC\)](#) and [National Toxicology Program \(NTP\)](#) have not classified acetone for carcinogenicity.

Can I get a medical test to check for acetone?

There are tests available to measure the amount of acetone in your breath, blood, and urine. While these tests can tell you how much acetone is in your body, it's important to remember that the amount of acetone that occurs naturally in the body varies from person to person. These tests cannot predict whether you will experience any health problems as a result of the exposure.

Tests for acetone exposure must be performed within 2–3 days after you have been exposed, because acetone leaves your body within a few days of entering it. These tests are usually not performed at your doctor's office; your doctor takes blood or urine samples and sends them to a testing laboratory.

How can I protect my family from acetone exposure?

Always follow directions on the label when using and storing products that contain acetone.

- Do not use products that contain acetone near open flames or hot surfaces.
- Store products that contain acetone in a cool, well-ventilated place, away from direct heat.
- If you spill a product that contains acetone, open a window to make sure you get proper ventilation and fresh air as the acetone evaporates.

Always supervise children and when using consumer products that contain acetone.

- Never allow children to drink a product that contains acetone. Keep these products away from children.

If you or a member of your household smokes cigarettes, ensure proper ventilation in your home.

- Avoid smoking tobacco products inside if possible.
- Open windows when possible to reduce the concentration of acetone in the air in your home.

For more information:

Call **CDC-INFO** at 1-800-232-4636, or submit your question online at <https://wwwn.cdc.gov/dcs/ContactUs/Form>

Go to ATSDR's Toxicological Profile for Acetone: <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=5&tid=1>

Go to ATSDR's Toxic Substances Portal: <https://wwwn.cdc.gov/TSP/index.aspx>

Find & contact your ATSDR Regional Representative at http://www.atsdr.cdc.gov/DRO/dro_org.html



Polycyclic Aromatic Hydrocarbons (PAHs) - ToxFAQs™

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List (NPL) sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl'ī-sī'klīk ār'ə-măt'īk hī'drə-kar'bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.

- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.
- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

Polycyclic Aromatic Hydrocarbons

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636.

ToxFAQs™ Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaqs/index.asp>.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

This fact sheet answers the most frequently asked health questions (FAQs) about cadmium. For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to cadmium happens mostly in the workplace where cadmium products are made. The general population is exposed from breathing cigarette smoke or eating cadmium contaminated foods. Cadmium damages the kidneys, lungs, and bones. Cadmium has been found in at least 1,014 of the 1,669 National Priorities List (NPL) sites identified by the Environmental Protection Agency (EPA).

What is cadmium?

Cadmium is a natural element in the earth's crust. It is usually found as a mineral combined with other elements such as oxygen (cadmium oxide), chlorine (cadmium chloride), or sulfur (cadmium sulfate, cadmium sulfide).

All soils and rocks, including coal and mineral fertilizers, contain some cadmium. Most cadmium used in the United States is extracted during the production of other metals like zinc, lead, and copper. Cadmium does not corrode easily and has many uses, including batteries, pigments, metal coatings, and plastics.

What happens to cadmium when it enters the environment?

- Cadmium enters soil, water, and air from mining, industry, and burning coal and household wastes.
- Cadmium does not break down in the environment, but can change forms.
- Cadmium particles in air can travel long distances before falling to the ground or water.
- Some forms of cadmium dissolve in water.
- Cadmium binds strongly to soil particles.
- Fish, plants, and animals take up cadmium from the environment.

How might I be exposed to cadmium?

- Eating foods containing cadmium; low levels are found in all foods (highest levels are found in leafy vegetables, grains, legumes, and kidney meat).
- Smoking cigarettes or breathing cigarette smoke.
- Breathing contaminated workplace air.
- Drinking contaminated water.
- Living near industrial facilities which release cadmium into the air.

How can cadmium affect my health?

Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea.

Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones.

How likely is cadmium to cause cancer?

The Department of Health and Human Services (DHHS) and the International Agency for Research on Cancer (IARC) have determined that cadmium and cadmium compounds are human carcinogens. The EPA determined that cadmium is a probable human carcinogen (group B1).

Cadmium

CAS # 7440-43-9

How can cadmium affect children?

The health effects in children are expected to be similar to the effects seen in adults (kidney and lung damage depending on the route of exposure).

A few studies in animals indicate that younger animals absorb more cadmium than adults. Animal studies also indicate that the young are more susceptible than adults to a loss of bone and decreased bone strength from exposure to cadmium.

We don't know if cadmium causes birth defects in people. Studies in animals exposed to high levels of cadmium during pregnancy have resulted in harmful effects to the young. Young animals exposed to cadmium before birth have shown effects on behavior and learning. There is also some information from animal studies that high enough exposures to cadmium before birth can reduce body weights and affect the skeleton in the developing young.

How can families reduce the risk of exposure to cadmium?

- Do not allow children to play with batteries. Dispose of nickel-cadmium batteries properly.
- Cadmium is a component of tobacco smoke. Avoid smoking and smoking in enclosed spaces like inside the home or car in order to limit exposure to children and other family members.
- If you work with cadmium, use all safety precautions to avoid carrying cadmium-containing dust home from work on your clothing, skin, hair, or tools.
- A balanced diet can reduce the amount of cadmium taken into the body from food and drink.

Is there a medical test to determine whether I've been exposed to cadmium?

Cadmium can be measured in blood, urine, hair, or nails. Urinary cadmium has been shown to accurately reflect the amount of cadmium in the body.

The amount of cadmium in your blood shows your recent exposure to cadmium. The amount of cadmium in your urine shows both your recent and your past exposure.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to cadmium in drinking water at concentrations of 0.04 milligrams per liter (0.04 mg/L) for up to 10 days is not expected to cause any adverse effects in a child.

The EPA has determined that lifetime exposure to 0.005 mg/L cadmium is not expected to cause any adverse effects.

The Food and Drug Administration (FDA) has determined that the cadmium concentration in bottled drinking water should not exceed 0.005 mg/L.

The Occupational Health and Safety Administration (OSHA) has limited workers' exposure to an average of 5 µg/m³ for an 8-hour workday, 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2012. Toxicological Profile for Cadmium. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636

ToxFAQs™ Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaqs/index.asp>.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

This fact sheet answers the most frequently asked health questions (FAQs) about arsenic. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to higher than average levels of arsenic occurs mostly in the workplace, near hazardous waste sites, or in areas with high natural levels. At high levels, inorganic arsenic can cause death. Exposure to lower levels for a long time can cause a discoloration of the skin and the appearance of small corns or warts. Arsenic has been found at 1,014 of the 1,598 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is arsenic?

Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds.

Inorganic arsenic compounds are mainly used to preserve wood. Organic arsenic compounds are used as pesticides, primarily on cotton plants.

What happens to arsenic when it enters the environment?

- ☐ Arsenic cannot be destroyed in the environment. It can only change its form.
- ☐ Arsenic in air will settle to the ground or is washed out of the air by rain.
- ☐ Many arsenic compounds can dissolve in water.
- ☐ Fish and shellfish can accumulate arsenic, but the arsenic in fish is mostly in a form that is not harmful.

How might I be exposed to arsenic?

- ☐ Eating food, drinking water, or breathing air containing arsenic.
- ☐ Breathing contaminated workplace air.
- ☐ Breathing sawdust or burning smoke from wood treated with arsenic.
- ☐ Living near uncontrolled hazardous waste sites containing arsenic.
- ☐ Living in areas with unusually high natural levels of arsenic in rock.

How can arsenic affect my health?

Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. Ingesting high levels of inorganic arsenic can result in death. Lower levels of arsenic can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the

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appearance of small “corns” or “warts” on the palms, soles, and torso.

Skin contact with inorganic arsenic may cause redness and swelling.

Organic arsenic compounds are less toxic than inorganic arsenic compounds. Exposure to high levels of some organic arsenic compounds may cause similar effects as inorganic arsenic.

How likely is arsenic to cause cancer?

Several studies have shown that inorganic arsenic can increase the risk of lung cancer, skin cancer, bladder cancer, liver cancer, kidney cancer, and prostate cancer. The World Health Organization (WHO), the Department of Health and Human Services (DHHS), and the EPA have determined that inorganic arsenic is a human carcinogen.

How can arsenic affect children?

We do not know if exposure to arsenic will result in birth defects or other developmental effects in people. Birth defects have been observed in animals exposed to inorganic arsenic.

It is likely that health effects seen in children exposed to high amounts of arsenic will be similar to the effects seen in adults.

How can families reduce the risk of exposure to arsenic?

- ☐ If you use arsenic-treated wood in home projects, you should wear dust masks, gloves, and protective clothing to decrease exposure to sawdust.
- ☐ If you live in an area with high levels of arsenic in water or soil, you should use cleaner sources of water and limit contact with soil.

Is there a medical test to show whether I've been exposed to arsenic?

There are tests to measure the level of arsenic in blood, urine, hair, or fingernails. The urine test is the most reliable test for arsenic exposure within the last few days. Tests on hair and fingernails can measure exposure to high levels of arsenic over the past 6-12 months. These tests can determine if you have been exposed to above-average levels of arsenic. They cannot predict how the arsenic levels in your body will affect your health.

Has the federal government made recommendations to protect human health?

EPA has set limits on the amount of arsenic that industrial sources can release to the environment and has restricted or canceled many uses of arsenic in pesticides. EPA has set a limit of 0.01 parts per million (ppm) for arsenic in drinking water.

The Occupational Safety and Health Administration has set limits of 10 µg arsenic per cubic meter of workplace air (10 µg/m³) for 8 hour shifts and 40 hour work weeks.

Source of Information

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological Profile for Arsenic. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about barium and barium compounds. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because these substances may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to barium occurs mostly in the workplace or from drinking contaminated water. Ingesting drinking water containing levels of barium above the EPA drinking water guidelines for relatively short periods of time can cause gastrointestinal disturbances and muscle weakness. Ingesting high levels for a long time can damage the kidneys. Barium and barium compounds have been found in at least 798 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is barium?

Barium is a silvery-white metal which exists in nature only in ores containing mixtures of elements. It combines with other chemicals such as sulfur or carbon and oxygen to form barium compounds.

Barium compounds are used by the oil and gas industries to make drilling muds. Drilling muds make it easier to drill through rock by keeping the drill bit lubricated. They are also used to make paint, bricks, ceramics, glass, and rubber.

Barium sulfate is sometimes used by doctors to perform medical tests and to take x-rays of the gastrointestinal tract.

What happens to barium when it enters the environment?

- ☐ Barium gets into the air during the mining, refining, and production of barium compounds, and from the burning of coal and oil.
- ☐ The length of time that barium will last in air, land, water, or sediments depends on the form of barium released.
- ☐ Barium compounds, such as barium sulfate and barium carbonate, which do not dissolve well in water, can last a long time in the environment.

☐ Barium compounds, such as barium chloride, barium nitrate, or barium hydroxide, that dissolve easily in water usually do not last in these forms for a long time in the environment. The barium in these compounds that is dissolved in water quickly combines with sulfate or carbonate that are naturally found in water and become the longer lasting forms (barium sulfate and barium carbonate).

☐ Fish and aquatic organisms can accumulate barium.

How might I be exposed to barium?

- ☐ Ingesting small amounts present in your food and water or breathing air containing very low levels of barium.
- ☐ Living in areas with unusually high natural levels of barium in the drinking water.
- ☐ Working in a job that involves barium production or use.
- ☐ Living or working near waste sites where barium has been disposed of.

How can barium affect my health?

The health effects of the different barium compounds depend on how well the compound dissolves in water or in the stomach contents. Barium compounds that do not dissolve well, such as barium sulfate, are not generally harmful.

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Barium has been found to potentially cause gastrointestinal disturbances and muscular weakness when people are exposed to it at levels above the EPA drinking water standards for relatively short periods of time. Some people who eat or drink amounts of barium above background levels found in food and water for a short period may experience vomiting, abdominal cramps, diarrhea, difficulties in breathing, increased or decreased blood pressure, numbness around the face, and muscle weakness. Eating or drinking very large amounts of barium compounds that easily dissolve can cause changes in heart rhythm or paralysis and possibly death. Animals that drank barium over long periods had damage to the kidneys, decreases in body weight, and some died.

How likely is barium to cause cancer?

The Department of Health and Human Services (DHHS) and the International Agency for Research on Cancer (IARC) have not classified barium as to its carcinogenicity. The EPA has determined that barium is not likely to be carcinogenic to humans following ingestion and that there is insufficient information to determine whether it will be carcinogenic to humans following inhalation exposure.

How can barium affect children?

We do not know whether children will be more or less sensitive than adults to barium toxicity. A study in rats that swallowed barium found a decrease in newborn body weight; we do not know if a similar effect would be seen in humans.

How can families reduce the risks of exposure to barium?

The greatest potential source of barium exposure is through food and drinking water. However, the amount of barium in foods and drinking water are typically too low to be of concern.

Is there a medical test to determine whether I've been exposed to barium?

There is no routine medical test to determine whether you have been exposed to barium. Doctors can measure barium in body tissues and fluids, such as bones, blood, urine, and feces, using very complex instruments. These tests cannot be used to predict the extent of the exposure or potential health effects.

The geometric mean barium level measured in the U.S. general population aged 6 and older is reported by the Centers for Disease Control and Prevention (CDC) as 1.44 µg/g creatinine (measured in urine).

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 2.0 milligrams of barium per liter of drinking water (2.0 mg/L), which is the same as 2 ppm.

The Occupational Safety and Health Administration (OSHA) has set Permissible Exposure Limits (PELs) of 0.5 milligrams of soluble barium compounds per cubic meter of workplace air (0.5 mg/m³) for 8 hour shifts and 40 hour work weeks. The OSHA limits for barium sulfate dust are 15 mg/m³ of total dust and 5 mg/m³ for respirable fraction.

The National Institute for Occupational Safety and Health (NIOSH) has set Recommended Exposure Limits (RELs) of 0.5 mg/m³ for soluble barium compounds. The NIOSH has set RELs of 10 mg/m³ (total dust) for barium sulfate and 5 mg/m³ (respirable fraction).

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Barium and Compounds (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about chromium. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to chromium occurs from ingesting contaminated food or drinking water or breathing contaminated workplace air. Chromium(VI) at high levels can damage the nose and cause cancer. Ingesting high levels of chromium(VI) may result in anemia or damage to the stomach or intestines. Chromium(III) is an essential nutrient. Chromium has been found in at least 1,127 of the 1,669 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is chromium?

Chromium is a naturally occurring element found in rocks, animals, plants, and soil. It can exist in several different forms. Depending on the form it takes, it can be a liquid, solid, or gas. The most common forms are chromium(0), chromium(III), and chromium(VI). No taste or odor is associated with chromium compounds.

The metal chromium, which is the chromium(0) form, is used for making steel. Chromium(VI) and chromium(III) are used for chrome plating, dyes and pigments, leather tanning, and wood preserving.

What happens to chromium when it enters the environment?

- ☐ Chromium can be found in air, soil, and water after release from the manufacture, use, and disposal of chromium-based products, and during the manufacturing process.
- ☐ Chromium does not usually remain in the atmosphere, but is deposited into the soil and water.
- ☐ Chromium can easily change from one form to another in water and soil, depending on the conditions present.
- ☐ Fish do not accumulate much chromium in their bodies from water.

How might I be exposed to chromium?

- ☐ Eating food containing chromium(III).

- ☐ Breathing contaminated workplace air or skin contact during use in the workplace.
- ☐ Drinking contaminated well water.
- ☐ Living near uncontrolled hazardous waste sites containing chromium or industries that use chromium.

How can chromium affect my health?

Chromium(III) is an essential nutrient that helps the body use sugar, protein, and fat.

Breathing high levels of chromium(VI) can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium(VI) compared to chromium(III).

The main health problems seen in animals following ingestion of chromium(VI) compounds are irritation and ulcers in the stomach and small intestine and anemia. Chromium(III) compounds are much less toxic and do not appear to cause these problems.

Sperm damage and damage to the male reproductive system have also been seen in laboratory animals exposed to chromium(VI).

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Skin contact with certain chromium(VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium(VI) or chromium(III). Allergic reactions consisting of severe redness and swelling of the skin have been noted.

How likely is chromium to cause cancer?

The Department of Health and Human Services (DHHS), the International Agency for Research on Cancer (IARC), and the EPA have determined that chromium(VI) compounds are known human carcinogens. In workers, inhalation of chromium(VI) has been shown to cause lung cancer. Chromium(VI) also causes lung cancer in animals. An increase in stomach tumors was observed in humans and animals exposed to chromium(VI) in drinking water.

How can chromium affect children?

It is likely that health effects seen in children exposed to high amounts of chromium will be similar to the effects seen in adults.

We do not know if exposure to chromium will result in birth defects or other developmental effects in people. Some developmental effects have been observed in animals exposed to chromium(VI).

How can families reduce the risks of exposure to chromium?

- ☐ Children should avoid playing in soils near uncontrolled hazardous waste sites where chromium may have been discarded.
- ☐ Chromium is a component of tobacco smoke. Avoid smoking in enclosed spaces like inside the home or car in order to limit exposure to children and other family members.
- ☐ Although chromium(III) is an essential nutrient, you should avoid excessive use of dietary supplements containing chromium.

Is there a medical test to determine whether I've been exposed to chromium?

Since chromium(III) is an essential element and naturally occurs in food, there will always be some level of chromium in your body. Chromium can be measured in hair, urine, and blood.

Higher than normal levels of chromium in blood or urine may indicate that a person has been exposed to chromium. However, increases in blood and urine chromium levels cannot be used to predict the kind of health effects that might develop from that exposure.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to chromium in drinking water at concentrations of 1 mg/L for up to 10 days is not expected to cause any adverse effects in a child.

The FDA has determined that the chromium concentration in bottled drinking water should not exceed 1 mg/L.

The Occupational Health and Safety Administration (OSHA) has limited workers' exposure to an average of 0.0005 mg/m³ chromium(VI), 0.5 mg/m³ chromium(III), and 1.0 mg/m³ chromium(0) for an 8-hour workday, 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Chromium (Draft for Public Comment). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about copper. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Copper is a reddish metal that occurs naturally in the environment. It also occurs naturally in plants and animals. Low levels of copper are essential for maintaining good health. High levels can cause harmful effects such as irritation of the nose, mouth and eyes, vomiting, diarrhea, stomach cramps, and nausea. Copper has been found in at least 884 of the 1,613 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is copper?

Copper is a reddish metal that occurs naturally in rocks, soil, water, and air. Copper also occurs naturally in plants and animals.

Metallic copper can be easily molded or shaped. Metallic copper can be found in the U.S. penny, electrical wiring, and some water pipes. Metallic copper is also found in mixtures (called alloys) with other metals such as brass and bronze. Copper is also found as part of other compounds forming salts. Copper salts occur naturally, but are also manufactured. The most common copper salt is copper sulfate. Most copper compounds are blue-green in color. Copper compounds are commonly used in agriculture to treat plant diseases like mildew, for water treatment and, as preservatives for wood, leather, and fabrics.

What happens to copper when it enters the environment?

- ☐ Copper can enter the environment from the mining of copper and other metals and from factories that make or use metallic copper or copper compounds.
- ☐ It can also enter the environment through domestic waste water, combustion of fossil fuels and wastes, wood production, phosphate fertilizer production, and natural sources (e.g., windblown dust from soils, volcanoes, decaying vegetation, forest fires, and sea spray).
- ☐ Copper in soil strongly attaches to organic material and minerals.

