REMEDIAL ACTION WORK PLAN
FORMER MILL SANITARY WIPING CLOTH SITE
NYSDEC SITE C203146
40 BRUCKNER BOULEVARD
BRONX, NY

PREPARED FOR

40 BRUCKNER REALTY LLC
BRONX, NY

PREPARED BY:

Mari Cate Conlon

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File No. 0200734-002
March 2022

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17 March 2022
File No. 0200734-002

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

Attention: Mr. Daniel McNally

Subject: Remedial Action Work Plan
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard
Bronx, New York
BCP Site C203146

Dear Mr. McNally:

On behalf of 40 Bruckner Realty LLC, Haley & Aldrich of New York is submitting for the review and approval of the New York State Department of Environmental Conservation (NYSDEC) this Remedial Action Work Plan (RAWP) for the above referenced subject site ("Site"). This document is being submitted as part of 40 Bruckner Realty LLC's acceptance and participation in the Brownfield Cleanup Program for the Site. This report has been developed in accordance with the NYSDEC (6 NYCRR) Part 375 Brownfield Cleanup Regulations dated December 2006, the "Technical Guidance for Site Investigation and Remediation" (DER-10 dated May 2010) and other relevant NYSDEC technical and administrative guidance. Comments received from NYSDEC on 16 March 2022 have been addressed as follows:

Comments:

1. Grammatical error in Summary of Remedial Instigation has been revised.
2. Reference to NYSDOH guidance values and matrices has been removed and replaced with a discussion of the soil vapor sampling results as per the Remedial Investigation Report.
3. Language revised to state confirmation soils samples will be collected at remedial excavation depths.
4. Tables revised to include analytical for soil, groundwater and soil vapor collected during the Remedial Investigation. Tables 6 and 8 have been added for emergency contact and confirmation soil sample details. Groundwater elevation and flow data now included in Appendix E.
5. Figure 14 now included to show an alphanumeric Site map.
6. Soil boring and monitoring well construction logs added to Appendices.
7. Section 2.1.6 revised to remove grammatical error and reference to NYSDOH guidance values and matrices, as per comments 1 and 2.

8. Section 2.2.3 revised to read correctly.
9. Section 2.5.7 revised to remove reference to NYSDOH guidance values and matrices which was replaced with a discussion of the soil vapor sampling results as per the Remedial Investigation Report.
10. Section 3.1 revised to state confirmation soils samples will be collected at remedial excavation depths, as per comment 3.
11. Section 3.8 revised to state confirmation soils samples will be collected at remedial excavation depths, as per comment 3. Section 3.8 also revised to include language for over excavation in any areas with confirmation samples not meeting Unrestricted Use Soil Cleanup Objectives.
12. Section 3.5 revised to state confirmation soils samples will be collected at remedial excavation depths, as per comment 3.
13. Section 4.4.1 revised to state activities described in daily reports will be linked to an alphanumeric Site map to be included in all reports.
14. Section 5.2.1 revised to state confirmation soils samples will be collected at remedial excavation depths, as per comment 3. Section 5.2.1 also revised to include language for over excavation in any areas with confirmation samples not meeting Unrestricted Use Soil Cleanup Objectives, as per comment 11.
15. Section 5.2.2 revised to state confirmation soils samples will be collected at remedial excavation depths, as per comment 3.
16. Section 5.3 revised to clarify the distinction between material removed for remedial purposes and material removed for development/construction purposes.
17. Section 5.4.7 revised to state that dewatering is for development purposes and reference to dewatering being necessary for removal of material above UUSCOs has been removed.
18. Data Usability Summary Reports are now included in the Pre-Design Investigation Report. EDDs were submitted to NYSDEC on 14 March 2022.
19. The Quality Assurance Project Plan has been revised to reference the most recent version of the NYSDEC's "Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl (PFAS)."

Please contact the undersigned if you have any questions or require additional information regarding this Remedial Action Work Plan.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Mari Cate Conlon

Mari C. Conlon, P.G.
Project Manager

Scott Underhill

Scott Underhill, P.E.
Environmental Engineer

James M. Bellew

James M. Bellew
Senior Associate

Enclosures

cc: Jacob Schwimmer – 40 Bruckner Boulevard Realty LLC
Jamal Krolowitz – 40 Bruckner Boulevard Realty LLC
Gerard Burke – NYSDEC
Scarlett McLaughlin – NYSDOH
Stephen Lawrence – NYSDOH
Frank Bifera, Esq. – Barclay Damon LLP
Tom Walsh, Esq. – Barclay Damon

Certification

I, Scott A. Underhill, certify that I am currently a NYS registered Professional Engineer and that this Remedial Action Work Plan was prepared in accordance with the applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

STATE OF NEW YORK
SCOTT ANDREW UNDERHILL
EXCELSIOR
075332
LICENSED PROFESSIONAL ENGINEER

17 March 2022

Scott A. Underhill *Date*
NYS Professional Engineer #089684

I, James M. Bellew, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that that this Remedial Action Work Plan was prepared in accordance with the applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

17 March 2022

James M. Bellew *Date*

Executive Summary

This Remedial Action Work Plan (RAWP) was developed by Haley & Aldrich of New York (Haley & Aldrich) on behalf of 40 Bruckner Realty LLC (40 Bruckner Realty) for the proposed development located at 40 Bruckner Boulevard (Section 2, Block 2295, Lot 51) within the Mott Haven neighborhood of the Bronx, New York (the Site).

In July 2021, the project (Site No. C203146) was accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and a countersigned Brownfield Cleanup Agreement (BCA) was issued with 40 Bruckner Realty LLC classified as a "Volunteer". The Volunteer proposes to remediate the Site for residential use.

This RAWP summarizes the nature and extent of contamination on the Site as determined from data gathered during the Remedial Investigation (RI) performed in September 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 NYSDEC Division of Environmental Remediation (DER) Program Policy: Technical Guidance for Site Investigation and Remediation (DER-10) and complies with applicable federal, state, and local laws, regulations, and requirements.

SITE DESCRIPTION AND SITE HISTORY

The Site, identified as Section 2, Block 2295, Lot 51 on the New York City tax map, is 41,240-square feet and is bounded by Bruckner Boulevard to the northeast followed by mixed commercial and residential buildings across Bruckner Boulevard to the east, northeast and north, by East 132nd Street to the southwest followed by the Harlem River Yard to the south, southwest and west, apartment buildings to the southeast, and by Alexander Avenue followed by commercial and industrial/manufacturing buildings to the west and northwest. The Site location is shown on Figure 1. Existing Site features are shown on the Site Map provided as Figure 2. The Site is currently vacant and is improved with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and a partially paved material storage and parking area.

The land is currently zoned as M1-5/R8A which allows for residential and industrial use. The Site is located in an urban area surrounded by commercial, industrial, and residential properties served by municipal water. Requestor plans to redevelop the Site for residential purposes consistent with current zoning.

The Site was developed as early as 1891 with a repair shop in the southwest corner and a machine shop on the east corner of the Site, while the rest of the Site remained vacant. Train tracks ran on a curve along the south, southeast, and east sides of the property. By 1908, the Site was developed with an office and a milk company next to the machine shop, which transitions to "Borden's Farm Product" with a wagon house, stable, and lumber yard by 1935. In 1944, the former machine shop and repair shop had been razed and the former "Borden's Farm Product" became a scrap and rubber storage facility. From the mid-1940s to the late-1980s, the Site was used for various industrial purposes and included an area for sorting and bailing rags, a rag stage area, a rag laundry, a paper stage, and by 1968, a wastepaper facility began operations in the east corner of the Site. Additionally, in the mid-1960s, the train tracks running along the south, southeast, and east sides of the property were no longer present. In 1965, the Site was listed in City Directories as “Mill Sanitary Wiping Cloth Corp” and remained listed as this facility until the mid-1990s.The Site remained relatively unchanged until the early-1990s when the former buildings labeled “Sorting and Bailing Rags” and “Wastepaper Facility” were converted to auto repair shops. The Site then remained relatively unchanged through the mid-2000s. From the mid- to late-2000s, several commercial operations were conducted at the Site, including NYC Water Works Inc. The current owner, 40 Bruckner LLC, purchased the Site from D. Benedetto Inc in December 2011. The Requestor, 40 Bruckner Realty LLC, is currently in a 99-year lease agreement of the Site with 40 Bruckner LLC.

SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

The RI was completed in accordance with Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 375, DER-10 and the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006 and subsequent updates). The RI was completed on September 1st through 10th 2021 to determine the nature and extent of contamination in soil, groundwater, and soil vapor.

The RI consisted of:

- Advancement of sixteen soil borings to 20 feet below ground surface (ft bgs) or shallower, depending on visual and olfactory observations, with samples collected from 0 to 2 inches below ground surface and from 8 to 10 ft bgs, or deeper depending on the depth to groundwater observed at each boring location. Two soil borings, SB-17 and SB-18, were advanced to 4 ft bgs and sampled from 0 to 2 ft bgs and 2 to 4 ft bgs. A total of 37 soil samples were collected;
- Installation of eight two-inch permanent groundwater monitoring wells to a depth of 15 or 20 ft bgs, depending on the depth to groundwater observed at each monitoring well location and the collection of eight groundwater samples;
- Survey and gauging of monitoring wells to determine groundwater elevation and flow direction;
- Installation of ten soil vapor probes to a depth of 6 to 12 ft bgs and the collection of ten soil vapor samples; and
- Collection of three grab samples from three distinct stockpiles of unidentified material.

A summary of environmental findings of the RI includes the following:

1. Depth to groundwater ranged from 8.13 to 13.68 ft bgs, with groundwater elevation ranging from 2.14 to 2.32.

2. Groundwater flow is from the northeast to the southwest.

3. Soil analytical results were compared to NYSDEC 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs); as a proxy for the potentially applicable Protection of Groundwater Soil Cleanup Objectives (SCOs), the Protection of Ecological Resources SCOs, and Restricted Residential Soil Cleanup Objectives (RRSCOs).

- The VOC, acetone was detected above UUSCOs in SB13 (0-2'') at 0.095 mg/kg and in SB18 (0-2') at 0.056 mg/kg. Additionally, four VOCs were detected above UUSCOs in soil boring SB6 (0-2''), including tetrachloroethene (PCE) (2.6 mg/kg), benzene (0.31 mg/kg), toluene (1.6 mg/kg), and xylenes, total (4.2 mg/kg). VOCs were not detected in remaining soil samples above the UUSCOs or RRSCOs.
- Seven polyaromatic hydrocarbons (PAHs) were detected above UUSCOs and RRSCOs in multiple shallow soil samples across the entire Site. All PAHs were detected at maximum concentrations above both RRSCOs and UUSCOs in SB17 (0-2'), including benzo(a)anthracene (38 mg/kg), benzo(a)pyrene (33 mg/kg), benzo(b)fluoranthene (42 mg/kg), benzo(k)fluoranthene (12 mg/kg), chrysene (33 mg/kg), dibenzo(a,h)anthracene (5.6 mg/kg), and indeno(1,2,3-cd)pyrene (23 mg/kg).
- Two pesticides, 4,4'-DDD (0.00919 mg/kg) and 4,4'-DDT (0.0169 mg/kg) were detected in soil sample SB1 (0-2'') above UUSCOs, but not RRSCOs. Additionally, pesticides including 4,4'-DDE (0.00383 mg/kg) and 4,4'-DDT (0.00499 mg/kg) were detected in soil sample SB3 (0-2''), also above UUSCOs. Pesticides were not detected in remaining soil samples above the UUSCOs or RRSCOs.
- Three PCBs were detected above UUSCOs, but not RRSCOs in multiple shallow soil samples. Aroclor 1254 was detected above UUSCOs in soil sample SB6 (0-2'') at a concentration of 0.145 mg/kg and in SB13 (0-2'') at a concentration of 0.101 mg/kg. Aroclor 1260 (0.104 mg/kg) was detected above UUSCOs in SB8 (0-2'') and Aroclor 1242 (0.519) was detected above UUSCOs in SB1 (0-2''). PCBs were not detected in remaining soil samples above the UUSCOs or RRSCOs.
- Several metals were detected in multiple shallow soil samples throughout the Site above UUSCOs and RRSCOs. Lead was detected at a maximum concentration of 1590 mg/kg and mercury was detected at a maximum concentration of 10.2 mg/kg, both in soil sample SB3 (0-2'') above RRSCOs. In soil sample SB8 (0-2''), copper was detected above the RRSCO at a maximum concentration of 588 mg/kg and zinc was detected at a maximum concentration of 694 mg/kg above UUSCOs. Soil sample SB8 (0-2''), cadmium was detected above RRSCOs at a concentration of 5.46 mg/kg and nickel was detected above UUSCOs at a concentration of 74.8 mg/kg. Cadmium and nickel were not detected above UUSCOs or RRSCOs in any other soil sample. Arsenic was detected above RRSCOs in SB18 (0-2'') at a maximum concentration of 34.6 mg/kg. Soil sample SB18 (0-2''), barium was detected above RRSCOs at 613 mg/kg. Barium was not detected above UUSCOs or RRSCOs in any other soil sample.
- One or more Perfluorinated Alkyl Acids (PFOS/PFOA) were detected above laboratory detection limits in 12 of the 37 soil samples analyzed. The maximum total concentration of PFOS/PFOA detected in soil samples was 0.00447 mg/kg in soil sample SB8 (0-2'').
- 1,4-dioxane was not detected at concentrations above the laboratory detection limit in any soil sample.

4. Soil grab sample analytical results were also compared to NYSDEC 6NYCRR Part 375 UUSCOs; as a proxy for the potentially applicable Protection of Groundwater SCOs, the Protection of Ecological Resources SCOs, and RRSCOs.

- No VOCs were detected above the laboratory detection limits in any grab sample.
- Three SVOCs were detected above UUSCOs and RRSCOs in grab sample GS-3, including Benzo(a)anthracene (2.1 mg/kg), benzo(a)pyrene (1.9 mg/kg), and benzo(b)fluoranthene (2.7 mg/kg). Additionally in GS-3 benzo(k)fluoranthene (0.9 mg/kg) and chrysene (2.1 mg/kg) were detected above UUSCOs, only. No other SVOCs were detected in remaining grab samples above UUSCOs or RRSCOs.
- Four metals were detected above UUSCOs in grab sample GS-3, including copper (90.7 mg/kg), lead (310 mg/kg), mercury (0.458 mg/kg), and zinc (185 mg/kg). Additionally, lead was detected above UUSCOs in GS-1 at 64.6 mg/kg. No other metals were detected in remaining grab samples above UUSCOs or RRSCOs.

5. Groundwater analytical results were compared to NYSDEC 6NYCRR Part 703.5 Class GA groundwater quality standards (AWQS) and NYSDEC guidance set forth in Technical and Operational Guidance Series (TOGS) 1.1.1 (Specifically "June 1998 NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values, Class GA for the protection of a source of drinking water modified per the April 2000 addendum") (TOGS 1.1.1).
   - One VOC, trichloroethene (TCE) was detected above the AWQS in MW8 at a concentration of 5 µg/L. PCE was detected above laboratory detection limits in several groundwater samples but did not exceed the AWQS. No other VOCs were detected in remaining groundwater samples exceeding the AWQS.
   - No SVOCs were detected in any groundwater samples exceeding the AWQS.
   - No Pesticides were detected in any groundwater samples exceeding the AWQS.
   - No PCBs were detected in any groundwater samples exceeding the AWQS.
   - Several metals were detected above the AWQS in multiple groundwater samples including sodium, total (maximum 270,000 µg/L), manganese, total (maximum 2415 µg/L), magnesium, total (maximum 101,000 µg/L), and iron, total (maximum 10500 µg/L). Antimony, total was only detected exceeding the AWQS in MW6 at a concentration of 5.16 µg/L. No other metals were detected in remaining groundwater samples exceeding the AWQS.
   - PFOA/PFAS compounds were detected above the NY-MCL for drinking water of 0.01 µg/L in each groundwater sample collected at the Site. Elevated PFOA/PFAS compounds include Perfluorobutanoic Acid (PFBA), Perfluoropentanoic Acid (PFPeA), Perfluorobutanesulfonic Acid (PFBS), Perfluorohexanoic Acid (PFHxA), Perfluoroheptanoic Acid (PFHpA), Perfluorooctanoic Acid (PFOA), 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS), Perfluorononanoic Acid (PFNA), and Perfluorooctanesulfonic Acid (PFOS). The total concentration of PFAS compounds ranged from 0.0155 µg/L in MW4 to a maximum of 0.259 µg/L in MW8.
   - 1,4-dioxane was not detected in any groundwater samples exceeding the AWQS.

6. Soil vapor sampling results indicate total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations ranging from 11.5 µg/m^3 in SV8 to 149.88 µg/m^3 in SV9. Total VOC concentrations ranged from 331.62 µg/m^3 in SV4 to 4082.07 µg/m^3 in SV6. Elevated concentrations of Chlorinated volatile organic compounds (CVOCs) were detected in several

soil vapor samples. 1,1,1-trichloroethene was detected at elevated concentrations in soil vapor samples SV6 and SV8 at concentrations of 122 µg/m^3 and 557 µg/m^3, respectively. Tetrachloroethene (PCE) was detected at elevated concentrations in SV6, SV8, and SV1 at a maximum concentration of 209 µg/m^3 in soil vapor sample SV1. Lastly, trichloroethene (TCE) was detected at elevated concentrations in soil vapor samples SV5, SV6, and SV7, at a maximum concentration of 59.1 µg/m^3 at SV8.

In addition, a Pre-Design Investigation (PDI) was conducted on 12 through 13 January 2022 to obtain additional supplemental data verifying the extent/depth of fill contamination at the Site. The PDI consisted of the advancement of 18 soil borings to between 5 and 10 ft bgs. Soil samples representative of Site conditions were collected at locations widely distributed across the Site. Samples were collected from borings PDI-1 through PDI-7 from 2 to 4, 4 to 6, 6 to 8 and 8 to 10 ft bgs. On the southern portion of the site, borings PDI-8 through PDI-12 were sampled from 2 to 4 and 4 to 6 ft bgs.

A summary of the PDI findings include the following:

- PCE was detected at 2 mg/kg, above the UUSCO of 1.3 mg/kg, in one sample collected at PDI-8 from 0 to 2 inches bgs. PCE was not detected above the applicable SCOs in deeper samples collected at this location or in any other samples throughout the Site. Petroleum related VOCs were detected in PDI-9 from 2 to 4 ft bgs including toluene (2.1 mg/kg [UUSCO 0.7 mg/kg]), total xylenes (3.5 mg/kg [UUSCO 0.26 mg/kg]), 2-butanone (0.34 mg/kg, [UUSCO 0.12 mg/kg]) and 1,2,4-trimethylbenzene (15 mg/kg, [UUSCO 3.6 mg/kg]). These petroleum related VOCs were not detected above the applicable standards in deeper samples collected at this location or in any other samples throughout the Site, including samples collected at the groundwater interface surrounding MW8.
- Seven PAHs/SVOCs were detected above UUSCOs and RRSCOs at varying depths throughout the Site including benzo(a)anthracene (maximum concentration 32 mg/kg [RRSCO 1 mg/kg]), benzo(a)pyrene (maximum concentration 25 mg/kg [RRSCO 1 mg/kg]), benzo(b)fluoranthene (maximum concentration 30 mg/kg [RRSCO 1 mg/kg]), benzo(k)fluoranthene (maximum concentration 8.5 mg/kg [RRSCO 3.9 mg/kg), chrysene (maximum concentration 30 mg/kg [RRSCO 3.9 mg/kg)], dibenzo(a,h)anthracene (maximum concentration 3.4 mg/kg [RRSCO 0.33 mg/kg]) and indeno(1,2,3-cd)pyrene (maximum concentration 16 mg/kg [RRSCO 0.5 mg/kg]). Maximum concentrations were detected in PDI-2 from 4 to 6 ft bgs. PAHs were detected above UUSCOs in multiple sampling intervals with deepest intervals detecting elevated concentrations at 6 to 8 ft bgs in the northwestern portion of the Site.
- Nine metals were detected above the UUSCOs or RRSCOs at varying depths throughout the Site including arsenic (maximum concentration 21.2 mg/kg [RRSCO 16 mg/kg]) , barium (maximum concentration 748 mg/kg [RRSCO 400 mg/kg]), cadmium (maximum concentration 10.8 mg/kg [RRSCO 4.3 mg/kg]), copper (maximum concentration 1,210 mg/kg [RRSCO 270 mg/kg]), lead (maximum concentration 1,420 mg/kg [RRSCO 400 mg/kg]), mercury (maximum concentration 3.08 mg/kg [RRSCO 0.81 mg/kg]), nickel (maximum concentration 221 mg/kg [UUSCO 30 mg/kg]), silver (maximum concentration 4.42 mg/kg [UUSCO 2 mg/kg]) and zinc (maximum concentration 1,440 mg/kg [UUSCO 109 mg/kg]). Metals were detected above UUSCOs in multiple sampling intervals with deepest intervals detecting elevated concentrations at 8 to 10 ft bgs in the northwestern portion of

the Site. Concentrations of metals exceeding the applicable SCOs were also detected to a depth of 6 ft bgs in the southeastern portion of the Site.

SUMMARY OF THE REMEDY

Alternative I, a Track 1 remedy, will include the following tasks:

- Development and implementation of a Construction Health & Safety Plan (CHASP) and Community Air Monitoring Plan (CAMP) for the protection of on-site workers, community/residents, and the environment during remediation and construction activities.
- Design and construction of a support-of-excavation (SOE) system to facilitate the Track 1 remediation.
- Implementation of soil erosion, pollution, and sediment control measures in compliance with applicable laws and regulations.
- Demolition of existing Site buildings, structures, and the concrete slab beneath the buildings.
- Excavation, stockpiling, off-Site transport, and disposal of about 10,100 cubic yards of historic fill and solid waste that exceeds UUSCOs as defined by 6 NYCRR Part 375-6.8. This includes excavation of two on-site soil stockpiles of about 250 cubic yards located at GS-1 and GS-3, as sampled in the September 2021 RI. Excavation will be to 8 ft bgs (bottom of historical fill) in the northwestern portion of the Site (approximately 23,450 sq foot area) to remove material exceeding UUSCOs. Two areas in the northwest portion of the Site surrounding PDI soil sample locations PDI-2 and PDI-4/PDI-7 (approximately 1,200 sq foot area) will be excavated to 10 ft bgs to remove material exceeding UUSCOs. In the southeastern portion of the Site, excavation will be to 4 ft bgs (approximately 16,590 sq foot area) to remove material exceeding UUSCOs. For development purposes, excavation will extend to 25 ft bgs throughout the Site and a total of 38,500 cubic yards of material will be removed.
- Delineation of elevated lead concentrations in soil in the vicinity of SB8 and SB3, installed during the RI, and PDI-2 and PDI-11, installed during the PDI, and subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material.
- If encountered, removal of USTs and/or associated appurtenances (e.g., fill lines, vent line, and electrical conduit) and decommissioning and off-Site disposal during redevelopment in accordance with DER-10, 6 NYCRR Part 613.9, NYSDEC CP-51, and other applicable NYSDEC UST closure requirements.
- Screening for indications of contamination (by visual means, odor, and monitoring photoionization detectors [PIDs]) of excavated material during intrusive site work.
- Appropriate off-Site disposal of material removed from the Site in accordance with federal, state, and local rules and regulations for handling, transport, and disposal.
- Collection and analysis of confirmation soil samples at the base of the remedial excavation in accordance with DER-10 to confirm a Track 1 remedy was achieved.

- Completion of a Soil Vapor Intrusion (SVI) Evaluation in accordance with DER-10 and NYSDOH Final Guidance on Soil Vapor Intrusion following remedial excavation activities and prior to occupancy.

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List of Acronyms and Abbreviations

A

amsl	above mean sea level
AOC	Area of Concern
ASP	Analytical Services Protocol

B

BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BTEX	Benzene, toluene, ethylbenzene, xylenes

C

CAMP	Community Air Monitoring Plan
CHASP	Construction Health & Safety Plan
cis-1,2-DCE	cis-1,2-Dichloroethylene
COC	Contaminant of Concern
CP-51	Commissioners Policy-51 *(specifically "October 2010 NYSDEC Commissioners Policy 51")*
CPP	Citizen Participation Plan
CQAP	Construction Quality Assurance Plan
CSM	Conceptual Site Model
CVOC	Chlorinated Volatile Organic Compound

D

4,4'-DDD	1,1-Dichloro-2,2-bis(4-chlorophenyl)ethane
4,4'-DDE	1,1-Dichloro-2,2-bis(4-chlorophenyl)ethene
4,4'-DDT	Dichlorodiphenyltrichloroethane
DER-10	Division of Environmental Remediation-10 *(specifically "May 2010 NYSDEC Technical Guidance for Site Investigation and Remediation")*
DUSR	Data Usability Summary Report

E

EE	Environmental Easement
ELAP	Environmental Laboratory Approval Program

F

FER	Final Engineering Report
ft bgs	feet below ground surface

G

GWQS	Groundwater Quality Standard

H

Haley & Aldrich	Haley & Aldrich of New York
HAZWOPER	Hazardous Waste Operations and Emergency Response

List of Acronyms and Abbreviations **(Continued)**

I	
IC	Institutional Control
ISCR	*In situ* Chemical Reductant
M	
mg/kg	milligrams per kilogram
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
ml/min	milliliter per minute
N	
ng/L	nanograms per liter
NTU	Nephelometric Turbidity Unit
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O	
OSHA	Occupational Health and Safety Administration
P	
PAH	Polycyclic Aromatic Hydrocarbon
PBS	Petroleum Bulk Storage
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene/Tetrachloroethene
Ph II/RI	Phase II Remedial Investigation Report
PHFxA	Perfluorohexanoic Acid
PFOA/PFAS	Per- and polyfluoroalkyl substances
PID	Photoionization Detector
PPE	Personal Protective Equipment
Q	
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QHHEA	Qualitative Human Health Exposure Assessment
R	
RA	Remedial Action
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCA	Recycled Concrete Aggregate
RCRA	Resource Conservation and Recovery Act
RE	Resident Engineer

List of Acronyms and Abbreviations (Continued)

RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
RRSCO	Restricted Residential Soil Cleanup Objective
S	
SCG	Standards, Criteria, and Guidelines
SCO	Soil Cleanup Objective
SDS	Safety Data Sheet
Site	40 Bruckner Boulevard, Bronx, New York
SMMP	Soil/Materials Management Plan
SMP	Site Management Plan
SOE	Support-of-Excavation
SVOC	Semi-Volatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
T	
TAL	Total Analyte List
TCE	Trichloroethylene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOGS 1.1.1	Technical and Operational Guidance Series 1.1.1 *(Specifically "June 1998 NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values, Class GA for the protection of a source of drinking water modified per the April 2000 addendum")*
TPH	Total Petroleum Hydrocarbons
U	
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
UUSCO	Unrestricted Use Soil Cleanup Objective
V	
VC	Vinyl Chloride
VOC	Volatile Organic Compound
W	
WQCA	Wastewater Quality Control Application

1. Introduction

This Remedial Action Work Plan (RAWP) was developed by Haley & Aldrich of New York (Haley & Aldrich) on behalf of 40 Bruckner Realty LLC (40 Bruckner Realty) for the proposed development located at 40 Bruckner Boulevard (Section 2, Block 2295, Lot 51) within the Mott Haven neighborhood of the Bronx, New York (the Site).

In July 2021, the project (Site No. C203146) was accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and a countersigned Brownfield Cleanup Agreement (BCA) was issued with 40 Bruckner Realty LLC classified as a "Volunteer". The Volunteer proposes to remediate the Site for residential use.

This RAWP summarizes the nature and extent of contamination on the Site as determined from data gathered during the Remedial Investigation (RI) performed on September 1st through 10th 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 NYSDEC Division of Environmental Remediation (DER) Program Policy: Technical Guidance for Site Investigation and Remediation (DER-10) and complies with applicable federal, state, and local laws, regulations, and requirements.

1.1 SITE LOCATION AND DESCRIPTION

The Site, identified as Section 2, Block 2295, Lot 51 on the New York City tax map, is 41,240-square feet and is bounded by Bruckner Boulevard to the northeast followed by mixed commercial and residential buildings across Bruckner Boulevard to the east, northeast and north, by East 132nd Street to the southwest followed by the Harlem River Yard to the south, southwest and west, apartment buildings to the southeast, and by Alexander Avenue followed by commercial and industrial/manufacturing buildings to the west and northwest. The Site location is shown on Figure 1. Existing Site features are shown on the Site Map provided as Figure 2. A survey map is provided in Appendix A. The Site is currently vacant and is improved with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and a partially paved material storage and parking area.

The land is currently zoned as M1-5/R8A which allows for residential and industrial use. The Site is located in an urban area surrounded by commercial, industrial, and residential properties served by municipal water. Requestor plans to redevelop the Site for residential purposes consistent with current zoning.

1.2 REDEVELOPMENT PLAN

At this time, Site development plans are conceptual; however, it is anticipated that the project will consist of redevelopment of the Site for use as a 12-story residential building. It is anticipated that this structure would be developed with a single-story sub-grade cellar that would extend approximately 20 feet below the floor slab of the first floor, requiring excavation to approximately 25 ft bgs, and encompass the entire Site footprint. Redevelopment plans are provided in Appendix B.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The Site is located in a mixed-use residential and commercial area. The Site is bounded by Bruckner Boulevard to the northeast followed by mixed commercial and residential buildings across Bruckner Boulevard to the east, northeast and north, by East 132nd Street to the southwest followed by the Harlem River Yard to the south, southwest, and west, apartment buildings to the southeast, and by Alexander Avenue followed by commercial and industrial/manufacturing buildings to the west and northwest. No public schools or hospitals are located within a 500 ft radius of the Site. The Bruckner Forever Young Social Adult Day Care is located approximately 299 ft east of the Site.

Direction	Adjoining properties	Surrounding Properties
North	Bruckner Boulevard followed by mixed commercial and residential buildings	Mixed-use commercial and residential buildings and vacant land
South	East 132nd Street followed by the Harlem River Yard	Vacant land
East	Residential apartment buildings	Mixed-use commercial and residential buildings
West	Alexander Avenue followed by commercial and industrial/manufacturing buildings	Commercial/office buildings

Additionally, there are many sensitive receptors located within a one-half mile radius including schools and day cares listed below:

No.	Name (Approximate distance from Site)	Address
1	Learning through Play Pre-K Center (528’)	80 Bruckner Boulevard, Bronx, NY 10454
2	South Bronx Classical Charter School II (1056’)	333 E 135th Street, Bronx, NY 10454
3	Zeta Charter School Bronx 1 (1056’)	222 Alexander Avenue, Bronx, NY 10454
4	Bronx Elementary School 43 (2112’)	165 Brown Place, Bronx, NY 10454
5	Mott Haven Academy Charter School (2112’)	170 Brown Place, Bronx, NY 10454
6	New York City Montessori Charter School (2640’)	423 E 138th Street, Bronx, NY 10454
7	Stars of Tomorrow Daycare Center Inc. (2640’)	423 E 138th Street, Bronx, NY 10454
8	Amy’s Family WeeCare (2640’)	520 E 137th Street, Bronx, NY 10454

1.4 SITE HISTORY

The Site was developed as early as 1891 with a repair shop in the southwest corner and a machine shop on the east corner of the Site, while the rest of the Site remained vacant. Train tracks ran on a curve along the south, southeast, and east sides of the property. By 1908, the Site was developed with an office and a milk company next to the machine shop, which transitions to "Borden's Farm Product" with a wagon house, stable, and lumber yard by 1935. In 1944, the former machine shop and repair shop had been razed and the former "Borden's Farm Product" became a scrap and rubber storage facility. From the mid-1940s to the late-1980s, the Site was used for various industrial purposes and included an area for sorting and bailing rags, a rag stage area, a rag laundry, a paper stage, and by 1968, a wastepaper facility began operations in the east corner of the Site. Additionally, in the mid-1960s, the train tracks running along the south, southeast, and east sides of the property were no longer present. In 1965, the Site is listed in City Directories as "Mill Sanitary Wiping Cloth Corp" and is listed as this facility until the mid-1990s.The Site remained relatively unchanged until the early-1990s when the former buildings labeled "Sorting and Bailing Rags" and "Wastepaper Facility" were converted to auto repair shops. The Site then remained relatively unchanged through the mid-2000s. From the mid- to late-2000s, several commercial operations were run at the Site, including, without limitation, NYC Water Works Inc. The current fee owner, 40 Bruckner LLC, purchased the Site from D. Benedetto Inc in December 2011. The Requestor, 40 Bruckner Realty LLC, is currently in a 99-year lease agreement of the Site with 40 Bruckner LLC.

1.5 PREVIOUS ENVIRONMENTAL REPORTS

A Phase II was performed by Environmental Business Consultants (EBC) on 10 June 2020 on behalf of a prospective purchaser. The scope of work for this Phase II consisted of the following:

1. Installation of 10 soil borings across the accessible areas of the Site and collection of 16 soil samples.

A summary of environmental findings of the Ph II includes the following:

1. Depth to groundwater is approximately 8 ft bgs at the Site.
2. The stratigraphy of the Site, from the surface down, consists of fill including brown silty sand with pieces of asphalt, concrete, brick, and wood to depths varying between 3 to 11 ft bgs throughout the Site. Historic fill is underlain by sandy-silts and coarse sands.
3. Soil samples were compared to NYSDEC 6 NYCRR Part 375-6.8 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted Residential Use Soil Cleanup Objectives (RRSCOs). Soil samples collected during the Phase II showed:
   - One CVOC, PCE, was detected at 2,500 µg/kg, which is above the UUSCO, in soil boring EBC3 (0-2'). See Figure 3 for the location of EBC3. PCE was also detected in other soil samples but at concentrations that did not exceed the UUSCO. Several petroleum-related VOCs were detected in multiple shallow soil samples but did not exceed UUSCOs.
   - Seven SVOCs were detected above both UUSCOs and RRSOCs in multiple shallow soil samples, including, benzo(a)anthracene (maximum 13,000 µg/kg), benzo(a)pyrene (maximum 12,000 µg/kg), benzo(b)fluoranthene (9,600 µg/kg), benzo(k)fluoranthene (maximum 6,200 µg/kg), chrysene (maximum 12,000 µg/kg), dibenzo(a,h)anthracene (1,400 µg/kg) and indeno(1,2,3-cd)pyrene (6,000 µg/kg).

- No PCBs were detected at concentrations exceeding the UUSCOs.
- The metal barium was detected above the RRSCO at EBC8 (0-2') at 686 mg/kg. Additionally, cadmium was detected above the RRSCO at EBC4 (0-2') at 4.36 mg/kg. Several other metals were detected in multiple shallow and deep soil samples, including copper (maximum 508 mg/kg), lead (maximum 1,350 mg/kg), and mercury (maximum 2.28 mg/kg) above both UUSCOs and RRSCOs, and zinc (maximum 2,690 mg/kg) above UUSCOs.
- Two pesticides were detected above UUSCOs, including 4,4'-DDE at EBC8 (0-2') at 4 µg/kg.

2. Description of Remedial Investigation Findings

The RI was completed in accordance with Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 375, DER-10, the NYSDEC Draft BCP Guide (May 2004), and the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006 and subsequent updates). The RI was completed on September 1st through 10th 2021 to determine the nature and extent of contamination in soil, groundwater, and soil vapor.

2.1 REMEDIAL INVESTIGATION

The RI consisted of:

- Advancement of sixteen soil borings to 20 feet below ground surface (ft bgs) or shallower, depending on visual and olfactory observations, with samples collected from 0 to 2 inches below ground surface and from 8 to 10 ft bgs, or deeper depending on the depth to groundwater observed at each boring location. Two soil borings, SB-17 and SB-18, were advanced to 4 ft bgs and sampled from 0 to 2 ft bgs and 2 to 4 ft bgs. A total of 37 soil samples were collected. Soil borings are included in Appendix C;
- Installation of eight two-inch permanent groundwater monitoring wells to a depth of 15 or 20 ft bgs, depending on the depth to groundwater observed at each monitoring well location and the collection of eight groundwater samples. Monitoring well construction logs are included in Appendix D;
- Survey and gauging of monitoring wells to determine groundwater elevation and flow direction;
- Installation of ten soil vapor probes to a depth of 6 to 12 ft bgs and the collection of ten soil vapor samples; and
- Collection of three grab samples from three distinct stockpiles of unidentified material.

2.1.1 Soil Investigation

Nineteen (19) soil borings (SB1 through SB19) were installed across the entire Site during the RI by Eastern Environmental Solutions Inc. Soil borings were advanced by a track-mounted direct-push drill rig (Geoprobe®) to a depth of 20 ft bgs, or shallower depending on visual and olfactory observations. Two soil borings, SB-17 and SB-18, were advanced to 4 ft bgs and sampled from 0 to 2 ft bgs and 2 to 4 ft bgs. Samples were collected from acetate liners using a stainless-steel trowel or sampling spoon. The soil was screened for visual, olfactory, and instrumental evidence of environmental impacts and was visually classified for soil type, grain size, texture, and moisture content. Soils were logged continuously by an engineer. The presence of staining, odors, and PID response was noted.

2.1.2 Groundwater Investigation

Eight two-inch permanent groundwater monitoring wells (MW1 through MW8) were installed to a depth of 15 or 20 ft bgs, depending on depth to groundwater observed at each monitoring well location. Monitoring wells have a 2-inch annular space and were installed using certified clean sand fill. Wells were screened from 5 to 15 ft bgs or from 10 to 20 ft bgs. Groundwater was encountered at approximately 8.13 to 13.68 ft bgs. Monitoring wells were developed by surging a pump in the well several times to pull fine-grained material from the well. Development was not completed until the water turbidity was 50 nephelometric turbidity units (NTU) or less, or 10 well volumes were removed, if possible. The well casings were surveyed by a New York State licensed surveyor on 27 September 2021. During surveying, Haley & Aldrich personnel performed a synoptic monitoring well gauging event.

2.1.3 Soil Vapor Investigation

NYSDEC DER-10 requires an assessment of soil vapor for contaminated sites to evaluate the health risk associated with potential exposure to VOCs through vapor intrusion into occupied spaces. Ten soil vapor probes were installed to assess soil vapor conditions.

Ten soil vapor probes (SV1 through SV10) were installed by Eastern Environmental Solutions, Inc. using a direct-push drilling rig (Geoprobe®) to advance the stainless-steel probe to a depth of approximately 6 to 12 ft bgs. The stainless-steel soil vapor probes were sealed with bentonite, and a tracer gas was used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) measure to verify the integrity of the soil vapor probe seal. In addition, one to three implant volumes were purged prior to the collection of the soil vapor samples. Sampling occurred for the duration of two hours. At the conclusion of the sampling round, tracer monitoring was performed a second time to confirm the integrity of the probe seals.

2.1.4 Samples Collected

During the September 2021 RI, a total of 39 soil samples, two of which were duplicate samples, were collected for laboratory analysis. Two soil samples were collected from each soil boring with one sample taken from a depth of 0 to 2 inches bgs and the other from 8 to 10 ft bgs, or deeper depending on the depth to groundwater. Samples were collected using laboratory-provided clean bottle ware, and VOC grab samples were collected using terra cores.

In addition, three grab samples were collected from three distinct stockpiles of unidentified material.

A total of eight groundwater samples, one from each monitoring well, were collected for laboratory analysis. A field blank, trip blank, MS/MSD sample, and a duplicate sample were also collected. Groundwater monitoring wells were sampled using low-flow sampling methods. Monitoring wells were purged, and physical and chemical parameters stabilized before samples were taken.

A total of ten soil vapor samples were collected for laboratory analysis, one from each soil vapor probe. Samples were collected in appropriately sized Summa canisters that were certified clean by the laboratory. Sampling occurred for the duration of two hours.

Soil, groundwater, and soil vapor samples were submitted for laboratory analysis to Alpha Analytical Inc., a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratory located in Westborough, Massachusetts.

2.1.5 Chemical Analysis

The laboratory analyses performed on the soil, groundwater, and soil vapor samples are summarized below.

Soil samples were analyzed for the following parameters:

- Target Compound List (TCL) VOCs using EPA method 8260B
- TCL SVOCs using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010
- PCBs using EPA method 8082
- TCL Pesticides using EPA method 8081B
- Per- and polyfluoroalkyl substances (PFAS) by EPA Method 537.1
- 1,4-dioxane by EPA Method 8270 SIM

Soil grab samples were analyzed for the following parameters:

- Target Compound List (TCL) VOCs using EPA method 8260B
- TCL SVOCs using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010

Groundwater samples were analyzed for the following parameters:

- TCL VOCs using EPA method 8260B;
- TCL SVOCs using EPA method 8270C;
- Total Metals using EPA methods 6010/7471;
- PFAS using EPA method 537; and
- 1,4-Dioxane using EPA method 8260B.

Soil vapor samples were analyzed for VOCs using USEPA Method TO-15.

2.1.6 Remedial Investigation Findings Summary

A summary of environmental findings of the RI includes the following:

1. Depth to groundwater ranged from 8.13 to 13.68 ft bgs, with groundwater elevation ranging from 2.14 to 2.32 ft.

2. Groundwater flow is estimated to be from the northeast to the southwest. Groundwater elevation data is presented in Appendix E.

3. Soil analytical results were compared to NYSDEC 6NYCRR Part 375 UUSCOs; as a proxy for the potentially applicable Protection of Groundwater SCOs, the Protection of Ecological Resources SCOs, and RRSCOs. Results are summarized in Figure 3.

    - The VOC, acetone was detected above UUSCOs in SB13 (0-2'') at 0.095 mg/kg and in SB18 (0-2') at 0.056 mg/kg. Additionally, four VOCs were detected above UUSCOs in soil boring SB6 (0-2''), including PCE (2.6 mg/kg), benzene (0.31 mg/kg), toluene (1.6 mg/kg), and xylenes, total (4.2 mg/kg). VOCs were not detected in remaining soil samples above the UUSCOs or RRSCOs.

- Seven PAHs/SVOCs were detected above UUSCOs and RRSCOs in multiple shallow soil samples across the entire Site. All PAHs were detected at maximum concentrations above both RRSCOs and UUSCOs in SB17 (0-2'), including benzo(a)anthracene (38 mg/kg), benzo(a)pyrene (33 mg/kg), benzo(b)fluoranthene (42 mg/kg), benzo(k)fluoranthene (12 mg/kg), chrysene (33 mg/kg), dibenzo(a,h)anthracene (5.6 mg/kg), and indeno(1,2,3-cd)pyrene (23 mg/kg).
- Two pesticides, 4,4'-DDD (0.00919 mg/kg) and 4,4'-DDT (0.0169 mg/kg) were detected in soil sample SB1 (0-2'') above UUSCOs, but not RRSCOs. Additionally, pesticides including 4,4'-DDE (0.00383 mg/kg) and 4,4'-DDT (0.00499 mg/kg) were detected in soil sample SB3 (0-2''), also above UUSCOs. Pesticides were not detected in remaining soil samples above the UUSCOs or RRSCOs.
- Three PCBs were detected above UUSCOs, but not RRSCOs in multiple shallow soil samples. Aroclor 1254 was detected above UUSCOs in soil sample SB6 (0-2'') at a concentration of 0.145 mg/kg and in SB13 (0-2'') at a concentration of 0.101 mg/kg. Aroclor 1260 (0.104 mg/kg) was detected above UUSCOs in SB8 (0-2'') and Aroclor 1242 (0.519) was detected above UUSCOs in SB1 (0-2''). PCBs were not detected in remaining soil samples above the UUSCOs or RRSCOs.
- Several metals were detected in multiple shallow soil samples throughout the Site above UUSCOs and RRSCOs. Lead was detected at a maximum concentration of 1590 mg/kg and mercury was detected at a maximum concentration of 10.2 mg/kg, both in soil sample SB3 (0-2'') above RRSCOs. In soil sample SB8 (0-2''), copper was detected above the RRSCO at a maximum concentration of 588 mg/kg and zinc was detected at a maximum concentration of 694 mg/kg above UUSCOs. Soil sample SB8 (0-2''), cadmium was detected above RRSCOs at a concentration of 5.46 mg/kg and nickel was detected above UUSCOs at a concentration of 74.8 mg/kg. Cadmium and nickel were not detected above UUSCOs or RRSCOs in any other soil sample. Arsenic was detected above RRSCOs in SB18 (0-2'') at a maximum concentration of 34.6 mg/kg. Soil sample SB18 (0-2''), barium was detected above RRSCOs at 613 mg/kg. Barium was not detected above UUSCOs or RRSCOs in any other soil sample.
- One or more Perfluorinated Alkyl Acids (PFOS/PFOA) were detected above laboratory detection limits in 12 of the 37 soil samples analyzed. The maximum total concentration of PFOS/PFOA detected in soil samples was 0.00447 mg/kg in soil sample SB8 (0-2'').
- 1,4-dioxane was not detected at concentrations above the laboratory detection limit in any soil sample.

4. Soil grab sample analytical results were also compared to NYSDEC 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs; as a proxy for the potentially applicable Protection of Groundwater Soil Cleanup Objectives (SCOs), the Protection of Ecological Resources SCOs, and Restricted Residential Soil Cleanup Objectives (RRSCOs). Results are summarized in Figure 4.

   - No VOCs were detected above the laboratory detection limits in any grab sample.
   - Three SVOCs were detected above UUSCOs and RRSCOs in grab sample GS-3, including Benzo(a)anthracene (2.1 mg/kg), benzo(a)pyrene (1.9 mg/kg), and

benzo(b)fluoranthene (2.7 mg/kg). Additionally in GS-3 benzo(k)fluoranthene (0.9 mg/kg) and chrysene (2.1 mg/kg) were detected above UUSCOs, only. No other SVOCs were detected in remaining grab samples above UUSCOs or RRSCOs.

- Four metals were detected above UUSCOs in grab sample GS-3, including copper (90.7 mg/kg), lead (310 mg/kg), mercury (0.458 mg/kg), and zinc (185 mg/kg). Additionally, lead was detected above UUSCOs in GS-1 at 64.6 mg/kg. No other metals were detected in remaining grab samples above UUSCOs or RRSCOs.

5. Groundwater analytical results were compared to NYSDEC 6NYCRR Part 703.5 Class GA groundwater quality standards (AWQS) and NYSDEC guidance set forth in Technical and Operational Guidance Series (TOGS) 1.1.1 (Specifically "June 1998 NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values, Class GA for the protection of a source of drinking water modified per the April 2000 addendum") (TOGS 1.1.1). Results are summarized in Figures 5 and 6.

   - One VOC, trichloroethene (TCE) was detected above the AWQS in MW8 at a concentration of 5 µg/L. PCE was detected above laboratory detection limits in several groundwater samples but did not exceed the AWQS. No other VOCs were detected in remaining groundwater samples exceeding the AWQS.
   - No SVOCs were detected in any groundwater samples exceeding the AWQS.
   - No Pesticides were detected in any groundwater samples exceeding the AWQS.
   - No PCBs were detected in any groundwater samples exceeding the AWQS.
   - Several metals were detected above the AWQS in multiple groundwater samples including sodium, total (maximum 270,000 µg/L), manganese, total (maximum 2415 µg/L), magnesium, total (maximum 101,000 µg/L), and iron, total (maximum 10500 µg/L). Antimony, total was only detected exceeding the AWQS in MW6 at a concentration of 5.16 µg/L. No other metals were detected in remaining groundwater samples exceeding the AWQS.
   - PFOA/PFAS compounds were detected above the NY-MCL for drinking water of 0.01 µg/L in each groundwater sample collected at the Site. Elevated PFOA/PFAS compounds include Perfluorobutanoic Acid (PFBA), Perfluoropentanoic Acid (PFPeA), Perfluorobutanesulfonic Acid (PFBS), Perfluorohexanoic Acid (PFHxA), Perfluoroheptanoic Acid (PFHpA), Perfluorooctanoic Acid (PFOA), 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS), Perfluorononanoic Acid (PFNA), and Perfluorooctanesulfonic Acid (PFOS). The total concentration of PFAS compounds ranged from 0.0155 µg/L in MW4 to a maximum of 0.259 µg/L in MW8.
   - 1,4-dioxane was not detected in any groundwater samples exceeding the AWQS.

7. Soil vapor sampling results indicate total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations ranging from 11.5 µg/m^3 in SV8 to 149.88 µg/m^3 in SV9. Total VOC concentrations ranged from 331.62 µg/m^3 in SV4 to 4082.07 µg/m^3 in SV6. Elevated concentrations of Chlorinated volatile organic compounds (CVOCs) were detected in several soil vapor samples. 1,1,1-trichloroethene was detected at elevated concentrations in soil vapor samples SV6 and SV8 at concentrations of 122 µg/m^3 and 557 µg/m^3, respectively. Tetrachloroethene (PCE) was detected at elevated concentrations in SV6, SV8, and SV1 at a

maximum concentration of 209 µg/m^3 in soil vapor sample SV1. Lastly, trichloroethene (TCE) was detected at elevated concentrations in soil vapor samples SV5, SV6, and SV7, at a maximum concentration of 59.1 µg/m^3 at SV8. Results are summarized in Figure 7.

2.2 PRE-DESIGN INVESTIGATION

In addition, a Pre-Design Investigation (PDI) was conducted on 12 through 13 January 2022 to obtain additional supplemental data verifying the extent/depth of fill contamination at the Site. The PDI consisted of the advancement of 18 soil borings to between 5 and 10 ft bgs.

2.2.1 Samples Collected

Soil samples representative of Site conditions were collected at locations widely distributed across the Site. Samples were collected from borings PDI-1 through PDI-7 from 2 to 4, 4 to 6, 6 to 8 and 8 to 10 ft bgs. On the southern portion of the site, borings PDI-8 through PDI-12 were sampled from 2 to 4 and 4 to 6 ft bgs. Samples were collected using laboratory-provided clean bottle ware, and VOC grab samples were collected using terra cores.

2.2.2 Chemical Analysis

The laboratory analyses performed on the soil, groundwater, and soil vapor samples are summarized below.

Soil samples were analyzed for the following parameters:

- Target Compound List (TCL) VOCs using EPA method 8260B
- TCL SVOCs using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010

2.2.3 Pre-Design Investigation Findings Summary

A summary of environmental findings of the PDI includes the following:

- PCE was detected at 2 mg/kg, above the UUSCO of 1.3 mg/kg, in one sample collected at PDI-8 from 0 to 2 inches bgs. PCE was not detected above the applicable SCOs in deeper samples collected at this location or in any other samples throughout the Site. Petroleum related VOCs were detected in PDI-9 from 2 to 4 ft bgs including toluene (2.1 mg/kg [UUSCO 0.7 mg/kg]), total xylenes (3.5 mg/kg [UUSCO 0.26 mg/kg]), 2-butanone (0.34 mg/kg, [UUSCO 0.12 mg/kg]) and 1,2,4-trimethylbenzene (15 mg/kg, [UUSCO 3.6 mg/kg]). These petroleum related VOCs were not detected above the applicable standards in deeper samples collected at this location or in any other samples throughout the Site, including samples collected at the groundwater interface surrounding MW8.
- Seven PAHs/SVOCs were detected above UUSCOs and RRSCOs at varying depths throughout the Site including benzo(a)anthracene (maximum concentration 32 mg/kg [RRSCO 1 mg/kg]), benzo(a)pyrene (maximum concentration 25 mg/kg [RRSCO 1 mg/kg]), benzo(b)fluoranthene (maximum concentration 30 mg/kg [RRSCO 1 mg/kg]), benzo(k)fluoranthene (maximum concentration 8.5 mg/kg [RRSCO 3.9 mg/kg), chrysene

(maximum concentration 30 mg/kg [RRSCO 3.9 mg/kg)], dibenzo(a,h)anthracene (maximum concentration 3.4 mg/kg [RRSCO 0.33 mg/kg]) and indeno(1,2,3-cd)pyrene (maximum concentration 16 mg/kg [RRSCO 0.5 mg/kg]). Maximum concentrations were detected in PDI-2 from 4 to 6 ft bgs. PAHs were detected above UUSCOs in multiple sampling intervals with deepest intervals detecting elevated concentrations at 6 to 8 ft bgs in the northwestern portion of the Site.

- Nine metals were detected above the UUSCOs or RRSCOs at varying depths throughout the Site including arsenic (maximum concentration 21.2 mg/kg [RRSCO 16 mg/kg]) , barium (maximum concentration 748 mg/kg [RRSCO 400 mg/kg]), cadmium (maximum concentration 10.8 mg/kg [RRSCO 4.3 mg/kg]), copper (maximum concentration 1,210 mg/kg [RRSCO 270 mg/kg]), lead (maximum concentration 1,420 mg/kg [RRSCO 400 mg/kg]), mercury (maximum concentration 3.08 mg/kg [RRSCO 0.81 mg/kg]), nickel (maximum concentration 221 mg/kg [UUSCO 30 mg/kg]), silver (maximum concentration 4.42 mg/kg [UUSCO 2 mg/kg]) and zinc (maximum concentration 1,440 mg/kg [UUSCO 109 mg/kg]). Metals were detected above UUSCOs in multiple sampling intervals with deepest intervals detecting elevated concentrations at 8 to 10 ft bgs in the northwestern portion of the Site. Concentrations of metals exceeding the applicable SCOs were also detected to a depth of 6 ft bgs in the southeastern portion of the Site.

Findings of the PDI are included the Pre-Design Investigation Report in Appendix F.

2.3 SIGNIFICANT THREAT

The NYSDEC and NYSDOH have determined that this Site does not pose a significant threat to human health and the environment.

2.4 GEOLOGY AND HYDROGEOLOGY

2.4.1 Historic Fill Material

The Site contains historic fill material that extends to depths as great as 11 ft bgs and consists of asphalt, concrete, brick, glass, and wood fragments.

2.4.2 Native Soil

The historic fill material is underlain by silty sands and fine to coarse sands to at least 20 ft bgs.

2.4.3 Bedrock

Bedrock beneath the Site is identified as the Fordham Gneiss, which consists of garnet-biotite-quartz-plagioclase gneiss and amphibolite.

2.4.4 Hydrogeology

Depth to groundwater ranges from 8.13 to 13.68 ft bgs and groundwater flow beneath the Site is from the northeast to the southwest. A groundwater contour map is included as Figure 8.

2.5 CONTAMINANT CONDITIONS

2.5.1 Conceptual Site Model

A conceptual site model (CSM) was developed based on the findings of the RI performed under the BCP program. The CSM provides a framework for distribution of impacted materials sitewide and potential migration/exposure pathways.

2.5.2 Potential Sources of Contamination

PAH contamination was identified at highest concentrations in the soil samples collected from the southwest portion of the Site, with significantly elevated concentrations detected at SB17 (0-2'). This area of elevated PAH impacts to shallow soils can likely be attributed to a source that was present during former industrial operations at the Site. Elevated concentrations of PAHs, metals, and pesticides in shallow soils are consistent with characteristics of urban fill material found throughout the New York City area.

The source of residual VOC and CVOC contamination present in soil and groundwater in the southwestern portion of the Site, as well as elevated concentrations of CVOCs in soil vapor is unknown but can likely be attributed to a source that was present during former industrial operations at the Site.

2.5.3 Description of AOCs

Areas of concern at this Site involve the Site's historic industrial operations and historic fill material generally found in the New York City area.

This section evaluates the nature and extent of soil, groundwater, and soil vapor contamination. The nature and extent of the contamination is derived from both field observations and analytical data detailed in the RIR.

2.5.4 AOC 1 – Site-Wide Urban Fill in Subsurface Soils

Shallow soils on-Site are impacted with elevated concentrations of metals, SVOCs, and in some areas, pesticides. These findings are consistent with characteristics of urban fill found throughout the New York City area. Urban fill material varies with depth throughout the Site extending to depths ranging from 4 to 12 ft bgs.

2.5.5 AOC 2 – Elevated PAH Impacts to Soil

Shallow soils to depths as great as 2 ft bgs throughout the subject Site are impacted with elevated levels of SVOCs, specifically PAHs above both the UUSCOs and RRSCOs. The greatest concentrations of PAHs were observed in soil samples collected from borings in the southwest portion of the Site, with the highest concentrations in soil sample SB17 (0-2'). In soil sample SB17 (0-2'), concentrations of PAHs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected at concentrations significantly greater than the rest of the Site. Specifically, benzo(b)fluoranthene detected at a concentration of 42 mg/kg is approximately 40 times higher than its RRSCO.

2.5.6 AOC 3 – Lead Impact to Soil

During the September 2021 RI, elevated concentrations of total lead were detected in shallow soils above the RRSCOs at SB8 and SB3 at 1,330 mg/kg and 1,590 mg/kg, respectively. Soil concentrations at these locations indicate the potential for excavated material from this area to be characterized as hazardous. Prior to soil disposal this elevated detection of lead will be laterally delineated and soil samples will be analyzed to determine if material should be characterized and disposed of as hazardous waste.

2.5.7 AOC 4 – Soil Vapor Impacts

Based on a review of analytical data collected during this RI, VOCs, including CVOCs, have partitioned from soil and/or groundwater into the vapor phase.

2.5.8 AOC 5 – Elevated Levels of Metals and SVOCs in Soil Stockpiles

Elevated levels of metals and SVOCs were identified in grab sample GS-3 collected from the unidentified stockpile located in the eastern portion of the building. additionally, lead was detected in grab sample GS-1 collected from a stockpile in the southern portion of the lot.

2.6 QUALITATIVE HUMAN EXPOSURE ASSESSMENT

A qualitative exposure assessment consists of characterizing the exposure setting (including the physical environment and potentially exposed human and ecological resource populations), identifying exposure pathways, and evaluating chemical fate and transport. An exposure pathway describes the means by which an individual or ecological resource may be exposed to contaminants originating from a site. An exposure pathway has the following five elements:

1. Receptor population
2. Contaminant source
3. Contaminant release and transport mechanism
4. Point of exposure
5. Route of exposure

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is not documented but could reasonably occur. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway does not exist in the present and will not exist in the future.

2.6.1 Receptor Population

The receptor population includes the people or ecological resources who are or may be exposed to contaminants at a point of exposure. The identification of potential receptors is based on the characteristics of the Site, the surrounding land uses, and the probable future land uses. The Site is currently vacant and developed with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and a partially paved material storage and parking area. Since the Site is vacant, individual receptors would currently only include construction/maintenance workers that may be employed to perform work on the property. Exposure routes on a vacant and developed site would include direct contact activities, although soil vapor and groundwater contamination may impact off-Site properties. The reasonably anticipated future use of the Site is for residential purposes which is consistent with surrounding property use and zoning. At full development, the Site will be completely covered by concrete, asphalt, or a building with a full cellar such that no ecological resources will foreseeably be exposed to contaminants remaining at the Site. Therefore, exposed receptors under the future use scenario will be comprised of individual residents, indoor workers, outdoor workers (e.g., groundskeepers or maintenance staff), and construction workers who may be employed at or perform work on the property. Site visitors may also be considered receptors; however, their exposure would be similar to that of the residents and employees but at a lesser frequency and duration. In addition, residents or employees in off-Site adjoining buildings may be exposed to soil vapors.

2.6.2 Contaminant Sources

The source of contamination is defined as either the source of contaminant release to the environment (such as a waste disposal area or point of discharge) or the impacted environmental medium (i.e., soil, soil vapor, groundwater) at the point of exposure. Sections 4.0 and 5.0 discuss the COCs present in the Site media at elevated concentrations. In general, these are primarily PAHs, metals, and CVOCs.

2.6.3 Exposure Routes and Mechanisms

The point of exposure is a location where actual or potential human contact with a contaminated medium may occur. Based on the exceedances of RRSCOs for the PAHs and metals in soil, the elevated CVOC concentrations in soil vapor, and exceedance of the AWQS for CVOCs and metals in groundwater, the point of exposure is defined as the whole site.

The route of exposure is the manner in which a contaminant actually enters or contacts the human body (e.g., ingestion, inhalation, dermal absorption). Based on the types of receptors and points of exposure identified above, potential routes of exposure are listed below:

<u>Current Use Scenario:</u> The Site is currently developed with multiple buildings underlain by a concrete slab and a partially paved material storage and parking area. Exposure to contaminated surface soil and contaminated groundwater is possible during subsurface investigations or other activities that disturb the subsurface. Release and transport mechanisms include contaminated surface soil transported as dust, contaminated groundwater flow, and volatilization of contaminants from soil and/or groundwater into vapor phase.

- Occupant/Employee/Visitor – skin contact, inhalation, and incidental ingestion
- Construction/Utility Worker – skin contact, inhalation, and incidental ingestion

<u>Construction/Remediation Scenario:</u> In the continued absence of engineering and institutional controls, there will be continued exposure pathways during construction/remediation specifically related to surface soil. Construction/Remedial activities include excavation and off-site disposal of soil and dewatering of impacted groundwater to facilitate the construction of the foundation elements. Release

and transport mechanisms include disturbed and exposed soil during excavation, contaminated soil transported as dust, contaminated groundwater flow (dewatering), inhalation of dust from contaminated soil, and volatilization of contaminants from soil and/or groundwater into vapor phase.

- Construction/Utility Worker – skin contact, inhalation, and incidental ingestion

Future Use Scenario: The anticipated remedial approach includes excavation of contaminated soil, dewatering of groundwater accumulated in excavations, and installation of a composite cover system. In the absence of engineering and institutional controls, release and transport mechanisms include contaminated groundwater and volatilization of contaminants from soil and/or groundwater into the vapor phase. Routes of exposure include cracks in the foundation or slab or emergency repairs to the foundation walls or slab.

- Construction/Utility Worker – skin contact, inhalation, and incidental ingestion
- Occupant/Employee/Visitor – inhalation
- Public Adjacent to the Site – inhalation

Contaminant release and transport mechanisms carry contaminants from the source to points where people may be exposed and are specific to the type of contaminant and Site use. For the VOCs (including CVOCs) present in soil, groundwater, and soil vapor, the potential exists for exposure through pathways associated with soil vapor migration. This would include the indoor vapor intrusion pathway also referred to as “soil vapor intrusion”). Additional pathways could include skin contact, inhalation, and incidental ingestion of VOCs present in soil and groundwater when and where construction workers are involved in subsurface activities where volatiles are present at elevated concentrations.

Concerning the indoor air pathway, the NYSDOH has issued a guidance document for assessing potential impacts to indoor air via soil vapor intrusion. The sub-slab vapor samples collected during the RI were assessed by the NYSDOH Soil Vapor Intrusion Guidance document. Based on the concentrations of CVOCs in soil vapor at the Site, soil vapor intrusion is a relevant transport mechanism under the current and future use scenario. Concerning skin contact, inhalation, and incidental ingestion of volatile organics present in soil and groundwater, the potential exists for exposure to VOCs for construction workers involved in subsurface activities where volatiles are present at elevated concentrations.

2.6.4 Exposure Assessment

Based on the above, we determine the following Qualitative Human Health Exposure Assessment (QHHEA) conclusions for current conditions, construction/remediation conditions and future use conditions as listed below.

Current Use Scenario
Site contamination includes PAHs and metals in soil, elevated CVOCs in soil vapor, and exceedance of the AWQS for CVOCs and metals in groundwater. Under current conditions, the likelihood of exposure to soil or groundwater is limited. The Site is affixed with a fence around the partially paved material storage and parking area in the southern portion of the Site. The building entrances are each locked and secured with Site access only granted to personnel associated with the planned development. Potable water for the Bronx will continue to be sourced from reservoirs in the Catskill and Delaware Watersheds. Intrusive work on the Site is done in accordance with a Site-Specific Health and Safety Plan and donning of personal protective equipment (PPE).

Construction/Remediation Scenario

The exposure element exists for each element during this phase. The overall risk will be minimized by the implementation of a Site-Specific Construction Health and Safety Plan, localized monitoring of organic vapors, community air monitoring on the site perimeter for particulates and VOCs, vapor and dust suppression techniques, installation of a stabilized entrance, cleaning truck tires and undercarriages, and donning of appropriate PPE. Additionally, the Site will be under a RAWP which will include a Soil Materials Management Plan that will highlight measures for PPE, covering of stockpiles, housekeeping, suppression techniques (particulates and vapor), and measures to prevent off-Site migration of contaminates.

Future Use Scenario

Under the proposed future condition (after construction/remediation), residual contaminants may remain on-Site depending on the remedy. The remaining contaminants would include those listed in the current conditions. If contaminants remain on site after construction/remediation, the route of exposure will be mitigated by proper installation of engineering controls such as Site capping system foundation.

2.7 REMEDIAL ACTION OBJECTIVES

The following Remedial Action Objectives (RAO) have been identified for the Site.

2.7.1 Soil

RAOs for Public Health Protection:

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

RAOs for Environmental Protection:

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

2.7.2 Groundwater

RAOs for Public Health Protection:

- Prevent ingestion of groundwater with contamination levels exceeding drinking water standards
- Prevent direct contact or inhalation of volatiles from contaminated groundwater

2.7.3 Soil Vapor

RAOs for Public Health Protection:

- Mitigate the risk of impacts to public health resulting from existing, or the potential for, soil vapor migration off-Site, or intrusion into the proposed development at the Site

2.7.4 Protection of Human Health and the Environment

Alternative I – The remedy would significantly reduce the potential for each of the identified pathways of exposure to on-Site contaminated media. Remediating the Site to Track 1 standards would result in the elimination of Site soil that exceeds UUSCOs. Encountered underground storage tanks (USTs) would be decommissioned, removed, and disposed off-Site, and petroleum-impacted material, if encountered, would be excavated, and disposed off-Site. The RAOs for public health and environmental protection would be met through the removal of contaminated media at the Site to meet UUSCOs and AWQS, which would significantly reduce the potential for exposure pathways via possible ingestion, inhalation, or dermal contact.

Since no engineering or institutional controls will be required for this remedy to maintain the Site in the future, this remedy is protective of human health and the environment.

Alternative II – The Track 2 remedy will provide similar overall protection to public health and the environment as Alternative I. Remediating the Site to Track 2 standards will result in the removal of Site soil that exceeds RRSCOs. Encountered underground storage tanks (USTs) would be decommissioned, removed, and disposed off-Site, and petroleum-impacted material, if encountered, would be excavated, and disposed off-Site. The RAOs for public health and environmental protection would be met through the removal of contaminated media at the Site to meet RRSCOs and AWQS, which would significantly reduce the potential for exposure pathways via possible ingestion, inhalation, or dermal contact.

Since no engineering or institutional controls will be required for this remedy to maintain the Site in the future, this remedy is protective of human health and the environment.

Public health will be protected during remediation under both remedial alternatives by implementing and enforcing dust, odor, and organic vapor control and monitoring procedures when needed.

3. Summary of Remedial Action

3.1 ALTERNATIVE I – TECHNICAL DESCRIPTION

Alternative I, a Track 1 remedy, will include the following tasks:

- Development and implementation of a Construction Health & Safety Plan (CHASP) and Community Air Monitoring Plan (CAMP) for the protection of on-site workers, community/residents, and the environment during remediation and construction activities.
- Design and construction of a support-of-excavation (SOE) system to facilitate the Track 1 remediation.
- Implementation of soil erosion, pollution, and sediment control measures in compliance with applicable laws and regulations.
- Demolition of existing Site buildings, structures, and the concrete slab beneath the buildings.
- Excavation, stockpiling, off-Site transport, and disposal of about 10,100 cubic yards of historic fill and solid waste that exceeds UUSCOs as defined by 6 NYCRR Part 375-6.8. This includes excavation of two on-site soil stockpiles of about 250 cubic yards located at GS-1 and GS-3, as sampled in the September 2021 RI. Excavation will be to 8 ft bgs (bottom of historical fill) in the northwestern portion of the Site (approximately 23,450 sq foot area) to remove material exceeding UUSCOs. Two areas in the northwest portion of the Site surrounding PDI soil sample locations PDI-2 and PDI-4/PDI-7 (approximately 1,200 sq foot area) will be excavated to 10 ft bgs to remove material exceeding UUSCOs. In the southeastern portion of the Site, excavation will be to 4 ft bgs (approximately 16,590 sq foot area) to remove material exceeding UUSCOs. For development purposes, excavation will extend to 25 ft bgs throughout the Site and a total of 38,500 cubic yards of material will be removed.
- Delineation of elevated lead concentrations in soil in the vicinity of SB8 and SB3, installed during the RI, and PDI-2 and PDI-11, installed during the PDI, and subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material.
- If encountered, removal of USTs and/or associated appurtenances (e.g., fill lines, vent line, and electrical conduit) and decommissioning and off-Site disposal during redevelopment in accordance with DER-10, 6 NYCRR Part 613.9, NYSDEC CP-51, and other applicable NYSDEC UST closure requirements.
- Screening for indications of contamination (by visual means, odor, and monitoring photoionization detectors [PIDs]) of excavated material during intrusive site work.
- Appropriate off-Site disposal of material removed from the Site in accordance with federal, state, and local rules and regulations for handling, transport, and disposal.
- Collection and analysis of confirmation soil samples at the base of the remedial excavation in accordance with DER-10 to confirm a Track 1 remedy was achieved.

- Completion of a Soil Vapor Intrusion (SVI) Evaluation in accordance with DER-10 and NYSDOH Final Guidance on Soil Vapor Intrusion following remedial excavation activities and prior to occupancy.

The requirements for each of the Alternative I tasks are described below.

On-Site Worker, Public Health, and Environmental Protection

A site-specific CHASP is appended to this RAWP (Appendix G) and will be implemented during excavation and foundation construction to protect Site workers from accidents and acute and chronic exposures to the identified contaminants of concern (COCs). Public health will be protected by implementing and enforcing dust, odor, and organic vapor control and monitoring procedures included in the CAMP. The CAMP will include continuous perimeter monitoring of dust and organic vapors using DustTrak aerosol monitors and PIDs capable of recording data and calculating 15-minute averages. Field personnel will monitor site perimeters for visible dust and odors.

Fill and Soil Removal

VOCs, PAHs, metals, PCBs, and pesticides were detected in historic fill material at concentrations that exceed the UUSCOs. To achieve Track 1, soil removal and disposal will extend from surface grade (about El. 11 to 16) to about 8 ft bgs on the northwestern portion of the Site and 4 ft bgs on the southeastern portion of the Site. Two areas surrounding PDI soil borings PDI-2 and PDI-4/PDI-7 will be excavated to 10 ft bgs. Additionally, this will include the excavation of two on-Site soil stockpiles located at GS-1 and GS-3 sampled in the September 2021 RI.

Elevated lead total concentrations, above 1,000 mg/kg, were detected in shallow soil collected from 0 to 2 inches at SB8 and SB3 during the September 2021 RI. During the January 2022 PDI, elevated lead concentrations, above 1,000 mg/kg, were detected in PDI-2 at 6 to 8 ft bgs and in PDI-11 at 2 to 4 ft bgs. Analysis for toxicity characteristics leachate procedure (TCLP) and total lead will be conducted at the above referenced locations along with delineation of potentially hazardous lead material followed by subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material. Delineation areas are shown in Figure 9.

The estimated volume of material requiring removal and off-Site disposal for a Track 1 cleanup is about 10,100 cubic yards. The soil will be screened for visual, olfactory, and instrumental evidence of environmental impacts. Excavation is expected to extend below the water table during remedial excavation or construction; therefore, installation of a dewatering system is anticipated to achieve development depth.

For development purposes, the building footprint will be excavated to 25 ft bgs (about El. -14 to -9) requiring excavation of a total of 38,500 cubic yards of material.

Hazardous Lead Removal, Management, and Disposal

Hazardous lead identified on-Site will be managed as a D008 hazardous waste in accordance with applicable federal, state, and local regulations. As such, the handling, transport, and disposal of this fill material is subject to USEPA and the Occupational Safety and Health Administration (OSHA) Hazardous

Waste Operations and Emergency Response (HAZWOPER) regulations. The excavated material will be segregated in the field and temporarily placed in stockpiles, or direct loaded, and transported by Part 364-permitted trucks to a facility permitted by RCRA to accept hazardous waste.