- ☐ Copper that dissolves in water becomes rapidly bound to particles suspended in the water.
- ☐ Copper does not typically enter groundwater.
- ☐ Copper carried by particles emitted from smelters and ore processing plants is carried back to the ground by gravity or in rain or snow.
- ☐ Copper does not break down in the environment.

How might I be exposed to copper?

- ☐ Breathing air, drinking water, eating food, and by skin contact with soil, water, or other copper-containing substances.
- ☐ Some copper in the environment can be taken up by plants and animals.
- ☐ Higher exposure may occur if your water is corrosive and you have copper plumbing and brass water fixtures. ☐ You may be exposed to higher amounts of copper if you drink water or swim in lakes or reservoirs recently treated with copper to control algae or receive cooling water from a power plant that may have high amounts of dissolved copper.
- ☐ Using some garden products (e.g., fungicides) to control plant diseases.
- ☐ Living near bronze and brass production facilities may expose you to higher copper levels in soil.
- ☐ You may breathe copper-containing dust or have skin contact if you work in the industry of mining copper or

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processing the ore. You may breathe high levels if you grind or weld copper metal.

How can copper affect my health?

Copper is essential for good health, but high amounts can be harmful. Long-term exposure to copper dust can irritate your nose, mouth, and eyes, and cause headaches, dizziness, nausea, and diarrhea.

Drinking water with higher than normal levels of copper may cause vomiting, diarrhea, stomach cramps, and nausea. Intentionally high intakes of copper can cause liver and kidney damage and even death.

How likely is copper to cause cancer?

We do not know whether copper can cause cancer in humans. The EPA has determined that copper is not classifiable as to carcinogenicity.

How can copper affect children?

Exposure to high levels of copper will result in the same type of effects in children and adults. Studies in animals suggest that the young children may have more severe effects than adults; we do not know if this would also be true in humans. There is a very small percentage of infants and children who are unusually sensitive to copper.

We do not know if copper can cause birth defects or other developmental effects in humans. Studies in animals suggest that ingestion of high levels of copper may cause a decrease in fetal growth.

How can families reduce the risk of exposure to copper?

- ☐ The greatest potential source of copper exposure is through drinking water, especially in water that is first drawn in the morning after sitting in copper pipes and brass faucets overnight.
- ☐ To reduce exposure, run the water for at least 15-30 seconds before using it.
- ☐ If you are exposed to copper at work, you may carry

copper home on your skin, clothes, or tools. You can avoid this by showering, and changing clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to copper?

Copper is normally found in all tissues of the body, blood, urine, feces, hair, and nails. High levels of copper in these samples can show that you have been exposed to higher than normal levels of copper. Tests to measure copper levels in the body are not routinely available at the doctor's office because they require special equipment. These tests cannot tell the extent of exposure or whether you will experience harmful effects.

Has the federal government made recommendations to protect human health?

The EPA has determined that drinking water should not contain more than 1.3 milligrams of copper per liter of water (1.3 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.1 mg per cubic meter (0.1 mg/m³) of copper fumes (vapor generated from heating copper) and 1 mg/m³ of copper dusts (fine metallic copper particles) and mists (aerosol of soluble copper) in workroom air during an 8-hour work shift, 40-hour workweek.

The Food and Nutrition Board of the Institute of Medicine recommends dietary allowances (RDAs) of 340 micrograms (340 µg) of copper per day for children aged 1-3 years, 440 µg/day for children aged 4-8 years, 700 µg/day for children aged 9-13 years, 890 µg/day for children aged 14-18 years, and 900 µg/day for adults.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2002. Toxicological Profile for Copper (Draft for Public Comment). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about DDT, DDE, and DDD. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to DDT, DDE, and DDD occurs mostly from eating foods containing small amounts of these compounds, particularly meat, fish and poultry. High levels of DDT can affect the nervous system causing excitability, tremors and seizures. In women, DDE can cause a reduction in the duration of lactation and an increased chance of having a premature baby. DDT, DDE, and DDD have been found in at least 441 of the 1,613 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are DDT, DDE, and DDD?

DDT (dichlorodiphenyltrichloroethane) is a pesticide once widely used to control insects in agriculture and insects that carry diseases such as malaria. DDT is a white, crystalline solid with no odor or taste. Its use in the U.S. was banned in 1972 because of damage to wildlife, but is still used in some countries.

DDE (dichlorodiphenyldichloroethylene) and DDD (dichlorodiphenyldichloroethane) are chemicals similar to DDT that contaminate commercial DDT preparations. DDE has no commercial use. DDD was also used to kill pests, but its use has also been banned. One form of DDD has been used medically to treat cancer of the adrenal gland.

What happens to DDT, DDE, and DDD when they enter the environment?

- ☐ DDT entered the environment when it was used as a pesticide; it still enters the environment due to current use in other countries.
- ☐ DDE enters the environment as contaminant or breakdown product of DDT; DDD also enters the environment as a breakdown product of DDT.
- ☐ DDT, DDE, and DDD in air are rapidly broken down by sunlight. Half of what's in air breaks down within 2 days.
- ☐ They stick strongly to soil; most DDT in soil is broken down slowly to DDE and DDD by microorganisms; half the DDT in soil will break down in 2-15 years, depending on the type of soil.

- ☐ Only a small amount will go through the soil into groundwater; they do not dissolve easily in water.
- ☐ DDT, and especially DDE, build up in plants and in fatty tissues of fish, birds, and other animals.

How might I be exposed to DDT, DDE, and DDD?

- ☐ Eating contaminated foods, such as root and leafy vegetables, fatty meat, fish, and poultry, but levels are very low.
- ☐ Eating contaminated imported foods from countries that still allow the use of DDT to control pests.
- ☐ Breathing contaminated air or drinking contaminated water near waste sites and landfills that may contain high levels of these chemicals.
- ☐ Infants fed on breast milk from mothers who have been exposed.
- ☐ Breathing or swallowing soil particles near waste sites or landfills that contain these chemicals.

How can DDT, DDE, and DDD affect my health?

DDT affects the nervous system. People who accidentally swallowed large amounts of DDT became excitable and had tremors and seizures. These effects went away after the exposure stopped. No effects were seen in people who took small daily doses of DDT by capsule for 18 months. A study in humans showed that women who had high amounts of a form of DDE in their breast milk were unable to

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breast feed their babies for as long as women who had little DDE in the breast milk. Another study in humans showed that women who had high amounts of DDE in breast milk had an increased chance of having premature babies. In animals, short-term exposure to large amounts of DDT in food affected the nervous system, while long-term exposure to smaller amounts affected the liver. Also in animals, short-term oral exposure to small amounts of DDT or its breakdown products may also have harmful effects on reproduction.

How likely are DDT, DDE, and DDD to cause cancer?

Studies in DDT-exposed workers did not show increases in cancer. Studies in animals given DDT with the food have shown that DDT can cause liver cancer. The Department of Health and Human Services (DHHS) determined that DDT may reasonably be anticipated to be a human carcinogen. The International Agency for Research on Cancer (IARC) determined that DDT may possibly cause cancer in humans. The EPA determined that DDT, DDE, and DDD are probable human carcinogens.

How can DDT, DDE, and DDD affect children?

There are no studies on the health effects of children exposed to DDT, DDE, or DDD. We can assume that children exposed to large amounts of DDT will have health effects similar to the effects seen in adults. However, we do not know whether children differ from adults in their susceptibility to these substances.

There is no evidence that DDT, DDE, or DDD cause birth defects in people. A study showed that teenage boys whose mothers had higher DDE amounts in the blood when they were pregnant were taller than those whose mothers had lower DDE levels. However, a different study found the opposite in preteen girls. The reason for the discrepancy between these studies is unknown.

Studies in rats have shown that DDT and DDE can mimic the action of natural hormones and in this way affect the development of the reproductive and nervous systems. Puberty was delayed in male rats given high amounts of DDE as juveniles. This could possibly happen in humans.

A study in mice showed that exposure to DDT during the first weeks of life may cause neurobehavioral problems later in life.

How can families reduce the risk of exposure to DDT, DDE, and DDD?

- ☐ Most families will be exposed to DDT by eating food or drinking liquids contaminated with small amounts of DDT.
- ☐ Cooking will reduce the amount of DDT in fish.
- ☐ Washing fruit and vegetables will remove most DDT from their surface.
- ☐ Follow health advisories that tell you about consumption of fish and wildlife caught in contaminated areas.

Is there a medical test to show whether I've been exposed to DDT, DDE, and DDD?

Laboratory tests can detect DDT, DDE, and DDD in fat, blood, urine, semen, and breast milk. These tests may show low, moderate, or excessive exposure to these compounds, but cannot tell the exact amount you were exposed to, or whether you will experience adverse effects. These tests are not routinely available at the doctor's office because they require special equipment.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) sets a limit of 1 milligram of DDT per cubic meter of air (1 mg/m³) in the workplace for an 8-hour shift, 40-hour workweek.

The Food and Drug Administration (FDA) has set limits for DDT, DDE, and DDD in foodstuff at or above which the agency will take legal action to remove the products from the market.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2002. Toxicological Profile for DDT/DDE/DDD (Update). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



Lead - ToxFAQs™

What is lead?

Lead is a metal found naturally in the earth's crust. It can be found in all parts of our environment, including air, water, and soil. Lead can combine with other chemicals to make different compounds.



Lead is used in the production of batteries, ammunition, and metal products (solder and pipes). Because of health concerns, the use of lead in paints, ceramic products, caulking, and pipe solder has been dramatically reduced. The use of lead as an additive to automobile gasoline was banned in 1996 in the United States.

What happens to lead in the environment?

- Lead is an element, so it does not break down.
- When lead is released into the air, it may be transported long distances before it lands and stays on the ground.
- Once on the ground, lead can often stick to soil particles.
- Lead in soil can get into groundwater, but the amount of lead that moves into groundwater will depend on the lead compound and soil type.

How can I be exposed to lead?

- Eating food or drinking water that contains lead.
- Drinking water from pipes that were soldered with lead can cause exposure.
- Spending time or living in homes with lead-based paints can result in exposure when the paint breaks down and forms dust, which can get on your hands, or into your mouth and nose and be swallowed.
- Spending time in areas where the soil is contaminated with lead.
- Working in a job where lead is used or participating in certain hobbies where lead is used, such as making stained glass.
- Using healthcare products from other countries, alternative treatments, or folk remedies.

Lead can cause health problems in almost every organ and system in your body.

How can lead affect my health?

The effects of lead are the same whether it enters the body by breathing it in or eating it. Lead can affect almost every organ and system in your body. The nervous system is the main target for lead poisoning in children and adults. Long-term exposure can result in decreased learning, memory, and attention, and weakness in fingers, wrists, or ankles. Lead exposure can cause anemia (low iron in the blood) and damage to the kidneys. It can also cause increases in blood pressure, particularly in middle-aged and older individuals. Exposure to high lead levels can severely damage the brain and kidneys and can cause death. In pregnant women, exposure to high levels of lead may cause a miscarriage. In men, it can cause damage to reproductive organs.

Lead

How can lead affect children?

Children are more vulnerable to lead poisoning than adults because their nervous system is still developing. Children can be exposed to lead in their environment and before birth from lead in their mother's body. At lower levels of exposure, lead can decrease mental development, especially learning, intelligence, and behavior. Physical growth may also be decreased. A child who swallows large amounts of lead may develop anemia, severe stomachache, muscle weakness, and brain damage. Exposure to lead during pregnancy can also result in premature births. Some effects of lead poisoning in a child may continue into adulthood.

Can lead cause cancer?

Several agencies and organizations both in the United States and internationally have reviewed studies and made an assessment about whether lead can cause cancer.

- The Department of Health and Human Services (HHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens (causing cancer in people).
- The U.S. Environmental Protection Agency (EPA) has classified lead as a probable human carcinogen.
- The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans, and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

Can I get a medical test to check for lead?

A blood test is available to measure the amount of lead in your blood. Blood tests are commonly used to screen children for lead poisoning. Your doctor can draw blood samples and send them to appropriate laboratories for analysis. If you think you or anyone in your family has been exposed to lead, contact your doctor, nurse, or poison control center.

How can I protect my family from lead exposure?

- Avoid exposure to sources of lead.
- Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.
- If your home contains lead-based paint (built before 1978), or if you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house to remove lead dust and lead tracked in soil.
- Certain water pipes may contain lead, so if you know that pipes have lead solder, you should avoid drinking from that source.
- Check for lead in some products such as toys and jewelry and avoid such products.
- Lead is sometimes in candies imported from other countries or traditional home remedies; find out if yours has any lead and avoid using these products or giving them to children.
- You can learn more about preventing lead poisoning here: <https://www.cdc.gov/nceh/lead/faqs/lead-faqs.htm>

Want more information?

Call **CDC-INFO** at 1-800-232-4636, or submit your question online at <https://wwwn.cdc.gov/dcs/ContactUs/Form>

Go to ATSDR's [Toxicological Profile for Lead](#)

CDC Lead Poisoning Prevention Program <https://www.cdc.gov/nceh/lead/default.htm>

Environmental Protection Agency <https://www.epa.gov/lead/protect-your-family-exposures-lead>

Go to ATSDR's Toxic Substances Portal: <https://wwwn.cdc.gov/TSP/index.aspx>

If you have any more questions or concerns, you can also find & contact your ATSDR Regional Representative at http://www.atsdr.cdc.gov/DRO/dro_org.html



This fact sheet answers the most frequently asked health questions (FAQs) about manganese. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Manganese is a trace element and eating a small amount from food or water is needed to stay healthy. Exposure to excess levels of manganese may occur from breathing air, particularly where manganese is used in manufacturing, and from drinking water and eating food. At high levels, it can cause damage to the brain. Manganese has been found in at least 869 of the 1,669 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is manganese?

Manganese is a naturally occurring metal that is found in many types of rocks. Pure manganese is silver-colored, but does not occur naturally. It combines with other substances such as oxygen, sulfur, or chlorine. Manganese occurs naturally in most foods and may be added to some foods.

Manganese is used principally in steel production to improve hardness, stiffness, and strength. It may also be used as an additive in gasoline to improve the octane rating of the gas.

What happens to manganese when it enters the environment?

- ☐ Manganese can be released to the air, soil, and water from the manufacture, use, and disposal of manganese-based products.
- ☐ Manganese cannot break down in the environment. It can only change its form or become attached to or separated from particles.
- ☐ In water, manganese tends to attach to particles in the water or settle into the sediment.
- ☐ The chemical state of manganese and the type of soil determine how fast it moves through the soil and how much is retained in the soil.
- ☐ The manganese-containing gasoline additive may degrade in the environment quickly when exposed to sunlight, releasing manganese.

How might I be exposed to manganese?

- ☐ The primary way you can be exposed to manganese is by eating food or manganese-containing nutritional supplements. Vegetarians who consume foods rich in manganese such as grains, beans and nuts, as well as heavy tea drinkers, may have a higher intake of manganese than the average person.
- ☐ Certain occupations like welding or working in a factory where steel is made may increase your chances of being exposed to high levels of manganese.
- ☐ Manganese is routinely contained in groundwater, drinking water, and soil at low levels. Drinking water containing manganese or swimming or bathing in water containing manganese may expose you to low levels of this chemical.

How can manganese affect my health?

Manganese is an essential nutrient, and eating a small amount of it each day is important to stay healthy.

The most common health problems in workers exposed to high levels of manganese involve the nervous system. These health effects include behavioral changes and other nervous system effects, which include movements that may become slow and clumsy. This combination of symptoms when sufficiently severe is referred to as "manganism". Other less severe nervous system effects such as slowed hand movements have been observed in

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some workers exposed to lower concentrations in the work place.

Nervous system and reproductive effects have been observed in animals after high oral doses of manganese.

How likely is manganese to cause cancer?

The EPA concluded that existing scientific information cannot determine whether or not excess manganese can cause cancer.

How can manganese affect children?

Studies in children have suggested that extremely high levels of manganese exposure may produce undesirable effects on brain development, including changes in behavior and decreases in the ability to learn and remember. We do not know for certain that these changes were caused by manganese alone. We do not know if these changes are temporary or permanent. We do not know whether children are more sensitive than adults to the effects of manganese, but there is some indication from experiments in laboratory animals that they may be.

Studies of manganese workers have not found increases in birth defects or low birth weight in their offspring. No birth defects were observed in animals exposed to manganese.

How can families reduce the risks of exposure to manganese?

- ☐ Children are not likely to be exposed to harmful amounts of manganese in the diet. However, higher-than-usual amounts of manganese may be absorbed if their diet is low in iron. It is important to provide your child with a well-balanced diet.
- ☐ Workers exposed to high levels of airborne manganese in certain occupational settings may accumulate manganese dust on their work clothes. Manganese-contaminated work

clothing should be removed before getting into your car or entering your home to help reduce the exposure hazard for yourself and your family.

Is there a medical test to determine whether I've been exposed to manganese?

Several tests are available to measure manganese in blood, urine, hair, or feces. Because manganese is normally present in our body, some is always found in tissues or fluids.

Because excess manganese is usually removed from the body within a few days, past exposures are difficult to measure with common laboratory tests.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to manganese in drinking water at concentrations of 1 mg/L for up to 10 days is not expected to cause any adverse effects in a child.

The EPA has established that lifetime exposure to 0.3 mg/L manganese is not expected to cause any adverse effects.

The FDA has determined that the manganese concentration in bottled drinking water should not exceed 0.05 mg/L.

The Occupational Health and Safety Administration (OSHA) has established a ceiling limit (concentration that should not be exceeded at any time during exposure) of 5 mg/m³ for manganese in workplace air.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Manganese (Draft for Public Comment). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about trichloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Trichloroethylene is a colorless liquid which is used as a solvent for cleaning metal parts. Drinking or breathing high levels of trichloroethylene may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. Trichloroethylene has been found in at least 852 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is trichloroethylene?

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

Trichloroethylene is not thought to occur naturally in the environment. However, it has been found in underground water sources and many surface waters as a result of the manufacture, use, and disposal of the chemical.

What happens to trichloroethylene when it enters the environment?

- ❑ Trichloroethylene dissolves a little in water, but it can remain in ground water for a long time.
- ❑ Trichloroethylene quickly evaporates from surface water, so it is commonly found as a vapor in the air.
- ❑ Trichloroethylene evaporates less easily from the soil than from surface water. It may stick to particles and remain for a long time.
- ❑ Trichloroethylene may stick to particles in water, which will cause it to eventually settle to the bottom sediment.
- ❑ Trichloroethylene does not build up significantly in

plants and animals.

How might I be exposed to trichloroethylene?

- ❑ Breathing air in and around the home which has been contaminated with trichloroethylene vapors from shower water or household products such as spot removers and typewriter correction fluid.
- ❑ Drinking, swimming, or showering in water that has been contaminated with trichloroethylene.
- ❑ Contact with soil contaminated with trichloroethylene, such as near a hazardous waste site.
- ❑ Contact with the skin or breathing contaminated air while manufacturing trichloroethylene or using it at work to wash paint or grease from skin or equipment.

How can trichloroethylene affect my health?

Breathing small amounts may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating.

Breathing large amounts of trichloroethylene may cause impaired heart function, unconsciousness, and death. Breathing it for long periods may cause nerve, kidney, and liver damage.

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Drinking large amounts of trichloroethylene may cause nausea, liver damage, unconsciousness, impaired heart function, or death.

Drinking small amounts of trichloroethylene for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear.

Skin contact with trichloroethylene for short periods may cause skin rashes.

How likely is trichloroethylene to cause cancer?

Some studies with mice and rats have suggested that high levels of trichloroethylene may cause liver, kidney, or lung cancer. Some studies of people exposed over long periods to high levels of trichloroethylene in drinking water or in workplace air have found evidence of increased cancer. Although, there are some concerns about the studies of people who were exposed to trichloroethylene, some of the effects found in people were similar to effects in animals.

In its 9th Report on Carcinogens, the National Toxicology Program (NTP) determined that trichloroethylene is “reasonably anticipated to be a human carcinogen.” The International Agency for Research on Cancer (IARC) has determined that trichloroethylene is “probably carcinogenic to humans.”

Is there a medical test to show whether I’ve been exposed to trichloroethylene?

If you have recently been exposed to trichloroethylene, it can be detected in your breath, blood, or urine. The breath test, if it is performed soon after exposure, can tell if you have been exposed to even a small amount of trichloroethylene.

Exposure to larger amounts is assessed by blood

and urine tests, which can detect trichloroethylene and many of its breakdown products for up to a week after exposure. However, exposure to other similar chemicals can produce the same breakdown products, so their detection is not absolute proof of exposure to trichloroethylene. This test isn’t available at most doctors’ offices, but can be done at special laboratories that have the right equipment.

Has the federal government made recommendations to protect human health?

The EPA has set a maximum contaminant level for trichloroethylene in drinking water at 0.005 milligrams per liter (0.005 mg/L) or 5 parts of TCE per billion parts water.

The EPA has also developed regulations for the handling and disposal of trichloroethylene.

The Occupational Safety and Health Administration (OSHA) has set an exposure limit of 100 parts of trichloroethylene per million parts of air (100 ppm) for an 8-hour workday, 40-hour workweek.

Glossary

Carcinogenicity: The ability of a substance to cause cancer.

CAS: Chemical Abstracts Service.

Evaporate: To change into a vapor or gas.

Milligram (mg): One thousandth of a gram.

Nonflammable: Will not burn.

ppm: Parts per million.

Sediment: Mud and debris that have settled to the bottom of a body of water.

Solvent: A chemical that dissolves other substances.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Trichloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations of tetrachloroethylene can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. Tetrachloroethylene has been found in at least 771 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is tetrachloroethylene?

(Pronounced tět'rə-klôr' ō-ěth'ə-lēn')

Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products.

Other names for tetrachloroethylene include perchloroethylene, PCE, and tetrachloroethene. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part tetrachloroethylene per million parts of air (1 ppm) or more, although some can smell it at even lower levels.

What happens to tetrachloroethylene when it enters the environment?

- ☐ Much of the tetrachloroethylene that gets into water or soil evaporates into the air.
- ☐ Microorganisms can break down some of the tetrachloroethylene in soil or underground water.
- ☐ In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain.
- ☐ It does not appear to collect in fish or other animals that live in water.

How might I be exposed to tetrachloroethylene?

- ☐ When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- ☐ When you drink water containing tetrachloroethylene, you are exposed to it.

How can tetrachloroethylene affect my health?

High concentrations of tetrachloroethylene (particularly in closed, poorly ventilated areas) can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death.

Irritation may result from repeated or extended skin contact with it. These symptoms occur almost entirely in work (or hobby) environments when people have been accidentally exposed to high concentrations or have intentionally used tetrachloroethylene to get a "high."

In industry, most workers are exposed to levels lower than those causing obvious nervous system effects. The health effects of breathing in air or drinking water with low levels of tetrachloroethylene are not known.

Results from some studies suggest that women who work in dry cleaning industries where exposures to tetrachloroethyl-

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ene can be quite high may have more menstrual problems and spontaneous abortions than women who are not exposed. However, it is not known if tetrachloroethylene was responsible for these problems because other possible causes were not considered.

Results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage. Exposure to very high levels of tetrachloroethylene can be toxic to the unborn pups of pregnant rats and mice. Changes in behavior were observed in the offspring of rats that breathed high levels of the chemical while they were pregnant.

How likely is tetrachloroethylene to cause cancer?

The Department of Health and Human Services (DHHS) has determined that tetrachloroethylene may reasonably be anticipated to be a carcinogen. Tetrachloroethylene has been shown to cause liver tumors in mice and kidney tumors in male rats.

Is there a medical test to show whether I've been exposed to tetrachloroethylene?

One way of testing for tetrachloroethylene exposure is to measure the amount of the chemical in the breath, much the same way breath-alcohol measurements are used to determine the amount of alcohol in the blood.

Because it is stored in the body's fat and slowly released into the bloodstream, tetrachloroethylene can be detected in the breath for weeks following a heavy exposure.

Tetrachloroethylene and trichloroacetic acid (TCA), a breakdown product of tetrachloroethylene, can be detected in the blood. These tests are relatively simple to perform. These tests aren't available at most doctors' offices, but can be per-

formed at special laboratories that have the right equipment.

Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed to tetrachloroethylene or the other chemicals.

Has the federal government made recommendations to protect human health?

The EPA maximum contaminant level for the amount of tetrachloroethylene that can be in drinking water is 0.005 milligrams tetrachloroethylene per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 100 ppm for an 8-hour workday over a 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that tetrachloroethylene be handled as a potential carcinogen and recommends that levels in workplace air should be as low as possible.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Milligram (mg): One thousandth of a gram.

Nonflammable: Will not burn.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Tetrachloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html> ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about toluene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to toluene occurs from breathing contaminated workplace air, in automobile exhaust, some consumer products paints, paint thinners, fingernail polish, lacquers, and adhesives. Toluene affects the nervous system. Toluene has been found at 959 of the 1,591 National Priority List sites identified by the Environmental Protection Agency

What is toluene?

Toluene is a clear, colorless liquid with a distinctive smell. Toluene occurs naturally in crude oil and in the tolu tree. It is also produced in the process of making gasoline and other fuels from crude oil and making coke from coal.

Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes.

What happens to toluene when it enters the environment?

☐ Toluene enters the environment when you use materials that contain it. It can also enter surface water and groundwater from spills of solvents and petroleum products as well as from leaking underground storage tanks at gasoline stations and other facilities.

☐ When toluene-containing products are placed in landfills or waste disposal sites, the toluene can enter the soil or water near the waste site.

☐ Toluene does not usually stay in the environment long.

☐ Toluene does not concentrate or buildup to high levels in animals.

How might I be exposed to toluene?

☐ Breathing contaminated workplace air or automobile exhaust.

☐ Working with gasoline, kerosene, heating oil, paints, and lacquers.

☐ Drinking contaminated well-water.

☐ Living near uncontrolled hazardous waste sites containing toluene products.

How can toluene affect my health?

Toluene may affect the nervous system. Low to moderate levles can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, loss of appetite, and

ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>

hearing and color vision loss. These symptoms usually disappear when exposure is stopped.

Inhaling High levels of toluene in a short time can make you feel light-headed, dizzy, or sleepy. It can also cause unconsciousness, and even death.

High levels of toluene may affect your kidneys.

How likely is toluene to cause cancer?

Studies in humans and animals generally indicate that toluene does not cause cancer.

The EPA has determined that the carcinogenicity of toluene can not be classified.

How can toluene affect children?

It is likely that health effects seen in children exposed to toluene will be similar to the effects seen in adults. Some studies in animals suggest that babies may be more sensitive than adults.

Breathing very high levels of toluene during pregnancy can result in children with birth defects and retard mental abilities, and growth. We do not know if toluene harms the unborn child if the mother is exposed to low levels of toluene during pregnancy.

How can families reduce the risk of exposure to toluene?

- ☐ Use toluene-containing products in well-ventilated areas.

- ☐ When not in use, toluene-containing products should be tightly covered to prevent evaporation into the air.

Is there a medical test to show whether I've been exposed to toluene?

There are tests to measure the level of toluene or its breakdown products in exhaled air, urine, and blood. To determine if you have been exposed to toluene, your urine or blood must be checked within 12 hours of exposure. Several other chemicals are also changed into the same breakdown products as toluene, so some of these tests are not specific for toluene.

Has the federal government made recommendations to protect human health?

EPA has set a limit of 1 milligram per liter of drinking water (1 mg/L).

Discharges, releases, or spills of more than 1,000 pounds of toluene must be reported to the National Response Center.

The Occupational Safety and Health Administration has set a limit of 200 parts toluene per million of workplace air (200 ppm).

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological Profile for Toluene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about xylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to xylene occurs in the workplace and when you use paint, gasoline, paint thinners and other products that contain it. People who breathe high levels may have dizziness, confusion, and a change in their sense of balance. This substance has been found in at least 658 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is xylene?

(Pronounced zī'lēn)

Xylene is a colorless, sweet-smelling liquid that catches on fire easily. It occurs naturally in petroleum and coal tar and is formed during forest fires. You can smell xylene in air at 0.08–3.7 parts of xylene per million parts of air (ppm) and begin to taste it in water at 0.53–1.8 ppm.

Chemical industries produce xylene from petroleum. It's one of the top 30 chemicals produced in the United States in terms of volume.

Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.

What happens to xylene when it enters the environment?

- ☐ Xylene has been found in waste sites and landfills when discarded as used solvent, or in varnish, paint, or paint thinners.
- ☐ It evaporates quickly from the soil and surface water into the air.

- ☐ In the air, it is broken down by sunlight into other less harmful chemicals.
- ☐ It is broken down by microorganisms in soil and water.
- ☐ Only a small amount of it builds up in fish, shellfish, plants, and animals living in xylene-contaminated water.

How might I be exposed to xylene?

- ☐ Breathing xylene in workplace air or in automobile exhaust.
- ☐ Breathing contaminated air.
- ☐ Touching gasoline, paint, paint removers, varnish, shellac, and rust preventatives that contain it.
- ☐ Breathing cigarette smoke that has small amounts of xylene in it.
- ☐ Drinking contaminated water or breathing air near waste sites and landfills that contain xylene.
- ☐ The amount of xylene in food is likely to be low.

How can xylene affect my health?

Xylene affects the brain. High levels from exposure for short periods (14 days or less) or long periods (more than 1 year) can cause headaches, lack of muscle coordination, dizziness, confusion, and changes in one's sense of balance. Exposure of

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people to high levels of xylene for short periods can also cause irritation of the skin, eyes, nose, and throat; difficulty in breathing; problems with the lungs; delayed reaction time; memory difficulties; stomach discomfort; and possibly changes in the liver and kidneys. It can cause unconsciousness and even death at very high levels.

Studies of unborn animals indicate that high concentrations of xylene may cause increased numbers of deaths, and delayed growth and development. In many instances, these same concentrations also cause damage to the mothers. We do not know if xylene harms the unborn child if the mother is exposed to low levels of xylene during pregnancy.

How likely is xylene to cause cancer?

The International Agency for Research on Cancer (IARC) has determined that xylene is not classifiable as to its carcinogenicity in humans.

Human and animal studies have not shown xylene to be carcinogenic, but these studies are not conclusive and do not provide enough information to conclude that xylene does not cause cancer.

Is there a medical test to show whether I've been exposed to xylene?

Laboratory tests can detect xylene or its breakdown products in exhaled air, blood, or urine. There is a high degree of agreement between the levels of exposure to xylene and the levels of xylene breakdown products in the urine. However, a urine sample must be provided very soon after exposure ends because xylene quickly leaves the body. These tests are not routinely available at your doctor's office.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 10 ppm of xylene in drinking water.

The EPA requires that spills or accidental releases of xylenes into the environment of 1,000 pounds or more must be reported.

The Occupational Safety and Health Administration (OSHA) has set a maximum level of 100 ppm xylene in workplace air for an 8-hour workday, 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) and the American Conference of Governmental Industrial Hygienists (ACGIH) also recommend exposure limits of 100 ppm in workplace air.

NIOSH has recommended that 900 ppm of xylene be considered immediately dangerous to life or health. This is the exposure level of a chemical that is likely to cause permanent health problems or death.

Glossary

Evaporate: To change from a liquid into a vapor or a gas.

Carcinogenic: Having the ability to cause cancer.

CAS: Chemical Abstracts Service.

ppm: Parts per million.

Solvent: A liquid that can dissolve other substances.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for xylenes (update). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop E-29, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 404-498-0093. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html> ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



This fact sheet answers the most frequently asked health questions (FAQs) about zinc. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Zinc is a naturally occurring element. Exposure to high levels of zinc occurs mostly from eating food, drinking water, or breathing workplace air that is contaminated. Low levels of zinc are essential for maintaining good health. Exposure to large amounts of zinc can be harmful. It can cause stomach cramps, anemia, and changes in cholesterol levels. Zinc has been found in at least 985 of the 1,662 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is zinc?

Zinc is one of the most common elements in the earth's crust. It is found in air, soil, and water, and is present in all foods. Pure zinc is a bluish-white shiny metal.

Zinc has many commercial uses as coatings to prevent rust, in dry cell batteries, and mixed with other metals to make alloys like brass, and bronze. A zinc and copper alloy is used to make pennies in the United States.

Zinc combines with other elements to form zinc compounds. Common zinc compounds found at hazardous waste sites include zinc chloride, zinc oxide, zinc sulfate, and zinc sulfide. Zinc compounds are widely used in industry to make paint, rubber, dyes, wood preservatives, and ointments.

What happens to zinc when it enters the environment?

- ☐ Some is released into the environment by natural processes, but most comes from human activities like mining, steel production, coal burning, and burning of waste.
- ☐ It attaches to soil, sediments, and dust particles in the air.
- ☐ Rain and snow remove zinc dust particles from the air.
- ☐ Depending on the type of soil, some zinc compounds can move into the groundwater and into lakes, streams, and rivers.
- ☐ Most of the zinc in soil stays bound to soil particles and

does not dissolve in water.

- ☐ It builds up in fish and other organisms, but it does not build up in plants.

How might I be exposed to zinc?

- ☐ Ingesting small amounts present in your food and water.
- ☐ Drinking contaminated water or a beverage that has been stored in metal containers or flows through pipes that have been coated with zinc to resist rust.
- ☐ Eating too many dietary supplements that contain zinc.
- ☐ Working on any of the following jobs: construction, painting, automobile mechanics, mining, smelting, and welding; manufacture of brass, bronze, or other zinc-containing alloys; manufacture of galvanized metals; and manufacture of machine parts, rubber, paint, linoleum, oilcloths, batteries, some kind of glass, ceramics, and dyes.

How can zinc affect my health?

Zinc is an essential element in our diet. Too little zinc can cause problems, but too much zinc is also harmful.

Harmful effects generally begin at levels 10-15 times higher than the amount needed for good health. Large doses taken by mouth even for a short time can cause stomach cramps, nausea, and vomiting. Taken longer, it can cause anemia and decrease the levels of your good cholesterol. We do not know if high levels of zinc affect reproduction in humans. Rats that were fed large amounts of zinc became infertile.

ToxFAQs™ Internet address is <http://www.atsdr.cdc.gov/toxfaq.html>

Inhaling large amounts of zinc (as dusts or fumes) can cause a specific short-term disease called metal fume fever. We do not know the long-term effects of breathing high levels of zinc.

Putting low levels of zinc acetate and zinc chloride on the skin of rabbits, guinea pigs, and mice caused skin irritation. Skin irritation will probably occur in people.

How likely is zinc to cause cancer?

The Department of Health and Human Services (DHHS) and the International Agency for Research on Cancer (IARC) have not classified zinc for carcinogenicity. Based on incomplete information from human and animal studies, the EPA has determined that zinc is not classifiable as to its human carcinogenicity.

How can zinc affect children?

Zinc is essential for proper growth and development of young children. It is likely that children exposed to very high levels of zinc will have similar effects as adults. We do not know whether children are more susceptible to the effects of excessive intake of zinc than the adults.

We do not know if excess zinc can cause developmental effects in humans. Animal studies have found decreased weight in the offspring of animals that ingested very high amounts of zinc.

How can families reduce the risks of exposure to zinc?

- ☐ Children living near waste sites that contain zinc may be exposed to higher levels of zinc through breathing contaminated air, drinking contaminated drinking water, touching or eating contaminated soil.
- ☐ Discourage your children from eating soil or putting their hands in their mouths and teach them to wash their hands frequently and before eating.
- ☐ If you use medicines or vitamin supplements containing

zinc, make sure you use them appropriately and keep them out of the reach of children.

Is there a medical test to determine whether I've been exposed to zinc?

There are tests available to measure zinc in your blood, urine, hair, saliva, and feces. These tests are not usually done in the doctor's office because they require special equipment. High levels of zinc in the feces can mean high recent zinc exposure. High levels of zinc in the blood can mean high zinc consumption and/or high exposure. Tests to measure zinc in hair may provide information on long-term zinc exposure; however, the relationship between levels in your hair and the amount of zinc you were exposed to is not clear.

Has the federal government made recommendations to protect human health?

The EPA recommends that drinking water should contain no more than 5 milligrams per liter of water (5 mg/L) because of taste. The EPA requires that any release of 1,000 pounds (or in some cases 5,000 pounds) into the environment be reported to the agency.

To protect workers, the Occupational Safety and Health Administration (OSHA) has set an average limit of 1 mg/m³ for zinc chloride fumes and 5 mg/m³ for zinc oxide (dusts and fumes) in workplace air during an 8-hour workday, 40-hour workweek.

Similarly, the National Institute for Occupational Safety and Health (NIOSH) has set the same standards for up to a 10-hour workday over a 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2005. Toxicological Profile for Zinc (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



ATTACHMENT B
REPORT FORMS

WEEKLY SAFETY REPORT FORM

Week Ending: _____ Project Name/Number: _____

Report Date: _____ Project Manager Name: _____

Summary of any violations of procedures occurring that week:

Summary of any job related injuries, illnesses, or near misses that week:

Summary of air monitoring data that week (include and sample analyses, action levels exceeded, and actions taken):

Comments:

Name: _____ Company: _____

Signature: _____ Title: _____

INCIDENT REPORT FORM

Date of Report: _____

Injured: _____

Employer: _____

Site: _____ Site Location: _____

Report Prepared By: _____
Signature Title

ACCIDENT/INCIDENT CATEGORY (check all that applies)

☐ Injury	☐ Illness	☐ Near Miss
☐ Property Damage	☐ Fire	☐ Chemical Exposure
☐ On-site Equipment	☐ Motor Vehicle	☐ Electrical
☐ Mechanical	☐ Spill	☐ Other

DATE AND TIME OF ACCIDENT/INCIDENT: Narrative report of Accident/Incident: Identify: 1) actions leading to or contributing to the accident/incident; 2) the accident/incident occurrence; and 3) actions following the accident/incident.