UST Removal

If encountered, USTs and/or associated appurtenances (e.g., fill lines, vent line, and electrical conduit) would be decommissioned in accordance with applicable NYSDEC tank closure requirements, including DER-10 Section 5.5 and 6 NYCRR Part 613.9, and NYSDEC CP-51. USTs and/or associated appurtenances would be registered and administratively closed with the NYSDEC Petroleum Bulk Storage (PBS) unit. Petroleum-impacted soil would be excavated and disposed of off-Site at a permitted disposal facility in accordance with applicable regulations. Closure documentation, such as Contractor affidavits, bills of lading for sludge disposal, and tank disposal receipts, would be provided as appendices in the Final Engineering Report (FER).

Confirmation Soil Sampling

Per NYSDEC DER-10, confirmation soil samples will be collected from the base of the remedial at a frequency of one per 900 square feet to confirm Track 1 UUSCOs were achieved. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth(s), the Applicant must notify the Department, submit the sample results, and in consultation with, the Department determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

An estimated 46 confirmation soil samples, plus QA/QC samples, would be collected and analyzed for the Part 375 list of VOCs, SVOCs, PCBs, pesticides, metals, PFAS, and 1,4-dioxane.

In addition, during waste characterization activities, to be completed prior to mobilization, one vertical and four horizontal samples will be collected from each lead delineation area to confirm lateral and vertical bounds of hazardous material or confirm non-hazardous concentrations. Samples will be analyzed for total and TCLP lead.

Post-Remedy Soil Vapor Intrusion Evaluation

Elevated concentrations of CVOCs were identified in soil vapor samples collected throughout the Site with maximum concentrations of TCE and PCE detected at SG-2 (co-located at MW-2). The CVOCs that have partitioned to the vapor phase from impacted soil and groundwater are likely attributed to historic manufacturing operations formerly conducted in that area of the Site. Following remedial actions and prior to occupancy, a SVI Evaluation will be conducted at the site and submitted to NYSDEC and NYSDOH.

3.2 ALTERNATIVE II – TECHNICAL DESCRIPTION

Alternative II, a Track 2 remedy, will include the following tasks:

- Development and implementation of a CHASP and CAMP for the protection of on-Site workers, community/residents, and environment during remediation and construction activities.

- Construction of a SOE system to facilitate the Track 2 remediation.
- Implementation of soil erosion, pollution, and sediment control measures in compliance with applicable laws and regulations.
- Demolition of existing Site buildings, structures, and the concrete slab beneath the buildings.
- Excavation, stockpiling, off-Site transport, and disposal of about 8,190 cubic yards of historic fill and solid waste that exceeds RRSCOs as defined by 6 NYCRR Part 375-6.8. This includes the excavation of two on-site soil stockpiles of about 250 cubic yards located at GS-1 and GS-3, as sampled in the September 2021 RI. Excavation will be to 6 ft bgs (bottom of historical fill) in the northwestern portion of the Site (approximately 24,650 sq foot area) to remove material exceeding RRSCOs. In the southeastern portion of the Site, excavation will be to 4 ft bgs (approximately 16,590 sq foot area) to remove material exceeding RRSCOs. For development purposes, excavation will extend to 25 ft bgs and a total of approximately 38,500 cubic yards of material will be removed from the Site.
- Delineation of elevated lead concentrations in soil in the vicinity of SB8 and SB3, installed during the RI, and PDI-2 and PDI-11, installed during the PDI, and subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material.
- If encountered, removal of USTs and/or associated appurtenances (e.g., fill lines, vent line, and electrical conduit) and decommissioning/disposal off-Site during Site redevelopment in accordance with DER-10, 6 NYCRR Part 613.9, NYSDEC CP-51, and other applicable NYSDEC UST closure requirements.
- Screening for indications of contamination (by visual means, odor, and monitoring with PIDs) of excavated material during intrusive site work.
- Appropriate off-site disposal of material removed from the Site in accordance with federal, state, and local rules and regulations for handling, transport, and disposal.
- Construction of a composite cover system consisting of 4 inches of subbase (recycled concrete aggregate) overlain by a 4-inch concrete slab and installation of a waterproofing/ vapor barrier that will exceed the performance expectations of a 20-mil vapor barrier to mitigate the soil vapor intrusion exposure pathway.
- Collection and analysis of confirmation soil samples at the base of the remedial excavation in accordance with DER-10 to confirm RRSCOs were achieved. If a Track 2 Residential cleanup is achieved, a cover system will not be a required element of the remedy, and NYSDEC will issue a Track 2 Certificate of Completion.
- Completion of a SVI Evaluation and collection in accordance with DER-10 and NYSDOH Final Guidance on Soil Vapor Intrusion following remedial excavation activities and prior to occupancy.

The requirements for each of the Alternative II tasks are described below.

<u>On-Site Worker, Public Health, and Environmental Protection</u>

A site-specific CHASP is appended to this RAWP (Appendix G) and will be enforced during excavation and foundation construction to protect on-Site workers from accidents and acute and chronic exposures to the identified contaminated media. Public health will be protected by implementing and enforcing dust, odor, and organic vapor control and monitoring procedures included in the CAMP. The CAMP will include continuous perimeter monitoring of dust and organic vapor using DustTrak aerosol monitors and PIDs capable of recording data and calculating 15-minute averages. Field personnel will monitor site perimeters for visible dust and odors.

Fill and Soil Removal

PAHs and metals were detected in historic fill material at concentrations that exceed the RRSCOs. To achieve Track 2, soil removal and disposal will extend from surface grade (about El. 11 to 16) to about 6 ft bgs on the northwestern portion of the Site and to 4 ft bgs in the southeastern portion of the Site. Additionally, this will include the excavation of two on-Site soil stockpiles located at GS-1 and GS-3 sampled in the September 2021 RI.

For development purposes, the building footprint will be excavated to 25 ft bgs (about El. -9 to -14).

Elevated lead total concentrations, above 1,000 mg/kg, were detected in shallow soil collected from 0 to 2 inches at SB8 and SB3 during the September 2021 RI. During the January 2022 PDI, elevated lead concentrations, above 1,000 mg/kg, were detected in PDI-2 at 6 to 8 ft bgs and in PDI-11 at 2 to 4 ft bgs. Analysis for toxicity characteristics leachate procedure (TCLP) and total lead will be conducted at the above referenced locations along with delineation of potentially hazardous lead material followed by subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material. Delineation areas are shown in Figure 9.

The estimated volume of material requiring removal and off-Site disposal for a Track 2 cleanup is about 8,190 cubic yards. The soil will be screened for visual, olfactory, and instrumental evidence of environmental impacts. Excavation is expected to extend below the water table during remedial excavation or construction; therefore, installation of a dewatering system is anticipated to facilitate development.

For development purposes, the building footprint will be excavated to 25 ft bgs (about El. -14 to -9) requiring excavation of a total of 38,500 cubic yards of material.

Hazardous Lead Removal, Management, and Disposal

Hazardous lead identified on Site will be managed as a D008 hazardous waste in accordance with applicable federal, state, and local regulations. As such, the handling, transport, and disposal of this fill material is subject to USEPA and the OSHA HAZWOPER) regulations. The excavated material will be segregated in the field and temporarily placed in stockpiles, or direct loaded, and transported by Part 364-permitted trucks to a facility permitted by RCRA to accept hazardous waste.

UST Removal

If encountered, USTs and/or associated appurtenances (e.g., fill lines, vent line, and electrical conduit) would be decommissioned in accordance with applicable NYSDEC tank closure requirements, including DER-10 Section 5.5 and 6 NYCRR Part 613.9, and NYSDEC CP-51. USTs and/or associated appurtenances would be registered and administratively closed with the NYSDEC PBS unit. Petroleum-impacted soil would be excavated and disposed of off-site at a permitted disposal facility in accordance with applicable regulations. Closure documentation, such as Contractor affidavits, bills of lading for sludge disposal, and tank disposal receipts, would be provided as appendices in the FER.

Composite Cover and Waterproofing/Vapor Barrier System

A composite cover system will be installed, consisting of 4 inches of subbase (recycled concrete aggregate) overlain by a 4-inch concrete slab, and a 20-mil vapor barrier to mitigate soil vapor intrusion.

Confirmation Soil Sampling

Per NYSDEC DER-10, confirmation soil samples will be collected from the excavation base at a frequency of one per 900 square feet. An estimated 46 confirmation soil samples, plus QA/QC samples, would be collected and analyzed for the Part 375 list of VOCs, SVOCs, pesticides, metals, PFAS, and 1,4-dioxane.

In addition, during waste characterization activities which will be completed prior to mobilization, one vertical and four horizontal samples will be collected from each lead delineation area to confirm lateral and vertical bounds of hazardous material or confirm non-hazardous concentrations. Samples will be analyzed for total and TCLP lead.

Post-Remedy Soil Vapor Intrusion Evaluation

Concentrations of CVOCs were identified in soil vapor samples collected throughout the Site with maximum concentrations of TCE and PCE detected at SG-2 (co-located at MW-2). The CVOCs that have partitioned to the vapor phase from impacted soil and groundwater are likely attributed to historic manufacturing operations formerly conducted in that area of the Site. Following remedial actions and prior to occupancy, a SVI Evaluation will be conducted at the site and submitted to NYSDEC and NYSDOH.

3.3 EVALUATION OF REMEDIAL ALTERNATIVES

The following is an evaluation of the proposed remedy based on the BCP remedy evaluation criteria listed below. The first two criteria are considered “threshold criteria” and the remaining criteria are “balancing criteria.” A remedial alternative must meet the threshold criteria to be considered and evaluated further under the balancing criteria.

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

3.3.1 Compliance with Standards, Criteria, and Guidance

Both alternatives will be in compliance with applicable standards, criteria, and guidance listed in Section 4.1 by removing site sources of contamination to achieve the RAOs. While implementing either remedy, protection of public health and the environment will be maintained by enforcing a Site-specific CHASP and CAMP. OSHA requirements for on-site construction safety will be followed by Site contractors performing work.

3.3.2 Short-Term Effectiveness and Impacts

Alternative I – The most significant short-term adverse impacts and risks to the community will be the potential complications and risk involved with designing and constructing SOE and underpinning for the building and structures adjoining the site. Potential impositions on roadway and pedestrian traffic associated with construction may be a result of the remedial excavation to achieve a Track 1 cleanup. Increased truck traffic and construction-related noise levels may be necessary to haul out soil that exceeds UUSCOs to achieve Track 1 standards, relative to Alternative II.

The excavated soil and fill would require about 505, 20-cubic-yard truck trips. Implementing the Alternative I concept would require approximately ten to twelve months of effort (assuming normal work hours). Truck traffic will be routed on the most direct course using major thoroughfares where possible, and flaggers will be used to protect pedestrians at site entrances and exits. Waiting times associated with analysis of confirmation sampling and resampling may delay construction, leaving soil exposed for a longer time resulting in a potential increase in dust, odors, and/or organic vapor from the excavation and construction-related noise. The effects of these potential adverse impacts to the community, workers, and the environment will be minimized by implementing the respective control plans.

Alternative II – Alternative II will result in similar, if not the same, short-term adverse impacts and risks to the community. The excavated soil and fill would require approximately 410, 20-cubic-yard truck trips. Implementing the Alternative II concept would require approximately ten to twelve months of effort (assuming normal work hours).

Under both remedial alternatives, dust will be controlled by the on-Site application of water spray as needed. Engineering controls, such as slowing the pace of work, applying foam and/or dust suppressant, and/or covering portions of the excavation will be used to suppress odors/dust when required. Work will be modified or stopped according to the action levels defined in the CAMP. Therefore, short-term impacts are similar for both alternatives.

3.3.3 Long-Term Effectiveness and Performance

Both remedial alternatives will remove contaminated media from the site exceeding UUSCOs (Alternative I) or RRSCOs (Alternative II) for soil. A post-construction SVI evaluation would be implemented to evaluate potential for vapor intrusion into the on-Site building. In addition, groundwater in New York City is not used for drinking water. Therefore, the long-term effectiveness of this remedy would eliminate risks and satisfy the objectives of the Alternative I and II criterion.

3.3.4 Reduction of Toxicity, Mobility, or Volume of Contaminated Material

Both remedial alternatives would permanently and significantly reduce the toxicity, mobility, and volume of contamination through removal of contaminated fill and buried solid waste through excavation and off-Site disposal.

3.3.5 Implementability

Alternative I – Implementing a Track 1 remedy will be technically challenging because of SOE requirements associated with protection of the neighboring buildings and streets; however, the SOE hardship is not significant as it will not extend beyond that which is required for construction. This remedy will consist primarily of excavation with standard bucket excavators. The availability of local contractors, personnel, and equipment suitable to working in a structurally challenging environment is high due to the frequency of this type of remediation in the region. It is not expected to require schedule extensions or additional costs associated with the excavation and SOE. However, if deeper contamination above UUSCOs is encountered requiring unanticipated over-excavation, the cost is marginal compared to the benefit of achieving an unrestricted use remediation and elimination of long-term engineering and institutional controls. Additional coordination between trades may be required. This alternative is considered feasible.

Alternative II – The technical feasibility of implementing the Alternative II remedy is similar to Alternative I, as significant excavation is still required to achieve the Track 2 RRSCOs. This alternative will consist primarily of excavation with standard bucket excavators. The availability of local contractors, personnel, and equipment suitable to working in a structurally challenging environment is high due to the frequency of this type of remediation in the region. Additional coordination between trades may be required. This alternative is considered feasible.

3.3.6 Cost-Effectiveness

Alternative I – Based on the assumptions detailed for Alternative I, the estimated remediation cost of a Track 1 cleanup is approximately $9,400,000. Because the Site will be remediated to UUSCOs, there are no long-term operation, maintenance, or monitoring costs associated with the proposed remedy. Table 4 details the individual cost components used to arrive at this cost estimate.

Alternative II – Based on the assumptions detailed for Alternative II, the estimated remediation cost to achieve a Track 2 cleanup is approximately $10,550,000. Alternative I is more cost-effective as Alternative II requires the implementation of the composite cover system as an engineering control as well as long-term operation, maintenance and monitoring for site management. Table 5 outlines the individual cost-components used to arrive at this cost estimate.

3.3.7 Community Acceptance

Both remedial alternatives should be acceptable to the community because the potential exposure pathways to on-Site contamination will be addressed upon completion of the respective remedies and the Site will be remediated to allow for a higher-level use. The selected remedy will be subject to a 45-day public comment period in accordance with the Citizen Participation Plan (CPP), included as Appendix H. Substantive public comments will be addressed before the remedy is approved.

3.3.8 Land Use

The current, intended, and reasonably anticipated future residential land use of the Site and its surroundings are compatible with both remedial alternatives. The proposed development will include the construction of a 12-story residential building with a single-story sub-grade cellar. Mid-rise mixed-use commercial/residential, mid-rise residential apartment buildings, and multiple-story commercial and office buildings are located at properties surrounding the Site.

3.4 SELECTION PREFERRED REMEDY

Both alternatives will be protective of human health and the environment and meet the remedy selection criteria. Alternative I achieves the remedial action goals established for the redevelopment project, and is effective in the short-term. Alternative I effectively reduces contaminant mobility and toxicity and is a superior alternative in the reduction of contaminant toxicity and volume. Alternative I is more effective in the long-term because it achieves unrestricted land use. The excavation depths for both remedial alternatives are comparable and will produce similar remedial costs. Alternative I is preferred over Alternative II if it can be feasibly and practically implemented at a similar cost while providing greater overall protection to human health and the environment. Therefore, Alternative I is the recommended remedial alternative for this Site. However, if this Alternative is not achievable, Alternative II is similarly protective of human health and the environment.

Figure 10 depicts the Alternative I cleanup plan. Figure 11 depicts the Alternative II cleanup plan. The Alternative I and II remediation extent is based on data presented in the RIR.

3.4.1 Zoning

The land is currently zoned as M1-5/R8A which allows for residential and industrial use. The Site is located in a Special Mixed-Use District (MX). The reasonably anticipated future use conforms to applicable zoning laws and maps.

3.4.2 Applicable Comprehensive Community Master Plans or Land Use Plans

According to the New York City Planning Commission, "The Special Mixed Use District (MX) was established in 1997 to encourage investment in, and enhance the vitality of, existing neighborhoods with mixed residential and industrial uses in close proximity and create expanded opportunities for new mixed use communities. New residential and non-residential uses (commercial, community facility and light industrial) can be developed as-of-right and be located side-by-side or within the same building. Pairing an M1 district with an R3 through R10 district (e.g. M1-2/R6) ensures a balanced variety of uses." A copy of the zoning map is included in Appendix I.

3.4.3 Surrounding Property Uses

The current, intended, and reasonably anticipated future land use of the Site and its surroundings are compatible with the selected remedy. The construction of a residential development conforms to recent development patterns in the area and current zoning.

3.4.4 Environmental Justice Concerns

As per the "Potential Environmental Justice Areas in Northern Brooklyn, Kings County, New York," the Site is in a potential Environmental Justice area. NYSDEC's Office of Environmental Justice acts as an advocate on behalf of these areas, which are disproportionately affected by environmental burdens.

3.4.5 Land Use Designations

There are no federal or state land use designations.

3.4.6 Population Growth Patterns

The population growth patterns and projections support the current and anticipated future land use.

3.4.7 Accessibility to Existing Infrastructure

The Site is accessible to existing infrastructure.

3.4.8 Proximity to Cultural Resources

The Site is not in close proximity to a registered landmark.

3.4.9 Proximity to Natural Resources

The Harlem River is located approximately 0.15 miles to the south of the Site. The Site is not located in close proximity to any other important federal, state, or local natural resources including waterways, wildlife refuges, wetlands, and critical habitats of endangered or threatened species.

3.4.10 Off—Site Groundwater Impacts

Municipal water supply wells are not present in this area of New York City; therefore, groundwater from the Site does not affect municipal water supply wells or recharge areas.

3.4.11 Proximity to Floodplains

According to the FEMA Preliminary Flood Insurance Rate Map (FIRM) dated 5 September 2007 (Map Number 3604970091F), the Site is located in Zone X, which is designated for areas of 0.2 percent annual chance of flood hazard; areas of one percent annual chance of flood with average depths of less than one foot or with drainage areas less than one square mile.

3.4.12 Geography and Geology of the Site

The Site geology is described in Section 2.6.

3.4.13 Current Institutional Controls

There are currently no institutional controls being implemented at the Site.

3.5 SUMMARY OF THE SELECTED REMEDIAL ACTION

The selected Track 1 (Alternative I) remedy will include the following:

- Development and implementation of a CHASP and CAMP for the protection of on-Site workers, community/residents, and the environment during remediation and construction activities.
- Design and construction of a SOE system to facilitate the Track 1 remediation.
- Implementation of soil erosion, pollution, and sediment control measures in compliance with applicable laws and regulations.
- Demolition of existing Site buildings, structures, and the concrete slab beneath the buildings.
- Excavation, stockpiling, off-Site transport, and disposal of about 10,100 cubic yards of historic fill and solid waste that exceeds UUSCOs as defined by 6 NYCRR Part 375-6.8. This includes excavation of two on-site soil stockpiles of about 250 cubic yards located at GS-1 and GS-3, as sampled in the September 2021 RI. Excavation will be to 8 ft bgs (bottom of historical fill) in the northwestern portion of the Site (approximately 23,450 sq foot area) to remove material exceeding UUSCOs. Two areas in the northwest portion of the Site surrounding PDI soil sample locations PDI-2 and PDI-4/PDI-7 (approximately 1,200 sq foot area) will be excavated to 10 ft bgs to remove material exceeding UUSCOs. In the southeastern portion of the Site, excavation will be to 4 ft bgs (approximately 16,590 sq foot area) to remove material exceeding UUSCOs. For development purposes, excavation will extend to 25 ft bgs throughout the Site and a total of 38,500 cubic yards of material will be removed. Development excavation plans are shown in Figure 12.
- Delineation of elevated lead concentrations in soil in the vicinity of SB8 and SB3, installed during the RI, and PDI-2 and PDI-11, installed during the PDI, and subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material.
- If encountered, removal of USTs and/or associated appurtenances (e.g., fill lines, vent line, and electrical conduit) and decommissioning and off-site disposal during redevelopment in accordance with DER-10, 6 NYCRR Part 613.9, NYSDEC CP-51, and other applicable NYSDEC UST closure requirements.
- Screening for indications of contamination (by visual means, odor, and monitoring PIDs) of excavated material during intrusive site work.
- Appropriate off-Site disposal of material removed from the Site in accordance with federal, state, and local rules and regulations for handling, transport, and disposal.
- Collection and analysis of confirmation soil samples at the base of the remedial excavation in accordance with DER-10 to confirm a Track 1 remedy was achieved. Proposed confirmation sample locations are shown in Figure 13.
- Completion of a SVI Evaluation in accordance with DER-10 and NYSDOH Final Guidance on Soil Vapor Intrusion following remedial excavation activities and prior to occupancy.

Remedial activities will be performed in accordance with this RAWP and the Department-issued Decision Document under the oversight of a New York State-Licensed Professional Engineer. Deviations from the RAWP and/or Decision Document will be promptly reported to the NYSDEC for approval and explained in the FER.

4. Remedial Action Program

4.1 GOVERNING DOCUMENTS

The primary documents governing the remedial action are summarized in this section.

4.1.1 Standards, Criteria and Guidance

The following standards, criteria, and guidance are typically applicable to Remedial Action projects in New York State, and will be consulted and adhered to as applicable:

- 29 Code of Federal Regulations (CFR) Part 1910.120 – Hazardous Waste Operations and Emergency Response
- 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 373-4 – Facility Standards for the Collection of Household Hazardous Waste and Hazardous Waste from Conditionally Exempt Small Quantity Generators
- 6 NYCRR Subpart 374-1 – Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
- 6 NYCRR Subpart 374-3 – Standards for Universal Waste
- 6 NYCRR Part 375 – Environmental Remediation Programs
- 6 NYCRR Part 376 – Land Disposal Restrictions
- 6 NYCRR Part 750 – State Pollutant Discharge Elimination System (SPDES) Permits
- CP-43 – Commissioner Policy on Groundwater Monitoring Well Decommissioning (December 2009)
- CP-51 – Soil Cleanup Guidance (2010)
- DER-10 – Technical Guidance for Site Investigation and Remediation (May 3, 2010)
- DER-23 – Citizen Participation Handbook for Remedial Programs (March 2010)
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006)
- TOGS 1.1.1 – Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- Screening and Assessment of Contaminated Sediment (Division of Fish, Wildlife and Marine Resources, June 2014)

4.1.2 Site-Specific Construction Health & Safety Plan

A site-specific CHASP has been prepared (Appendix G). The CHASP will apply to remedial and construction-related work on Site. The CHASP provides a mechanism for establishing on-Site safe working conditions, safety organization, procedures, and PPE requirements during implementation of the remedy. The CHASP meets the requirements of 29 CFR 1910 and 29 CFR 1926 (which includes 29 CFR 1910.120 and 29 CFR 1926.65, respectively). The CHASP includes, but is not limited to, the following components:

- Organization and identification of key personnel
- Training requirements
- Medical surveillance requirements
- List of Site hazards
- Excavation safety
- Drill rig safety
- Work zone descriptions and monitoring procedures
- Personal safety equipment and PPE requirements
- Decontamination requirements
- Standard operating procedures
- Contingency plan
- CAMP
- Safety data sheets (SDS)

The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work are responsible for the preparation of a CHASP and for performance of the work according to the CHASP and applicable laws. The CHASP and requirements defined in this RAWP pertain to remedial and ground-intrusive work performed at the Site until the issuance of a Certificate of Completion. The Site Safety Coordinator will be Brian Ferguson, a resume for whom is included in Appendix J. If required, confined space entry will comply with OSHA requirements to address the potential risk posed by combustible and toxic gasses.

4.1.3 Quality Assurance Project Plan

A Quality Assurance Project Plan (QAPP) has been prepared that describes the quality control components that will ensure that the proposed remedy accomplishes the remedial goals and RAOs and is completed in accordance with the design specifications. The QAPP is provided as Appendix K and includes:

- Responsibilities of key personnel and their organizations for the proposed remedy
- Qualifications of the quality assurance officer
- Sampling requirements including methodologies, quantity, volume, locations, frequency, and acceptance and rejection criteria
- Description of the reporting requirements for quality assurance activities including weekly quality assurance review reports.

4.1.4 Construction Quality Assurance Plan

A Construction Quality Assurance Plan (CQAP) has been prepared that describes the quality control components that will ensure that the proposed remedy accomplishes the remedial goals and RAOs and is completed in accordance with the design specifications. Because the remedy will be accomplished concurrently with building construction, the Contractor and construction manager will have the primary responsibility to provide construction quality. A list of engineering personnel involved in implementation of the CQAP and procedures that will be carried out by the remedial engineering team are listed in Section 4.2.1. Project personnel resumes are provided in Appendix J.

4.1.5 Soil/Materials Management Plan

A Soil/Materials Management Plan (SMMP) has been prepared that includes detailed plans for managing soils/materials that are disturbed at the Site, including excavation, handling, storage, transport, and disposal. The SMMP also includes controls that will be applied to these efforts to facilitate effective, nuisance-free performance in compliance with applicable federal, state, and local laws and regulations (see Section 5.4).

4.1.6 Stormwater Pollution Prevention Plan

Erosion and sediment controls will be implemented as necessary in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. Best management practices for soil erosion and sediment control will be selected to minimize erosion and sedimentation off-Site from the onset of remediation to the completion of development. Stormwater pollution prevention will be implemented as described below in Section 5.4.9. A Stormwater Pollution Prevention Plan (SWPPP) is not necessary because the project will disturb less than one acre, and stormwater discharge will be to a combined sewer in accordance with the New York City generic SPDES permit.

4.1.7 Community Air Monitoring Program

Details of the CAMP are discussed in section 5.4.11.

4.1.8 Contractors Site Operations Plan

The Resident Engineer (RE) will review plans and submittals for this remedial project, and Contractor and subcontractor document submittals, and will confirm that plans and submittals are in compliance with this RAWP. The RE is responsible to ensure that later document submittals for this remedial project, including Contractor and subcontractor document submittals, are in compliance with this RAWP. Remedial documents, including Contractor and subcontractor document submittals, will be submitted to the NYSDEC and NYSDOH in a timely manner and prior to the start of work associated with the remedial document.

4.1.9 Citizen Participation Plan

Document repositories were established at the following locations and contain the applicable project documents:

Bronx Community Board 1
Attn: Cedric Loftin
3030 3rd Avenue
Bronx, NY 10455
Phone: (718)-585-7117

Mott Haven Library
Attn: Kathleen Carrasco
321 E 140th Street
Bronx, NY 10455
Phone: (718) 585-7117

Hours: Temporarily Closed

4.2 GENERAL REMEDIAL CONSTRUCTION INFORMATION

4.2.1 Project Organization

A project team for the Site was created based on qualifications and experience with personnel suited for successful completion of the project.

The following project personnel are anticipated for oversight of the RAWP implementation. Project personnel resumes are provided in Appendix J.

NYSDEC Case Manager	Daniel McNally
NYSDOH Case Manager	Scarlett McLaughlin
Remediation Engineer	Scott Underhill, P.E.
Principal/Qualified Environmental Professional	James Bellew
Project Manager	Mari Conlon, P.G.
Haley & Aldrich Health & Safety Director	Brian Fitzpatrick, CHMM
Health & Safety Officer	Brian Ferguson
Field Team Leader/Quality Assurance Officer	Sarah Commisso

Haley & Aldrich personnel, under the direct supervision of the Qualified Environmental Professional and the RE, will be on-Site during implementation of the RAWP to monitor particulates and organic vapor in accordance with the CAMP. CAMP results that exceed specified action levels will be reported to the NYSDEC and NYSDOH.

Haley & Aldrich personnel will meet with the Construction Superintendent on a daily basis to discuss the plans for that day and schedule upcoming activities. Field personnel will document remedial activities. Field activities will be forwarded to the Field Team Leader and Project Manager on a daily basis and to the Qualified Environmental Professional and the RE on a weekly basis. Daily reports will also be submitted to the NYSDEC and NYSDOH case managers by noon the following business day.

Field personnel will screen excavations with a PID during ground-intrusive work. PID readings, including specifically elevated readings, will be recorded in the project field book (or on separate logs) and reported to the NYSDEC and NYSDOH. Field personnel under the direct supervision of the RE and Qualified Environmental Professional will collect confirmation samples from the base and sidewalls of the excavation in accordance with this RAWP.

Field observations and 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, and/or photographs. A photo log will be kept to document construction activities during remediation.

The Field Team Leader will maintain original field paperwork during performance of the remedy. Remedial activities will be documented in the monthly BCP progress reports. The Project Manager will maintain the field paperwork after completion and will maintain submittal document files.

4.2.2 Resident Engineer

The RE for this project will be Scott Underhill. 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 at the site. 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 this RAWP and other relevant provisions of ECL 27-1419 have been achieved in substantial conformance with the RAWP.

Under direction of the RE, the work of other contractors and subcontractors involved in aspects of the remedial construction will be documented, including soil excavation, stockpiling, confirmation sample collection, air monitoring, emergency spill response services, import of backfill, and management of waste transport and disposal.

The RE will review the pre-remedial plans submitted by contractors and subcontractors for substantial conformance with this RAWP and will provide a certification in the FER. The RE will provide the certifications listed below in Section 8.1.

4.2.3 Remedial Action Construction Schedule

The remedial action construction schedule is discussed below in Section 9.0 and included in Appendix L. The NYSDEC will be promptly notified of proposed changes, delays, and/or deviations to the schedule.

4.2.4 Work Hours

The hours for operation of remedial construction will either conform to the requirements of the NYCDOB construction code or to a site-specific variance issued by the NYCDOB. The NYSDEC will be notified by the Volunteer of variances issued by the NYCDOB. The NYSDEC reserves the right to deny alternate remedial construction hours.

4.2.5 Site Security

Site access will be controlled by gate entrances to the property. The Site perimeter will be secured with gated, signed, plywood fencing with restricted points of entry in accordance with the NYCDOB and New York City Department of Transportation (NYCDOT) permits and requirements. The purpose of the fencing is to limit site access to authorized personnel, protect pedestrians from Site activities, and maintain Site security.

4.2.6 Traffic Control

Site traffic will be controlled through designated points of access along Bruckner Boulevard. Access points will be continuously monitored and if necessary, a flagging system will be used to protect workers, pedestrians, and authorized guests. Traffic will also be required to adhere to applicable local, state, and federal laws.

4.2.7 Contingency Plan

Contingency plans, as described below, have been developed to effectively deal with potential unexpected discovery of additional contaminated media or USTs.

4.2.8 Discovery of Additional Contaminated Soil

During remediation and construction, soil will be continuously monitored by the RE's field representatives via visual, olfactory, and instrumental field screening techniques to identify additional soil that may not be suitable for disposal at the NYSDEC-approved disposal facility. If such soil is identified, the suspected impacts will be confirmed by collecting and analyzing samples in accordance with the NYSDEC-approved facility's requirements. If the previously approved facility is not permitted to receive the impacted soil, the soil will be excavated and disposed of off-Site at a permitted facility that can receive the material.

Identification of unknown or unexpected contaminated media identified by screening during ground-intrusive Site work will be promptly communicated to the NYSDEC Project Manager. These findings will be detailed in the monthly BCP progress report.

4.2.9 UST Discovery

Previous investigations did not identify presence of USTs on the Site. In the event a UST is discovered during excavation, it will be decommissioned as per the 6 NYCRR part 612.2 and 613.9 and DER-10 Section 5.5. After removal of the tank and residual contents, confirmatory post-excavation soil samples will be collected as outlined in DER-10 if deemed necessary by the NYSDEC and/or the RE. Post-excavation soil samples is not expected where the proposed excavation would extend below the UST, unless visual, olfactory, or instrumental field screening techniques indicate the potential for contamination. If petroleum impacted soils are encountered, they will be segregated, characterized, and disposed of at an appropriate offsite facility. Closure documentation including affidavits, bills of lading, and tank disposal receipts will be included in the FER. If necessary, the NYSDEC petroleum bulk storage registration will be updated.

In the event USTs are encountered during ground-intrusive activities, the NYSDEC Project Manager will be promptly notified, and pertinent information will be included in the monthly BCP progress report.

4.2.10 Worker Training and Monitoring

Worker training and monitoring will be conducted in accordance with the Site-specific CHASP.

4.2.11 Agency Approvals

Permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction.

4.2.12 Pre-Construction Meeting with the NYSDEC

Prior to the start of remedial construction, a meeting will be held between the NYSDEC, RE, Volunteer, Construction Manager, and remediation contractor to discuss project roles, responsibilities, and expectations associated with this RAWP.

4.2.13 Emergency Contact Information

An emergency contact sheet is included in Table 6 that states the specific project contacts (with names and phone numbers) for use by NYSDEC and NYSDOH in the case of an emergency is included in the CHASP.

4.2.14 Remedial Action Costs

A detailed summary of the total estimated costs of the Track 1 and Track 2 remedies are included in Tables 1 and 2, respectively.

4.3 SITE PREPARATION

4.3.1 Mobilization

Prior to commencing remedial construction, the remediation contractor will mobilize to the Site and prepare for remedial activities. Mobilization and site preparation activities may include the following:

- Identifying the location of aboveground and underground utilities (e.g., power, gas, water, sewer, and telephone), equipment, and structures as necessary to implement remediation;
- Mobilizing necessary remediation personnel, equipment, and materials to the Site;
- Constructing one or more stabilized construction entrances consisting of non-hazardous material at or near the site exit, which takes into consideration the Site setting and Site perimeter;
- Constructing an equipment decontamination pad for trucks, equipment, and personnel that come into contact with impacted materials during remediation; and
- Mark-out of hazardous lead-impacted area (if identified during waste characterization).
- Mark-out of PCE impacted soil (if identified during waste characterization).

4.3.2 Monitoring Well Decommissioning

Monitoring wells will be decommissioned in accordance with NYSDEC CP-43 by an experience driller with oversight from Haley & Aldrich. Decommissioning documentation will be provided in the FER.

4.3.3 Erosion and Sedimentation Controls

Since the planned earthwork activities will be below the adjacent sidewalk grade, full-time erosion and sedimentation measures are not anticipated. Best management practices for soil erosion will be implemented to minimize erosion and sedimentation offsite.

4.3.4 Temporarily Stabilized Construction Entrance(s)

Temporary stabilized construction entrances will be installed at the existing curb cuts along Bruckner Boulevard. The entrances will be covered with gravel or recycled concrete aggregate (RCA) and graded so that runoff water will be directed on site. Vehicles exiting construction areas will be cleaned using clean water or dry brushing, as needed, to remove site soil from the tires and undercarriages. The Contractor will protect and maintain the existing sidewalks and roadways at both site access points.

4.3.5 Utility Marker and Easement Layouts

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

4.3.6 Excavation Support

Appropriate management of the structural stability of on-Site or off-Site structures during Site activities is the sole responsibility of the Volunteer and its Contractors. The Volunteer and its contractors are solely responsible for the safe execution of the work performed under this RAWP. The Volunteer and its Contractors must obtain the necessary local, state, and/or federal permits or approvals that may be required to perform the work detailed in this RAWP. Additionally, the Volunteer and its Contractors are solely responsible for the implementation of the required, appropriate, or necessary health and safety measures during performance of work conducted under this RAWP.

4.3.7 Equipment and Material Staging

The Contractor will notify the RE and the Volunteer, in writing with receipt confirmed, at least 30 calendar days in advance of pending site work mobilization. During mobilization, construction equipment will be delivered to the Site, temporary facilities constructed, and temporary utilities installed. The Contractor will place and maintain temporary toilet facilities within the work areas for usage by Site personnel.

4.3.8 Truck-Inspection Station

An outbound-truck inspection station will be set up at or near the Site exit. Before exiting the Site, trucks will be required to stop at the truck inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. If observed, soil and debris will be removed. Brooms, shovels, and potable water will be utilized for the removal of soil from vehicles and equipment, as necessary. The Contractor is responsible for collecting soil that is tracked immediately off-Site and returning the soil to the Site.

4.3.9 Site Fencing

The Site will be secured with a gated fence with appropriate signage maintained by the Contractor. The fence will limit access to authorized personnel and protect pedestrian from Site activities.

4.3.10 Demobilization

After remediation and construction is completed, the Contractor will be responsible for demobilizing equipment and materials not designated for off-site disposal. The RE's representative will document that the Contractor performs follow-up coordination and maintenance for the following activities:

- Removal of sediment and erosion control measures and disposal of materials in accordance with applicable rules and regulations
- Equipment decontamination
- Refuse disposal
- Removal of remaining contaminated material or waste.

4.4 REPORTING

Periodic reports and a FER will be required to document the remedial action. The RE, Scott Underhill, will be responsible for certifying the FER and is licensed to practice engineering in the State of New York. Should Mr. Underhill become unable to fulfill this responsibility, another suitably qualified NYS Professional Engineer will take his place. Field reports will be included as appendices to the FER. In addition to the periodic reports and the FER, copies of the relevant Contractor documents will be submitted to the NYSDEC. A map, as shown in Figure 14, showing areas of work will be submitted as part of the daily reports.

4.4.1 Field Reports

Reports providing a summary of activities for each day of active remedial work will be emailed to the NYSDEC and NYSDOH project managers on a daily basis. These reports will include:

- The project number, statement of activities, an update of the progress made, locations of excavation, and other remedial work performed
- Quantities of material imported and exported from the Site
- Status of on-Site soil/fill stockpiles
- A summary of citizen complaints including relevant details (i.e., name, phone number, basis of complaint, actions taken)
- A summary of CAMP results noting exceedances
- Photographs of notable Site conditions and activities
- Activities described in the daily field reports shall be linked to an alphanumeric grid map of the Site included in each report submission

Reports are not intended to be the primary mode of communication for notifying NYSDEC of emergencies, requests for changes to the RAWP, or time critical information. However, these conditions if to occur, will be included in the daily reports. Emergency conditions and changes to the RAWP will be directly communicated to the NYSDEC Project Manager.

4.4.2 Monthly Reports

Monthly reports will consist of a summary of remedial work performed at the Site throughout the month and will include:

- Investigative or remedial actions relative to the Site during the reporting period
- Actions relative to the Site anticipated for the next reporting period
- Approved changes of work scope or schedule, if applicable
- Results of sampling or testing
- Deliverables submitted during the reporting period
- The approximate percentage of completion of the project at the Site
- Unresolved delays encountered that may affect the schedule
- Community participation (CP) plan activities during this reporting period and activities anticipated in support of the CP plan for the next reporting period
- All daily reports submitted to NYSDEC during the reporting period will be included as an appendix

4.4.3 Photographs

Photographs of the remedial activities will be taken and included in the FER with provided descriptions of the representative photographs.

4.4.4 Complaint Management Plan

Complaints from the public regarding nuisance or other Site conditions will be addressed by notifying the NYSDEC of the complaint and investigating the cause/source of the issue. Records will be kept regarding the date and time of the complaint, the nature of the complaint, the type of communication (i.e., telephone, email, letter, etc.) and the name and contact information of the complaint provider. Corrective measures will then be formulated and put into place to address the complaint as soon as possible. Resolution will be documented and submitted to the NYSDEC. A representative of the Volunteer will reply within two weeks of receipt to the complaint provider to ensure resolution.

4.4.5 Deviations from the RAWP

Deviations from the RAWP will be communicated to and coordinated with the NYSDEC in advance. Notification will be provided to the NYSDEC by telephone and email for conditions requiring immediate action (e.g., conditions judged to be a danger to the surrounding community). Based on the significance of the deviation, an addendum to this RAWP may be necessary and will include:

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

5. Remedial Action: Material Removal from the Site

Remediation will include the following material removal tasks:

Excavation, stockpiling, off-Site transport, and disposal of about 10,100 cubic yards of historic fill and solid waste that exceeds UUSCOs as defined by 6 NYCRR Part 375-6.8. This includes excavation of two on-Site soil stockpiles of about 250 cubic yards located at GS-1 and GS-3, as sampled in the September 2021 RI.

Delineation of elevated lead concentrations in soil in the vicinity of SB8 and SB3, installed during the RI, and PDI-2 and PDI-11, installed during the PDI, and subsequent excavation and disposal of potentially hazardous lead-impacted historic fill material.

5.1 SOIL CLEANUP OBJECTIVES

SCOs for the site will be the Track 1 UUSCO concentrations listed in Table 7. Soil and materials management will be conducted in accordance with the SMMP as described below. Soil sample locations and results that exceed the UUSCOs are shown on Figure 3. UST closures (if necessary) will, at a minimum, conform to criteria defined in DER-10.

5.2 REMEDIAL PERFORMANCE EVALUATION (CONFIRMATION SAMPLING)

5.2.1 Soil Sampling Frequency

One confirmation soil sample will be collected for every 900 square feet at the base of the remedial excavation Site-wide in accordance with NYSDEC DER-10, or at an alternative frequency approved by NYSDEC. Confirmation samples will be collected to confirm that UUSCOs have been achieved.

A total of 46 bottom confirmation samples, plus QA/QC samples, will be collected. If confirmation sampling indicates that SCOs were not achieved at the stated remedial depth(s), the Applicant must notify the Department, submit the sample results, and in consultation with, the Department determine if further remedial excavation is necessary. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved.

In addition, during waste characterization activities to be completed prior to mobilization, one vertical and four horizontal samples will be collected from each lead delineation area to confirm non-hazardous concentrations. Samples will be analyzed for total and TCLP lead.

5.2.2 Methodology

Confirmation soil samples will be collected from the base of the remedial excavation in accordance with NYSDEC DER-10 to document remedial performance and will be analyzed for the Part 375 list of VOCs, SVOCs, pesticides, metals, PFAS, and 1,4-dioxane. Samples will be collected into laboratory-provided bottle ware. VOCs will be collected into Terracore or Encores. Samples will be transported under chain of custody protocol to an ELAP certified laboratory. Should additional soil samples be deemed necessary (e.g., additional tank closure, unknown environmental condition through visual evidence of a remaining source, over-excavation of failed confirmation sample), confirmation sampling will be conducted in accordance with NYSDEC DER-10.

5.2.3 QA/QC

Quality control procedures for confirmation soil sampling are included in the QAPP (refer to Appendix K). Confirmation analytical results will be provided in the NYSDEC's electronic data deliverable (EDD) format for EQuIS™. Guidance on the sampling frequency is presented in NYSDEC DER-10 Section 5.4.

The QA/QC procedures required by the NYSDEC Analytical Services Protocol (ASP) and SW-846 methods will be followed. This will include instrument calibration, standard compound spikes, surrogate compound spikes, and analysis of quality control samples. The laboratory will provide sample bottles, which will be pre-cleaned and preserved. Where there are differences in the SW-846 and NYSDEC ASP requirements, the NYSDEC ASP will take precedence.

5.2.4 Data Validation

ASP Category B deliverables will be prepared for remedial performance samples collected during implementation of this RAWP. Data Usability Summary Reports (DUSR) will be prepared by a qualified data validator and the findings will be reported in the FER.

5.2.5 Reporting

Analytical laboratories that analyze confirmation soil samples, prepare results, and perform contingency sampling will be NYSDOH ELAP-certified.

5.3 ESTIMATED MATERIAL REMOVAL QUANTITIES

Excavation on-Site for the proposed redevelopment plan is anticipated to generate a total of approximately 38,500 cubic yards of soil for development/construction purposes. Based on the selected remedial alternative a total of approximately 10,100 cubic yards will be removed for remedial purposes.

5.4 SOIL/MATERIALS MANAGEMENT PLAN

This section presents the approach to management, disposal, and reuse of soil, fill, and materials to be excavated from the Site. This plan is based on the current knowledge of Site conditions and will be altered as necessary. Field personnel, under the direction of the RE, will monitor and document the handling and transport of material removed from the Site for disposal as a regulated solid waste. Field personnel, under the direction of the RE, will assist the remediation contractor in identifying impacted materials during remediation, determining materials suitable for direct load out versus temporary on-Site stockpiling, selection of samples for waste characterization, if necessary, and determining the proper off-Site disposal facility. Separate stockpile areas will be constructed as needed for the various materials to be excavated or generated in order to avoid comingling impacted with nonimpacted soil.

5.4.1 Soil Screening Methods

Visual, olfactory, and instrumental soil screening and assessment will be performed during remediation and development-related ground intrusive activities into known or potentially contaminated material.

Soil screening will be performed regardless of when the invasive work is done and will include excavation and invasive work performed during the remedy and development, such as excavations for foundations and utility work.

5.4.2 Stockpile Methods

Stockpiles will be used as necessary to separate and stage excavated material pending loading or characterization sampling. Separate stockpile areas will be constructed to avoid comingling materials. Stockpile areas will meet the following minimum requirements:

- Excavated soil will be placed onto a minimum thickness of 6 mil low-permeability liner of sufficient strength and thickness to prevent puncture during use; separate stockpiles will be created where material types are different. The use of multiple layers of thinner liners is permissible.
- Efforts will be made to place and remove the soil to minimize the potential to jeopardize the integrity of the liner.
- Stockpiles will be covered at the designated times (see below) with minimum 6-mil plastic sheeting or tarps which will be securely anchored to the ground. Stockpiles will be routinely inspected, and broken sheeting covers will be promptly replaced.
- Stockpiles will be covered upon reaching their capacity (approximately 1,000 cubic yards) until ready for loading. Stockpiles that have not reached their capacity will be covered at the end of each workday.
- Each stockpile will be encircled with silt fences and hay bales, as needed, to contain and filter particulates from rainwater that has drained off the soils and to mitigate the potential for surface water run-off.
- Stockpiles will be inspected at a minimum of once daily and after every storm event.
- Stockpiling hazardous lead-impacted material on-Site will be avoided as necessary, and material will be live-loaded into trucks permitted to transport hazardous waste.

5.4.3 Materials Excavation and Load Out

Field personnel, under the supervision of the RE, will monitor ground-intrusive work and the excavation and load-out of excavated material.

Loaded vehicles leaving the Site will be appropriately lined, securely covered, manifested, and placarded in accordance with the appropriate federal, state, and local requirements, including applicable transportation requirements (i.e., New York State Department of Transportation [NYSDOT] and NYCDOT requirements). Trucks hauling historic fill material will not be lined unless free liquids are present, or the material is grossly impacted. Trucks hauling hazardous lead impacted material will be lined and covered. Hazardous wastes derived from the site will be stored, transported, and disposed of in compliance with applicable local, state, and federal regulations.

A truck wash will be operated on Site. Trucks will be washed, as necessary, before leaving the Site, and Site ingress and egress points will be cleaned of dirt and other materials to prevent material generated during remediation and development from being tracked off-Site.

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

The Volunteer and associated parties will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this RAWP. 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 RAWP. Mechanical processing of historic fill and contaminated soil on-Site is prohibited unless otherwise approved by NYSDEC.

Primary contaminant sources (including, but not limited to, tanks and hotspots) identified during Site characterization, the RI, and implementation of the remedy will be surveyed by a surveyor licensed to practice in the State of New York. The excavation will be surveyed, and survey information will be shown on maps to be included with the FER.

5.4.4 Materials Transport Off-Site

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. Trucks headed to disposal facilities will travel north on Alexander Avenue to Bruckner Boulevard, west on Bruckner Boulevard, north on Lincoln Avenue, west of 135th Street, west on 138th Street, north on Gerard Avenue onto the Major Deegan Expressway I-87 north, or other routes approved by the NYSDEC. Truck routes are shown on Figure 15.

Loaded trucks will exit in the vicinity of the Site using approved truck routes. These routes are the most appropriate route to and from the Site and take into account the following:

- Limiting transport through residential areas and past sensitive sites
- Use of city mapped truck routes
- Prohibiting off-site queuing of trucks entering the facility
- Limiting total distance to major highways
- Promoting safety in access to highways
- Overall safety in transport
- Community input (where necessary)

Trucks will be prohibited from excessive stopping and idling in the neighborhood outside of the Site. 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, or hazardous lead-impacted material, truck liners will be used.

5.4.5 Materials Disposal Off-Site

Disposal facilities have not been determined at the time of this report submittal; however, facility determination will be reported to the NYSDEC Project Manager prior to off-Site transport and disposal of excavated material. About 10,100 cubic yards of historic fill and solid waste that exceeds UUSCOs including the two on-Site soil stockpiles of about 250 cubic yards. Additional potentially hazardous lead impacted soil, if encountered, will also be excavated and removed from the Site. 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 local, state (including 6NYCRR Part 360), and federal regulations. Hazardous lead identified on Site will be managed as a D008 hazardous waste in accordance with applicable federal, state, and local regulations. As such, the handling, transport, and disposal of this fill material is subject to USEPA and the OSHA HAZWOPER regulations. The presence of hazardous waste requires compliance with both federal and state regulations and the following requirements:

- Hazardous waste disposal requires obtaining a United States EPA RCRA generator ID number
- Hazardous waste must be transported to a facility permitted by RCRA to accept hazardous waste
- Hazardous waste must be segregated and cannot be comingled with other Site material
- Hazardous waste must be transported and disposed by properly-permitted (Part 364) transporters and facilities.

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 UUSCOs, such as nonhazardous historic fill material, contaminated soil, and hazardous lead-impacted material excavated, is prohibited from being taken to a New York State recycling facility (6 NYCRR Part 360-16 Registration Facility). Non-hazardous historic fill material, contaminated soil, and hazardous lead-impacted material transported off-Site will be handled, at a minimum, as a solid waste per 6 NYCRR Part 360.

The following documentation, to be included in the FER, will be obtained for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms to applicable laws:

- A letter from the RE or Volunteer to the receiving facility describing the material to be disposed of and requesting formal written acceptance of the material. This letter will state that material to be disposed of is contaminated material generated at an environmental remediation site located 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 chemical data for the material being transported (including waste characterization and RI data); and
- A letter from each receiving facility stating that it is in receipt of the correspondence (above) and acceptance of the material is approved.

5.4.6 Materials Reuse On-Site

Materials reuse is not anticipated at the Site.

5.4.7 Fluids Management

For development purposes, liquids removed from the Site, including dewatering fluids, will be handled, transported, and disposed of 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.

5.4.8 Backfill from Off-Site Sources

Materials proposed for import onto the Site are not anticipated as part of the Track 1 remedy. However, if imported materials is proposed, documentation of the material will be provided to NYSDEC for approval prior to its use on Site. Imported soil for backfill must meet the requirements of 6 NYCRR Part 375-6.7(d) and NYSDEC DER-10 Section 5.4(e), Table 5.4(e)10. Material from industrial sites, spill sites, other environmental remediation sites, or other potentially contaminated sites will not be imported to the Site. Solid waste will not be imported onto the Site.

Backfill material will consist of clean fill (as described in the following paragraph) or other acceptable fill material such as virgin stone from a quarry or recycled concrete aggregate (RCA). If RCA is imported to the site, it will be from a NYSDEC-registered facility in compliance with 6 NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require chemical testing, unless required by the NYSDEC under the terms for operation of the facility. RCA imported to the site must be derived from recognizable and uncontaminated concrete, with no more than 10% by weight passing through a No. 80 sieve. RCA is not acceptable for and will not be used as cover or drainage material.

Imported soil (i.e., clean fill) will meet the UUSCOs. Non-compliant soils will not be imported to the Site. Clean fill will be segregated at a source/facility that is free of environmental contaminants. Qualified environmental personnel will collect representative samples at a frequency consistent with NYSDEC CP-51. The samples will be analyzed for Part 375 VOCs, SVOCs, pesticides/herbicides, PCBs, cyanide, metals including trivalent and hexavalent chromium, 1,4-dioxane, and PFAS by a NYSDOH ELAP-certified laboratory. Upon meeting these criteria, the certified-clean fill will be transported to the Site and segregated from impacted material, as necessary, on plastic sheeting until used as backfill. Trucks entering the Site with imported soils will be secured with tight fitting covers.

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 the NYSDEC. The contents of this RAWP and NYSDEC approval of this RAWP should not be considered an approval for this purpose.

5.4.9 Stormwater Pollution Prevention

Silt fence or hay bales will be installed around the perimeter of the remedial construction area, as required. 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 maintained at the Site and available for inspection by the NYSDEC. Necessary repairs to silt fence and/or hay bales will be made immediately. Accumulated sediments will be removed as required to keep the barriers and hay bale checks functional. Manufacturer's recommendations will be followed for replacing silt fence damaged due to weathering. Erosion and sediment control measures identified in the RAWP will be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to the sewer system.

5.4.10 Contingency Plan

As discussed above in Section 4.2.7, 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, if encountered, and surrounding subsurface materials (e.g., soil, stone). Chemical analyses will include Part 375 VOCs, SVOCs, PCBs, pesticides, and metals. Analyses will not be otherwise limited without NYSDEC approval. Identification of unknown or unexpected contaminated media identified by screening during ground-intrusive work will be promptly communicated by phone to the NYSDEC Project Manager. These findings will also be detailed in the monthly BCP progress report.

5.4.11 Community Air Monitoring Plan

The Community Air Monitoring Plan will require real-time monitoring for particulates (i.e., dust) and VOCs at the upwind and downwind perimeters when ground intrusive activities, including soil/waste excavation, soil handling, test pit excavation and/or trenching, are in progress at the Site. The CAMP aims to provide protection for residents in the designated work area and residents of the downwind community from potential airborne releases that directly result from the remedial construction activities conducted at the Site. Adherence to the monitoring action levels specified in the CAMP requires monitoring and, when necessary, corrective actions to abate emissions, and/or shutdown work. The CAMP also helps to confirm that work activities do not spread contamination off-Site through the air. In addition, visual and olfactory observations will be made to keep dust and odors at a minimum around the work areas. VOCs will be monitored using PIDs, and particulates will be monitored using TSI DustTrak Environmental Monitor (DustTraks) equipment. Readings will be recorded every 15-minutes at the Site by field personnel.

The following actions will be taken based on monitoring of particulate concentrations:

- If the downwind PM-10 particulate level is 100 µg/m^3 greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 µg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m^3 above the upwind level, work will be stopped, and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

The following actions will be taken based on VOC monitoring:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-

minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over 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 exclusion 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 over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shut down.

5.4.12 Odor, Dust and Nuisance Control Plan

Dust, odor, and nuisance controls will be accomplished by the remediation contractor as described in this section.

Odor Control

This odor control plan is capable of controlling emissions of nuisance odors off-Site. Specific odor control methods to be used if needed will include application of foam suppressants or tarps over the odor or VOC source areas. If nuisance odors are identified, work will be halted, and the source of odors will be identified and corrected. Work will not resume until nuisance odors have been abated. The NYSDEC and NYSDOH will be notified of odor events and of other complaints about the project. Implementation of odor controls is the responsibility of the Contractor. Monitoring odor emission, including the halt of work, will be the responsibility of the RE or his/her designated representative.

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. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (a) direct load-out of soils to trucks for off-Site disposal; (b) use of chemical odorants in spray or misting systems; and (c) 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

A dust suppression plan that addresses dust management during ground-intrusive on-Site work will include, at a minimum: (a) use of a dedicated water distribution system, on-Site water truck for road wetting, or an alternate source with suitable supply and pressure for use in dust control; (b) gravel used for on-Site roads to provide a clean and dust-free road surface; and (c) 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 used by the remediation contractor during Site preparation (including clearing and grubbing) and during remedial work. A plan for noise control will be developed and used by the remediation contractor during Site preparation and remedial work and will conform, at a minimum, to the NYCDEP noise control standards.

6. Residual Contamination to Remain On-Site

Residual contaminated soil and groundwater will not exist beneath the development footprint after the Track 1 remedy is complete; therefore, ECs and ICs will not be required to protect human health and the environment.

7. Engineering Controls

Following completion of the Track 1 UUSCOs remedy neither ECs (e.g., sub-membrane depressurization system or waterproofing/vapor barrier membrane) nor ICs (e.g., EE, SMP) will be required as part of the remedial action. In the event that a Track 2 cleanup is required since a Track 1 cleanup cannot be achieved, implementation of ECs may be required. As part of development, a composite cover system consisting of 4 inches of subbase (recycled concrete aggregate) overlain by a 4-inch concrete slab and installation of a waterproofing/vapor barrier will be installed.

8. Final Engineering Report

A FER will be submitted to the NYSDEC following implementation of the remedy defined in this RAWP. The FER will be prepared in conformance with NYSDEC DER-10 and will include the following:

- Documentation that the remedial work required under this RAWP has been completed and has been performed in substantial conformance with this plan.
- A summary of the locations and characteristics of material removed from the Site including the surveyed map(s) of each area, as necessary.
- As-built drawings for constructed elements, certifications, manifests, and bills of lading.
- A description of the changes to the remedy from the elements provided in the RAWP and associated design documents, if any.
- A tabular summary of performance evaluation sampling results and material characterization results and other sampling and chemical analyses performed as part of the remedy.
- Written and photographic documentation of remedial work performed under this remedy.
- A summary of confirmation sampling results to show that remaining soil left on-Site meets the Track 1 UUSCOs.
- If necessary, a summary of remaining contamination that exceeds the Track 1 UUSCOs and an explanation for why the material was not removed as part of the remedy. A table and a map that shows remaining contamination in excess of the Track 1 UUSCOs would also be included.
- Documentation of treatment and/or disposal of material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with the disposal of material must also include records and approvals for receipt of the material.
- Documentation of the origin and chemical quality of each material type imported onto the Site.

Before approval of the FER and issuance of a Certificate of Completion, the daily or weekly reports and monthly BCP progress reports must be submitted in digital format (i.e. PDF).

8.1 CERTIFICATIONS

The following certification will appear in front of the FER Executive Summary. The certification will be signed by the RE, Scott Underhill, who is a NYS-licensed Professional Engineer. The certification will be appropriately signed and stamped.

The certification will include the following statements:

I, _________, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject remedial program, and I certify that the Remedial Work Plan was implemented and that all remediation activities were completed in substantial conformance with the DER-approved Remedial Work Plan.

If the Remedial Action Work Plan identifies time frames to be achieved by the remedial program, the certification will include: The data submitted to DER demonstrates that the remediation requirements set forth in the Remedial Work and all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established in the work plan.

9. Schedule

Mobilization for implementation of the RAWP is expected to take about two to four weeks. Once mobilization is complete, remediation of the Site will proceed. The remedy, which will be implemented in accordance with this RAWP, is anticipated to take about ten to twelve months to complete. A FER will be drafted following completion of the remedy and subsequently submitted to the NYSDEC for review and approval. A project schedule is included in Appendix L.

References

1. Brownfield Cleanup Program Application. 40 Bruckner Boulevard, Bronx, New York. Prepared for 40 Bruckner Realty LLC by Haley & Aldrich of New York for submission to the New York State Department of Environmental Conservation. Submitted in March 2021.

2. Limited Phase II Subsurface Investigation. 40 Bruckner Boulevard, Bronx, New York. Prepared by Environmental Business Consultants (EBC), prepared for JCS Realty. December 2020.

3. Program Policy DER-10, "Technical Guidance for Site Investigation and Remediation," New York State Department of Environmental Conservation, May 2010.

4. Remedial Investigation Work Plan. 40 Bruckner Boulevard, Bronx, New York. Prepared for 40 Bruckner Realty LLC, prepared by Haley & Aldrich of New York. August 2021.

5. Remedial Investigation Report. 40 Bruckner Boulevard, Bronx, New York. Prepared for 40 Bruckner Realty LLC, prepared by Haley & Aldrich of New York. October 2021.

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TABLES

Table 1a. Remedial Investigation Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB1 (0-2")		SB1 (11-13')		SB2 (0-2")		SB2 (11-13')		SB3 (0-2")		SB3 (8-10')	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-03		L2147599-04		L2147386-01		L2147386-02		L2147386-19		L2147386-20	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)															
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035															
Methylene chloride	100	0.05	mg/kg	0.0066	U	0.0047	U	0.0055	U	0.0056	U	0.007	U	0.0056	U
1,1-Dichloroethane	26	0.27	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Chloroform	49	0.37	mg/kg	0.002	U	0.0014	U	0.0017	U	0.0017	U	0.0021	U	0.0017	U
Carbon tetrachloride	2.4	0.76	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
1,2-Dichloropropane			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Dibromochloromethane			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
1,1,2-Trichloroethane			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Tetrachloroethene	19	1.3	mg/kg	0.00074		0.00087		0.00055	U	0.00056	U	0.0007	U	0.00056	U
Chlorobenzene	100	1.1	mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
Trichlorofluoromethane			mg/kg	0.0053	U	0.0037	U	0.0044	U	0.0044	U	0.0056	U	0.0045	U
1,2-Dichloroethane	3.1	0.02	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
1,1,1-Trichloroethane	100	0.68	mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
Bromodichloromethane			mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
trans-1,3-Dichloropropene			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
cis-1,3-Dichloropropene			mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
1,3-Dichloropropene, Total			mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
1,1-Dichloropropene			mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
Bromoform			mg/kg	0.0053	U	0.0037	U	0.0044	U	0.0044	U	0.0056	U	0.0045	U
1,1,2,2-Tetrachloroethane			mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
Benzene	4.8	0.06	mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
Toluene	100	0.7	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Ethylbenzene	41	1	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Chloromethane			mg/kg	0.0053	U	0.0037	U	0.0044	U	0.0044	U	0.0056	U	0.0045	U
Bromomethane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
Vinyl chloride	0.9	0.02	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Chloroethane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,1-Dichloroethene	100	0.33	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
trans-1,2-Dichloroethene	100	0.19	mg/kg	0.002	U	0.0014	U	0.0017	U	0.0017	U	0.0021	U	0.0017	U
Trichloroethene	21	0.47	mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
1,2-Dichlorobenzene	100	1.1	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
Methyl tert butyl ether	100	0.93	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
p/m-Xylene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
o-Xylene			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Xylenes, Total	100	0.26	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
cis-1,2-Dichloroethene	100	0.25	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
1,2-Dichloroethene, Total			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Dibromomethane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
Styrene			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Dichlorodifluoromethane			mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
Acetone	100	0.05	mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
Carbon disulfide			mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
2-Butanone	100	0.12	mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
Vinyl acetate			mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
4-Methyl-2-pentanone			mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
1,2,3-Trichloropropane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
2-Hexanone			mg/kg	0.013	U	0.0093	U	0.011	U	0.011	U	0.014	U	0.011	U
Bromochloromethane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
2,2-Dichloropropane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,2-Dibromoethane			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
1,3-Dichloropropane			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,1,1,2-Tetrachloroethane			mg/kg	0.00066	U	0.00047	U	0.00055	U	0.00056	U	0.0007	U	0.00056	U
Bromobenzene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
n-Butylbenzene	100	12	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
sec-Butylbenzene	100	11	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
tert-Butylbenzene	100	5.9	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
o-Chlorotoluene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
p-Chlorotoluene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,2-Dibromo-3-chloropropane			mg/kg	0.004	U	0.0028	U	0.0033	U	0.0033	U	0.0042	U	0.0033	U
Hexachlorobutadiene			mg/kg	0.0053	U	0.0037	U	0.0044	U	0.0044	U	0.0056	U	0.0045	U
Isopropylbenzene			mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
p-Isopropyltoluene			mg/kg	0.00023	J	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
Naphthalene	100	12	mg/kg	0.0053	U	0.0037	U	0.0044	U	0.0044	U	0.0056	U	0.0045	U
Acrylonitrile			mg/kg	0.0053	U	0.0037	U	0.0044	U	0.0044	U	0.0056	U	0.0045	U
n-Propylbenzene	100	3.9	mg/kg	0.0013	U	0.00093	U	0.0011	U	0.0011	U	0.0014	U	0.0011	U
1,2,3-Trichlorobenzene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,2,4-Trichlorobenzene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,3,5-Trimethylbenzene	52	8.4	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,2,4-Trimethylbenzene	52	3.6	mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,4-Dioxane	13	0.1	mg/kg	0.11	U	0.074	U	0.088	U	0.089	U	0.11	U	0.089	U
p-Diethylbenzene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
p-Ethyltoluene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
1,2,4,5-Tetramethylbenzene			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
Ethyl ether			mg/kg	0.0026	U	0.0019	U	0.0022	U	0.0022	U	0.0028	U	0.0022	U
trans-1,4-Dichloro-2-butene			mg/kg	0.0066	U	0.0047	U	0.0055	U	0.0056	U	0.007	U	0.0056	U

LOCATION	SB4 (0-2")		SB4 (11-13')		SB5 (0-2")		SB5 (8-10')		SB6 (0-2")		SB6 (0-2")		SB6 (8-10')	
SAMPLING DATE	9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/3/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID	L2147386-03		L2147386-04		L2147599-05		L2147599-06		L2147599-07		L2147599-07 R2		L2147599-08	
SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)														
	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035														
Methylene chloride	0.006	U	0.0065	U	0.0047	U	0.0064	U	0.5	U	0.0074	U	0.0056	U
1,1-Dichloroethane	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.036	J	0.0015	U	0.0011	U
Chloroform	0.0018	U	0.0019	U	0.0014	U	0.0019	U	0.023	J	0.0022	U	0.0017	U
Carbon tetrachloride	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
1,2-Dichloropropane	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.095	J	0.00035	J	0.0011	U
Dibromochloromethane	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
1,1,2-Trichloroethane	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
Tetrachloroethene	0.0006	U	0.00065	U	0.0034		0.00026	J	2.6		0.028		0.0014	
Chlorobenzene	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
Trichlorofluoromethane	0.0048	U	0.0052	U	0.0038	U	0.0051	U	0.4	U	0.0059	U	0.0045	U
1,2-Dichloroethane	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
1,1,1-Trichloroethane	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.06		0.00066	J	0.00056	U
Bromodichloromethane	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
trans-1,3-Dichloropropene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
cis-1,3-Dichloropropene	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
1,3-Dichloropropene, Total	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
1,1-Dichloropropene	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
Bromoform	0.0048	U	0.0052	U	0.0038	U	0.0051	U	0.4	U	0.0059	U	0.0045	U
1,1,2,2-Tetrachloroethane	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
Benzene	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.31		0.002		0.00056	U
Toluene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	1.6		0.0057		0.0011	U
Ethylbenzene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.56		0.0013	J	0.0011	U
Chloromethane	0.0048	U	0.0052	U	0.0038	U	0.0051	U	0.4	U	0.0059	U	0.0045	U
Bromomethane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
Vinyl chloride	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
Chloroethane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,1-Dichloroethene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
trans-1,2-Dichloroethene	0.0018	U	0.0019	U	0.0014	U	0.0019	U	0.15	U	0.0022	U	0.0017	U
Trichloroethene	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.067		0.00048	J	0.00056	U
1,2-Dichlorobenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.019	J	0.003	U	0.0022	U
1,3-Dichlorobenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,4-Dichlorobenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.024	J	0.00062	J	0.0022	U
Methyl tert butyl ether	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
p/m-Xylene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	3.6		0.0074		0.0022	U
o-Xylene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.6		0.0013	J	0.0011	U
Xylenes, Total	0.0012	U	0.0013	U	0.00095	U	0.0013	U	4.2		0.0087	J	0.0011	U
cis-1,2-Dichloroethene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.068	J	0.00075	J	0.0011	U
1,2-Dichloroethene, Total	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.068	J	0.00075	J	0.0011	U
Dibromomethane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
Styrene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
Dichlorodifluoromethane	0.012	U	0.013	U	0.0095	U	0.013	U	1	U	0.015	U	0.011	U
Acetone	0.012	U	0.013	U	0.0095	U	0.013	U	1	U	0.015	U	0.011	U
Carbon disulfide	0.012	U	0.013	U	0.0095	U	0.013	U	1	U	0.015	U	0.011	U
2-Butanone	0.012	U	0.013	U	0.0095	U	0.013	U	0.41	J	0.015	U	0.011	U
Vinyl acetate	0.012	U	0.013	U	0.0095	U	0.013	U	1	U	0.015	U	0.011	U
4-Methyl-2-pentanone	0.012	U	0.013	U	0.0095	U	0.013	U	0.79	J	0.015	U	0.011	U
1,2,3-Trichloropropane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
2-Hexanone	0.012	U	0.013	U	0.0095	U	0.013	U	1	U	0.015	U	0.011	U
Bromochloromethane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
2,2-Dichloropropane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,2-Dibromoethane	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
1,3-Dichloropropane	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,1,1,2-Tetrachloroethane	0.0006	U	0.00065	U	0.00047	U	0.00064	U	0.05	U	0.00074	U	0.00056	U
Bromobenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
n-Butylbenzene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.092	J	0.0015	U	0.0011	U
sec-Butylbenzene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.1	U	0.0015	U	0.0011	U
tert-Butylbenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
o-Chlorotoluene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
p-Chlorotoluene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,2-Dibromo-3-chloropropane	0.0036	U	0.0039	U	0.0028	U	0.0038	U	0.3	U	0.0044	U	0.0034	U
Hexachlorobutadiene	0.0048	U	0.0052	U	0.0038	U	0.0051	U	0.4	U	0.0059	U	0.0045	U
Isopropylbenzene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.04	J	0.0015	U	0.0011	U
p-Isopropyltoluene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.033	J	0.0015	U	0.0011	U
Naphthalene	0.0048	U	0.0052	U	0.0038	U	0.0051	U	0.33	J	0.0059	U	0.0045	U
Acrylonitrile	0.0048	U	0.0052	U	0.0038	U	0.0051	U	0.4	U	0.0059	U	0.0045	U
n-Propylbenzene	0.0012	U	0.0013	U	0.00095	U	0.0013	U	0.36		0.00069	J	0.0011	U
1,2,3-Trichlorobenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,2,4-Trichlorobenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
1,3,5-Trimethylbenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.38		0.001	J	0.0022	U
1,2,4-Trimethylbenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	1.3		0.0026	J	0.0022	U
1,4-Dioxane	0.096	U	0.1	U	0.076	U	0.1	U	8	U	0.12	U	0.09	U
p-Diethylbenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.00077	J	0.0022	U
p-Ethyltoluene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	1.7		0.0031		0.0022	U
1,2,4,5-Tetramethylbenzene	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.078	J	0.003	U	0.0022	U
Ethyl ether	0.0024	U	0.0026	U	0.0019	U	0.0026	U	0.2	U	0.003	U	0.0022	U
trans-1,4-Dichloro-2-butene	0.006	U	0.0065	U	0.0047	U	0.0064	U	0.5	U	0.0074	U	0.0056	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1a. Remedial Investigation Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB7 (0-2")		SB7 (8-10')		SB8 (0-2")		SB8 (8-10')		SB9 (0-2")		SB9 (8-10')		SB10 (0-2")		SB10 (8-10')		SB11 (0-2")		SB11 (8-10')		SB12 (7-8')		SB12 (12-14')		SB13 (0-2")	
SAMPLING DATE				9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/3/2021	
LAB SAMPLE ID				L2147386-23		L2147386-24		L2147386-08		L2147386-09		L2147386-15		L2147386-16		L2147386-10		L2147386-11		L2147599-12		L2147599-13		L2147386-13		L2147386-14		L2147599-01	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																													
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035																													
Methylene chloride	100	0.05	mg/kg	0.0061	U	0.0046	U	0.0066	U	0.005	U	0.0063	U	0.0053	U	0.0054	U	0.0048	U	0.0065	U	0.0053	U	0.0063	U	0.0051	U	0.0068	U
1,1-Dichloroethane	26	0.27	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Chloroform	49	0.37	mg/kg	0.0018	U	0.0014	U	0.002	U	0.0015	U	0.0019	U	0.0016	U	0.0016	U	0.0014	U	0.002	U	0.0016	U	0.0019	U	0.0015	U	0.002	U
Carbon tetrachloride	2.4	0.76	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
1,2-Dichloropropane			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Dibromochloromethane			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
1,1,2-Trichloroethane			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Tetrachloroethene	19	1.3	mg/kg	0.00061	U	0.00046	U	0.012		0.00024	J	0.0028		0.0021		0.00054	U	0.00048	U	0.0046		0.00029	J	0.00063	U	0.00051	U	0.0065	
Chlorobenzene	100	1.1	mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
Trichlorofluoromethane			mg/kg	0.0049	U	0.0037	U	0.0053	U	0.004	U	0.005	U	0.0042	U	0.0043	U	0.0039	U	0.0052	U	0.0042	U	0.005	U	0.004	U	0.0055	U
1,2-Dichloroethane	3.1	0.02	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
1,1,1-Trichloroethane	100	0.68	mg/kg	0.00061	U	0.00046	U	0.00058	J	0.0005	U	0.00022	J	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
Bromodichloromethane			mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
trans-1,3-Dichloropropene			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
cis-1,3-Dichloropropene			mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
1,3-Dichloropropene, Total			mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
1,1-Dichloropropene			mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
Bromoform			mg/kg	0.0049	U	0.0037	U	0.0053	U	0.004	U	0.005	U	0.0042	U	0.0043	U	0.0039	U	0.0052	U	0.0042	U	0.005	U	0.004	U	0.0055	U
1,1,2,2-Tetrachloroethane			mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
Benzene	4.8	0.06	mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.0008		0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
Toluene	100	0.7	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Ethylbenzene	41	1	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Chloromethane			mg/kg	0.0049	U	0.0037	U	0.0053	U	0.004	U	0.005	U	0.0042	U	0.0043	U	0.0039	U	0.0052	U	0.0042	U	0.005	U	0.004	U	0.0055	U
Bromomethane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
Vinyl chloride	0.9	0.02	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Chloroethane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,1-Dichloroethene	100	0.33	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
trans-1,2-Dichloroethene	100	0.19	mg/kg	0.0018	U	0.0014	U	0.002	U	0.0015	U	0.0019	U	0.0016	U	0.0016	U	0.0014	U	0.002	U	0.0016	U	0.0019	U	0.0015	U	0.002	U
Trichloroethene	21	0.47	mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.0063	
1,2-Dichlorobenzene	100	1.1	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
Methyl tert butyl ether	100	0.93	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
p/m-Xylene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
o-Xylene			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Xylenes, Total	100	0.26	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
cis-1,2-Dichloroethene	100	0.25	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
1,2-Dichloroethene, Total			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Dibromomethane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
Styrene			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Dichlorodifluoromethane			mg/kg	0.012	U	0.0092	U	0.013	U	0.01	U	0.012	U	0.01	U	0.011	U	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.014	U
Acetone	100	0.05	mg/kg	0.012	U	0.0092	U	0.016		0.01	U	0.012	U	0.01	U	0.0076	J	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.095	
Carbon disulfide			mg/kg	0.012	U	0.0092	U	0.013	U	0.01	U	0.012	U	0.01	U	0.011	U	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.014	U
2-Butanone	100	0.12	mg/kg	0.012	U	0.0092	U	0.013	U	0.01	U	0.012	U	0.01	U	0.011	U	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.01	J
Vinyl acetate			mg/kg	0.012	U	0.0092	U	0.013	U	0.01	U	0.012	U	0.01	U	0.011	U	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.014	U
4-Methyl-2-pentanone			mg/kg	0.012	U	0.0092	U	0.013	U	0.01	U	0.012	U	0.01	U	0.011	U	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.014	U
1,2,3-Trichloropropane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
2-Hexanone			mg/kg	0.012	U	0.0092	U	0.013	U	0.01	U	0.012	U	0.01	U	0.011	U	0.0097	U	0.013	U	0.01	U	0.013	U	0.01	U	0.014	U
Bromochloromethane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
2,2-Dichloropropane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,2-Dibromoethane			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
1,3-Dichloropropane			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,1,1,2-Tetrachloroethane			mg/kg	0.00061	U	0.00046	U	0.00066	U	0.0005	U	0.00063	U	0.00053	U	0.00054	U	0.00048	U	0.00065	U	0.00053	U	0.00063	U	0.00051	U	0.00068	U
Bromobenzene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
n-Butylbenzene	100	12	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
sec-Butylbenzene	100	11	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
tert-Butylbenzene	100	5.9	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
o-Chlorotoluene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
p-Chlorotoluene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,2-Dibromo-3-chloropropane			mg/kg	0.0036	U	0.0028	U	0.004	U	0.003	U	0.0038	U	0.0032	U	0.0032	U	0.0029	U	0.0039	U	0.0032	U	0.0038	U	0.003	U	0.0041	U
Hexachlorobutadiene			mg/kg	0.0049	U	0.0037	U	0.0053	U	0.004	U	0.005	U	0.0042	U	0.0043	U	0.0039	U	0.0052	U	0.0042	U	0.005	U	0.004	U	0.0055	U
Isopropylbenzene			mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
p-Isopropyltoluene			mg/kg	0.0012	U	0.00092	U	0.034		0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
Naphthalene	100	12	mg/kg	0.0049	U	0.0037	U	0.0053	U	0.004	U	0.005	U	0.0042	U	0.0038	J	0.0039	U	0.0052	U	0.0042	U	0.005	U	0.004	U	0.0012	J
Acrylonitrile			mg/kg	0.0049	U	0.0037	U	0.0053	U	0.004	U	0.005	U	0.0042	U	0.0043	U	0.0039	U	0.0052	U	0.0042	U	0.005	U	0.004	U	0.0055	U
n-Propylbenzene	100	3.9	mg/kg	0.0012	U	0.00092	U	0.0013	U	0.001	U	0.0012	U	0.001	U	0.0011	U	0.00097	U	0.0013	U	0.001	U	0.0013	U	0.001	U	0.0014	U
1,2,3-Trichlorobenzene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,2,4-Trichlorobenzene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,3,5-Trimethylbenzene	52	8.4	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.00023	J	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,2,4-Trimethylbenzene	52	3.6	mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.00045	J	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,4-Dioxane	13	0.1	mg/kg	0.097	U	0.074	U	0.11	U	0.08	U	0.1	U	0.084	U	0.086	U	0.078	U	0.1	U	0.084	U	0.1	U	0.081	U	0.11	U
p-Diethylbenzene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.00034	J	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
p-Ethyltoluene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
1,2,4,5-Tetramethylbenzene			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
Ethyl ether			mg/kg	0.0024	U	0.0018	U	0.0026	U	0.002	U	0.0025	U	0.0021	U	0.0021	U	0.0019	U	0.0026	U	0.0021	U	0.0025	U	0.002	U	0.0027	U
trans-1,4-Dichloro-2-butene			mg/kg	0.0061	U	0.0046	U	0.0066	U	0.005	U	0.0063	U	0.0053	U	0.0054	U	0.0048	U	0.0065	U	0.0053	U	0.0063	U	0.0051	U	0.0068	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1a. Remedial Investigation Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB13 (11-13')		SB14 (0-2")		SB14 (11-13')		SB15 (0-2")		SB15 (8-10')		SB16 (0-2")		SB16 (8-10')		SB17 (0-2')		SB17 (2-4')		SB18 (0-2')		SB18 (2-4')		SB19 (0-2")		GS-1	
SAMPLING DATE				9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID				L2147599-02		L2147386-05		L2147386-06		L2147386-21		L2147386-22		L2147386-25		L2147386-26		L2147599-09		L2147599-10		L2147386-17		L2147386-18		L2147599-11		L2147599-20	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																													
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035																													
Methylene chloride	100	0.05	mg/kg	0.0058	U	0.0051	U	0.0054	U	0.0053	U	0.0044	U	0.0058	U	0.0055	U	0.0066	U	0.0056	U	0.0068	U	0.0053	U	0.0031	U	0.0054	U
1,1-Dichloroethane	26	0.27	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Chloroform	49	0.37	mg/kg	0.0018	U	0.0015	U	0.0016	U	0.0016	U	0.0013	U	0.0017	U	0.0016	U	0.00028	J	0.0017	U	0.002	U	0.0016	U	0.00093	U	0.0016	U
Carbon tetrachloride	2.4	0.76	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
1,2-Dichloropropane			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Dibromochloromethane			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
1,1,2-Trichloroethane			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Tetrachloroethene	19	1.3	mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.003		0.00033	J	0.00068	U	0.00053	U	0.00021	J	0.00054	U
Chlorobenzene	100	1.1	mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
Trichlorofluoromethane			mg/kg	0.0047	U	0.0041	U	0.0044	U	0.0042	U	0.0035	U	0.0046	U	0.0044	U	0.0053	U	0.0045	U	0.0055	U	0.0042	U	0.0025	U	0.0043	U
1,2-Dichloroethane	3.1	0.02	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
1,1,1-Trichloroethane	100	0.68	mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
Bromodichloromethane			mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
trans-1,3-Dichloropropene			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
cis-1,3-Dichloropropene			mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
1,3-Dichloropropene, Total			mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
1,1-Dichloropropene			mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
Bromoform			mg/kg	0.0047	U	0.0041	U	0.0044	U	0.0042	U	0.0035	U	0.0046	U	0.0044	U	0.0053	U	0.0045	U	0.0055	U	0.0042	U	0.0025	U	0.0043	U
1,1,2,2-Tetrachloroethane			mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
Benzene	4.8	0.06	mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
Toluene	100	0.7	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Ethylbenzene	41	1	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Chloromethane			mg/kg	0.0047	U	0.0041	U	0.0044	U	0.0042	U	0.0035	U	0.0046	U	0.0044	U	0.0053	U	0.0045	U	0.0055	U	0.0042	U	0.0025	U	0.0043	U
Bromomethane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
Vinyl chloride	0.9	0.02	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Chloroethane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,1-Dichloroethene	100	0.33	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
trans-1,2-Dichloroethene	100	0.19	mg/kg	0.0018	U	0.0015	U	0.0016	U	0.0016	U	0.0013	U	0.0017	U	0.0016	U	0.002	U	0.0017	U	0.002	U	0.0016	U	0.00093	U	0.0016	U
Trichloroethene	21	0.47	mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
1,2-Dichlorobenzene	100	1.1	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
Methyl tert butyl ether	100	0.93	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
p/m-Xylene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
o-Xylene			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Xylenes, Total	100	0.26	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
cis-1,2-Dichloroethene	100	0.25	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
1,2-Dichloroethene, Total			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Dibromomethane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
Styrene			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Dichlorodifluoromethane			mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.014	U	0.01	U	0.0062	U	0.011	U
Acetone	100	0.05	mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.056		0.01	U	0.0062	U	0.011	U
Carbon disulfide			mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.014	U	0.01	U	0.0062	U	0.011	U
2-Butanone	100	0.12	mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.014	U	0.01	U	0.0062	U	0.011	U
Vinyl acetate			mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.014	U	0.01	U	0.0062	U	0.011	U
4-Methyl-2-pentanone			mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.014	U	0.01	U	0.0062	U	0.011	U
1,2,3-Trichloropropane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
2-Hexanone			mg/kg	0.012	U	0.01	U	0.011	U	0.01	U	0.0088	U	0.012	U	0.011	U	0.013	U	0.011	U	0.014	U	0.01	U	0.0062	U	0.011	U
Bromochloromethane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
2,2-Dichloropropane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,2-Dibromoethane			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
1,3-Dichloropropane			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,1,1,2-Tetrachloroethane			mg/kg	0.00058	U	0.00051	U	0.00054	U	0.00053	U	0.00044	U	0.00058	U	0.00055	U	0.00066	U	0.00056	U	0.00068	U	0.00053	U	0.00031	U	0.00054	U
Bromobenzene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
n-Butylbenzene	100	12	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
sec-Butylbenzene	100	11	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
tert-Butylbenzene	100	5.9	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
o-Chlorotoluene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
p-Chlorotoluene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,2-Dibromo-3-chloropropane			mg/kg	0.0035	U	0.0031	U	0.0033	U	0.0032	U	0.0026	U	0.0035	U	0.0033	U	0.004	U	0.0033	U	0.0041	U	0.0032	U	0.0018	U	0.0032	U
Hexachlorobutadiene			mg/kg	0.0047	U	0.0041	U	0.0044	U	0.0042	U	0.0035	U	0.0046	U	0.0044	U	0.0053	U	0.0045	U	0.0055	U	0.0042	U	0.0025	U	0.0043	U
Isopropylbenzene			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
p-Isopropyltoluene			mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
Naphthalene	100	12	mg/kg	0.0047	U	0.0041	U	0.0044	U	0.0042	U	0.0035	U	0.0046	U	0.0044	U	0.0053	U	0.0045	U	0.0055	U	0.0042	U	0.0025	U	0.0043	U
Acrylonitrile			mg/kg	0.0047	U	0.0041	U	0.0044	U	0.0042	U	0.0035	U	0.0046	U	0.0044	U	0.0053	U	0.0045	U	0.0055	U	0.0042	U	0.0025	U	0.0043	U
n-Propylbenzene	100	3.9	mg/kg	0.0012	U	0.001	U	0.0011	U	0.001	U	0.00088	U	0.0012	U	0.0011	U	0.0013	U	0.0011	U	0.0014	U	0.001	U	0.00062	U	0.0011	U
1,2,3-Trichlorobenzene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,2,4-Trichlorobenzene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,3,5-Trimethylbenzene	52	8.4	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,2,4-Trimethylbenzene	52	3.6	mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,4-Dioxane	13	0.1	mg/kg	0.093	U	0.082	U	0.087	U	0.085	U	0.07	U	0.093	U	0.088	U	0.1	U	0.089	U	0.11	U	0.085	U	0.05	U	0.087	U
p-Diethylbenzene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
p-Ethyltoluene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
1,2,4,5-Tetramethylbenzene			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
Ethyl ether			mg/kg	0.0023	U	0.002	U	0.0022	U	0.0021	U	0.0018	U	0.0023	U	0.0022	U	0.0026	U	0.0022	U	0.0027	U	0.0021	U	0.0012	U	0.0022	U
trans-1,4-Dichloro-2-butene			mg/kg	0.0058	U	0.0051	U	0.0054	U	0.0053	U	0.0044	U	0.0058	U	0.0055	U	0.0066	U	0.0056	U	0.0068	U	0.0053	U	0.0031	U	0.0054	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1a. Remedial Investigation Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				GS-2		GS-3		DUP-20210902		DUP-1-20210902	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-19		L2147599-18		L2147386-07		L2147386-12	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035											
Methylene chloride	100	0.05	mg/kg	0.0059	U	0.0059	U	0.0054	U	0.0051	U
1,1-Dichloroethane	26	0.27	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Chloroform	49	0.37	mg/kg	0.0018	U	0.0018	U	0.0016	U	0.0015	U
Carbon tetrachloride	2.4	0.76	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
1,2-Dichloropropane			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Dibromochloromethane			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
1,1,2-Trichloroethane			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Tetrachloroethene	19	1.3	mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Chlorobenzene	100	1.1	mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Trichlorofluoromethane			mg/kg	0.0047	U	0.0047	U	0.0043	U	0.0041	U
1,2-Dichloroethane	3.1	0.02	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
1,1,1-Trichloroethane	100	0.68	mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Bromodichloromethane			mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
trans-1,3-Dichloropropene			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
cis-1,3-Dichloropropene			mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
1,3-Dichloropropene, Total			mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
1,1-Dichloropropene			mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Bromoform			mg/kg	0.0047	U	0.0047	U	0.0043	U	0.0041	U
1,1,2,2-Tetrachloroethane			mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Benzene	4.8	0.06	mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Toluene	100	0.7	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Ethylbenzene	41	1	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Chloromethane			mg/kg	0.0047	U	0.0047	U	0.0043	U	0.0041	U
Bromomethane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
Vinyl chloride	0.9	0.02	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Chloroethane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,1-Dichloroethene	100	0.33	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
trans-1,2-Dichloroethene	100	0.19	mg/kg	0.0018	U	0.0018	U	0.0016	U	0.0015	U
Trichloroethene	21	0.47	mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
1,2-Dichlorobenzene	100	1.1	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
Methyl tert butyl ether	100	0.93	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
p/m-Xylene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
o-Xylene			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Xylenes, Total	100	0.26	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
cis-1,2-Dichloroethene	100	0.25	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
1,2-Dichloroethene, Total			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Dibromomethane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
Styrene			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Dichlorodifluoromethane			mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
Acetone	100	0.05	mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
Carbon disulfide			mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
2-Butanone	100	0.12	mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
Vinyl acetate			mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
4-Methyl-2-pentanone			mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
1,2,3-Trichloropropane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
2-Hexanone			mg/kg	0.012	U	0.012	U	0.011	U	0.01	U
Bromochloromethane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
2,2-Dichloropropane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,2-Dibromoethane			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
1,3-Dichloropropane			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,1,1,2-Tetrachloroethane			mg/kg	0.00059	U	0.00059	U	0.00054	U	0.00051	U
Bromobenzene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
n-Butylbenzene	100	12	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
sec-Butylbenzene	100	11	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
tert-Butylbenzene	100	5.9	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
o-Chlorotoluene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
p-Chlorotoluene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,2-Dibromo-3-chloropropane			mg/kg	0.0036	U	0.0035	U	0.0032	U	0.0031	U
Hexachlorobutadiene			mg/kg	0.0047	U	0.0047	U	0.0043	U	0.0041	U
Isopropylbenzene			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
p-Isopropyltoluene			mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
Naphthalene	100	12	mg/kg	0.0047	U	0.0047	U	0.0043	U	0.0041	U
Acrylonitrile			mg/kg	0.0047	U	0.0047	U	0.0043	U	0.0041	U
n-Propylbenzene	100	3.9	mg/kg	0.0012	U	0.0012	U	0.0011	U	0.001	U
1,2,3-Trichlorobenzene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,2,4-Trichlorobenzene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,3,5-Trimethylbenzene	52	8.4	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,2,4-Trimethylbenzene	52	3.6	mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,4-Dioxane	13	0.1	mg/kg	0.095	U	0.094	U	0.087	U	0.082	U
p-Diethylbenzene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
p-Ethyltoluene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
1,2,4,5-Tetramethylbenzene			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
Ethyl ether			mg/kg	0.0024	U	0.0023	U	0.0022	U	0.002	U
trans-1,4-Dichloro-2-butene			mg/kg	0.0059	U	0.0059	U	0.0054	U	0.0051	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1b. Remedial Investigation Semi-Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB1 (0-2")		SB1 (11-13')		SB2 (0-2")		SB2 (11-13')		SB3 (0-2")		SB3 (8-10')		SB4 (0-2")		SB4 (11-13')		SB5 (0-2")		SB5 (8-10')		SB6 (0-2")		SB6 (8-10')
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/3/2021		9/3/2021
LAB SAMPLE ID				L2147599-03		L2147599-04		L2147386-01		L2147386-02		L2147386-19		L2147386-20		L2147386-03		L2147386-04		L2147599-05		L2147599-06		L2147599-07		L2147599-08
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL
SAMPLE DEPTH (ft.)																										
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results
Semivolatile Organics by GC/MS																										
Acenaphthene	100	20	mg/kg	0.095	J	0.14	U	0.14	U	0.14	U	0.047	J	0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
1,2,4-Trichlorobenzene			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Hexachlorobenzene	1.2	0.33	mg/kg	0.53	U	0.1	U	0.11	U	0.11	U	0.12	U	0.1	U	0.11	U	0.1	U	0.12	U	0.12	U	0.57	U	0.11
Bis(2-chloroethyl)ether			mg/kg	0.8	U	0.16	U	0.16	U	0.16	U	0.18	U	0.16	U	0.16	U	0.15	U	0.18	U	0.17	U	0.86	U	0.17
2-Chloronaphthalene			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
1,2-Dichlorobenzene	100	1.1	mg/kg	0.4	J	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
1,3-Dichlorobenzene	49	2.4	mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
1,4-Dichlorobenzene	13	1.8	mg/kg	0.16	J	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
3,3'-Dichlorobenzidine			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2,4-Dinitrotoluene			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2,6-Dinitrotoluene			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Fluoranthene	100	100	mg/kg	0.73		0.1	U	0.051	J	0.11	U	1.5		0.1	U	0.11	U	0.1	U	0.065	J	0.12	U	0.57	U	0.11
4-Chlorophenyl phenyl ether			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
4-Bromophenyl phenyl ether			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Bis(2-chloroisopropyl)ether			mg/kg	1.1	U	0.21	U	0.22	U	0.21	U	0.23	U	0.21	U	0.21	U	0.2	U	0.24	U	0.23	U	1.1	U	0.23
Bis(2-chloroethoxy)methane			mg/kg	0.96	U	0.19	U	0.2	U	0.19	U	0.21	U	0.19	U	0.19	U	0.18	U	0.21	U	0.21	U	1	U	0.21
Hexachlorobutadiene			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Hexachlorocyclopentadiene			mg/kg	2.5	U	0.5	U	0.52	U	0.51	U	0.56	U	0.5	U	0.51	U	0.48	U	0.57	U	0.55	U	2.7	U	0.55
Hexachloroethane			mg/kg	0.71	U	0.14	U	0.14	U	0.14	U	0.16	U	0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
Isophorone			mg/kg	0.8	U	0.16	U	0.16	U	0.16	U	0.18	U	0.16	U	0.16	U	0.15	U	0.18	U	0.17	U	0.86	U	0.17
Naphthalene	100	12	mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.16	J	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.48	J	0.19
Nitrobenzene			mg/kg	0.8	U	0.16	U	0.16	U	0.16	U	0.18	U	0.16	U	0.16	U	0.15	U	0.18	U	0.17	U	0.86	U	0.17
NDPA/DPA			mg/kg	0.71	U	0.14	U	0.14	U	0.14	U	0.16	U	0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
n-Nitrosodi-n-propylamine			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Bis(2-ethylhexyl)phthalate			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Butyl benzyl phthalate			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Di-n-butylphthalate			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Di-n-octylphthalate			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Diethyl phthalate			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Dimethyl phthalate			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Benzo(a)anthracene	1	1	mg/kg	0.36	J	0.1	U	0.034	J	0.11	U	0.84		0.1	U	0.11	U	0.1	U	0.038	J	0.12	U	0.11	J	0.11
Benzo(a)pyrene	1	1	mg/kg	0.31	J	0.14	U	0.14	U	0.14	U	0.69		0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
Benzo(b)fluoranthene	1	1	mg/kg	0.4	J	0.1	U	0.035	J	0.11	U	1.1		0.1	U	0.11	U	0.1	U	0.045	J	0.12	U	0.57	U	0.11
Benzo(k)fluoranthene	3.9	0.8	mg/kg	0.53	U	0.1	U	0.11	U	0.11	U	0.33		0.1	U	0.11	U	0.1	U	0.12	U	0.12	U	0.57	U	0.11
Chrysene	3.9	1	mg/kg	0.37	J	0.1	U	0.026	J	0.11	U	0.95		0.1	U	0.11	U	0.1	U	0.033	J	0.12	U	0.21	J	0.11
Acenaphthylene	100	100	mg/kg	0.71	U	0.14	U	0.14	U	0.14	U	0.14	J	0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
Anthracene	100	100	mg/kg	0.17	J	0.1	U	0.11	U	0.11	U	0.23		0.1	U	0.11	U	0.1	U	0.12	U	0.12	U	0.57	U	0.11
Benzo(ghi)perylene	100	100	mg/kg	0.27	J	0.14	U	0.14	U	0.14	U	0.32		0.042	J	0.14	U	0.13	U	0.024	J	0.16	U	0.77	U	0.15
Fluorene	100	30	mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Phenanthrene	100	100	mg/kg	0.59		0.1	U	0.032	J	0.11	U	0.82		0.1	U	0.11	U	0.1	U	0.035	J	0.12	U	0.25	J	0.11
Dibenzo(a,h)anthracene	0.33	0.33	mg/kg	0.53	U	0.1	U	0.11	U	0.11	U	0.089	J	0.1	U	0.11	U	0.1	U	0.12	U	0.12	U	0.57	U	0.11
Indeno(1,2,3-cd)pyrene	0.5	0.5	mg/kg	0.24	J	0.14	U	0.14	U	0.14	U	0.36		0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
Pyrene	100	100	mg/kg	0.6		0.1	U	0.05	J	0.11	U	1.4		0.1	U	0.11	U	0.1	U	0.06	J	0.12	U	0.098	J	0.11
Biphenyl			mg/kg	2	U	0.4	U	0.41	U	0.41	U	0.052	J	0.4	U	0.4	U	0.38	U	0.45	U	0.44	U	2.2	U	0.44
4-Chloroaniline			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2-Nitroaniline			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
3-Nitroaniline			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
4-Nitroaniline			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Dibenzofuran	59	7	mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.056	J	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2-Methylnaphthalene			mg/kg	1.1	U	0.21	U	0.22	U	0.21	U	0.17	J	0.21	U	0.21	U	0.2	U	0.24	U	0.23	U	0.18	J	0.23
1,2,4,5-Tetrachlorobenzene			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Acetophenone			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.35	J	0.19
2,4,6-Trichlorophenol			mg/kg	0.53	U	0.1	U	0.11	U	0.11	U	0.12	U	0.1	U	0.11	U	0.1	U	0.12	U	0.12	U	0.57	U	0.11
p-Chloro-m-cresol			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2-Chlorophenol			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2,4-Dichlorophenol			mg/kg	0.8	U	0.16	U	0.16	U	0.16	U	0.18	U	0.16	U	0.16	U	0.15	U	0.18	U	0.17	U	0.86	U	0.17
2,4-Dimethylphenol			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2-Nitrophenol			mg/kg	1.9	U	0.38	U	0.39	U	0.39	U	0.42	U	0.38	U	0.38	U	0.36	U	0.43	U	0.42	U	2.1	U	0.41
4-Nitrophenol			mg/kg	1.2	U	0.24	U	0.25	U	0.25	U	0.27	U	0.25	U	0.25	U	0.24	U	0.28	U	0.27	U	1.3	U	0.27
2,4-Dinitrophenol			mg/kg	4.2	U	0.84	U	0.87	U	0.86	U	0.94	U	0.85	U	0.85	U	0.81	U	0.95	U	0.93	U	4.6	U	0.92
4,6-Dinitro-o-cresol			mg/kg	2.3	U	0.45	U	0.47	U	0.46	U	0.51	U	0.46	U	0.46	U	0.44	U	0.52	U	0.5	U	2.5	U	0.5
Pentachlorophenol	6.7	0.8	mg/kg	0.71	U	0.14	U	0.14	U	0.14	U	0.16	U	0.14	U	0.14	U	0.13	U	0.16	U	0.16	U	0.77	U	0.15
Phenol	100	0.33	mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
2-Methylphenol	100	0.33	mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
3-Methylphenol/4-Methylphenol	100	0.33	mg/kg	1.3	U	0.25	U	0.26	U	0.26	U	0.05	J	0.25	U	0.26	U	0.24	U	0.29	U	0.28	U	1.4	U	0.28
2,4,5-Trichlorophenol			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Benzoic Acid			mg/kg	2.9	U	0.57	U	0.59	U	0.58	U	0.63	U	0.57	U	0.58	U	0.54	U	0.64	U	0.63	U	3.1	U	0.62
Benzyl Alcohol			mg/kg	0.88	U	0.17	U	0.18	U	0.18	U	0.2	U	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
Carbazole			mg/kg	0.092	J	0.17	U	0.18	U	0.18	U	0.15	J	0.18	U	0.18	U	0.17	U	0.2	U	0.19	U	0.96	U	0.19
1,4-Dioxane	13	0.1	mg/kg	0.13	U	0.026	U	0.027	U	0.027	U	0.029	U	0.026	U	0.027	U	0.025	U	0.03	U	0.029	U	0.14	U	0.029

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1b. Remedial Investigation Semi-Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION					SB7 (0-2")		SB7 (8-10')		SB8 (0-2")		SB8 (8-10')		SB9 (0-2")		SB9 (8-10')		SB10 (0-2")		SB10 (8-10')		SB11 (0-2")		SB11 (8-10')		SB12 (7-8')		SB12 (12-14')	
SAMPLING DATE					9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID					L2147386-23		L2147386-24		L2147386-08		L2147386-09		L2147386-15		L2147386-16		L2147386-10		L2147386-11		L2147599-12		L2147599-13		L2147386-13		L2147386-14	
SAMPLE TYPE					SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																												
	NY-RESRR	NY-UNRES	Units	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS																												
Acenaphthene	100	20	mg/kg	U	0.72	U	0.16	U	1.3		0.14	U	0.12	J	0.14	U	0.3		0.14	U	0.076	J	0.14	U	0.26		0.14	U
1,2,4-Trichlorobenzene			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Hexachlorobenzene	1.2	0.33	mg/kg	U	0.54	U	0.12	U	0.54	U	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	U	0.11	U	0.1	U	0.11	U
Bis(2-chloroethyl)ether			mg/kg	U	0.81	U	0.18	U	0.81	U	0.15	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.16	U
2-Chloronaphthalene			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
1,2-Dichlorobenzene	100	1.1	mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
1,3-Dichlorobenzene	49	2.4	mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
1,4-Dichlorobenzene	13	1.8	mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
3,3'-Dichlorobenzidine			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2,4-Dinitrotoluene			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2,6-Dinitrotoluene			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Fluoranthene	100	100	mg/kg	U	1.1		0.12	U	20		0.18		2.4		0.11	U	5.1		0.1	U	1.2		0.11	U	2.7		0.11	U
4-Chlorophenyl phenyl ether			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
4-Bromophenyl phenyl ether			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Bis(2-chloroisopropyl)ether			mg/kg	U	1.1	U	0.24	U	1.1	U	0.2	U	0.21	U	0.21	U	0.21	U	0.21	U	0.22	U	0.22	U	0.2	U	0.22	U
Bis(2-chloroethoxy)methane			mg/kg	U	0.98	U	0.21	U	0.98	U	0.18	U	0.19	U	0.19	U	0.19	U	0.19	U	0.2	U	0.2	U	0.18	U	0.2	U
Hexachlorobutadiene			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Hexachlorocyclopentadiene			mg/kg	U	2.6	U	0.57	U	2.6	U	0.48	U	0.51	U	0.51	U	0.5	U	0.5	U	0.52	U	0.52	U	0.48	U	0.52	U
Hexachloroethane			mg/kg	U	0.72	U	0.16	U	0.72	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.15	U	0.14	U	0.13	U	0.14	U
Isophorone			mg/kg	U	0.81	U	0.18	U	0.81	U	0.15	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.16	U
Naphthalene	100	12	mg/kg	U	0.9	U	0.2	U	0.65	J	0.17	U	0.073	J	0.18	U	0.14	J	0.18	U	0.061	J	0.18	U	0.084	J	0.18	U
Nitrobenzene			mg/kg	U	0.81	U	0.18	U	0.81	U	0.15	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.16	U
NDPA/DPA			mg/kg	U	0.72	U	0.16	U	0.72	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.15	U	0.14	U	0.13	U	0.14	U
n-Nitrosodi-n-propylamine			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Bis(2-ethylhexyl)phthalate			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.13	J	0.18	U	0.088	J	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Butyl benzyl phthalate			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Di-n-butylphthalate			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Di-n-octylphthalate			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Diethyl phthalate			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Dimethyl phthalate			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Benzo(a)anthracene	1	1	mg/kg	U	0.43	J	0.12	U	10		0.1		1.6		0.11	U	3		0.1	U	0.55		0.11	U	1.7		0.11	U
Benzo(a)pyrene	1	1	mg/kg	U	0.46	J	0.16	U	9.1		0.089	J	1.4		0.14	U	2.5		0.14	U	0.52		0.14	U	1.2		0.14	U
Benzo(b)fluoranthene	1	1	mg/kg	U	0.61		0.12	U	12		0.12		1.9		0.11	U	3.5		0.1	U	0.64		0.11	U	1.4		0.11	U
Benzo(k)fluoranthene	3.9	0.8	mg/kg	U	0.21	J	0.12	U	4.6		0.042	J	0.66		0.11	U	0.78		0.1	U	0.25		0.11	U	0.4		0.11	U
Chrysene	3.9	1	mg/kg	U	0.52	J	0.12	U	9.6		0.091	J	1.2		0.11	U	2.3		0.1	U	0.58		0.11	U	1.5		0.11	U
Acenaphthylene	100	100	mg/kg	U	0.72	U	0.16	U	1		0.14	U	0.097	J	0.14	U	0.12	J	0.14	U	0.03	J	0.14	U	0.13	U	0.14	U
Anthracene	100	100	mg/kg	U	0.54	U	0.12	U	4.1		0.045	J	0.38		0.11	U	1		0.1	U	0.2		0.11	U	0.68		0.11	U
Benzo(ghi)perylene	100	100	mg/kg	U	0.36	J	0.16	U	5.6		0.048	J	0.61		0.14	U	1.2		0.14	U	0.34		0.14	U	0.55		0.14	U
Fluorene	100	30	mg/kg	U	0.9	U	0.2	U	1.4		0.17	U	0.12	J	0.18	U	0.36		0.18	U	0.07	J	0.18	U	0.29		0.18	U
Phenanthrene	100	100	mg/kg	U	0.77		0.12	U	14		0.13		1.4		0.11	U	3.3		0.1	U	0.9		0.11	U	3.2		0.11	U
Dibenzo(a,h)anthracene	0.33	0.33	mg/kg	U	0.54	U	0.12	U	1.6		0.1	U	0.15		0.11	U	0.26		0.1	U	0.082	J	0.11	U	0.14		0.11	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	mg/kg	U	0.36	J	0.16	U	6.1		0.055	J	0.74		0.14	U	1.4		0.14	U	0.38		0.14	U	0.6		0.14	U
Pyrene	100	100	mg/kg	U	0.96		0.12	U	17		0.16		2.2		0.11	U	4.3		0.1	U	1		0.11	U	2.9		0.11	U
Biphenyl			mg/kg	U	2.1	U	0.45	U	2.1	U	0.39	U	0.4	U	0.41	U	0.4	U	0.4	U	0.42	U	0.41	U	0.38	U	0.41	U
4-Chloroaniline			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2-Nitroaniline			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
3-Nitroaniline			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
4-Nitroaniline			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Dibenzofuran	59	7	mg/kg	U	0.9	U	0.2	U	0.88	J	0.17	U	0.073	J	0.18	U	0.21		0.18	U	0.05	J	0.18	U	0.18		0.18	U
2-Methylnaphthalene			mg/kg	U	1.1	U	0.24	U	0.39	J	0.2	U	0.038	J	0.21	U	0.082	J	0.21	U	0.034	J	0.22	U	0.066	J	0.22	U
1,2,4,5-Tetrachlorobenzene			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Acetophenone			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.031	J	0.18	U	0.17	U	0.18	U
2,4,6-Trichlorophenol			mg/kg	U	0.54	U	0.12	U	0.54	U	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	U	0.11	U	0.1	U	0.11	U
p-Chloro-m-cresol			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2-Chlorophenol			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2,4-Dichlorophenol			mg/kg	U	0.81	U	0.18	U	0.81	U	0.15	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.16	U
2,4-Dimethylphenol			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2-Nitrophenol			mg/kg	U	2	U	0.43	U	2	U	0.36	U	0.38	U	0.38	U	0.38	U	0.38	U	0.4	U	0.39	U	0.36	U	0.39	U
4-Nitrophenol			mg/kg	U	1.3	U	0.28	U	1.3	U	0.24	U	0.25	U	0.25	U	0.25	U	0.25	U	0.26	U	0.25	U	0.23	U	0.25	U
2,4-Dinitrophenol			mg/kg	U	4.3	U	0.95	U	4.3	U	0.81	U	0.85	U	0.86	U	0.84	U	0.84	U	0.88	U	0.87	U	0.8	U	0.87	U
4,6-Dinitro-o-cresol			mg/kg	U	2.4	U	0.52	U	2.4	U	0.44	U	0.46	U	0.46	U	0.46	U	0.46	U	0.48	U	0.47	U	0.44	U	0.47	U
Pentachlorophenol	6.7	0.8	mg/kg	U	0.72	U	0.16	U	0.72	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.15	U	0.14	U	0.13	U	0.14	U
Phenol	100	0.33	mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
2-Methylphenol	100	0.33	mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
3-Methylphenol/4-Methylphenol	100	0.33	mg/kg	U	1.3	U	0.28	U	0.14	J	0.24	U	0.26	U	0.26	U	0.25	U	0.25	U	0.26	U	0.26	U	0.24	U	0.26	U
2,4,5-Trichlorophenol			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Benzoic Acid			mg/kg	U	2.9	U	0.64	U	2.9	U	0.55	U	0.58	U	0.58	U	0.57	U	0.57	U	0.59	U	0.59	U	0.54	U	0.59	U
Benzyl Alcohol			mg/kg	U	0.9	U	0.2	U	0.9	U	0.17	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.17	U	0.18	U
Carbazole			mg/kg	U	0.9	U	0.2	U	1.9		0.022	J	0.15	J	0.18	U	0.22		0.18	U	0.076	J	0.18	U	0.25		0.18	U
1,4-Dioxane	13	0.1	mg/kg	U	0.14	U	0.03	U	0.14	U	0.025	U	0.027	U	0.027	U	0.026	U	0.026	U	0.028	U	0.027	U	0.025	U	0.027	U

Notes:

Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1b. Remedial Investigation Semi-Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB13 (0-2")		SB13 (11-13')		SB14 (0-2")		SB14 (11-13')		SB15 (0-2")		SB15 (8-10')		SB16 (0-2")		SB16 (8-10')		SB17 (0-2')		SB17 (2-4')		SB18 (0-2')		SB18 (2-4')	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-01		L2147599-02		L2147386-05		L2147386-06		L2147386-21		L2147386-22		L2147386-25		L2147386-26		L2147599-09		L2147599-10		L2147386-17		L2147386-18	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS																											
Acenaphthene	100	20	mg/kg	0.048	J	0.14	U	0.14	U	0.15	U	0.032	J	0.14	U	0.022	J	0.16	U	5.6		0.14	U	0.023	J	0.14	U
1,2,4-Trichlorobenzene			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Hexachlorobenzene	1.2	0.33	mg/kg	0.11	U	0.1	U	0.1	U	0.11	U	0.12	U	0.11	U	0.11	U	0.12	U	1.1	U	0.1	U	0.11	U	0.1	U
Bis(2-chloroethyl)ether			mg/kg	0.16	U	0.16	U	0.16	U	0.17	U	0.18	U	0.16	U	0.16	U	0.17	U	1.6	U	0.16	U	0.17	U	0.15	U
2-Chloronaphthalene			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
1,2-Dichlorobenzene	100	1.1	mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
3,3'-Dichlorobenzidine			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2,4-Dinitrotoluene			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2,6-Dinitrotoluene			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Fluoranthene	100	100	mg/kg	1.6		0.1	U	0.1	U	0.11	U	0.87		0.11	U	0.62		0.12	U	53		0.1	U	0.42		0.044	J
4-Chlorophenyl phenyl ether			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
4-Bromophenyl phenyl ether			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Bis(2-chloroisopropyl)ether			mg/kg	0.22	U	0.21	U	0.21	U	0.22	U	0.24	U	0.22	U	0.22	U	0.23	U	2.2	U	0.21	U	0.22	U	0.21	U
Bis(2-chloroethoxy)methane			mg/kg	0.2	U	0.19	U	0.19	U	0.2	U	0.22	U	0.2	U	0.19	U	0.21	U	1.9	U	0.19	U	0.2	U	0.18	U
Hexachlorobutadiene			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Hexachlorocyclopentadiene			mg/kg	0.52	U	0.5	U	0.5	U	0.53	U	0.58	U	0.52	U	0.52	U	0.55	U	5.2	U	0.5	U	0.54	U	0.49	U
Hexachloroethane			mg/kg	0.14	U	0.14	U	0.14	U	0.15	U	0.16	U	0.14	U	0.14	U	0.16	U	1.4	U	0.14	U	0.15	U	0.14	U
Isophorone			mg/kg	0.16	U	0.16	U	0.16	U	0.17	U	0.18	U	0.16	U	0.16	U	0.17	U	1.6	U	0.16	U	0.17	U	0.15	U
Naphthalene	100	12	mg/kg	0.09	J	0.17	U	0.18	U	0.19	U	0.032	J	0.18	U	0.062	J	0.19	U	2.9		0.18	U	0.028	J	0.17	U
Nitrobenzene			mg/kg	0.16	U	0.16	U	0.16	U	0.17	U	0.18	U	0.16	U	0.16	U	0.17	U	1.6	U	0.16	U	0.17	U	0.15	U
NDPA/DPA			mg/kg	0.14	U	0.14	U	0.14	U	0.15	U	0.16	U	0.14	U	0.14	U	0.16	U	1.4	U	0.14	U	0.15	U	0.14	U
n-Nitrosodi-n-propylamine			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Bis(2-ethylhexyl)phthalate			mg/kg	1.2		0.17	U	0.18	U	0.19	U	0.22		0.18	U	0.072	J	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Butyl benzyl phthalate			mg/kg	0.14	J	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Di-n-butylphthalate			mg/kg	0.48		0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Di-n-octylphthalate			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Diethyl phthalate			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Dimethyl phthalate			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Benzo(a)anthracene	1	1	mg/kg	0.8		0.1	U	0.1	U	0.11	U	0.48		0.11	U	0.35		0.12	U	38		0.1	U	0.21		0.032	J
Benzo(a)pyrene	1	1	mg/kg	0.75		0.14	U	0.14	U	0.15	U	0.53		0.14	U	0.38		0.16	U	33		0.14	U	0.26		0.14	U
Benzo(b)fluoranthene	1	1	mg/kg	0.98		0.1	U	0.1	U	0.11	U	0.67		0.11	U	0.45		0.12	U	42		0.1	U	0.3		0.039	J
Benzo(k)fluoranthene	3.9	0.8	mg/kg	0.34		0.1	U	0.1	U	0.11	U	0.24		0.11	U	0.17		0.12	U	12		0.1	U	0.1	J	0.1	U
Chrysene	3.9	1	mg/kg	0.85		0.1	U	0.1	U	0.11	U	0.48		0.11	U	0.34		0.12	U	33		0.1	U	0.32		0.029	J
Acenaphthylene	100	100	mg/kg	0.14		0.14	U	0.14	U	0.15	U	0.069	J	0.14	U	0.073	J	0.16	U	1.6		0.14	U	0.06	J	0.14	U
Anthracene	100	100	mg/kg	0.2		0.1	U	0.1	U	0.11	U	0.15		0.11	U	0.11		0.12	U	14		0.1	U	0.086	J	0.1	U
Benzo(ghi)perylene	100	100	mg/kg	0.7		0.14	U	0.14	U	0.15	U	0.4		0.14	U	0.28		0.16	U	21		0.14	U	0.33		0.05	J
Fluorene	100	30	mg/kg	0.062	J	0.17	U	0.18	U	0.19	U	0.032	J	0.18	U	0.025	J	0.19	U	5.9		0.18	U	0.19	U	0.17	U
Phenanthrene	100	100	mg/kg	0.76		0.1	U	0.1	U	0.11	U	0.46		0.11	U	0.3		0.12	U	42		0.1	U	0.28		0.1	U
Dibenzo(a,h)anthracene	0.33	0.33	mg/kg	0.16		0.1	U	0.1	U	0.11	U	0.091	J	0.11	U	0.066	J	0.12	U	5.6		0.1	U	0.11	U	0.1	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	mg/kg	0.77		0.14	U	0.14	U	0.15	U	0.4		0.14	U	0.28		0.16	U	23		0.14	U	0.22		0.14	U
Pyrene	100	100	mg/kg	1.4		0.1	U	0.1	U	0.11	U	0.79		0.11	U	0.56		0.12	U	53		0.02	J	0.39		0.049	J
Biphenyl			mg/kg	0.42	U	0.4	U	0.4	U	0.42	U	0.46	U	0.41	U	0.41	U	0.44	U	0.55	J	0.4	U	0.43	U	0.39	U
4-Chloroaniline			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2-Nitroaniline			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
3-Nitroaniline			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
4-Nitroaniline			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Dibenzofuran	59	7	mg/kg	0.048	J	0.17	U	0.18	U	0.19	U	0.02	J	0.18	U	0.022	J	0.19	U	3.6		0.18	U	0.19	U	0.17	U
2-Methylnaphthalene			mg/kg	0.1	J	0.21	U	0.21	U	0.22	U	0.24	U	0.22	U	0.023	J	0.23	U	1.7	J	0.21	U	0.058	J	0.21	U
1,2,4,5-Tetrachlorobenzene			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Acetophenone			mg/kg	0.03	J	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2,4,6-Trichlorophenol			mg/kg	0.11	U	0.1	U	0.1	U	0.11	U	0.12	U	0.11	U	0.11	U	0.12	U	1.1	U	0.1	U	0.11	U	0.1	U
p-Chloro-m-cresol			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2-Chlorophenol			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2,4-Dichlorophenol			mg/kg	0.16	U	0.16	U	0.16	U	0.17	U	0.18	U	0.16	U	0.16	U	0.17	U	1.6	U	0.16	U	0.17	U	0.15	U
2,4-Dimethylphenol			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2-Nitrophenol			mg/kg	0.39	U	0.38	U	0.38	U	0.4	U	0.44	U	0.39	U	0.39	U	0.42	U	3.9	U	0.38	U	0.4	U	0.37	U
4-Nitrophenol			mg/kg	0.26	U	0.24	U	0.25	U	0.26	U	0.28	U	0.25	U	0.25	U	0.27	U	2.5	U	0.24	U	0.26	U	0.24	U
2,4-Dinitrophenol			mg/kg	0.88	U	0.83	U	0.85	U	0.9	U	0.97	U	0.87	U	0.86	U	0.93	U	8.6	U	0.84	U	0.9	U	0.82	U
4,6-Dinitro-o-cresol			mg/kg	0.47	U	0.45	U	0.46	U	0.48	U	0.52	U	0.47	U	0.47	U	0.5	U	4.7	U	0.46	U	0.49	U	0.45	U
Pentachlorophenol	6.7	0.8	mg/kg	0.14	U	0.14	U	0.14	U	0.15	U	0.16	U	0.14	U	0.14	U	0.16	U	1.4	U	0.14	U	0.15	U	0.14	U
Phenol	100	0.33	mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
2-Methylphenol	100	0.33	mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
3-Methylphenol/4-Methylphenol	100	0.33	mg/kg	0.26	U	0.25	U	0.25	U	0.27	U	0.29	U	0.26	U	0.26	U	0.28	U	2.6	U	0.25	U	0.27	U	0.25	U
2,4,5-Trichlorophenol			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Benzoic Acid			mg/kg	0.59	U	0.56	U	0.57	U	0.6	U	0.65	U	0.59	U	0.58	U	0.63	U	5.8	U	0.57	U	0.61	U	0.56	U
Benzyl Alcohol			mg/kg	0.18	U	0.17	U	0.18	U	0.19	U	0.2	U	0.18	U	0.18	U	0.19	U	1.8	U	0.18	U	0.19	U	0.17	U
Carbazole			mg/kg	0.092	J	0.17	U	0.18	U	0.19	U	0.062	J	0.18	U	0.032	J	0.19	U	4.2		0.18	U	0.059	J	0.17	U
1,4-Dioxane	13	0.1	mg/kg	0.027	U	0.026	U	0.026	U	0.028	U	0.03	U	0.027	U	0.027	U	0.029	U	0.27	U	0.026	U	0.028	U	0.026	U

Notes:

Red shaded results exceed both Unrestricted and Restricted Residential SCOs

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria

NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result

J - Estimated Result

Table 1b. Remedial Investigation Semi-Volatile Organic Compound Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB19 (0-2")		GS-1		GS-2		GS-3		DUP-20210902		DUP-1-20210902	
SAMPLING DATE				9/3/2021		9/3/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-11		L2147599-20		L2147599-19		L2147599-18		L2147386-07		L2147386-12	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)															
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS															
Acenaphthene	100	20	mg/kg	0.028	J	0.14	U	0.069	J	0.12	J	0.14	U	0.14	U
1,2,4-Trichlorobenzene			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Hexachlorobenzene	1.2	0.33	mg/kg	0.11	U	0.11	U	0.11	U	0.1	U	0.1	U	0.1	U
Bis(2-chloroethyl)ether			mg/kg	0.17	U	0.16	U	0.17	U	0.15	U	0.15	U	0.16	U
2-Chloronaphthalene			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
1,2-Dichlorobenzene	100	1.1	mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
1,3-Dichlorobenzene	49	2.4	mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
1,4-Dichlorobenzene	13	1.8	mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
3,3'-Dichlorobenzidine			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2,4-Dinitrotoluene			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2,6-Dinitrotoluene			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Fluoranthene	100	100	mg/kg	0.43		0.5		1.2		3.8		0.1	U	0.056	J
4-Chlorophenyl phenyl ether			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
4-Bromophenyl phenyl ether			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Bis(2-chloroisopropyl)ether			mg/kg	0.22	U	0.22	U	0.22	U	0.2	U	0.2	U	0.21	U
Bis(2-chloroethoxy)methane			mg/kg	0.2	U	0.2	U	0.2	U	0.18	U	0.18	U	0.19	U
Hexachlorobutadiene			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Hexachlorocyclopentadiene			mg/kg	0.53	U	0.52	U	0.53	U	0.48	U	0.49	U	0.5	U
Hexachloroethane			mg/kg	0.15	U	0.14	U	0.15	U	0.13	U	0.14	U	0.14	U
Isophorone			mg/kg	0.17	U	0.16	U	0.17	U	0.15	U	0.15	U	0.16	U
Naphthalene	100	12	mg/kg	0.19	U	0.031	J	0.053	J	0.11	J	0.17	U	0.17	U
Nitrobenzene			mg/kg	0.17	U	0.16	U	0.17	U	0.15	U	0.15	U	0.16	U
NDPA/DPA			mg/kg	0.15	U	0.14	U	0.15	U	0.13	U	0.14	U	0.14	U
n-Nitrosodi-n-propylamine			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Bis(2-ethylhexyl)phthalate			mg/kg	0.19	U	0.18	U	0.18	U	0.072	J	0.17	U	0.17	U
Butyl benzyl phthalate			mg/kg	0.19	U	0.18	U	0.18	U	0.1	J	0.17	U	0.17	U
Di-n-butylphthalate			mg/kg	0.19	U	0.18	U	0.18	U	0.036	J	0.17	U	0.17	U
Di-n-octylphthalate			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Diethyl phthalate			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Dimethyl phthalate			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Benzo(a)anthracene	1	1	mg/kg	0.24		0.31		0.74		2.1		0.1	U	0.034	J
Benzo(a)pyrene	1	1	mg/kg	0.21		0.38		0.68		1.9		0.14	U	0.14	U
Benzo(b)fluoranthene	1	1	mg/kg	0.25		0.47		0.88		2.7		0.1	U	0.035	J
Benzo(k)fluoranthene	3.9	0.8	mg/kg	0.089	J	0.14		0.27		0.9		0.1	U	0.1	U
Chrysene	3.9	1	mg/kg	0.26		0.32		0.75		2.1		0.1	U	0.026	J
Acenaphthylene	100	100	mg/kg	0.15	U	0.073	J	0.092	J	0.2		0.14	U	0.14	U
Anthracene	100	100	mg/kg	0.06	J	0.1	J	0.28		0.64		0.1	U	0.1	U
Benzo(ghi)perylene	100	100	mg/kg	0.14	J	0.25		0.46		1.4		0.14	U	0.14	U
Fluorene	100	30	mg/kg	0.024	J	0.024	J	0.094	J	0.12	J	0.17	U	0.17	U
Phenanthrene	100	100	mg/kg	0.33		0.24		0.85		2.4		0.1	U	0.043	J
Dibenzo(a,h)anthracene	0.33	0.33	mg/kg	0.036	J	0.063	J	0.1	J	0.31		0.1	U	0.1	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	mg/kg	0.14	J	0.27		0.47		1.5		0.14	U	0.14	U
Pyrene	100	100	mg/kg	0.45		0.47		1.2		3.3		0.1	U	0.048	J
Biphenyl			mg/kg	0.43	U	0.41	U	0.42	U	0.38	U	0.39	U	0.4	U
4-Chloroaniline			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2-Nitroaniline			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
3-Nitroaniline			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
4-Nitroaniline			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Dibenzofuran	59	7	mg/kg	0.19	U	0.18	U	0.036	J	0.071	J	0.17	U	0.17	U
2-Methylnaphthalene			mg/kg	0.22	U	0.22	U	0.035	J	0.038	J	0.2	U	0.21	U
1,2,4,5-Tetrachlorobenzene			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Acetophenone			mg/kg	0.19	U	0.18	U	0.18	U	0.025	J	0.17	U	0.17	U
2,4,6-Trichlorophenol			mg/kg	0.11	U	0.11	U	0.11	U	0.1	U	0.1	U	0.1	U
p-Chloro-m-cresol			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2-Chlorophenol			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2,4-Dichlorophenol			mg/kg	0.17	U	0.16	U	0.17	U	0.15	U	0.15	U	0.16	U
2,4-Dimethylphenol			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2-Nitrophenol			mg/kg	0.4	U	0.39	U	0.4	U	0.36	U	0.37	U	0.38	U
4-Nitrophenol			mg/kg	0.26	U	0.25	U	0.26	U	0.23	U	0.24	U	0.24	U
2,4-Dinitrophenol			mg/kg	0.9	U	0.87	U	0.89	U	0.8	U	0.82	U	0.84	U
4,6-Dinitro-o-cresol			mg/kg	0.48	U	0.47	U	0.48	U	0.43	U	0.44	U	0.45	U
Pentachlorophenol	6.7	0.8	mg/kg	0.15	U	0.14	U	0.15	U	0.13	U	0.14	U	0.14	U
Phenol	100	0.33	mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
2-Methylphenol	100	0.33	mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
3-Methylphenol/4-Methylphenol	100	0.33	mg/kg	0.27	U	0.26	U	0.27	U	0.029	J	0.24	U	0.25	U
2,4,5-Trichlorophenol			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Benzoic Acid			mg/kg	0.6	U	0.59	U	0.6	U	0.54	U	0.55	U	0.56	U
Benzyl Alcohol			mg/kg	0.19	U	0.18	U	0.18	U	0.17	U	0.17	U	0.17	U
Carbazole			mg/kg	0.029	J	0.027	J	0.055	J	0.24		0.17	U	0.17	U
1,4-Dioxane	13	0.1	mg/kg	0.028	U	0.027	U	0.028	U	0.025	U	0.026	U	0.026	U

Notes:

Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1c. Remedial Investigation Polychlorinated Biphenyl Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB1 (0-2")		SB1 (11-13')		SB2 (0-2")		SB2 (11-13')		SB3 (0-2")		SB3 (8-10')		SB4 (0-2")		SB4 (11-13')		SB5 (0-2")		SB5 (8-10')		SB6 (0-2")	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID				L2147599-03		L2147599-04		L2147386-01		L2147386-02		L2147386-19		L2147386-20		L2147386-03		L2147386-04		L2147599-05		L2147599-06		L2147599-07	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																									
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC																									
Aroclor 1016	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1221	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1232	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1242	1	0.1	mg/kg	0.519		0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1248	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1254	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0326	J	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.145	
Aroclor 1260	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1262	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
Aroclor 1268	1	0.1	mg/kg	0.0348	U	0.0338	U	0.0353	U	0.036	U	0.0394	U	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.0375	U
PCBs, Total	1	0.1	mg/kg	0.519		0.0338	U	0.0353	U	0.036	U	0.0326	J	0.0358	U	0.0342	U	0.0338	U	0.04	U	0.0375	U	0.145	

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1c. Remedial Investigation Polychlorinated Biphenyl Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB6 (8-10')		SB7 (0-2")		SB7 (8-10')		SB8 (0-2")		SB8 (8-10')		SB9 (0-2")		SB9 (8-10')		SB10 (0-2")		SB10 (8-10')		SB11 (0-2")		SB11 (8-10')	
SAMPLING DATE				9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID				L2147599-08		L2147386-23		L2147386-24		L2147386-08		L2147386-09		L2147386-15		L2147386-16		L2147386-10		L2147386-11		L2147599-12		L2147599-13	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																									
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC																									
Aroclor 1016	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1221	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1232	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1242	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1248	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1254	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1260	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.104		0.0335	U	0.0212	J	0.035	U	0.0231	J	0.0343	U	0.0375	U	0.0352	U
Aroclor 1262	1	0.1	mg/kg	0.0381	U	0.0355	U	0.0398	U	0.0353	U	0.0335	U	0.0354	U	0.035	U	0.036	U	0.0343	U	0.0375	U	0.0352	U
Aroclor 1268	1	0.1	mg/kg	0.0381	U	0.00375	J	0.0398	U	0.0738		0.0335	U	0.0107	J	0.035	U	0.0122	J	0.0343	U	0.0375	U	0.0352	U
PCBs, Total	1	0.1	mg/kg	0.0381	U	0.00375	J	0.0398	U	0.178		0.0335	U	0.0319	J	0.035	U	0.0353	J	0.0343	U	0.0375	U	0.0352	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1c. Remedial Investigation Polychlorinated Biphenyl Analytical Results in Soil

Former Mill Sanitary Wiping Cloth Site

40 Bruckner Boulevard, Bronx, NY

BCP Site C203146

LOCATION				SB12 (7-8')		SB12 (12-14')		SB13 (0-2")		SB13 (11-13')		SB14 (0-2")		SB14 (11-13')		SB15 (0-2")		SB15 (8-10')		SB16 (0-2")		SB16 (8-10')		SB17 (0-2')	
SAMPLING DATE				9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021	
LAB SAMPLE ID				L2147386-13		L2147386-14		L2147599-01		L2147599-02		L2147386-05		L2147386-06		L2147386-21		L2147386-22		L2147386-25		L2147386-26		L2147599-09	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																									
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC																									
Aroclor 1016	1	0.1	mg/kg	0.0324	U	0.036	U	0.0366	U	0.0344	U	0.0352	U	0.037	U	0.0403	U	0.035	U	0.0343	U	0.0368	U	0.0362	U
Aroclor 1221	1	0.1	mg/kg	0.0324	U	0.036	U	0.0366	U	0.0344	U	0.0352	U	0.037	U	0.0403	U	0.035	U	0.0343	U	0.0368	U	0.0362	U
Aroclor 1232	1	0.1	mg/kg	0.0324	U	0.036	U	0.0366	U	0.0344	U	0.0352	U	0.037	U	0.0403	U	0.035	U	0.0343	U	0.0368	U	0.0362	U
Aroclor 1242	1	0.1	mg/kg	0.0324	U	0.036	U	0.0366	U	0.0344	U	0.0352	U	0.037	U	0.0403	U	0.035	U	0.0343	U	0.0368	U	0.0362	U
Aroclor 1248	1	0.1	mg/kg	0.0324	U	0.036	U	0.0366	U	0.0344	U	0.0352	U	0.037	U	0.0403	U	0.035	U	0.0343	U	0.0368	U	0.0362	U
Aroclor 1254	1	0.1	mg/kg	0.0324	U	0.036	U	0.101		0.0344	U	0.0352	U	0.037	U	0.0236	J	0.035	U	0.0343	U	0.0368	U	0.0202	J
Aroclor 1260	1	0.1	mg/kg	0.0324	U	0.036	U	0.0906		0.0344	U	0.0352	U	0.037	U	0.0218	J	0.035	U	0.0339	J	0.0368	U	0.0362	U
Aroclor 1262	1	0.1	mg/kg	0.0324	U	0.036	U	0.0366	U	0.0344	U	0.0352	U	0.037	U	0.0403	U	0.035	U	0.0343	U	0.0368	U	0.0362	U
Aroclor 1268	1	0.1	mg/kg	0.0324	U	0.036	U	0.03	J	0.0344	U	0.0352	U	0.037	U	0.0149	J	0.035	U	0.00975	J	0.0368	U	0.0362	U
PCBs, Total	1	0.1	mg/kg	0.0324	U	0.036	U	0.222	J	0.0344	U	0.0352	U	0.037	U	0.0603	J	0.035	U	0.0437	J	0.0368	U	0.0202	J

Notes:

Yellow shaded results exceed Unrestricted SCOs

Red shaded results exceed both Unrestricted and Restricted Residential SCOs

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria

NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result

J - Estimated Result

Table 1c. Remedial Investigation Polychlorinated Biphenyl Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB17 (2-4')		SB18 (0-2')		SB18 (2-4')		SB19 (0-2")		DUP-20210902		DUP-1-20210902	
SAMPLING DATE				9/3/2021		9/2/2021		9/2/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-10		L2147386-17		L2147386-18		L2147599-11		L2147386-07		L2147386-12	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)															
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC															
Aroclor 1016	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1221	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1232	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1242	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1248	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1254	1	0.1	mg/kg	0.0338	U	0.0948	J	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1260	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1262	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
Aroclor 1268	1	0.1	mg/kg	0.0338	U	0.186	U	0.0343	U	0.0368	U	0.0334	U	0.0346	U
PCBs, Total	1	0.1	mg/kg	0.0338	U	0.0948	J	0.0343	U	0.0368	U	0.0334	U	0.0346	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1d. Remedial Investigation Pesticides Analytical Results in Soil

Former Mill Sanitary Wiping Cloth SIte

40 Bruckner Boulevard, Bronx, NY

BCP Site C203146

LOCATION				SB1 (0-2")		SB1 (11-13')		SB2 (0-2")		SB2 (11-13')		SB3 (0-2")		SB3 (8-10')		SB4 (0-2")		SB4 (11-13')		SB5 (0-2")		SB5 (8-10')		SB6 (0-2")		SB6 (8-10')	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID				L2147599-03		L2147599-04		L2147386-01		L2147386-02		L2147386-19		L2147386-20		L2147386-03		L2147386-04		L2147599-05		L2147599-06		L2147599-07		L2147599-08	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Organochlorine Pesticides by GC																											
Delta-BHC	100	0.04	mg/kg	0.00169	U	0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
Lindane	1.3	0.1	mg/kg	0.000705	U	0.000676	U	0.000728	U	0.00071	U	0.000767	U	0.000714	U	0.000716	U	0.000692	U	0.000776	U	0.00075	U	0.000727	U	0.000742	U
Alpha-BHC	0.48	0.02	mg/kg	0.000705	U	0.000676	U	0.000728	U	0.00071	U	0.000767	U	0.000714	U	0.000716	U	0.000692	U	0.000776	U	0.00075	U	0.000727	U	0.000742	U
Beta-BHC	0.36	0.036	mg/kg	0.00169	U	0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
Heptachlor	2.1	0.042	mg/kg	0.000846	U	0.000811	U	0.000873	U	0.000852	U	0.000921	U	0.000857	U	0.00086	U	0.00083	U	0.000932	U	0.0009	U	0.000873	U	0.000891	U
Aldrin	0.097	0.005	mg/kg	0.00169	U	0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
Heptachlor epoxide			mg/kg	0.00317	U	0.00304	U	0.00327	U	0.0032	U	0.00104	JP	0.00321	U	0.00322	U	0.00311	U	0.00349	U	0.00338	U	0.00327	U	0.00334	U
Endrin	11	0.014	mg/kg	0.000705	U	0.000676	U	0.000728	U	0.00071	U	0.000767	U	0.000714	U	0.000716	U	0.000692	U	0.000776	U	0.00075	U	0.000727	U	0.000742	U
Endrin aldehyde			mg/kg	0.00211	U	0.00203	U	0.00218	U	0.00213	U	0.0023	U	0.00214	U	0.00215	U	0.00208	U	0.00233	U	0.00225	U	0.00218	U	0.00223	U
Endrin ketone			mg/kg	0.00169	U	0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
Dieldrin	0.2	0.005	mg/kg	0.00106	U	0.00101	U	0.00109	U	0.00106	U	0.00115	U	0.00107	U	0.00107	U	0.00104	U	0.00116	U	0.00112	U	0.00109	U	0.00111	U
4,4'-DDE	8.9	0.0033	mg/kg	0.00169	U	0.00162	U	0.000777	J	0.0017	U	0.00383		0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
4,4'-DDD	13	0.0033	mg/kg	0.00919		0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
4,4'-DDT	7.9	0.0033	mg/kg	0.0169		0.00304	U	0.00144	J	0.0032	U	0.00499		0.00321	U	0.00322	U	0.00311	U	0.00349	U	0.00338	U	0.00327	U	0.00334	U
Endosulfan I	24	2.4	mg/kg	0.00169	U	0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
Endosulfan II	24	2.4	mg/kg	0.00169	U	0.00162	U	0.00175	U	0.0017	U	0.00184	U	0.00171	U	0.00172	U	0.00166	U	0.00186	U	0.0018	U	0.00174	U	0.00178	U
Endosulfan sulfate	24	2.4	mg/kg	0.000705	U	0.000676	U	0.000728	U	0.00071	U	0.000767	U	0.000714	U	0.000716	U	0.000692	U	0.000776	U	0.00075	U	0.000727	U	0.000742	U
Methoxychlor			mg/kg	0.00317	U	0.00304	U	0.00327	U	0.0032	U	0.00345	U	0.00321	U	0.00322	U	0.00311	U	0.00349	U	0.00338	U	0.00327	U	0.00334	U
Toxaphene			mg/kg	0.0317	U	0.0304	U	0.0327	U	0.032	U	0.0345	U	0.0321	U	0.0322	U	0.0311	U	0.0349	U	0.0338	U	0.0327	U	0.0334	U
cis-Chlordane	4.2	0.094	mg/kg	0.00211	U	0.00203	U	0.00218	U	0.00213	U	0.00143	JIP	0.00214	U	0.00215	U	0.00208	U	0.00233	U	0.00225	U	0.00218	U	0.00223	U
trans-Chlordane			mg/kg	0.00211	U	0.00203	U	0.00218	U	0.00213	U	0.00159	JIP	0.00214	U	0.00215	U	0.00208	U	0.00233	U	0.00225	U	0.00218	U	0.00223	U
Chlordane			mg/kg	0.0141	U	0.0135	U	0.0146	U	0.0142	U	0.022		0.0143	U	0.0143	U	0.0138	U	0.0155	U	0.015	U	0.0145	U	0.0148	U

Notes:

Yellow shaded results exceed Unrestricted SCOs

Red shaded results exceed both Unrestricted and Restricted Residential SCOs

NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria

NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result

J - Estimated Result

I- The lower value for the two columns has been reported due to obvious interference

P- The RPD between the results for the two columns exceeds the method-specified criteria

E- Analtyical results from sample extration

Table 1d. Remedial Investigation Pesticides Analytical Results in Soil
Former Mill Sanitary Wiping Cloth SIte
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB7 (0-2")		SB7 (8-10')		SB8 (0-2")		SB8 (8-10')		SB9 (0-2")		SB9 (8-10')		SB10 (0-2")		SB10 (8-10')		SB11 (0-2")		SB11 (8-10')		SB12 (7-8')		SB12 (12-14')	
SAMPLING DATE				9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147386-23		L2147386-24		L2147386-08		L2147386-09		L2147386-15		L2147386-16		L2147386-10		L2147386-11		L2147599-12		L2147599-13		L2147386-13		L2147386-14	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Organochlorine Pesticides by GC																											
Delta-BHC	100	0.04	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
Lindane	1.3	0.1	mg/kg	0.00712	U	0.000755	U	0.00699	U	0.000672	U	0.00681	U	0.000697	U	0.00717	U	0.000679	U	0.000714	U	0.000711	U	0.000672	U	0.000715	U
Alpha-BHC	0.48	0.02	mg/kg	0.00712	U	0.000755	U	0.00699	U	0.000672	U	0.00681	U	0.000697	U	0.00717	U	0.000679	U	0.000714	U	0.000711	U	0.000672	U	0.000715	U
Beta-BHC	0.36	0.036	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
Heptachlor	2.1	0.042	mg/kg	0.00854	U	0.000906	U	0.00839	U	0.000807	U	0.00817	U	0.000837	U	0.00861	U	0.000815	U	0.000856	U	0.000854	U	0.000807	U	0.000858	U
Aldrin	0.097	0.005	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
Heptachlor epoxide			mg/kg	0.032	U	0.0034	U	0.0314	U	0.00303	U	0.0306	U	0.00314	U	0.0323	U	0.00306	U	0.00321	U	0.0032	U	0.00302	U	0.00322	U
Endrin	11	0.014	mg/kg	0.00712	U	0.000755	U	0.00699	U	0.000672	U	0.00681	U	0.000697	U	0.00717	U	0.000679	U	0.000714	U	0.000711	U	0.000672	U	0.000715	U
Endrin aldehyde			mg/kg	0.0214	U	0.00226	U	0.021	U	0.00202	U	0.0204	U	0.00209	U	0.0215	U	0.00204	U	0.00214	U	0.00213	U	0.00202	U	0.00214	U
Endrin ketone			mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
Dieldrin	0.2	0.005	mg/kg	0.0107	U	0.00113	U	0.0105	U	0.00101	U	0.0102	U	0.00104	U	0.0108	U	0.00102	U	0.00107	U	0.00107	U	0.00101	U	0.00107	U
4,4'-DDE	8.9	0.0033	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
4,4'-DDD	13	0.0033	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
4,4'-DDT	7.9	0.0033	mg/kg	0.032	U	0.0034	U	0.0314	U	0.00303	U	0.0306	U	0.00314	U	0.0323	U	0.00306	U	0.00321	U	0.0032	U	0.00302	U	0.00322	U
Endosulfan I	24	2.4	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
Endosulfan II	24	2.4	mg/kg	0.0171	U	0.00181	U	0.0168	U	0.00161	U	0.0163	U	0.00167	U	0.0172	U	0.00163	U	0.00171	U	0.00171	U	0.00161	U	0.00172	U
Endosulfan sulfate	24	2.4	mg/kg	0.00712	U	0.000755	U	0.00699	U	0.000672	U	0.00681	U	0.000697	U	0.00717	U	0.000679	U	0.000714	U	0.000711	U	0.000672	U	0.000715	U
Methoxychlor			mg/kg	0.032	U	0.0034	U	0.0314	U	0.00303	U	0.0306	U	0.00314	U	0.0323	U	0.00306	U	0.00321	U	0.0032	U	0.00302	U	0.00322	U
Toxaphene			mg/kg	0.32	U	0.034	U	0.314	U	0.0303	U	0.306	U	0.0314	U	0.323	U	0.0306	U	0.0321	U	0.032	U	0.0302	U	0.0322	U
cis-Chlordane	4.2	0.094	mg/kg	0.0214	U	0.00226	U	0.021	U	0.00202	U	0.0204	U	0.00209	U	0.0215	U	0.00204	U	0.00214	U	0.00213	U	0.00202	U	0.00214	U
trans-Chlordane			mg/kg	0.0214	U	0.00226	U	0.021	U	0.00202	U	0.0204	U	0.00209	U	0.0215	U	0.00204	U	0.00214	U	0.00213	U	0.00202	U	0.00214	U
Chlordane			mg/kg	0.142	U	0.0151	U	0.14	U	0.0134	U	0.136	U	0.0139	U	0.143	U	0.0136	U	0.0143	U	0.0142	U	0.0134	U	0.0143	U

Notes:

Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result
I- The lower value for the two columns has been reported due to obvious interference
P- The RPD between the results for the two columns exceeds the method-specified criteria
E- Analtyical results from sample extration