WITNESS TO ACCIDENT/INCIDENT:

Name: _____	Company: _____
Address: _____	Address: _____
Phone No.: _____	Phone No.: _____
Name: _____	Company: _____
Address: _____	Address: _____
Phone No.: _____	Phone No.: _____

INJURED - ILL:

Name: _____ SSN: _____

Address: _____ Age: _____

Length of Service: _____ Time on Present Job: _____

Time/Classification: _____

SEVERITY OF INJURY OR ILLNESS:

___ Disabling ___ Non-disabling ___ Fatality

___ Medical Treatment ___ First Aid Only

ESTIMATED NUMBER OF DAYS AWAY FROM JOB: _____**NATURE OF INJURY OR ILLNESS:** _____

CLASSIFICATION OF INJURY:

___ Abrasions	___ Dislocations	___ Punctures
___ Bites	___ Faint/Dizziness	___ Radiation Burns
___ Blisters	___ Fractures	___ Respiratory Allergy
___ Bruises	___ Frostbite	___ Sprains
___ Chemical Burns	___ Heat Burns	___ Toxic Resp. Exposure
___ Cold Exposure	___ Heat Exhaustion	___ Toxic Ingestion
___ Concussion	___ Heat Stroke	___ Dermal Allergy
___ Lacerations		

Part of Body Affected: _____

Degree of Disability: _____

Date Medical Care was Received: _____

Where Medical Care was Received: _____

Address (if off-site): _____

(If two or more injuries, record on separate sheets)

PROPERTY DAMAGE:

Description of Damage: _____

Cost of Damage: \$ _____

ACCIDENT/INCIDENT LOCATION: _____

ACCIDENT/INCIDENT ANALYSIS: Causative agent most directly related to accident/incident
(Object, substance, material, machinery, equipment, conditions)

Was weather a factor?: _____

Unsafe mechanical/physical/environmental condition at time of accident/incident (Be specific):

Personal factors (Attitude, knowledge or skill, reaction time, fatigue):

ON-SITE ACCIDENTS/INCIDENTS:

Level of personal protection equipment required in Site Safety Plan:

Modifications:

Was injured using required equipment?:

If not, how did actual equipment use differ from plan?:

ACTION TAKEN TO PREVENT RECURRENCE: (Be specific. What has or will be done? When will it be done? Who is the responsible party to insure that the correction is made?)

ACCIDENT/INCIDENT REPORT REVIEWED BY:

SSO Name Printed

SSO Signature

OTHERS PARTICIPATING IN INVESTIGATION:

Signature

Title

Signature

Title

Signature

Title

ACCIDENT/INCIDENT FOLLOW-UP: Date:

Outcome of accident/incident:

Physician's recommendations:

Date injured returned to work:

Follow-up performed by:

Signature

Title

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

ATTACHMENT C
EMERGENCY HAND SIGNALS

EMERGENCY SIGNALS

In most cases, field personnel will carry portable radios for communication. If this is the case, a transmission that indicates an emergency will take priority over all other transmissions. All other site radios will yield the frequency to the emergency transmissions.

Where radio communications is not available, the following air-horn and/or hand signals will be used:

EMERGENCY HAND SIGNALS

OUT OF AIR, CAN'T BREATHE!



Hand gripping throat

**LEAVE AREA IMMEDIATELY,
NO DEBATE!**

(No Picture) Grip partner's wrist or place both hands around waist

NEED ASSISTANCE!



Hands on top of head

**OKAY! – I'M ALL RIGHT!
- I UNDERSTAND!**



Thumbs up

NO! - NEGATIVE!



Thumbs down

APPENDIX H
COMMUNITY AIR MONITORING PLAN

EAST 138TH STREET AFFORDABLE HOUSING

BRONX, NEW YORK

Community Air Monitoring Plan

NYSDEC BCP Site No: C203155
AKRF Project Number: 210261

Prepared For:

New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor
Albany, New York 12233

Prepared On Behalf Of:

East 138th Street JV Associates LLC
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New York, NY 10010

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AKRF, Inc.
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New York, New York 10016
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SEPTEMBER 2025

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TABLES

Table 1 – Work Zone Air Monitoring Action Levels

1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) has been developed for the implementation of a Remedial Action Work Plan (RAWP) by AKRF, Inc. (AKRF) personnel and its subcontractors at the property located at 110 East 138th Street in the Mott Haven section of the Bronx, New York, hereafter referred to as the “Site.” The Site is identified by the City of New York as Borough of the Bronx, Tax Block 2323, Lot 43 on the New York City Tax Map.

The Site currently consists of a vacant one-story building with a basement and an adjacent one-story steel shed that most recently housed a used auto sales facility with a repair shop from 2005 through 2019. The Site location is shown on Figure 1, and the Site layout is shown on Figure 2. The Site is abutted to the north by East 138th Street, followed by the Madison Avenue Bridge; to the south by the Padded Wagon[®] moving company warehouse and associated parking; to the east by Exterior Street, followed by the Major Deegan Expressway; and to the west by a freight train rail line, followed by the Harlem River. The surrounding area is comprised of predominantly commercial and industrial uses, with some parkland to the east. Surrounding land use is shown on Figure 3.

2.0 AIR MONITORING PROGRAM

The purpose of the air monitoring program is to identify any exposure of the field personnel and the community to potential environmental hazards in the soil and groundwater. Air Monitoring will be conducted in accordance with the New York State Department of Health (NYSDOH) and New York State Department of Environmental Conservation (NYSDEC) guidance. Results of the air monitoring will be used to determine the appropriate response action, if needed. Field personnel will be trained in the proper operation of all field instruments at the start of the field program. The equipment will be calibrated according to manufacturer specifications at the start of each day of fieldwork. If an instrument fails calibration, the project manager will be contacted immediately to obtain a replacement instrument and arrange for repairs.

2.1 Work Zone Air Monitoring

2.1.1 Volatile Organic Compound (VOC) Monitoring

Continuous monitoring for VOCs will be conducted using roving hand-held equipment during all ground-intrusive activities, including soil boring advancement and groundwater monitoring well installation. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background concentrations. VOCs will be monitored continuously at the downwind perimeter of the exclusion zone. Monitoring will be conducted with a photoionization detector (PID) equipped with a 10.6 electron Volt (eV) lamp capable of calculating 15-minute running average concentrations. More frequent intervals of monitoring will be conducted if required as determined by the SSO. All PID readings will be recorded and available for NYSDEC and NYSDOH personnel to review. Instantaneous readings will also be recorded.

2.1.2 Airborne Particulate Monitoring

A DustTrak[®] or equivalent would be used to measure real-time concentrations of total particulates 10 micrometers or less (PM₁₀). Measurements for particulates will be taken prior to commencement of the work and during the work in areas where contaminated soil would be disturbed. The action levels listed in Table 1 are based on 15-minute averages of the monitoring data. The measurements will be made at the breathing height of the workers and as close to their location as practicable. The Site Safety Officer (SSO) will set up the equipment and confirm that it is working properly. His/her qualified designee may oversee the air measurements during the day. The initial measurement for the day will be performed before the start of work and will establish background levels. The final measurement for the day will be performed after the end of work. The action levels for particulates and VOCs and required responses are listed in Table 1.

Table 1
Work Zone Action Levels and Required Responses

Monitoring	Action Level ¹	Response Action
Particulate	Less than 0.125 mg/m ³ above background	Level D or D-Modified (Requires coveralls and steel toe boots) (As applicable: Chemical resistant gloves, chemical resistant boot covers, hard hat, safety glasses, face shield, or escape mask)
	Between 0.125 mg/m ³ and 0.150 mg/m ³ above background	Level C (Requires full face or half face respirator, hooded chemical resistant two piece Tyvek suit or overalls, chemical resistant inner and outer gloves, chemical resistant boot covers, steel toe and shank boots) (As applicable: hard hat, face shield, or escape mask) Apply dust suppression measures. Resume work or upgrade.
	Greater than 0.150 mg/m ³ above background	Stop work. Apply additional dust suppression measures. Resume work when less than 0.150 mg/m ³ and maintain Level C.
Volatile Organic Compound (VOC)	Less than 5 ppm in breathing zone	Level D or D-Modified
	Between 5 and 50 ppm	Level C
	More than 50 ppm	Stop work. Resume work when source of vapors is abated and readings are less than 50 ppm above background.
Notes: ¹ - 15-minute time-weighted average parts per million = ppm milligrams per cubic meter = mg/m ³		

2.2 Perimeter Community Air Monitoring

Fixed air monitoring stations will be set up at the upwind and downwind perimeters of the exclusion zone during all ground intrusive activities and will continuously log VOC and particulate levels. Each fixed monitoring station will be fully enclosed and equipped with the following:

- A PID equipped with a 10.6 eV lamp capable of calculating 15-minute running average VOC concentrations;
- A TSI 8530 DustTrak II or equivalent dust monitor capable of measuring the concentration of airborne respirable particulates less than 10 micrometers in size (PM10) and calculating 15-minute running average particulate concentrations; and
- A Netronix™ Thiamus™ ICU-820 or equivalent Global System for Mobile Communication (GSM)/Global Positioning System (GPS) device capable of recording air monitoring and location data.
- Each monitoring station will be capable of sending e-mail alerts to the SSO to indicate an exceedance of action levels. Additionally, the SSO will conduct an inspection of the monitoring stations on at least an hourly basis. Upon completion of Site activities, all air monitoring data will be available to download via the iEnvironet® website. All air monitoring data recorded at the fixed monitoring stations will be available for NYSDOH and NYSDEC review and will be included in the Final Engineering Report (FER).

2.2.1 Perimeter Community Air Monitoring Action Levels

VOC Action Levels

The following actions will be taken based on organic vapor levels measured:

If total organic vapor levels exceed 5 parts per million (ppm) above background for the 15-minute average at the exclusion zone perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the exclusion zone persist at levels in excess of 5 ppm above background, but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet – is below 5 ppm above background for the 15-minute average.

If the total organic vapor level is above 25 ppm at the perimeter of the exclusion zone, activities will be shutdown.

Particulate Action Levels

The following actions will be taken based on particulate levels measured:

If the downwind particulate concentrations are greater than 0.1 milligrams per cubic meter (mg/m^3) above background (upwind concentrations), and no other obvious source is apparent, then it will be assumed that the elevated particulate concentrations are a result of site activities. In such instances, dust suppression measures will be implemented and monitoring will be continued. Work will be allowed to continue with dust suppression if downwind particulate levels do not exceed $0.15 \text{ mg}/\text{m}^3$ above the background (upwind concentration) and provided that no visible dust is migrating from the work area.

If particulate levels persist at $0.15 \text{ mg}/\text{m}^3$ above the background, work must be stopped until dust suppression measures bring particulate levels to below $0.15 \text{ mg}/\text{m}^3$ above background.

2.3 Major Vapor Emission Response Plan

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work Site, or half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted or vapor controls must be implemented.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the exclusion zone, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If either of the following criteria is exceeded in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be implemented:

- Sustained organic vapor levels approaching 1 ppm above background for a period of more than 30 minutes; or
- Organic vapor levels greater than 5 ppm above background for any time period.

Upon activation, the following activities shall be undertaken as part of the Major Vapor Emission Response Plan:

- The NYSDEC, NYSDOH, and local police authorities will be immediately contacted by the SSO and advised of the situation;
- Frequent air monitoring will be conducted at 30-minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Site Health and Safety Officer; and
- All Emergency contacts will go into effect as appropriate.
- All readings will be recorded and be available for NYSDEC and NYSDOH personnel to review.

2.4 Reporting

CAMP summary reports will be prepared and submitted to NYSDEC and NYSDOH for review as part of the daily reports. In the event there is an action level exceedance or complaint, NYSDEC and NYSDOH will be notified within 24 hours (same day to the extent possible) of the exceedance or complaint. The notification will include a description of the exceedance or complaint, the cause of the exceedance, and any corrective actions taken. All recorded CAMP data will be included in the FER.

APPENDIX I
CITIZEN PARTICIPATION PLAN



Department of
Environmental
Conservation

Brownfield Cleanup Program

Citizen Participation Plan

for

East 138th Street Affordable Housing

February 2023

BCP Site No. C203155
110 East 138th Street
Bronx, New York 10451

Prepared by:



AKRF, Inc.

440 Park Avenue South, 7th Floor
New York, NY 10016
(212) 696-0670

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Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site’s investigation and cleanup process.

Applicant: **East 138th Street JV Associates LLC (“Applicant”)**
Site Name: **East 138th Street Affordable Housing (“Site”)**
Site Address: **110 East 138th Street, Bronx, NY 10451**
Site County: **The Bronx**
Site Number: **C203155**

1. What is New York’s Brownfield Cleanup Program?

New York’s Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as “brownfields” so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants who conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at: <http://www.dec.ny.gov/chemical/8450.html> .

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision-makers form or adopt final positions.

Involving citizens affected and interested in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment
- Improving public access to, and understanding of, issues and information related to a particular site and that site’s investigation and cleanup process
- Providing citizens with early and continuing opportunities to participate in NYSDEC’s site investigation and cleanup process
- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision-making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the Site's investigation and cleanup program. The public's suggestions about this Citizen Participation Plan (CPP) and the CP program for the Site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the Site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC website. If this occurs, NYSDEC will inform the public in fact sheets distributed about the site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the Site's investigation and cleanup process. The Site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the Site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The site contact list includes, at a minimum:

- Chief executive officer and planning board chairperson of each county, city, town and village in which the site is located;
- Residents, owners, and occupants of the Site and properties adjacent to the Site;
- The public water supplier which services the area in which the Site is located;
- Any person who has requested to be placed on the Site contact list;
- The administrator of any school or day care facility located on or near the Site for purposes of posting and/or dissemination of information at the facility; and
- Location(s) of reports and information.

The Site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the Site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

Note: The first Site fact sheet (usually related to the draft Remedial Investigation Work Plan) is distributed both by paper mailing through the postal service and through DEC Delivers, its email listserv service. The

fact sheet includes instructions for signing up with the appropriate county listserv to receive future notifications about the site. See <http://www.dec.ny.gov/chemical/61092.html>.

Subsequent fact sheets about the Site will be distributed exclusively through the listserv, except for households without internet access that have indicated the need to continue to receive Site information in paper form. Please advise the NYSDEC site project manager identified in Appendix A if that is the case. Paper mailings may continue during the investigation and cleanup process for some sites, based on public interest and need.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the Site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the Site investigation and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.
- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the Site's investigation and cleanup process with questions, comments, or requests for information.

This CPP may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the Site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the Site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the Site, as described in Section 5.

If the Site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the Site.

As of the date the declaration (page 2) was signed by the NYSDEC project manager, the significant threat determination for the Site has not yet been made.

To verify the significant threat status of the Site, the interested public may contact the NYSDEC project manager identified in Appendix A.

For more information about TAGs, go online at <http://www.dec.ny.gov/regulations/2590.html>

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Activities	Timing of CP Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repository(ies)	At time of preparation of application to participate in the BCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the site contact list should be provided to the public at the same time.
After Execution of Brownfield Site Cleanup Agreement (BCA):	
• Prepare Citizen Participation Plan (CPP)	Before start of Remedial Investigation Note: Applicant must submit CPP to NYSDEC for review and approval within 20 days of the effective date of the BCA.
Before NYSDEC Approves Remedial Investigation Work Plan (RIWP):	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RIWP • Conduct 30-day public comment period	Before NYSDEC approves RIWP. If RIWP is submitted with application, public comment periods will be combined, and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet.
After Applicant Completes Remedial Investigation:	
• Distribute fact sheet to site contact list that describes RI results	Before NYSDEC approves RI Report
Before NYSDEC Approves Remedial Action Work Plan (RAWP):	
• Distribute fact sheet to site contact list about draft RAWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RAWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RAWP. Forty-five-day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.
Before Applicant Starts Cleanup Action:	
• Distribute fact sheet to site contact list that describes upcoming cleanup action	Before the start of cleanup action.
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that NYSDEC is reviewing the Final Engineering Report • Distribute fact sheet to site contact list announcing NYSDEC approval of Final Engineering Report and issuance of Certificate of Completion (COC)	At the time the cleanup action has been completed. Note: The two fact sheets are combined when possible if there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the Site. Additional major issues of public concern may be identified during the course of the site's investigation and cleanup process.

Redevelopment Project-Related Issues

The Applicant submitted a BCP Application to the NYSDEC in June 2022 and the application was deemed complete on July 22, 2022. The BCP Application was available for public comment between August 5, 2022 and September 4, 2022.

The Site is part of the Bronx County Census Tract 51. According to the 2015-2019 American Community Survey (ACS) Profile data, it is estimated that approximately 52% of the population in Census Tract 41 is living below the poverty line. The unemployment rate for Census Tract 51 is estimated at 11.5% compared to the New York City unemployment rate of 6.3% in 2015-2019 (the New York City unemployment rate is 5.6% as of September 2022). The entire Site is located in an En-Zone.

The Site consists of an approximately 0.67-acre parcel located at 110 East 138th Street in the Mott Haven section of the Bronx, New York, and is identified as New York City Tax Block 2323, Lot 43. Currently, the Site is developed with a vacant one-story building with a basement and an adjacent one-story steel shed that most recently housed a used auto sales facility with a repair shop from 2005 to 2019. The exterior surface of the Site consists of an asphalt-paved parking area. A 550-gallon used oil aboveground storage tank (AST) is located in the northeastern portion of the Site.

The proposed development for the Site will include demolition of the existing structures and construction of a new mixed-use affordable housing building with ground floor commercial spaces. All remedial investigation and remedial activities are expected to be conducted in accordance with Environmental Conservation Law (ECL) Article 27, Title 14, 6 New York Codes, Rules, and Regulations (NYCRR) 375-1.6(a), 375-3.6, and 375-6, and all applicable laws, rules, regulations, and guidance documents.

Potential Remediation/Construction-Related Issues

Issues of concern to the community during the on-Site remedial investigation phase will likely include those related to the possibility of discovering contamination associated with the historical Site uses such as a lumber yard, shoe manufacturing and auto used sales and repair, which could have potential impacts to on-site subsurface conditions including soil, groundwater, and soil vapor. As most of the Site is capped by existing structures and impervious parking areas, there is limited existing potential exposure pathway from uncapped areas.

Issues of concern to the community during the on-site remediation phase will likely include those related to the on-site handling and off-site disposal of contaminated soil. The likely concern to the surrounding community will be the possibility of the generation of vapors or dust from the Site during remediation. On-Site air quality and dust levels will be monitored during any soil excavation and removal activities in accordance with a Site-specific Health and Safety Plan (HASP) that will be included as part of the RAWP. Dust suppression techniques will be employed to prevent the generation of dust. All air and dust monitoring will be performed in accordance with the New York State Department of Health's (NYSDOH) Community Air Monitoring Program (CAMP).

Additional remediation/construction concern will be the potential presence of trucks traveling through the community, and parking or idling at or near the Site during soil excavation and disposal. The RAWP will include provisions for on-Site soil handling techniques that minimize the number of trucks and duration of

time within or near the Site. In addition, provisions will be included to restrict truck traffic (to the extent possible) to designated routes along main roads while minimizing traffic within the community.

The concern over construction-related noise is also a common one for communities in which redevelopment is occurring. Construction plans will minimize noise to the extent possible and the operation of heavy equipment will be restricted to normal working hours as will be set forth in the required New York City-issued permits. Additional mitigation measures will also be evaluated.

The site is located in an Environmental Justice Area. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Environmental justice efforts focus on improving the environment in communities, specifically minority and low-income communities, and addressing disproportionate adverse environmental impacts that may exist in those communities.

Fact sheets for this project will be translated into Spanish. For additional information, visit: <https://statisticalatlas.com/tract/New-York/Bronx-County/005100/Race-and-Ethnicity>

4. Site Information

Appendix C contains a map identifying the location of the Site.

Site Description

The 29,142 square foot (0.67-acre) project site is located at 110 East 138th Street in the Mott Haven section of the Bronx, New York. The Site is identified on the New York City Tax Map as Block 2323, Lot 43. The Site is currently developed with a one-story building with a basement and an adjacent one-story steel shed that housed a used auto sales facility with a repair shop from 2005 to 2019. The exterior surface of the Site consists of an asphalt-paved parking area. A 550-gallon used oil Above-Ground Storage Tank (AST) is located in the northeastern portion of the Site. Previous occupants of the Site include the aforementioned auto sales and auto repair shop, a shoe factory, a wholesale coffee and roasting facility, and a lumber yard.

The Site is abutted to the north by East 138th Street, followed by the Madison Avenue bridge; to the south by the Padded Wagon[®] moving company warehouse and associated parking; to the east by Exterior Street, followed by the Major Deegan Expressway, and to the west by a freight train rail line, followed by the Harlem River.

The surrounding area is predominately commercial and automotive-related.

The Site is currently zoned as R7-2 (residential) and C2-4 (commercial) and is located within the Special Harlem River Waterfront District and Inclusionary Housing Designated Area.

History of Site Use, Investigation, and Cleanup

Available records indicated that the Site included a lumber yard and a building materials company in the late 19th and early 20th centuries. By 1922, the Site was identified as part of the New York State Canal Terminal and included three small one-story structures (for unspecified use) and undeveloped land. By 1935, the Site was occupied by a building materials business and contained a 550-gallon gasoline underground storage tank (UST) in the eastern portion of the Site. It is unknown if this tank was removed from the Site. The Site was shown as vacant land from 1944 to 1951. The existing warehouse on the eastern side of the Site was used as a coffee roasting and sales business from approximately 1968 through 1993, a warehouse (for unspecified use) in 1994 to 2004, a shoe factory in 2005, and a used auto sales facility with a repair shop in 2005 to 2019. The Site has been vacant since 2019. During AKRF's Phase I Environmental

Site Assessment (ESA), an approximately 550-gallon used oil AST was observed on a steel rack in the outdoor area on the western side of the Site. Further, abandoned chemicals were noted throughout the Site including paint containers up to five gallons, three 55-gallon motor oil drums in the main building's basement, the steel shed, and the outdoor parking area. Maintenance chemicals stored in the steel shed did not appear to be properly stored, with numerous stained areas and small puddles of unidentified materials noted on the shed's concrete floor. Floor staining was also observed on the western side of the main building's basement.

During a previous investigation conducted at the Site by AKRF, contaminated soil, groundwater, and soil vapor are present at the Site. Soil beneath the Site contains elevated levels of metals, pesticides, and organic compounds, which are released naturally from burning combustion products such as coal, oil, gasoline, and wood. These compounds are commonly found in fill material in New York City due to the presence of coal ash and other man-made materials. Similarly, organic compounds and metals were detected in groundwater at concentrations exceeding the corresponding regulatory standards. Petroleum- and chlorinated solvent-related compounds were additionally detected at elevated levels in soil vapor samples beneath the Site. The soil vapor laboratory results are likely associated with the Site's historical automotive and manufacturing uses.

5. Investigation and Cleanup Process

Application

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a **Volunteer**. This means that the Applicant was not responsible for the disposal or discharge of the contaminants, or whose ownership or operation of the Site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination on-site, and must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential exposures of people, fish, and wildlife to contaminants on the Site and to contamination that has migrated from the Site.

The Applicant has proposed that the Site will be used for restricted residential purposes.

To achieve this goal, the Applicant will conduct investigation activities at the Site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement (BCA) executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the Site.

Investigation

The Applicant has completed a partial Site investigation before it entered into the BCP. For the partial investigation, NYSDEC will determine if the data are useable.

The Applicant will conduct an investigation of the Site, officially called a "Remedial Investigation" (RI). The RI will be performed with NYSDEC oversight. The Applicant submitted an RIWP as part of the BCP Application and associated 30-day public comment period.

The RI has several goals:

- Define the nature and extent of contamination in soil, surface water, groundwater and any of the parts of the environment that may be affected;
- Identify the source(s) of contamination;
- Assess the impact of the contamination on public health and the environment; and

- Provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

The Applicant will address any NYSDEC comments for the Draft RIWP and submit a finalized RIWP to NYSDEC for review and approval. The finalized RIWP will be placed in the document repositories for public review.

When the RI is complete, the Applicant will prepare and submit a report that summarizes the results. This report will also recommend whether cleanup action is needed to address Site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine whether the Site poses a significant threat to public health of the environment. If the Site is a “significant threat,” it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by the NYSDEC. If the Site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Interim Remedial Measures

An Interim Remedial Measure (IRM) is an action that can be undertaken at a site when a source of contamination or exposure pathway can be effectively addressed before the site investigation and analysis of alternatives are completed. If an IRM is likely to represent all or a significant part of the final remedy, NYSDEC will require a 30-day public comment period.

Remedy Selection

When the investigation of the site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a “Certificate of Completion” (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a “Remedial Action Work Plan” (RAWP). The RAWP describes the Applicant’s proposed remedy for addressing contamination related to the site.

Once the Applicant submits a Draft RAWP for approval, NYSDEC would announce the availability of the draft RAWP for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan, if necessary, before approving the proposed remedy. The NYSDOH must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy. The selected remedy

is formalized in the Site Decision Document (DD).

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a Final Engineering Report (FER) that certifies that cleanup requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the Site.

Certificate of Completion

When NYSDEC is satisfied that the cleanup requirements have been achieved or will be achieved for the site, it will approve the FER. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the site after it receives a COC.

Site Management

The purpose of Site management is to ensure the safe reuse of the property if contamination will remain in place. Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management incorporates any institutional controls (ICs) and engineering controls (ECs) required to ensure that the remedy implemented for the Site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan (SMP).

An *institutional control* (IC) is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the site suitable for some, but not all uses.

An *engineering control* (EC) is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that pumps and treats groundwater. Site management continues until NYSDEC determines that it is no longer needed.

APPENDIX A -

PROJECT CONTACTS AND LOCATIONS OF REPORTS AND INFORMATION

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Michael Sollecito
Project Manager
NYSDEC
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233
(518) 402-2198
Email: Michael.sollecito@dec.ny.gov

Thomas Panzone
Public Participation Specialist
NYSDEC Region 2
1 Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101
(718) 482-4953
Email: Thomas.panzone@dec.ny.gov

New York State Department of Health (NYSDOH):

Mark Sergott
Project Manager
New York State Department of Health
Empire State Plaza, Corning Tower Rm. 1787
Albany, NY 12237
(518) 402-7860
BEEI@health.ny.gov

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Bronx Community Board 1	New York Public Library – Woodstock Branch	NYSDEC
3024 3 rd Avenue Bronx, NY 10455	761 East 160 th Street Bronx, NY 10456	625 Broadway, 12 th Floor Albany, NY 12233
Attn: Arlene Parks, Chairperson District Manager – Vacant Environmental Chairperson	Attn: Daisha Topping, Library Manager	Attn: Michael Sollecito
Phone: (718) 585-7117 brxcb1@optonline.net	Phone: (718) 655-6255 woodstock@nypl.org	Phone: (518) 402-2198
Hours: Monday through Friday: 9 am-5 pm (Call for appointment)	Hours: Monday through Friday: 10 am-6 pm Saturday: 10 am-5 pm Sunday: Closed	Hours: Monday-Friday: 9 am-5 pm (Call for appointment)

APPENDIX B
SITE CONTACT LIST

Local, State, and Federal Officials

Hon. Eric Adams Mayor of New York City City of New York 1 Centre Street New York, NY 10007	Hon. Brad Lander New York City Comptroller Office of the Comptroller, City of NY 1 Centre Street New York, NY 10007
Hon. Jumaane Williams Public Advocate 1 Centre Street New York, NY 10007	Hon. Vanessa L Gibson Bronx Borough President 851 Grand Concourse, 3 rd Floor Bronx, NY 10451
Hon. Amanda Septimo State Assembly District 84 384 East 149 th Street, Suite 202 Bronx, NY 10455	Hon. Diana Ayala City Council District 8 214 St. Ann's Avenue Bronx, NY 10454
David Gold, Commissioner NYC Department of City Planning 120 Broadway, 31 st Floor New York, New York 10271	NYC Department of City Planning Bronx Borough Office 17757 Grand Concourse, Suite 503 Bronx, NY 10453
Hon. Charles Schumer U.S. Senate 780 Third Avenue, Suite 2301 New York, NY 10017	Hon. Kirsten Gillibrand U.S. Senate 780 Third Avenue, Suite 2601 New York, New York 10017
Hon. Ritchie Torres U.S. House of Representatives 540 East Fordham Road Unit 2A Bronx, NY 10458	Ischia Bravo, County Clerk Bronx Clerks' Office 851 Grand Concourse, Room 118 Bronx, NY 10451
Mark McIntyre, Acting Director/General Counsel Mayor's Office of Environmental Remediation 100 Gold Street, 2 nd Floor New York, NY 10038	Mark Chambers, Director Mayor's Office of Environmental Sustainability 253 Broadway, 7 th Floor New York, New York 10007
Rohit T. Aggarwala Commissioner NYC Dept. of Environmental Protection 59-17 Junction Boulevard Flushing, NY 11373	Hon. Jose M. Serrano New York State Senator, 29 th District 335 East 100 th Street New York, NY 10029

Residents, Owners, and Occupants of the Site and Adjacent Properties

The Site (Tax Block 2323, Lot 43) is currently owned by East 138th Street JV Associates LLC, with a corporate address of 902 Broadway, 3rd Floor, New York, NY 10010. A list of the remaining adjacent properties and owners is provided below:

Block/Lot	Owner	Occupant
2349/3	Cubsmart, L.P. 5 Old Lancaster Road Malvern, PA 19355 Phone: (844) 427-1409	CubeSmart Self Storage 255 Exterior Street Bronx, NY 10451 Phone: (718) 402-2322
2349/4	NYS Department of Transportation 47-40 21 st Street Long Island City, NY 11101 Phone: (518) 457-6195	NYS Department of Transportation 47-40 21 st Street Long Island City, NY 11101 Phone: (518) 457-6195
2344/52	Seymour Ostrager 1667 Exeter Road Lebanon, CT 06249 Phone: (954) 457-4479	BP 115 East 138 th Street Bronx, NY 10451 Phone: (718) 402-2376
161 Grand Concourse (No block/lot listed)	New York City Department of Parks & Recreation The Arsenal, Central Park 830 Fifth Avenue New York, NY 10065 Phone: (212) 639-9675	New York City Department of Parks & Recreation The Arsenal, Central Park 830 Fifth Avenue New York, NY 10065 Phone: (212) 639-9675
2323/28	Metropolitan Transit Authority 2 Broadway New York, NY 10004 Phone: (212) 878-7000	The Padded Wagon of New York 163 Exterior Street Bronx, NY 10451 Phone: (212) 222-4880

Local News Media

New York Post 1211 Avenue of the Americas New York, New York 10036	New York Daily News 270C Duffy Avenue Hicksville, NY 11801
Spectrum New York 1 News 75 Ninth Avenue New York, NY 10011	Schneps Media 3602 East Tremont Avenue Bronx, NY 10465
Bronx Times-Reporter 3602 East Tremont Avenue Bronx, NY 10465	News 12 The Bronx 930 Soundview Avenue Bronx, NY 10473
Inner City Press PO Box 20047 Dag Hammarskjold Station New York, NY 10017	Bronx Times 3602 East Tremont Avenue Bronx, NY 10465
El Diario 15 MetroTech Center, 7 th Floor Brooklyn, NY 11201	Hoy Nueva York 15 MetroTech Center, 7 th Floor Brooklyn, NY 11201

Nearby School and Day Care Centers

Schools	
Health Opportunities High School President/Executive Director/Principal 350 Gerard Avenue Bronx, NY 10451 (718) 401-1826 https://www.hopschool.org/ Distance: 770 feet northeast of the Site	Community School for Social Justice President/Executive Director/Principal 350 Gerard Avenue Bronx, NY 10451 (718) 402-8481 https://www.cssjbronx.org/reach-out Distance: 860 feet northeast of the Site
Family Life Academy Charter School III President/Executive Director/Principal 370 Gerard Avenue Bronx, NY 10451 (718) 585-6580 Distance: 1,000 feet northwest of the Site	Success Academy Charter School Bronx 1 President/Executive Director/Principal 339 Morris Avenue, Floor 2 Bronx, NY 10451 (347) 286-7950 https://www.successacademies.org/school/bronx-1/ Distance: 1,400 feet east of the Site
The Urban Assembly Bronx Academy of Letters President/Executive Director/Principal 339 Morris Avenue Bronx, NY 10451 (718) 401-2891 http://www.bronxletters.org/ Distance: 1,400 feet east of the Site	Hostos Community College (Daycare) President/Executive Director/Principal 500 Grand Concourse Bronx, NY 10451 (718) 518-4444 https://www.hostos.cuny.edu/ChildrensCenter Distance: 1,700 feet northeast of the Site
KIPP NYC College Prep High School President/Executive Director/Principal 201 East 144 th Street Bronx, NY 10451 (212) 991-2626 https://kippnyc.org/school/kipp-nyc-college-prep/ Distance: 1,700 feet northeast of the site	Family Life Academy Charter School II President/Executive Director/Principal 296 East 140 th Street Bronx, NY 10454 (718) 665-2805 https://www.flacsny.com/apps/pages/index.jsp?uREC_ID=2001084&type=d&pREC_ID=2093272 Distance: 1,900 feet southeast of the Site
PS/IS 224 President/Executive Director/Principal 345 Brook Avenue Bronx, NY 10454 718-665-9804	
Daycare Facilities	
Sunshine Learning Center of Morris Ave LLC President/Executive Director/Principal 253 East 142 nd Street Bronx, NY 10451 (718) 679-9096 https://www.sunshinenewyork.com/locations Distance: 1,830 feet northeast of the Site	Children's Pride President/Executive Director/Principal 414 Morris Avenue Bronx, NY 10451 (718) 401-4242 https://headstartprograms.org/center-185485.html Distance: 1,850 feet northeast of the Site

Community, Civic, Religious and Other Environmental Organizations:

Consolidated Edison Corporate Affairs
Evelyn Oliver – Director
511 Theodore Fremd Avenue
Rye, NY 10580

Gabriel De Jesus - President
40th Police Precinct Council
257 Alexander Ave.
Bronx, NY 10454

FDNY
Battalion 14 Engine 60 Ladder 17
341 East 143rd Street
Bronx, NY 10454

South Bronx Overall Economic Development Corporation
Lourdes Zapata – President & CEO
555 Bergen Avenue
Bronx, NY 10455
lzapata@sobro.org

We Stay / Nos Quedamos Committee Inc.
Website: <http://www.nosquedamos.org/>
754 Melrose Avenue
Bronx, NY 10451
Jessica Clemente – CEO
clemente@nosquedamos.org

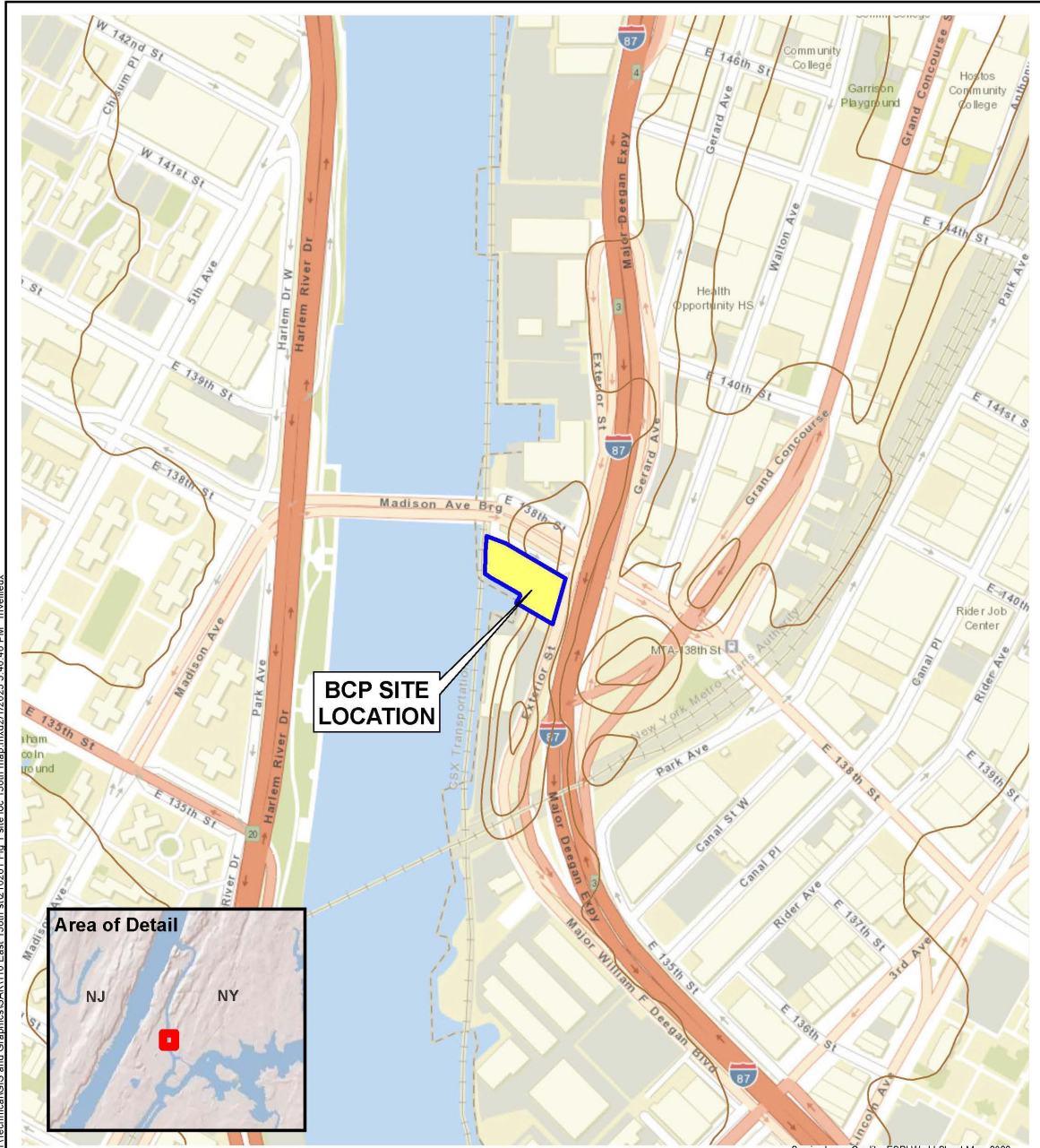
Bronx Land Trust
PRESIDENT – Martin Rogers - Neighborhood Advisory Committee Community Garden
972 Sherman Avenue, Suite 2G
The Bronx, NY 10456
<https://www.bronxlandtrust.org/>

Centor Cristiano Emanuel
2612 3rd Avenue
Bronx, NY 10454

St. Jerome Roman Catholic Church
230 Alexander Avenue
Bronx, NY 10454

Tercera Iglesia Bautista / Third Spanish Baptist Church
322 Alexander Avenue
Bronx, NY 10454

APPENDIX C
SITE LOCATION MAP



Service Layer Credits: ESRI World Street Map, 2022.