Table 1d. Remedial Investigation Pesticides Analytical Results in Soil
Former Mill Sanitary Wiping Cloth SIte
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB13 (0-2")		SB13 (11-13')		SB14 (0-2")		SB14 (11-13')		SB15 (0-2")		SB15 (8-10')		SB16 (0-2")		SB16 (8-10')		SB17 (0-2')		SB17 (2-4')		SB18 (0-2')		SB18 (2-4')	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-01		L2147599-02		L2147386-05		L2147386-06		L2147386-21		L2147386-22		L2147386-25		L2147386-26		L2147599-09		L2147599-10		L2147386-17		L2147386-18	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Organochlorine Pesticides by GC																											
Delta-BHC	100	0.04	mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00837	U	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
Lindane	1.3	0.1	mg/kg	0.000734	U	0.000675	U	0.00071	U	0.000733	U	0.0039	U	0.000698	U	0.00349	U	0.000753	U	0.000706	U	0.00067	U	0.00763	U	0.000694	U
Alpha-BHC	0.48	0.02	mg/kg	0.000734	U	0.000675	U	0.00071	U	0.000733	U	0.0039	U	0.000698	U	0.00349	U	0.000753	U	0.000706	U	0.00067	U	0.00763	U	0.000694	U
Beta-BHC	0.36	0.036	mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00837	U	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
Heptachlor	2.1	0.042	mg/kg	0.000881	U	0.00081	U	0.000852	U	0.00088	U	0.00468	U	0.000837	U	0.00418	U	0.000904	U	0.000847	U	0.000804	U	0.00916	U	0.000833	U
Aldrin	0.097	0.005	mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00837	U	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
Heptachlor epoxide			mg/kg	0.0033	U	0.00304	U	0.00319	U	0.0033	U	0.0176	U	0.00314	U	0.0157	U	0.00339	U	0.00318	U	0.00301	U	0.0344	U	0.00312	U
Endrin	11	0.014	mg/kg	0.000734	U	0.000675	U	0.00071	U	0.000733	U	0.0039	U	0.000698	U	0.00349	U	0.000753	U	0.000706	U	0.00067	U	0.00763	U	0.000694	U
Endrin aldehyde			mg/kg	0.0022	U	0.00202	U	0.00213	U	0.0022	U	0.0117	U	0.00209	U	0.0105	U	0.00226	U	0.00212	U	0.00201	U	0.0229	U	0.00208	U
Endrin ketone			mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00837	U	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
Dieldrin	0.2	0.005	mg/kg	0.0011	U	0.00101	U	0.00106	U	0.0011	U	0.00585	U	0.00105	U	0.00523	U	0.00113	U	0.00106	U	0.001	U	0.0114	U	0.00104	U
4,4'-DDE	8.9	0.0033	mg/kg	0.00141	JIP	0.00162	U	0.0017	U	0.00176	U	0.00594	J	0.00167	U	0.00242	J	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
4,4'-DDD	13	0.0033	mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00424	J	0.00181	U	0.00169	U	0.00161	U	0.0138	J	0.00167	U
4,4'-DDT	7.9	0.0033	mg/kg	0.00753	IP	0.00304	U	0.00319	U	0.0033	U	0.00797	JP	0.00314	U	0.0157	U	0.00339	U	0.00318	U	0.00301	U	0.0344	U	0.00312	U
Endosulfan I	24	2.4	mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00837	U	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
Endosulfan II	24	2.4	mg/kg	0.00176	U	0.00162	U	0.0017	U	0.00176	U	0.00936	U	0.00167	U	0.00837	U	0.00181	U	0.00169	U	0.00161	U	0.0183	U	0.00167	U
Endosulfan sulfate	24	2.4	mg/kg	0.000734	U	0.000675	U	0.00071	U	0.000733	U	0.0039	U	0.000698	U	0.00349	U	0.000753	U	0.000706	U	0.00067	U	0.00763	U	0.000694	U
Methoxychlor			mg/kg	0.0033	U	0.00304	U	0.00319	U	0.0033	U	0.0176	U	0.00314	U	0.0157	U	0.00339	U	0.00318	U	0.00301	U	0.0344	U	0.00312	U
Toxaphene			mg/kg	0.033	U	0.0304	U	0.0319	U	0.033	U	0.176	U	0.0314	U	0.157	U	0.0339	U	0.0318	U	0.0301	U	0.344	U	0.0312	U
cis-Chlordane	4.2	0.094	mg/kg	0.00241		0.00202	U	0.00213	U	0.0022	U	0.0117	U	0.00209	U	0.00517	J	0.00226	U	0.00212	U	0.00201	U	0.0229	U	0.00208	U
trans-Chlordane			mg/kg	0.00337		0.00202	U	0.00213	U	0.0022	U	0.0117	U	0.00209	U	0.00587	JP	0.00226	U	0.00212	U	0.00201	U	0.0229	U	0.00208	U
Chlordane			mg/kg	0.0147	U	0.0135	U	0.0142	U	0.0147	U	0.078	U	0.014	U	0.0697	U	0.0151	U	0.0141	U	0.0134	U	0.153	U	0.0139	U

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result
I- The lower value for the two columns has been reported due to obvious interference
P- The RPD between the results for the two columns exceeds the method-specified criteria
E- Analtyical results from sample extration

Table 1d. Remedial Investigation Pesticides Analytical Results in Soil
Former Mill Sanitary Wiping Cloth SIte
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB19 (0-2")		DUP-20210902		DUP-1-20210902	
SAMPLING DATE				9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-11		L2147386-07		L2147386-12	
SAMPLE TYPE				SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)									
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual
Organochlorine Pesticides by GC									
Delta-BHC	100	0.04	mg/kg	0.00175	U	0.00158	U	0.00166	U
Lindane	1.3	0.1	mg/kg	0.00073	U	0.000657	U	0.000694	U
Alpha-BHC	0.48	0.02	mg/kg	0.00073	U	0.000657	U	0.000694	U
Beta-BHC	0.36	0.036	mg/kg	0.00175	U	0.00158	U	0.00166	U
Heptachlor	2.1	0.042	mg/kg	0.000876	U	0.000789	U	0.000833	U
Aldrin	0.097	0.005	mg/kg	0.00175	U	0.00158	U	0.00166	U
Heptachlor epoxide			mg/kg	0.00329	U	0.00296	U	0.00312	U
Endrin	11	0.014	mg/kg	0.00073	U	0.000657	U	0.000694	U
Endrin aldehyde			mg/kg	0.00219	U	0.00197	U	0.00208	U
Endrin ketone			mg/kg	0.00175	U	0.00158	U	0.00166	U
Dieldrin	0.2	0.005	mg/kg	0.0011	U	0.000986	U	0.00104	U
4,4'-DDE	8.9	0.0033	mg/kg	0.00175	U	0.00158	U	0.00166	U
4,4'-DDD	13	0.0033	mg/kg	0.00175	U	0.00158	U	0.00166	U
4,4'-DDT	7.9	0.0033	mg/kg	0.00329	U	0.00296	U	0.00312	U
Endosulfan I	24	2.4	mg/kg	0.00175	U	0.00158	U	0.00166	U
Endosulfan II	24	2.4	mg/kg	0.00175	U	0.00158	U	0.00166	U
Endosulfan sulfate	24	2.4	mg/kg	0.00073	U	0.000657	U	0.000694	U
Methoxychlor			mg/kg	0.00329	U	0.00296	U	0.00312	U
Toxaphene			mg/kg	0.0329	U	0.0296	U	0.0312	U
cis-Chlordane	4.2	0.094	mg/kg	0.00219	U	0.00197	U	0.00208	U
trans-Chlordane			mg/kg	0.00219	U	0.00197	U	0.00208	U
Chlordane			mg/kg	0.0146	U	0.0131	U	0.0139	U

Notes:

Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result
I- The lower value for the two columns has been reported due to obvious interference
P- The RPD between the results for the two columns exceeds the method-specified criteria
E- Analtyical results from sample extration

Table 1e. Remedial Investigation Emerging Contaminants Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION		SB1 (0-2")		SB1 (11-13')		SB2 (0-2")		SB2 (11-13')		SB3 (0-2")		SB3 (8-10')		SB4 (0-2")		SB4 (11-13')		SB5 (0-2")		SB5 (8-10')		SB6 (0-2")	
SAMPLING DATE		9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID		L2147599-03		L2147599-04		L2147386-01		L2147386-02		L2147386-19		L2147386-20		L2147386-03		L2147386-04		L2147599-05		L2147599-06		L2147599-07	
SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																							
	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																							
Solids, Total	%	92.9		93.3		90.3		90.5		83.8		92		92.7		96		82.5		85.8		86	
Perfluorinated Alkyl Acids by Isotope Dilution																							
Perfluorobutanoic Acid (PFBA)	mg/kg	0.000511	U	0.000516	U	0.000026	J	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000032	J	0.000551	U	0.000547	U
Perfluoropentanoic Acid (PFPeA)	mg/kg	0.000511	U	0.000516	U	0.000111	J	0.000513	U	0.000099	J	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorobutanesulfonic Acid (PFBS)	mg/kg	0.000256	U	0.000258	U	0.000255	U	0.000256	U	0.000294	U	0.000248	U	0.000244	U	0.000253	U	0.000293	U	0.000276	U	0.000274	U
Perfluorohexanoic Acid (PFHxA)	mg/kg	0.000511	U	0.000516	U	0.000108	J	0.000513	U	0.000112	J	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluoroheptanoic Acid (PFHpA)	mg/kg	0.000256	U	0.000258	U	0.00006	J	0.000256	U	0.000294	U	0.000248	U	0.000244	U	0.000253	U	0.000293	U	0.000276	U	0.000062	J
Perfluorohexanesulfonic Acid (PFHxS)	mg/kg	0.000256	U	0.000258	U	0.000099	J	0.000256	U	0.000294	U	0.000248	U	0.000244	U	0.000253	U	0.000293	U	0.000276	U	0.000274	U
Perfluorooctanoic Acid (PFOA)	mg/kg	0.000256	U	0.000258	U	0.000176	J	0.000256	U	0.000115	J	0.000061	JF	0.000244	U	0.000253	U	0.000293	U	0.000276	U	0.000306	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluoroheptanesulfonic Acid (PFHpS)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorononanoic Acid (PFNA)	mg/kg	0.000256	U	0.000258	U	0.000255	U	0.000256	U	0.000106	J	0.000248	U	0.000244	U	0.000253	U	0.000293	U	0.000276	U	0.000274	U
Perfluorooctanesulfonic Acid (PFOS)	mg/kg	0.000256	U	0.000258	U	0.000255	U	0.000256	U	0.0013		0.000248	U	0.000244	U	0.000253	U	0.000159	J	0.000178	J	0.00291	
Perfluorodecanoic Acid (PFDA)	mg/kg	0.000256	U	0.000258	U	0.000255	U	0.000256	U	0.000294	U	0.000248	U	0.000244	U	0.000253	U	0.000293	U	0.000276	U	0.000274	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluoroundecanoic Acid (PFUnA)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorodecanesulfonic Acid (PFDS)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorooctanesulfonamide (FOSA)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorododecanoic Acid (PFDoA)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorotridecanoic Acid (PFTrDA)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
Perfluorotetradecanoic Acid (PFTA)	mg/kg	0.000511	U	0.000516	U	0.00051	U	0.000513	U	0.000588	U	0.000495	U	0.000487	U	0.000506	U	0.000587	U	0.000551	U	0.000547	U
PFOA/PFOS, Total	mg/kg	0.000256	U	0.000258	U	0.000176	J	0.000256	U	0.00142	J	0.000061	J	0.000244	U	0.000253	U	0.000159	J	0.000178	J	0.00322	

Notes:
No current EPA guidance for PFOA/PFAs
U - Non Detect Result
J - Estimated Result

Table 1e. Remedial Investigation Emerging Contaminants Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION		SB6 (8-10')		SB7 (0-2")		SB7 (8-10')		SB8 (0-2")		SB8 (8-10')		SB9 (0-2")		SB9 (8-10')		SB10 (0-2")		SB10 (8-10')		SB11 (0-2")		SB11 (8-10')		SB12 (7-8')	
SAMPLING DATE		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021	
LAB SAMPLE ID		L2147599-08		L2147386-23		L2147386-24		L2147386-08		L2147386-09		L2147386-15		L2147386-16		L2147386-10		L2147386-11		L2147599-12		L2147599-13		L2147386-13	
SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																									
	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																									
Solids, Total	%	85.6		90.8		83.6		91		96.5		93.3		93		92.3		93.8		87.9		90		97.2	
Perfluorinated Alkyl Acids by Isotope Dilution																									
Perfluorobutanoic Acid (PFBA)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000095	J	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluoropentanoic Acid (PFPeA)	mg/kg	0.000515	U	0.000085	J	0.000575	U	0.000151	J	0.000495	U	0.000059	J	0.000514	U	0.000088	J	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluorobutanesulfonic Acid (PFBS)	mg/kg	0.000257	U	0.000246	U	0.000288	U	0.000261	U	0.000247	U	0.000243	U	0.000257	U	0.000245	U	0.000249	U	0.000266	U	0.000272	U	0.000243	U
Perfluorohexanoic Acid (PFHxA)	mg/kg	0.000515	U	0.000092	J	0.000575	U	0.000187	J	0.000495	U	0.000067	J	0.000514	U	0.000073	J	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluoroheptanoic Acid (PFHpA)	mg/kg	0.000257	U	0.000246	U	0.000288	U	0.00014	J	0.000247	U	0.000243	U	0.000257	U	0.000245	U	0.000249	U	0.000266	U	0.000272	U	0.000243	U
Perfluorohexanesulfonic Acid (PFHxS)	mg/kg	0.000257	U	0.000246	U	0.000288	U	0.000261	U	0.000247	U	0.000243	U	0.000257	U	0.000245	U	0.00013	J	0.000266	U	0.000272	U	0.000243	U
Perfluorooctanoic Acid (PFOA)	mg/kg	0.000051	J	0.000051	J	0.000108	J	0.000552		0.000247	U	0.000131	J	0.000158	J	0.000114	J	0.000249	U	0.000266	U	0.000272	U	0.000243	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluoroheptanesulfonic Acid (PFHpS)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluorononanoic Acid (PFNA)	mg/kg	0.000257	U	0.000246	U	0.000288	U	0.000143	J	0.000247	U	0.000243	U	0.000257	U	0.000245	U	0.000249	U	0.000266	U	0.000272	U	0.000243	U
Perfluorooctanesulfonic Acid (PFOS)	mg/kg	0.000257	U	0.00106		0.000158	J	0.00392		0.000171	J	0.00137		0.00075		0.000584		0.000249	U	0.000266	U	0.000174	JF	0.000243	U
Perfluorodecanoic Acid (PFDA)	mg/kg	0.000257	U	0.000081	J	0.000288	U	0.000154	J	0.000247	U	0.000094	J	0.000257	U	0.000245	U	0.000249	U	0.000266	U	0.000272	U	0.000243	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluoroundecanoic Acid (PFUnA)	mg/kg	0.000515	U	0.000062	JF	0.000575	U	0.000053	J	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluorodecanesulfonic Acid (PFDS)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluorooctanesulfonamide (FOSA)	mg/kg	0.000515	U	0.00218	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.00209	U	0.000532	U	0.000545	U	0.000485	U
Perfluorododecanoic Acid (PFDoA)	mg/kg	0.000515	U	0.000492	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.000498	U	0.000532	U	0.000545	U	0.000485	U
Perfluorotridecanoic Acid (PFTrDA)	mg/kg	0.000515	U	0.00218	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.00209	U	0.000532	U	0.000545	U	0.000485	U
Perfluorotetradecanoic Acid (PFTA)	mg/kg	0.000515	U	0.00218	U	0.000575	U	0.000522	U	0.000495	U	0.000486	U	0.000514	U	0.00049	U	0.00209	U	0.000532	U	0.000545	U	0.000485	U
PFOA/PFOS, Total	mg/kg	0.000051	J	0.00111	J	0.000266	J	0.00447		0.000171	J	0.0015	J	0.000908	J	0.000698	J	0.000249	U	0.000266	U	0.000174	J	0.000243	U

Notes:
No current EPA guidance for PFOA/PFAs
U - Non Detect Result
J - Estimated Result

Table 1e. Remedial Investigation Emerging Contaminants Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION		SB12 (12-14')		SB13 (0-2")		SB13 (11-13')		SB14 (0-2")		SB14 (11-13')		SB15 (0-2")		SB15 (8-10')		SB16 (0-2")		SB16 (8-10')		SB17 (0-2')		SB17 (2-4')		SB18 (0-2')	
SAMPLING DATE		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021	
LAB SAMPLE ID		L2147386-14		L2147599-01		L2147599-02		L2147386-05		L2147386-06		L2147386-21		L2147386-22		L2147386-25		L2147386-26		L2147599-09		L2147599-10		L2147386-17	
SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																									
	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																									
Solids, Total	%	91.1		89		94.5		92.2		88.9		82.2		91.4		91.8		85.8		89.7		94.7		86.3	
Perfluorinated Alkyl Acids by Isotope Dilution																									
Perfluorobutanoic Acid (PFBA)	mg/kg	0.000497	U	0.00004	J	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000028	J	0.000519	U	0.000025	J
Perfluoropentanoic Acid (PFPeA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000063	J	0.000488	U	0.000057	J	0.000541	U	0.000073	J	0.000519	U	0.000534	U
Perfluorobutanesulfonic Acid (PFBS)	mg/kg	0.000248	U	0.000261	U	0.000238	U	0.000243	U	0.000271	U	0.000289	U	0.000244	U	0.000254	U	0.00027	U	0.000265	U	0.000259	U	0.000267	U
Perfluorohexanoic Acid (PFHxA)	mg/kg	0.000497	U	0.000055	J	0.000476	U	0.000486	U	0.000542	U	0.000082	J	0.000488	U	0.000058	J	0.000541	U	0.000137	J	0.000519	U	0.000534	U
Perfluoroheptanoic Acid (PFHpA)	mg/kg	0.000248	U	0.000066	J	0.000238	U	0.000243	U	0.000271	U	0.000289	U	0.000244	U	0.000055	J	0.00027	U	0.000076	J	0.000259	U	0.000267	U
Perfluorohexanesulfonic Acid (PFHxS)	mg/kg	0.000248	U	0.000261	U	0.000238	U	0.000243	U	0.000271	U	0.000289	U	0.000244	U	0.000254	U	0.00027	U	0.000265	U	0.000259	U	0.000267	U
Perfluorooctanoic Acid (PFOA)	mg/kg	0.000248	U	0.000383		0.000238	U	0.000243	U	0.000271	U	0.000053	J	0.000244	U	0.000143	J	0.000106	J	0.000283		0.000071	J	0.000066	J
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluoroheptanesulfonic Acid (PFHpS)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluorononanoic Acid (PFNA)	mg/kg	0.000248	U	0.000261	U	0.000238	U	0.000243	U	0.000271	U	0.000289	U	0.000244	U	0.000254	U	0.00027	U	0.000097	J	0.000259	U	0.000267	U
Perfluorooctanesulfonic Acid (PFOS)	mg/kg	0.000248	U	0.00165		0.000238	U	0.000276	F	0.000271	U	0.00211		0.000244	U	0.000739		0.000693		0.0036		0.000259	U	0.00017	J
Perfluorodecanoic Acid (PFDA)	mg/kg	0.000248	U	0.000261	U	0.000238	U	0.000243	U	0.000271	U	0.000116	J	0.000244	U	0.000254	U	0.00027	U	0.000265	U	0.000259	U	0.000267	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluoroundecanoic Acid (PFUnA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluorodecanesulfonic Acid (PFDS)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluorooctanesulfonamide (FOSA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluorododecanoic Acid (PFDoA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluorotridecanoic Acid (PFTrDA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
Perfluorotetradecanoic Acid (PFTA)	mg/kg	0.000497	U	0.000521	U	0.000476	U	0.000486	U	0.000542	U	0.000578	U	0.000488	U	0.000508	U	0.000541	U	0.000531	U	0.000519	U	0.000534	U
PFOA/PFOS, Total	mg/kg	0.000248	U	0.00203		0.000238	U	0.000276		0.000271	U	0.00216	J	0.000244	U	0.000882	J	0.000799	J	0.00388		0.000071	J	0.000236	J

Notes:
No current EPA guidance for PFOA/PFAs
U - Non Detect Result
J - Estimated Result

Table 1e. Remedial Investigation Emerging Contaminants Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION		SB18 (2-4')		SB19 (0-2")		DUP-20210902		DUP-1-20210902	
SAMPLING DATE		9/2/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID		L2147386-18		L2147599-11		L2147386-07		L2147386-12	
SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)									
	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry									
Solids, Total	%	95.1		88.8		95.9		93.5	
Perfluorinated Alkyl Acids by Isotope Dilution									
Perfluorobutanoic Acid (PFBA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluoropentanoic Acid (PFPeA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorobutanesulfonic Acid (PFBS)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000252	U
Perfluorohexanoic Acid (PFHxA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluoroheptanoic Acid (PFHpA)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000252	U
Perfluorohexanesulfonic Acid (PFHxS)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000252	U
Perfluorooctanoic Acid (PFOA)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000107	J
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluoroheptanesulfonic Acid (PFHpS)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorononanoic Acid (PFNA)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000252	U
Perfluorooctanesulfonic Acid (PFOS)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000673	
Perfluorodecanoic Acid (PFDA)	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.000252	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluoroundecanoic Acid (PFUnA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorodecanesulfonic Acid (PFDS)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorooctanesulfonamide (FOSA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorododecanoic Acid (PFDoA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorotridecanoic Acid (PFTrDA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
Perfluorotetradecanoic Acid (PFTA)	mg/kg	0.000512	U	0.000541	U	0.0005	U	0.000504	U
PFOA/PFOS, Total	mg/kg	0.000256	U	0.000271	U	0.00025	U	0.00078	J

Notes:
No current EPA guidance for PFOA/PFAs
U - Non Detect Result
J - Estimated Result

Table 1f. Remedial Investigation Metals Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB1 (0-2")		SB1 (11-13')		SB2 (0-2")		SB2 (11-13')		SB3 (0-2")		SB3 (8-10')		SB4 (0-2")		SB4 (11-13')		SB5 (0-2")		SB5 (8-10')		SB6 (0-2")		SB6 (8-10')	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/3/2021		9/3/2021	
LAB SAMPLE ID				L2147599-03		L2147599-04		L2147386-01		L2147386-02		L2147386-19		L2147386-20		L2147386-03		L2147386-04		L2147599-05		L2147599-06		L2147599-07		L2147599-08	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals																											
Aluminum, Total			mg/kg	6070		5450		7090		4250		2670		4780		5110		5320		3260		5700		4290		5500	
Antimony, Total			mg/kg	4.21	U	4.23	U	4.31	U	4.32	U	3.94	J	4.22	U	4.26	U	4.06	U	4.78	U	4.65	U	4.6	U	4.43	U
Arsenic, Total	16	13	mg/kg	2.85		0.964		1.88		1.32		19.2		1.76		2.28		1.85		1.97		2.12		3.65		2.37	
Barium, Total	400	350	mg/kg	150		31.5		41.2		11.3		289		18.4		70.2		21		32.1		18.9		58.5		21.7	
Beryllium, Total	72	7.2	mg/kg	0.346	J	0.347	J	0.353	J	0.199	J	0.258	J	0.228	J	0.247	J	0.243	J	0.144	J	0.242	J	0.266	J	0.239	J
Cadmium, Total	4.3	2.5	mg/kg	0.362	J	0.846	U	0.862	U	0.865	U	0.598	J	0.844	U	0.851	U	0.811	U	0.957	U	0.93	U	0.919	U	0.886	U
Calcium, Total			mg/kg	17200		1140		3410		285		12600		371		2040		462		6670		564		7410		510	
Chromium, Total			mg/kg	14.9		7.76		11.2		6.07		19		6.2		9.02		7.99		8.03		8.61		10.1		8.24	
Cobalt, Total			mg/kg	7.15		2.5		6.88		3.12		10.8		3.53		3.57		4.48		4.53		5.05		7.66		4.78	
Copper, Total	270	50	mg/kg	135		5.47		12.4		5.89		297		6.1		15.6		7.67		41.4		9.46		32		9.31	
Iron, Total			mg/kg	13500		6530		10100		6870		37600		8840		7790		10300		9940		13200		11300		12800	
Lead, Total	400	63	mg/kg	181		8.66		74.3		3.29	J	1590		3.96	J	233		4.54		63.7		5.29		112		4.93	
Magnesium, Total			mg/kg	10800		1060		3050		1690		1520		1830		1980		2340		4250		2380		4810		2240	
Manganese, Total	2000	1600	mg/kg	229		378		472		234		316		231		261		296		140		296		263		274	
Mercury, Total	0.81	0.18	mg/kg	0.548		0.049	J	0.115		0.076	U	10.2		0.069	U	0.08		0.07	U	0.466		0.082	U	0.544		0.077	U
Nickel, Total	310	30	mg/kg	14.7		5.26		11.2		6.16		20.4		7.5		7.76		9.07		7.58		9.79		14.2		8.91	
Potassium, Total			mg/kg	1070		197	J	800		354		258		321		586		418		622		430		1080		298	
Selenium, Total	180	3.9	mg/kg	1.68	U	1.69	U	1.72	U	1.73	U	1	J	1.69	U	1.7	U	1.62	U	1.91	U	1.86	U	1.84	U	1.77	U
Silver, Total	180	2	mg/kg	0.843	U	0.846	U	0.862	U	0.865	U	0.386	J	0.844	U	0.851	U	0.811	U	0.957	U	0.93	U	0.919	U	0.886	U
Sodium, Total			mg/kg	274		82.5	J	377		149	J	152	J	24.2	J	96.2	J	46.8	J	178	J	52.8	J	220		145	J
Thallium, Total			mg/kg	1.68	U	1.69	U	1.72	U	1.73	U	1.84	U	1.69	U	1.7	U	1.62	U	1.91	U	1.86	U	1.84	U	1.77	U
Vanadium, Total			mg/kg	18.7		7.58		12.1		7.21		18.6		8.38		10.2		9.23		19.6		11.7		15.9		11.1	
Zinc, Total	10000	109	mg/kg	206		15		61		13.9		684		16.9		81.4		23		143		28		71.6		25.8	

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1f. Remedial Investigation Metals Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB7 (0-2")		SB7 (8-10')		SB8 (0-2")		SB8 (8-10')		SB9 (0-2")		SB9 (8-10')		SB10 (0-2")		SB10 (8-10')		SB11 (0-2")		SB11 (8-10')		SB12 (7-8')		SB12 (12-14')	
SAMPLING DATE				9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147386-23		L2147386-24		L2147386-08		L2147386-09		L2147386-15		L2147386-16		L2147386-10		L2147386-11		L2147599-12		L2147599-13		L2147386-13		L2147386-14	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																											
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals																											
Aluminum, Total			mg/kg	2820		6760		3540		1590		4990		5100		7690		2660		7720		1890		5410		5670	
Antimony, Total			mg/kg	4.24	U	0.413	J	9.55		4.04	U	4.17	U	4.18	U	4.18	U	4.05	U	4.31	U	4.42	U	3.93	U	4.31	U
Arsenic, Total	16	13	mg/kg	3.74		2.92		9.1		1		2.99		2.32		3.4		1		5.72		0.451	J	2.19		2.32	
Barium, Total	400	350	mg/kg	38.4		26.6		255		14.9		73.6		25.7		95.2		17.1		62.8		12.2		27.8		22.7	
Beryllium, Total	72	7.2	mg/kg	0.085	J	0.3	J	0.388	J	0.089	J	0.217	J	0.243	J	0.343	J	0.122	J	0.396	J	0.106	J	0.252	J	0.259	J
Cadmium, Total	4.3	2.5	mg/kg	0.313	J	0.676	J	5.46		0.809	U	0.359	J	0.837	U	0.836	U	0.81	U	0.861	U	0.884	U	0.786	U	0.863	U
Calcium, Total			mg/kg	70400		504		22300		569		27300		1300		21300		669		3640		252		430		526	
Chromium, Total			mg/kg	8.39		10.9		50.2		3.92		13.2		11.8		19		5.64		23.6		3.91		7.59		8.02	
Cobalt, Total			mg/kg	5.44		6.09		11.5		2.05		6.02		4.42		7.53		2.63		8.09		2.04		4.27		4.9	
Copper, Total	270	50	mg/kg	74.5		11.8		588		5.45		56.3		9.89		46.2		11.9		27.1		4.46		9.91		9.04	
Iron, Total			mg/kg	12200		15600		23700		4770		12000		10600		14800		5800		19300		4360		9480		11800	
Lead, Total	400	63	mg/kg	303		6.54		1330		2.1	J	90.1		7.61		86.7		2.22	J	80.2		2.09	J	44.5		4.88	
Magnesium, Total			mg/kg	31500		2970		4700		891		8500		2490		6740		1440		5590		765		2390		2590	
Manganese, Total	2000	1600	mg/kg	137		388		294		176		173		296		282		98.4		365		152		292		332	
Mercury, Total	0.81	0.18	mg/kg	0.48		0.075	U	5.62		0.07	U	0.424		0.08		0.204		0.075	U	0.512		0.073	U	0.05	J	0.07	U
Nickel, Total	310	30	mg/kg	8.44		12.9		74.8		5		13.3		9.54		16.4		5.47		15		3.83		8.34		10.4	
Potassium, Total			mg/kg	354		560		655		233		1440		457		2140		781		2090		295		469		503	
Selenium, Total	180	3.9	mg/kg	1.36	J	0.422	J	0.692	J	1.62	U	1.67	U	1.67	U	1.67	U	1.62	U	0.31	J	1.77	U	1.57	U	1.72	U
Silver, Total	180	2	mg/kg	0.847	U	0.939	U	1.69		0.809	U	0.834	U	0.837	U	0.836	U	0.81	U	0.861	U	0.884	U	0.786	U	0.863	U
Sodium, Total			mg/kg	237		104	J	176		51.9	J	182		110	J	312		63.8	J	599		63.6	J	60.3	J	38.9	J
Thallium, Total			mg/kg	1.69	U	1.88	U	1.69	U	1.62	U	1.67	U	1.67	U	1.67	U	1.62	U	1.72	U	1.77	U	1.57	U	1.72	U
Vanadium, Total			mg/kg	23.7		14.3		173		4.46		21.1		12.7		28.6		6.69		27.9		4.7		10.4		10	
Zinc, Total	10000	109	mg/kg	50.4		79.3		694		8.91		97.2		21.4		86.9		23.3		93.2		8.97		35.4		28.2	

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1f. Remedial Investigation Metals Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB13 (0-2")		SB13 (11-13')		SB14 (0-2")		SB14 (11-13')		SB15 (0-2")	
SAMPLING DATE				9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-01		L2147599-02		L2147386-05		L2147386-06		L2147386-21	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)													
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals													
Aluminum, Total			mg/kg	6720		5030		8470		3170		9340	
Antimony, Total			mg/kg	4.36	U	4.01	U	4.24	U	4.36	U	4.68	U
Arsenic, Total	16	13	mg/kg	5.46		1.6		1.32		1.04		3.66	
Barium, Total	400	350	mg/kg	347		21.7		60.9		13.9		111	
Beryllium, Total	72	7.2	mg/kg	0.322	J	0.241	J	0.509		0.139	J	0.094	J
Cadmium, Total	4.3	2.5	mg/kg	2.26		0.803	U	0.849	U	0.871	U	1.14	
Calcium, Total			mg/kg	25200		333		4050		365		31000	
Chromium, Total			mg/kg	18.9		6.83		23.7		5.97		18.7	
Cobalt, Total			mg/kg	7.09		4.08		11.9		2.51		12.3	
Copper, Total	270	50	mg/kg	57.2		7.22		32.5		5.87		141	
Iron, Total			mg/kg	15700		10400		17000		5280		28900	
Lead, Total	400	63	mg/kg	501		4.21		14.6		3.01	J	296	
Magnesium, Total			mg/kg	5460		1860		6790		1370		5700	
Manganese, Total	2000	1600	mg/kg	270		268		401		217		234	
Mercury, Total	0.81	0.18	mg/kg	0.433		0.07	U	0.069	U	0.079	U	0.415	
Nickel, Total	310	30	mg/kg	15		8.28		18.4		5.61		20.7	
Potassium, Total			mg/kg	1960		365		2330		237		1180	
Selenium, Total	180	3.9	mg/kg	0.453	J	1.6	U	1.7	U	1.74	U	1.12	J
Silver, Total	180	2	mg/kg	0.872	U	0.803	U	0.849	U	0.871	U	0.935	U
Sodium, Total			mg/kg	384		97.7	J	243		42.2	J	571	
Thallium, Total			mg/kg	1.74	U	1.6	U	1.7	U	1.74	U	1.87	U
Vanadium, Total			mg/kg	34.4		9.9		28.8		6.68		55.1	
Zinc, Total	10000	109	mg/kg	400		19.4		48.7		10.2		163	

LOCATION	SB15 (8-10')		SB16 (0-2")		SB16 (8-10')		SB17 (0-2')		SB17 (2-4')		SB18 (0-2')		SB18 (2-4')	
SAMPLING DATE	9/2/2021		9/2/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID	L2147386-22		L2147386-25		L2147386-26		L2147599-09		L2147599-10		L2147386-17		L2147386-18	
SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)														
	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals														
Aluminum, Total	6800		6760		4970		3100		6470		2940		3140	
Antimony, Total	0.433	J	4.17	U	4.55	U	1.48	J	4.17	U	4.68		0.387	J
Arsenic, Total	1.74		2.54		2.47		12.6		2.07		34.6		8.21	
Barium, Total	34.7		45.1		22.6		98.2		34.4		613		31.8	
Beryllium, Total	0.308	J	0.3	J	0.228	J	0.355	J	0.376	J	0.218	J	0.222	J
Cadmium, Total	0.275	J	0.434	J	0.346	J	0.943		0.835	U	1.62		0.823	U
Calcium, Total	750		4580		625		13200		1750		62500		1670	
Chromium, Total	8.99		20.7		12.4		13.2		16.5		27.5		7.52	
Cobalt, Total	5.37		6.14		5.07		8.83		6.55		5.52		4.87	
Copper, Total	10.3		19.3		8.32		68.2		17.4		69.5		133	
Iron, Total	13800		14400		10800		16300		13900		36200		11700	
Lead, Total	5.79		42.6		4.84		260		12.3		786		156	
Magnesium, Total	2700		2920		2240		1400		3700		2770		1200	
Manganese, Total	351		272		330		146		234		255		196	
Mercury, Total	0.069	U	0.128		0.074	U	0.215		0.053	J	4.66		0.378	
Nickel, Total	11		14		10		15.3		12.8		26.7		9.16	
Potassium, Total	555		862		790		950		1460		622		347	
Selenium, Total	1.66	U	0.793	J	0.656	J	0.71	J	1.67	U	4.97		0.84	J
Silver, Total	0.833	U	0.835	U	0.91	U	0.866	U	0.835	U	0.942		0.823	U
Sodium, Total	26.9	J	101	J	35	J	756		354		151	J	77.2	J
Thallium, Total	0.416	J	1.67	U	1.82	U	1.73	U	1.67	U	1.74	U	1.65	U
Vanadium, Total	13		16.3		11.2		10.3		22.2		52.8		13.4	
Zinc, Total	27.9		86.3		90.1		236		40.4		1740		156	

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 1f. Remedial Investigation Metals Analytical Results in Soil
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION				SB19 (0-2")		GS-1		GS-2		GS-3		DUP-20210902		DUP-1-20210902	
SAMPLING DATE				9/3/2021		9/3/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID				L2147599-11		L2147599-20		L2147599-19		L2147599-18		L2147386-07		L2147386-12	
SAMPLE TYPE				SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)															
	NY-RESRR	NY-UNRES	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals															
Aluminum, Total			mg/kg	4660		5750		5360		4430		5160		3590	
Antimony, Total			mg/kg	4.44	U	4.32	U	4.26	U	0.513	J	3.99	U	4.16	U
Arsenic, Total	16	13	mg/kg	5.72		3.07		3.05		4.73		2.02		1.41	
Barium, Total	400	350	mg/kg	160		116		70		168		21.4		22.4	
Beryllium, Total	72	7.2	mg/kg	0.258	J	0.259	J	0.222	J	0.225	J	0.247	J	0.141	J
Cadmium, Total	4.3	2.5	mg/kg	0.409	J	0.865	U	0.853	U	0.21	J	0.797	U	0.832	U
Calcium, Total			mg/kg	53200		15000		21900		6720		504		970	
Chromium, Total			mg/kg	14.3		14.5		14.9		11		7.21		13.9	
Cobalt, Total			mg/kg	3.9		6.74		5.6		4.58		4.14		4.9	
Copper, Total	270	50	mg/kg	22		30.5		27.1		90.7		7.67		10.3	
Iron, Total			mg/kg	11200		14500		13000		11500		10200		8020	
Lead, Total	400	63	mg/kg	761		64.6		40.7		310		4.57		4.59	
Magnesium, Total			mg/kg	3090		5570		4600		2000		2170		2550	
Manganese, Total	2000	1600	mg/kg	229		336		189		230		303		236	
Mercury, Total	0.81	0.18	mg/kg	8.77		0.176		0.081		0.458		0.07	U	0.071	U
Nickel, Total	310	30	mg/kg	10.2		13.5		10.7		10.2		8.79		13	
Potassium, Total			mg/kg	750		1220		1950		821		384		417	
Selenium, Total	180	3.9	mg/kg	1.78	U	1.73	U	1.7	U	0.466	J	1.59	U	1.66	U
Silver, Total	180	2	mg/kg	0.889	U	0.865	U	0.853	U	0.777	U	0.797	U	0.832	U
Sodium, Total			mg/kg	337		179		132	J	242		43.4	J	92	J
Thallium, Total			mg/kg	1.78	U	1.73	U	1.7	U	1.55	U	1.59	U	1.66	U
Vanadium, Total			mg/kg	18.4		25.1		19.5		13.4		9.14		12	
Zinc, Total	10000	109	mg/kg	417		87.1		52.3		185		22.3		18	

Notes:
Yellow shaded results exceed Unrestricted SCOs
Red shaded results exceed both Unrestricted and Restricted Residential SCOs
NY-RESRR: New York NYCRR Part 375 Restricted-Residential Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted Use Criteria

U - Non Detect Result
J - Estimated Result

Table 2a. Remedial Investigation Volatile Organic Compound Analytical Results in Groundwater
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION			MW1		MW2		MW3		MW4		MW5		MW6		MW7		MW8		DUP20210910		FIELD BLANK		TRIP BLANK	
SAMPLING DATE			9/10/2021		9/10/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/10/2021		9/10/2021	
LAB SAMPLE ID			L2148852-03		L2148852-01		L2148852-04		L2148579-01		L2148852-02		L2148579-02		L2148852-05		L2148579-03		L2148852-06		L2148852-07		L2148852-08	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DEPTH (ft.)																								
	NY-AWQS	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by GC/MS																								
Methylene chloride	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	7	ug/l	2.5	U	1	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	5	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	50	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	ug/l	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Tetrachloroethene	5	ug/l	0.5	U	0.5	U	0.5	U	0.45	J	0.65		0.7		0.5	U	1.3		0.5	U	0.5	U	0.5	U
Chlorobenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichlorofluoromethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	0.6	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromodichloromethane	50	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropene, Total		ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromoform	50	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,1,2,2-Tetrachloroethane	5	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	1	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloromethane		ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromomethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Vinyl chloride	2	ug/l	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	5	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.27	J	0.5	U	0.5	U	5		0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	3	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	3	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	3	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl tert butyl ether	10	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p/m-Xylene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
o-Xylene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Xylenes, Total		ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,2-Dichloroethene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethene, Total		ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Dibromomethane	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2,3-Trichloropropane	0.04	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Acrylonitrile	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Dichlorodifluoromethane	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50	ug/l	5	U	5	U	1.6	J	5	U	5	U	5	U	5	U	5	U	5	U	1.6	J	5	U
Carbon disulfide	60	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Vinyl acetate		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromochloromethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2,2-Dichloropropane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromoethane	0.0006	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,3-Dichloropropane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,1,2-Tetrachloroethane	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromobenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Butylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
o-Chlorotoluene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p-Chlorotoluene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	0.04	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Hexachlorobutadiene	0.5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Isopropylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p-Isopropyltoluene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Naphthalene	10	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Propylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,3-Trichlorobenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dioxane		ug/l	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U	250	U
p-Diethylbenzene		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
p-Ethyltoluene		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4,5-Tetramethylbenzene	5	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Ethyl ether		ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,4-Dichloro-2-butene	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U

Notes:

NY-AWQS: New York TOGS 111 Ambient Water Quality Standards

Red shaded results exceed NY-AWQS

U- Non-detect Result

J - Estimated Result

Table 2b. Remedial Investigation Semi-Volatile Organic Compound Results in Groundwater

Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION			MW1		MW2		MW3		MW4		MW5		MW6		MW7		MW8		DUP20210910		FIELD BLANK		TRIP BLANK	
SAMPLING DATE			9/10/2021		9/10/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/10/2021		9/10/2021	
LAB SAMPLE ID			L2148852-03		L2148852-01		L2148852-04		L2148579-01		L2148852-02		L2148579-02		L2148852-05		L2148579-03		L2148852-06		L2148852-07		L2148852-08	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DEPTH (ft.)																								
	NY-AWQS	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS																								
1,2,4-Trichlorobenzene	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Bis(2-chloroethyl)ether	1	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
1,2-Dichlorobenzene	3	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
1,3-Dichlorobenzene	3	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
1,4-Dichlorobenzene	3	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
3,3'-Dichlorobenzidine	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2,4-Dinitrotoluene	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2,6-Dinitrotoluene	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
4-Chlorophenyl phenyl ether		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
4-Bromophenyl phenyl ether		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
Bis(2-chloroisopropyl)ether	5	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
Bis(2-chloroethoxy)methane	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Hexachlorocyclopentadiene	5	ug/l	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	-	-
Isophorone	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Nitrobenzene	0.4	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
NDPA/DPA	50	ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
n-Nitrosodi-n-propylamine		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Bis(2-ethylhexyl)phthalate	5	ug/l	3	U	3	U	3	U	2	J	3	U	3	U	3	U	3	U	3	U	3	U	-	-
Butyl benzyl phthalate	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Di-n-butylphthalate	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Di-n-octylphthalate	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Diethyl phthalate	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Dimethyl phthalate	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Biphenyl		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
4-Chloroaniline	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2-Nitroaniline	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
3-Nitroaniline	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
4-Nitroaniline	5	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Dibenzofuran		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
1,2,4,5-Tetrachlorobenzene	5	ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-
Acetophenone		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2,4,6-Trichlorophenol		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
p-Chloro-m-cresol		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
2-Chlorophenol		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
2,4-Dichlorophenol	1	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2,4-Dimethylphenol	50	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2-Nitrophenol		ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-
4-Nitrophenol		ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-
2,4-Dinitrophenol	10	ug/l	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	-	-
4,6-Dinitro-o-cresol		ug/l	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-
Phenol	1	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2-Methylphenol		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
3-Methylphenol/4-Methylphenol		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
2,4,5-Trichlorophenol		ug/l	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Benzoic Acid		ug/l	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	50	U	-	-
Benzyl Alcohol		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
Carbazole		ug/l	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	-	-
Semivolatile Organics by GC/MS-SIM																								
Acenaphthene	20	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.02	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
2-Chloronaphthalene	10	ug/l	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.03	J	0.2	U	0.2	U	0.2	U	0.2	U	-	-
Fluoranthene	50	ug/l	0.03	J	0.1	U	0.1	U	0.03	J	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Hexachlorobutadiene	0.5	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	-	-
Naphthalene	10	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.23		0.06	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Benzo(a)anthracene	0.002	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.04	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Benzo(a)pyrene	0	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Benzo(b)fluoranthene	0.002	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Benzo(k)fluoranthene	0.002	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Chrysene	0.002	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Acenaphthylene		ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.02	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Anthracene	50	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.02	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Benzo(ghi)perylene		ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Fluorene	50	ug/l	0.02	J	0.1	U	0.1	U	0.1	U	0.03	J	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Phenanthrene	50	ug/l	0.04	J	0.03	J	0.03	J	0.04	J	0.05	J	0.04	J	0.02	J	0.06	J	0.03	J	0.1	U	-	-
Dibenzo(a,h)anthracene		ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Indeno(1,2,3-cd)pyrene	0.002	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Pyrene	50	ug/l	0.02	J	0.1	U	0.1	U	0.02	J	0.1	U	0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
2-Methylnaphthalene		ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.12		0.03	J	0.1	U	0.1	U	0.1	U	0.1	U	-	-
Pentachlorophenol	1	ug/l	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	-	-
Hexachlorobenzene	0.04	ug/l	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	-	-
Hexachloroethane	5	ug/l	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	-	-

Notes:

NY-AWQS: New York TOGS 111 Ambient Water Quality Standards

Red shaded results exceed NY-AWQS

U- Non-detect Result

J - Estimated Result

Table 2c. Remedial Investigation Polychlorinated Biphenyl Analytical Results in Groundwater

Former Mill Sanitary Wiping Cloth Site

40 Bruckner Boulevard, Bronx, NY

BCP Site C203146

LOCATION			MW1		MW2		MW3		MW4		MW5		MW6		MW7		MW8		DUP20210910		FIELD BLANK		TRIP BLANK	
SAMPLING DATE			9/10/2021		9/10/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/10/2021		9/10/2021	
LAB SAMPLE ID			L2148852-03		L2148852-01		L2148852-04		L2148579-01		L2148852-02		L2148579-02		L2148852-05		L2148579-03		L2148852-06		L2148852-07		L2148852-08	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DEPTH (ft.)																								
	NY-AWQS	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC																								
Aroclor 1016	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1221	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1232	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1242	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1248	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1254	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1260	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1262	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
Aroclor 1268	0.09	ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-
PCBs, Total		ug/l	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	-	-

Notes:

NY-AWQS: New York TOGS 111 Ambient Water Quality Standards

Red shaded results exceed NY-AWQS

U- Non-detect Result

J - Estimated Result

Table 2d. Remedial Investigation Emerging Contaminant Analytical Results in Groundwater
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION			MW1		MW2		MW3		MW4		MW5		MW6		MW7		MW8		DUP20210910		FIELD BLANK		TRIP BLANK	
SAMPLING DATE			9/10/2021		9/10/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/10/2021		9/10/2021	
LAB SAMPLE ID			L2148852-03		L2148852-01		L2148852-04		L2148579-01		L2148852-02		L2148579-02		L2148852-05		L2148579-03		L2148852-06		L2148852-07		L2148852-08	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DEPTH (ft.)																								
	NY-MCL	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
1,4 Dioxane by 8270D-SIM																								
1,4-Dioxane	1	ug/l	0.139	U	0.139	U	0.144	U	0.144	U	0.0564	J	0.144	U	0.134	U	0.139	U	0.144	U	0.134	U	-	-
Perfluorinated Alkyl Acids by Isotope Dilution																								
Perfluorobutanoic Acid (PFBA)	0.01	ug/l	0.0216		0.0312		0.0238		0.0102		0.00723		0.00826		0.00378		0.0109		0.0232		0.00176	U	-	-
Perfluoropentanoic Acid (PFPeA)	0.01	ug/l	0.0201		0.103		0.0539		0.00299		0.0134		0.00859		0.00428		0.0169		0.0526		0.00176	U	-	-
Perfluorobutanesulfonic Acid (PFBS)	0.01	ug/l	0.00635		0.00344		0.0295		0.00329		0.00374		0.0142		0.00935		0.00893		0.0298		0.00176	U	-	-
Perfluorohexanoic Acid (PFHxA)	0.01	ug/l	0.0184		0.0622		0.0466		0.0024		0.0081		0.00952		0.00463		0.0157		0.0462		0.00176	U	-	-
Perfluoroheptanoic Acid (PFHpA)	0.01	ug/l	0.0113		0.00519		0.0155		0.00186		0.00407		0.00648		0.00422		0.0129		0.0153		0.00176	U	-	-
Perfluorohexanesulfonic Acid (PFHxS)	0.01	ug/l	0.00736		0.00383		0.00531		0.0033		0.0021		0.00217		0.0024		0.00819		0.00521		0.00176	U	-	-
Perfluorooctanoic Acid (PFOA)	0.01	ug/l	0.0465		0.015		0.0926		0.013		0.0204		0.0202		0.00977		0.0715		0.09		0.00176	U	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	0.01	ug/l	0.00182	U	0.00121	J	0.00178	U	0.00124	J	0.00176	U	0.0165		0.00637		0.0018	U	0.00185	U	0.00176	U	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	0.01	ug/l	0.00182	U	0.00178	U	0.0013	J	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.00309		0.00132	J	0.00176	U	-	-
Perfluorononanoic Acid (PFNA)	0.01	ug/l	0.000746	J	0.00178	U	0.017		0.000325	J	0.00292		0.0109		0.00103	J	0.00846		0.0175		0.00176	U	-	-
Perfluorooctanesulfonic Acid (PFOS)	0.01	ug/l	0.00947		0.00257		0.0627		0.00246		0.037		0.0312		0.0211		0.187		0.0646		0.00176	U	-	-
Perfluorodecanoic Acid (PFDA)	0.01	ug/l	0.00182	U	0.00178	U	0.000884	J	0.0018	U	0.000289	J	0.00082	J	0.000693	J	0.00253		0.000871	J	0.00176	U	-	-
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.000617	J	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
Perfluoroundecanoic Acid (PFUnA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.000267	J	0.00185	U	0.00176	U	-	-
Perfluorodecanesulfonic Acid (PFDS)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
Perfluorooctanesulfonamide (FOSA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.00172	J	0.00176	U	0.00108	J	0.00183	U	0.0012	J	0.00185	U	0.00176	U	-	-
Perfluorododecanoic Acid (PFDoA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
Perfluorotridecanoic Acid (PFTrDA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
Perfluorotetradecanoic Acid (PFTA)	0.01	ug/l	0.00182	U	0.00178	U	0.00178	U	0.0018	U	0.00176	U	0.00183	U	0.00183	U	0.0018	U	0.00185	U	0.00176	U	-	-
PFOA/PFOS, Total	0.01	ug/l	0.056		0.0176		0.155		0.0155		0.0574		0.0514		0.0309		0.259		0.155		0.00176	U	-	-

Notes:
MCL- Maximum Contaminant Level
MCL for drinking water as per July 2020 New York State Department of Health
Red Shaded Results Exceed the MCL

U- Non-detect Result
J - Estimated Result

Table 2e. Remedial Investigation Metals Analytical Results in Groundwater
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION			MW1		MW2		MW3		MW4		MW5		MW6		MW7		MW8		DUP20210910		FIELD BLANK		TRIP BLANK	
SAMPLING DATE			9/10/2021		9/10/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/9/2021		9/10/2021		9/10/2021		9/10/2021	
LAB SAMPLE ID			L2148852-03		L2148852-01		L2148852-04		L2148579-01		L2148852-02		L2148579-02		L2148852-05		L2148579-03		L2148852-06		L2148852-07		L2148852-08	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DEPTH (ft.)																								
	NY-AWQS	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals																								
Aluminum, Total		ug/l	112		101		25.1		48.7		156		64.7		361		83.6		8.76	J	10	U	-	-
Antimony, Total	3	ug/l	2.11	J	4	U	4	U	4	U	4	U	5.16		4	U	1.41	J	4	U	4	U	-	-
Arsenic, Total	25	ug/l	1.17		5.05		0.6		0.36	J	0.39	J	0.29	J	0.56		0.34	J	0.54		0.5	U	-	-
Barium, Total	1000	ug/l	134.8		102.9		59.15		155.8		84.19		55.31		57.04		95.33		58.85		0.5	U	-	-
Beryllium, Total	3	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	-	-
Cadmium, Total	5	ug/l	0.21		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.1	J	0.2		0.2	U	0.2	U	-	-
Calcium, Total		ug/l	216000		111000		93200		130000		73400		54800		55000		56800		92400		100	U	-	-
Chromium, Total	50	ug/l	0.75	J	0.95	J	1.72		1.49		1.98		0.47	J	3.49		1.2		1.65		0.52	J	-	-
Cobalt, Total		ug/l	2.05		3.61		0.18	J	0.81		0.42	J	0.22	J	0.7		0.39	J	0.16	J	0.5	U	-	-
Copper, Total	200	ug/l	7.32		0.55	J	0.41	J	0.94	J	0.89	J	0.88	J	1.63		2.35		0.42	J	1	U	-	-
Iron, Total	300	ug/l	189		10500		42.9	J	196		308		112		603		275		70	U	70	U	-	-
Lead, Total	25	ug/l	8.45		0.53	J	1	U	1	U	0.42	J	0.39	J	0.96	J	1	U	1	U	1	U	-	-
Magnesium, Total	35000	ug/l	101000		35700		8840		32500		18100		7590		7320		9930		8740		70	U	-	-
Manganese, Total	300	ug/l	1119		2415		104.4		123.6		834.6		47.67		74.87		19.54		99.75		1	U	-	-
Mercury, Total	0.7	ug/l	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.09	J	0.2	U	0.2	U	-	-
Nickel, Total	100	ug/l	6.02		2.2		2	U	3.09		1.42	J	1.1	J	1.63	J	0.95	J	0.7	J	2	U	-	-
Potassium, Total		ug/l	24200		12800		10100		15200		6940		6490		9860		8950		10200		100	U	-	-
Selenium, Total	10	ug/l	5	U	2.9	J	7.88		9.5		5	U	7.19		6.04		7.28		7.48		5	U	-	-
Silver, Total	50	ug/l	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	-	-
Sodium, Total	20000	ug/l	270000		231000		26600		140000		111000		43800		131000		133000		27000		100	U	-	-
Thallium, Total	0.5	ug/l	1	U	1	U	1	U	1	U	0.16	J	0.25	J	1	U	1	U	1	U	0.21	J	-	-
Vanadium, Total		ug/l	2.03	J	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	-	-
Zinc, Total	2000	ug/l	11.7		10	U	10	U	10	U	10	U	10	U	29.33		6.12	J	10	U	10	U	-	-

Notes:
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards
Red shaded results exceed NY-AWQS
U- Non-detect Result
J - Estimated Result

Table 3. Remedial Investigation Volatile Organic Compound Results in Soil Vapor
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
BCP Site C203146

LOCATION		SV1		SV2		SV3		SV4		SV5		SV6		SV7		SV8		SV9		SV10		SV10	
SAMPLING DATE		9/3/2021		9/2/2021		9/10/2021		9/2/2021		9/3/2021		9/3/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021		9/2/2021	
LAB SAMPLE ID		L2147614-02		L2147370-01		L2148853-01		L2147370-03		L2147614-03		L2147614-01		L2147370-04		L2147370-05		L2147370-06		L2147370-07		L2147370-07 R1	
SAMPLE TYPE		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR		SOIL_VAPOR	
SAMPLE DEPTH (ft.)																							
	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics in Air																							
Dichlorodifluoromethane	ug/m3	6.23		2.57		2.49		2.35		2.13		9.89	U	5.19		12.4	U	3.27		3.3	U	-	-
Chloromethane	ug/m3	0.708		0.413	U	0.413	U	0.413	U	0.737	U	4.13	U	1.03	U	5.16	U	0.413	U	1.38	U	-	-
Freon-114	ug/m3	1.4	U	1.4	U	1.4	U	1.4	U	2.5	U	14	U	3.49	U	17.5	U	1.4	U	4.66	U	-	-
Vinyl chloride	ug/m3	0.511	U	0.511	U	0.511	U	0.511	U	0.913	U	5.11	U	1.28	U	6.39	U	0.511	U	1.71	U	-	-
1,3-Butadiene	ug/m3	1.48		9.62		6.66		1.52		1.37		5.15		8.07		7.92		2.43		1.9		-	-
Bromomethane	ug/m3	0.777	U	0.777	U	0.777	U	0.777	U	1.39	U	7.77	U	1.94	U	9.71	U	0.777	U	2.59	U	-	-
Chloroethane	ug/m3	0.528	U	0.528	U	0.528	U	0.528	U	0.942	U	5.28	U	1.32	U	6.6	U	0.528	U	1.76	U	-	-
Ethanol	ug/m3	32.2		21.3		38.6		17		30.5		256		31.1		165		23.6		183		-	-
Vinyl bromide	ug/m3	0.874	U	0.874	U	0.874	U	0.874	U	1.56	U	8.74	U	2.19	U	10.9	U	0.874	U	2.92	U	-	-
Acetone	ug/m3	297		34.4		130		27.1		1180		352		131		404		111		368		-	-
Trichlorofluoromethane	ug/m3	21.8		1.67		5.41		1.33		2.01	U	11.2	U	20.1		14	U	1.72		3.75	U	-	-
Isopropanol	ug/m3	13.6		1.5		6.32		1.23	U	2.78		30		3.07	U	15.4	U	7.67		4.1	U	-	-
1,1-Dichloroethene	ug/m3	0.793	U	0.793	U	0.793	U	0.793	U	1.42	U	7.93	U	1.98	U	9.91	U	0.793	U	2.64	U	-	-
Tertiary butyl Alcohol	ug/m3	28		11.9		31.8		5.76		13.7		18.9		8.52		19.3		8.82		8.15		-	-
Methylene chloride	ug/m3	1.74	U	1.74	U	1.74	U	1.74	U	3.1	U	17.4	U	4.34	U	21.7	U	1.74	U	5.8	U	-	-
3-Chloropropene	ug/m3	0.626	U	0.626	U	0.626	U	0.626	U	1.12	U	6.26	U	1.57	U	7.83	U	0.626	U	2.09	U	-	-
Carbon disulfide	ug/m3	4.89		1.48		6.42		4.55		5.54		15.2		10.4		13.3		7.72		4.36		-	-
Freon-113	ug/m3	1.53	U	1.53	U	1.53	U	1.53	U	2.74	U	15.3	U	3.83	U	19.2	U	1.53	U	5.11	U	-	-
trans-1,2-Dichloroethene	ug/m3	0.793	U	0.793	U	0.793	U	0.793	U	1.42	U	7.93	U	1.98	U	9.91	U	0.793	U	2.64	U	-	-
1,1-Dichloroethane	ug/m3	0.809	U	0.809	U	0.809	U	0.809	U	1.44	U	8.09	U	2.02	U	10.1	U	0.809	U	2.7	U	-	-
Methyl tert butyl ether	ug/m3	0.721	U	0.721	U	0.721	U	0.721	U	1.29	U	7.21	U	1.8	U	9.01	U	0.721	U	2.4	U	-	-
2-Butanone	ug/m3	160		51.6		54.6		26.3		50.7		1870		487		2210		20.1		2290	E	2440	
cis-1,2-Dichloroethene	ug/m3	0.793	U	0.793	U	0.793	U	0.793	U	1.42	U	7.93	U	1.98	U	9.91	U	0.793	U	2.64	U	-	-
Ethyl Acetate	ug/m3	1.8	U	1.8	U	1.8	U	1.8	U	3.22	U	18	U	4.5	U	22.5	U	1.8	U	6.02	U	-	-
Chloroform	ug/m3	1.61		26.7		0.977	U	0.977	U	1.74	U	9.77	U	2.44	U	12.2	U	1.82		3.26	U	-	-
Tetrahydrofuran	ug/m3	1.47	U	1.47	U	6.93		1.47	U	2.63	U	14.7	U	3.69	U	18.4	U	1.59		4.93	U	-	-
1,2-Dichloroethane	ug/m3	0.809	U	0.809	U	0.809	U	0.809	U	1.44	U	8.09	U	2.02	U	10.1	U	0.809	U	2.7	U	-	-
n-Hexane	ug/m3	20.9		21.1		159		16.7		4.23		180		7.82		13.4		21.3		6.45		-	-
1,1,1-Trichloroethane	ug/m3	1.76		6.11		1.84		3.8		28.4		122		2.85		557		29.9		5.25		-	-
Benzene	ug/m3	8.72		14.4		5.53		9.17		4.12		27.1		3.51		7.99	U	9.58		3.51		-	-
Carbon tetrachloride	ug/m3	1.26	U	1.26	U	1.26	U	1.26	U	2.25	U	12.6	U	3.15	U	15.7	U	1.26	U	4.2	U	-	-
Cyclohexane	ug/m3	8.33		8.47		1.14		8.19		2.31		19.3		3.65		8.61	U	9.84		2.3	U	-	-
1,2-Dichloropropane	ug/m3	0.924	U	0.924	U	0.924	U	0.924	U	1.65	U	10.7		2.31	U	11.6	U	0.924	U	3.08	U	-	-
Bromodichloromethane	ug/m3	1.34	U	1.34	U	1.34	U	1.34	U	2.39	U	13.4	U	3.35	U	16.7	U	1.34	U	4.47	U	-	-
1,4-Dioxane	ug/m3	0.721	U	0.721	U	0.721	U	0.721	U	1.29	U	7.21	U	1.8	U	9.01	U	0.721	U	2.4	U	-	-
Trichloroethene	ug/m3	2.12		1.07	U	1.07	U	1.07	U	7.69		11.3		2.69	U	59.1		1.07	U	3.58	U	-	-
2,2,4-Trimethylpentane	ug/m3	8.41		10.5		0.934	U	11.8		1.67	U	9.34	U	2.34	U	11.7	U	9.48		3.12	U	-	-
Heptane	ug/m3	14.6		19.8		119		15.8		3.61		170		5.41		10.2	U	36		5.37		-	-
cis-1,3-Dichloropropene	ug/m3	0.908	U	0.908	U	0.908	U	0.908	U	1.62	U	9.08	U	2.27	U	11.3	U	0.908	U	3.03	U	-	-
4-Methyl-2-pentanone	ug/m3	11.8		4.18		12		3		6.02		553		5.12	U	25.6	U	4.22		6.84	U	-	-
trans-1,3-Dichloropropene	ug/m3	0.908	U	0.908	U	0.908	U	0.908	U	1.62	U	9.08	U	2.27	U	11.3	U	0.908	U	3.03	U	-	-
1,1,2-Trichloroethane	ug/m3	1.09	U	1.09	U	1.09	U	1.09	U	1.95	U	10.9	U	2.73	U	13.6	U	1.09	U	3.64	U	-	-
Toluene	ug/m3	56.5		65.9		11.1		70.8		14.7		52		8.93		11.5		71.6		11.5		-	-
2-Hexanone	ug/m3	19.8		12		0.82	U	8.48		12.5		214		31.9		135		0.82	U	207		-	-
Dibromochloromethane	ug/m3	1.7	U	1.7	U	1.7	U	1.7	U	3.04	U	17	U	4.26	U	21.3	U	1.7	U	5.68	U	-	-
1,2-Dibromoethane	ug/m3	1.54	U	1.54	U	1.54	U	1.54	U	2.74	U	15.4	U	3.84	U	19.2	U	1.54	U	5.13	U	-	-
Tetrachloroethene	ug/m3	209		4.54		6.42		3.96		73.2		134		3.39	U	113		1.36	U	5.67		-	-
Chlorobenzene	ug/m3	0.921	U	0.921	U	0.921	U	0.921	U	1.64	U	9.21	U	2.3	U	11.5	U	0.921	U	3.07	U	-	-
Ethylbenzene	ug/m3	11.3		10.4		3.7		11.7		5.08		9.99		3.31		10.9	U	12.1		4.56		-	-
p/m-Xylene	ug/m3	38.7		36		13.2		40.8		18		21.5		12.1		21.7	U	41.4		17.8		-	-
Bromoform	ug/m3	2.07	U	2.07	U	2.07	U	2.07	U	3.69	U	20.7	U	5.17	U	25.8	U	2.07	U	6.9	U	-	-
Styrene	ug/m3	0.852	U	0.852	U	0.852	U	0.852	U	1.66		8.52	U	2.13	U	10.6	U	0.852	U	2.84	U	-	-
1,1,2,2-Tetrachloroethane	ug/m3	1.37	U	1.37	U	1.37	U	1.37	U	2.45	U	13.7	U	3.43	U	17.2	U	1.37	U	4.58	U	-	-
o-Xylene	ug/m3	14.7		13		5.26		14.7		6.6		8.69	U	4		10.9	U	15.2		6.3		-	-
4-Ethyltoluene	ug/m3	3.93		3.63		0.983	U	4.31		2.51		9.83	U	2.46	U	12.3	U	3.78		3.28	U	-	-
1,3,5-Trimethylbenzene	ug/m3	4.25		4.01		1.24		4.8		2.71		9.83	U	2.46	U	12.3	U	4.78		3.28	U	-	-
1,2,4-Trimethylbenzene	ug/m3	17.2		14.7		4.65		17.7		10.5		9.93		6.69		12.3	U	18.1		11.4		-	-
Benzyl chloride	ug/m3	1.04	U	1.04	U	1.04	U	1.04	U	1.85	U	10.4	U	2.59	U	12.9	U	1.04	U	3.45	U	-	-
1,3-Dichlorobenzene	ug/m3	1.2	U	1.2	U	1.2	U	1.2	U	2.15	U	12	U	3.01	U	15	U	1.2	U	4.01	U	-	-
1,4-Dichlorobenzene	ug/m3	1.2	U	1.2	U	1.2	U	1.2	U	2.15	U	12	U	3.01	U	15	U	1.2	U	4.01	U	-	-
1,2-Dichlorobenzene	ug/m3	1.2	U	1.2	U	1.2	U	1.2	U	2.15	U	12	U	3.01	U	15	U	1.2	U	4.01	U	-	-
1,2,4-Trichlorobenzene	ug/m3	1.48	U	1.48	U	1.48	U	1.48	U	2.65	U	14.8	U	3.71	U	18.6	U	1.48	U	4.95	U	-	-
Hexachlorobutadiene	ug/m3	21.3	U	-	-	2.13	U	-	-	3.81	U	21.3	U	-	-	-	-	-	-	-	-	-	-
Volatile Organics in Air by SIM																							
Hexachlorobutadiene	ug/m3	-	-	0.533	U			0.533	U	-	-	-	-	1.33	U	6.67	U	0.533	U	1.78	U	-	-
Total BTEX/VOCs																							
Total BTEX	ug/m3	129.92	-	139.7	-	38.79	-	147.17	-	48.5	-	110.59	-	31.85	-	11.5	-	149.88	-	43.67	-		-
Total VOCs	ug/m3	1019.54	-	411.48	-	633.31	-	331.62	-	1490.56	-	4082.07	-	791.55	-	3708.52	-	472.8	-	3290.22	-		-

Notes:
U- Non-Detect Results
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
SV-10 Rerun for 2-Butanone
BTEX- Benzene, Toluene, Ethylbenzene, Xylenes

Table 4. Alternative I Remedial Cost Estimate

Former Mill Sanitary Wiping Cloth Site

40 Bruckner Bouelvard, Bronx NY

NYSDEC BCP Site C203146

Consulting/Engineering Costs					
Task	**Description**	**Unit**	**Unit Cost**	**Quantity**	**Total Cost**
1	Waste Characterization and Lead Delineation	Lump Sum	$ 95,000	1	$ 95,000
2	Program Management (NYSDEC/NYSDOH Correspondence, Daily/Weekly/Monthly Reporting, etc.)	Month	$ 15,000	15	$ 225,000
3	Remedial Oversight	Month	$ 30,000	15	$ 450,000
4	Confirmation Sampling	Sample	$ 1,000	60	$ 60,000
5	Closure Reporting and COC Coordination	Allowance	$ 75,000	1	$ 75,000
				Consulting/Engineering Subtotal	$ 905,000
Contractor Costs					
Task					
1	Mobilization/Demobilization, Site Maintenance, Security, etc.	Allowance	$ 350,000	1	$ 350,000
2	Truck Wash Station	Month	$ 25,000	8	$ 200,000
3	Management/Handling Contaminated Material	Cubic Yard	$ 40	17,000	$ 680,000
4	Support of Excavation	Linear Foot	$ 4,000	950	$ 3,800,000
5	Transport and Disposal of Fill Material	Ton	$ 75	17,170	$ 1,287,750
6	Transport and Disposal of Hazardous Material (Lead)	Ton	$ 275	1,000	$ 275,000
7	Dewatering System	Month	$ 75,000	8	$ 600,000
8	Underground Storage Tank (Contingency Budget)	Allowance	$ 75,000	1	$ 75,000
				Contractor Subtotal	$ 7,267,750
				Total	$ 8,172,750
				15% Contingency	$ 1,225,913
				Estimated Total	$ 9,398,663

Notes:

1. Assuming a conditional Track 1 Remedy

2. Assumes density of 1.7 tons per cubic yard of fill/soil

3. Assumes residual soil will meet Track 1 Unrestricted Use Soil Cleanup Objectives

4. Assumes full site dewatering

5. SOE Costs are based on a conventional soldier pile and timber lagging system with lateral bracing provided by either steel rakers or tiebacks.

6. Costs are estimated and subject to change. Costs do not include new building construction.

7. RAWP implementation is assumed to take 10-12 months.

8. This cost estimate was prepared to compare various remedial alternatives as was based on available information at the time of preparation. The estimate may be +/- 30-50% of the actual cost. This estimate was not prepared for financial or legal consulting purposes and was not intended for use regarding compliance with financial reporting requirements or liability services.

9. This estimate does not include legal fees associated with attorneys involved in the project, insurance fees or outside consulting fees.

Table 5. Alternative II Remedial Cost Estimate

Former Mill Sanitary Wiping Cloth Site

40 Bruckner Bouelvard, Bronx NY

NYSDEC BCP Site C203146

Consulting/Engineering Costs					
Task	**Description**	**Unit**	**Unit Cost**	**Quantity**	**Total Cost**
1	Waste Characterization and Lead Delineation	Lump Sum	$ 95,000	1	$ 95,000
2	Program Management (NYSDEC/NYSDOH Correspondence, Daily/Weekly/Monthly Reporting, etc.)	Month	$ 15,000	15	$ 225,000
3	Remedial Oversight	Month	$ 30,000	15	$ 450,000
4	Documentation Sampling	Sample	$ 1,000	60	$ 60,000
5	Closure Reporting and COC Coordination (including Site Management Plan)	Lump Sum	$ 90,000	1	$ 90,000
6	Annual Site Management (quarterly groundwater sampling, engineering control monitoring, etc.)	Year	$ 40,000	4	$ 160,000
				Consulting/Engineering Subtotal	$ 1,080,000
Contractor Costs					
Task					
1	Mobilization/Demobilization, Site Maintenance, Security, etc.	Allowance	$ 350,000	1	$ 350,000
2	Truck Wash Station	Month	$ 25,000	12	$ 300,000
3	Management/Handling Contaminated Material	Cubic Yard	$ 40	24,000	$ 960,000
4	Support of Excavation	Linear Foot	$ 4,000	950	$ 3,800,000
5	Transport and Disposal of Fill Material	Ton	$ 75	14,000	$ 1,050,000
6	Transport and Disposal of Hazardous Material (Lead)	Ton	$ 275	2,000	$ 550,000
7	Dewatering System	Month	$ 75,000	12	$ 900,000
8	Underground Storage Tank (Contingency Budget)	Allowance	$ 75,000	1	$ 75,000
9	Composite Cover System	Allowance	$ 100,000	1	$ 100,000
				Contractor Subtotal	$ 8,085,000
				Total	$ 9,165,000
				15% Contingency	$ 1,374,750
				Estimated Total	$ 10,539,750

Notes:

1. Assuming a conditional Track 2 Remedy with site management

2. Assumes density of 1.7 tons per cubic yard of fill/soil

3. Assumes residual soil will meet Track 2 Restricted Residential Use Soil Cleanup Objectives

4. Assumes full dewatering

5. SOE Costs are based on a conventional soldier pile and timber lagging system with lateral bracing provided by either steel rakers or tiebacks.

6. Costs are estimated and subject to change. Costs do not include new building construction.

7. RAWP implementation is assumed to take 12 months.

8. This cost esimate was prepared to compare various remedial alternatives as was based on available information at the time of preparation. The estimate may be +/- 30-50% of the actual cost. This estimate was not prepared for financial or legal consulting purposes and was not intended for use regarding compliance with financial reporting requirements or liability services.

9. This estimate does not include legal fees associated with attorneys involved in the project, insurance fees or outside consulting fees.