440 Park Avenue South, New York, NY 10016

110 East 138th Street
 Bronx, New York

BCP SITE LOCATION

DATE
2/1/2023

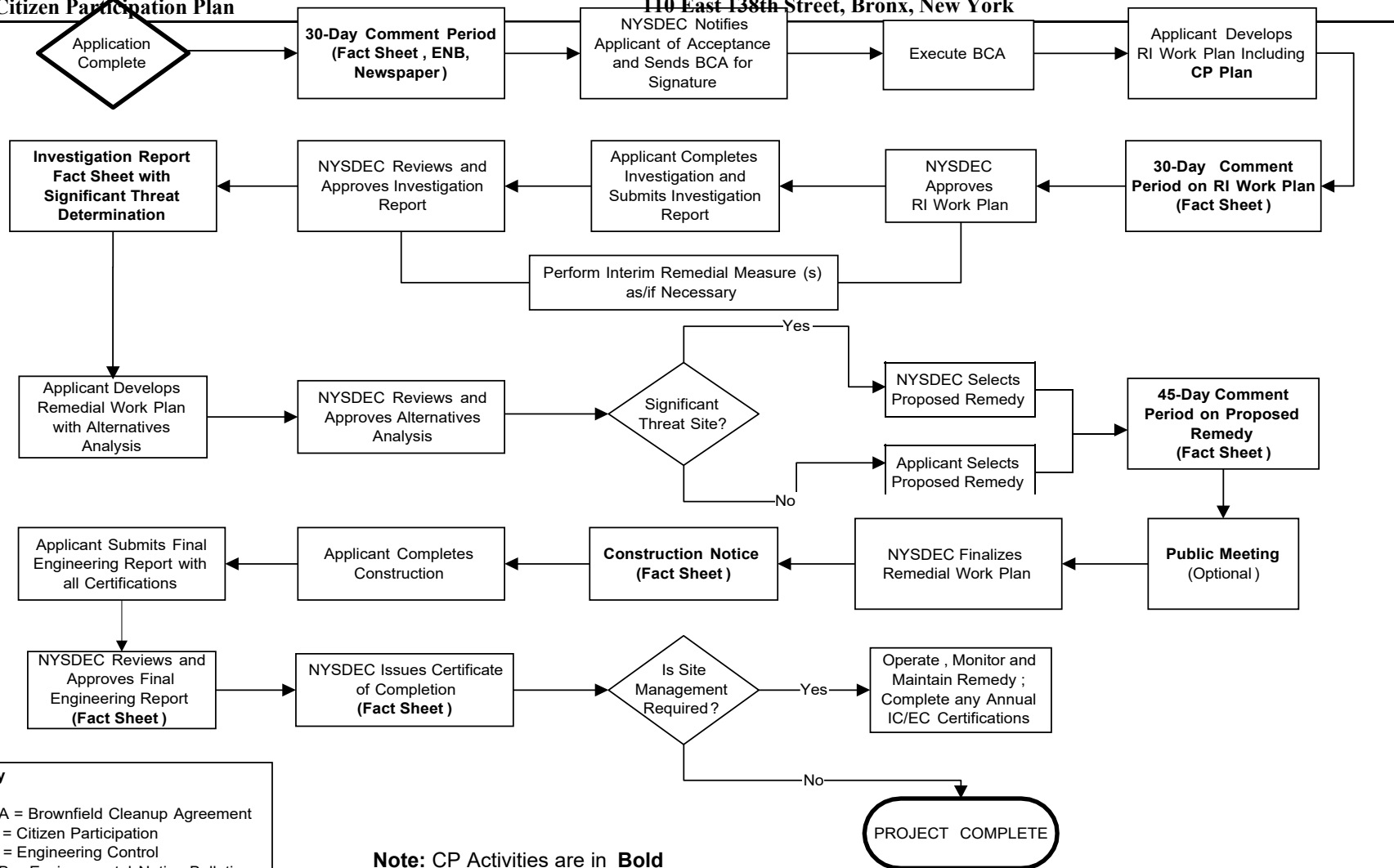
PROJECT NO.
210261

FIGURE
1

Appendix D– Brownfield Cleanup Program Process

AKRF, Inc.
Citizen Participation Plan

BCP Site No. C203155 – East 138th Street Affordable Housing
110 East 138th Street, Bronx, New York





Department of
Environmental
Conservation

Division of Environmental Remediation

Remedial Programs

Scoping Sheet for Major Issues of Public Concern

Instructions

This Scoping Sheet assesses major issues of public concern; impacts of the site and its remedial program on the community; community interest in the site; information the public needs; and information needed from the public.

The information generated helps to plan and conduct required citizen participation (CP) activities, and to choose and conduct additional CP activities, if appropriate. The scoping sheet can be revisited and updated as appropriate during the site's remedial process to more effectively implement the site's CP program.

Note: Use the information as an aid to prepare and update the Major Issues of Public Concern section of the site CP Plan.

General Instructions

- When to prepare: During preparation of the CP Plan for the site. It can be revisited and updated anytime during the site remedial process.
- Fill in site name and other information as appropriate.
- The Scoping Sheet may be prepared by DEC or a remedial party, but must be reviewed and approved by the DER site project manager or his/her designee.

Instructions for Numbered Parts

Consider the bulleted issues and questions below and any others that may be unique or appropriate to the site and the community to help complete the five Parts of this Scoping Sheet. Identify the issue stakeholders in Parts 1 through 3 and adjust the site's contact list accordingly.

Part 1. List Major Issues of Public Concern and Information the Community Wants.

- Is our health being impacted? (e.g. Are there problems with our drinking water or air? Are you going to test our water, yards, sumps, basements? Have health studies been done?)
- There are odors in the neighborhood. Do they come from the site and are they hazardous?
- Are there restrictions on what we may do (e.g. Can our children play outside? Can we garden? Must we avoid certain areas? Can we recreate (fish, hunt, hike, etc. on/around the site?)
- How and when were the site's contamination problems created?
- What contaminants are of concern and why? How will you look for contamination and find out where it is going? What is the schedule for doing that?
- The site is affecting our property values!
- How can we get more information (e.g. who are the project contacts?)
- How will we be kept informed and involved during the site remedial process?
- Who has been contacted in the community about site remedial activities?
- What has been done to this point? What happens next and when?
- The site is going to be cleaned up for restricted use. What does that mean? We don't want redevelopment on a "dirty" site.

Part 2. List Important Information Needed From the Community, if Applicable.

- Can the community supplement knowledge about past/current uses of the site?
- Does the community have knowledge that the site may be significantly impacting nearby people, properties, natural resources, etc.?
- Are activities currently taking place at the site or at nearby properties that may need to be restricted?
- Who may be interested or affected by the site that has not yet been identified?
- Are there unique community characteristics that could affect how information is exchanged?
- Does the community and/or individuals have any concerns they want monitored?
- Does the community have information about other sources in the area for the contamination?

Part 3. List Major Issues and Information That Need to be Communicated to the Community.

- Specific site investigation or remediation activities currently underway, or that will begin in the near future.
- The process and general schedule to investigate, remediate and, if applicable, redevelop the site.
- Current understanding about the site contamination and effects, if any, on public health and the environment.
- Site impacts on the community and any restrictions on the public's use of the site and/or nearby properties.
- Planned CP activities, their schedule, and how they relate to the site's remedial process.
- Ways for the community to obtain/provide information (document repositories, contacts, etc.).

Part 4. Community Characteristics

a. - e. Obtain information from local officials, property owners and residents, site reports, site visits, “windshield surveys,” other staff, etc.

f. Has the affected community experienced other **significant** present or past environmental problems unrelated to this site? Such experiences could significantly affect public concerns and perspectives about the site; how the community will relate to project staff; the image and credibility of project staff within the community; and the ways in which project staff communicate with the community.

g. In its remedial programs, DER seeks to integrate, and be consistent with, environmental justice principles set forth in *DEC Commissioner Policy 29 on Environmental Justice* and *DER 23 – Citizen Participation Handbook for Remedial Programs*. Is the site and/or affected community wholly or partly in an Environmental Justice (EJ) Area? Use the Search feature on DEC's public web site for “environmental justice”. DEC's EJ pages define an EJ area, and link to county maps to help determine if the site and/or community are in an EJ area.

h. Consider factors such as:

- Is English the primary language of the affected community? If not, provisions should be considered regarding public outreach activities such as fact sheets, meetings, door-to-door visits and other activities to ensure their effectiveness.
- The age demographics of the community. For example, is there a significant number of senior citizens in the community? It may be difficult for some to attend public meetings and use document repositories. This may suggest adopting more direct interaction with the community with activities such as door-to-door visits, additional fact sheets, visits to community and church centers, nursing homes, etc.
- How do people travel about the community? Would most people drive to a public meeting or document repository? Is there adequate public transportation?

Part 5. Affected/Interested Public.

Individuals and organizations who need or want information and input can change during the site's remedial process. This need is influenced by real, potential, or perceived impacts of the site or the remedial process. Some people may want information and input throughout the remedial process. Others may participate only during specific remedial

stages, or may only be interested in particular issues.

It is important to revisit this question when reviewing this scoping sheet. Knowing who is interested in the site – and the issues that are important to them – will help to select and conduct appropriate outreach activities, and to identify their timing and the information to be exchanged.

Check all affected/interested parties that apply to the site. **Note: Adjust the site's contact list appropriately.** The following are some ways to identify affected/interested parties:

- Tax maps of adjacent property owners
- Attendees at public meetings
- Telephone discussions
- Letters and e-mails to DER, the remedial party, and other agencies
- Political jurisdictions and boundaries
- Media coverage
- Current/proposed uses of site and/or nearby properties (recreational, commercial, industrial)
- Discussions with community organizations: grass roots organizations, local environmental groups, environmental justice groups, churches, and neighborhood advisory groups



Division of Environmental Remediation

Remedial Programs

Scoping Sheet for Major Issues of Public Concern (see instructions)

Site Name: East 138th Street Affordable Housing

Site Number: C203155

Site Address and County: 110 East 138th Street, Bronx

Remedial Party(ies): East 138th Street JV Associates LLC

Note: For Parts 1. – 3. the individuals, groups, organizations, businesses and units of government identified should be added to the site contact list as appropriate.

Part 1. *List major issues of public concern and information the community wants. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and information needs. Use this information as an aid to prepare or update the Major Issues of Public Concern section of the site Citizen Participation Plan.*

A subsurface investigation of the Site was conducted by AKRF and was documented in a Draft Remedial Investigation Report, dated October 2021. The findings of the investigation were used to support the BCP Application.

- The contamination present at the Site stems from historical uses including a lumber yard, a canal terminal, warehouse uses and an auto sales and repair facility.
- The proposed Site use involves affordable housing. As such, there will be restrictions on Site use, which will be determined following remediation.
- As most of the Site is currently capped by existing buildings and impervious parking areas, there is limited existing potential exposure pathway from uncapped areas. A Community Air Monitoring Plan (CAMP) will be developed as part of the Remedial Action Work Plan (RAWP) that will be implemented during all subsurface disturbance activities to mitigate potential exposures to particulates and organic vapors.
- The proposed remediation of the Site will not diminish, and may improve, the property values in the surrounding area.
- Adjacent property occupants and owners will be kept informed about the progress of the Site cleanup activities. Periodic fact sheets will be sent by mail.
- Local, state, and federal officials will be contacted about the Site remediation activities.
- Up to now, a Remedial Investigation (RI) was conducted on the Site in accordance with New York City (E) Designation requirements. A draft Remedial Investigation Work Plan (RIWP) will be prepared and submitted to further investigate the extent of on-site contamination. If required, the RIWP will include provisions for analysis of soil, groundwater, and soil vapor beneath the entire Site. Findings from the Remedial Investigation will be used to prepare a RAWP, which includes the proposed remedy to address Site contamination and protect the health and safety of the public in the surrounding community.
- For more information about the Site or BCP program, contact the NYSDEC or NYSDOH Project Manager. Contact information is provided in Appendix A.

How were these issues and/or information needs identified?

These issues were identified based on a review of historic records of the Site presented in previous environmental reports, including: a Phase I Environmental Site Assessment (ESA) prepared by AKRF in March 2020, and the Draft Remedial Investigation Report (RIR), prepared by AKRF dated October 2021. A description of the proposed project was also presented in the BCP Application.

Part 2. *List important information needed **from** the community, if applicable. Identify individuals, groups, organizations, businesses and/or units of government related to the information needed.*

- Adjacent property owners and occupants will be informed of the Site remediation activities and can reach out to the Site's NYSDEC and/or NYSDOH Project Manager to obtain additional information.
- Nearby uses do not need to be restricted, since measures will be implemented during all investigation and remediation activities to protect the health safety of the public and local community. These measures include, monitoring for dust that may be emanating from the Site and implementing dust controls such as spraying water or minimizing subsurface disturbance. Odors will be mitigated by the use of protective foams and/or covering any contaminated areas of disturbance or stockpiles with tarps.

How were these information needs identified?

Research was completed to identify the names and contact information of adjacent property owners and local government officials. These individuals are included in the Site Contact List under Appendix B.

Part 3. *List major issues and information that need to be communicated **to** the community. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and/or information.*

- An initial Subsurface Investigation of the Site was conducted by AKRF, which was documented in a draft RIR, dated October 2021. The findings of the investigation were used to support the BCP Application, and will be used to develop a RIWP which will be submitted to NYSDEC and NYSDOH for review and approval. The findings of the investigation will be used to develop a RAWP and a selected cleanup remedy.
- Document repositories, where copies of all documents regarding the investigation and remediation of the Site are available to the public, have been established at: Bronx Community Board 1, 3024 Third Avenue, Bronx, NY 10455; and New York Public Library, Woodstock Branch, 761 East 160th Street, Bronx, NY 10456.

How were these issues and/or information needs identified?

These needs were identified by summarizing the project timeline and a review of the information included in the BCP Application. Any contact information or details pertaining to the Site that have changed since issuance of the BCP Application, have been updated in this CP Plan.

Part 4. *Identify the following characteristics of the affected/interested community. This knowledge will help to identify and understand issues and information important to the community, and ways to effectively develop and implement the site citizen participation plan (mark all that apply):*

a. Land use/zoning at and around site:

☐ Residential ☐ Agricultural ☐ Recreational ☒ Commercial ☒ Industrial

b. Residential type around site:

☒ Urban ☐ Suburban ☐ Rural

c. Population density around site:

☒ High ☐ Medium ☐ Low

d. Water supply of nearby residences:

☒ Public ☐ Private Wells ☐ Mixed

e. Is part or all of the water supply of the affected/interested community currently impacted by the site?

☐ Yes ☒ No

Provide details if appropriate:

[Click here to enter text.](#)

f. Other environmental issues significantly impacted/impacting the affected community?

☐ Yes ☒ No

Provide details if appropriate:

[Click here to enter text.](#)

g. Is the site and/or the affected/interested community wholly or partly in an Environmental Justice Area?

☒ Yes ☐ No

h. Special considerations:

☒ Language ☐ Age ☐ Transportation ☐ Other

Explain any marked categories in h:

Project fact sheets will be translated to Spanish.

Part 5. *The site contact list must include, at a minimum, the individuals, groups, and organizations identified in Part 2. of the Citizen Participation Plan under ‘Site Contact List’. Are other individuals, groups, organizations, and units of government affected by, or interested in, the site, or its remedial program? (Mark and identify all that apply, then adjust the site contact list as appropriate.)*

☐ **Non-Adjacent Residents/Property Owners:** [Click here to enter text.](#)

☒ **Local Officials:** See list in Appendix B of the Citizen Participation Plan

☒ **Media:** See list in Appendix B of the Citizen Participation Plan

☐ **Business/Commercial Interests:** [Click here to enter text.](#)

☐ **Labor Group(s)/Employees:** [Click here to enter text.](#)

☐ **Indian Nation:** [Click here to enter text.](#)

☒ **Citizens/Community Group(s):** See list in Appendix B of the Citizen Participation Plan

☒ **Environmental Justice Group(s):** See list in Appendix B of the Citizen Participation Plan

☐ **Environmental Group(s):** [Click here to enter text.](#)

☒ **Civic Group(s):** See list in Appendix B of the Citizen Participation Plan

☐ **Recreational Group(s):** [Click here to enter text.](#)

☒ **Other(s):** Schools and daycares, See list in Appendix B of the Citizen Participation Plan

Prepared/Updated By: Bryan S. Murty / Adrianna Bosco

Date: 11-18-22 / 2-1-2023

Reviewed/Approved By: Thomas V. Panzone

Date: 1-27-23

APPENDIX J
CONSTRUCTION QUALITY ASSURANCE PLAN

EAST 138TH STREET AFFORDABLE HOUSING

BRONX, NEW YORK

Construction Quality Assurance Project Plan

AKRF Project Number: 210261
NYSDEC BCP Number: C203155

Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor
Albany, New York 12233

Prepared on Behalf of:

East 138th Street JV Associates LLC
257 Park Avenue South, 12th Floor
New York, NY 10010

Prepared by:

akrf

AKRF, Inc.
440 Park Avenue South
New York, New York 10016
(212) 696-0670

SEPTEMBER 2025

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LIST OF ACRONYMS

Acronym	Definition
BCP	Brownfield Cleanup Project
CAMP	Community Air Monitoring Plan
CQAP	Construction Quality Assurance Plan
FER	Final Engineering Report
HASP	Health and Safety Plan
NYSDEC	New York State Department of Environmental Conservation
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RAWP	Remedial Action Work Plan
SCO	Soil Cleanup Objective
SMMP	Soil/Material Management Plan

1.0 INTRODUCTION

This Construction Quality Assurance Plan (CQAP) has been prepared for remedial activities conducted under the Remedial Action Work Plan (RAWP) that will be performed at the 110 East 138th Street project site located in the Mott Haven section of the Bronx (Tax Block 2323, Lot 43) on the New York City Tax Map, and under the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP), Site No. C203155. This CQAP supplements the NYSDEC-approved RAWP and provides monitoring, inspection, testing, and documentation protocols and procedures.

The following information is provided:

1. Responsibility, Authority and Qualifications – The responsibility, authority and qualifications of the key personnel involved in the project.
2. Inspection and Testing Activities – Inspections and tests that will be used to verify that construction activities meet or exceed all design criteria and federal, state, and local regulations and requirements.
3. Meetings – The requirements for project coordination meetings between the Volunteer and its representatives, the remedial or environmental Contractors, and other involved parties.
4. Documentation and Reporting – Field documentation and reporting requirements.

2.0 RESPONSIBILITY AND AUTHORITY

Measures will be implemented to ensure that a functional quality control (QC) organization is active during the project and to provide support for the construction QC system in conducting inspections, tests and retesting (in the event of failure of any item of work). This includes oversight of subcontractors and compliance with contract provisions. Construction QC includes, but is not limited to, the inspections and tests required in the RAWP and approved submittals and will cover all project operations. A consultant hired by the BCP Volunteer will manage field activities and coordinate the contractor's activities.

2.1 Volunteer

East 138th Street JV Associates LLC (the "Volunteer") is responsible for coordinating the project, including activities of the Site consultant, contractor(s) and subcontractor(s), to comply with the requirements of the RAWP and regulatory agencies. The Volunteer is also responsible for completing and submitting documentation required by the RAWP, the CQAP, and the Quality Assurance Project Plan (QAPP) and has the authority to accept or reject the materials and workmanship of any subcontractors at the Site.