Table 6. Emergency Contacts
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx NY
NYSDEC BCP Site C203146

Party	Role	Personnel	Phone	Email
40 Bruckner Realty LLC	Owner/Operator	Jamal	412-708-5363	jamal@jcsrealtyny.com
NYSDEC	Case Manager	Daniel McNally	518-402-9767	Daniel.McNally@dec.ny.gov
NYSDOH	Case Manager	Scarlett McLaughlin	518- 402-7860	Scarlett.McLaughlin@health.ny.gov
Haley & Aldrich of New York	Environmental Consultant	James Bellew	646-277-5686	jbellew@haleyaldrich.com
Haley & Aldrich of New York	Remedial Engineer of Record	Scott Underhill	518-396-7638	sunderhill@haleyaldrich.com
Bronx Community Board 1	Community Repository	Cedric Loftin	718-585-7117	Brxcb1@optonline.net
Mott Haven Library	Community Repository	Kathleen Carrasco	718-665-4878	kathleencarrasco@nypl.org
Engine 83 Ladder 29	FDNY	N/A	911; 718-999-2000	N/A
40th Police Precinct	NYPD	N/A	911; 718-402-2270	N/A

Table 7. Track 1 Soil Cleanup Objectives
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard, Bronx, NY
NYSDEC BCP Site C203146

PCBs/Pesticides (mg/kg)	
Delta-BHC	0.04
Lindane	0.1
Alpha-BHC	0.02
Beta-BHC	0.036
Heptachlor	0.042
Aldrin	0.005
Endrin	0.014
Dieldrin	0.005
4,4'-DDE	0.0033
4,4'-DDD	0.0033
4,4'-DDT	0.0033
Endosulfan I	2.4
Endosulfan II	2.4
Endosulfan sulfate	2.4
cis-Chlordane	0.094
PCBs, Total	0.1

Volatile Organic Compounds (mg/kg)	
Methylene chloride	0.05
1,1-Dichloroethane	0.27
Chloroform	0.37
Carbon tetrachloride	0.76
Tetrachloroethene	1.3
Chlorobenzene	1.1
1,2-Dichloroethane	0.02
1,1,1-Trichloroethane	0.68
Benzene	0.06
Toluene	0.7
Ethylbenzene	1
Vinyl chloride	0.02
1,1-Dichloroethene	0.33
trans-1,2-Dichloroethene	0.19
Trichloroethene	0.47
1,2-Dichlorobenzene	1.1
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
Methyl tert butyl ether	0.93
Xylenes, Total	0.26
cis-1,2-Dichloroethene	0.25
Acetone	0.05
2-Butanone	0.12
n-Butylbenzene	12
sec-Butylbenzene	11
tert-Butylbenzene	5.9
Naphthalene	12
n-Propylbenzene	3.9
1,3,5-Trimethylbenzene	8.4
1,2,4-Trimethylbenzene	3.6
1,4-Dioxane	0.1

Semivolatile Organic Compounds (mg/kg)	
Acenaphthene	20
Hexachlorobenzene	0.33
1,2-Dichlorobenzene	1.1
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
Fluoranthene	100
Naphthalene	12
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(k)fluoranthene	0.8
Chrysene	1
Acenaphthylene	100
Anthracene	100
Benzo(ghi)perylene	100
Fluorene	30
Phenanthrene	100
Dibenzo(a,h)anthracene	0.33
Indeno(1,2,3-cd)pyrene	0.5
Pyrene	100
Dibenzofuran	7
Pentachlorophenol	0.8
Phenol	0.33
2-Methylphenol	0.33
3-Methylphenol/4-Methylph	0.33
1,4-Dioxane	0.1

Metals (mg/kg)	
Arsenic, Total	13
Barium, Total	350
Beryllium, Total	7.2
Cadmium, Total	2.5
Copper, Total	50
Lead, Total	63
Manganese, Total	1600
Mercury, Total	0.18
Nickel, Total	30
Selenium, Total	3.9
Silver, Total	2
Zinc, Total	109

Notes:
1. Criteria are 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives
2. mg/kg: milligram per kilogram

Table 8. Confirmation Soil Sample Details
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Bouelvard, Bronx NY
NYSDEC BCP Site C203146

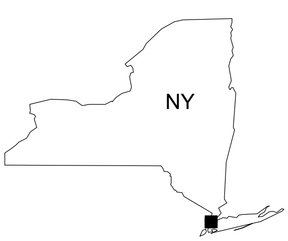
Confirmation Sample ID	Soil Sample Depth (FT BGS)	Target Compound List VOCs	Target Compound List SVOCs	Total Analyte List Metals	Pesticides	PFAS	1,4-Dioxane
EP-1	8	X	X	X	X	X	X
EP-2	8	X	X	X	X	X	X
EP-3	8	X	X	X	X	X	X
EP-4	8	X	X	X	X	X	X
EP-5	8	X	X	X	X	X	X
EP-6	8	X	X	X	X	X	X
EP-7	8	X	X	X	X	X	X
EP-8	8	X	X	X	X	X	X
EP-9	8	X	X	X	X	X	X
EP-10	8	X	X	X	X	X	X
EP-11	8	X	X	X	X	X	X
EP-12	10	X	X	X	X	X	X
EP-13	8	X	X	X	X	X	X
EP-14	8	X	X	X	X	X	X
EP-15	8	X	X	X	X	X	X
EP-16	8	X	X	X	X	X	X
EP-17	10	X	X	X	X	X	X
EP-18	8	X	X	X	X	X	X
EP-19	8	X	X	X	X	X	X
EP-20	8	X	X	X	X	X	X
EP-21	8	X	X	X	X	X	X
EP-22	8	X	X	X	X	X	X
EP-23	8	X	X	X	X	X	X
EP-24	10	X	X	X	X	X	X
EP-25	10	X	X	X	X	X	X
EP-26	4	X	X	X	X	X	X
EP-27	4	X	X	X	X	X	X
EP-28	4	X	X	X	X	X	X
EP-29	4	X	X	X	X	X	X
EP-30	4	X	X	X	X	X	X
EP-31	4	X	X	X	X	X	X
EP-32	4	X	X	X	X	X	X
EP-33	4	X	X	X	X	X	X
EP-34	4	X	X	X	X	X	X
EP-35	4	X	X	X	X	X	X
EP-36	4	X	X	X	X	X	X
EP-37	4	X	X	X	X	X	X
EP-38	4	X	X	X	X	X	X
EP-39	4	X	X	X	X	X	X
EP-40	4	X	X	X	X	X	X
EP-41	4	X	X	X	X	X	X
EP-42	4	X	X	X	X	X	X
EP-43	4	X	X	X	X	X	X
EP-44	4	X	X	X	X	X	X
EP-45	4	X	X	X	X	X	X
EP-46	4	X	X	X	X	X	X

Notes:

VOCs - Volatile Organic Compounds
SVOCs - Semi-volatile Organic Compounds
PCBs - Polychlorinated biphenyls
PFAS - Per- and Polyfluoroalkyl Substances

QAQC samples include:
Field Duplicate - 1 for every 20 samples
Trip Blanks - 1 per cooler of samples to be analyzed for VOCs
Field Blanks - 1 for every 20 samples

FIGURES



MAP SOURCE: ESRI
SITE COORDINATES: 73°55'38"W 40°48'23"N

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX. NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
SEPTEMBER 2021

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0200734\GIS\Maps\2021_01\0200734_001_0001_PROJECT_LOCUS.mxd — USER: ajospe — LAST SAVED: 1/27/2021 9:41:28 PM

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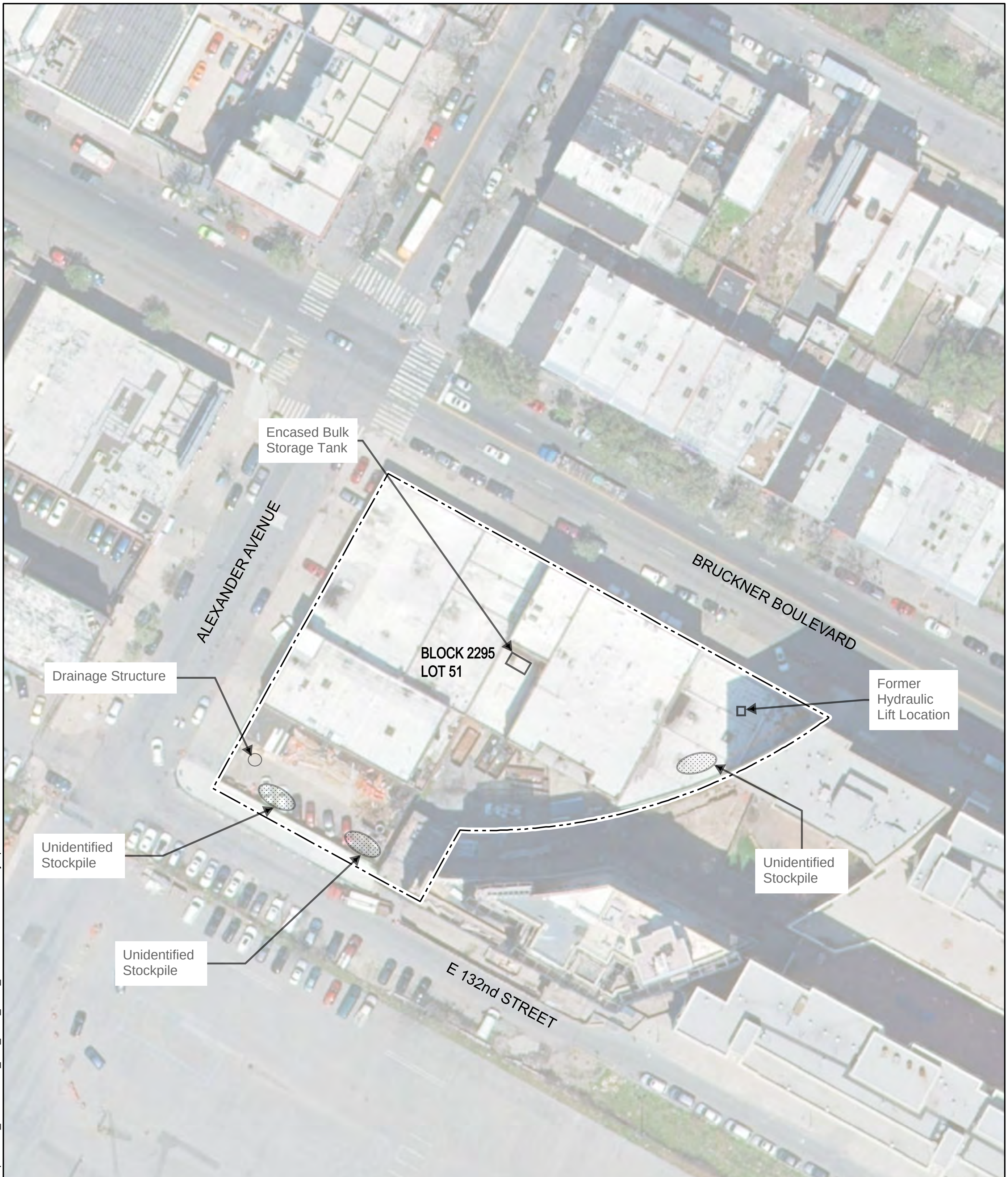


LEGEND

APPROXIMATE SITE BOUNDARY

N

0 40 80
SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI

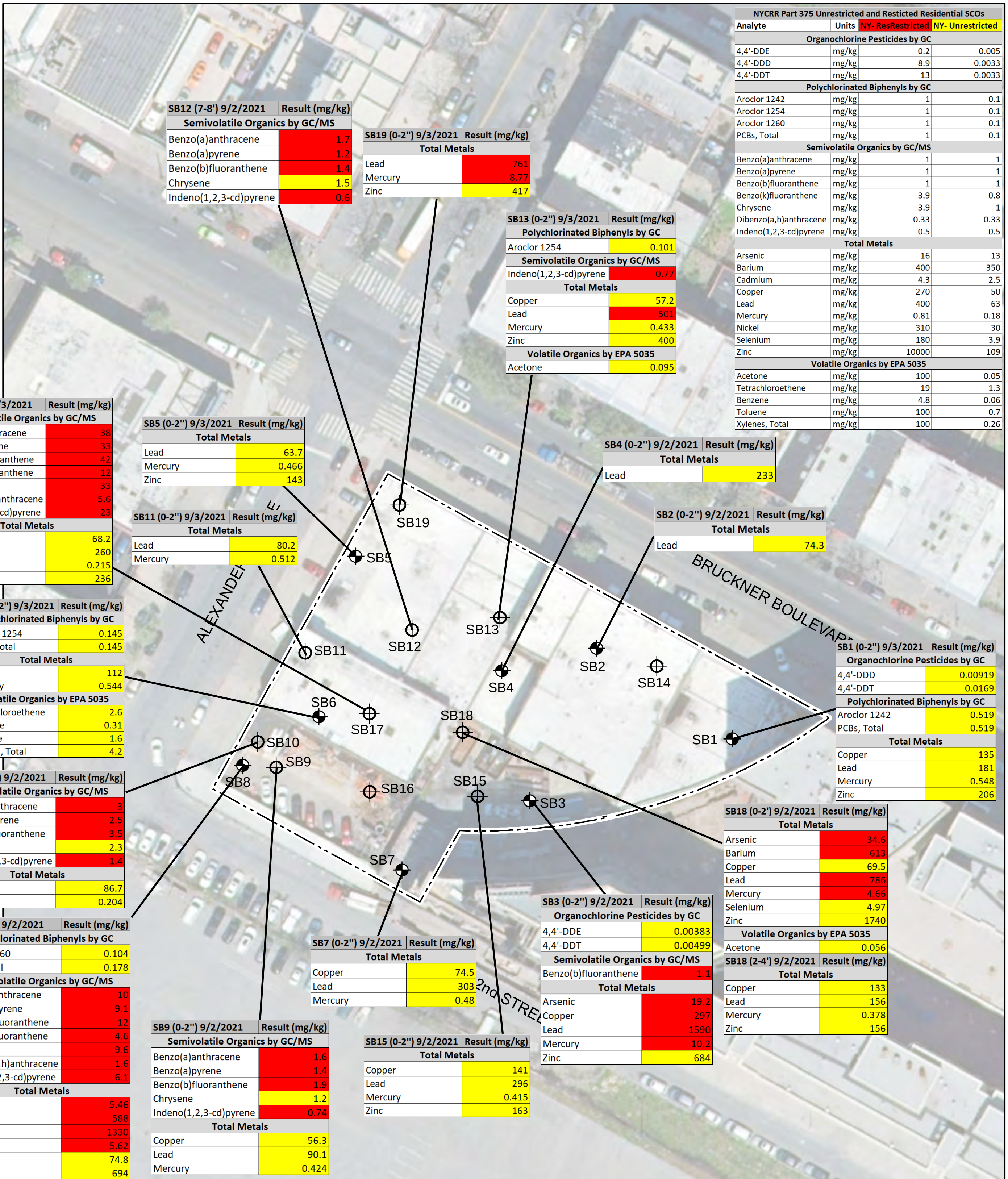
HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SITE MAP

SEPTEMBER 2021

FIGURE 2



NYCRR Part 375 Unrestricted and Resticted Residential SCOs			
Analyte	Units	NY- ResRestricted	NY- Unrestricted
Organochlorine Pesticides by GC			
4,4'-DDE	mg/kg	0.2	0.005
4,4'-DDD	mg/kg	8.9	0.0033
4,4'-DDT	mg/kg	13	0.0033
Polychlorinated Biphenyls by GC			
Aroclor 1242	mg/kg	1	0.1
Aroclor 1254	mg/kg	1	0.1
Aroclor 1260	mg/kg	1	0.1
PCBs, Total	mg/kg	1	0.1
Semivolatile Organics by GC/MS			
Benzo(a)anthracene	mg/kg	1	1
Benzo(a)pyrene	mg/kg	1	1
Benzo(b)fluoranthene	mg/kg	1	1
Benzo(k)fluoranthene	mg/kg	3.9	0.8
Chrysene	mg/kg	3.9	1
Dibenzo(a,h)anthracene	mg/kg	0.33	0.33
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.5
Total Metals			
Arsenic	mg/kg	16	13
Barium	mg/kg	400	350
Cadmium	mg/kg	4.3	2.5
Copper	mg/kg	270	50
Lead	mg/kg	400	63
Mercury	mg/kg	0.81	0.18
Nickel	mg/kg	310	30
Selenium	mg/kg	180	3.9
Zinc	mg/kg	10000	109
Volatile Organics by EPA 5035			
Acetone	mg/kg	100	0.05
Tetrachloroethene	mg/kg	19	1.3
Benzene	mg/kg	4.8	0.06
Toluene	mg/kg	100	0.7
Xylenes, Total	mg/kg	100	0.26

SB12 (7-8') 9/2/2021	Result (mg/kg)
Semivolatile Organics by GC/MS	
Benzo(a)anthracene	1.7
Benzo(a)pyrene	1.2
Benzo(b)fluoranthene	1.4
Chrysene	1.5
Indeno(1,2,3-cd)pyrene	0.6

SB19 (0-2'') 9/3/2021	Result (mg/kg)
Total Metals	
Lead	761
Mercury	8.77
Zinc	417

SB13 (0-2'') 9/3/2021	Result (mg/kg)
Polychlorinated Biphenyls by GC	
Aroclor 1254	0.101
Semivolatile Organics by GC/MS	
Indeno(1,2,3-cd)pyrene	0.77
Total Metals	
Copper	57.2
Lead	501
Mercury	0.433
Zinc	400
Volatile Organics by EPA 5035	
Acetone	0.095

SB17 (0-2') 9/3/2021	Result (mg/kg)
Semivolatile Organics by GC/MS	
Benzo(a)anthracene	38
Benzo(a)pyrene	33
Benzo(b)fluoranthene	42
Benzo(k)fluoranthene	12
Chrysene	33
Dibenzo(a,h)anthracene	5.6
Indeno(1,2,3-cd)pyrene	23
Total Metals	
Copper	68.2
Lead	260
Mercury	0.215
Zinc	236

SB5 (0-2'') 9/3/2021	Result (mg/kg)
Total Metals	
Lead	63.7
Mercury	0.466
Zinc	143

SB4 (0-2'') 9/2/2021	Result (mg/kg)
Total Metals	
Lead	233

SB11 (0-2'') 9/3/2021	Result (mg/kg)
Total Metals	
Lead	80.2
Mercury	0.512

SB2 (0-2'') 9/2/2021	Result (mg/kg)
Total Metals	
Lead	74.3

SB6 (0-2'') 9/3/2021	Result (mg/kg)
Polychlorinated Biphenyls by GC	
Aroclor 1254	0.145
PCBs, Total	0.145
Total Metals	
Lead	112
Mercury	0.544
Volatile Organics by EPA 5035	
Tetrachloroethene	2.6
Benzene	0.31
Toluene	1.6
Xylenes, Total	4.2

SB1 (0-2'') 9/3/2021	Result (mg/kg)
Organochlorine Pesticides by GC	
4,4'-DDD	0.00919
4,4'-DDT	0.0169
Polychlorinated Biphenyls by GC	
Aroclor 1242	0.519
PCBs, Total	0.519
Total Metals	
Copper	135
Lead	181
Mercury	0.548
Zinc	206

SB10 (0-2'') 9/2/2021	Result (mg/kg)
Semivolatile Organics by GC/MS	
Benzo(a)anthracene	3
Benzo(a)pyrene	2.5
Benzo(b)fluoranthene	3.5
Chrysene	2.3
Indeno(1,2,3-cd)pyrene	1.4
Total Metals	
Lead	86.7
Mercury	0.204

SB18 (0-2') 9/2/2021	Result (mg/kg)
Total Metals	
Arsenic	34.6
Barium	613
Copper	69.5
Lead	786
Mercury	4.66
Selenium	4.97
Zinc	1740
Volatile Organics by EPA 5035	
Acetone	0.056

SB18 (2-4') 9/2/2021	Result (mg/kg)
Total Metals	
Copper	133
Lead	156
Mercury	0.378
Zinc	156

SB3 (0-2'') 9/2/2021	Result (mg/kg)
Organochlorine Pesticides by GC	
4,4'-DDE	0.00383
4,4'-DDT	0.00499
Semivolatile Organics by GC/MS	
Benzo(b)fluoranthene	1.1
Total Metals	
Arsenic	19.2
Copper	297
Lead	1590
Mercury	10.2
Zinc	684

SB8 (0-2'') 9/2/2021	Result (mg/kg)
Polychlorinated Biphenyls by GC	
Aroclor 1260	0.104
PCBs, Total	0.178
Semivolatile Organics by GC/MS	
Benzo(a)anthracene	10
Benzo(a)pyrene	9.1
Benzo(b)fluoranthene	12
Benzo(k)fluoranthene	4.6
Chrysene	9.6
Dibenzo(a,h)anthracene	1.6
Indeno(1,2,3-cd)pyrene	6.1
Total Metals	
Cadmium	5.46
Copper	588
Lead	1330
Mercury	5.62
Nickel	74.8
Zinc	694

SB7 (0-2'') 9/2/2021	Result (mg/kg)
Total Metals	
Copper	74.5
Lead	303
Mercury	0.48

SB9 (0-2'') 9/2/2021	Result (mg/kg)
Semivolatile Organics by GC/MS	
Benzo(a)anthracene	1.6
Benzo(a)pyrene	1.4
Benzo(b)fluoranthene	1.9
Chrysene	1.2
Indeno(1,2,3-cd)pyrene	0.74
Total Metals	
Copper	56.3
Lead	90.1
Mercury	0.424

SB15 (0-2'') 9/2/2021	Result (mg/kg)
Total Metals	
Copper	141
Lead	296
Mercury	0.415
Zinc	163

LEGEND

APPROXIMATE SITE BOUNDARY

SOIL BORING LOCATION

WELL/SOIL BORING LOCATION

N

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SOIL RESULTS EXCEEDANCE MAP
(SEPTEMBER 2021 REMEDIAL INVESTIGATION)

SEPTEMBER 2021

FIGURE 3A

GIS FILE PATH: C:\ajospe\Projects\0200734\

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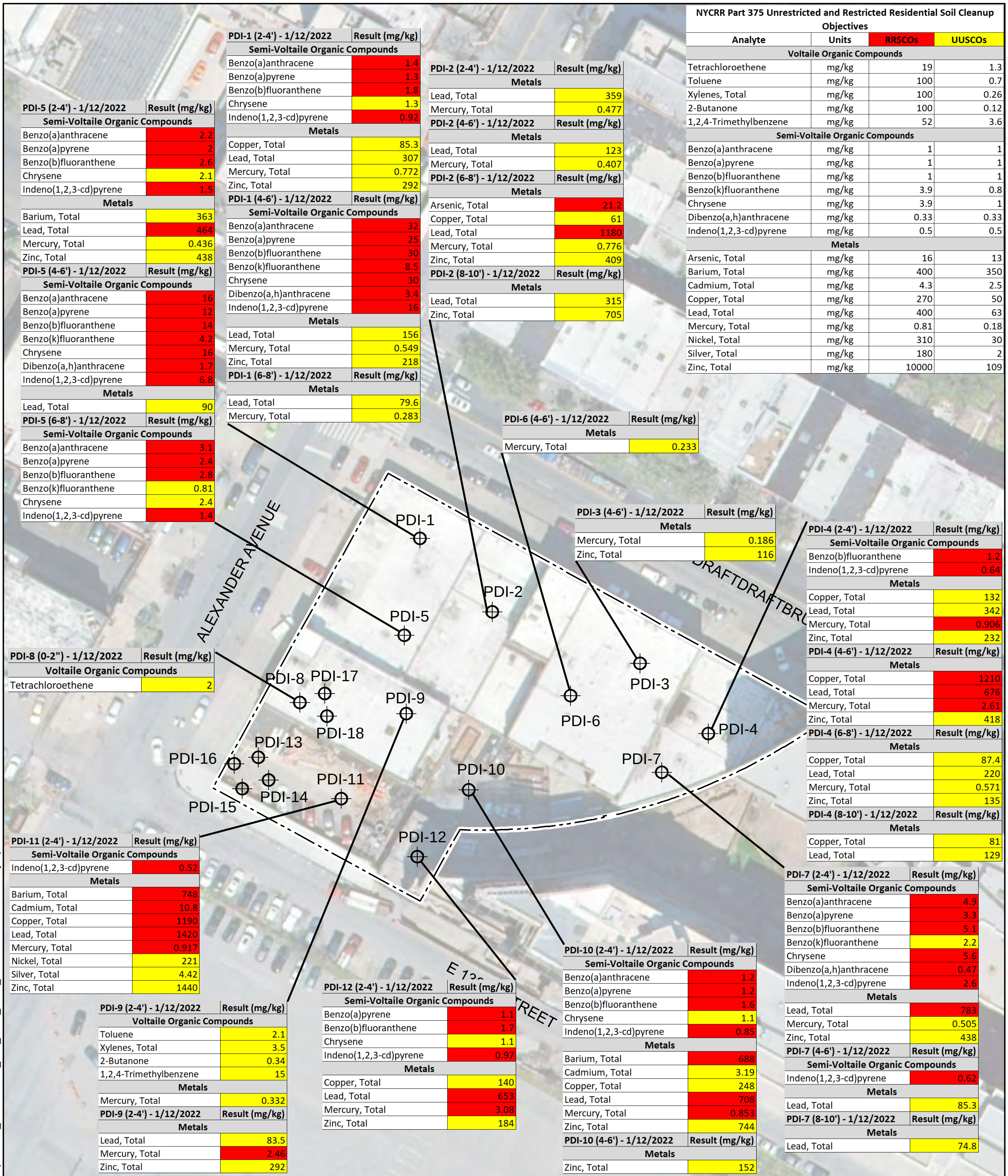


NYCRR Part 375 Unrestricted and Restricted Residential Soil Cleanup Objectives			
Analyte	Units	RRSCOs	UUSCOs
Voltaile Organic Compounds			
Tetrachloroethene	mg/kg	19	1.3
Toluene	mg/kg	100	0.7
Xylenes, Total	mg/kg	100	0.26
2-Butanone	mg/kg	100	0.12
1,2,4-Trimethylbenzene	mg/kg	52	3.6
Semi-Voltaile Organic Compounds			
Benzo(a)anthracene	mg/kg	1	1
Benzo(a)pyrene	mg/kg	1	1
Benzo(b)fluoranthene	mg/kg	1	1
Benzo(k)fluoranthene	mg/kg	3.9	0.8
Chrysene	mg/kg	3.9	1
Dibenzo(a,h)anthracene	mg/kg	0.33	0.33
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.5
Metals			
Arsenic, Total	mg/kg	16	13
Barium, Total	mg/kg	400	350
Cadmium, Total	mg/kg	4.3	2.5
Copper, Total	mg/kg	270	50
Lead, Total	mg/kg	400	63
Mercury, Total	mg/kg	0.81	0.18
Nickel, Total	mg/kg	310	30
Silver, Total	mg/kg	180	2
Zinc, Total	mg/kg	10000	109

PDI-1 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	1.4
Benzo(a)pyrene	1.3
Benzo(b)fluoranthene	1.8
Chrysene	1.3
Indeno(1,2,3-cd)pyrene	0.92
Metals	
Copper, Total	85.3
Lead, Total	307
Mercury, Total	0.772
Zinc, Total	292
PDI-1 (4-6') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	32
Benzo(a)pyrene	25
Benzo(b)fluoranthene	30
Benzo(k)fluoranthene	8.5
Chrysene	30
Dibenzo(a,h)anthracene	3.4
Indeno(1,2,3-cd)pyrene	16
Metals	
Lead, Total	156
Mercury, Total	0.549
Zinc, Total	218
PDI-1 (6-8') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	79.6
Mercury, Total	0.283

PDI-2 (2-4') - 1/12/2022	Result (mg/kg)
Metals	
Lead, Total	359
Mercury, Total	0.477
PDI-2 (4-6') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	123
Mercury, Total	0.407
PDI-2 (6-8') - 1/12/2022	**Result (mg/kg)**
Metals	
Arsenic, Total	21.2
Copper, Total	61
Lead, Total	1180
Mercury, Total	0.776
Zinc, Total	409
PDI-2 (8-10') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	315
Zinc, Total	705

PDI-5 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	2.2
Benzo(a)pyrene	2
Benzo(b)fluoranthene	2.6
Chrysene	2.1
Indeno(1,2,3-cd)pyrene	1.5
Metals	
Barium, Total	363
Lead, Total	464
Mercury, Total	0.436
Zinc, Total	438
PDI-5 (4-6') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	16
Benzo(a)pyrene	12
Benzo(b)fluoranthene	14
Benzo(k)fluoranthene	4.2
Chrysene	16
Dibenzo(a,h)anthracene	1.7
Indeno(1,2,3-cd)pyrene	6.8
Metals	
Lead, Total	90
PDI-5 (6-8') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	3.1
Benzo(a)pyrene	2.4
Benzo(b)fluoranthene	2.8
Benzo(k)fluoranthene	0.81
Chrysene	2.4
Indeno(1,2,3-cd)pyrene	1.4

PDI-6 (4-6') - 1/12/2022	Result (mg/kg)
Metals	
Mercury, Total	0.233

PDI-3 (4-6') - 1/12/2022	Result (mg/kg)
Metals	
Mercury, Total	0.186
Zinc, Total	116

PDI-4 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(b)fluoranthene	1.2
Indeno(1,2,3-cd)pyrene	0.64
Metals	
Copper, Total	132
Lead, Total	342
Mercury, Total	0.906
Zinc, Total	232
PDI-4 (4-6') - 1/12/2022	**Result (mg/kg)**
Metals	
Copper, Total	1210
Lead, Total	676
Mercury, Total	2.61
Zinc, Total	418
PDI-4 (6-8') - 1/12/2022	**Result (mg/kg)**
Metals	
Copper, Total	87.4
Lead, Total	220
Mercury, Total	0.571
Zinc, Total	135
PDI-4 (8-10') - 1/12/2022	**Result (mg/kg)**
Metals	
Copper, Total	81
Lead, Total	129

PDI-8 (0-2") - 1/12/2022	Result (mg/kg)
Voltaile Organic Compounds	
Tetrachloroethene	2

PDI-11 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Indeno(1,2,3-cd)pyrene	0.52
Metals	
Barium, Total	748
Cadmium, Total	10.8
Copper, Total	1190
Lead, Total	1420
Mercury, Total	0.917
Nickel, Total	221
Silver, Total	4.42
Zinc, Total	1440

PDI-9 (2-4') - 1/12/2022	Result (mg/kg)
Voltaile Organic Compounds	
Toluene	2.1
Xylenes, Total	3.5
2-Butanone	0.34
1,2,4-Trimethylbenzene	15
Metals	
Mercury, Total	0.332
PDI-9 (2-4') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	83.5
Mercury, Total	2.46
Zinc, Total	292

PDI-12 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)pyrene	1.1
Benzo(b)fluoranthene	1.7
Chrysene	1.1
Indeno(1,2,3-cd)pyrene	0.97
Metals	
Copper, Total	140
Lead, Total	653
Mercury, Total	3.08
Zinc, Total	184

PDI-10 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	1.2
Benzo(a)pyrene	1.2
Benzo(b)fluoranthene	1.6
Chrysene	1.1
Indeno(1,2,3-cd)pyrene	0.85
Metals	
Barium, Total	688
Cadmium, Total	3.19
Copper, Total	248
Lead, Total	708
Mercury, Total	0.853
Zinc, Total	744
PDI-10 (4-6') - 1/12/2022	**Result (mg/kg)**
Metals	
Zinc, Total	152

PDI-7 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	4.9
Benzo(a)pyrene	3.3
Benzo(b)fluoranthene	5.1
Benzo(k)fluoranthene	2.2
Chrysene	5.6
Dibenzo(a,h)anthracene	0.47
Indeno(1,2,3-cd)pyrene	2.6
Metals	
Lead, Total	783
Mercury, Total	0.505
Zinc, Total	438
PDI-7 (4-6') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Indeno(1,2,3-cd)pyrene	0.62
Metals	
Lead, Total	85.3
PDI-7 (8-10') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	74.8

LEGEND

APPROXIMATE SITE BOUNDARY

SOIL BORING LOCATION

N

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

LOCATIONS ARE APPROXIMATE

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SOIL RESULTS EXCEEDANCE MAP
(JANUARY 2022 PRE-DESIGN INVESTIGATION)

JANUARY 2022

FIGURE 3B

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

NYCRR Part 375 Unrestricted and Resticted Residential SCOs			
Analyte	Units	NY- ResRestricted	NY- Unrestricted
Semivolatile Organics by GC/MS			
Benzo(a)anthracene	mg/kg	1	1
Benzo(a)pyrene	mg/kg	1	1
Benzo(b)fluoranthene	mg/kg	1	1
Benzo(k)fluoranthene	mg/kg	3.9	0.8
Chrysene	mg/kg	3.9	1
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.5
Total Metals			
Copper	mg/kg	270	50
Lead	mg/kg	400	63
Mercury	mg/kg	0.81	0.18
Zinc	mg/kg	10000	109

GS-1 9/3/2021	Result (mg/kg)
Total Metals	
Lead	64.6

GS-3 9/3/2021	Result (mg/kg)
Semivolatile Organics by GC/MS	
Benzo(a)anthracene	2.1
Benzo(a)pyrene	1.9
Benzo(b)fluoranthene	2.7
Benzo(k)fluoranthene	0.9
Chrysene	2.1
Indeno(1,2,3-cd)pyrene	1.5
Total Metals	
Copper	90.7
Lead	310
Mercury	0.458
Zinc	185

LEGEND

APPROXIMATE SITE BOUNDARY

GRAB SAMPLE LOCATION

N

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

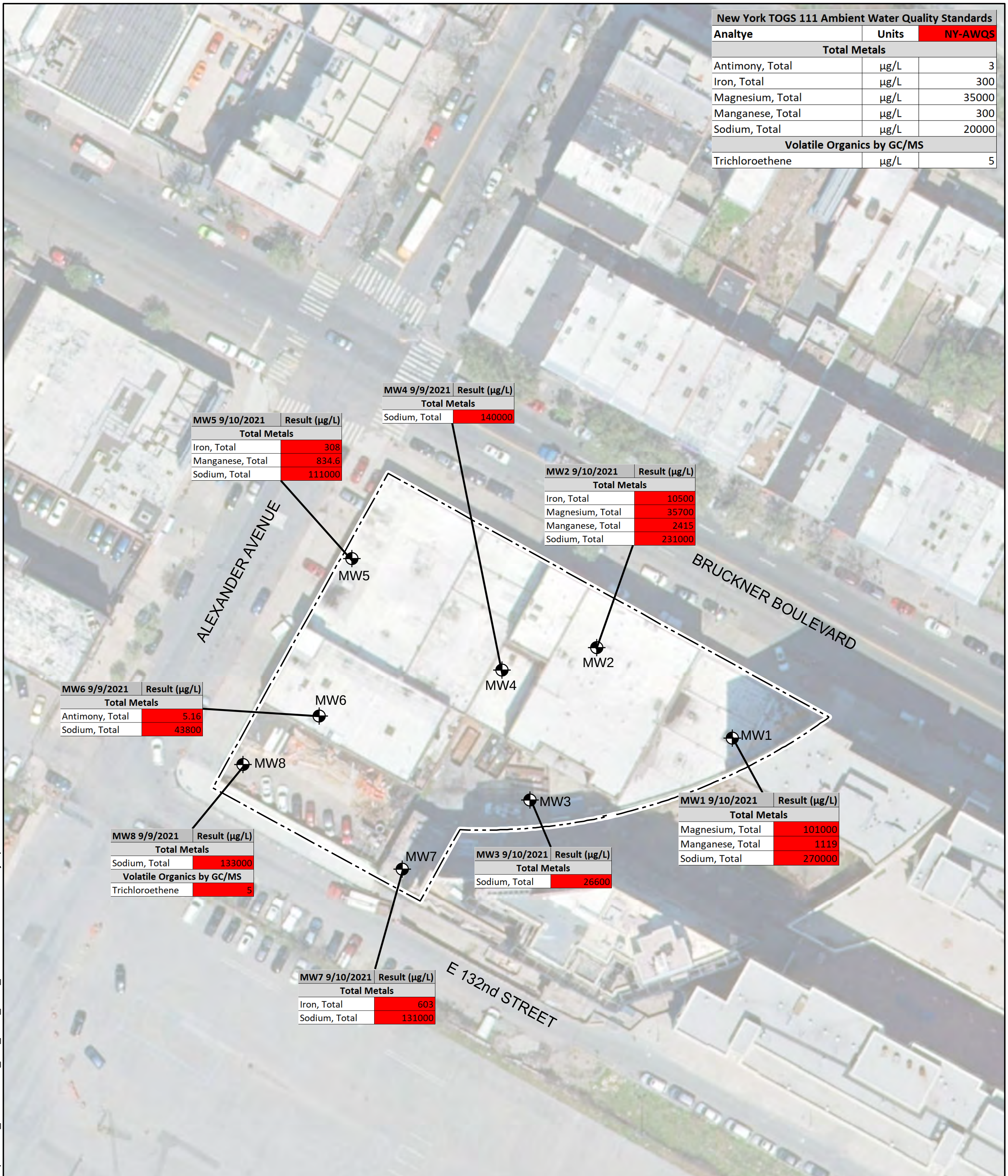
40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SOIL GRAB SAMPLE RESULTS
EXCEEDANCE MAP

SEPTEMBER 2021

FIGURE 4

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM



New York TOGS 111 Ambient Water Quality Standards		
Analtye	Units	NY-AWQS
Total Metals		
Antimony, Total	µg/L	3
Iron, Total	µg/L	300
Magnesium, Total	µg/L	35000
Manganese, Total	µg/L	300
Sodium, Total	µg/L	20000
Volatile Organics by GC/MS		
Trichloroethene	µg/L	5

MW4 9/9/2021	Result (µg/L)
Total Metals	
Sodium, Total	140000

MW5 9/10/2021	Result (µg/L)
Total Metals	
Iron, Total	308
Manganese, Total	834.6
Sodium, Total	111000

MW2 9/10/2021	Result (µg/L)
Total Metals	
Iron, Total	10500
Magnesium, Total	35700
Manganese, Total	2415
Sodium, Total	231000

MW6 9/9/2021	Result (µg/L)
Total Metals	
Antimony, Total	5.16
Sodium, Total	43800

MW1 9/10/2021	Result (µg/L)
Total Metals	
Magnesium, Total	101000
Manganese, Total	1119
Sodium, Total	270000

MW8 9/9/2021	Result (µg/L)
Total Metals	
Sodium, Total	133000
Volatile Organics by GC/MS	
Trichloroethene	5

MW3 9/10/2021	Result (µg/L)
Total Metals	
Sodium, Total	26600

MW7 9/10/2021	Result (µg/L)
Total Metals	
Iron, Total	603
Sodium, Total	131000

LEGEND

APPROXIMATE SITE BOUNDARY

PERMANENT MONITORING WELL LOCATION

N

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

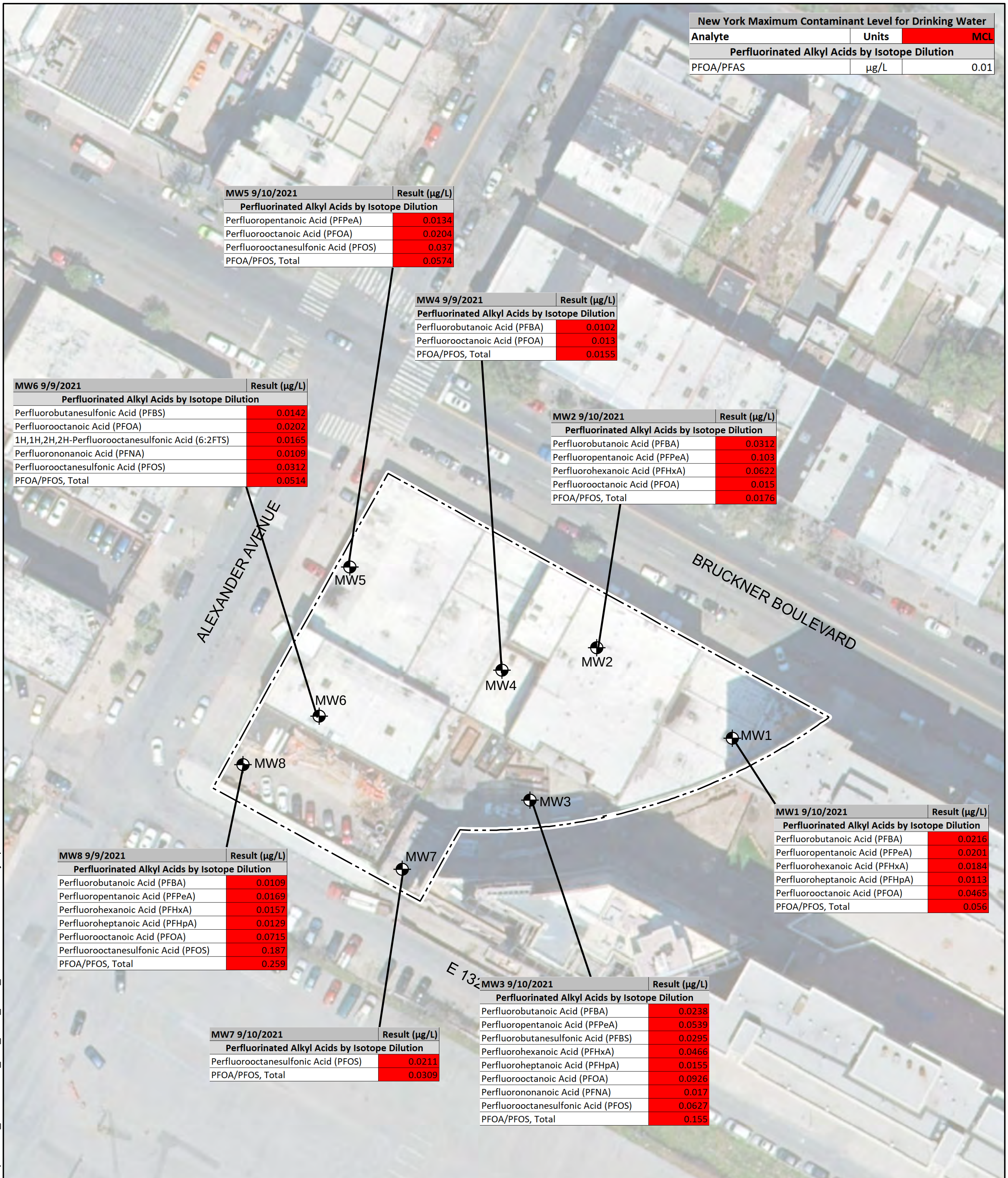
40 BRUCKNER BOULEVARD
BRONX, NEW YORK

GROUNDWATER RESULTS EXCEEDANCE MAP

SEPTEMBER 2021

FIGURE 5

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM



New York Maximum Contaminant Level for Drinking Water		
Analyte	Units	MCL
Perfluorinated Alkyl Acids by Isotope Dilution		
PFOA/PFAS	µg/L	0.01

MW5 9/10/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluoropentanoic Acid (PFPeA)	0.0134
Perfluorooctanoic Acid (PFOA)	0.0204
Perfluorooctanesulfonic Acid (PFOS)	0.037
PFOA/PFOS, Total	0.0574

MW4 9/9/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorobutanoic Acid (PFBA)	0.0102
Perfluorooctanoic Acid (PFOA)	0.013
PFOA/PFOS, Total	0.0155

MW6 9/9/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorobutanesulfonic Acid (PFBS)	0.0142
Perfluorooctanoic Acid (PFOA)	0.0202
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	0.0165
Perfluorononanoic Acid (PFNA)	0.0109
Perfluorooctanesulfonic Acid (PFOS)	0.0312
PFOA/PFOS, Total	0.0514

MW2 9/10/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorobutanoic Acid (PFBA)	0.0312
Perfluoropentanoic Acid (PFPeA)	0.103
Perfluorohexanoic Acid (PFHxA)	0.0622
Perfluorooctanoic Acid (PFOA)	0.015
PFOA/PFOS, Total	0.0176

MW1 9/10/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorobutanoic Acid (PFBA)	0.0216
Perfluoropentanoic Acid (PFPeA)	0.0201
Perfluorohexanoic Acid (PFHxA)	0.0184
Perfluoroheptanoic Acid (PFHpA)	0.0113
Perfluorooctanoic Acid (PFOA)	0.0465
PFOA/PFOS, Total	0.056

MW8 9/9/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorobutanoic Acid (PFBA)	0.0109
Perfluoropentanoic Acid (PFPeA)	0.0169
Perfluorohexanoic Acid (PFHxA)	0.0157
Perfluoroheptanoic Acid (PFHpA)	0.0129
Perfluorooctanoic Acid (PFOA)	0.0715
Perfluorooctanesulfonic Acid (PFOS)	0.187
PFOA/PFOS, Total	0.259

MW3 9/10/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorobutanoic Acid (PFBA)	0.0238
Perfluoropentanoic Acid (PFPeA)	0.0539
Perfluorobutanesulfonic Acid (PFBS)	0.0295
Perfluorohexanoic Acid (PFHxA)	0.0466
Perfluoroheptanoic Acid (PFHpA)	0.0155
Perfluorooctanoic Acid (PFOA)	0.0926
Perfluorononanoic Acid (PFNA)	0.017
Perfluorooctanesulfonic Acid (PFOS)	0.0627
PFOA/PFOS, Total	0.155

MW7 9/10/2021	Result (µg/L)
Perfluorinated Alkyl Acids by Isotope Dilution	
Perfluorooctanesulfonic Acid (PFOS)	0.0211
PFOA/PFOS, Total	0.0309

LEGEND

APPROXIMATE SITE BOUNDARY

PERMANENT MONITORING WELL LOCATION

N

0 40 80

SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

EMERGING CONTAMINANTS IN
GROUNDWATER RESULTS EXCEEDANCE MAP

SEPTEMBER 2021

FIGURE 6

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

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LEGEND

APPROXIMATE SITE BOUNDARY

SOIL VAPOR POINT

N

0 40 80

SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SOIL VAPOR RESULTS EXCEEDANCE MAP

SEPTEMBER 2021

FIGURE 7

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

LEGEND

APPROXIMATE SITE BOUNDARY

(2.17) PERMANENT MONITORING WELL LOCATION (GROUNDWATER ELEVATION)

(2.15) GROUNDWATER ELEVATION CONTOUR

(2.15) INFERRED GROUNDWATER ELEVATION CONTOUR

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

GROUNDWATER CONTOUR MAP

SEPTEMBER 2021

FIGURE 8

LEGEND

APPROXIMATE SITE BOUNDARY

FORMER RI SOIL BORING LOCATION

PROPOSED LEAD DELINEATION LOCATION (INDICATES 5 FT STEP-OUT)

POTENTIAL LEAD DELINATION LOCATION (INDICATES 5 FT STEP-OUT)

NOTE
1. AERIAL IMAGERY SOURCE: ESRI
LOCATIONS ARE APPROXIMATE

N

0 40 80
SCALE IN FE

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

PROPOSED LEAD DELINEATION MAP

JANUARY 2022

FIGURE 9

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

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LEGEND

- APPROXIMATE SITE BOUNDARY
- PRE-DESIGN INVESTIGATION SOIL BORING LOCATION
- PROPOSED 8 FT BGS REMEDIAL EXCAVATION
- PROPOSED 4 FT BGS REMEDIAL EXCAVATION
- PROPOSED 10 FT BGS REMEDIAL EXCAVATION

N

0 40 80

SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI
LOCATIONS ARE APPROXIMATE

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

ALTERNATIVE I EXAVATION MAP

JANUARY 2022

FIGURE 10

LEGEND

APPROXIMATE SITE BOUNDARY

PRE-DESIGN INVESTIGATION SOIL BORING LOCATION

PROPOSED 6 FT BGS REMEDIAL EXCAVATION

PROPOSED 4 FT BGS REMEDIAL EXCAVATION

0 40 80

SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI
LOCATIONS ARE APPROXIMATE

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

ALTERNATIVE II EXAVATION MAP

JANUARY 2022

FIGURE 11

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

LEGEND

SITE BOUNDARY

SITE-WIDE EXCAVATION TO 25 FT BGS

NOTES

1. ALL LOCATINS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: NEARMAP, 12 AUGUST 2021

0 40 80

SCALE IN FEET

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

DEVELOPMENT EXCAVATION PLAN

OCTOBER 2021

FIGURE 12

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0200734\GIS\Maps\2021_10\0200734_001_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 10/15/2021 9:30:50 AM

LEGEND

SITE BOUNDARY

PROPOSED ENDPOINT SAMPLE LOCATION

NOTES

1. ALL LOCATINS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: NEARMAP, 12 AUGUST 2021

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0 40 80

SCALE IN FEET

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NY

PROPOSED CONFIRMATION SAMPLE LOCATION MAP

OCTOBER 2021

FIGURE 13

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0200734\GIS\Maps\2021_10\0200734_001_0002_SITE_PLAN.mxd — USER: hwachholz — LAST SAVED: 10/15/2021 9:30:50 AM

LEGEND

APPROXIMATE SITE BOUNDARY

N

NOTE
AERIAL IMAGERY SOURCE: ESRI
LOCATIONS ARE APPROXIMA

0 40 80
SCALE IN FEET

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

ALPHANUMERIC SITE MAP

MARCH 2022

FIGURE 14

LEGEND

- SITE BOUNDARY
- TRUCK ENTRANCE
- TRUCK EGRESS
- TRUCK INGRESS
- TRUCK ROUTE

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.
2. TRUCK ROUTE MAP SOURCE: NEW YORK DEPARTMENT OF TRANSPORTATION, 2015
3. AERIAL IMAGERY SOURCE: NEARMAP, 12 MARCH 2021

N

0 40 80
SCALE IN FEET

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

TRUCK ROUTE MAP

OCTOBER 2021

FIGURE 15

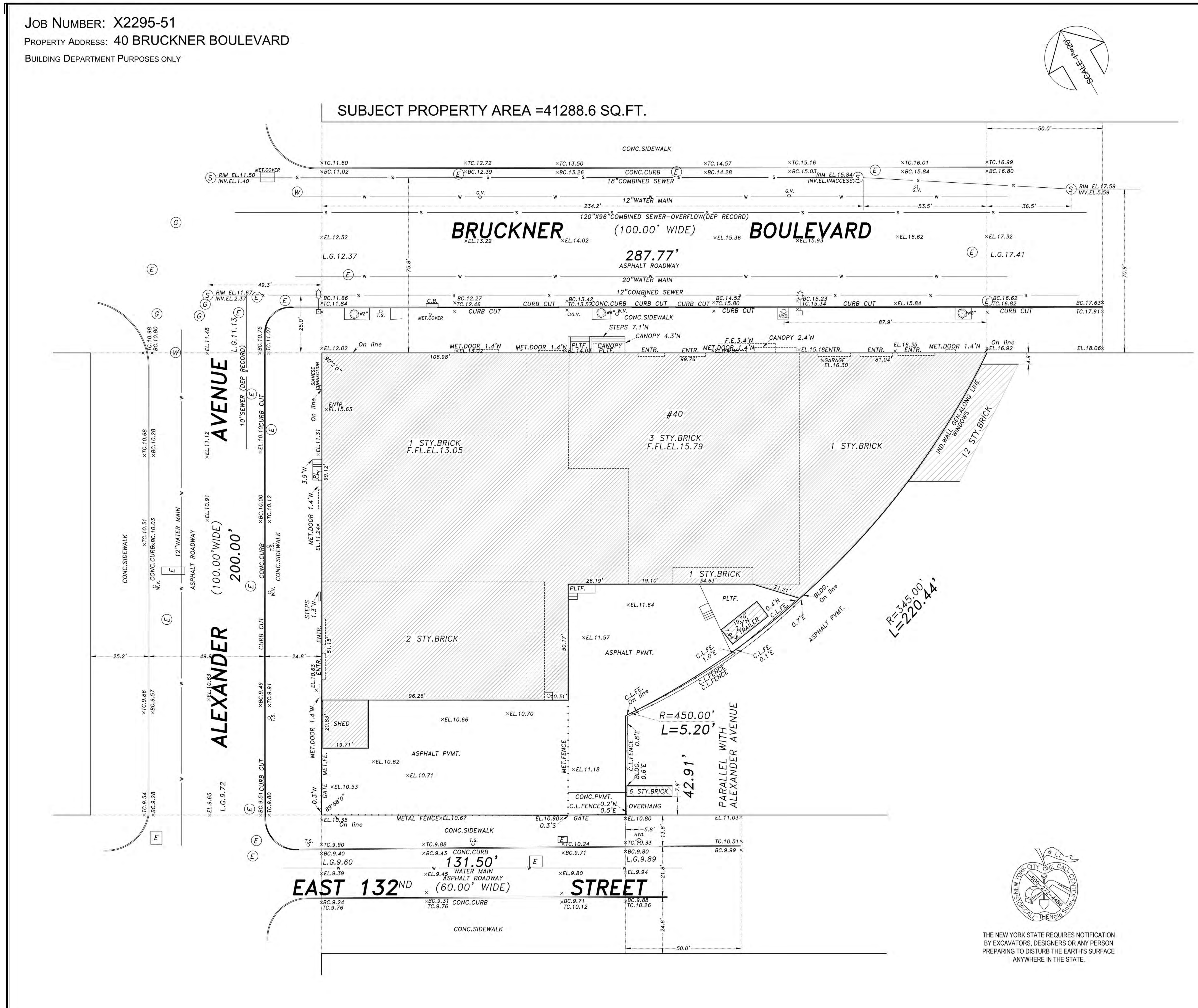
GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0200734\GIS\Maps\2021_10\0200734_001_0003_TRUCK_ROUTE_MAP.mxd — USER: hwachholz — LAST SAVED: 10/15/2021 1:58:03 PM

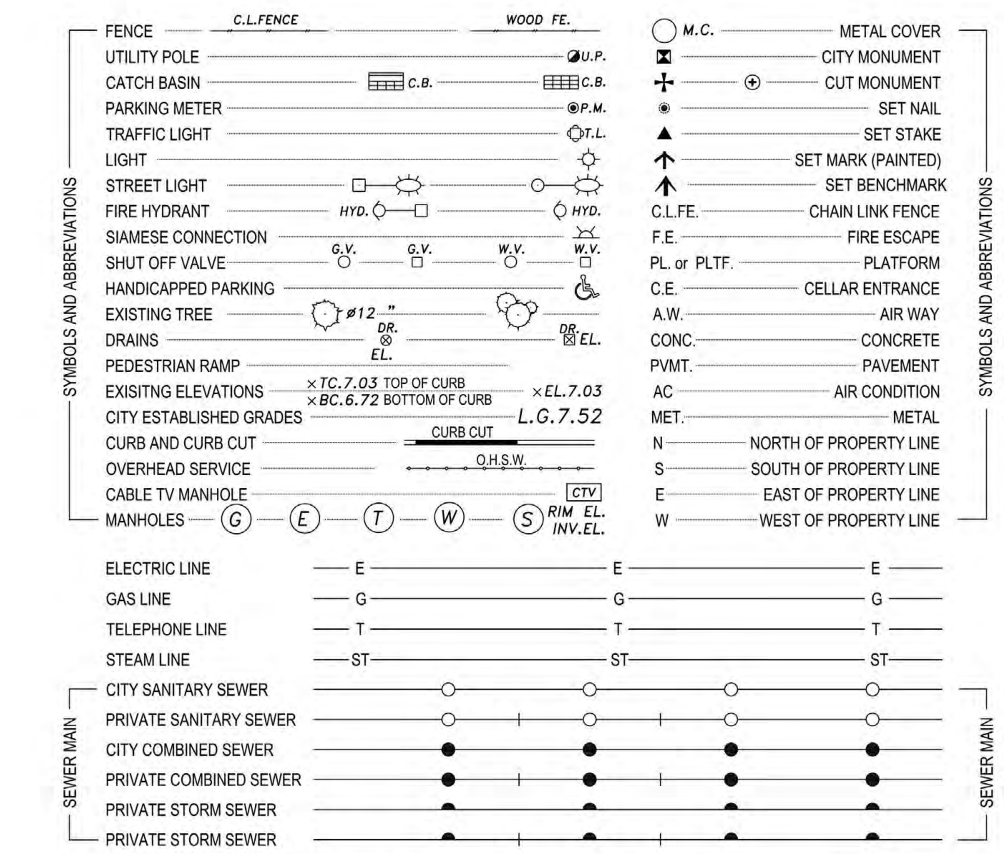
APPENDIX A

Survey Map

JOB NUMBER: X2295-51
PROPERTY ADDRESS: 40 BRUCKNER BOULEVARD
BUILDING DEPARTMENT PURPOSES ONLY

SUBJECT PROPERTY AREA =41288.6 SQ.FT.





NOTES:
SURVEYED AS IN POSSESSION. OFFSETS AND/OR DIMENSIONS SHOWN BETWEEN THE STRUCTURES AND PROPERTY LINES ARE FOR SPECIFIC PURPOSE AND USE AND THEREFORE ARE NOT INTENDED TO GUIDE ERECTION OF FENCES, RETAINING WALLS, POOLS, PLANTING AREAS, ADDITIONS TO STRUCTURES, SHEDS, GARAGES AND ANY OTHER CONSTRUCTION.
THE USER OF THIS SURVEY EXPRESSLY AGREES AND UNDERSTANDS THAT SHOULD JAROSLAW KRAWCZYK OR KABA LAND SURVEYING, PC. BE FOUND LIBEL IN A COURT OF LAW FOR ERRORS OR EMISSIONS ARISING FROM THIS SURVEY THAT THE LIMIT OF LIABILITY IS THE PRICE PAID FOR THIS SURVEY.
DO NOT USE THIS SURVEY UNLESS YOU AGREE AND CONSENT TO ALL OF THE ABOVE.
PLUMBNESS OF WALLS NOT VERIFIED.
UNDERGROUND AND SIDEWALK VAULTS NOT LOCATED AS PART OF THIS SURVEY.
PROPERTY CORNER MONUMENTS WERE NOT PLACED AS PART OF THIS SURVEY.
THIS SURVEY HAS BEEN PREPARED WITHOUT A FULL ABSTRACT OF TITLE. OTHER AGREEMENTS, COVENANTS AND/OR RESTRICTIONS AFFECTING AND/OR BENEFITING PARCEL SURVEYED, IF ANY, NOT INDICATED HEREON.
EASEMENTS IF ANY IF NOT SHOWN ON THIS SURVEY ARE NOT GUARANTEED.
SOME DIMENSIONS, FEATURES AN/OR LOCATIONS MAY NOT BE DRAWN TO SCALE TO PROVIDE CLARITY.

GENERAL NOTES

SUBSURFACE UTILITIES ARE NOT GUARANTEED BY SURVEYOR. HIGH CAUTION RECOMMENDED AND VERIFICATION WITH PROPER CITY AGENCIES, IS MANDATORY BEFORE COMMENCING ALL NEW WORK.
ALL SUBSURFACE AND OVERHEAD UTILITIES (AS TO SIZE , TYPE AND DEPTH) SHOWN ON THIS SURVEY ARE TAKEN FROM RECORDS OF GOVERNMENTAL AGENCIES AND UTILITY COMPANIES, UNLESS OTHERWISE NOTED AND SHOWN. COVER OR DEPTH OF UTILITIES WHICH DERIVED FROM FIELD MEASUREMENTS SHOWN ON THIS SURVEY SHOULD BE VERIFIED WITH PROPER AGENCY PRIOR TO CONSTRUCTION OF PROJECT. INVERT ELEVATIONS ARE DERIVED FROM CITY AGENCY RECORDS WHEN NOT AVAILABLE BY FIELD SURVEY AND NOTED AS "PER RECORD" ON THE SURVEY.
ALL SUBSURFACE UTILITY AS TO LOCATION AND DEPTH, SHOULD BE RECHECKED AND LEGAL GRADES SHOULD BE VERIFIED WITH THE TOPOGRAPHICAL BUREAU, PREFERABLY IN WRITING BEFORE COMMENCING CONSTRUCTION.
THIS IS TO CERTIFY THAT THERE ARE NO STREAMS OR NATURAL WATER COURSES ON THE SURVEYED PROPERTY EXCEPT AS SHOWN AND/OR DESCRIBED ON THIS SURVEY.
ALL OPERATIONS OF UNDERGROUND FACILITIES AND ALL EXCAVATORS ARE OBLIGATED TO COMPLY WITH ARTICLE 36 OF THE GENERAL BUSINESS LAW AND WITH PROVISIONS OF INDUSTRIAL CODE PART (RULE NO.35) BEFORE ANY EXCAVATION OR DEMOLITION IS COMMENCED. EVERY EXCAVATOR IS REQUIRED BY THESE LAWS TO GIVE ADVANCE NOTICE TO EVERY OPERATOR OF UNDERGROUND FACILITIES OF HIS INTENT TO PERFORM EXCAVATION OR DEMOLITION WORK IN THE SPECIFIED AREA.
THE USER OF THE SURVEY EXPRESSLY UNDERSTANDS AND AGREES THAT THE SURVEYOR MAKES NO CLAIM AND DOES NOT GUARANTEE THAT THE SEWERS SHOWN HEREON ARE PUBLIC OR THAT ANY PROPERTIES SHOWN ON THE SURVEY WILL BE ABLE TO CONNECT TO SAME.
THE USER OF THIS SURVEY EXPRESSLY AGREES AND UNDERSTANDS THAT SHOULD JAROSLAW KRAWCZYK OR KABA LAND SURVEYING, PC. BE FOUND LIBEL IN A COURT OF LAW FOR ERRORS OR EMISSIONS ARISING FROM THIS SURVEY THAT THE LIMIT OF LIABILITY IS THE PRICE PAID FOR THIS SURVEY.
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ALL ELEVATIONS SHOWN REFER TO NAVD 88 DATUM.
LEGAL GRADES SHOWN ON THE SURVEY REFER TO NAVD 88 DATUM.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF **THE NEW YORK STATE EDUCATION LAW.** COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID COPY. GUARANTEES OR CERTIFICATIONS INDICATED HEREON SHALL RUN ONLY TO THE PERSON FOR WHOM THE SURVEY IS PREPARED AND ON HIS BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION. GUARANTEES OR CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

SURVEYED FOR:			
GUARANTEED TO: ABOVE,			
BOROUGH: BRONX	TOWN: THE BRONX		
SECTION:	BLOCK: 2295	LOT: 51	
FILED MAP INFO:			

ARCHITECTURAL SURVEY

PREPARED BY

kaBA surveying
phone:718-354-7279 718-470-2358
fax:718-247-5854 718-470-2264
338 JERICHO TURNPIKE, FLORAL PARK, NY 11001
PROFESSIONAL LAND SURVEYOR
brooklyn bronx manhattan queens nassau
WWW.KABAPLS.COM
SURVEYS@KABAPLS.COM

THE NEW YORK STATE REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

SURVEYED ON: NOVEMBER 3, 2020

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DOB STAMP AND SIGNATURE

NO.	DATE	REVISION

NO.	DATE	ISSUE
04	05.14.2021	DOB SUBMISSION #1
03	04.30.2021	50% DESIGN DEVELOPMENT
02	03.19.2021	100% SCHEMATIC DESIGN
01	02.12.2021	50% SCHEMATIC DESIGN

KEY PLAN

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NEW YORK, NY 10001
T 212.457.4077
S9ARCHITECTURE.COM

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Brooklyn, NY 11211
718-701-5680

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New York, NY 10038
212-257-6190

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000-000-0000

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PROJECT TITLE:
40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00
DOB NO: XXXXXXXXXXX

DRAWING TITLE:
ZONING - SURVEY

SCALE: PAGE: X OF XXXX

Z-002.00

DOB SCAN STICKER

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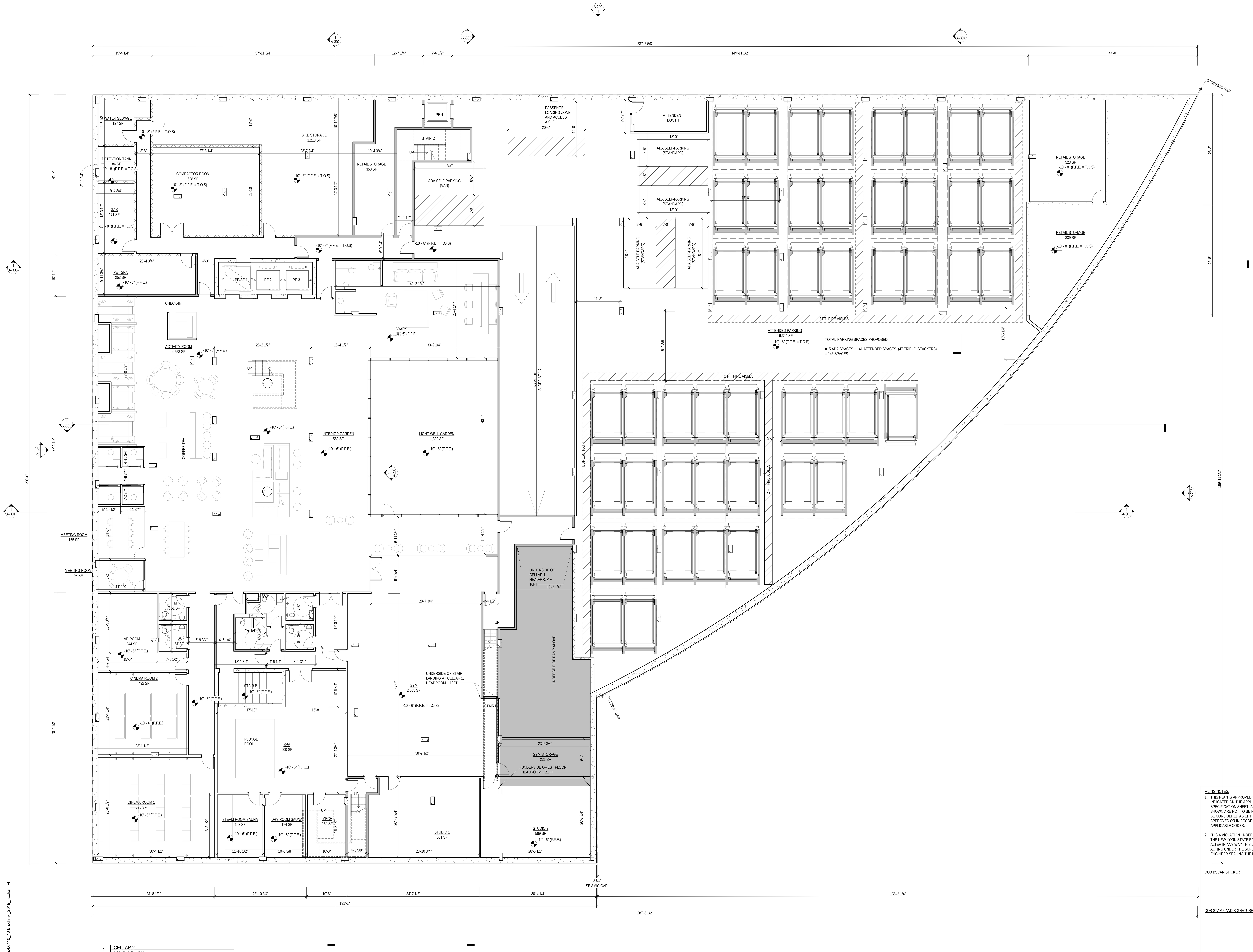
04/14/21 CHECKED BY:

APPENDIX B

Proposed Development Plans

NO.	DATE	REVISION



1 CELLAR 2
SCALE: 1/8" = 1'-0"

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NO.	DATE	ISSUE
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City, State, and Zip
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PROJECT TITLE:

40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:

CELLAR 2 - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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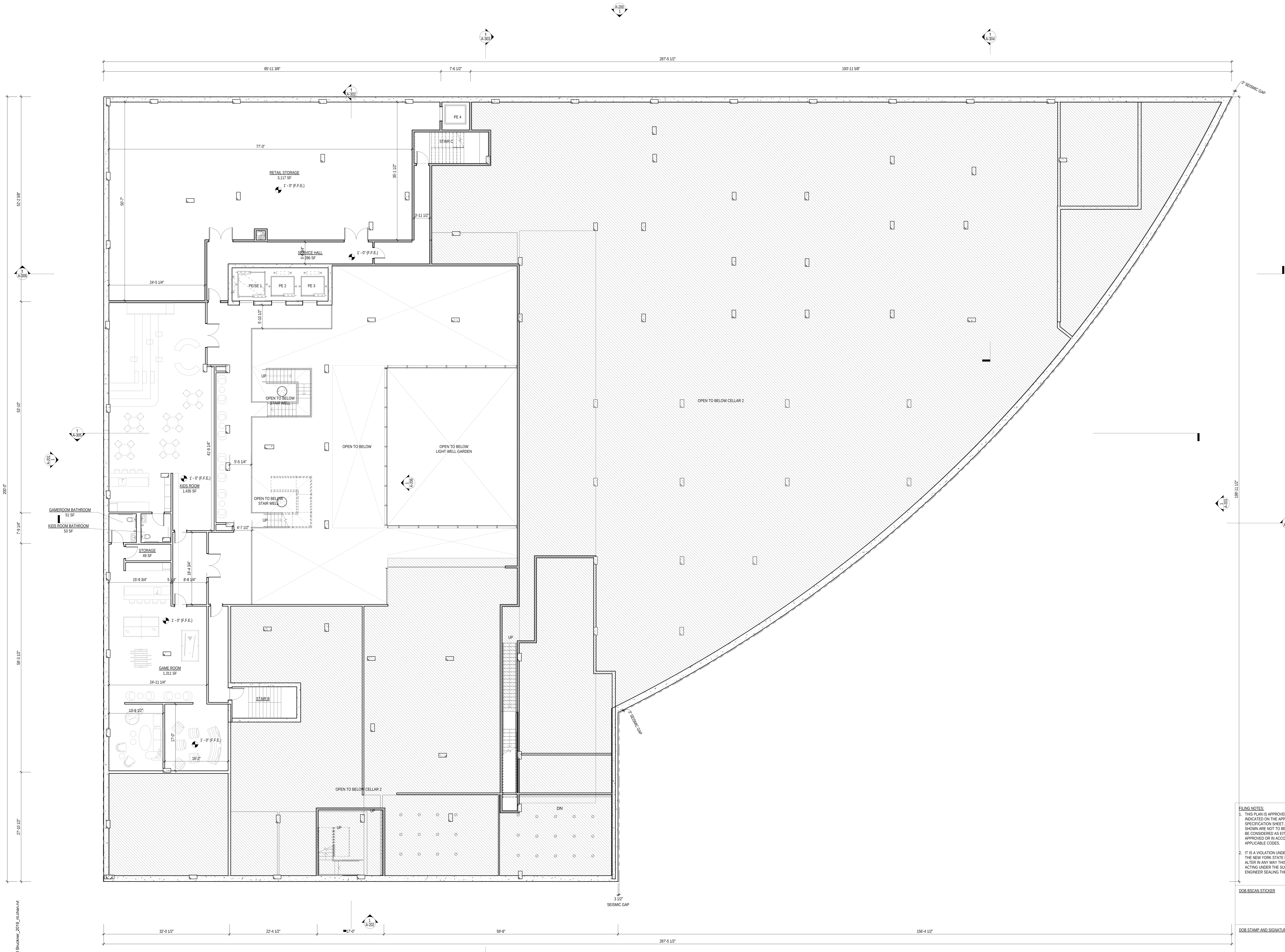

1 CELLAR 1
SCALE: 1/8" = 1'-0"

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40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:
CELLAR 1 - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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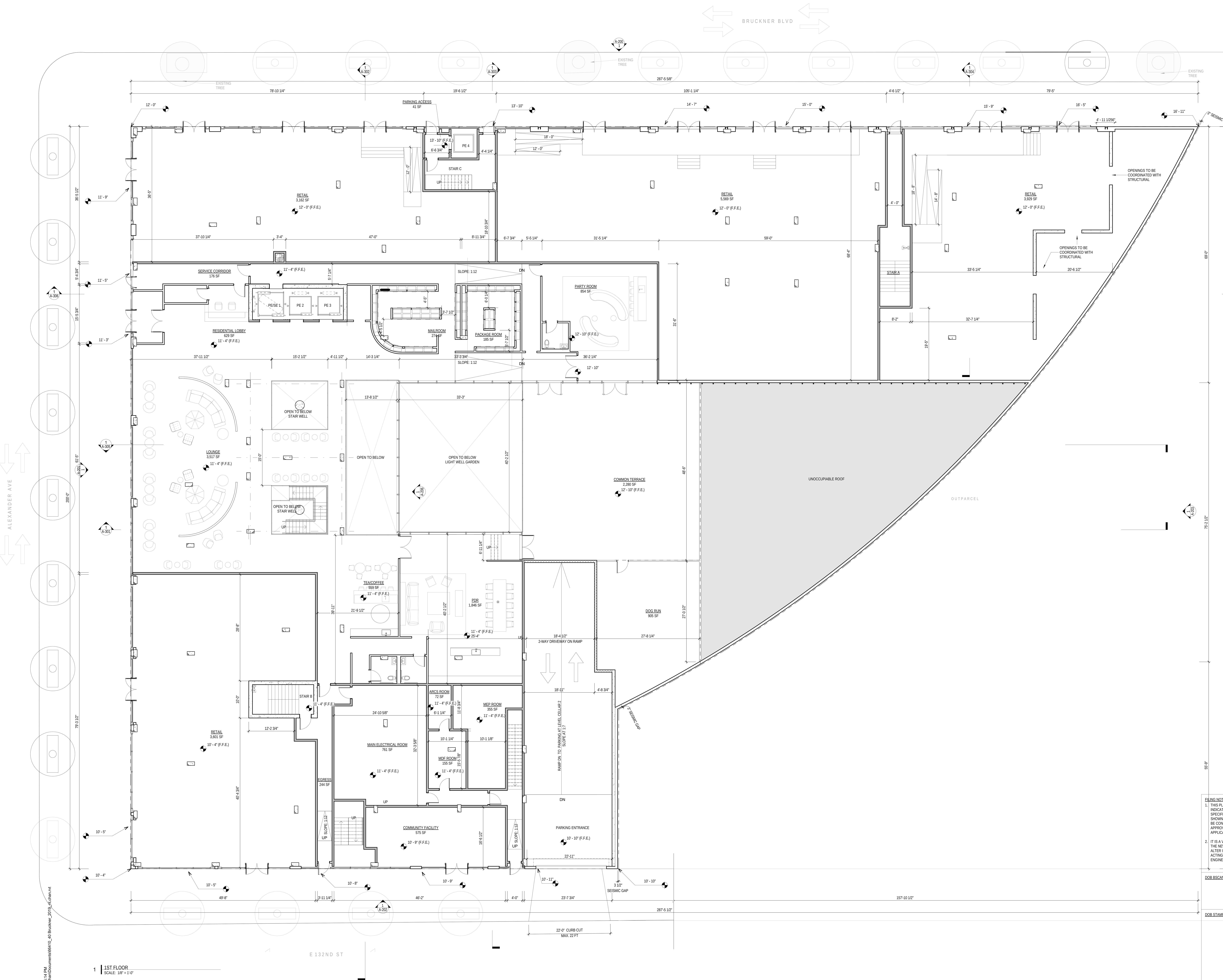

1 1ST FLOOR
SCALE: 1/8" = 1'-0"

NO.	DATE	REVISION

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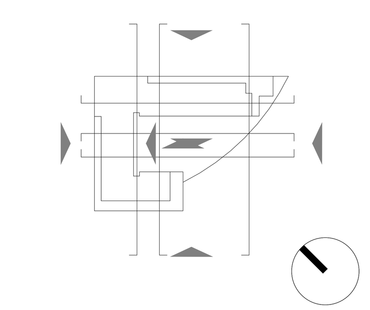

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40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:

GROUND FLOOR - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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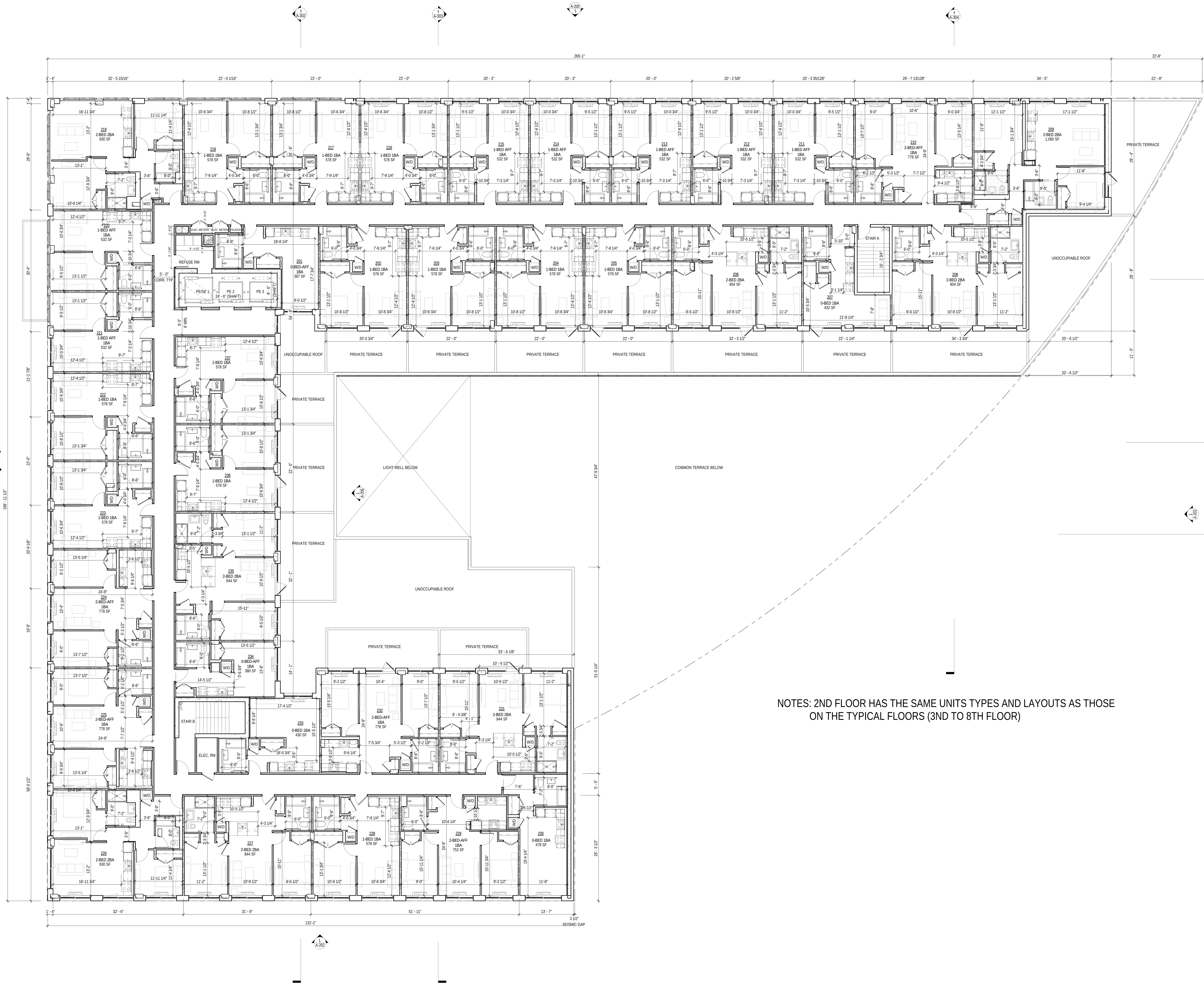

1 2ND FLOOR
SCALE: 1/8" = 1'-0"

NOTES: 2ND FLOOR HAS THE SAME UNITS TYPES AND LAYOUTS AS THOSE ON THE TYPICAL FLOORS (3ND TO 8TH FLOOR)

NO.	DATE	REVISION
04	05.14.2021	DOB SUBMISSION #1
03	04.30.2021	50% DESIGN DEVELOPMENT
02	03.19.2021	100% SCHEMATIC DESIGN
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NO.	DATE	ISSUE

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PROJECT TITLE:
40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

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DRAWING TITLE:
2ND FLOOR - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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1 3RD-8TH FLOOR
SCALE: 1/8" = 1'-0"

NO.	DATE	REVISION
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PROJECT TITLE:
40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:
3RD TO 8TH FLOOR - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

A-104.00

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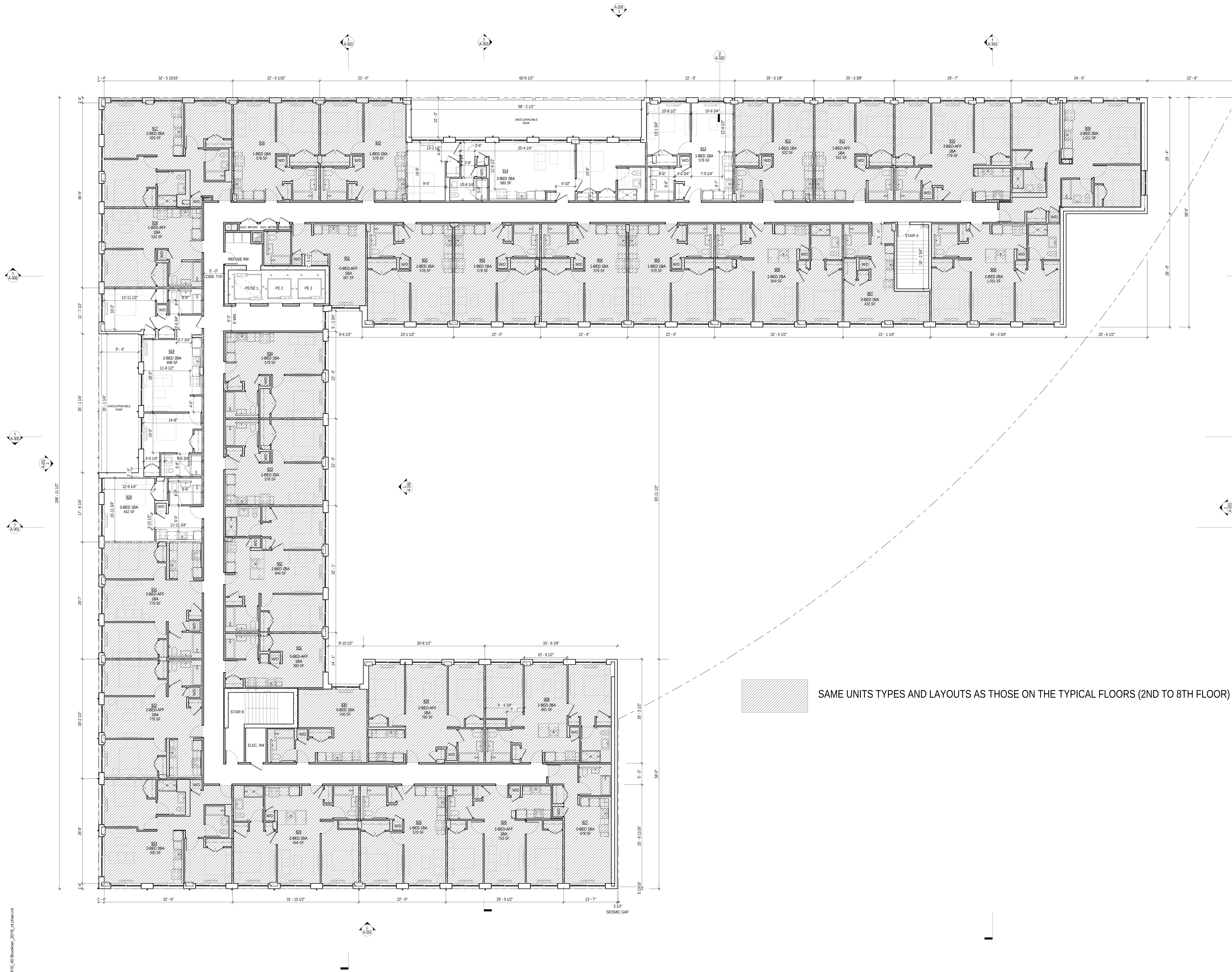

1 9TH FLOOR
SCALE: 1/8" = 1'-0"

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000-000-0000

Xtra
Xtra CONSULTANT
Street Address
City, State, and Zip
000-000-0000

Xtra
Xtra CONSULTANT
Street Address
City, State, and Zip
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DOB BSCAN STICKER

DOB STAMP AND SIGNATURE

PROJECT TITLE:
40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:
9TH FLOOR - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

A-105.00

DOB SCAN STICKER

SEAL

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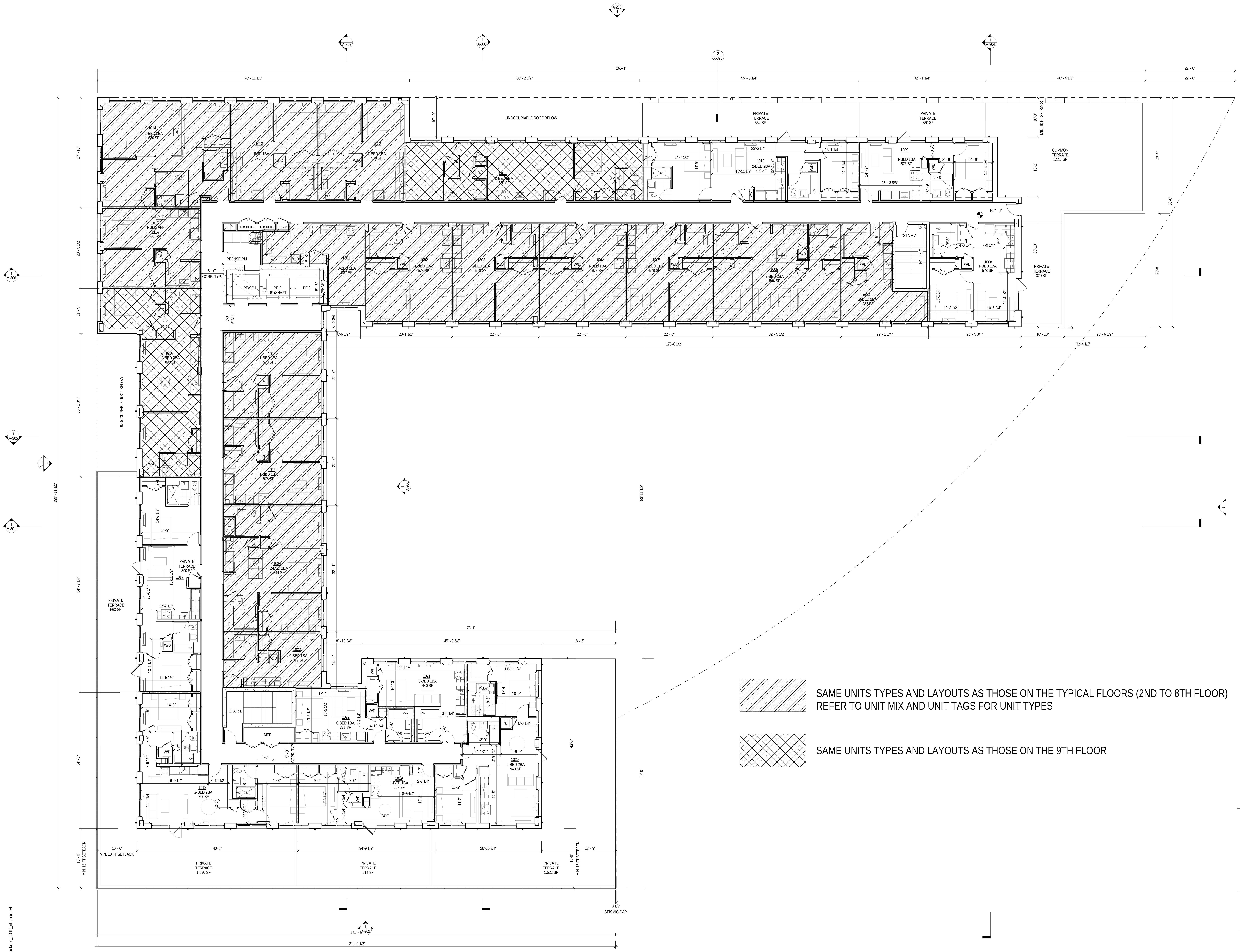

SAME UNITS TYPES AND LAYOUTS AS THOSE ON THE TYPICAL FLOORS (2ND TO 8TH FLOOR)
REFER TO UNIT MIX AND UNIT TAGS FOR UNIT TYPES

SAME UNITS TYPES AND LAYOUTS AS THOSE ON THE 9TH FLOOR

1 10TH-11TH FLOOR
SCALE: 1/8" = 1'-0"

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NO.	DATE	REVISION
04	05.14.2021	DOB SUBMISSION #1
03	04.30.2021	50% DESIGN DEVELOPMENT
02	03.19.2021	100% SCHEMATIC DESIGN
01	02.12.2021	50% SCHEMATIC DESIGN
NO.	DATE	ISSUE

KEY PLAN

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T 212.457.4077
S9ARCHITECTURE.COM

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Architect/Interior Designer:
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212-257-6190

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CIVIL ENGINEER NAME
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000-000-0000

Landscape Architect:
LANDSCAPE ARCHITECT
Street Address
City, State, and Zip
000-000-0000

Vertical Transportation Consultant:
VERTICAL TRANSPORTATION CONSULTANT
Street Address
City, State, and Zip
000-000-0000

Xtra
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Xtra
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Street Address
City, State, and Zip
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PROJECT TITLE:
40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:
10TH TO 11TH FLOOR - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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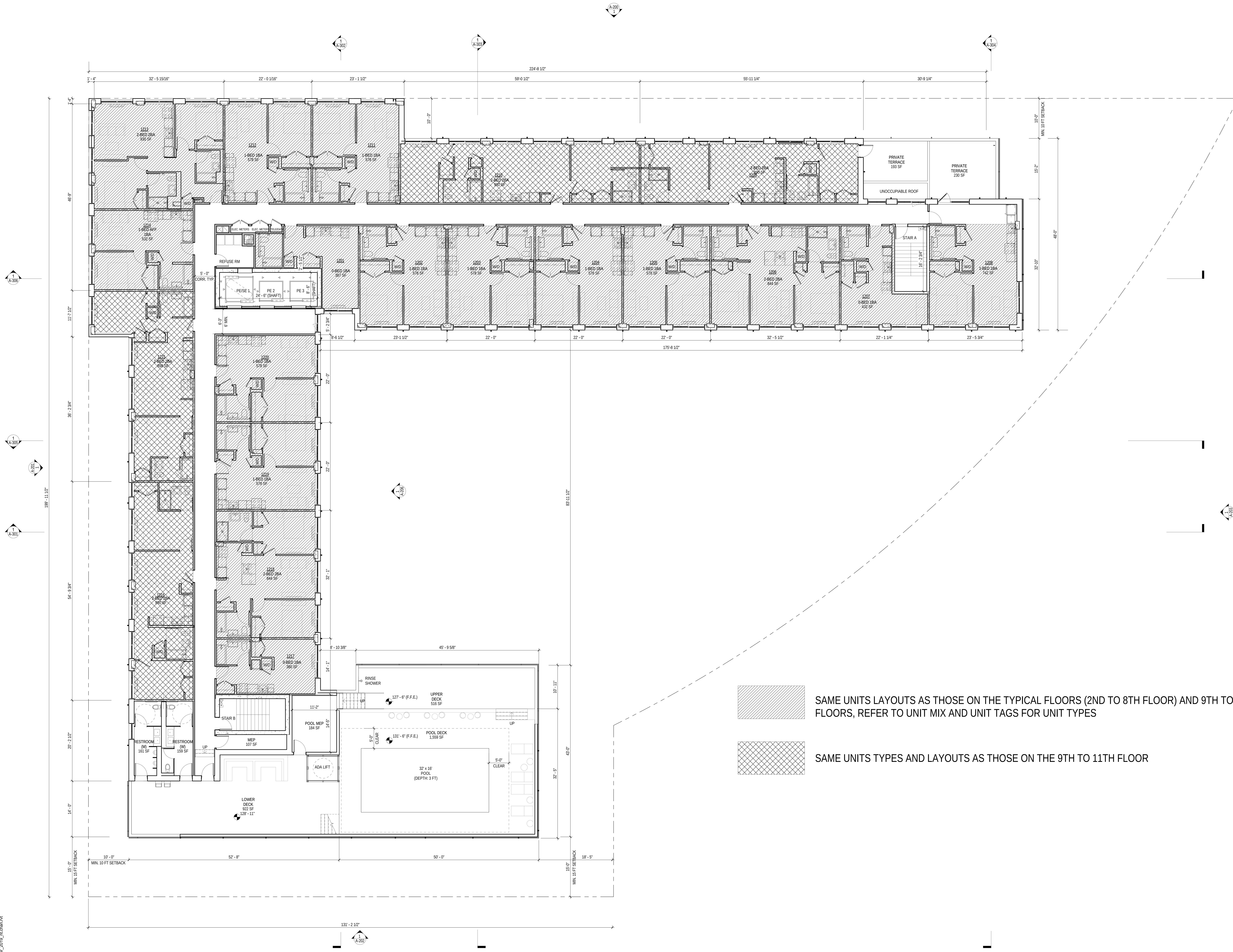

1 12TH FLOOR
SCALE: 1/8" = 1'-0"

SAME UNITS LAYOUTS AS THOSE ON THE TYPICAL FLOORS (2ND TO 8TH FLOOR) AND 9TH TO 11TH FLOORS, REFER TO UNIT MIX AND UNIT TAGS FOR UNIT TYPES

SAME UNITS TYPES AND LAYOUTS AS THOSE ON THE 9TH TO 11TH FLOOR

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NO.	DATE	REVISION

NO.	DATE	ISSUE
04	05.14.2021	DOB SUBMISSION #1
03	04.30.2021	50% DESIGN DEVELOPMENT
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KEY PLAN

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PROJECT TITLE:
40 BRUCKNER

40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXXX

DRAWING TITLE:
12TH FLOOR - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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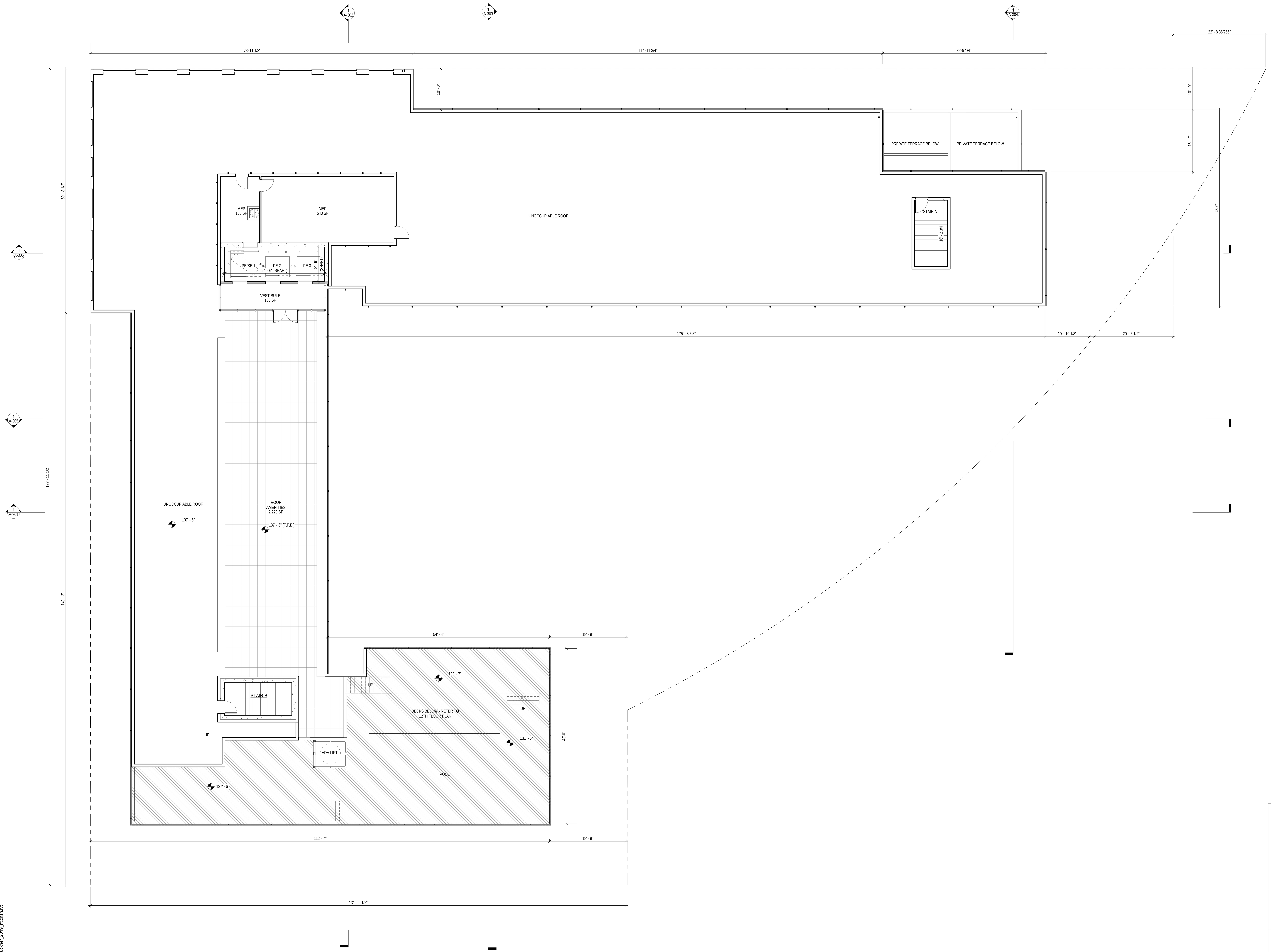

1 ROOF
SCALE: 1/8" = 1'-0"

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NO.	DATE	REVISION
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03	04.30.2021	50% DESIGN DEVELOPMENT
02	03.19.2021	100% SCHEMATIC DESIGN
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KEY PLAN

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40 BRUCKNER BLVD, BRONX, NY

PROJECT NO: 66410.00

DOB NO: XXXXXXXXXXX

DRAWING TITLE:
ROOF - OVERALL PLAN

SCALE: 1/8" = 1'-0" PAGE: X OF XXXX

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APPENDIX C

Soil Boring Logs

TEST BORING REPORT

HALEY ALDRICH

BORING NO. **SB1**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	40	0-2"	SB1 (0-2")	0-5' Fill material including concrete, brick, and wood pieces with some brown silty SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
5					0.0
	50			5-10' Fill material including brown silty SAND with pieces of asphalt and brick, no odor, moist	0.0
					0.0
					0.0
					0.0
				Note: Fill material present to at least 10 ft bgs	0.0
10	60	11-13'	SB1 (11-13')	10-13' Dark brown silty SAND, no odor, moist	0.0
					0.0
				Note: Groundwater at 13 ft bgs	0.0
				13-15' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
15	60			15-17' Brown silty SAND, no odor, wet	0.0
					0.0
				17-20' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			20'	13'

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO. SB2

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/2/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/2/2021

Elevation ft.	**Datum** NAVD-88	**Boring Location**	See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud	Casing Advance
☐ Safety	☐ Bentonite	Type Method Depth
☐ Doughnut	☐ Polymer	Direct Push
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	30	0-2"	SB2 (0-2")	0-8' Brown silty SAND with fill material including pieces of brick and asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
5					0.0
					0.0
	50			Note: Fill material present to 8 ft bgs	0.0
				8-15' Brown well-graded SAND, no odor, moist	0.0
					0.0
10					0.0
					0.0
	50	11-13'	SB2 (11-13')	Note: Groundwater at approximately 13 ft bgs	0.0
					0.0
					0.0
15				15-20' Brown well-graded SAND, no odor, wet	0.0
					0.0
	60				0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20'	13'

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB2

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO. **SB3**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location: See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 7822DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	32	0-2'	SB3 (0-2')	0-4' Brown to dark brown fine gravel with pieces of asphalt and glass, loose, no odor, dry	0.0
					0.0
					0.0
					0.0
5				Note: Fill material present to 4 ft bgs	0.0
	29	8-10'	SB3 (8-10')	5-10' Brown fine SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
10					0.0
				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data					Sample ID	Summary	
Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water	**O** Open End Rod	Overburden (Linear ft.)	10
					T Thin Wall Tube	Rock Cored (Linear ft.)	-
					U Undisturbed Sample	Number of Samples	2
					S Split Spoon Sample	BORING NO.	SB3
					G Geoprobe		

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB4
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 6610DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	30	0-2"	SB4 (0-2")	2" Concrete	0.0
				2"-5' Brown SAND with silt, with fill material including pieces of asphalt and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
5	50			5-8' Brown silty SAND, with fill material including pieces of asphalt and brick, no odor, moist	0.0
					0.0
				Note: Fill material present to 8 ft bgs	0.0
					0.0
					0.0
10	60	11-13'	SB4 (11-13') & DUP-20210902	10-15' Brown silty SAND, no odor, moist	0.0
					0.0
				Note: Groundwater at approximately 13 ft bgs	0.0
					0.0
					0.0
15				END OF EXPLORATION 15 FT BGS	
20					

Water Level Data				
Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			15	13

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	3
BORING NO.	SB4

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO. SB5

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/3/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/3/2021

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	40	0-2"	SB5 (0-2")	0-5' Brown silty SAND with fill material including pieces of concrete and asphalt, no odor, moist	0.0
					0.0
					0.0
					0.0
5				Note: Fill material to 5 ft bgs	0.0
	52	8-10'	SB5 (8-10')	5-10' Brown silty fine grained SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
10					0.0
	60			10-15' Brown silty fine grained SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
15					0.0
	60			15-20' Brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
20					0.0
				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			20	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB5

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO.	SB6
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☑ Geoprobe ☐ Winch
☑ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	47	0-2"	SB6 (0-2")	0-6" Concrete	0.0
				6"-4' Dark brown to black fine to medium SAND with silt, with fill material including pieces of asphalt	1.1
				and brick, loose, no odor, dry	1.1
					1.1
5				Note: Fill material to 4 ft bgs	1.1
	32	8-10'	SB6 (8-10')	4-10' Brown fine SAND with silt, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
10					0.0
				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB6

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

HALEY ALDRICH

TEST BORING REPORT

BORING NO.	SB7
Page 1 of 1	

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 7822DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	42	0-2"	SB7 (0-2")	0-4' Dark brown medium to coarse SAND, with fine gravel and fill material including pieces of asphalt	0.0
				and glass, loose, no odor, dry	0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown fine to medium SAND with silt, no odor, moist	0.0
5	48	8-10'	SB7 (8-10')		0.0
					0.0
					0.0
					0.0
				Note: Groundwater at approximately 10 ft bgs	0.0
10	48			10-12' Brown fine to medium SAND with silt, no odor, wet	0.0
					0.0
				12-15' Brown fine to coarse SAND, trace silt and fine gravel, no odor, wet	0.0
					0.0
					0.0
15	50			15-20 Brown coarse SAND, wet, no odor, with some fine gravel	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20	10

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB7

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO. **SB8**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	31	0-2"	SB8 (0-2")	0-3' Dark brown to black fine to medium SAND with silt and fine gravel. Fill material including pieces	0.0
				of asphalt and wood, no odor, dry	0.0
				3-4' Black fine SAND, slight sweet odor, dry	65.0
				Note: Fill material to 4 ft bgs	65.0
				4-5' Brown fine SAND	0.0
5	35	8-10'	SB8 (8-10') DUP-1-20210902	5-10' Brown fine to coarse SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
10	24			10-15' Brown coarse SAND, with some fine gravel, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
15	38			15-20' Brown coarse SAND, with some fine gravel, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20	9

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	3
BORING NO.	SB8

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO.	SB9
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0				0-5' Brown to dark brown fine to medium SAND with silt and some fine gravel. Fill material present	0.0
	28	0-2"	SB9 (0-2")	including pieces of asphalt, brick, and glass, no odor, dry	0.0
					0.0
					0.0
				Note: Fill material present to 5 ft bgs	0.0
5				5-9' Brown fine SAND, no odor, moist	0.0
	32	8-10'	SB9 (8-10')		0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB9

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO.	SB10
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location: See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	38	0-2"	SB10 (0-2")	0-5' Brown to dark brown fine to medium SAND with silt and some fine gravel. Fill material present	0.0
				including pieces of asphalt, brick, and glass, no odor, dry	0.0
					0.0
					0.0
				Note: Fill material present to 5 ft bgs	0.0
5	38	8-10'	SB10 (8-10')	5-9' Brown fine SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
				9-10' Brown medium to coarse SAND with some fine gravel, no odor, wet	0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB10

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

BORING NO. SB11

Page 1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/3/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/3/2021

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud
☐ Safety	☐ Bentonite
☐ Doughnut	☐ Polymer
☑ Automatic	☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40	0-2"	SB11 (0-2")	0-4' Dark brown fine to medium SAND with silt, with fill material including pieces of asphalt and brick,	0.0
				no odor, dry	0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Dark brown fine SAND with clay, no odor, dry	0.0
5	46	8-10'	SB11 (8-10')	5-8' Brown fine SAND with silt, no odor	0.0
				Note: Groundwater at approximately 8 ft bgs	0.0
				8-10' Brown medium to coarse SAND with some fine gravel (mps 0.5"), no odor, wet	0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			10	8

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB11

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB12
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	48			0-7' Fill material including concrete, brick, and asphalt present, no recovery of soil	0.0
					0.0
					0.0
					0.0
					0.0
5	60	7-8'	SB12 (7-8')	Note: Fill material to 7 ft bgs	0.0
				7-10' Brown to orange brown silty SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
10	50	12-14'	SB12 (12-14')	10-15; Brown to orange brown silty SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at 14 ft bgs	0.0
					0.0
15	60			15-20' Brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20	14

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB12

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

HALEY ALDRICH

BORING NO. SB13

Page 1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/3/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/3/2021

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 7822DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	25	0-2"	SB13 (0-2")	0-5" Brown silty SAND with fill material including pieces of concrete, asphalt, and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
5	35			5-11' Brown silty SAND with fill material including pieces of concrete, asphalt, and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
				Note: Fill material present to 11 ft bgs	0.0
10	40	11-13'	SB13 (11-13')	11-13' Fine orange brown to brown SAND, no odor, moist	0.0
					0.0
				Note: Groundwater at 13 ft bgs	0.0
				END OF EXPLORATION 13 FT BGS DUE TO REFUSAL	
15					
				Note: Multiple shallow refusals in this location at approximately 4 ft bgs	
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			13	13

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	13
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB13

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

Form #3000

TEST BORING REPORT

BORING NO.	SB14
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 7822DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	35	0-2"	SB14 (0-2")	3" Concrete	0.0
				3"-8' Brown silty SAND, with some fill material including asphalt, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
5	45	8-10'	SB14 (8-10')		0.0
					0.0
				8-9' Layer of asphalt	0.0
				9-11' Brown silty SAND followed by a 6" lense of asphalt/concrete at 11.5'	0.0
					0.0
10	60			Note: Fill material present to 12 ft bgs	0.0
				12-15' Orange brown well-graded SAND, no odor, wet	0.0
				Note: Groundwater at approximatley 13 ft bgs	0.0
					0.0
					0.0
15				END OF EXPLORATION 15 FT BGS	
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			15	13

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB14

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO.	SB15
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location: See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud
☐ Safety	☐ Bentonite
☐ Doughnut	☐ Polymer
☑ Automatic	☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	32	0-2"	SB15 (0-2")	0-4' Brown to dark brown fine to medium SAND with silt and trace gravel. Fill material including pieces of asphalt, brick, and wood present, loose, no odor, dry	0.0, 0.0, 0.0
				Note: Fill material to 4 ft bgs	0.0
5	34	8-10'	SB15 (8-10')	4-10' Brown fine SAND with trace silt, no odor, dry	0.0, 0.0, 0.0, 0.0, 0.0
				Note: Groundwater at approximately 10 ft bgs	0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB15

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB16
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum NAVD-88		Boring Location	See Site plan					
Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 7822DT		Hammer Type		Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety		☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut		☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic		☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:			

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
				0-4' Dark brown to brown fine to medium SAND with silt, with fill material including pieces of asphalt	0.0
				and concrete, no odor, loose, dry	0.0
	25	0-2"	SB16 (0-2")		0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown fine SAND with some silt, no odor, wet	0.0
5					0.0
					0.0
	48	8-10'	SB16 (8-10')		0.0
					0.0
				Note: Groundwater at approximately 10 ft bgs	0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB16

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO. **SB17**

Page 1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 7822DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	34	0-2' 2-4'	SB17 (0-2') SB17 (2-4')	6" Concrete	0.0
				6"-4' Dark brown to brown fine to medium SAND with silt, with fill material including pieces of asphalt	0.0
				and brick, loose, no odor, dry	0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown fine SAND with silt, no odor, moist	0.0
5	36				0.0
					0.0
				Note: Groundwater at 9 ft bgs	0.0
				9-10' Brown fine SAND with silt, no odor, wet	0.0
					0.0
10	33			10-15' Brown medium to coarse SAND, trace silt and fine gravel (mps 0.25"), no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
15	40			15-20' Brown medium to coarse SAND, trace silt and fine gravel (mps 0.25"), no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			20	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB17

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

HALEY ALDRICH

TEST BORING REPORT

BORING NO. **SB18**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan				
Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 7822DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0		0-2' 2-4'	SB18 (0-2') SB18 (2-4')	0-4' Dark brown to black silty SAND with fill material including pieces of concrete and asphalt, no odor,	0.0
				dry	0.0
					0.0
					0.0
5				Note: Fill material present to 4 ft bgs	0.0
				4-10' Brown fine silty SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
10				Note: Groundwater at approximately 10 ft bgs	0.0
				10-15' Brown fine to coarse SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
15					0.0
				END OF EXPLORATION 15 FT BGS	0.0
					0.0
					0.0
					0.0
20					0.0

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			15	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB18

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB19
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud	Casing Advance Type Method Depth
☐ Safety	☐ Bentonite	Direct Push
☐ Doughnut	☐ Polymer	
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	30	0-2"	0-2"	0-5' Brown silty SAND, with fill material including pieces of brick, asphalt, and concrete, no odor, dry	0.0
					0.0
					0.0
					0.0
5				Note: Refusal at 5 ft bgs	0.0
				END OF EXPLORATION 5 FT BGS	0.0
10					
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	5
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	SB19

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

APPENDIX D

Monitoring Well Construction Logs

OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. MW1
Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	9/1/2021
DRILLER	J. Zinzer	**WATER LEVEL**	14.14

TOC El. 16.46 ft **Location** See Plan ☐ **Guard Pipe**
El. Datum NAVD88 ☐ **Roadway Box**

SOIL/ROCK CONDITIONS	**BOREHOLE BACKFILL**	Depth
		0
		0.5
Dark brown SAND with fine to medium gravel. Fill material present	Soil cuttings	
Boulders encountered approximately 4 ft bgs		
		6
	Bentonite Plug	
		8
	Filter Sand	
		20

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

L1, L2, L3

Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.
Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface N/A ft

Height/Depth of top of riser pipe above/below ground surface N/A ft

Type of protective casing: N/A
Length N/A ft
Inside Diameter N/A in

Depth of bottom of guard pipe/roadway box N/A ft

Type of Seals	**Top of Seal (ft)**	**Thickness (ft)**
Concrete	0.0	0.5
Soil Cuttings	0.5	5.5
Bentonite Seal	6.0	2.0
Filter Sand	8.0	12.0

Type of riser pipe: Solid PVC
Inside diameter of riser pipe 2.0 in
Type of backfill around riser Soil cuttings

Diameter of borehole 6.5 in

Depth to top of well screen 10.0 ft

Type of screen Machine Slotted PVC
Screen gauge or size of openings 0.010 in
Diameter of screen 2.0 in
Type of backfill around screen #2 Filter Sand

Depth of bottom of well screen 20.0 ft

Bottom of Silt trap 0.0 ft

Depth of bottom of borehole 20.0 ft

(Not to Scale)

Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length
10 ft	+	10 ft	+	0 ft	=	20 ft

COMMENTS:

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OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. MW2
Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	8/31/2021
DRILLER	J. Zinzer	**WATER LEVEL**	1/12/1900

TOC El. 14.98 ft
El. Datum NAVD88
Location See Plan
☐ **Guard Pipe**
☐ **Roadway Box**

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL
	0
	0.5
	Soil cuttings
	6
	Bentonite Plug
	8
	Filter Sand
	20

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

L1 L2 L3

Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.
Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface	0.0	ft
Height/Depth of top of riser pipe above/below ground surface	N/A	ft
Type of protective casing:	N/A	
Length	N/A	ft
Inside Diameter	N/A	in
Depth of bottom of guard pipe/roadway box	N/A	ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.5
Soil Cuttings	0.5	5.5
Bentonite Seal	6.0	2.0
Filter Sand	8.0	12.0

Type of riser pipe:	Solid PVC	
Inside diameter of riser pipe	2.0	in
Type of backfill around riser	Soil cuttings	
Diameter of borehole	6.5	in
Depth to top of well screen	10.0	ft
Type of screen	Machine Slotted PVC	
Screen gauge or size of openings	0.010	in
Diameter of screen	2.0	in
Type of backfill around screen	#2 Filter Sand	
Depth of bottom of well screen	20.0	ft
Bottom of Silt trap	0.0	ft
Depth of bottom of borehole	20.0	ft

(Not to Scale)

10 ft + 10 ft + 0 ft = 20 ft
Riser Pay Length (L1) + Length of screen (L2) + Length of silt trap (L3) = Pay length

COMMENTS:

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OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. **MW3**

Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	8/31/2021
DRILLER	J. Zinzer	**WATER LEVEL**	9.38

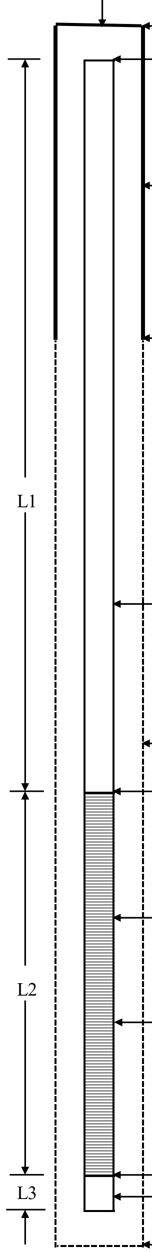
TOC El. 11.55 ft **Location** See Plan ☐ **Guard Pipe**

El. Datum NAVD88 ☐ **Roadway Box**

SOIL/ROCK CONDITIONS	**BOREHOLE BACKFILL**
	0
	0.5
	Soil cuttings
	2
	Bentonite Plug
	3
	#2 Filter Sand
	15

(Bottom of Exploration)

(Numbers refer to depth from ground surface in feet)



Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.

Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface 0.0 **ft**

Height/Depth of top of riser pipe above/below ground surface N/A **ft**

Type of protective casing: N/A

Length N/A **ft**

Inside Diameter N/A **in**

Depth of bottom of guard pipe/roadway box N/A **ft**

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.5
Soil Cuttings	0.5	5.5
Bentonite Seal	6.0	2.0
Filter Sand	8.0	12.0

Type of riser pipe: Solid PVC

Inside diameter of riser pipe 2.0 **in**

Type of backfill around riser Soil cuttings

Diameter of borehole 6.5 **in**

Depth to top of well screen 5.0 **ft**

Type of screen Machine Slotted PVC

Screen gauge or size of openings 0.010 **in**

Diameter of screen 2.0 **in**

Type of backfill around screen #2 Filter Sand

Depth of bottom of well screen 15.0 **ft**

Bottom of Silt trap 0.0 **ft**

Depth of bottom of borehole 15.0 **ft**

(Not to Scale)

5 ft	+	10 ft	+	0 ft	=	15 ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length

COMMENTS:

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OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No.	MW4
Boring No.	

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	8/31/2021
DRILLER	J. Zinzer	**WATER LEVEL**	9.38

TOC El. 14.84 ft | **Location** See Plan | ☐ **Guard Pipe**
El. Datum NAVD88 | | ☑ **Roadway Box**

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL
	0
	0.5
	Soil cuttings
	6
	Bentonite Plug
	8
	#2 Filter Sand
	20

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

L1 L2 L3

Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.
Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface	0.0	ft
Height/Depth of top of riser pipe above/below ground surface	N/A	ft
Type of protective casing:	N/A	
Length	N/A	ft
Inside Diameter	N/A	in
Depth of bottom of guard pipe/roadway box	N/A	ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.5
Soil Cuttings	0.5	5.5
Bentonite Seal	6.0	2.0
Filter Sand	8.0	12.0

Type of riser pipe:	Solid PVC	
Inside diameter of riser pipe	2.0	in
Type of backfill around riser	Soil cuttings	
Diameter of borehole	6.5	in
Depth to top of well screen	10.0	ft
Type of screen	Machine Slotted PVC	
Screen gauge or size of openings	0.010	in
Diameter of screen	2.0	in
Type of backfill around screen	#2 Filter Sand	
Depth of bottom of well screen	20.0	ft
Bottom of Silt trap	0.0	ft
Depth of bottom of borehole	20.0	ft

(Not to Scale)

10 ft + 10 ft + 0 ft = 20 ft
Riser Pay Length (L1) | Length of screen (L2) | Length of silt trap (L3) | Pay length

COMMENTS:

OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. MW5
Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	9/3/2021
DRILLER	J. Zinzer	**WATER LEVEL**	12.65

TOC El. 10.89 ft
El. Datum NAVD88
Location See Plan
☐ **Guard Pipe**
☐ **Roadway Box**

SOIL/ROCK CONDITIONS	**BOREHOLE BACKFILL**
	0
	0.5
	Soil cuttings
	2
	Bentonite Plug
	3
	#2 Filter Sand
	15

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)

L1 L2 L3

Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.
Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface 0.0 ft

Height/Depth of top of riser pipe above/below ground surface N/A ft

Type of protective casing: N/A
Length N/A ft
Inside Diameter N/A in

Depth of bottom of guard pipe/roadway box N/A ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.5
Soil Cuttings	0.5	1.5
Bentonite Seal	2.0	1.0
Filter Sand	3.0	12.0

Type of riser pipe: Solid PVC
Inside diameter of riser pipe 2.0 in
Type of backfill around riser Soil cuttings

Diameter of borehole 6.5 in

Depth to top of well screen 5.0 ft

Type of screen Machine Slotted PVC
Screen gauge or size of openings 0.010 in
Diameter of screen 2.0 in
Type of backfill around screen #2 Filter Sand

Depth of bottom of well screen 15.0 ft

Bottom of Silt trap 0.0 ft

Depth of bottom of borehole 15.0 ft

(Not to Scale)

5 ft + 10 ft + 0 ft = 15 ft
Riser Pay Length (L1) + Length of screen (L2) + Length of silt trap (L3) = Pay length

COMMENTS:

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OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. MW6

Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	9/1/2021
DRILLER	J. Zinzer	**WATER LEVEL**	8.74

TOC El. **10.93** ft

El. Datum **NAVD88**

Location See Plan

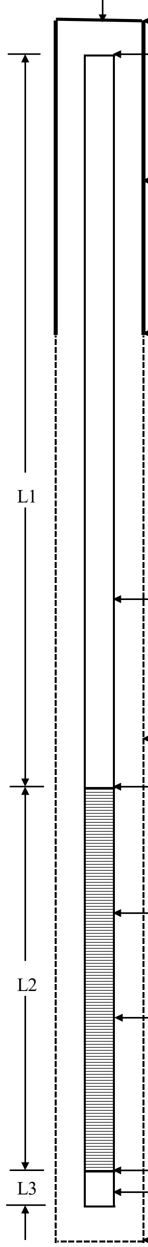
☐ **Guard Pipe**

☐ **Roadway Box**

SOIL/ROCK CONDITIONS	**BOREHOLE BACKFILL**
	0
	0.5
	Soil cuttings
	2
	Bentonite Plug
	3
	#2 Filter Sand
	15

(Bottom of Exploration)

(Numbers refer to depth from ground surface in feet)



Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.

Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface	0.0	**ft**
Height/Depth of top of riser pipe above/below ground surface	N/A	**ft**
Type of protective casing:	N/A	
Length	N/A	**ft**
Inside Diameter	N/A	**in**
Depth of bottom of guard pipe/roadway box	N/A	**ft**

Type of Seals	**Top of Seal (ft)**	**Thickness (ft)**
Concrete	0.0	0.5
Soil Cuttings	0.5	1.5
Bentonite Seal	2.0	1.0
Filter Sand	3.0	12.0

Type of riser pipe:	Solid PVC	
Inside diameter of riser pipe	2.0	**in**
Type of backfill around riser	Soil cuttings	
Diameter of borehole	6.5	**in**
Depth to top of well screen	5.0	**ft**
Type of screen	Machine Slotted PVC	
Screen gauge or size of openings	0.010	**in**
Diameter of screen	2.0	**in**
Type of backfill around screen	#2 Filter Sand	
Depth of bottom of well screen	15.0	**ft**
Bottom of Silt trap	0.0	**ft**
Depth of bottom of borehole	15.0	**ft**

(Not to Scale)

Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length
5 ft	+	10 ft	+	0 ft	=	15 ft

COMMENTS:

Form 2007

OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. MW7

Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	9/2/2021
DRILLER	J. Zinzer	**WATER LEVEL**	9.02

TOC El. 11.19 ft

El. Datum NAVD88

Location See Plan

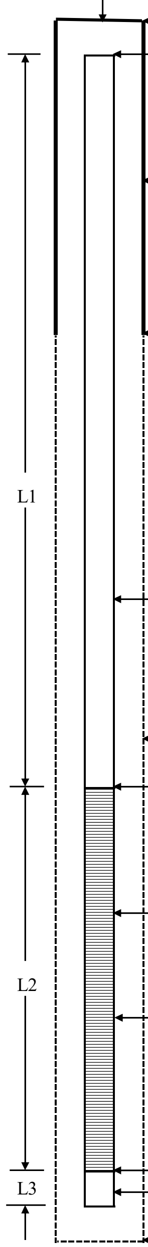
☐ **Guard Pipe**

☐ **Roadway Box**

SOIL/ROCK CONDITIONS	**BOREHOLE BACKFILL**
	0
	0.5
	Soil cuttings
	2
	Bentonite Plug
	3
	#2 Filter Sand
	15

(Bottom of Exploration)

(Numbers refer to depth from ground surface in feet)



Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.

Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface	0.0	ft
Height/Depth of top of riser pipe above/below ground surface	N/A	ft
Type of protective casing:	N/A	
Length	N/A	ft
Inside Diameter	N/A	in
Depth of bottom of guard pipe/roadway box	N/A	ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.5
Soil Cuttings	0.5	1.5
Bentonite Seal	2.0	1.0
Filter Sand	3.0	12.0

Type of riser pipe:	Solid PVC	
Inside diameter of riser pipe	2.0	in
Type of backfill around riser	Soil cuttings	
Diameter of borehole	6.5	in
Depth to top of well screen	5.0	ft
Type of screen	Machine Slotted PVC	
Screen gauge or size of openings	0.010	in
Diameter of screen	2.0	in
Type of backfill around screen	#2 Filter Sand	
Depth of bottom of well screen	15.0	ft
Bottom of Silt trap	0.0	ft
Depth of bottom of borehole	15.0	ft

(Not to Scale)

Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length
5 ft	+	10 ft	+	0 ft	=	15 ft

COMMENTS:

Form 2007

OBSERVATION WELL INSTALLATION REPORT

HALEY ALDRICH

Well No. MW8
Boring No.

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE INSTALLED**	9/2/2021
DRILLER	J. Zinzer	**WATER LEVEL**	8.58

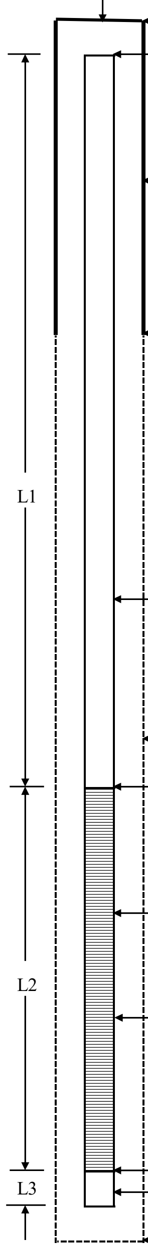
TOC El. 10.73 ft
El. Datum NAVD88

Location See Plan

☐ **Guard Pipe**
☐ **Roadway Box**

SOIL/ROCK CONDITIONS	**BOREHOLE BACKFILL**
	0
	0.5
	Soil cuttings
	2
	Bentonite Plug
	3
	#2 Filter Sand
	15

(Bottom of Exploration)
(Numbers refer to depth from ground surface in feet)



Type of protective cover/lock (circle one): Pent.bolt 9/16" hex. 1/2" hex. 7/10" hex.
Padlock key no.__________

Height/Depth of top of guard pipe/roadway box above/below ground surface 0.0 **ft**

Height/Depth of top of riser pipe above/below ground surface N/A **ft**

Type of protective casing: N/A
Length N/A **ft**
Inside Diameter N/A **in**

Depth of bottom of guard pipe/roadway box N/A **ft**

Type of Seals	**Top of Seal (ft)**	**Thickness (ft)**
Concrete	0.0	0.5
Soil Cuttings	0.5	1.5
Bentonite Seal	2.0	1.0
Filter Sand	3.0	12.0

Type of riser pipe: Solid PVC
Inside diameter of riser pipe 2.0 **in**
Type of backfill around riser Soil cuttings

Diameter of borehole 6.5 **in**

Depth to top of well screen 5.0 **ft**

Type of screen Machine Slotted PVC
Screen gauge or size of openings 0.010 **in**
Diameter of screen 2.0 **in**
Type of backfill around screen #2 Filter Sand

Depth of bottom of well screen 15.0 **ft**

Bottom of Silt trap 0.0 **ft**

Depth of bottom of borehole 15.0 **ft**

(Not to Scale)

5 ft	+	10 ft	+	0 ft	=	15 ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length

COMMENTS:

Form 2007

APPENDIX E

Groundwater Elevation Data

Synoptic Monitoring Well Gauging Log

PROJECT	40 Bruckner Boulevard Environmental Services
LOCATION	40 Bruckner Boulevard, Bronx, NY
CLIENT	40 Bruckner Realty LLC
H&A FILE NO.	0200734-000
PROJECT MANAGER	Mari Conlon
FIELD REP.	Z. Simmel
GAUGING DATE	9/27/2021
WEATHER	Sunny

MONITORING WELL ID	TIME	DEPTH TO WATER (FT BELOW TOC)	TOP OF CASING (FT)	GROUNDWATER ELEVATION (FT)
MW1	12:56:00 PM	14.14	16.46	2.32
MW2	12:27:00 PM	12.73	14.98	2.25
MW3	12:38:00 PM	9.38	11.55	2.17
MW4	12:10:00 PM	12.65	14.84	2.19
MW5	10:40:00 AM	8.75	10.89	2.14
MW6	10:46:00 AM	8.74	10.93	2.19
MW7	12:23:00 PM	9.02	11.19	2.17
MW8	11:00:00 AM	8.58	10.73	2.15

Comments:

1. Monitoring wells MW1 through MW8 were surveyed by Montrose Surveyors on 27 September 2021
2. Wells were gauged on 27 September 2021
3. Elevation refers to the North American Vertical Datum of 1988 (NAVD88).

APPENDIX F

Pre-Design Investigation Report

PRE-DESIGN INVESTIGATION REPORT
FORMER MILL SANITARY WIPING CLOTH SITE
BCP SITE C203146
40 BRUCKNER BOULEVARD
BRONX, NEW YORK

PREPARED FOR
40 BRUCKNER REALTY LLC
BRONX, NEW YORK

PREPARED BY:

Mari Cate Conlon

Mari C. Conlon, P.G.
Senior Project Manager
Haley & Aldrich of New York

REVIEWED AND APPROVED BY:

James M. Bellew

James M. Bellew
Principal
Haley & Aldrich of New York

File No. 0200734-002
January 2022

HALEY & ALDRICH OF NEW YORK
237 West 35th Street
16th Floor
New York, NY 10123
646.518.7735

25 January 2022
File No. 0200734-002

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

Attention: Mr. Daniel McNally

Subject: Pre-Design Investigation Report
Former Mill Sanitary Wiping Cloth Site
BCP Site C203146
40 Bruckner Boulevard
Bronx, New York

Dear Mr. McNally,

On behalf of 40 Bruckner Realty LLC, Haley & Aldrich of New York is submitting for review and approval of the New York State Department of Environmental Conservation (NYSDEC) this Pre-Design Investigation Report (PDIR) for the Former Mill Sanitary Wiping Cloth Site, located at 40 Bruckner Boulevard in the Mott Haven neighborhood of the Bronx, NY (Site). This document is being submitted as part of 40 Bruckner Realty LLC's acceptance and participation in the Brownfield Cleanup Program for the Site. This PDIR was developed in accordance with the NYSDEC (6 NYCRR) Part 375 Brownfield Cleanup Regulations dated December 2006, the "Technical Guidance for Site Investigation and Remediation" (DER-10 dated May 2010), other relevant NYSDEC technical and administrative guidance and the Pre-Design Investigation Work Plan approved on 10 January 2022.

Please do not hesitate to contact us if there are any questions regarding this submittal or any other aspects of the project.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

James M. Bellew
Principal

Mari Cate Conlon

Mari C. Conlon, P.G.
Senior Project Manager

Enclosures
Cc: Jacob Schwimmer – 40 Bruckner Boulevard Realty LLC
Jamal Krolowitz – 40 Bruckner Boulevard Realty LLC
Gerard Burke – NYSDEC
Scarlett McLaughlin – NYSDOH
Stephen Lawrence – NYSDOH

Frank Bifera, Esq. – Barclay Damon LLP
Tom Walsh, Esq. – Barclay Damon

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Certification

This report documents pre-design investigation activities conducted at the Site located at 40 Bruckner Boulevard, Bronx, New York.

I, James M. Bellew, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Pre-Design Investigation Report[1] was prepared in accordance with all statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan(s) and any DER-approved modifications.

James M. Bellew

25 January 2022

James M. Bellew, Principal

[1] Certification applies to remedial investigation activities conducted after the execution of the Brownfield Cleanup Agreement dated [13 July 2021].

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HALEY ALDRICH

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List of Acronyms and Abbreviations

A

AA	Alternatives Analysis
AAR	Alternatives Analysis Report
Alpha	Alpha Analytical Laboratories, Inc.
AOCs	Areas of Concern
ASP	Analytical Services Protocol
AWQS	Ambient Water Quality Standards

B

BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes

C

cis-1,2-DCE	cis-1,2-dichloroethene
Coastal	Coastal Environmental Solutions, Inc.
COCs	Contaminants of Concern
CP-51	Commissioners Policy-51 *(specifically "October 2010 NYSDEC Commissioners Policy 51")*
CSM	Conceptual Site Model
CVOCs	chlorinated volatile organic compounds

D

1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichlroethene
DCE	Dichloroethene
DER-10	Division of Environmental Remediation-10 *(specifically "May 2010 NYSDEC Technical Guidance for Site Investigation and Remediation")*
DOT	Department of Transportation
DUSR	Data Usability Summary Report

E

EBC	Environmental Business Consultants
Eastern	Eastern Environmental Solutions
EPA	U.S. Environmental Protection Agency

H

FER	Final Engineering Report
FWRIA	Fish and Wildlife Resources Impact Analysis
Haley & Aldrich	Haley & Aldrich of New York

M

MS	Matrix Spike
MSD	Matrix Spike Duplicate
MDL	method detection limit
mg/kg	milligrams per kilogram

N

NYCRR	New York Codes, Rules and Regulations
NY-MCL	New York Maximum Concentrations Limit
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health

P

PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	perchloroethene/tetrachloroethene
PDI	Pre-design Investigation
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PVC	polyvinyl chloride
PID	Photoionization Detector

Q

QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QHHEA	Qualitative Human Health Exposure Assessment

R

RA	Remedial Action
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RCSCOs	Restricted Commercial Soil Cleanup Objectives
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RRSCOs	Restricted-Residential Soil Cleanup Objectives

S

SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
Site	the property located at 40 Bruckner Boulevard, Bronx, New York
SMP	Site Management Plan
SRI	Supplemental Remedial Investigation
SRIR	Supplemental Remedial Investigation Report
SRIWP	Supplemental Remedial Investigation Work Plan
SSDS	Sub-Slab Depressurization System

SVOC	Semi-Volatile Organic Compound

T

1,1,1-TCA	1,1,1-trichloroethane
TCE	trichloroethene
TCL	Target Compound List
TOGS 1.1.1	Technical and Operational Guidance Series 1.1.1 *(Specifically "June 1998 NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values, Class GA for the protection of a source of drinking water modified per the April 2000 addendum")*
TPH	Total Petroleum Hydrocarbons
trans-1,2-DCE	trans-1,2-Dichloroethene

U

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
USGS	United States Geologic Survey
UUSCOs	Unrestricted Use Soil Cleanup Objectives

V

VOCs	Volatile Organic Compounds

1. Introduction

This Pre-Design Investigation Report (PDIR) was developed by Haley & Aldrich of New York (Haley & Aldrich) on behalf of 40 Bruckner Realty LLC (Bruckner Realty) for the proposed development of the property located at 40 Bruckner Boulevard, Bronx, New York (the Site). The Site location is shown in Figure 1.

The Site, identified as Section 2, Block 2295, Lot 51 on the New York City tax map, is 41,240-square feet and is bounded by Bruckner Boulevard to the northeast followed by mixed commercial and residential buildings across Bruckner Boulevard to the east, northeast and north, by East 132nd Street to the southwest followed by the Harlem River Yard to the south, southwest and west, apartment buildings to the southeast, and by Alexander Avenue followed by commercial and industrial/manufacturing buildings to the west and northwest. Existing Site features are shown on the Site Map provided as Figure 2. The Site is currently vacant and is improved with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and an unpaved material storage and parking area.

The land is currently zoned as M1-5/R8A which allows for residential and industrial use. The Site is located in an urban area surrounded by commercial, industrial, and residential properties served by municipal water. Requestor plans to redevelop the Site for residential purposes consistent with current zoning.

The activities of this Pre-Design Investigation (PDI) were completed on 12 and 13 January 2022 in accordance with the approved “Pre-Design Investigation Work Plan” (PDIWP) (Appendix A), which was.

1.1 PURPOSE AND OBJECTIVES

A Remedial Investigation Report (RIR), submitted to NYSDEC on 11 January 2022, identified historic fill contamination in shallow soil at the Site. The PDI was completed in order to obtain additional supplemental data verifying the extent/depth of fill contamination at the Site and supplement the Remedial Action Work Plan (RAWP).

2. Site Background

2.1 SITE LOCATION AND DESCRIPTION

The Site, identified as Section 2, Block 2295, Lot 51 on the New York City tax map, is 41,240-square feet and is bounded by Bruckner Boulevard to the northeast followed by mixed commercial and residential buildings across Bruckner Boulevard to the east, northeast and north, by East 132nd Street to the southwest followed by the Harlem River Yard to the south, southwest and west, apartment buildings to the southeast, and by Alexander Avenue followed by commercial and industrial/manufacturing buildings to the west and northwest. The Site location is shown on Figure 1. Existing Site features are shown on the Site Map provided as Figure 2. The Site is currently vacant and is improved with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and an unpaved material storage and parking area.

The land is currently zoned as M1-5/R8A which allows for residential and industrial use. The Site is located in an urban area surrounded by commercial, industrial, and residential properties served by municipal water. Requestor plans to redevelop the Site for residential purposes consistent with current zoning.

2.2 GEOLOGY AND HYDROGEOLOGY

Bedrock beneath the Site is identified as the Fordham Gneiss which consists of garnet-biotite-quartz-plagioclase gneiss and amphibolite. Depth to bedrock undulates in the south Bronx and is expected to range between 15-30 feet below ground surface (ft bgs). The Site is underlain by a layer of urban fill consisting of mainly brown silty sand with asphalt, concrete, brick, glass, and wood fragments. The depth of fill material varies across the Site extending between approximately 4 and 12 ft bgs. Silty sands and fine to coarse sands underly the fill layer.

Groundwater was encountered at approximately 8 to 13 ft bgs, and groundwater flow beneath the Site is generally to the southwest. Variations in groundwater depth are due to Site topography.

2.3 SITE HISTORY

The Site was developed as early as 1891 with a repair shop in the southwest corner and a machine shop on the east corner of the Site, while the rest of the Site remained vacant. Train tracks ran on a curve along the south, southeast, and east sides of the property. By 1908, the Site was developed with an office and a milk company next to the machine shop, which transitions to “Borden’s Farm Product” with a wagon house, stable, and lumber yard by 1935. In 1944, the former machine shop and repair shop had been razed and the former “Borden’s Farm Product” became a scrap and rubber storage facility. From the mid-1940s to the late-1980s, the Site was used for various industrial purposes and included an area for sorting and bailing rags, a rag stage area, a rag laundry, a paper stage, and by 1968, a wastepaper facility began operations in the east corner of the Site. Additionally, in the mid-1960s, the train tracks running along the south, southeast, and east sides of the property were no longer present. In 1965, the Site is listed in City Directories as “Mill Sanitary Wiping Cloth Corp” and is listed as this facility until the mid-1990s.The Site remained relatively unchanged until the early-1990s when the former buildings labeled “Sorting and Bailing Rags” and “Wastepaper Facility” were converted to auto repair shops. The Site then remained relatively unchanged through the mid-2000s. From the mid- to late-2000s, several commercial operations were run at the Site, including, without limitation, NYC Water Works Inc. The current fee owner, 40 Bruckner LLC, purchased the Site from D. Benedetto Inc in December 2011. The Requestor, 40 Bruckner Realty LLC, is currently in a 99-year lease agreement of the Site with 40 Bruckner LLC.

2.4 REDEVELOPMENT PLANS

At this time, Site development plans are conceptual; however, it is anticipated that the project will consist of redevelopment of the Site for use as a 12-story residential building. It is anticipated that this structure would be developed with a single-story sub-grade cellar that would extend approximately 20 feet below the floor slab of the first floor, requiring excavation to approximately 25 ft bgs, and encompass the entire Site footprint.

3. Summary of Remedial Investigation

The Remedial Investigation (RI) identified the following areas of concern (AOC):

AOC 1 – Site-Wide Urban Fill in Subsurface Soils
Shallow soils on Site are impacted with elevated concentrations of metals, SVOCs, and in some areas, pesticides. These findings are consistent with characteristics of urban fill found throughout the New York City area. Urban fill material varies in depth throughout the Site extending to depths as great as 12 ft bgs.

AOC 2 – Elevated PAH Impacts to Soil
Shallow soils throughout the subject Site are impacted with elevated levels of SVOCs, specifically PAHs above both the UUSCOs and RRSCOs. The greatest concentrations of PAHs were observed in soil samples collected from borings in the southwest portion of the Site, with the highest concentrations in soil sample SB17 (0-2'). In soil sample SB17 (0-2'), concentrations of PAHs including benzo(a)anthracene (38 mg/kg [UUSCO 1 mg/kg and RRSCO 1 mg/kg]), benzo(a)pyrene (33 mg/kg [UUSCO 1 mg/kg and RRSCO 1 mg/kg]), benzo(b)fluoranthene (42 mg/kg [UUSCO 1 mg/kg and RRSCO 1 mg/kg]), benzo(k)fluoranthene (12 mg/kg [UUSCO 0.8 mg/kg and RRSCO 3.9 mg/kg]), chrysene (33 mg/kg [UUSCO 1 mg/kg and RRSCO 3.9 mg/kg]), dibenzo(a,h)anthracene (5.6 mg/kg [UUSCO 0.33 mg/kg and RRSCO 0.33 mg/kg]), and indeno(1,2,3-cd)pyrene (23 mg/kg [UUSCO 0.5 mg/kg and RRSCO 0.5 mg/kg]) were detected at concentrations significantly greater than the rest of the Site. These concentrations of PAHs in soil sample SB17 (0-2') are also above both New York NYCRR Part 375 Commercial Criteria and New York NYCRR Part 375 Industrial Criteria. Elevated concentrations of PAHs are likely the result of urban fill and impacts from the former industrial operations at the site.

AOC 3 – Soil Vapor Impacts
Based on a review of analytical data collected during this RI, VOCs have partitioned from soil and/or groundwater into the vapor phase.

AOC – 4 Elevated Levels of Metals and SVOCs in Soil Stockpiles
Elevated levels of metals and SVOCs were identified in grab sample GS-3 collected from the unidentified stockpile located in the eastern portion of the building. Additionally, lead was detected in grab sample GS-1 collected from a stockpile in the southern portion of the lot.

4. Pre-Design Investigation Approach

4.1 PROJECT TEAM

A project team for the Site was created based on qualifications and experience with personnel suited for successfully completion of the project.

The NYSDEC Case Manager/Project Manager was Mr. Daniel McNally. The Case Manager/Project Manager was responsible for overseeing the successful completion of the project work and adherence to the approved PDIWP on behalf of NYSDEC.

James Bellew was the Qualified Environmental Professional and Principal in Charge for this work. In this role, Mr. Bellew was responsible for the overall completion of each task as per the requirements outlined in this work plan and in accordance with the DER-10 guidance.

Mari Conlon was the Haley & Aldrich Project Manager for this work. In this role, Ms. Conlon managed the day-to-day tasks, including coordination and supervision of field engineers and scientists, adherence to the work plan and oversight of project schedule. As the Project Manager, Ms. Conlon was responsible for communications with the NYSDEC Case Manager regarding project status, schedule, issues, and updates for project work.

Sarah Commisso was the field engineer responsible for implementing the field effort for this work. Ms. Commisso's responsibilities included implementing the work plan activities and directing the subcontractors to ensure successful completion of field activities.

The drilling subcontractor utilized for this investigation was Eastern Environmental Solutions, Inc. (Eastern). Eastern provided a Geoprobe operator to implement the scope of work of the approved PDIWP.

Samples were collected in laboratory prepared sample bottles (pre-preserved when appropriate), placed in ice-packed coolers maintained at approximately 4 degrees Celsius under standard chain of custody procedures and transported to Alpha Analytical Laboratories, Inc. (Alpha) of Westborough, Massachusetts (Certification No. 07010T). Alpha was responsible for analyzing the samples as per the analyses and methods identified in the approved PDIWP.

4.2 SOIL BORING INSTALLATION AND SOIL SAMPLING

Eighteen soil borings were advanced between 5 to 10 ft bgs using a track-mounted direct-push drill rig (Geoprobe®) operated by a licensed operator provided by Eastern, the drilling subcontractor. Soil samples were collected from acetate liners using a stainless-steel trowel or sampling spoon. Samples were collected using laboratory provided clean bottle ware. VOC grab samples were collected using terra cores. Sampling locations are displayed in Figure 3.

Soils were logged continuously by a geologist using the Unified Soil Classification System. The presence of staining, odors, and photoionization detector (PID) response was noted. Soil boring logs are provided as Appendix B. Sampling methods are described in the Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) in the approved Remedial Investigation Work Plan, approved on 31 August 2021.

Soil samples representative of Site conditions were collected at locations widely distributed across the Site, as shown in Figure 3. Samples were collected from borings PDI-1 through PDI-7 from 2 to 4, 4 to 6, 6 to 8 and 8 to 10 ft bgs. On the southern portion of the site, borings PDI-8 through PDI-12 were sampled from 2 to 4 and 4 to 6 ft bgs.

Samples were analyzed for:

- Target Compound List (TCL) VOCs using EPA method 8260B
- TCL SVOCs using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010

Four soil borings, PDI-13 through PDI-16, were installed surrounding MW-8, installed during the RI, to evaluate for chlorinated VOCs. Samples were collected right above the groundwater interface at 7 to 8 ft bgs. Samples were analyzed for VOCs via EPA method 8260B. In addition, PDI-8 and two additional soil samples, PDI-17 and PDI-18, were collected surrounding former SB-6 from 0 to 2 inches and analyzed for tetrachloroethylene (PCE), which was observed above UUSCOs during the RI.

4.3 QUALITY ASSURANCE/QUALITY CONTROL

The PDI was conducted in accordance with Haley & Aldrich's Quality Assurance Project Plan (QAPP) provided in the approved RIWP. Haley & Aldrich's sampling program included several types of quality assurance/quality control (QA/QC) samples and measures to ensure the usability of the data. QA/QC samples included equipment rinsate/field blanks, trip blanks, sample duplicates, and matrix spike/matrix spike duplicates (MS/MSDs).

When applicable, the sample result summary tables list the laboratory method detection limit (MDL) at which a compound was non-detectable. The laboratory results were reported to the sample-specific practical quantitation limit (PQL), equal to the sample-specific MDL, supported by the instrument calibrations.

The reliability of laboratory data is supported by compliance with sample holding times and laboratory MDLs below cleanup criteria. The accuracy and precision of the laboratory analytical methods were maintained by using calibration and calibration verification procedures, laboratory control samples, and surrogate, matrix, and analytical spikes. A review of the laboratory data packages indicates that holding times were met and no significant non-conformance issues were reported. Category B laboratory reports are provided in Appendix C. Data was validated as detailed in Section 6.4 and summarized in Data Usability Summary Reports (DUSRs) included in Appendix D.