2.2 Construction Quality Assurance (QA) Officer (Consultant)

The Construction QA Officer will be an employee of the consultant hired by the Volunteer and will perform activities that are necessary to assure the quality of construction. He/she will be on-site as required during construction activities and will have the authority to take any action necessary to maintain compliance with the RAWP and approved submittals and to monitor construction quality.

Specific responsibilities of the Construction QA Officer include:

- Supporting the Volunteer and the consultant's field staff;
- Evaluating construction activities and activities of the field staff;
- Verifying that remedial activities are performed in accordance with the RAWP, approved submittals, and with federal, state, and local regulations and requirements;
- Verifying that data are properly recorded, validated, reduced, summarized, and inspected;
- Evaluating sampling and monitoring activities;
- Educating the field staff on construction QC requirements and procedures; and
- Scheduling and coordinating inspections.

2.3 Field Team Leader (Consultant)

The Field Team Leader will be an employee of AKRF, Inc. (AKRF) and will be on-site during construction activities. He/she will have authority to take any action necessary to maintain compliance with the RAWP and approved submittals and to maintain construction quality. The Field Team Leader will also manage the field staff discussed in this CQAP.

Specific responsibilities of the Field Team Leader include:

- Reviewing the RAWP for clarity and completeness so that the construction activities can be effectively implemented;
- Verifying that the contractor's work is in accordance with the RAWP, approved submittals, and this CQAP;

- Performing on-site inspection of the work in progress to assess compliance with the RAWP, approved submittals, and this CQAP;
- Scheduling and coordinating inspections;
- Reporting the results of all observations and tests as the work progresses and modifying materials and work to comply with the RAWP and approved submittals as noted below:
 1. Providing daily reports on field construction, material shipments, and inspection results.
 2. Review and interpretation of all data, drawings, and reports.
 3. Identification of all work that should be accepted, rejected, or uncovered for observation, or that may require special testing, inspection, or approval.
 4. Rejection of defective work and verification that corrective measures are implemented.
 5. Making observations and records that will aid in the preparation of a report on remedial activities.
- Inspecting each delivery of materials and/or equipment;
- Reporting to the Construction QA Officer the results of all inspections, including work that is not of acceptable quality or that fails to meet the requirements of the RAWP, approved submittals, and this CQAP;
- Verifying that testing equipment meets established requirements that the tests are conducted according to the proper standardized procedures;
- Confirming that testing equipment, personnel, and procedures do not change over time, or making sure that any changes do not adversely impact the inspection process;
- Confirming that regular calibration of testing equipment occurs and is properly recorded; and
- Confirming that waste treatment or disposal is performed in accordance with applicable federal, state, and local laws and regulations.

2.4 Site Technician (Consultant)

A qualified scientist, geologist, or engineer (supplemented by additional personnel, if necessary) from AKRF will be on-site during remedial construction documenting site personnel, equipment, samples collected, contamination observations and any other observations of field activities. Specific responsibilities include:

- Calibration, operation, and maintenance of air monitoring instrumentation in accordance with the RAWP and approved submittals;
- Collecting, packaging, and shipping of environmental samples in accordance with the RAWP and QAPP;
- Documenting sample collection in a field notebook and identifying all sample locations in a field notebook or Site drawing;
- Preparing and logging manifests for transportation of any non-hazardous and hazardous materials;

- Informing the Site Project Coordinator when (if) the concentrations of air contaminants exceed action levels specified in the RAWP; and
- Maintaining and organizing the field equipment and supply storage area.

3.0 FIELD QUALITY CONTROL (QC) INSPECTIONS, TESTING, AND SAMPLING

The definable features of work are described in Sections 5.0 and 6.0 of the RAWP. This section describes the anticipated inspection, testing, and sampling requirements associated with these definable features of work.

3.1 Mobilization

Inspections will be performed to assure that Site laydown areas, support facilities, surface water controls, and air monitoring systems are established in accordance with the RAWP and approved submittals. In addition, the stakeout of existing utilities in work areas and the maintenance of Site security will be verified. There are no testing and sampling requirements associated with mobilization of the contractor(s).

Each delivery of materials and/or equipment will be inspected relative to approved submittals. Approved materials and/or equipment will be stored at a designated area of the Site.

Equipment will be set-up and tested in accordance with the RAWP and approved submittals.

3.2 Soil Excavation

The Soil/Materials Management Plan (SMMP), Section 6.4 of the RAWP, outlines the procedures to be performed during the handling of soil/fill materials on-site during all intrusive work. Inspections will be performed during soil excavation activities including concrete removal, soil excavation, stockpiling, and load out, shoring, and re-use and backfilling (if any). Any impacts to building structural elements will be documented and assessed immediately. AKRF will confirm that all soil excavation related work will be conducted as specified in the RAWP, or are equivalent. Air monitoring will be conducted as outlined in the Health and Safety Plan (HASP), provided as Appendix G of the RAWP. Soil screening will be conducted as outlined in Section 6.4.1 of the RAWP. Any corrective actions will be summarized in the Daily Reports.

3.3 Soil Sampling

Soil sampling activities at the Site include waste classification sampling, endpoint and/or reuse sampling, and sampling of clean backfill from off-site sources. Proposed endpoint sample locations have not yet been established. All soil sampling activities will be conducted in accordance with the QAPP and Sections 6.2 and 6.4 of the RAWP. The applicable Soil Cleanup Objectives (SCOs) for this Site are the Track 4 Restricted Residential SCOs (RRSCOs).

Soil and materials management on-site and off-site will be conducted in accordance with the SMMP (Section 6.4 of the RAWP).

3.4 Loading of Waste Material for Transportation

Inspections will be conducted to verify that material removed from the Site is properly loaded for transfer to a permitted treatment/disposal facility. Manifests and bills of lading will be maintained and will be included as an Appendix in the Final Engineering Report (FER).

3.5 Site Restoration

Site restoration will be observed and recorded to verify compliance with the RAWP and approved submittals. The surface will be restored to match the surrounding ground surface.

4.0 MEETINGS

A pre-construction meeting will be held with representatives of NYSDEC, the consultants, and contractor(s) performing the work prior to the start of major construction activities. Additional meetings will be called as necessary if work conditions change or deviations are necessary.

Project personnel and visitors will be given health and safety briefings periodically by the Site Technician or Field Team Leader to assist Site personnel in safely conducting their work activities. The safety briefings will include information on new operations to be conducted, changes in work practices or changes in the Site's environmental conditions, as well as periodic reinforcement of previously discussed topics.

5.0 DOCUMENTATION AND REPORTING REQUIREMENTS

The value of the CQAP will be assured by proper documentation. The inspectors will use data sheets, field reports, log forms, schedules, and checklists to document Site work and verify compliance with the RAWP and approved submittals. Documentation will include, at a minimum, the following reports and information:

- Daily field construction reports;
- Photographs;
- Sampling chains of custody;
- Material disposition logs; and
- Variances to the RAWP and approved submittals.

5.1 Daily Report

The Site Technician or Field Team Leader will prepare a daily report that identifies the following:

- Work force and visitors to the Site;
- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the Site;
- References to alphanumeric grid map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of Community Air Monitoring Plan (CAMP) findings, including excursions;
- Apparent deviations from the RAWP;
- Weather conditions;
- Photographs of the Site and pertinent work; and
- An explanation of notable Site conditions.

5.2 Photographic Log

The photographic log will be kept to document construction activities by still photographs. The photographic log may also be used to record activities recorded in the daily report. All photographs will be taken with a camera capable of producing date and timestamps.

5.3 Sampling Documentation

The project field book will be used to document all sampling activities and how they correspond to the RAWP. All observations and field and/or laboratory tests will be recorded in the project field book or on separate logs. Recorded field observations may take the form of notes, charts, sketches, or photographs.

5.4 Material Disposition Tracking

All materials that are taken off-site for disposal will be tracked and final disposition confirmed. Copies of all waste manifests and bills of lading will be maintained by the Project Manager.

5.5 Variances to Remedial Action Work Plan (RAWP)

Required changes to the RAWP will be documented as construction proceeds. Any material deviations from the NYSDEC-approved RAWP will be communicated to the NYSDEC Project Manager. NYSDEC approval will be sought prior to proceeding with work deviating materially from the RAWP. In the event of an emergency change to the work plan, the NYSDEC Project Manager will be consulted immediately.

5.6 Final Engineering Report (FER)

At the completion of the project the consultant/construction manager will prepare an FER. This report will describe the implementation of the RAWP and will include a summary of the field work, as-built drawings for constructed elements, manifests, bills of lading, test results demonstrating that all mitigation and remedial systems are functioning properly, and photographic documentation. The FER will also include a description of the changes in the Remedial Action from the elements provided in the RAWP.

5.7 Document Storage

The Field Team Leader will maintain the current field book and all original field paperwork during the performance of work. The Project Manager will maintain the field paperwork after completion and will maintain all submittal document files.

APPENDIX K

REMEDIAL INVESTIGATION REPORT FACT SHEET AND SIGNIFICANT THREAT DETERMINATION



Department of
Environmental
Conservation

Where to Find Information:

Access project documents through the DECinfo Locator and at these location(s):
<https://extapps.dec.ny.gov/data/DecDocs/C203155/>

Bronx Public Library – Mott Haven Branch

321 East 140th Street
Bronx, NY 10454
(718) 665-4878
mothaven@nypl.org

Bronx Community Board 1

3024 Third Avenue
Bronx, NY 10455
(718) 585-7117
Bx01@CB.NYC.Gov

Who to Contact:

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

Project-Related Questions

Michael Sollecito, Project Manager
NYSDEC
625 Broadway, 12th Floor
Albany, NY 12233-7016
(518) 402-2198
michael.sollecito@dec.ny.gov

Project-Related Health Questions

Jim Sullivan
NYSDOH
Bureau of Environmental Exposure
Investigation
Empire State Plaza, Corning Tower
Albany, NY 12237
(518) 402-5584
beei@health.ny.gov

For more information about New York's
Brownfield Cleanup Program, visit:
<https://dec.ny.gov/environmental-protection/site-cleanup/brownfield-and-state-superfund-programs/brownfield>

FACT SHEET

Brownfield Cleanup Program

East 138th Street Affordable
Housing
110 East 138th Street
Bronx, NY 10451

July 2024

SITE No. C203155
NYSDEC REGION 2

Report Recommends Cleanup of Brownfield Site Contamination

The New York State Department of Environmental Conservation (NYSDEC) is reviewing the Remedial Investigation Report for the East 138th Street Affordable Housing ("site") located at 110 East 138th Street, Bronx, NY. Please see the map for the site location.

Remedial Investigation Report: The Remedial Investigation Report (RIR) describes the results of the site investigation and recommends development of a remedy to address the contamination that was found. The RIR was submitted by East 138th Street JV Associates LLC ("applicant").

- Access the RIR and other project documents online through the DECinfo Locator: <https://extapps.dec.ny.gov/data/DecDocs/C203155/>
- The documents also are available at the location(s) identified at left under "Where to Find Information."

Based on the findings of the investigation, NYSDOH, in consultation with the New York State Department of Health (NYSDOH), has determined that the site does not pose a significant threat to public health or the environment.

Highlights of the Remedial Investigation Report: The primary contaminants of concern at the site are semi-volatile organic compounds (SVOCs) and metals in soil, SVOCs and perfluoroalkyl and polyfluoroalkyl substances (PFAS) in groundwater, and chlorinated solvent- and petroleum-related VOCs in soil vapor. Soil contamination is likely attributed to past site uses and historic fill.

Next Steps: NYSDOH will complete its review, make any necessary revisions and, if appropriate, approve the investigation report. The approved report will be made available to the public (see "Where to Find Information" at left). The applicant may then develop a cleanup plan, called a "Remedial Action Work Plan." This plan describes how contamination will be addressed, with NYSDOH and NYSDOH overseeing the work. NYSDOH will present the draft cleanup plan to the public for its review and comment during a 45-day comment period. NYSDOH will keep the public informed throughout the investigation and cleanup of the site.

Site Description: The 0.67-acre site is bordered to the north by a Metro North Railroad owned lot, to the north by East 138th Street and the Madison Avenue Bridge, to the east by East 135th Street and nearby Deegan Rock Park, to the south by a lot owned by a moving company developed with a warehouse, and to the west by the Harlem River.

BROWNFIELD CLEANUP PROGRAM

The site is currently developed with a vacant one-story building with a basement and an adjacent single-story steel shed that most recently housed a used auto sales facility with a repair shop from 2005 to 2019. The exterior surface of the site consists of an asphalt paved parking area. The proposed redevelopment project consists of constructing a new 100% affordable residential building. The existing structures will be demolished and developed with an approximately 135,000-gross square foot 3- to 12-story structure for affordable senior housing, with a basement.

Additional site details, including environmental and health assessment summaries, are available on NYSDEC's Environmental Site Remediation Database (by entering the site ID, C203155) at:

<https://extapps.dec.ny.gov/cfm/extapps/derexternal/index.cfm?pageid=3>

Brownfield Cleanup Program: New York's Brownfield Cleanup Program (BCP) encourages the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and redeveloped. These uses include recreation, housing, business, or other uses. A brownfield site is any real property where a contaminant is present at levels exceeding the soil cleanup objectives (SCOs) or other health-based or environmental standards, criteria or guidance adopted by

NYSDEC that are applicable based on the reasonably anticipated use of the property, in accordance with applicable regulations.

For more information about the BCP, visit:

<https://dec.ny.gov/environmental-protection/site-cleanup/brownfield-and-state-superfund-programs/brownfield>

We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Stay Informed With DEC Delivers

Sign up to receive site updates by email:

<https://dec.ny.gov/environmental-protection/site-cleanup/regional-remediation-project-information/environmental-cleanup-email-newsletters>

Note: Please disregard if you already have signed up and received this fact sheet electronically.

DECinfo Locator

Interactive map to access DEC documents and public data about the environmental quality of specific sites: <https://dec.ny.gov/maps/interactive-maps/decinfo-locator>

BROWNFIELD CLEANUP PROGRAM

Site Location





Translation Available. Don't see your language? Ask!

English	To have this document translated into a language you can understand, contact the person below. There is no charge for the translation.
Español Spanish	Si necesita la traducción de este documento a un idioma que pueda entender, comuníquese con la persona indicada abajo. La traducción es gratis.
简体字 Simplified Chinese	如需將此文件翻譯成您能理解的語言版本，請聯絡下方人員。本次翻譯不收取費用。
Русский Russian	Чтобы получить перевод этого документа на понятный вам язык, свяжитесь с представителем, данные которого указаны ниже. Плата за эту услугу не взимается.
אידיש Yiddish	צו האבן די דאקומענט איבערגעטייטשט אין א שפראך וואס איר קענט פארשטיין, פארבינדט זיך מיט די פערזאן אונטן. די איבערטייטשונג איז פריי פון אפצאל.
বাঙালি Bengali	এই নথিটি আপনি বুঝতে পারেন এমন একটি ভাষায় অনুবাদ করতে, নিম্নলিখিত ব্যক্তির সাথে যোগাযোগ করুন। অনুবাদের জন্য কোন চার্জ দিতে হবে না।
한국어 Korean	이 언어를 본인이 이해할 수 있는 언어로 받아보려면 아래 담당자에게 문의하십시오. 번역료는 없습니다.
Kreyòl Ayisyen Haitian Creole	Pou yo ka tradwi dokiman sa nan yon lang ou ka konprann, kontakte moun ki anba a. Ou p'ap peye anyen pou tradiksyon an.
Italiano Italian	Per ottenere la traduzione di questo documento in un'altra lingua, contatti la persona indicata qui di seguito. La traduzione è gratuita.
العربية Arabic	لترجمة هذا المستند إلى لغة يمكنك فهمها، تواصل مع الشخص أدناه. لا يتم تطبيق رسوم مقابل الترجمة.
Języki Polski Polish	Aby uzyskać tłumaczenie tego dokumentu na język, który jest dla Ciebie zrozumiały, skontaktuj się z poniższą osobą. Za tłumaczenie nie jest pobierana żadna opłata.

Contact: Michael Sollecito, 518-402-2198, michael.sollecito@dec.ny.gov

APPENDIX L
ENVIRONMENTAL FOOTPRINT ANALYSIS AND CLIMATE VULNERABILITY ASSESSMENT



Environmental, Planning, and Engineering Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
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April 18, 2025

Mr. Michael Sollecito
NYSDEC
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY, 12233-7016

Re: Environmental Footprint Analysis (EFA)
110 East 138th Street, Bronx, NY
NYSDEC BCP Site No. C203155

Dear Mr. Sollecito:

This Environmental Footprint Analysis (EFA) has been prepared by AKRF, Inc. (AKRF) on behalf of East 138th Street JV Associates LLC (the “Client”) for the site [New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C203155] located at the above-referenced location, also identified as New York City Tax Block 2323, Lot 43 (the “Site”). As further detailed in the November 2023 NYSDEC Memorandum, DER-31: Green and Sustainable Remediation Initiative, beginning January 1, 2024, all remedial work plans and reports submitted to NYSDEC pursuant to a remedial program under Part 375 are required to address green and sustainable remediation (GSR) in accordance with DER-31. The EFA requirement was incorporated into the NYSDEC Decision Document as a requirement for selection between the two remedy alternatives — Track 1 and Track 4.

This EFA focuses on the primary components of the remedy: excavation and disposal of soil, import of approved materials (stone, soil etc.) for backfill, and installation of an active sub-slab depressurization system (SSDS). The below-ground portion of the SSDS installation will be performed using import of 750 tons of SSDS gas permeable aggregate for Track 4. Remedial activities also will include removal and off-site disposal of soil/fill materials, and daily use of heavy machinery.

This EFA was performed consistent with NYSDEC guidelines, the methodologies used in the Environmental Protection Agency (EPA) Spreadsheets for Environmental Footprint Analysis (SEFA) tool, and the requirements of the Climate Leadership and Community Protection Act (CLCPA).

GREENHOUSE GASES

Greenhouse gases (GHGs) are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth’s surface, the atmosphere, and clouds. The general warming of the Earth’s atmosphere caused by this phenomenon is known as the “greenhouse effect.” The United States Environmental Protection Agency (EPA) identifies seven types of GHGs that are relevant for GHG inventory purposes: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons

(HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃), and sulfur hexafluoride (SF₆). There are no significant direct or indirect sources of HFCs, PFCs, NF₃, or SF₆ associated with the selected remedy; therefore, the GHG assessment focuses on CO₂, N₂O, and methane.

To present a complete inventory of all GHGs, component emissions are added together and presented as carbon dioxide equivalent (CO₂e) emissions—a unit representing the quantity of each GHG weighted by its effectiveness using CO₂ as a reference. This is achieved by multiplying the quantity of each GHG emitted by a factor called global warming potential (GWP). GWPs account for the lifetime and the radiative forcing¹ of each chemical over a period of 20 years (e.g., CO₂ has a much shorter atmospheric lifetime than N₂O and therefore has a much lower GWP). The GWPs for the main GHGs discussed here are presented in Table 1.

Table 1
Global Warming Potential (GWP) for Major GHGs

Greenhouse Gas	20-Year Horizon GWP
Carbon Dioxide (CO ₂)	1
Methane (CH ₄)	84
Nitrous Oxide (N ₂ O)	264
Source: 6 NYCRR 496.5	

Statewide GHG Inventory and Emission Limit

In July 2019, New York State enacted the CLCPA establishing statewide GHG emission limits that represent a 40 percent reduction from 1990 levels by 2030, and an 85 percent reduction from 1990 levels by 2050. Among other requirements to meet the state's emission reduction goals, the CLCPA directs state agencies to determine if their decisions are consistent with the statewide GHG emission limits established by the CLCPA in the Environmental Conservation Law (ECL) Article 75².

As part of the regulations adopted at 6 NYCRR Part 496 in 2020, the New York State Energy Research and Development Authority (NYSERDA) developed the 1990 baseline GHG emissions for New York State consistent with the calculation requirements specified under the CLCPA. The statewide inventory is separated into four sectors—Energy Sector, Industrial Processes and Product Use, Agriculture Forestry and Other Land Use, and Waste. The GHG emissions associated with the selected remedy would fall within the Energy Sector (including emissions from the direct fuel combustion and electricity usage), the Industrial Processes and Product Use Sector (the embodied emissions from the manufacturing process of materials brought to the Site), and the Waste Sector (emissions associated with the end of life for materials removed from the Site for disposal).

The GHG inventory performed by NYSERDA determined a statewide 1990 annual baseline emission total of 409.78 million metric tons (MMT) of CO₂e. As established in 6 NYCRR Part 496, the statewide annual CO₂e emission limits for 2030 and 2050 as 245.87 MMT and 61.47 MMT, respectively.

METHODOLOGY

On-Site Fuel Usage

¹ *Radiative forcing* is a measure of the influence a gas has in altering the balance of incoming and outgoing energy in the Earth-atmosphere system and is an index of the importance of the gas as a GHG.

² CLCPA Section 7(2).

Direct Emissions

Consistent with the SEFA tool, on-site fuel (i.e., direct) emissions were estimated based on the fuel consumption associated with construction equipment to be used during implementation of the remedy. On-site emissions were calculated for non-road construction engines based on specific estimates of construction activity and fuel consumption data from the NONROAD emissions module within model EPA's MOVES model. The detailed data, including the number, type, power rating, and hours of operation for all construction engines was coupled with fuel consumption rate data from EPA's MOVES model to estimate total fuel consumption throughout the duration of the construction activities.

Direct GHG emissions from Site work were calculated based on fuel consumption over the duration to complete the remedies — approximately 3 months to complete Track 1 and 1.5 months to complete Track 4. The quantity of fuel was then multiplied by a unit-specific CO₂ emission factor of 10.21 kg per gallon of diesel—taken from EPA's Emission Factors for Greenhouse Gas Inventories. In order to develop CO₂e emission factors, emission factors of N₂O and CH₄ for diesel construction equipment (1.01 g/gallon and 0.94 g/gallon, respectively) were also taken from EPA's Emission Factors Hub.

Upstream Emissions

Upstream GHG emissions were also projected based upon the estimated fuel consumption required for the selected remedy. Upstream emission factors for diesel have been specified by NYSDEC for upstream and out-of-state emissions.³

Off-Site Fuel Usage

Consistent with the SEFA tool, GHG emissions associated with the truck and worker trips to the Site were estimated. The numbers of trucks (concrete trucks, dump trucks, and tractor trailers) and workers for each phase of construction activity were used to estimate truck and vehicle VMT. Distances for truck deliveries were developed based on estimates of the origin and destination of materials. Table 18-7 of the *CEQR Technical Manual* was used to determine the percentage of vehicle miles traveled by road type, and the most recent version of the EPA MOVES model provided an estimate of truck GHG emission factors, which were used to produce the associated emissions attributable to the selected remedy.

GHG emissions generated by the selected remedy associated with the number of vehicle trips by mode (e.g., worker cars, delivery trucks) were calculated using the estimated number vehicles traveling to the Site to develop total vehicle miles traveled (VMT). VMT was calculated using an average round-trip commute distance of 25.3 miles for construction workers in the New York City Region (based on the average trip to work distance for the New York Metropolitan Area area)⁴; and round-trip distances for truck deliveries was based on the identified origin and destination of materials and waste.

Based upon a duration of 3 months to complete Track 1, 7,786 VMT were estimated for construction worker travel. Construction/delivery truck trips were estimated to result in 93,851 VMT. In the 1.5 months to complete Track 4, 2,880 VMT were estimated for construction worker travel. Construction/delivery truck trips were estimated to result in 58,608 VMT. GHG emissions were then estimated directly using CO₂e emission factors from the most recent version of the EPA MOVES model (MOVES5).

Material Emissions

³ NYSDEC. Appendix A of the *2024 Statewide GHG Emission Report*. December 2024.

⁴ New York State Department of Transportation (NYSDOT). *2009 NHTS, New York State Add-On*. Key Tables. Table 3: Average Travel Day Person-Trip Length by Mode and Purpose, trip-to work distance for SOV in NYMTC 10-county area. 2011.

Emissions related to the production of construction materials (embodied emissions) were estimated based on the quantity of materials to be brought to the Site along with the appropriate CO₂e emission factors used in the SEFA tool. The Track 1 remedy will import approximately 21,450 tons of soil while Track 4 will import approximately 1,950 tons of soil, 750 tons of aggregate, 0.6 tons of piping, 0.4 tons of filter fabric, and 1.9 tons of vapor barrier.

Waste Emissions

Emissions associated with disposed materials exported from the Site were estimated based on the quantity of materials to be removed, the description of those materials, the potential destination, and the appropriate CO₂e emission factors used in the SEFA tool. Track 1 and Track 4 will require export of 19,500 and 3,000 tons of non-hazardous soil, respectively. All exported materials are to be sent to hazardous or non-hazardous waste landfill facilities for disposal, as applicable. Therefore, emissions associated with both waste handling and transportation of the materials to the disposal facility were included in the off-site fuel usage estimates.

PROJECTED CARBON FOOTPRINT

The estimated GHG emissions for the selected remedy are presented in **Tables 2 and 3**. Detailed calculations can be found in Appendix A.

Table 2
Summary of GHG Emissions—Track 1
(metric tons CO₂e)

Core Element	Energy Consumption (MMBtu)	Direct Emissions	Indirect Emissions	Total
On-Site Fuel Usage	12,748	38	12	50
Off-Site Fuel Usage	3,083	0	269	269
Material	1,064	0	47	47
Waste	3,120	0	221	221
Total	20,015	38	549	586
Note: Totals may not sum due to rounding. See detailed calculations in Appendix A.				

Table 3
Summary of GHG Emissions—Track 4
(metric tons CO₂e)

Core Element	Energy Consumption (MMBtu)	Direct Emissions	Indirect Emissions	Total
On-Site Fuel Usage	1,876	6	2	7
Off-Site Fuel Usage	1,907	0	167	167
Material	223	0	11	11
Waste	480	0	34	34
Total	4,486	6	213	219
Note: Totals may not sum due to rounding. See detailed calculations in Appendix A.				

If you have any questions or require additional information, please contact me at (646) 388-9846 or Adrianna Bosco at (646) 388-9576.

Sincerely,
AKRF, Inc.

A handwritten signature in black ink, appearing to read "Kevin Edwards". The signature is fluid and cursive, with the first name "Kevin" and last name "Edwards" clearly distinguishable.

Kevin Edwards
Senior Technical Director



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April 18, 2025

Mr. Michael Sollecito
NYSDEC
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY, 12233-7016

**Re: Climate Vulnerability Analysis
110 East 138th Street, Bronx, NY
NYSDEC BCP Site No. C203155**

Dear Mr. Sollecito:

This Climate Vulnerability Analysis (CVA) has been prepared by AKRF, Inc. (AKRF) on behalf of East 138th Street JV Associates LLC (the “Client”) for the Site [New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C203155] located at the above-referenced location, also identified as New York City Tax Block 2323, Lot 43 (the “Site”). As further detailed in the November 2023 NYSDEC Memorandum, DER-31: Green and Sustainable Remediation Initiative, beginning January 1, 2024, all remedial work plans and reports submitted to NYSDEC pursuant to a remedial program under Part 375 are required to address green and sustainable remediation (GSR) in accordance with DER-31. The EFA was incorporated into the NYSDEC Decision Document as a requirement for selection between the two remedy alternatives — Track 1 and Track 4.

This CVA focuses on the risks associated with the construction and operation of the primary components of each of the two remedy alternatives: excavation and disposal of contaminated soil, import of backfill materials, and installation of an active sub-slab depressurization system (SSDS).

POLICY CONTEXT

The New York State Sea Level Rise Task Force was created to assess potential impacts on the state’s coastlines from rising seas and increased storm surge. The Task Force prepared a report of its findings and recommendations including protective and adaptive measures.¹ The recommendations are to: provide more protective standards for coastal development, wetlands protection, shoreline armoring, and post-storm recovery; implement adaptive measures for habitats; integrate climate change adaptation strategies into state environmental plans; and amend local and state regulations or statutes to respond to climate change. The Task Force also recommended the formal adoption of projections of sea-level rise.

¹ New York State Sea Level Rise Task Force. *Report to the Legislature*. December 2010.

The New York State Climate Action Plan Interim Report identified a number of policy options and actions that could increase the climate change resilience of natural systems, the built environment, and key economic sectors—focusing on agriculture, vulnerable coastal zones, ecosystems, water resources, energy infrastructure, public health, telecommunications and information infrastructure, and transportation.² New York State’s Community Risk and Resiliency Act (CRRA)³ requires that applicants for certain State programs demonstrate that they have taken into account future physical climate risks from storm surges, sea-level rise and flooding, and required the NYSDEC to establish official State sea-level rise projections. In February 2017, DEC adopted a rule (6 NYCRR Part 490) defining the existing projections for use. These projections provide the basis for State adaptation decisions and are available for use by all decision makers. CRRA applies to specific State permitting, funding and regulatory decisions, including: smart growth assessments; funding for wastewater treatment plants; siting of hazardous waste facilities; design and construction of petroleum and chemical bulk storage facilities; oil and gas drilling; and State acquisition of open space. As required under the CRRA, DEC published implementation guidance and reference to climate change projections specific to New York State in August 2021.

In New York City, the Climate Change Adaptation Task Force is tasked with fostering collaboration and cooperation between public and private organizations working to build the resilience of the city’s critical infrastructure against rising seas, higher temperatures, and changing precipitation patterns. The Task Force is composed of over 57 New York City and State agencies, public authorities, and companies that operate, regulate, or maintain critical infrastructure in New York City. Led by the Mayor’s Office of Climate and Environmental Justice, the Task Force works together to assess risks, prioritize strategies, and examine how standards and regulations may need to be adjusted in response to a changing climate.

To assist the Task Force, the New York City Panel on Climate Change (NPCC) has prepared a set of climate change projections for the New York City region⁴, which was subsequently updated,^{5,6} and has suggested approaches to create an effective adaptation program for critical infrastructure. The NPCC includes leading climatologists, sea-level rise specialists, adaptation experts, and engineers, as well as representatives from the insurance and legal sectors. The climate change projections include a summary of baseline and projected climate conditions throughout the 21st century including heat waves and cold events, intense precipitation and droughts, sea-level rise, and coastal storm levels and frequency.

Temperature & Urban Heat Island

The probability that New York City would experience an increase in air temperatures and relative humidity (characterized as the heat index of a given location) is considered by NPCC to be “very likely.” NPCC projected that temperatures are likely to increase by up to 7.1 degrees Fahrenheit by the 2050s and that New York City would experience up to 9 heat waves per year with an average duration up to 6 days. By the end

² NYSERDA. New York State Climate Action Plan Interim Report. November 2010.

³ *Community Risk and Resiliency Act*. Chapter 355, NY Laws of 2014. April 9, 2013. Signed September 22, 2014.

⁴ New York City Panel on Climate Change. *Climate Change Adaptation in New York City: Building a Risk Management Response*. Annals of the New York Academy of Sciences, May 2010.

⁵ Braneon, C., Ortiz, L., Bader, D., Devineni, N., Orton, P., Rosenzweig, B., McPhearson, T., Smalls-Mantey, L., Gornitz, V., Mayo, T., Kadam, S., Sheerazi, H., Glenn, E., Yoon, L., Derras-Chouk, A., Towers, J., Leichenko, R., Balk, D., Marcotullio, P., & Horton, R. (2024). *NYC climate risk information 2022: Observations and projections*. Interim Report for Public Release <https://climateassessment.nyc>

⁶ Balk, D., Braneon, C., Leichenko, R., Moss, R., Towers, J. (2024). *Climate Risk and Equity: Advancing Knowledge Toward a Sustainable Future: Introduction*. New York City Panel on Climate Change. <https://climateassessment.nyc>

of the century, temperatures are likely to increase by up to 13.5 degrees Fahrenheit with up to 10 heat waves per year with an average duration of 10 days.

Precipitation

NPCC projected that precipitation levels are likely to increase by up to 13 percent compared to the 1971–2000 base period by the 2050s and up to 25 percent by the end of the century with up to 5 rainfall events projected to result in 2 inches or more of precipitation.

Sea Level Rise

NPCC has projected that sea levels are likely to increase by up to 23 inches by the 2050s and up to 65 inches by the end of the century (more detailed ranges and timescales are available). In general, the probability of increased sea levels is characterized by NPCC as “extremely likely,” but there is uncertainty regarding the probability the various levels projected and timescale. Intense hurricanes are characterized by NPCC as “more likely than not” to increase in intensity and/or frequency, and the likelihood of changes in other large storms (“Nor’easters”) are characterized by NPCC as unknown. Therefore, the projections for future 1-in-100 coastal storm surge levels for New York City include only sea-level rise at this time, and do not account for changes in storm frequency.

CLIMATE RISKS

Temperature & Urban Heat Island

Existing Conditions

The Site is identified as being vulnerable to extreme heat by the New York City Department of Health (DOH), with a Heat Vulnerability Index (HVI) of 5 out of 5—considered the highest level of risk.⁷ When completed, the Site will contain a five- to 12-story affordable senior housing building with ground floor retail space. The Site is abutted to the north by East 138th Street, followed by the Madison Avenue Bridge; to the south by a moving company warehouse and associated parking; to the east by Exterior Street, followed by the Major Deegan Expressway; and to the west by a freight train rail line, followed by the Harlem River. The surrounding area is comprised predominantly of commercial and industrial uses, with some parkland to the east.

Nearby parks and natural resources include Weston Park, St. Mary’s Park, Franz Sigel Park, and Mill Pond Park. There is an absence of trees along the Site’s cross streets.

Future Conditions

According to projections for increases in annual mean temperatures, the Site is anticipated to experience increased temperatures between 4.2 degrees Fahrenheit and 13.5 degrees Fahrenheit by the end of the century.^{8,9} Additionally, by the 2080s NPCC projects that the number of days with temperatures above 90

⁷ NYCDOH. *Interactive Heat Vulnerability Index*. <https://a816-dohbesp.nyc.gov/IndicatorPublic/beta/key-topics/climatehealth/hvi/>

⁸ NYSERDA. *Climate Change in New York State. Updating the 2011 ClimAID Climate Risk Information Supplement to NYSERDA Report 11-18 (Responding to Climate Change in New York State)*. September 2014.

⁹ Braneon, C., Ortiz, L., Bader, D., Devineni, N., Orton, P., Rosenzweig, B., McPhearson, T., Smalls-Mantey, L., Gornitz, V., Mayo, T., Kadam, S., Sheerazi, H., Glenn, E., Yoon, L., Derras-Chouk, A., Towers, J., Leichenko, R., Balk, D., Marcotullio, P., & Horton, R. (2024). *NYC climate risk information 2022: Observations and projections*. Interim Report for Public Release <https://climateassessment.nyc>

degrees Fahrenheit would increase by 91 days (or 69 days above 95 degrees Fahrenheit). By the end of the century, NPCC projects that New York City would likely experience up to 10 heat waves per year with an average duration of 10 days.

Climate Vulnerability of the Selected Remedy

The remedy would not be affected by the projected increase in temperature or urban heat island effect. Therefore, no further assessment of heat impacts is warranted.

Precipitation

Existing Conditions

Precipitation in New York City was observed to have increased by a rate of 0.76 inch per decade with an average storm rainfall intensity of approximately 2 inches in one hour and a 10 percent chance of occurrence per year. New York City Department of Environmental Protection (NYCDEP) has identified that the Site does not experience nuisance flooding (with flood levels greater than 4 inches) or deep and continuous flooding (with flood levels greater than 1 foot).

Future Conditions

Annual precipitation levels are anticipated to increase in New York City up to 14 percent (approximately 56.7 inches per year) by the 2050s and up to 30 percent (approximately 64.6 inches per year) by the end of the century.¹⁰

Climate Vulnerability of the Selected and Implemented Remedy

As described in the Remedial Action Work Plan (RAWP), erosion and sedimentation control measures will be implemented for the selected remedy during construction activities at the Site. The RAWP included requirements regarding stormwater management, erosion and sediment control, and construction practices to minimize stormwater contamination. Since remediation will be completed in approximately 3 months for Track 1 and 1.5 months for Track 4, these measures are resilient to the current rainfall levels of approximately 2 inches in one hour.

Following completion, the remedy is not likely to be affected by increased future projected precipitation levels. Therefore, no further assessment of stormwater flooding impacts is warranted.

Sea Level Rise

Existing Conditions

According to current flood hazard projections,¹¹ the Site is within the current 1-in-100 and the 1-in-500 coastal storm surge levels. Due to the Site's proximity to Harlem River, the southwestern portion of the site is at risk of flooding.

Note that these flood areas and elevations are likely conservatively high and may be revised in the future. On October 17, 2016, the Federal Emergency Management Agency (FEMA) and New York City Mayor de Blasio announced plans to revise the FEMA flood maps based on a 2015 New York City appeal of FEMA's flood risk calculations for New York City and the region. Therefore, it is possible that the revised FEMA

¹⁰ As noted by the NPCC, the greatest increases in precipitation are projected to occur during the winter months with smaller increases generally projected for the summer and fall seasons. However, NPCC projects that some reductions in mean precipitation is anticipated under the low-end scenario by 2100, with the greatest decreases projected for the summer and fall seasons.

¹¹ FEMA. *Preliminary Flood Insurance Rate Map*. Panel 3604970236G. Release Date: 12/05/2013.

current flood elevations would be lower, and the resulting future flood elevations, including sea-level rise, may also be lower than those presented here.

Future Conditions

According to NPCC data (under the NPCC high-end estimate), by the 2050s, the 1-in-100 flood levels could reach 23 inches higher due to sea-level rise. By the end of the century, the 1-in-100 flood levels could reach 65 inches higher.

Climate Vulnerability of the Selected Remedy

The completed remedy would not be affected by projected increases in sea level rise. Therefore, no further assessment of coastal flooding impacts is warranted.

CONCLUSIONS

Based on the review of potential flooding (from both sea level rise and increased precipitation) and heat impacts, the selected remedy is resilient to existing and future climate risks.

If you have any questions or require additional information, please contact me at (646) 388-9846 or Adrianna Bosco at (646) 388-9576.

Sincerely,
AKRF, Inc.



Kevin Edwards
Senior Technical Director

APPENDIX M
NYSDEC REQUEST TO IMPORT/REUSE FILL OR SOIL



**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**



Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

Site Name:

Site Number:

The allowable site use is:

Have Ecological Resources been identified?

Is this soil originating from the site?

How many cubic yards of soil will be imported/reused?

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone?

Does it contain less than 10%, by weight, material that passes a size 100 sieve?

Is this virgin material from a permitted mine or quarry?

Is this material recycled concrete or brick from a DEC registered processing facility?

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Name and address of fill source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

Signature

Date

Print Name

Firm