4.4 REPORTING

Daily reports were provided to NYSDEC including a summary of Site activities, investigation progress updates, and photographs of field work. The submitted daily reports are included in Appendix E.

4.5 INVESTIGATION DERIVED WASTE

Following sample collection, boreholes that were not converted to monitoring wells were backfilled with soil cutting and an upper bentonite plug. Boreholes were restored to grade with the surrounding area.

5. Health and Safety

The work outlined above was completed under a Site-specific Health and Safety Plan (HASP) in accordance with Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations. Work was completed in Modified Level D personal protective equipment (PPE).

The PDI activities were conducted in accordance with a Site-specific Community Air Monitoring Plan (CAMP). CAMP data was provided to NYSDEC in the daily reports included in Appendix E.

6. Contaminants of Concern and Nature and Extent of Contamination

6.1 APPLICABLE STANDARDS

Soil analytical results were compared to NYSDEC 6NYCRR Part 375 UUSCOs and RRSCOs.

6.2 SOIL SAMPLING RESULTS

Table 1 summarizes the analytical results from the soil sampling event. Figure 3 provides the soil boring locations as well as a summary of soil data from the sampling event. Details of the soil boring logs are provided in Appendix B.

Volatile Organic Compounds

PCE was detected at 2 mg/kg, above the UUSCO of 1.3 mg/kg, in one sample collected at PDI-8 from 0 to 2 inches bgs. PCE was not detected above the applicable SCOs in deeper samples collected at this location or in any other samples throughout the Site. Petroleum related VOCs were detected in PDI-9 from 2 to 4 ft bgs including toluene (2.1 mg/kg [UUSCO 0.7 mg/kg]), total xylenes (3.5 mg/kg [UUSCO 0.26 mg/kg]), 2-butanone (0.34 mg/kg, [UUSCO 0.12 mg/kg]) and 1,2,4-trimethylbenzene (15 mg/kg, [UUSCO 3.6 mg/kg]). These petroleum related VOCs were not detected above the applicable standards in deeper samples collected at this location or in any other samples throughout the Site, including samples collected at the groundwater interface surrounding MW8.

No other VOCs were detected in remaining soil samples above the UUSCOs or RRSCOs.

Semi-Volatile Organic Compounds

Seven PAHs/SVOCs were detected above UUSCOs and RRSCOs at varying depths throughout the Site including benzo(a)anthracene (maximum concentration 32 mg/kg [RRSCO 1 mg/kg]), benzo(a)pyrene (maximum concentration 25 mg/kg [RRSCO 1 mg/kg]), benzo(b)fluoranthene (maximum concentration 30 mg/kg [RRSCO 1 mg/kg]), benzo(k)fluoranthene (maximum concentration 8.5 mg/kg [RRSCO 3.9 mg/kg), chrysene (maximum concentration 30 mg/kg [RRSCO 3.9 mg/kg)], dibenzo(a,h)anthracene (maximum concentration 3.4 mg/kg [RRSCO 0.33 mg/kg]) and indeno(1,2,3-cd)pyrene (maximum concentration 16 mg/kg [RRSCO 0.5 mg/kg]). Maximum concentrations were detected in PDI-2 from 4 to 6 ft bgs. PAHs were detected above UUSCOs in multiple sampling intervals with deepest intervals detecting elevated concentrations at 6 to 8 ft bgs in the northwestern portion of the Site. Concentrations of PAHs exceeding the applicable SCOs were also detected to a depth of 4 ft bgs in the southeastern portion of the Site.

No other SVOCs were detected in remaining soil samples above UUSCOs or RRSCOs.

Metals

Nine metals were detected above the UUSCOs or RRSCOs at varying depths throughout the Site including arsenic (maximum concentration 21.2 mg/kg [RRSCO 16 mg/kg]) , barium (maximum concentration 748 mg/kg [RRSCO 400 mg/kg]), cadmium (maximum concentration 10.8 mg/kg [RRSCO 4.3 mg/kg]), copper (maximum concentration 1,210 mg/kg [RRSCO 270 mg/kg]), lead (maximum concentration 1,420 mg/kg [RRSCO 400 mg/kg]), mercury (maximum concentration 3.08 mg/kg [RRSCO 0.81 mg/kg]), nickel (maximum concentration 221 mg/kg [UUSCO 30 mg/kg]), silver (maximum concentration 4.42 mg/kg [UUSCO 2 mg/kg]) and zinc (maximum concentration 1,440 mg/kg [UUSCO 109 mg/kg]). Metals were detected above UUSCOs in multiple sampling intervals with deepest intervals detecting elevated concentrations at 8 to 10 ft bgs in the northwestern portion of the Site. Concentrations of metals exceeding the applicable SCOs were also detected to a depth of 6 ft bgs in the southeastern portion of the Site.

No other metals were detected in remaining soil samples above UUSCOs or RRSCOs.

6.3 DATA VALIDATION

DUSRs were prepared to confirm the compliance of methods with the protocols described in the NYSDEC ASP. DUSRs are provided in Appendix D. Electronic Data Deliverables (EDDs) were submitted to NYSDEC via email. Email correspondence of the submittal is included in Appendix D.

6.4 DATA USE

Validated analytical data, supplied in ASP Category B Data Packages in Appendix C, was submitted to the NYSDEC EQuIS database in an Electronic Data Deliverable package on 14 March 2022.

7. Conclusions

Based on the results of the PDI, the following conclusions have been identified:

- Impacts to shallow soils encountered at the Site are consistent with characteristics of urban fill found throughout the New York City area. Shallow soils will be excavated and removed as part of remedial action.
- Fill material with elevated PAHs and metals above UUSCOs and/or RRSCOs was found to extend to approximately 8 ft bgs in the northwestern portion of the site with exception of two areas surrounding PDI-2 and PDI-4/PDI-7 where contaminated fill material extended to 10 ft bgs. Contaminated fill material was found to extend to 4 ft bgs in the southeastern portion of the Site.
- PCE was found to slightly exceed the UUSCO at PDI-8 from 0 to 2 inches bgs (2 mg/kg [UUSCO 1.3 mg/kg]). PCE was not detected above UUSCOs in deeper soil samples collected at this boring location or in any other samples collected during the PDI.

References

1. Remedial Investigation Report. 40 Bruckner Boulevard, Bronx, New York. Prepared for 40 Bruckner Realty LLC, prepared by Haley & Aldrich of New York, January 2022.

2. Remedial Investigation Work Plan. 40 Bruckner Boulevard, Bronx, New York. Prepared for 40 Bruckner Realty LLC, prepared by Haley & Aldrich of New York. August 2021.

3. Brownfield Cleanup Program Application. 40 Bruckner Boulevard, Bronx, New York. Prepared for 40 Bruckner Realty LLC by Haley & Aldrich of New York for submission to the New York State Department of Environmental Conservation. Submitted in March 2021.

4. Limited Phase II Subsurface Investigation. 40 Bruckner Boulevard, Bronx, New York. Prepared by Environmental Business Consultants (EBC), prepared for JCS Realty. December 2020.

5. Phase I Environmental Site Assessment – 40 Bruckner Boulevard, Tax Lot 51, Tax Block 2295, Bronx, New York. Prepared by Roux Environmental Engineering and Geology, D.P.C., prepared for 40 Bruckner, LLC. January 2019.

6. Program Policy DER-10, "Technical Guidance for Site Investigation and Remediation," New York State Department of Environmental Conservation. May 2010.

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TABLES

TABLE I
SOIL ANALYTICAL RESULTS - DRAFT
40 BRUCKNER BOULEVARD
BRONX, NY
FILE NO. 0200734

Precharacterization Grid	Action Level																									
Location Name	NY Part 375 Restricted Residential Use Soil Cleanup Objectives	NY Part 375 Unrestricted Use Soil Cleanup Objectives	PDI-1	PDI-1	PDI-1	PDI-1	PDI-1	PDI-2	PDI-2	PDI-2	PDI-2	PDI-3	PDI-3	PDI-3	PDI-3	PDI-4	PDI-4	PDI-4	PDI-4	PDI-5	PDI-5	PDI-5	PDI-5	PDI-5	PDI-6	PDI-6
Sample Name			PDI-1 (2-4)	PDI-1 (4-6)	PDI-1 (6-8)	PDI-1 (8-10)	DUP-02-01-01122022	PDI-2 (2-4)	PDI-2 (4-6)	PDI-2 (6-8)	PDI-2 (8-10)	PDI-3 (2-4)	PDI-3 (4-6)	PDI-3 (6-8)	PDI-3 (8-10)	PDI-4 (2-4)	PDI-4 (4-6)	PDI-4 (6-8)	PDI-4 (8-10)	PDI-5 (2-4)	PDI-5 (4-6)	PDI-5 (6-8)	PDI-5 (8-10)	DUP-01-01122022	PDI-6 (2-4)	PDI-6 (4-6)
Sample Date			01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/13/2022	01/13/2022	01/13/2022	01/13/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/13/2022	01/13/2022
Lab Sample ID			L2201757-05	L2201757-06	L2201757-07	L2201757-08	L2201757-10	L2201757-32	L2201757-33	L2201757-34	L2201757-35	L2201949-05	L2201949-06	L2201949-07	L2201949-08	L2201757-17	L2201757-18	L2201757-19	L2201757-20	L2201757-01	L2201757-02	L2201757-03	L2201757-04	L2201757-09	L2201949-01	L2201949-02
Sample Depth (bgs)			2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)
Volatile Organic Compounds (mg/kg)																										
1,1,1,2-Tetrachloroethane	NA	NA	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
1,1,1-Trichloroethane	100	0.68	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
1,1,2,2-Tetrachloroethane	NA	NA	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
1,1,2-Trichloroethane	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,1-Dichloroethane	26	0.27	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,1-Dichloroethene	100	0.33	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,1-Dichloropropene	NA	NA	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
1,2,3-Trichlorobenzene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021) 2)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,2,3-Trichloropropane	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,2,4,5-Tetramethylbenzene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	0.00028 J	0.00084 J	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,2,4-Trichlorobenzene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,2,4-Trimethylbenzene	52	3.6	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	0.00063 J	0.003	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,2-Dibromo-3-chloropropane (DBCP)	NA	NA	ND (0.0048)	ND (0.003)	ND (0.0033)	ND (0.0035)	ND (0.2)	ND (0.0031)	ND (0.004)	ND (0.0037)	ND (0.0037)	ND (0.0029)	ND (0.0038)	ND (0.0027)	ND (0.0038)	ND (0.0046)	ND (0.0051)	ND (0.0031)	ND (0.0051)	ND (0.0035)	ND (0.0033)	ND (0.0035)	ND (0.0034)	ND (0.0032)	ND (0.0031)	ND (0.0031)
1,2-Dibromoethane (Ethylene Dibromide)	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,2-Dichlorobenzene	100	1.1	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	0.00053	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,2-Dichloroethane	3.1	0.02	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,2-Dichloroethene (total)	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,2-Dichloropropane	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
1,3,5-Trimethylbenzene	52	8.4	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	0.00055 J	0.0024	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,3-Dichlorobenzene	49	2.4	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,3-Dichloropropane	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,3-Dichloropropene	NA	NA	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
1,4-Dichlorobenzene	13	1.8	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,4-Diethylbenzene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	0.002 J	0.0076	0.00068 J	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
1,4-Dioxane	13	0.1	ND (0.13)	ND (0.08)	ND (0.087)	ND (0.094)	ND (5.2)	ND (0.084)	ND (0.11)	ND (0.099)	ND (0.099)	ND (0.076)	ND (0.1)	ND (0.072)	ND (0.1)	ND (0.12)	ND (0.14)	ND (0.083)	ND (0.14)	ND (0.094)	ND (0.089)	ND (0.092)	ND (0.09)	ND (0.086)	ND (0.084)	ND (0.083)
2,2-Dichloropropane	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13) 4)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
2-Butanone (Methyl Ethyl Ketone)	100	0.12	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	ND (0.01)	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
2-Chlorotoluene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
2-Hexanone (Methyl Butyl Ketone)	NA	NA	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	ND (0.01)	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
2-Phenylbutane (sec-Butylbenzene)	100	11	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
4-Chlorotoluene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
4-Ethyltoluene (1-Ethyl-4-Methylbenzene)	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	0.0018 J	0.012	0.001 J	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	ND (0.01)	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
Acetone	100	0.05	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	0.0079 J	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
Acrylonitrile	NA	NA	ND (0.0064)	ND (0.004)	ND (0.0043)	ND (0.0047)	ND (0.26)	ND (0.0042)	ND (0.0053)	ND (0.0049)	ND (0.0049)	ND (0.0038)	ND (0.0051)	ND (0.0036)	ND (0.0051)	ND (0.0061)	ND (0.0068)	ND (0.0041)	ND (0.0068)	ND (0.0047)	ND (0.0044)	ND (0.0046)	ND (0.0045)	ND (0.0043)	ND (0.0042)	ND (0.0041)
Benzene	4.8	0.06	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
Bromobenzene	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Bromodichloromethane	NA	NA	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
Bromoform	NA	NA	ND (0.0064)	ND (0.004)	ND (0.0043)	ND (0.0047)	ND (0.26)	ND (0.0042)	ND (0.0053)	ND (0.0049)	ND (0.0049)	ND (0.0038)	ND (0.0051)	ND (0.0036)	ND (0.0051)	ND (0.0061)	ND (0.0068)	ND (0.0041)	ND (0.0068)	ND (0.0047)	ND (0.0044)	ND (0.0046)	ND (0.0045)	ND (0.0043)	ND (0.0042)	ND (0.0041)
Bromomethane (Methyl Bromide)	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Carbon disulfide	NA	NA	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	ND (0.01)	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
Carbon tetrachloride	2.4	0.76	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
Chlorobenzene	100	1.1	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
Chlorobromomethane	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Chloroethane	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Chloroform (Trichloromethane)	49	0.37	ND (0.0024)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.098)	ND (0.0016)	ND (0.002)	0.00036 J	0.0004 J	ND (0.0014)	ND (0.0019)	ND (0.0014)	ND (0.0019)	ND (0.0023)	ND (0.0026)	ND (0.0016)	ND (0.0026)	ND (0.0018)	ND (0.0017)	ND (0.0017)	ND (0.0017)	ND (0.0016)	ND (0.0016)	ND (0.0016)
Chloromethane (Methyl Chloride)	NA	NA	ND (0.0064)	ND (0.004)	ND (0.0043)	ND (0.0047)	ND (0.26)	ND (0.0042)	ND (0.0053)	ND (0.0049)	ND (0.0049)	ND (0.0038)	ND (0.0051)	ND (0.0036)	ND (0.0051)	ND (0.0061)	ND (0.0068)	ND (0.0041)	ND (0.0068)	ND (0.0047)	ND (0.0044)	ND (0.0046)	ND (0.0045)	ND (0.0043)	ND (0.0042)	ND (0.0041)
cis-1,2-Dichloroethene	100	0.25	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
cis-1,3-Dichloropropene	NA	NA	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
Cymene (p-Isopropyltoluene)	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	0.00032 J	0.0014	0.00056 J	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
Dibromochloromethane	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
Dibromomethane	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Dichlorodifluoromethane (CFC-12)	NA	NA	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	ND (0.01)	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
Ethyl Ether	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Ethylbenzene	41	1	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	0.00044 J	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	0.00069 J	0.0049	0.00042 J	0.0004 J	ND (0.0011)	ND (0.001)	ND (0.001)
Hexachlorobutadiene	NA	NA	ND (0.0064)	ND (0.004)	ND (0.0043)	ND (0.0047)	ND (0.26)	ND (0.0042)	ND (0.0053)	ND (0.0049)	ND (0.0049)	ND (0.0038)	ND (0.0051)	ND (0.0036)	ND (0.0051)	ND (0.0061)	ND (0.0068)	ND (0.0041)	ND (0.0068)	ND (0.0047)	ND (0.0044)	ND (0.0046)	ND (0.0045)	ND (0.0043)	ND (0.0042)	ND (0.0041)
Isopropylbenzene (Cumene)	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	0.00058 J	0.003	0.00021 J	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
m,p-Xylenes	NA	NA	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	0.0012 J	ND (0.0027)	ND (0.0025)	ND (0.0025)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	0.0013 J	0.0043	ND (0.0023)	0.0012 J	ND (0.0022)	ND (0.0021)	ND (0.0021)

ABBREVIATIONS AND NOTES:
Draft results, data unvalidated
mg/kg: milligram per kilogram

-: Not Analyzed
bgs: below ground surface
ft: feet
J: Estimated Result
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

- For test methods used, see the laboratory data sheets.
- Bold values indicate an exceedance of the **Unrestricted Use** and/or
Restricted Residential Use criteria.

TABLE I
SOIL ANALYTICAL RESULTS - DRAFT
40 BRUCKNER BOULEVARD
BRONX, NY
FILE NO. 0200734

Precharacterization Grid	Action Level										
Location Name / Sample Name / Sample Date / Lab Sample ID / Sample Depth (bgs)	NY Part 375 Restricted Residential Use Soil Cleanup Objectives	NY Part 375 Unrestricted Use Soil Cleanup Objectives	PDI-1 PDI-1 (2-4) 01/12/2022 L2201757-05 2 - 4 (ft)	PDI-1 PDI-1 (4-6) 01/12/2022 L2201757-06 4 - 6 (ft)	PDI-1 PDI-1 (6-8) 01/12/2022 L2201757-07 6 - 8 (ft)	PDI-1 PDI-1 (8-10) 01/12/2022 L2201757-08 8 - 10 (ft)	PDI-1 DUP-02-01-01122022 01/12/2022 L2201757-10 8 - 10 (ft)	PDI-2 PDI-2 (2-4) 01/12/2022 L2201757-32 2 - 4 (ft)	PDI-2 PDI-2 (4-6) 01/12/2022 L2201757-33 4 - 6 (ft)	PDI-2 PDI-2 (6-8) 01/12/2022 L2201757-34 6 - 8 (ft)	PDI-2 PDI-2 (8-10) 01/12/2022 L2201757-35 8 - 10 (ft)
Volatile Organic Compounds (mg/kg)											
Methyl Tert Butyl Ether (MTBE)	100	0.93	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)
Methylene chloride (Dichloromethane)	100	0.05	ND (0.008)	ND (0.005)	ND (0.0054)	ND (0.0059)	ND (0.33)	ND (0.0052)	ND (0.0066)	ND (0.0062)	ND (0.0062)
Naphthalene	100	12	0.0012 J	ND (0.004)	0.0011 J	0.001 J	1.4	ND (0.0042)	ND (0.0053)	0.0018 J	ND (0.0049)
n-Butylbenzene	100	12	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
n-Propylbenzene	100	3.9	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
o-Xylene	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
Styrene	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
tert-Butylbenzene	100	5.9	ND (0.0032)	ND (0.002)	ND (0.0022)	ND (0.0023)	ND (0.13)	ND (0.0021)	ND (0.0027)	ND (0.0025)	ND (0.0025)
Tetrachloroethene	19	1.3	ND (0.0008)	0.00051	0.00035 J	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	0.00057 J	0.00054 J
Toluene	100	0.7	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
trans-1,2-Dichloroethene	100	0.19	ND (0.0024)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.098)	ND (0.0016)	ND (0.002)	ND (0.0018)	ND (0.0018)
trans-1,3-Dichloropropene	NA	NA	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
trans-1,4-Dichloro-2-butene	NA	NA	ND (0.008)	ND (0.005)	ND (0.0054)	ND (0.0059)	ND (0.33)	ND (0.0052)	ND (0.0066)	ND (0.0062)	ND (0.0062)
Trichloroethene	21	0.47	ND (0.0008)	ND (0.0005)	ND (0.00054)	ND (0.00059)	ND (0.033)	ND (0.00052)	ND (0.00066)	ND (0.00062)	ND (0.00062)
Trichlorofluoromethane (CFC-11)	NA	NA	ND (0.0064)	ND (0.004)	ND (0.0043)	ND (0.0047)	ND (0.26)	ND (0.0042)	ND (0.0053)	ND (0.0049)	ND (0.0049)
Vinyl acetate	NA	NA	ND (0.016)	ND (0.01)	ND (0.011)	ND (0.012)	ND (0.66)	ND (0.01)	ND (0.013)	ND (0.012)	ND (0.012)
Vinyl chloride	0.9	0.02	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	ND (0.001)	ND (0.0013)	ND (0.0012)	ND (0.0012)
Xylene (total)	100	0.26	ND (0.0016)	ND (0.001)	ND (0.0011)	ND (0.0012)	ND (0.066)	0.0012 J	ND (0.0013)	ND (0.0012)	ND (0.0012)
Semi-Volatile Organic Compounds (mg/kg)											
1,2,4,5-Tetrachlorobenzene	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
1,2,4-Trichlorobenzene	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
1,2-Dichlorobenzene	100	1.1	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
1,3-Dichlorobenzene	49	2.4	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
1,4-Dichlorobenzene	13	1.8	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
1,4-Dioxane	13	0.1	ND (0.035)	ND (0.55)	ND (0.026)	ND (0.025)	ND (0.026)	ND (0.027)	ND (0.026)	ND (0.026)	ND (0.026)
2,2'-oxybis(1-Chloropropane)	NA	NA	ND (0.28)	ND (4.4)	ND (0.21)	ND (0.2)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
2,4,5-Trichlorophenol	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2,4,6-Trichlorophenol	NA	NA	ND (0.14)	ND (2.2)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.1)	ND (0.1)	ND (0.1)
2,4-Dichlorophenol	NA	NA	ND (0.21)	ND (3.3)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)
2,4-Dimethylphenol	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2,4-Dinitrophenol	NA	NA	ND (1.1)	ND (18)	ND (0.83)	ND (0.81)	ND (0.82)	ND (0.86)	ND (0.85)	ND (0.84)	ND (0.84)
2,4-Dinitrotoluene	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2,6-Dinitrotoluene	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2-Chloronaphthalene	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2-Chlorophenol	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2-Methylnaphthalene	NA	NA	0.059 J	2 J	ND (0.21)	ND (0.2)	ND (0.21)	0.022 J	ND (0.21)	ND (0.21)	ND (0.21)
2-Methylphenol (o-Cresol)	100	0.33	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2-Nitroaniline	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
2-Nitrophenol	NA	NA	ND (0.51)	ND (7.9)	ND (0.37)	ND (0.36)	ND (0.37)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)
3&4-Methylphenol	NA	NA	ND (0.34)	ND (5.3)	ND (0.25)	ND (0.24)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.25)	ND (0.25)
3,3'-Dichlorobenzidine	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
3-Nitroaniline	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
4,6-Dinitro-2-methylphenol	NA	NA	ND (0.61)	ND (9.5)	ND (0.45)	ND (0.44)	ND (0.45)	ND (0.46)	ND (0.46)	ND (0.45)	ND (0.45)
4-Bromophenyl phenyl ether	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
4-Chloro-3-methylphenol	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
4-Chlorophenyl phenyl ether	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
4-Chloroaniline	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
4-Nitroaniline	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
4-Nitrophenol	NA	NA	ND (0.33)	ND (5.1)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.25)	ND (0.25)	ND (0.24)	ND (0.24)
Acenaphthene	100	20	0.17 J	7.6	ND (0.14)	ND (0.14)	0.033 J	0.042 J	0.12 J	0.023 J	ND (0.14)
Acenaphthylene	100	100	0.094 J	ND (2.9)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)
Acetophenone	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)
Anthracene	100	100	0.44	16	ND (0.1)	ND (0.1)	ND (0.1)	0.093 J	0.17	0.069 J	ND (0.1)
Benzo(a)anthracene	1	1	**1.4**	**32**	0.032 J	0.032 J	0.057 J	0.37	0.33	0.32	0.03 J
Benzo(a)pyrene	1	1	**1.3**	**25**	ND (0.14)	ND (0.14)	0.044 J	0.36	0.28	0.32	ND (0.14)
Benzo(b)fluoranthene	1	1	**1.8**	**30**	0.038 J	0.03 J	0.054 J	0.48	0.38	0.41	0.035 J
Benzo(g,h,i)perylene	100	100	0.89	16	ND (0.14)	ND (0.14)	0.026 J	0.24	0.18	0.22	0.029 J

Location Name / Sample Name / Sample Date / Lab Sample ID / Sample Depth (bgs)	PDI-3 PDI-3 (2-4) 01/13/2022 L2201949-05 2 - 4 (ft)	PDI-3 PDI-3 (4-6) 01/13/2022 L2201949-06 4 - 6 (ft)	PDI-3 PDI-3 (6-8) 01/13/2022 L2201949-07 6 - 8 (ft)	PDI-3 PDI-3 (8-10) 01/13/2022 L2201949-08 8 - 10 (ft)	PDI-4 PDI-4 (2-4) 01/12/2022 L2201757-17 2 - 4 (ft)	PDI-4 PDI-4 (4-6) 01/12/2022 L2201757-18 4 - 6 (ft)	PDI-4 PDI-4 (6-8) 01/12/2022 L2201757-19 6 - 8 (ft)	PDI-4 PDI-4 (8-10) 01/12/2022 L2201757-20 8 - 10 (ft)	PDI-5 PDI-5 (2-4) 01/12/2022 L2201757-01 2 - 4 (ft)	PDI-5 PDI-5 (4-6) 01/12/2022 L2201757-02 4 - 6 (ft)	PDI-5 PDI-5 (6-8) 01/12/2022 L2201757-03 6 - 8 (ft)	PDI-5 PDI-5 (8-10) 01/12/2022 L2201757-04 8 - 10 (ft)	PDI-5 DUP-01-01122022 01/12/2022 L2201757-09 8 - 10 (ft)	PDI-6 PDI-6 (2-4) 01/13/2022 L2201949-01 2 - 4 (ft)	PDI-6 PDI-6 (4-6) 01/13/2022 L2201949-02 4 - 6 (ft)
Volatile Organic Compounds (mg/kg)															
Methyl Tert Butyl Ether (MTBE)	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Methylene chloride (Dichloromethane)	ND (0.0048)	ND (0.0064)	ND (0.0045)	ND (0.0064)	ND (0.0076)	ND (0.0086)	ND (0.0052)	ND (0.0085)	ND (0.0059)	ND (0.0056)	ND (0.0058)	ND (0.0057)	ND (0.0054)	ND (0.0052)	ND (0.0052)
Naphthalene	ND (0.0038)	ND (0.0051)	ND (0.0036)	ND (0.0051)	ND (0.0061)	ND (0.0068)	ND (0.0041)	ND (0.0068)	0.062	0.16	0.019	ND (0.0045)	0.001 J	ND (0.0042)	ND (0.0041)
n-Butylbenzene	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
n-Propylbenzene	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	0.00032 J	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
o-Xylene	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	0.0014	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
Styrene	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
tert-Butylbenzene	ND (0.0019)	ND (0.0025)	ND (0.0018)	ND (0.0026)	ND (0.003)	ND (0.0034)	ND (0.0021)	ND (0.0034)	ND (0.0024)	ND (0.0022)	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0021)	ND (0.0021)
Tetrachloroethene	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	0.00084	ND (0.00086)	0.00026	ND (0.00085)	ND (0.00059)	ND (0.00056)	0.00031 J	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
Toluene	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	0.0012	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
trans-1,2-Dichloroethene	ND (0.0014)	ND (0.0019)	ND (0.0014)	ND (0.0019)	ND (0.0023)	ND (0.0026)	ND (0.0016)	ND (0.0026)	ND (0.0018)	ND (0.0017)	ND (0.0017)	ND (0.0017)	ND (0.0016)	ND (0.0016)	ND (0.0016)
trans-1,3-Dichloropropene	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
trans-1,4-Dichloro-2-butene	ND (0.0048)	ND (0.0064)	ND (0.0045)	ND (0.0064)	ND (0.0076)	ND (0.0086)	ND (0.0052)	ND (0.0085)	ND (0.0059)	ND (0.0056)	ND (0.0058)	ND (0.0057)	ND (0.0054)	ND (0.0052)	ND (0.0052)
Trichloroethene	ND (0.00048)	ND (0.00064)	ND (0.00045)	ND (0.00064)	ND (0.00076)	ND (0.00086)	ND (0.00052)	ND (0.00085)	ND (0.00059)	ND (0.00056)	ND (0.00058)	ND (0.00057)	ND (0.00054)	ND (0.00052)	ND (0.00052)
Trichlorofluoromethane (CFC-11)	ND (0.0038)	ND (0.0051)	ND (0.0036)	ND (0.0051)	ND (0.0061)	ND (0.0068)	ND (0.0041)	ND (0.0068)	ND (0.0047)	ND (0.0044)	ND (0.0046)	ND (0.0045)	ND (0.0043)	ND (0.0042)	ND (0.0041)
Vinyl acetate	ND (0.0096)	ND (0.013)	ND (0.0091)	ND (0.013)	ND (0.015)	ND (0.017)	ND (0.01)	ND (0.017)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.01)	ND (0.01)
Vinyl chloride	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	ND (0.0012)	ND (0.0011)	ND (0.0012)	ND (0.0011)	ND (0.0011)	ND (0.001)	ND (0.001)
Xylene (total)	ND (0.00096)	ND (0.0013)	ND (0.00091)	ND (0.0013)	ND (0.0015)	ND (0.0017)	ND (0.001)	ND (0.0017)	0.0013 J	0.0057	ND (0.0012)	0.0012 J	ND (0.0011)	ND (0.001)	ND (0.001)
Semi-Volatile Organic Compounds (mg/kg)															
1,2,4,5-Tetrachlorobenzene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
1,2,4-Trichlorobenzene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
1,2-Dichlorobenzene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	0.22	ND (0.18)	ND (0.18)	0.075 J	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
1,3-Dichlorobenzene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
1,4-Dichlorobenzene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	0.038 J	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
1,4-Dioxane	ND (0.026)	ND (0.028)	ND (0.027)	ND (0.026)	ND (0.028)	ND (0.028)	ND (0.027)	ND (0.027)	ND (0.028)	ND (0.54)	ND (0.026)	ND (0.025)	ND (0.026)	ND (0.026)	ND (0.027)
2,2'-oxybis(1-Chloropropane)	ND (0.21)	ND (0.22)	ND (0.22)	ND (0.21)	ND (0.22)	ND (0.22)	ND (0.21)	ND (0.22)	ND (0.22)	ND (4.3)	ND (0.2)	ND (0.2)	ND (0.21)	ND (0.21)	ND (0.22)
2,4,5-Trichlorophenol	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2,4,6-Trichlorophenol	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (2.2)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.11)
2,4-Dichlorophenol	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (3.2)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)
2,4-Dimethylphenol	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2,4-Dinitrophenol	ND (0.84)	ND (0.88)	ND (0.88)	ND (0.83)	ND (0.89)	ND (0.88)	ND (0.86)	ND (0.87)	ND (0.88)	ND (17)	ND (0.82)	ND (0.8)	ND (0.82)	ND (0.85)	ND (0.86)
2,4-Dinitrotoluene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2,6-Dinitrotoluene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2-Chloronaphthalene	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2-Chlorophenol	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2-Methylnaphthalene	ND (0.21)	ND (0.22)	ND (0.22)	ND (0.21)	0.06 J	0.077 J	ND (0.21)	0.022 J	0.085 J	ND (4.3)	0.1 J	ND (0.2)	ND (0.21)	ND (0.21)	ND (0.22)
2-Methylphenol (o-Cresol)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2-Nitroaniline	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
2-Nitrophenol	ND (0.38)	ND (0.4)	ND (0.39)	ND (0.37)	ND (0.4)	ND (0.4)	ND (0.39)	ND (0.39)	ND (0.4)	ND (7.8)	ND (0.37)	ND (0.36)	ND (0.37)	ND (0.38)	ND (0.39)
3&4-Methylphenol	ND (0.25)	ND (0.26)	ND (0.26)	ND (0.25)	ND (0.27)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (5.2)	ND (0.24)	ND (0.24)	ND (0.25)	ND (0.25)	ND (0.26)
3,3'-Dichlorobenzidine	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
3-Nitroaniline	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
4,6-Dinitro-2-methylphenol	ND (0.45)	ND (0.48)	ND (0.47)	ND (0.45)	ND (0.48)	ND (0.48)	ND (0.46)	ND (0.47)	ND (0.48)	ND (9.4)	ND (0.44)	ND (0.44)	ND (0.45)	ND (0.46)	ND (0.47)
4-Bromophenyl phenyl ether	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
4-Chloro-3-methylphenol	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
4-Chlorophenyl phenyl ether	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
4-Chloroaniline	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
4-Nitroaniline	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
4-Nitrophenol	ND (0.24)	ND (0.26)	ND (0.26)	ND (0.24)	ND (0.26)	ND (0.26)	ND (0.25)	ND (0.26)	ND (0.26)	ND (5)	ND (0.24)	ND (0.23)	ND (0.24)	ND (0.25)	ND (0.25)
Acenaphthene	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)	0.084 J	0.028 J	ND (0.14)	ND (0.14)	0.33	1.5 J	0.41	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)
Acenaphthylene	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)	0.086 J	ND (0.15)	ND (0.14)	ND (0.14)	0.15	ND (2.9)	ND (0.14)	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)
Acetophenone	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Anthracene	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.1)	0.21	0.065 J	ND (0.11)	ND (0.11)	0.74	4.4	1	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.11)
Benzo(a)anthracene	0.045 J	0.028 J	ND (0.11)	ND (0.1)	0.89	0.28	0.066 J	0.13	**2.2**	**16**	**3.1**	ND (0.1)	0.033 J	0.055 J	0.029 J
Benzo(a)pyrene	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)	0.86	0.28	0.062 J	0.11 J	**2**	**12**	**2.4**	ND (0.13)	ND (0.14)	0.066 J	ND (0.14)
Benzo(b)fluoranthene	0.05 J	0.042 J	ND (0.11)	ND (0.1)	**1.2**	0.46	0.093 J	0.17	**2.6**	**14**	**2.8**	ND (0.1)	ND (0.1)	0.078 J	0.039 J
Benzo(g,h,i)perylene	0.028 J	0.022 J	ND (0.15)	ND (0.14)	0.55	0.2	0.047 J	0.075 J	1.5	7	1.3	ND (0.13)	ND (0.14)	0.054 J	0.027 J

ABBREVIATIONS AND NOTES:
Draft results, data unvalidated
mg/kg: milligram per kilogram

-: Not Analyzed
bgs: below ground surface
ft: feet
J: Estimated Result
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

- For test methods used, see the laboratory data sheets.
- Bold values indicate an exceedance of the **Unrestricted Use** and/or
Restricted Residential Use criteria.

TABLE I
SOIL ANALYTICAL RESULTS - DRAFT
40 BRUCKNER BOULEVARD
BRONX, NY
FILE NO. 0200734

Precharacterization Grid Location Name Sample Name Sample Date Lab Sample ID Sample Depth (bgs)	Action Level: NY Part 375 Restricted Residential Use Soil Cleanup Objectives	Action Level: NY Part 375 Unrestricted Use Soil Cleanup Objectives	PDI-1 PDI-1 (2-4) 01/12/2022 L2201757-05 2 - 4 (ft)	PDI-1 PDI-1 (4-6) 01/12/2022 L2201757-06 4 - 6 (ft)	PDI-1 PDI-1 (6-8) 01/12/2022 L2201757-07 6 - 8 (ft)	PDI-1 PDI-1 (8-10) 01/12/2022 L2201757-08 8 - 10 (ft)	PDI-1 DUP-02-01-01122022 01/12/2022 L2201757-10 8 - 10 (ft)	PDI-2 PDI-2 (2-4) 01/12/2022 L2201757-32 2 - 4 (ft)	PDI-2 PDI-2 (4-6) 01/12/2022 L2201757-33 4 - 6 (ft)	PDI-2 PDI-2 (6-8) 01/12/2022 L2201757-34 6 - 8 (ft)	PDI-2 PDI-2 (8-10) 01/12/2022 L2201757-35 8 - 10 (ft)	PDI-3 PDI-3 (2-4) 01/13/2022 L2201949-05 2 - 4 (ft)
Benzo(k)fluoranthene	3.9	0.8	0.41	**8.5**	ND (0.1)	ND (0.1)	ND (0.1)	0.14	0.12	0.15	ND (0.1)	ND (0.1)
Benzoic acid	NA	NA	ND (0.76)	ND (12)	ND (0.56)	ND (0.55)	ND (0.56)	ND (0.58)	ND (0.57)	ND (0.56)	ND (0.56)	ND (0.56)
Benzyl Alcohol	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Biphenyl	NA	NA	ND (0.54)	0.59 J	ND (0.39)	ND (0.38)	ND (0.39)	ND (0.41)	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.4)
bis(2-Chloroethoxy)methane	NA	NA	ND (0.25)	ND (4)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
bis(2-Chloroethyl)ether	NA	NA	ND (0.21)	ND (3.3)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)
bis(2-Ethylhexyl)phthalate	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Butyl benzylphthalate	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Carbazole	NA	NA	0.22 J	5.4	ND (0.17)	ND (0.17)	ND (0.17)	0.029 J	0.086 J	0.025 J	ND (0.17)	ND (0.17)
Chrysene	3.9	1	**1.3**	**30**	0.024 J	0.023 J	0.042 J	0.45	0.32	0.34	0.028 J	0.046 J
Dibenz(a,h)anthracene	0.33	0.33	0.19	**3.4**	ND (0.1)	ND (0.1)	ND (0.1)	0.06 J	0.045 J	0.051 J	ND (0.1)	ND (0.1)
Dibenzofuran	59	7	0.12 J	5.2	ND (0.17)	ND (0.17)	0.019 J	0.025 J	0.059 J	0.03 J	ND (0.17)	ND (0.17)
Diethyl phthalate	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Semi-Volatile Organic Compounds (mg/kg)												
Dimethyl phthalate	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Di-n-butylphthalate	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Di-n-octyl phthalate	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Fluoranthene	100	100	2.6	71	0.046 J	0.067 J	0.13	0.73	0.84	0.64	0.045 J	0.092 J
Fluorene	100	30	0.17 J	7	ND (0.17)	ND (0.17)	0.021 J	0.033 J	0.084 J	0.018 J	ND (0.17)	ND (0.17)
Hexachlorobenzene	1.2	0.33	ND (0.14)	ND (2.2)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Hexachlorobutadiene	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Hexachlorocyclopentadiene	NA	NA	ND (0.67)	ND (10)	ND (0.49)	ND (0.48)	ND (0.49)	ND (0.51)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Hexachloroethane	NA	NA	ND (0.19)	ND (2.9)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)
Indeno(1,2,3-cd)pyrene	0.5	0.5	**0.92**	**16**	ND (0.14)	ND (0.14)	0.028 J	0.26	0.21	0.23	0.027 J	0.029 J
Isophorone	NA	NA	ND (0.21)	ND (3.3)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)
Naphthalene	100	12	0.13 J	3.9	ND (0.17)	ND (0.17)	0.032 J	0.04 J	0.029 J	0.05 J	ND (0.17)	ND (0.17)
Nitrobenzene	NA	NA	ND (0.21)	ND (3.3)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)
N-Nitrosodi-n-propylamine	NA	NA	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
N-Nitrosodiphenylamine	NA	NA	ND (0.19)	ND (2.9)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)
Pentachlorophenol	6.7	0.8	ND (0.19)	ND (2.9)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)
Phenanthrene	100	100	2.2	79	0.036 J	0.091 J	0.14	0.54	0.81	0.37	0.023 J	0.062 J
Phenol	100	0.33	ND (0.24)	ND (3.7)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.17)
Pyrene	100	100	2.4	68	0.041 J	0.058 J	0.11	0.75	0.69	0.59	0.045 J	0.1
Inorganic Compounds (mg/kg)												
Aluminum	NA	NA	6840	4610	6180	5120	5970	5320	6590	4600	5530	5750
Antimony	NA	NA	ND (5.47)	ND (4.32)	ND (4.02)	ND (3.89)	ND (4.04)	ND (4.19)	ND (4.21)	1.48 J	ND (4.12)	ND (4.05)
Arsenic	16	13	4.78	4.33	2.54	1.53	1.83	5.27	4	**21.2**	5.32	1.63
Barium	400	350	135	77.6	43.1	22.6	28.3	101	58	138	55	29
Beryllium	72	7.2	0.306 J	0.164 J	0.217 J	0.234 J	0.291 J	0.226 J	0.278 J	0.347 J	0.223 J	0.235 J
Cadmium	4.3	2.5	0.492 J	0.32 J	0.201 J	0.124 J	0.129 J	0.251 J	0.227 J	0.917	1.07	0.227 J
Calcium	NA	NA	31400	8430	4770	644	558	17300	6920	12600	533	2600
Chromium	NA	NA	15.7	9.48	11.2	7.28	8.12	11.3	11.6	19	13	9.25
Cobalt	NA	NA	6.46	4.97	4.92	3.56	4.01	4.71	5.32	4.99	5.4	3.78
Copper	270	50	**85.3**	48.6	20.2	7.28	6.84	25.8	19.7	**61**	22.2	11.2
Iron	NA	NA	14400	12500	10900	8610	10400	11600	12900	14200	23200	9020
Lead	400	63	**307**	**156**	**79.6**	5.92	4.39	**359**	**123**	**1180**	**315**	29.4
Magnesium	NA	NA	8340	5080	4290	2020	2200	4140	4840	3240	2220	2980
Manganese	2000	1600	324	233	257	246	248	196	287	250	246	263
Mercury	0.81	0.18	**0.772**	**0.549**	**0.283**	ND (0.065)	ND (0.066)	**0.477**	**0.407**	**0.776**	0.179	0.078
Nickel	310	30	16.6	9.57	9.68	8.44	8.31	8.85	10	10.8	9.44	7.7
Potassium	NA	NA	1520	934	967	541	552	1860	1020	964	448	694
Selenium	180	3.9	0.361 J	0.259 J	ND (1.61)	ND (1.56)	ND (1.61)	0.41 J	ND (1.68)	1.29 J	ND (1.65)	ND (1.62)
Silver	180	2	ND (1.09)	ND (0.864)	ND (0.803)	ND (0.778)	ND (0.807)	ND (0.837)	ND (0.842)	ND (0.826)	ND (0.824)	ND (0.81)
Sodium	NA	NA	457	188	195	42.7 J	33.4 J	203	182	223	68.8 J	261
Thallium	NA	NA	ND (2.19)	ND (1.73)	ND (1.61)	ND (1.56)	ND (1.61)	ND (1.67)	ND (1.68)	ND (1.65)	ND (1.65)	ND (1.62)
Vanadium	NA	NA	20.7	17.5	17.2	9.96	11.9	15.9	19.1	15.7	18.7	12
Zinc	10000	109	**292**	**218**	79.4	17.6	19.8	69.1	81.2	**409**	**705**	32.4
Other												
Total Solids (%)	NA	NA	70.3	89.8	96.2	96.6	96.4	92	92.8	93.6	94.9	93.3

Precharacterization Grid Location Name Sample Name Sample Date Lab Sample ID Sample Depth (bgs)	PDI-3 PDI-3 (4-6) 01/13/2022 L2201949-06 4 - 6 (ft)	PDI-3 PDI-3 (6-8) 01/13/2022 L2201949-07 6 - 8 (ft)	PDI-3 PDI-3 (8-10) 01/13/2022 L2201949-08 8 - 10 (ft)	PDI-4 PDI-4 (2-4) 01/12/2022 L2201757-17 2 - 4 (ft)	PDI-4 PDI-4 (4-6) 01/12/2022 L2201757-18 4 - 6 (ft)	PDI-4 PDI-4 (6-8) 01/12/2022 L2201757-19 6 - 8 (ft)	PDI-4 PDI-4 (8-10) 01/12/2022 L2201757-20 8 - 10 (ft)	PDI-5 PDI-5 (2-4) 01/12/2022 L2201757-01 2 - 4 (ft)	PDI-5 PDI-5 (4-6) 01/12/2022 L2201757-02 4 - 6 (ft)	PDI-5 PDI-5 (6-8) 01/12/2022 L2201757-03 6 - 8 (ft)	PDI-5 PDI-5 (8-10) 01/12/2022 L2201757-04 8 - 10 (ft)	PDI-5 DUP-01-01122022 01/12/2022 L2201757-09 8 - 10 (ft)	PDI-6 PDI-6 (2-4) 01/13/2022 L2201949-01 2 - 4 (ft)	PDI-6 PDI-6 (4-6) 01/13/2022 L2201949-02 4 - 6 (ft)
Benzo(k)fluoranthene	ND (0.11)	ND (0.11)	ND (0.1)	0.37	0.12	0.031 J	0.055 J	0.59	**4.2**	**0.81**	ND (0.1)	ND (0.1)	0.028 J	ND (0.11)
Benzoic acid	ND (0.6)	ND (0.59)	ND (0.56)	ND (0.6)	ND (0.6)	ND (0.58)	ND (0.59)	ND (0.59)	ND (12)	ND (0.55)	ND (0.54)	ND (0.56)	ND (0.57)	ND (0.58)
Benzyl Alcohol	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Biphenyl	ND (0.42)	ND (0.42)	ND (0.4)	ND (0.42)	0.026 J	ND (0.41)	ND (0.42)	0.024 J	ND (8.2)	0.027 J	ND (0.38)	ND (0.39)	ND (0.4)	ND (0.41)
bis(2-Chloroethoxy)methane	ND (0.2)	ND (0.2)	ND (0.19)	ND (0.2)	ND (0.2)	ND (0.19)	ND (0.2)	ND (0.2)	ND (3.9)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.19)	ND (0.19)
bis(2-Chloroethyl)ether	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (3.2)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)
bis(2-Ethylhexyl)phthalate	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Butyl benzylphthalate	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Carbazole	ND (0.18)	ND (0.18)	ND (0.17)	0.11 J	0.05 J	ND (0.18)	ND (0.18)	0.27	1.3 J	0.28	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Chrysene	0.03 J	ND (0.11)	ND (0.1)	0.96	0.34	0.078 J	0.15	**2.1**	**16**	**2.4**	ND (0.1)	0.026 J	0.051 J	0.03 J
Dibenz(a,h)anthracene	ND (0.11)	ND (0.11)	ND (0.1)	0.13	0.06 J	ND (0.11)	ND (0.11)	0.31	**1.7 J**	0.3	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.11)
Dibenzofuran	ND (0.18)	ND (0.18)	ND (0.17)	0.059 J	0.033 J	ND (0.18)	ND (0.18)	0.2	0.79 J	0.2	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Diethyl phthalate	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Semi-Volatile Organic Compounds (mg/kg)														
Dimethyl phthalate	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Di-n-butylphthalate	ND (0.18)	ND (0.18)	ND (0.17)	0.045 J	0.08 J	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Di-n-octyl phthalate	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Fluoranthene	0.045 J	ND (0.11)	ND (0.1)	1.9	0.61	0.13	0.24	3.2	26	3.8	ND (0.1)	0.059 J	0.071 J	0.054 J
Fluorene	ND (0.18)	ND (0.18)	ND (0.17)	0.079 J	0.027 J	ND (0.18)	ND (0.18)	0.3	1.4 J	0.39	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Hexachlorobenzene	ND (0.11)	ND (0.11)	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (2.2)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.11)
Hexachlorobutadiene	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Hexachlorocyclopentadiene	ND (0.53)	ND (0.52)	ND (0.5)	ND (0.53)	ND (0.53)	ND (0.51)	ND (0.52)	ND (0.52)	ND (10)	ND (0.49)	ND (0.48)	ND (0.49)	ND (0.5)	ND (0.51)
Hexachloroethane	ND (0.15)	ND (0.15)	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)	ND (0.14)	ND (0.15)	ND (2.9)	ND (0.14)	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)
Indeno(1,2,3-cd)pyrene	ND (0.15)	ND (0.15)	ND (0.14)	**0.64**	0.22	0.051 J	0.084 J	**1.5**	**6.8**	**1.4**	ND (0.13)	ND (0.14)	0.055 J	0.026 J
Isophorone	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (3.2)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)
Naphthalene	ND (0.18)	ND (0.18)	ND (0.17)	0.1 J	0.11 J	0.03 J	0.038 J	0.15 J	ND (3.6)	0.11 J	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Nitrobenzene	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (3.2)	ND (0.15)	ND (0.15)	ND (0.15)	ND (0.16)	ND (0.16)
N-Nitrosodi-n-propylamine	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
N-Nitrosodiphenylamine	ND (0.15)	ND (0.15)	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)	ND (0.14)	ND (0.15)	ND (2.9)	ND (0.14)	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)
Pentachlorophenol	ND (0.15)	ND (0.15)	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.14)	ND (0.14)	ND (0.15)	ND (2.9)	ND (0.14)	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)
Phenanthrene	0.034 J	ND (0.11)	ND (0.1)	1.1	0.41	0.082 J	0.14	3.3	23	3.8	ND (0.1)	0.099 J	0.047 J	0.031 J
Phenol	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (3.6)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)
Pyrene	0.043 J	ND (0.11)	ND (0.1)	1.7	0.52	0.11	0.22	3.3	29	4.1	ND (0.1)	0.067 J	0.074 J	0.053 J
Inorganic Compounds (mg/kg)														
Aluminum	8110	7000	3710	5040	2420	4100	2440	3320	3980	5960	5370	5140	5520	5240
Antimony	ND (4.25)	ND (4.19)	ND (4.02)	0.77 J	8.46	3.25 J	0.854 J	0.574 J	ND (4.18)	ND (3.94)	ND (4)	ND (4.05)	ND (4.16)	0.386 J
Arsenic	2.24	1.37	0.828	3.53	7.29	7.3	3.81	4.4	3.88	2.2	1.72	1.86	2.25	1.73
Barium	51.2	32.2	9.02	136	108	97.4	60.2	**363**	59.8	36.8	21.2	30.4	38.8	30.8
Beryllium	0.298 J	0.318 J	0.153 J	0.276 J	0.144 J	0.213 J	0.129 J	0.192 J	0.117 J	0.252 J	0.272 J	0.251 J	0.216 J	0.214 J
Cadmium	0.451 J	0.226 J	0.129 J	0.561 J	1.22	0.749 J	0.336 J	0.658 J	0.217 J	0.158 J	0.136 J	0.105 J	0.266 J	0.222 J
Calcium	3210	643	265	20900	5570	27500	7280	61300	4480	7160	392	285	1510	848
Chromium	15.2	10.8	6.22	10.5	9.91	14.1	7.4	11.6	8.35	9.32	6.47	6.27	10.1	8.25
Cobalt	6.64	3.54	2.43	5.85	5.19	5.21	4.42	2.87	5.32	4.17	3.62	3.45	3.66	3.2
Copper	24.9	5.7	5.94	**132**	**1210**	**87.4**	**81**	12.6	19.6	12.4	7.71	6.66	13.9	8.91
Iron	13200	10800	5850	12600	13200	11200	7880	9890	10600	9630	9060	8420	8340	8350
Lead	39.8	5.24	1.9 J	**342**	**676**	**220**	**129**	**464**	**90**	28.5	4.69	3.67 J	41.1	26.5
Magnesium	4380	1550	1260	13300	2690	2940	1650	1930	1970	3690	2240	2080	1680	1560
Manganese	401	326	115	261	130	140	92.9	238	198	303	292	260	216	222
Mercury	**0.186**	ND (0.077)	ND (0.079)	**0.906**	**2.61**	**0.571**	0.075	**0.436**	0.152	0.112	ND (0.065)	ND (0.066)	0.103	**0.233**
Nickel	12.5	7.18	5.95	10.8	13.1	25.3	9.38	6	15.6	8.58	7.75	6.93	7.08	6.52
Potassium	1790	360	253	1180	410	1010	611	848	1630	1040	588	544	511	439
Selenium	ND (1.7)	ND (1.68)	ND (1.61)	0.377 J	1.37 J	1.42 J	0.664 J	0.441 J	ND (1.67)	ND (1.58)	ND (1.6)	ND (1.62)	0.266 J	ND (1.64)
Silver	ND (0.85)	ND (0.838)	ND (0.804)	ND (0.838)	0.668 J	ND (0.851)	ND (0.863)	ND (0.833)	ND (0.835)	ND (0.789)	ND (0.799)	ND (0.81)	ND (0.831)	ND (0.821)
Sodium	488	280	100 J	738	361	630	354	266	89.3 J	108 J	41.7 J	30.7 J	61.4 J	60.2 J
Thallium	ND (1.7)	ND (1.68)	ND (1.61)	ND (1.68)	ND (1.69)	ND (1.7)	ND (1.72)	ND (1.66)	ND (1.67)	ND (1.58)	ND (1.6)	ND (1.62)	ND (1.66)	0.296 J
Vanadium	20.9	13.3	6.67	14.5	13.6	14.8	10.7	14.2	11.7	12.1	8.79	9	12.2	10.1
Zinc	**116**	18.8	10	**232**	**418**	**135**	90.2	**438**	60	32	18.9	15.8	73.9	35.2
Other														
Total Solids (%)	88.6	90.5	94.3	89.7	89.4	90.7	90.2	90.3	92.1	96.6	96.2	96.2	91.3	91.6

ABBREVIATIONS AND NOTES:
Draft results, data unvalidated
mg/kg: milligram per kilogram

-: Not Analyzed
bgs: below ground surface
ft: feet
J: Estimated Result
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

- For test methods used, see the laboratory data sheets.
- Bold values indicate an exceedance of the **Unrestricted Use** and/or **Restricted Residential Use** criteria.

TABLE I
SOIL ANALYTICAL RESULTS - DRAFT
40 BRUCKNER BOULEVARD
BRONX, NY
FILE NO. 0200734

Precharacterization Grid	Action Level																									
Location Name	NY Part 375 Restricted Residential Use Soil Cleanup Objectives	NY Part 375 Unrestricted Use Soil Cleanup Objectives	PDI-6	PDI-6	PDI-6	PDI-7	PDI-7	PDI-7	PDI-7	PDI-8	PDI-8	PDI-8	PDI-9	PDI-9	PDI-10	PDI-10	PDI-11	PDI-11	PDI-12	PDI-12	PDI-13	PDI-14	PDI-15	PDI-16	PDI-17	PDI-18
Sample Name			PDI-6 (6-8)	PDI-6 (8-10)	DUP-03-01132022	PDI-7 (2-4)	PDI-7 (4-6)	PDI-7 (6-8)	PDI-7 (8-10)	PDI-8 (0-2)	PDI-8 (2-4)	PDI-8 (4-6)	PDI-9 (2-4)	PDI-9 (4-6)	PDI-10 (2-4)	PDI-10 (4-6)	PDI-11 (2-4)	PDI-11 (4-6)	PDI-12 (2-4)	PDI-12 (4-6)	PDI-13 (7-8)	PDI-14 (7-8)	PDI-15 (7-8)	PDI-16 (7-8)	PDI-17 (0-2)	PDI-18 (0-2)
Sample Date			01/13/2022	01/13/2022	01/13/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/13/2022	01/13/2022	01/13/2022	01/13/2022	01/12/2022	01/12/2022
Lab Sample ID			L2201949-03	L2201949-04	L2201949-13	L2201757-21	L2201757-22	L2201757-23	L2201757-24	L2201757-25	L2201757-26	L2201757-27	L2201757-30	L2201757-31	L2201757-11	L2201757-12	L2201757-15	L2201757-16	L2201757-13	L2201757-14	L2201949-10	L2201949-12	L2201949-09	L2201949-11	L2201757-28	L2201757-29
Sample Depth (bgs)			6 - 8 (ft)	8 - 10 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	0 - 2 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	7 - 8 (ft)	7 - 8 (ft)	7 - 8 (ft)	7 - 8 (ft)	0 - 2 (ft)	0 - 2 (ft)
Volatile Organic Compounds (mg/kg)																										
1,1,1,2-Tetrachloroethane	NA	NA	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
1,1,1-Trichloroethane	100	0.68	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
1,1,2,2-Tetrachloroethane	NA	NA	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
1,1,2-Trichloroethane	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,1-Dichloroethane	26	0.27	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,1-Dichloroethene	100	0.33	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,1-Dichloropropene	NA	NA	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
1,2,3-Trichlorobenzene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,2,3-Trichloropropane	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,2,4,5-Tetramethylbenzene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	1	ND (0.0023)	0.0011 J	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,2,4-Trichlorobenzene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,2,4-Trimethylbenzene	52	3.6	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	**15**	0.00054 J	ND (0.0029)	ND (0.0024)	0.0005 J	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,2-Dibromo-3-chloropropane (DBCP)	NA	NA	ND (0.0037)	ND (0.0036)	ND (0.0031)	ND (0.0043)	ND (0.0036)	ND (0.0035)	ND (0.0036)	-	ND (0.0035)	ND (0.0038)	ND (0.21)	ND (0.0035)	ND (0.0044)	ND (0.0036)	ND (0.0026)	ND (0.0032)	ND (0.0039)	ND (0.0034)	ND (0.0031)	ND (0.0035)	ND (0.0035)	ND (0.0031)	-	-
1,2-Dibromoethane (Ethylene Dibromide)	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,2-Dichlorobenzene	100	1.1	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,2-Dichloroethane	3.1	0.02	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,2-Dichloroethene (total)	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	0.1	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,2-Dichloropropane	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
1,3,5-Trimethylbenzene	52	8.4	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	5.6	0.00031 J	ND (0.0029)	ND (0.0024)	0.00024 J	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,3-Dichlorobenzene	49	2.4	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,3-Dichloropropane	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,3-Dichloropropene	NA	NA	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
1,4-Dichlorobenzene	13	1.8	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,4-Diethylbenzene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	0.88	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
1,4-Dioxane	13	0.1	ND (0.098)	ND (0.097)	ND (0.083)	ND (0.11)	ND (0.095)	ND (0.093)	ND (0.096)	-	ND (0.094)	ND (0.1)	ND (5.6)	ND (0.094)	ND (0.12)	ND (0.097)	ND (0.07)	ND (0.085)	ND (0.1)	ND (0.091)	ND (0.083)	ND (0.094)	ND (0.092)	ND (0.084)	-	-
2,2-Dichloropropane	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
2-Butanone (Methyl Ethyl Ketone)	100	0.12	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	**0.34 J**	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
2-Chlorotoluene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
2-Hexanone (Methyl Butyl Ketone)	NA	NA	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	ND (0.7)	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
2-Phenylbutane (sec-Butylbenzene)	100	11	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	0.29	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
4-Chlorotoluene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
4-Ethyltoluene (1-Ethyl-4-Methylbenzene)	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	12	0.00058 J	ND (0.0029)	ND (0.0024)	0.00052 J	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	ND (0.7)	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
Acetone	100	0.05	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	ND (0.7)	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
Acrylonitrile	NA	NA	ND (0.0049)	ND (0.0049)	ND (0.0042)	ND (0.0057)	ND (0.0048)	ND (0.0047)	ND (0.0048)	-	ND (0.0047)	ND (0.0051)	ND (0.28)	ND (0.0047)	ND (0.0058)	ND (0.0048)	ND (0.0035)	ND (0.0042)	ND (0.0052)	ND (0.0046)	ND (0.0041)	ND (0.0047)	ND (0.0046)	ND (0.0042)	-	-
Benzene	4.8	0.06	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	0.031 J	ND (0.00059)	0.00033 J	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
Bromobenzene	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Bromodichloromethane	NA	NA	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
Bromoform	NA	NA	ND (0.0049)	ND (0.0049)	ND (0.0042)	ND (0.0057)	ND (0.0048)	ND (0.0047)	ND (0.0048)	-	ND (0.0047)	ND (0.0051)	ND (0.28)	ND (0.0047)	ND (0.0058)	ND (0.0048)	ND (0.0035)	ND (0.0042)	ND (0.0052)	ND (0.0046)	ND (0.0041)	ND (0.0047)	ND (0.0046)	ND (0.0042)	-	-
Bromomethane (Methyl Bromide)	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Carbon disulfide	NA	NA	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	ND (0.7)	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
Carbon tetrachloride	2.4	0.76	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Chlorobenzene	100	1.1	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
Chlorobromomethane	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Chloroethane	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Chloroform (Trichloromethane)	49	0.37	ND (0.0018)	ND (0.0018)	ND (0.0016)	ND (0.0021)	ND (0.0018)	ND (0.0018)	0.0002 J	-	ND (0.0018)	ND (0.0019)	ND (0.1)	ND (0.0018)	ND (0.0022)	ND (0.0018)	ND (0.0013)	ND (0.0016)	ND (0.0019)	ND (0.0017)	ND (0.0016)	ND (0.0018)	ND (0.0017)	ND (0.0016)	-	-
Chloromethane (Methyl Chloride)	NA	NA	ND (0.0049)	ND (0.0049)	ND (0.0042)	ND (0.0057)	ND (0.0048)	ND (0.0047)	ND (0.0048)	-	ND (0.0047)	ND (0.0051)	ND (0.28)	ND (0.0047)	ND (0.0058)	ND (0.0048)	ND (0.0035)	ND (0.0042)	ND (0.0052)	ND (0.0046)	ND (0.0041)	ND (0.0047)	ND (0.0046)	ND (0.0042)	-	-
cis-1,2-Dichloroethene	100	0.25	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	0.1	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
cis-1,3-Dichloropropene	NA	NA	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	ND (0.035)	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
Cymene (p-Isopropyltoluene)	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	0.44	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Dibromochloromethane	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Dibromomethane	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Dichlorodifluoromethane (CFC-12)	NA	NA	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	ND (0.7)	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
Ethyl Ether	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Ethylbenzene	41	1	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	0.00034 J	0.45	0.00016 J	ND (0.0015)	ND (0.0012)	0.00061 J	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Hexachlorobutadiene	NA	NA	ND (0.0049)	ND (0.0049)	ND (0.0042)	ND (0.0057)	ND (0.0048)	ND (0.0047)	ND (0.0048)	-	ND (0.0047)	ND (0.0051)	ND (0.28)	ND (0.0047)	ND (0.0058)	ND (0.0048)	ND (0.0035)	ND (0.0042)	ND (0.0052)	ND (0.0046)	ND (0.0041)	ND (0.0047)	ND (0.0046)	ND (0.0042)	-	-
Isopropylbenzene (Cumene)	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	0.55	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
m,p-Xylenes	NA	NA	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	0.0011 J	2.2	ND (0.0023)	ND (0.0029)	ND (0.0024)	0.0025	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-

ABBREVIATIONS AND NOTES:
Draft results, data unvalidated
mg/kg: milligram per kilogram

-: Not Analyzed
bgs: below ground surface
ft: feet
J: Estimated Result
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

- For test methods used, see the laboratory data sheets.
- Bold values indicate an exceedance of the **Unrestricted Use** and/or **Restricted Residential Use** criteria.

TABLE I
SOIL ANALYTICAL RESULTS - DRAFT
40 BRUCKNER BOULEVARD
BRONX, NY
FILE NO. 0200734

Precharacterization Grid	Action Level																								
Location Name	NY Part 375 Restricted Residential Use Soil Cleanup Objectives	NY Part 375 Unrestricted Use Soil Cleanup Objectives	PDI-6	PDI-6	PDI-6	PDI-7	PDI-7	PDI-7	PDI-7	PDI-8	PDI-8	PDI-8	PDI-9	PDI-9	PDI-10	PDI-10	PDI-11	PDI-11	PDI-12	PDI-12	PDI-13	PDI-14	PDI-15	PDI-16	PDI-17	PDI-18
Sample Name			PDI-6 (6-8)	PDI-6 (8-10)	DUP-03-01132022	PDI-7 (2-4)	PDI-7 (4-6)	PDI-7 (6-8)	PDI-7 (8-10)	PDI-8 (0-2)	PDI-8 (2-4)	PDI-8 (4-6)	PDI-9 (2-4)	PDI-9 (4-6)	PDI-10 (2-4)	PDI-10 (4-6)	PDI-11 (2-4)	PDI-11 (4-6)	PDI-12 (2-4)	PDI-12 (4-6)	PDI-13 (7-8)	PDI-14 (7-8)	PDI-15 (7-8)	PDI-16 (7-8)	PDI-17 (0-2)	PDI-18 (0-2)
Sample Date			01/13/2022	01/13/2022	01/13/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/12/2022	01/13/2022	01/13/2022	01/13/2022	01/13/2022	01/12/2022	01/12/2022
Lab Sample ID			L2201949-03	L2201949-04	L2201949-13	L2201757-21	L2201757-22	L2201757-23	L2201757-24	L2201757-25	L2201757-26	L2201757-27	L2201757-30	L2201757-31	L2201757-11	L2201757-12	L2201757-15	L2201757-16	L2201757-13	L2201757-14	L2201949-10	L2201949-12	L2201949-09	L2201949-11	L2201757-28	L2201757-29
Sample Depth (bgs)			6 - 8 (ft)	8 - 10 (ft)	8 - 10 (ft)	2 - 4 (ft)	4 - 6 (ft)	6 - 8 (ft)	8 - 10 (ft)	0 - 2 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	2 - 4 (ft)	4 - 6 (ft)	7 - 8 (ft)	7 - 8 (ft)	7 - 8 (ft)	7 - 8 (ft)	0 - 2 (ft)	0 - 2 (ft)
Volatile Organic Compounds (mg/kg)																										
Methyl Tert Butyl Ether (MTBE)	100	0.93	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026))	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Methylene chloride (Dichloromethane)	100	0.05	ND (0.0061)	ND (0.0061)	ND (0.0052)	ND (0.0071)	ND (0.0059)	ND (0.0058)	ND (0.006)	-	ND (0.0059)	ND (0.0064)	ND (0.35)	ND (0.0059)	ND (0.0073)	ND (0.006)	ND (0.0044)	ND (0.0053)	ND (0.0064)	ND (0.0057)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0052)	-	-
Naphthalene	100	12	ND (0.0049)	ND (0.0049)	ND (0.0042)	ND (0.0057)	ND (0.0048)	ND (0.0047)	ND (0.0048)	-	ND (0.0047)	ND (0.0051)	0.84	ND (0.0047)	ND (0.0058)	ND (0.0048)	ND (0.0035)	ND (0.0042)	ND (0.0052)	ND (0.0046)	ND (0.0041)	ND (0.0047)	ND (0.0046)	ND (0.0042)	-	-
n-Butylbenzene	100	12	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	0.39	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
n-Propylbenzene	100	3.9	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	1.9	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
o-Xylene	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	1.3	ND (0.0012)	ND (0.0015)	ND (0.0012)	0.00047 J	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Styrene	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
tert-Butylbenzene	100	5.9	ND (0.0024)	ND (0.0024)	ND (0.0021)	ND (0.0028)	ND (0.0024)	ND (0.0023)	ND (0.0024)	-	ND (0.0024)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0029)	ND (0.0024)	ND (0.0017)	ND (0.0021)	ND (0.0026)	ND (0.0023)	ND (0.0021)	ND (0.0024)	ND (0.0023)	ND (0.0021)	-	-
Tetrachloroethene	19	1.3	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	**2**	0.002	0.00032 J	0.2	0.0088	ND (0.00073)	ND (0.0006)	0.00018 J	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	0.46	0.0017
Toluene	100	0.7	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	**2.1**	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
trans-1,2-Dichloroethene	100	0.19	ND (0.0018)	ND (0.0018)	ND (0.0016)	ND (0.0021)	ND (0.0018)	ND (0.0018)	ND (0.0018)	-	ND (0.0018)	ND (0.0019)	ND (0.1)	ND (0.0018)	ND (0.0022)	ND (0.0018)	ND (0.0013)	ND (0.0016)	ND (0.0019)	ND (0.0017)	ND (0.0016)	ND (0.0018)	ND (0.0017)	ND (0.0016)	-	-
trans-1,3-Dichloropropene	NA	NA	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
trans-1,4-Dichloro-2-butene	NA	NA	ND (0.0061)	ND (0.0061)	ND (0.0052)	ND (0.0071)	ND (0.0059)	ND (0.0058)	ND (0.006)	-	ND (0.0059)	ND (0.0064)	ND (0.35)	ND (0.0059)	ND (0.0073)	ND (0.006)	ND (0.0044)	ND (0.0053)	ND (0.0064)	ND (0.0057)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0052)	-	-
Trichloroethene	21	0.47	ND (0.00061)	ND (0.00061)	ND (0.00052)	ND (0.00071)	ND (0.00059)	ND (0.00058)	ND (0.0006)	-	ND (0.00059)	ND (0.00064)	0.096	ND (0.00059)	ND (0.00073)	ND (0.0006)	ND (0.00044)	ND (0.00053)	ND (0.00064)	ND (0.00057)	ND (0.00052)	ND (0.00059)	ND (0.00058)	ND (0.00052)	-	-
Trichlorofluoromethane (CFC-11)	NA	NA	ND (0.0049)	ND (0.0049)	ND (0.0042)	ND (0.0057)	ND (0.0048)	ND (0.0047)	ND (0.0048)	-	ND (0.0047)	ND (0.0051)	ND (0.28)	ND (0.0047)	ND (0.0058)	ND (0.0048)	ND (0.0035)	ND (0.0042)	ND (0.0052)	ND (0.0046)	ND (0.0041)	ND (0.0047)	ND (0.0046)	ND (0.0042)	-	-
Vinyl acetate	NA	NA	ND (0.012)	ND (0.012)	ND (0.01)	ND (0.014)	ND (0.012)	ND (0.012)	ND (0.012)	-	ND (0.012)	ND (0.013)	ND (0.7)	ND (0.012)	ND (0.015)	ND (0.012)	ND (0.0087)	ND (0.011)	ND (0.013)	ND (0.011)	ND (0.01)	ND (0.012)	ND (0.012)	ND (0.01)	-	-
Vinyl chloride	0.9	0.02	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	ND (0.0013)	ND (0.07)	ND (0.0012)	ND (0.0015)	ND (0.0012)	ND (0.00087)	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Xylene (total)	100	0.26	ND (0.0012)	ND (0.0012)	ND (0.001)	ND (0.0014)	ND (0.0012)	ND (0.0012)	ND (0.0012)	-	ND (0.0012)	0.0011 J	**3.5**	ND (0.0012)	ND (0.0015)	ND (0.0012)	0.003 J	ND (0.0011)	ND (0.0013)	ND (0.0011)	ND (0.001)	ND (0.0012)	ND (0.0012)	ND (0.001)	-	-
Semi-Volatile Organic Compounds (mg/kg)																										
1,2,4,5-Tetrachlorobenzene	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
1,2,4-Trichlorobenzene	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
1,2-Dichlorobenzene	100	1.1	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
1,3-Dichlorobenzene	49	2.4	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
1,4-Dichlorobenzene	13	1.8	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
1,4-Dioxane	13	0.1	ND (0.026)	ND (0.026)	ND (0.026)	ND (0.028)	ND (0.026)	ND (0.026)	ND (0.027)	-	ND (0.025)	ND (0.026)	ND (0.027)	ND (0.027)	ND (0.03)	ND (0.026)	ND (0.03)	ND (0.026)	ND (0.026)	ND (0.026)	-	-	-	-	-	-
2,2'-oxybis(1-Chloropropane)	NA	NA	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.22)	ND (0.21)	ND (0.21)	ND (0.22)	-	ND (0.2)	ND (0.21)	ND (0.21)	ND (0.22)	ND (0.24)	ND (0.21)	ND (0.24)	ND (0.21)	ND (0.21)	ND (0.21)	-	-	-	-	-	-
2,4,5-Trichlorophenol	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2,4,6-Trichlorophenol	NA	NA	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.1)	ND (0.1)	ND (0.11)	-	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.1)	ND (0.12)	ND (0.11)	ND (0.1)	ND (0.1)	-	-	-	-	-	-
2,4-Dichlorophenol	NA	NA	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	-	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.16)	ND (0.16)	-	-	-	-	-	-
2,4-Dimethylphenol	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2,4-Dinitrophenol	NA	NA	ND (0.84)	ND (0.83)	ND (0.83)	ND (0.89)	ND (0.85)	ND (0.83)	ND (0.86)	-	ND (0.81)	ND (0.84)	ND (0.85)	ND (0.87)	ND (0.98)	ND (0.84)	ND (0.95)	ND (0.85)	ND (0.84)	ND (0.83)	-	-	-	-	-	-
2,4-Dinitrotoluene	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2,6-Dinitrotoluene	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2-Chloronaphthalene	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2-Chlorophenol	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2-Methylnaphthalene	NA	NA	ND (0.21)	ND (0.21)	ND (0.21)	0.15 J	0.036 J	ND (0.21)	0.055 J	-	ND (0.2)	ND (0.21)	0.22	ND (0.22)	0.041 J	0.041 J	0.18 J	ND (0.21)	0.053 J	ND (0.21)	-	-	-	-	-	-
2-Methylphenol (o-Cresol)	100	0.33	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2-Nitroaniline	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
2-Nitrophenol	NA	NA	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.4)	ND (0.38)	ND (0.38)	ND (0.39)	-	ND (0.36)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.38)	ND (0.43)	ND (0.38)	ND (0.38)	ND (0.37)	-	-	-	-	-	-
3&4-Methylphenol	NA	NA	ND (0.25)	ND (0.25)	ND (0.25)	0.06 J	ND (0.25)	ND (0.25)	ND (0.26)	-	ND (0.24)	ND (0.25)	0.072 J	ND (0.26)	ND (0.29)	ND (0.25)	0.039 J	ND (0.26)	0.035 J	ND (0.25)	-	-	-	-	-	-
3,3'-Dichlorobenzidine	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
3-Nitroaniline	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	NA	NA	ND (0.46)	ND (0.45)	ND (0.45)	ND (0.48)	ND (0.46)	ND (0.45)	ND (0.47)	-	ND (0.44)	ND (0.46)	ND (0.46)	ND (0.47)	ND (0.53)	ND (0.46)	ND (0.51)	ND (0.46)	ND (0.45)	ND (0.45)	-	-	-	-	-	-
4-Bromophenyl phenyl ether	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
4-Chloro-3-methylphenol	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
4-Chloroaniline	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
4-Nitroaniline	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
4-Nitrophenol	NA	NA	ND (0.25)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.25)	ND (0.24)	ND (0.25)	-	ND (0.24)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.28)	ND (0.25)	ND (0.28)	ND (0.25)	ND (0.24)	ND (0.24)	-	-	-	-	-	-
Acenaphthene	100	20	ND (0.14)	ND (0.14)	ND (0.14)	0.42	0.054 J	ND (0.14)	ND (0.14)	-	ND (0.13)	ND (0.14)	0.044 J	ND (0.14)	0.094 J	0.075 J	0.029 J	ND (0.14)	0.024 J	ND (0.14)	-	-	-	-	-	-
Acenaphthylene	100	100	ND (0.14)	ND (0.14)	ND (0.14)	1.5	0.13 J	ND (0.14)	0.14	-	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)	0.17	0.034 J	0.19	ND (0.14)	0.26	ND (0.14)	-	-	-	-	-	-
Acetophenone	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	0.17 J	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Anthracene	100	100	ND (0.1)	ND (0.1)	ND (0.1)	1.8	0.2	ND (0.1)	0.12	-	ND (0.1)	ND (0.1)	0.12	ND (0.11)	0.21	0.1	0.15	ND (0.11)	0.12	ND (0.1)	-	-	-	-	-	-
Benzo(a)anthracene	1	1	ND (0.1)	ND (0.1)	ND (0.1)	**4.9**	0.72	ND (0.1)	0.52	-	0.024 J	ND (0.1)	0.28	0.076 J	**1.2**	0.28	0.37	ND (0.11)	0.94	ND (0.1)	-	-	-	-	-	-
Benzo(a)pyrene	1	1	ND (0.14)	ND (0.14)	ND (0.14)	**3.3**	0.47	ND (0.14)	0.32	-	ND (0.13)	ND (0.14)	0.26	0.086 J	**1.2**	0.26	0.49	ND (0.14)	**1.1**	ND (0.14)	-	-	-	-	-	-
Benzo(b)fluoranthene	1	1	ND (0.1)	ND (0.1)	ND (0.1)	**5.1**	0.69	ND (0.1)	0.55	-	ND (0.1)	ND (0.1)	0.34	0.11	**1.6**	0.38	0.71	ND (0.11)	**1.7**	ND (0.1)	-	-	-	-	-	-
Benzo(g,h,i)perylene	100	100	ND (0.14)	ND (0.14)	ND (0.14)	2	0.72	ND (0.14)	0.21	-	0.048 J	ND (0.14)	0.19	0.067 J	0.76	0.17	0.51	ND (0.14)	0.93	ND (0.14)	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
Draft results, data unvalidated
mg/kg: milligram per kilogram

-: Not Analyzed
bgs: below ground surface
ft: feet
J: Estimated Result
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

- For test methods used, see the laboratory data sheets.
- Bold values indicate an exceedance of the **Unrestricted Use** and/or **Restricted Residential Use** criteria.

TABLE I
SOIL ANALYTICAL RESULTS - DRAFT
40 BRUCKNER BOULEVARD
BRONX, NY
FILE NO. 0200734

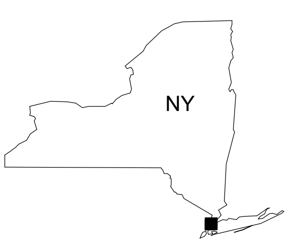
Precharacterization Grid	Action Level																									
Location Name Sample Name Sample Date Lab Sample ID Sample Depth (bgs)	NY Part 375 Restricted Residential Use Soil Cleanup Objectives	NY Part 375 Unrestricted Use Soil Cleanup Objectives	PDI-6 PDI-6 (6-8) 01/13/2022 L2201949-03 6 - 8 (ft)	PDI-6 PDI-6 (8-10) 01/13/2022 L2201949-04 8 - 10 (ft)	PDI-6 DUP-03-01132022 01/13/2022 L2201949-13 8 - 10 (ft)	PDI-7 PDI-7 (2-4) 01/12/2022 L2201757-21 2 - 4 (ft)	PDI-7 PDI-7 (4-6) 01/12/2022 L2201757-22 4 - 6 (ft)	PDI-7 PDI-7 (6-8) 01/12/2022 L2201757-23 6 - 8 (ft)	PDI-7 PDI-7 (8-10) 01/12/2022 L2201757-24 8 - 10 (ft)	PDI-8 PDI-8 (0-2) 01/12/2022 L2201757-25 0 - 2 (ft)	PDI-8 PDI-8 (2-4) 01/12/2022 L2201757-26 2 - 4 (ft)	PDI-8 PDI-8 (4-6) 01/12/2022 L2201757-27 4 - 6 (ft)	PDI-9 PDI-9 (2-4) 01/12/2022 L2201757-30 2 - 4 (ft)	PDI-9 PDI-9 (4-6) 01/12/2022 L2201757-31 4 - 6 (ft)	PDI-10 PDI-10 (2-4) 01/12/2022 L2201757-11 2 - 4 (ft)	PDI-10 PDI-10 (4-6) 01/12/2022 L2201757-12 4 - 6 (ft)	PDI-11 PDI-11 (2-4) 01/12/2022 L2201757-15 2 - 4 (ft)	PDI-11 PDI-11 (4-6) 01/12/2022 L2201757-16 4 - 6 (ft)	PDI-12 PDI-12 (2-4) 01/12/2022 L2201757-13 2 - 4 (ft)	PDI-12 PDI-12 (4-6) 01/12/2022 L2201757-14 4 - 6 (ft)	PDI-13 PDI-13 (7-8) 01/13/2022 L2201949-10 7 - 8 (ft)	PDI-14 PDI-14 (7-8) 01/13/2022 L2201949-12 7 - 8 (ft)	PDI-15 PDI-15 (7-8) 01/13/2022 L2201949-09 7 - 8 (ft)	PDI-16 PDI-16 (7-8) 01/13/2022 L2201949-11 7 - 8 (ft)	PDI-17 PDI-17 (0-2) 01/12/2022 L2201757-28 0 - 2 (ft)	PDI-18 PDI-18 (0-2) 01/12/2022 L2201757-29 0 - 2 (ft)
Benzo(k)fluoranthene	3.9	0.8	ND (0.1)	ND (0.1)	ND (0.1)	**2.2**	0.28	ND (0.1)	0.23	-	ND (0.1)	ND (0.1)	0.11	0.038 J	0.5	0.094 J	0.21	ND (0.11)	0.38	ND (0.1)	-	-	-	-	-	-
Benzoic acid	NA	NA	ND (0.57)	ND (0.56)	ND (0.56)	ND (0.6)	ND (0.57)	ND (0.56)	ND (0.58)	-	ND (0.54)	ND (0.57)	ND (0.58)	ND (0.59)	ND (0.66)	ND (0.57)	ND (0.64)	ND (0.57)	ND (0.57)	ND (0.56)	-	-	-	-	-	-
Benzyl Alcohol	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Biphenyl	NA	NA	ND (0.4)	ND (0.39)	ND (0.39)	0.054 J	ND (0.4)	ND (0.4)	ND (0.41)	-	ND (0.38)	ND (0.4)	0.038 J	ND (0.41)	ND (0.46)	ND (0.4)	0.049 J	ND (0.4)	ND (0.4)	ND (0.39)	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	NA	NA	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.2)	ND (0.19)	ND (0.19)	ND (0.19)	-	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.2)	ND (0.22)	ND (0.19)	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.19)	-	-	-	-	-	-
bis(2-Chloroethyl)ether	NA	NA	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	-	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.16)	ND (0.16)	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	0.91	0.1 J	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	0.37	ND (0.18)	0.17 J	ND (0.18)	0.34	ND (0.18)	ND (0.17)	0.062 J	-	-	-	-	-	-
Butyl benzylphthalate	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Carbazole	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	0.76	0.11 J	ND (0.17)	0.054 J	-	ND (0.17)	ND (0.18)	0.019 J	ND (0.18)	0.12 J	0.08 J	0.08 J	ND (0.18)	0.19	ND (0.17)	-	-	-	-	-	-
Chrysene	3.9	1	ND (0.1)	ND (0.1)	ND (0.1)	**5.6**	0.84	ND (0.1)	0.62	-	0.029 J	ND (0.1)	0.27	0.075 J	**1.1**	0.3	0.46	ND (0.11)	**1.1**	ND (0.1)	-	-	-	-	-	-
Dibenz(a,h)anthracene	0.33	0.33	ND (0.1)	ND (0.1)	ND (0.1)	**0.47**	0.11	ND (0.1)	0.052 J	-	ND (0.1)	ND (0.1)	0.041 J	ND (0.11)	0.17	0.041 J	0.1 J	ND (0.11)	0.15	ND (0.1)	-	-	-	-	-	-
Dibenzofuran	59	7	ND (0.18)	ND (0.17)	ND (0.17)	0.37	0.059 J	ND (0.17)	0.051 J	-	ND (0.17)	ND (0.18)	0.029 J	ND (0.18)	0.079 J	0.066 J	0.061 J	ND (0.18)	0.093 J	ND (0.17)	-	-	-	-	-	-
Diethyl phthalate	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	0.068 J	0.035 J	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Semi-Volatile Organic Compounds (mg/kg)																										
Dimethyl phthalate	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Di-n-butylphthalate	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	0.045 J	ND (0.18)	0.059 J	ND (0.18)	0.28	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Di-n-octyl phthalate	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	0.86	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Fluoranthene	100	100	ND (0.1)	ND (0.1)	ND (0.1)	17	1.5	0.025 J	1.2	-	0.028 J	ND (0.1)	0.68	0.13	2	0.68	0.64	ND (0.11)	2.5	ND (0.1)	-	-	-	-	-	-
Fluorene	100	30	ND (0.18)	ND (0.17)	ND (0.17)	0.48	0.07 J	ND (0.17)	0.025 J	-	ND (0.17)	ND (0.18)	0.032 J	ND (0.18)	0.11 J	0.09 J	0.043 J	ND (0.18)	0.074 J	ND (0.17)	-	-	-	-	-	-
Hexachlorobenzene	1.2	0.33	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.1)	ND (0.1)	ND (0.11)	-	ND (0.1)	ND (0.1)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.1)	ND (0.12)	ND (0.11)	ND (0.1)	ND (0.1)	-	-	-	-	-	-
Hexachlorobutadiene	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Hexachlorocyclopentadiene	NA	NA	ND (0.5)	ND (0.49)	ND (0.49)	ND (0.53)	ND (0.5)	ND (0.5)	ND (0.52)	-	ND (0.48)	ND (0.5)	ND (0.51)	ND (0.52)	ND (0.58)	ND (0.5)	ND (0.56)	ND (0.51)	ND (0.5)	ND (0.49)	-	-	-	-	-	-
Hexachloroethane	NA	NA	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.15)	ND (0.14)	ND (0.14)	ND (0.14)	-	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.16)	ND (0.14)	ND (0.16)	ND (0.14)	ND (0.14)	ND (0.14)	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.5	0.5	ND (0.14)	ND (0.14)	ND (0.14)	**2.6**	**0.62**	ND (0.14)	0.27	-	0.039 J	ND (0.14)	0.2	0.072 J	**0.85**	0.19	**0.52**	ND (0.14)	**0.97**	ND (0.14)	-	-	-	-	-	-
Isophorone	NA	NA	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	-	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.16)	ND (0.16)	-	-	-	-	-	-
Naphthalene	100	12	ND (0.18)	ND (0.17)	ND (0.17)	0.39	0.077 J	ND (0.17)	0.1 J	-	0.046 J	ND (0.18)	0.31	0.033 J	0.081 J	0.1 J	0.24	ND (0.18)	0.26	ND (0.17)	-	-	-	-	-	-
Nitrobenzene	NA	NA	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	ND (0.16)	ND (0.16)	-	ND (0.15)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.18)	ND (0.16)	ND (0.16)	ND (0.16)	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	NA	NA	ND (0.18)	ND (0.17)	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
N-Nitrosodiphenylamine	NA	NA	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.15)	ND (0.14)	ND (0.14)	ND (0.14)	-	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.16)	ND (0.14)	ND (0.16)	ND (0.14)	ND (0.14)	ND (0.14)	-	-	-	-	-	-
Pentachlorophenol	6.7	0.8	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.15)	ND (0.14)	ND (0.14)	ND (0.14)	-	ND (0.13)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.16)	ND (0.14)	ND (0.16)	ND (0.14)	ND (0.14)	ND (0.14)	-	-	-	-	-	-
Phenanthrene	100	100	ND (0.1)	ND (0.1)	ND (0.1)	6.4	1.2	0.024 J	0.93	-	0.043 J	ND (0.1)	0.5	0.061 J	1.3	0.71	0.49	ND (0.11)	1.6	ND (0.1)	-	-	-	-	-	-
Phenol	100	0.33	ND (0.18)	ND (0.17)	ND (0.17)	0.038 J	ND (0.18)	ND (0.17)	ND (0.18)	-	ND (0.17)	ND (0.18)	0.081 J	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.2)	ND (0.18)	ND (0.17)	ND (0.17)	-	-	-	-	-	-
Pyrene	100	100	ND (0.1)	ND (0.1)	ND (0.1)	15	1.4	0.02 J	1	-	0.024 J	ND (0.1)	0.62	0.13	1.8	0.54	0.55	ND (0.11)	2.2	ND (0.1)	-	-	-	-	-	-
Inorganic Compounds (mg/kg)																										
Aluminum	NA	NA	5220	4220	5020	5270	3680	3490	3710	-	5490	5700	6350	6780	5710	4950	6830	4750	2700	4710	-	-	-	-	-	-
Antimony	NA	NA	ND (4.07)	ND (4.01)	ND (3.98)	ND (4.47)	ND (4.1)	ND (4.09)	1.49 J	-	ND (4.04)	ND (4.14)	ND (4.2)	ND (4.26)	3.74 J	ND (4.07)	14.8	ND (4.11)	3.25 J	ND (4.14)	-	-	-	-	-	-
Arsenic	16	13	1.24	1.1	1.5	7.05	2.32	2	2.22	-	2.67	2.64	3.27	3.28	10.8	1.92	7.03	1.8	12.5	1.59	-	-	-	-	-	-
Barium	400	350	16.3	10.8	18.3	189	53.2	14	25.5	-	24.4	16.7	77.1	41.1	**688**	26.2	**748**	16	114	19.7	-	-	-	-	-	-
Beryllium	72	7.2	0.179 J	0.2 J	0.255 J	0.438 J	0.197 J	0.164 J	0.185 J	-	0.259 J	0.248 J	0.252 J	0.281 J	0.235 J	0.22 J	1.63	0.164 J	0.181 J	0.198 J	-	-	-	-	-	-
Cadmium	4.3	2.5	0.155 J	0.192 J	0.215 J	0.957	0.205 J	0.115 J	0.185 J	-	0.194 J	0.174 J	0.454 J	0.4 J	**3.19**	0.309 J	**10.8**	0.123 J	1.1	0.116 J	-	-	-	-	-	-
Calcium	NA	NA	405	259	247	31200	3920	387	671	-	820	418	18100	3130	16100	466	12900	524	1690	712	-	-	-	-	-	-
Chromium	NA	NA	12.6	6.06	6.81	13.3	6.92	6.58	7.57	-	7.48	6.77	13.2	15.5	20.9	6.46	172	7.81	12.1	6.13	-	-	-	-	-	-
Cobalt	NA	NA	3.18	3.11	3.67	5.1	3.27	2.91	4.15	-	4.26	4.45	7.03	5.72	7.99	3.83	40.9	4.4	5.09	3.15	-	-	-	-	-	-
Copper	270	50	5.54	6.93	8.26	48.8	34	31.2	28	-	9.81	8.06	26.3	22.4	**248**	7.39	**1190**	7.8	**140**	6.31	-	-	-	-	-	-
Iron	NA	NA	7670	7660	9020	13400	7920	8070	9220	-	11200	12000	12600	13300	35400	9540	31100	9350	27400	8870	-	-	-	-	-	-
Lead	400	63	2.47 J	2.57 J	3.35 J	**783**	**85.3**	13.4	**74.8**	-	12.5	4.83	51.7	**83.5**	**708**	4.22	**1420**	3.74 J	**653**	4.71	-	-	-	-	-	-
Magnesium	NA	NA	1450	1490	1890	4560	1660	1260	1040	-	2330	2300	6910	4040	2140	1980	2980	1850	876	1840	-	-	-	-	-	-
Manganese	2000	1600	169	228	278	210	147	150	164	-	297	328	262	236	569	323	333	193	168	233	-	-	-	-	-	-
Mercury	0.81	0.18	ND (0.072)	ND (0.079)	ND (0.084)	**0.505**	0.179	ND (0.073)	0.106	-	ND (0.074)	ND (0.076)	**0.332**	**2.46**	**0.853**	ND (0.067)	**0.917**	ND (0.068)	**3.08**	ND (0.066)	-	-	-	-	-	-
Nickel	310	30	6.26	7.14	7.78	13.4	6.82	5.66	10.3	-	8.82	9.05	10.9	8.87	21.5	8.87	**221**	8.05	11.6	6.91	-	-	-	-	-	-
Potassium	NA	NA	350	380	403	1510	501	293	224	-	468	414	1680	1670	846	414	1060	392	327	354	-	-	-	-	-	-
Selenium	180	3.9	ND (1.63)	ND (1.6)	ND (1.59)	0.662 J	0.23 J	ND (1.64)	0.303 J	-	ND (1.62)	ND (1.66)	ND (1.68)	ND (1.7)	1.36 J	ND (1.63)	1.18 J	ND (1.64)	1.7	ND (1.65)	-	-	-	-	-	-
Silver	180	2	ND (0.815)	ND (0.802)	ND (0.796)	ND (0.894)	ND (0.82)	ND (0.818)	ND (0.841)	-	ND (0.809)	ND (0.828)	ND (0.84)	ND (0.852)	1.41	ND (0.814)	**4.42**	ND (0.822)	ND (0.823)	ND (0.827)	-	-	-	-	-	-
Sodium	NA	NA	36.6 J	29.2 J	30.1 J	499	144 J	82.8 J	101 J	-	116 J	83.8 J	146 J	289	167 J	14.5 J	316	32 J	37.9 J	33 J	-	-	-	-	-	-
Thallium	NA	NA	ND (1.63)	ND (1.6)	ND (1.59)	ND (1.79)	ND (1.64)	ND (1.64)	ND (1.68)	-	ND (1.62)	ND (1.66)	ND (1.68)	ND (1.7)	ND (1.88)	ND (1.63)	ND (1.82)	ND (1.64)	ND (1.64)	ND (1.65)	-	-	-	-	-	-
Vanadium	NA	NA	11.4	7.8	8.24	19.9	10.7	9.34	11.4	-	11.8	10.7	15.9	22.1	49.6	8.95	469	9.44	16.7	8.59	-	-	-	-	-	-
Zinc	10000	109	11.7	14.1	18.1	**438**	62	14.6	48.3	-	24.9	23.7	44.5	**292**	**744**	**152**	**1440**	18.4	**184**	17	-	-	-	-	-	-
Other																										
Total Solids (%)	NA	NA	92.7	95.2	96.3	87.1	93.4	93.9	91.3	93.9	95.9	93.6	93.3	90.8	80.6	93.7	82.6	92.1	93.5	94.9	96.1	96.3	95.9	95.6	88.3	88.2

ABBREVIATIONS AND NOTES:
Draft results, data unvalidated
mg/kg: milligram per kilogram

-: Not Analyzed
bgs: below ground surface
ft: feet
J: Estimated Result
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

- For test methods used, see the laboratory data sheets.
- Bold values indicate an exceedance of the **Unrestricted Use** and/or
Restricted Residential Use criteria.

FIGURES



MAP SOURCE: ESRI
SITE COORDINATES: 73°55'38"W 40°48'23"N

HALEY ALDRICH

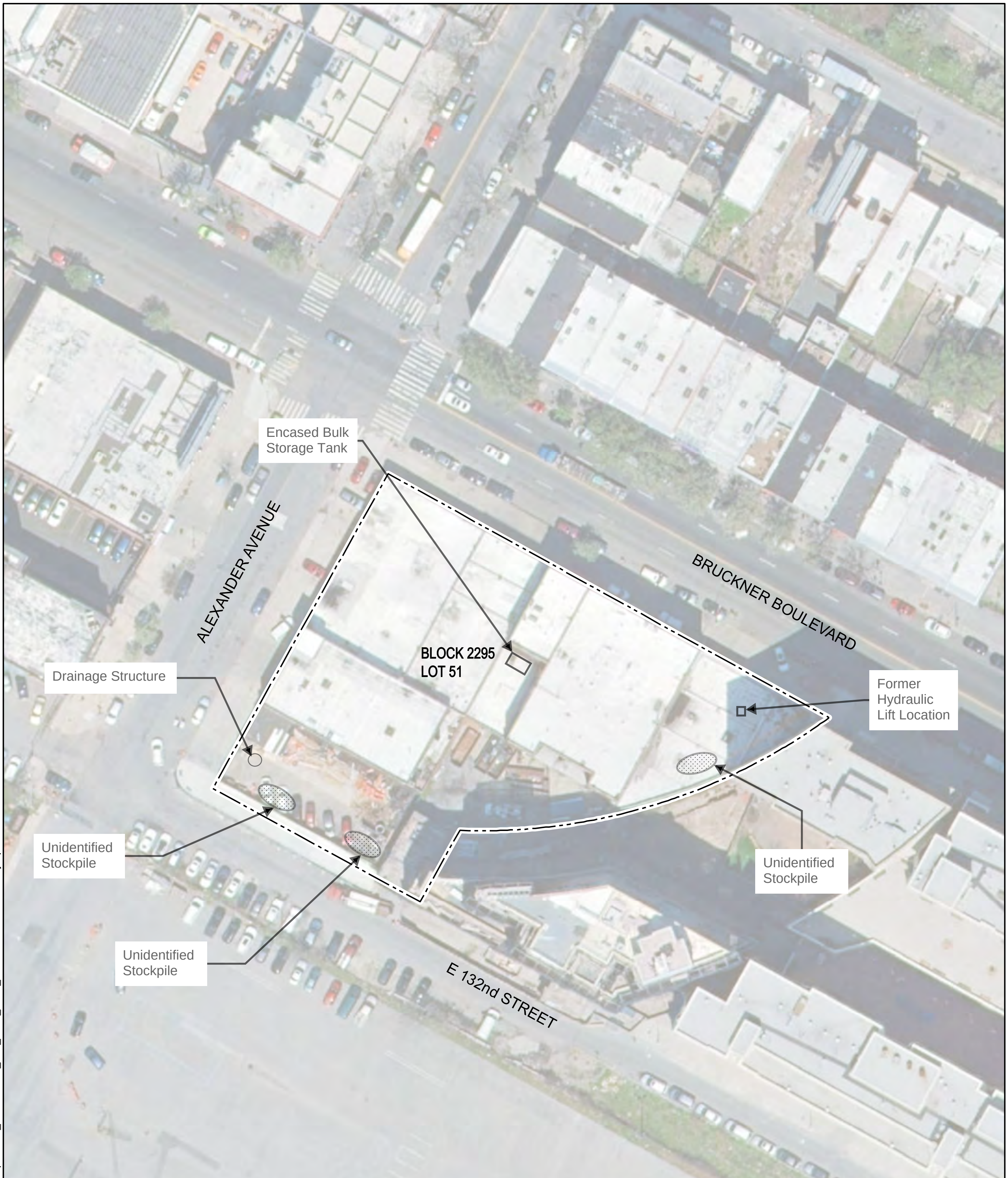
40 BRUCKNER BOULEVARD
BRONX. NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
JANUARY 2021

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0200734\GIS\Maps\2021_01\0200734_001_0001_PROJECT_LOCUS.mxd — USER: ajospe — LAST SAVED: 1/27/2021 9:41:28 PM



LEGEND

APPROXIMATE SITE BOUNDARY

N

NOTE
AERIAL IMAGERY SOURCE: ESRI

0 40 80
SCALE IN FEET

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SITE MAP

JANUARY 2021

FIGURE 2

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

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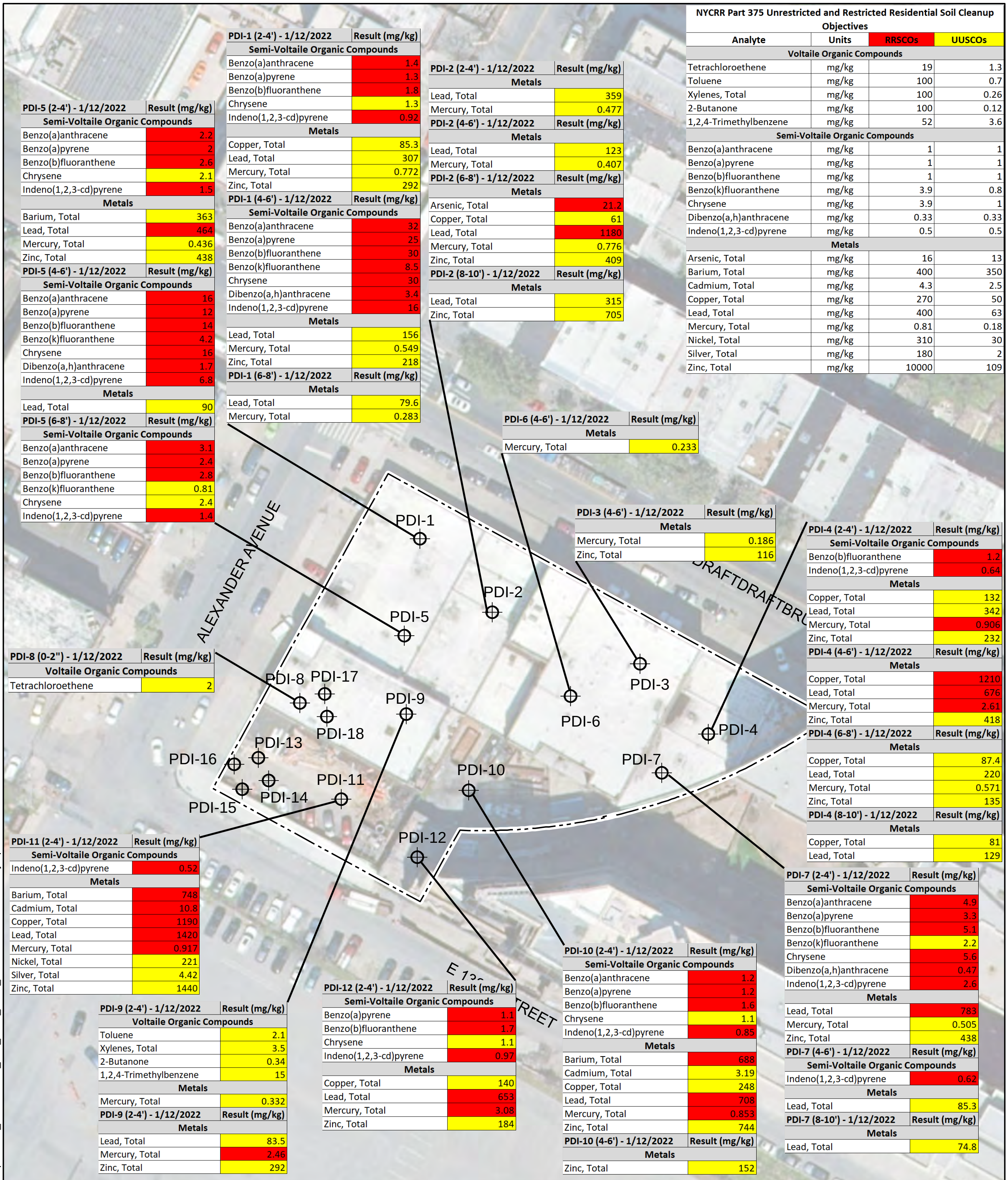

NYCRR Part 375 Unrestricted and Restricted Residential Soil Cleanup Objectives

Analyte	Units	RRSCOs	UUSCOs
Voltaile Organic Compounds			
Tetrachloroethene	mg/kg	19	1.3
Toluene	mg/kg	100	0.7
Xylenes, Total	mg/kg	100	0.26
2-Butanone	mg/kg	100	0.12
1,2,4-Trimethylbenzene	mg/kg	52	3.6
Semi-Voltaile Organic Compounds			
Benzo(a)anthracene	mg/kg	1	1
Benzo(a)pyrene	mg/kg	1	1
Benzo(b)fluoranthene	mg/kg	1	1
Benzo(k)fluoranthene	mg/kg	3.9	0.8
Chrysene	mg/kg	3.9	1
Dibenzo(a,h)anthracene	mg/kg	0.33	0.33
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.5
Metals			
Arsenic, Total	mg/kg	16	13
Barium, Total	mg/kg	400	350
Cadmium, Total	mg/kg	4.3	2.5
Copper, Total	mg/kg	270	50
Lead, Total	mg/kg	400	63
Mercury, Total	mg/kg	0.81	0.18
Nickel, Total	mg/kg	310	30
Silver, Total	mg/kg	180	2
Zinc, Total	mg/kg	10000	109

PDI-1 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	1.4
Benzo(a)pyrene	1.3
Benzo(b)fluoranthene	1.8
Chrysene	1.3
Indeno(1,2,3-cd)pyrene	0.92
Metals	
Copper, Total	85.3
Lead, Total	307
Mercury, Total	0.772
Zinc, Total	292
PDI-1 (4-6') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	32
Benzo(a)pyrene	25
Benzo(b)fluoranthene	30
Benzo(k)fluoranthene	8.5
Chrysene	30
Dibenzo(a,h)anthracene	3.4
Indeno(1,2,3-cd)pyrene	16
Metals	
Lead, Total	156
Mercury, Total	0.549
Zinc, Total	218
PDI-1 (6-8') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	79.6
Mercury, Total	0.283

PDI-2 (2-4') - 1/12/2022	Result (mg/kg)
Metals	
Lead, Total	359
Mercury, Total	0.477
PDI-2 (4-6') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	123
Mercury, Total	0.407
PDI-2 (6-8') - 1/12/2022	**Result (mg/kg)**
Metals	
Arsenic, Total	21.2
Copper, Total	61
Lead, Total	1180
Mercury, Total	0.776
Zinc, Total	409
PDI-2 (8-10') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	315
Zinc, Total	705

PDI-5 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	2.2
Benzo(a)pyrene	2
Benzo(b)fluoranthene	2.6
Chrysene	2.1
Indeno(1,2,3-cd)pyrene	1.5
Metals	
Barium, Total	363
Lead, Total	464
Mercury, Total	0.436
Zinc, Total	438
PDI-5 (4-6') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	16
Benzo(a)pyrene	12
Benzo(b)fluoranthene	14
Benzo(k)fluoranthene	4.2
Chrysene	16
Dibenzo(a,h)anthracene	1.7
Indeno(1,2,3-cd)pyrene	6.8
Metals	
Lead, Total	90
PDI-5 (6-8') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	3.1
Benzo(a)pyrene	2.4
Benzo(b)fluoranthene	2.8
Benzo(k)fluoranthene	0.81
Chrysene	2.4
Indeno(1,2,3-cd)pyrene	1.4

PDI-6 (4-6') - 1/12/2022	Result (mg/kg)
Metals	
Mercury, Total	0.233

PDI-3 (4-6') - 1/12/2022	Result (mg/kg)
Metals	
Mercury, Total	0.186
Zinc, Total	116

PDI-4 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(b)fluoranthene	1.2
Indeno(1,2,3-cd)pyrene	0.64
Metals	
Copper, Total	132
Lead, Total	342
Mercury, Total	0.906
Zinc, Total	232
PDI-4 (4-6') - 1/12/2022	**Result (mg/kg)**
Metals	
Copper, Total	1210
Lead, Total	676
Mercury, Total	2.61
Zinc, Total	418
PDI-4 (6-8') - 1/12/2022	**Result (mg/kg)**
Metals	
Copper, Total	87.4
Lead, Total	220
Mercury, Total	0.571
Zinc, Total	135
PDI-4 (8-10') - 1/12/2022	**Result (mg/kg)**
Metals	
Copper, Total	81
Lead, Total	129

PDI-8 (0-2") - 1/12/2022	Result (mg/kg)
Voltaile Organic Compounds	
Tetrachloroethene	2

PDI-11 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Indeno(1,2,3-cd)pyrene	0.52
Metals	
Barium, Total	748
Cadmium, Total	10.8
Copper, Total	1190
Lead, Total	1420
Mercury, Total	0.917
Nickel, Total	221
Silver, Total	4.42
Zinc, Total	1440

PDI-7 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	4.9
Benzo(a)pyrene	3.3
Benzo(b)fluoranthene	5.1
Benzo(k)fluoranthene	2.2
Chrysene	5.6
Dibenzo(a,h)anthracene	0.47
Indeno(1,2,3-cd)pyrene	2.6
Metals	
Lead, Total	783
Mercury, Total	0.505
Zinc, Total	438
PDI-7 (4-6') - 1/12/2022	**Result (mg/kg)**
Semi-Voltaile Organic Compounds	
Indeno(1,2,3-cd)pyrene	0.62
Metals	
Lead, Total	85.3
PDI-7 (8-10') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	74.8

PDI-10 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)anthracene	1.2
Benzo(a)pyrene	1.2
Benzo(b)fluoranthene	1.6
Chrysene	1.1
Indeno(1,2,3-cd)pyrene	0.85
Metals	
Barium, Total	688
Cadmium, Total	3.19
Copper, Total	248
Lead, Total	708
Mercury, Total	0.853
Zinc, Total	744
PDI-10 (4-6') - 1/12/2022	**Result (mg/kg)**
Metals	
Zinc, Total	152

PDI-12 (2-4') - 1/12/2022	Result (mg/kg)
Semi-Voltaile Organic Compounds	
Benzo(a)pyrene	1.1
Benzo(b)fluoranthene	1.7
Chrysene	1.1
Indeno(1,2,3-cd)pyrene	0.97
Metals	
Copper, Total	140
Lead, Total	653
Mercury, Total	3.08
Zinc, Total	184

PDI-9 (2-4') - 1/12/2022	Result (mg/kg)
Voltaile Organic Compounds	
Toluene	2.1
Xylenes, Total	3.5
2-Butanone	0.34
1,2,4-Trimethylbenzene	15
Metals	
Mercury, Total	0.332
PDI-9 (2-4') - 1/12/2022	**Result (mg/kg)**
Metals	
Lead, Total	83.5
Mercury, Total	2.46
Zinc, Total	292

LEGEND

APPROXIMATE SITE BOUNDARY

SOIL BORING LOCATION

N

0 40 80

SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI
LOCATIONS ARE APPROXIMATE

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SOIL RESULTS EXCEEDANCE MAP

JANUARY 2022

FIGURE 3

GIS FILE PATH: C:\ajospe\Projects\0200734\Maps\2021_01\0200734_001_0002_SITE_PLAN.mxd — USER: ajospe — LAST SAVED: 1/28/2021 9:30:57 PM

APPENDIX A

Pre-Design Investigation Work Plan

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PRE-DESIGN INVESTIGATION WORK PLAN
FORMER MILL SANITARY WIPING CLOTH SITE
BCP SITE C203146
40 BRUCKNER BOULEVARD
BRONX, NEW YORK

by Haley & Aldrich of New York
New York, New York

for 40 Bruckner Realty LLC
199 Lee Avenue, suite 1088
Brooklyn, New York

File No. 0200734-002
January 2022

HALEY & ALDRICH OF NEW YORK
237 W 35th Street
16th Floor
New York, NY 10123
646.277.5686

5 January 2022
File No. 0200734-001

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Attention: Mr. Daniel McNally

Subject: Pre-Design Investigation Work Plan
Former Mill Sanitary Wiping Cloth Site
BCP Site C203146
40 Bruckner Boulevard
Bronx, New York

Dear Mr. McNally,

On behalf of 40 Bruckner Realty LLC, Haley & Aldrich of New York is submitting for the review and approval of the New York State Department of Environmental Conservation (NYSDEC) this draft Pre-Design Investigation Work Plan (PDIWP) for 40 Bruckner Boulevard located in the Mott Haven neighborhood of the Bronx, NY (Site). This PDIWP has been developed based on the NYSDEC's "Technical Guidance for Site Investigation and Remediation" (DER-10, dated May 2010).

Please do not hesitate to contact us if there are any questions regarding this submittal or any other aspects of the project.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

James M. Bellew
Principal

Mari Cate Conlon

Mari C. Conlon, P.G.
Senior Project Manager

Cc: Jacob Schwimmer – 40 Bruckner Boulevard Realty LLC
Frank Bifera, Esq. – Barclay Damon LLP
Scarlett McLaughlin – NYSDOH

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1. Introduction and Purpose

On behalf of 40 Bruckner Realty LLC, Haley & Aldrich of New York (Haley & Aldrich) has prepared this Pre-Design Investigation Work Plan (PDIWP) for the Former Mill Sanitary Wiping Cloth Site, BCP Site C203146, located at 40 Bruckner Boulevard (the "Site", see Figure 1) in the Mott Haven neighborhood of the Bronx, NY (Site). This PDIWP is being submitted to obtain additional supplemental data for verifying the extent/depth of fill contamination at the site. This PDIWP was prepared in accordance with the regulations and guidance applicable to the BCP, including, without limitation, DER-10 which is entitled "Technical Guidance for Site Investigation and Remediation" and dated May 2010 (DER-10).

The Site, identified as Section 2, Block 2295, Lot 51 on the New York City tax map, is 41,240-square feet and is bounded by Bruckner Boulevard to the northeast followed by mixed commercial and residential buildings across Bruckner Boulevard to the east, northeast and north, by East 132nd Street to the southwest followed by the Harlem River Yard to the south, southwest and west, apartment buildings to the southeast, and by Alexander Avenue followed by commercial and industrial/manufacturing buildings to the west and northwest. The Site location is shown on Figure 1. Existing Site features are shown on Figure 2. The Site is currently vacant and is improved with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and an unpaved material storage and parking area.

The land is currently zoned as M1-5/R8A which allows for residential and industrial use. The Site is located in an urban area surrounded by commercial, industrial, and residential properties served by municipal water. Requestor plans to redevelop the Site for residential purposes consistent with current zoning.

2. Background

2.1 CURRENT LAND USE

Although the Site is currently vacant, the Site is improved with a one-story warehouse, a three-story former commercial use building, a one-story building formerly used as a tire repair shop, and an unpaved materials storage and parking area. The Site is accessed from Bruckner Boulevard, Alexander Avenue and East 132nd Street.

2.2 PREVIOUS INVESTIGATIONS

A Remedial Investigation (RI) was completed by Haley & Aldrich in accordance with the Remedial Investigation Work Plan (RIWP) approved by NYSDEC in August 2021 (Appendix A). The RI activities, including installation of 19 soil borings, 8 permanent groundwater monitoring wells and 10 soil vapor probes, were completed in September 2021 and reported in the Remedial Investigation Report (RIR) submitted to NYSDEC in October 2021.

Results of the RI found contaminants of concern at the Site are primarily metals, SVOCs, and VOCs with impacts to soil, and chlorinated VOCs with impacts to soil, groundwater, and soil vapor. Supplemental data is required to determine the transition from urban fill material to native material throughout the site. The RI boring logs, included in Appendix B, indicate urban fill varying from 4 to 12 feet below grade (ft bgs) throughout the site.

3. Pre-Design Investigation

This section describes the field activities to be conducted during the Pre-Design Investigation (PDI) and provides the sampling scope, objectives, methods, anticipated number of samples, and sample locations. A summary of the sampling and analysis plan is provided in Table 1 and Figure 3. The following investigation activities will be conducted to fill data gaps so that the extent and depth of fill contamination at the Site can be determined.

3.1 UTILITY MARKOUT

Field personnel will mobilize to the Site to stake (with flagging or paint) the proposed soil sample locations. Once the sample locations are marked, Dig Safely New York will be contacted to mark underground utilities. A ground penetrating radar survey was completed in August 2021 prior to the RI. Once the utilities are marked, field equipment and personnel will be mobilized to the Site.

3.2 SOIL SAMPLING

Additional on-Site soil samples will be collected at varying intervals to identify the extent and depth of fill contamination at the site.

The sampling and analysis plan is summarized in Table 1. Twelve soil borings will be installed to 10 feet below grade surface (ft bgs) by a track-mounted direct push drill rig (Geoprobe®) operated by a licensed operator. Soil samples will be collected from acetate liners using a stainless-steel trowel or sampling spoon. Samples will be placed in laboratory provided clean bottle ware.

Soils will be logged continuously by a geologist or engineer using the Unified Soil Classification System. The presence of staining, odors, and photoionization detector (PID) response will be noted. Samples will be collected using laboratory-provided clean bottle ware. VOC grab samples will be collected using terra cores. Sampling methods are described in the Field Sampling Plan (FSP) provided as Appendix B of the approved RIWP. A Quality Assurance Project Plan (QAPP) is provided as Appendix C of the approved RIWP. Laboratory data will be reported in ASP Category B deliverable format.

Soil samples representative of Site conditions will be collected at locations widely distributed across the Site as shown on Figure 3. Samples intervals have been proposed based on observations from the soil boring logs developed during the RI and submitted in the RIR. On the northern portion of the site, borings PDI-1 through PDI-7 will be sampled from 2 to 4, 4 to 6, 6 to 8 and 8 to 10 ft bgs. On the southern portion of the site, borings PDI-8 through PDI-12 will be sampled from 2 to 4 and 4 to 6 ft bgs. This is to characterize the extent of contamination within the historic fill and verify the proposed excavation depth within the Remedial Action Work Plan (RAWP).

Samples will be analyzed for:

- Target Compound List (TCL) VOCs using EPA method 8260B
- TCL SVOCs using EPA method 8270C

- Total Analyte List (TAL) Metals using EPA method 6010

Four soil borings, PDI-13 through PDI-16, will be installed surrounding MW-8, installed during the RI, to evaluate for chlorinated VOCs. Samples will be collected right above the groundwater interface at 7 to 8 ft bgs. Samples will be analyzed for VOCs via EPA method 8260B. In addition, PDI-8 and two additional soil samples, PDI-17 and PDI-18, will be collected surrounding former SB-6 from 0 to 2 inches and analyzed for tetrachloroethylene which as observed above UUSCOs during the RI.

3.3 INVESTIGATION DERIVED WASTE

Following sample collection, boreholes will be backfilled with soil cutting and an upper bentonite plug. Boreholes will be restored to grade with surrounding area. If soil is identified as grossly contaminated, it will be separated and placed into a sealed and labeled Department of Transportation (DOT) approved 55-gallon drum pending characterization and offsite disposal.

4. Quality Assurance and Quality Control

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

QA/QC procedures are defined in the Quality Assurance Project Plan included in Appendix C of the approved RIWP.

5. Data Use

5.1 DATA SUBMITTAL

Analytical data will be supplied in ASP Category B Data Packages. If more stringent than those suggested by the United States Environmental Protection Agency, the laboratory's in house QA/QC limits will be utilized.

5.2 DATA VALIDATION

Data packages will be sent to a qualified data validation specialist for evaluation of accuracy and precision of the analytical results. A DUSR will be created to confirm the compliance of methods with the protocols described in the NYSDEC Analytical service Protocol (ASP). DUSRs will summarize and confirm usability of the data for project-related decisions. Data validation will be completed in accordance with the DUSR guidelines from NYSDEC Division of Environmental Remediation. The DUSR will be included with the submittal of a Pre-Design Investigation Report (PDIR).

6. Health and Safety

6.1 HEALTH AND SAFETY PLAN

A Site-specific Health and Safety Plan (HASP) has been prepared in accordance with NYSDEC and NYSDOH guidelines and is provided as Appendix E of the approved RIWP.

6.2 COMMUNITY AIR MONITORING PLAN

The proposed PDI work will be completed both indoors and outdoors at the Site. Where intrusive drilling operations are planned, community air monitoring will be implemented to protect the downwind receptors. A Haley & Aldrich representative will continually monitor the breathing air in the vicinity of the immediate work area using a PID to measure total VOCs in air at concentrations as low as 1 part per million (ppm). The air in the work zone also will be monitored for visible dust generation.

If VOC measurements above 5 ppm are sustained for 15 minutes or visible dust generation is observed, the intrusive work will be temporarily halted and a more rigorous monitoring of VOCs and dust using recordable meters will be implemented in accordance with the NYSDOH Generic Community Air Monitoring Plan (CAMP).

7. Reporting

During implementation of this work plan, daily reports will be provided to the NYSDEC which summarize daily activities and provide the CAMP monitoring data. Following completion of the work, a summary of the PDI will be provided to NYSDEC as an appendix to the Remedial Action Work Plan to support implementation of proposed remedial action. The report will include:

- Summary of the activities;
- Figure showing sampling locations;
- Tables summarizing laboratory analytical results;
- Laboratory analytical data reports;
- Field sampling data sheets;
- Findings regarding the nature and extent of contamination at the Site;
- Qualitative exposure assessment of any contamination from an on-site source that has migrated offsite; and
- Conclusions and recommendations.

References

1. Draft Remedial Investigation Report, 40 Bruckner Boulevard, Bronx, New York, Prepared for 40 Bruckner Realty LLC by Haley & Aldrich of New York for submission to the New York State Department of Environmental Conservation, submitted October 2021.

2. Remedial Investigation Work Plan, 40 Bruckner Boulevard, Bronx, New York, Prepared for 40 Bruckner Realty LLC by Haley & Aldrich of New York for submission to the New York State Department of Environmental Conservation, approved September 2021.

3. Brownfield Cleanup Program Application, 40 Bruckner Boulevard, Bronx, New York, Prepared for 40 Bruckner Realty LLC by Haley & Aldrich of New York for submission to the New York State Department of Environmental Conservation, approved July 2021.

4. Program Policy DER-10, "Technical Guidance for Site Investigation and Remediation," New York State Department of Environmental Conservation, May 2010.

TABLES

Table 1. PDI Sampling and Analysis Plan
40 Bruckner Boulevard, Bronx, New York

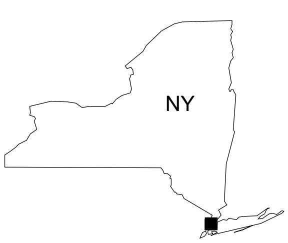
Location	Sample Depth (ft bgs)	Target Compound List VOCs (8260B)	Target Compound List SVOCs (8270C)	Total Analyte List Metals (6010)	Tetrachloroethylene
SOIL					
PDI-1	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-2	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-3	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-4	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-5	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-6	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-7	2-4	X	X	X	
	4-6	X	X	X	
	6-8	X	X	X	
	8-10	X	X	X	
PDI-8	0-2"				X
	2-4	X	X	X	
	4-6	X	X	X	
PDI-9	2-4	X	X	X	
	4-6	X	X	X	
PDI-10	2-4	X	X	X	
	4-6	X	X	X	
PDI-11	2-4	X	X	X	
	4-6	X	X	X	
PDI-12	2-4	X	X	X	
	4-6	X	X	X	
PDI-13	7-8	X			
PDI-14	7-8	X			
PDI-15	7-8	X			
PDI-16	7-8	X			
PDI-17	0-2"				X
PDI-18	0-2"				X
PDI-19	0-2"				X

Notes:
VOCs - Volatile Organic Compounds
SVOCs - Semi-volatile Organic Compounds
Ft bgs - Feet below grade surface

QAQC samples include:
Field Duplicate - 1 for every 20 samples
Field Blanks - 1 for every 20 samples
Trip Blanks - 1 per cooler of samples to be analyzed for VOCs

Samples will be collected at indicated intervals in feet with the exception of samples noted to be taken at 0 to 2 inches (0-2")

FIGURES



N

MAP SOURCE: ESRI
SITE COORDINATES: 73°55'38"W 40°48'23"N

HALEY ALDRICH

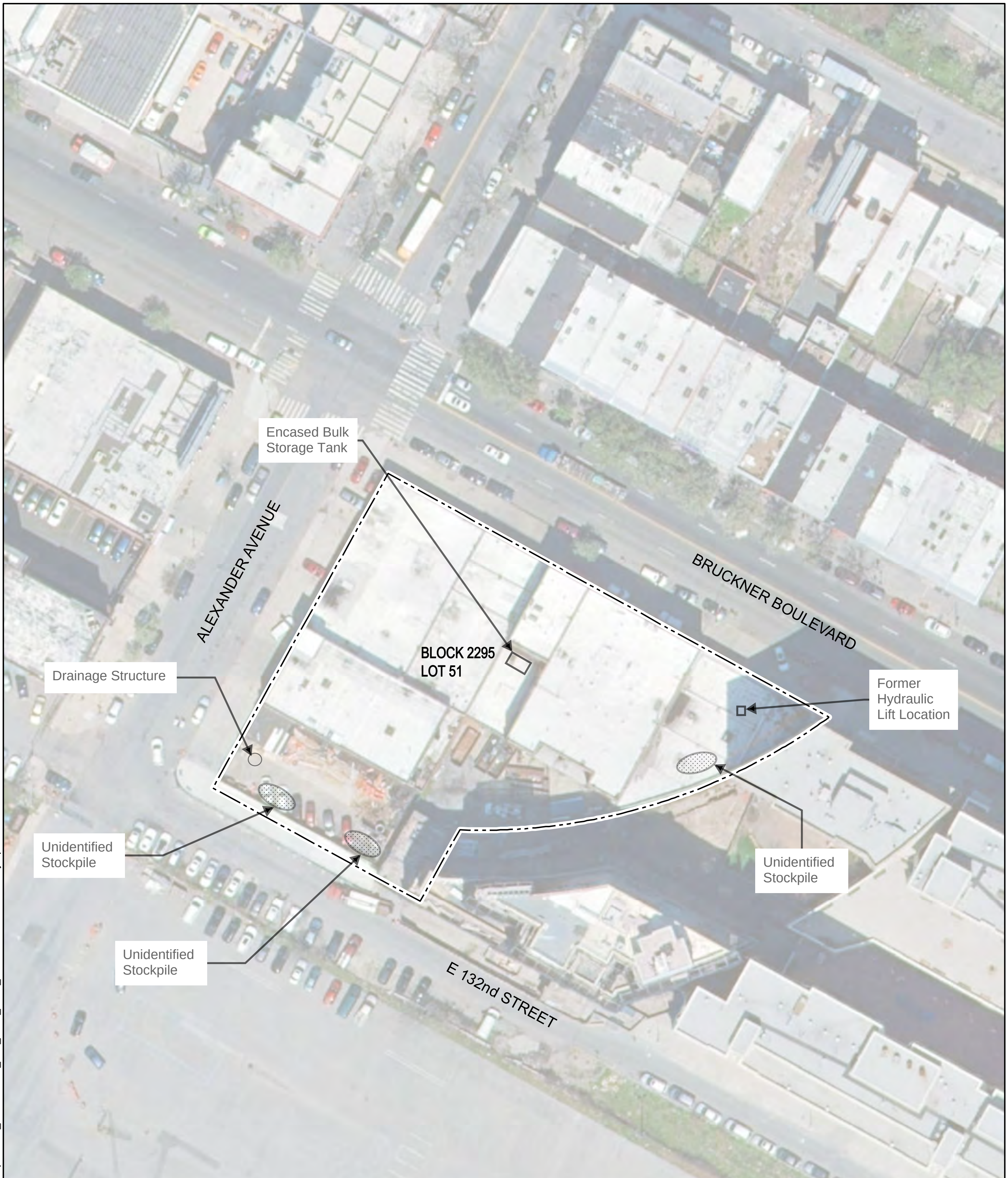
40 BRUCKNER BOULEVARD
BRONX. NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
JANUARY 2021

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0200734\GIS\Maps\2021_01\0200734_001_0001_PROJECT_LOCUS.mxd — USER: ajospe — LAST SAVED: 1/27/2021 9:41:28 PM



LEGEND

APPROXIMATE SITE BOUNDARY

N

NOTE
AERIAL IMAGERY SOURCE: ESRI

0 40 80
SCALE IN FEET

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

SITE MAP

JANUARY 2021

FIGURE 2

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LEGEND

APPROXIMATE SITE BOUNDARY

PROPOSED SOIL BORING

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

PRE-DESIGN INVESTIGATION
SAMPLE LOCATION MAP

DECEMBER 2021

FIGURE 1

APPENDIX A

Remedial Investigation Work Plan

APPENDIX B

Remedial Investigation Boring Logs

TEST BORING REPORT

BORING NO.	SB1
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site Plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 6610DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	40	0-2"	SB1 (0-2")	0-5' Fill material including concrete, brick, and wood pieces with some brown silty SAND, no	0.0
				odor, dry	0.0
					0.0
					0.0
					0.0
5	50			5-10' Fill material including brown silty SAND with pieces of asphalt and brick, no odor, moist	0.0
					0.0
					0.0
					0.0
				Note: Fill material present to at least 10 ft bgs	0.0
10	60	11-13'	SB1 (11-13')	10-13' Dark brown silty SAND, no odor, moist	0.0
					0.0
				Note: Groundwater at 13 ft bgs	0.0
				13-15' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
15	60			15-17' Brown silty SAND, no odor, wet	0.0
					0.0
				17-20' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			20'	13'

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

HALEY ALDRICH

BORING NO. **SB2**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	30	0-2"	SB2 (0-2")	0-8' Brown silty SAND with fill material including pieces of brick and asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
5					0.0
	50				0.0
				Note: Fill material present to 8 ft bgs	0.0
				8-15' Brown well-graded SAND, no odor, moist	0.0
					0.0
10					0.0
	50	11-13'	SB2 (11-13')		0.0
				Note: Groundwater at approximately 13 ft bgs	0.0
					0.0
					0.0
15	60			15-20' Brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20'	13'

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2

BORING NO. SB2

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB3	Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88
Boring Location	See Site plan		
Rig Make & Model	Geoprobe 7822DT		

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig			Hammer Type	Drilling Mud	Casing Advance
☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
☐ Skid	☐ Hand auger	☐ Cutting Head			

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	32	0-2'	SB3 (0-2')	0-4' Brown to dark brown fine gravel with pieces of asphalt and glass, loose, no odor, dry	0.0
					0.0
					0.0
					0.0
5				Note: Fill material present to 4 ft bgs	0.0
	29	8-10'	SB3 (8-10')	5-10' Brown fine SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB3

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

BORING NO. **SB4**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	30	0-2"	SB4 (0-2")	2" Concrete	0.0
				2"-5' Brown SAND with silt, with fill material including pieces of asphalt and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
5	50			5-8' Brown silty SAND, with fill material including pieces of asphalt and brick, no odor, moist	0.0
					0.0
				Note: Fill material present to 8 ft bgs	0.0
					0.0
					0.0
10	60	11-13'	SB4 (11-13') & DUP-20210902	10-15' Brown silty SAND, no odor, moist	0.0
					0.0
				Note: Groundwater at approximately 13 ft bgs	0.0
					0.0
					0.0
15				END OF EXPLORATION 15 FT BGS	
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			15	13

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	3
BORING NO.	SB4

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH	TEST BORING REPORT	BORING NO. SB5
		Page 1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 6610DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40	0-2"	SB5 (0-2")	0-5' Brown silty SAND with fill material including pieces of concrete and asphalt, no odor, moist	0.0
					0.0
					0.0
					0.0
				Note: Fill material to 5 ft bgs	0.0
5	52	8-10'	SB5 (8-10')	5-10' Brown silty fine grained SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
					0.0
10	60			10-15' Brown silty fine grained SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
15	60			15-20' Brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			20	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB5

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

HALEY ALDRICH

TEST BORING REPORT

BORING NO. **SB6**

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PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID		Visual-Manual Identification & Description	PID (ppm)
0				0-6"	Concrete	0.0
	47	0-2"	SB6 (0-2")	6"-4'	Dark brown to black fine to medium SAND with silt, with fill material including pieces of asphalt and brick, loose, no odor, dry	1.1
						1.1
						1.1
5				Note:	Fill material to 4 ft bgs	1.1
	32	8-10'	SB6 (8-10')	4-10'	Brown fine SAND with silt, no odor, moist	0.0
						0.0
						0.0
				Note:	Groundwater at approximately 9 ft bgs	0.0
10						0.0
					END OF EXPLORATION 10 FT BGS	
15						
20						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB6

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

BORING NO. SB7

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PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/2/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/2/2021

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud	Casing Advance
☐ Safety	☐ Bentonite	Type Method Depth
☐ Doughnut	☐ Polymer	Direct Push
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
				0-4' Dark brown medium to coarse SAND, with fine gravel and fill material including pieces of asphalt	0.0
				and glass, loose, no odor, dry	0.0
	42	0-2"	SB7 (0-2")		0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown fine to medium SAND with silt, no odor, moist	0.0
5					0.0
					0.0
	48	8-10'	SB7 (8-10')		0.0
					0.0
				Note: Groundwater at approximately 10 ft bgs	0.0
10				10-12' Brown fine to medium SAND with silt, no odor, wet	0.0
					0.0
	48			12-15' Brown fine to coarse SAND, trace silt and fine gravel, no odor, wet	0.0
					0.0
					0.0
15				15-20 Brown coarse SAND, wet, no odor, with some fine gravel	0.0
					0.0
	50				0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB7

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

TEST BORING REPORT

BORING NO.	SB8
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud	Casing Advance
☐ Safety	☐ Bentonite	Type Method Depth
☐ Doughnut	☐ Polymer	Direct Push
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	31	0-2"	SB8 (0-2")	0-3' Dark brown to black fine to medium SAND with silt and fine gravel. Fill material including pieces	0.0
				of asphalt and wood, no odor, dry	0.0
				3-4' Black fine SAND, slight sweet odor, dry	65.0
				Note: Fill material to 4 ft bgs	65.0
				4-5' Brown fine SAND	0.0
5	35	8-10'	SB8 (8-10') DUP-1-20210902	5-10' Brown fine to coarse SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
10	24			10-15' Brown coarse SAND, with some fine gravel, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
15	38			15-20' Brown coarse SAND, with some fine gravel, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20	9

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	3
BORING NO.	SB8

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO. **SB9**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location: See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	28	0-2"	SB9 (0-2")	0-5' Brown to dark brown fine to medium SAND with silt and some fine gravel. Fill material present	0.0
				including pieces of asphalt, brick, and glass, no odor, dry	0.0
					0.0
					0.0
				Note: Fill material present to 5 ft bgs	0.0
5	32	8-10'	SB9 (8-10')	5-9' Brown fine SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB9

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB10
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 7822DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	38	0-2"	SB10 (0-2")	0-5' Brown to dark brown fine to medium SAND with silt and some fine gravel. Fill material present	0.0
				including pieces of asphalt, brick, and glass, no odor, dry	0.0
					0.0
					0.0
				Note: Fill material present to 5 ft bgs	0.0
5	38	8-10'	SB10 (8-10')	5-9' Brown fine SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at approximately 9 ft bgs	0.0
				9-10' Brown medium to coarse SAND with some fine gravel, no odor, wet	0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB10

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO. SB11

PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/3/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/3/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud
☐ Safety	☐ Bentonite
☐ Doughnut	☐ Polymer
☑ Automatic	☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40	0-2"	SB11 (0-2")	0-4' Dark brown fine to medium SAND with silt, with fill material including pieces of asphalt and brick,	0.0
				no odor, dry	0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Dark brown fine SAND with clay, no odor, dry	0.0
5	46	8-10'	SB11 (8-10')	5-8' Brown fine SAND with silt, no odor	0.0
				Note: Groundwater at approximately 8 ft bgs	0.0
				8-10' Brown medium to coarse SAND with some fine gravel (mps 0.5"), no odor, wet	0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			10	8

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB11

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

BORING NO.	SB12
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance: Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	48			0-7' Fill material including concrete, brick, and asphalt present, no recovery of soil	0.0
					0.0
					0.0
					0.0
					0.0
5	60	7-8'	SB12 (7-8')	Note: Fill material to 7 ft bgs	0.0
				7-10' Brown to orange brown silty SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
10	50	12-14'	SB12 (12-14')	10-15; Brown to orange brown silty SAND, no odor, moist	0.0
					0.0
					0.0
				Note: Groundwater at 14 ft bgs	0.0
					0.0
15	60			15-20' Brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			20	14

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB12

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

HALEY ALDRICH

TEST BORING REPORT

BORING NO.	SB13
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	25	0-2"	SB13 (0-2")	0-5" Brown silty SAND with fill material including pieces of concrete, asphalt, and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
5	35			5-11' Brown silty SAND with fill material including pieces of concrete, asphalt, and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
				Note: Fill material present to 11 ft bgs	0.0
10	40	11-13'	SB13 (11-13')	11-13' Fine orange brown to brown SAND, no odor, moist	0.0
					0.0
				Note: Groundwater at 13 ft bgs	0.0
				END OF EXPLORATION 13 FT BGS DUE TO REFUSAL	
15					
				Note: Multiple shallow refusals in this location at approximately 4 ft bgs	
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			13	13

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	13
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB13

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

BORING NO. SB14

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. Datum NAVD-88 Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	35	0-2"	SB14 (0-2")	3" Concrete	0.0
				3"-8' Brown silty SAND, with some fill material including asphalt, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
5					0.0
	45	8-10'	SB14 (8-10')		0.0
				8-9' Layer of asphalt	0.0
				9-11' Brown silty SAND followed by a 6" lense of asphalt/concrete at 11.5'	0.0
					0.0
10				Note: Fill material present to 12 ft bgs	0.0
	60			12-15' Orange brown well-graded SAND, no odor, wet	0.0
				Note: Groundwater at approximatley 13 ft bgs	0.0
					0.0
					0.0
15				END OF EXPLORATION 15 FT BGS	
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			15	13

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB14

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO. SB15
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PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	32	0-2"	SB15 (0-2")	0-4' Brown to dark brown fine to medium SAND with silt and trace gravel. Fill material including pieces of asphalt, brick, and wood present, loose, no odor, dry	0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
5				4-10' Brown fine SAND with trace silt, no odor, dry	0.0
	34	8-10'	SB15 (8-10')		0.0
					0.0
					0.0
					0.0
				Note: Groundwater at approximately 10 ft bgs	0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB15

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

TEST BORING REPORT

HALEY ALDRICH

BORING NO.	SB16
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/2/2021
DRILLER	J. Zinzer	DATE FINISHED	9/2/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model: Geoprobe 7822DT			Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	25	0-2"	SB16 (0-2")	0-4' Dark brown to brown fine to medium SAND with silt, with fill material including pieces of asphalt and concrete, no odor, loose, dry	0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown fine SAND with some silt, no odor, wet	0.0
5	48	8-10'	SB16 (8-10')		0.0
					0.0
					0.0
					0.0
				Note: Groundwater at approximately 10 ft bgs	0.0
10				END OF EXPLORATION 10 FT BGS	
15					
20					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			10	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB16

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

HALEY ALDRICH

TEST BORING REPORT

BORING NO. **SB17**

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation ft. | Datum NAVD-88 | Boring Location See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	34	0-2' 2-4'	SB17 (0-2') SB17 (2-4')	6" Concrete	0.0
				6"-4' Dark brown to brown fine to medium SAND with silt, with fill material including pieces of asphalt	0.0
				and brick, loose, no odor, dry	0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown fine SAND with silt, no odor, moist	0.0
5					0.0
	36				0.0
				Note: Groundwater at 9 ft bgs	0.0
				9-10' Brown fine SAND with silt, no odor, wet	0.0
					0.0
10	33			10-15' Brown medium to coarse SAND, trace silt and fine gravel (mps 0.25"), no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
15	40			15-20' Brown medium to coarse SAND, trace silt and fine gravel (mps 0.25"), no odor, wet	0.0
					0.0
					0.0
					0.0
					0.0
20				END OF EXPLORATION 20 FT BGS	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/3/2021			20	9

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	20
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB17

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

HALEY ALDRICH

TEST BORING REPORT

BORING NO. SB18

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PROJECT	40 Bruckner Blvd- Remedial Investigation	**H&A FILE NO.**	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	JCS Realty	**FIELD REP.**	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	9/2/2021
DRILLER	J. Zinzer	**DATE FINISHED**	9/2/2021

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 7822DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	Drilling Mud	Casing Advance
☐ Safety	☐ Bentonite	Type Method Depth
☐ Doughnut	☐ Polymer	Direct Push
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
		0-2' 2-4'	SB18 (0-2') SB18 (2-4')	0-4' Dark brown to black silty SAND with fill material including pieces of concrete and asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
5				Note: Fill material present to 4 ft bgs	0.0
				4-10' Brown fine silty SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
10				Note: Groundwater at approximately 10 ft bgs	0.0
				10-15' Brown fine to coarse SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
15					0.0
				END OF EXPLORATION 15 FT BGS	0.0
					0.0
					0.0
					0.0
20					0.0

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
9/2/2021			15	10

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	15
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	SB18

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

Form #3000

TEST BORING REPORT

HALEY ALDRICH

BORING NO.	SB19
Page	1 of 1

PROJECT	40 Bruckner Blvd- Remedial Investigation	H&A FILE NO.	0200734
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	JCS Realty	FIELD REP.	Z. Simmel
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	9/3/2021
DRILLER	J. Zinzer	DATE FINISHED	9/3/2021

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 7822DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	30	0-2"	0-2"	0-5' Brown silty SAND, with fill material including pieces of brick, asphalt, and concrete, no odor, dry	0.0
					0.0
					0.0
					0.0
5				Note: Refusal at 5 ft bgs	0.0
				END OF EXPLORATION 5 FT BGS	0.0
10					
15					
20					

Water Level Data				
Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	5
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	SB19

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

APPENDIX B

Soil Boring Logs

GEOPROBE BORING REPORT

BORING NO. **PDI-1**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

Rig		Hammer Type	Drilling Mud
☐ Truck ☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite
☐ ATV ☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer
☑ Track ☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None
☐ Skid ☐ Hand auger	☐ Cutting Head		

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40	(2-4') (4-6')	PDI-1 (2-4') PDI-1 (4-6')	0-6" Concrete	0.0
				6"-7' Fill material including pieces of asphalt, brick, concrete, and wood with dark brown silty SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
5	55	(6-8') (8-10')	PDI-1 (6-8') PDI-1 (8-10') DUP-02-01122022		0.0
					0.0
					0.0
				Note: Fill material to 7 ft bgs	0.0
				7-10' Brown silty SAND, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	5
BORING NO.	PDI-1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. PDI-2

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	**H&A FILE NO.**	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	40 Bruckner Realty LLC	**FIELD REP.**	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	1/12/2022
DRILLER	N. Turro	**DATE FINISHED**	1/12/2022

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

Rig		Equipment	Hammer Type	Drilling Mud
☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite
☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer
☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None
☐ Skid	☐ Hand auger	☐ Cutting Head		

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	46	(2-4') (4-6')	PDI-2 (2-4') PDI-2 (4-6')	0-2' Concrete	0.0
				2-5' Brown silty SAND with fill material including pieces of asphalt, brick, and concrete, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
5	43	(6-8') (8-10')	PDI-2 (6-8') PDI-2 (8-10')	5-9' Brown silty SAND with fill material including pieces of asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 9 ft bgs	0.0
				9-10' Brown silty SAND, no odor, slightly moist	0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	4

BORING NO. PDI-2

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-3**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/13/2022
DRILLER	N. Turro	DATE FINISHED	1/13/2022

Elevation ft. | Datum NAVD-88 | Boring Location See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	21	(2-4') (4-6')	PDI-3 (2-4') PDI-3 (4-6')	0-3" Concrete	0.0
				3"-3' Brown silty SAND with some pieces of asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
				Note: Fill material to 3 ft bgs	0.0
				3-10' Brown silty SAND, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
5	48	(6-8') (8-10')	PDI-3 (6-8') PDI-3 (8-10')		0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	4
BORING NO.	PDI-3

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

HALEY ALDRICH

BORING NO. **PDI-4**

PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation: ft. Datum: NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance (Type Method Depth): Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	24	(2-4') (4-6')	PDI-4 (2-4') PDI-4 (4-6')	0-5' Fill material including pieces of concrete and asphalt with some brown silty SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
5	50	(6-8') (8-10')	PDI-4 (6-8') PDI-4 (8-10')	5-10' Dark brown silty SAND with fill material including pieces of asphalt and brick, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 10 ft bgs	0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	4
BORING NO.	PDI-4

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-5**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance (Type Method Depth): Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	24	(2-4') (4-6')	PDI-5 (2-4') PDI-5 (4-6')	0-5" Concrete	0.0
				5"-7' Fill material including pieces of concrete, brick and asphalt with some brown silty SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
5	50	(6-8') (8-10')	PDI-5 (6-8') PDI-5 (8-10') DUP-01-01122022		0.0
					0.0
					0.0
				Note: Fill material to 7 ft bgs	0.0
				7-10' Brown silty SAND, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	5
BORING NO.	PDI-5

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. PDI-6

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	**H&A FILE NO.**	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	40 Bruckner Realty LLC	**FIELD REP.**	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	1/13/2022
DRILLER	N. Turro	**DATE FINISHED**	1/13/2022

Elevation	ft.	**Datum**	NAVD-88	**Boring Location**	See Site Plan

Item	**Casing**	**Sampler**	**Core Barrel**	**Rig Make & Model**	Geoprobe 6610DT		**Hammer Type**	**Drilling Mud**	**Casing Advance**
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	**Type Method Depth**
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	**Drilling Notes:**		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	24	(2-4') (4-6')	PDI-6 (2-4') PDI-6 (4-6')	0-4" Concrete	0.0
				4"-6' Brown silty SAND with fill material including pieces of brick and asphalt, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
5	50	(6-8') (8-10')	PDI-6 (6-8') PDI-6 (8-10') DUP-03-01132022		0.0
				Note: Fill material to 6 ft bgs	0.0
				6-8' Brown silty SAND, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
				8-10' Brown fine to medium SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	5
BORING NO.	PDI-6

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. PDI-7
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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	**H&A FILE NO.**	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	40 Bruckner Realty LLC	**FIELD REP.**	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	1/12/2022
DRILLER	N. Turro	**DATE FINISHED**	1/12/2022

Elevation ft. **Datum** NAVD-88 **Boring Location** See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	30	(2-4') (4-6')	PDI-7 (2-4') PDI-7 (4-6')	0-4" Concrete	0.0
				4"-6' Brown silty SAND with fill material including pieces of brick and asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
5	48	(6-8') (8-10')	PDI-7 (6-8') PDI-7 (8-10')		0.0
					0.0
				6-9' Brown silty SAND, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
					0.0
				9-10' Approximately 1 ft of brown silty SAND with asphalt, no odor, slightly moist	0.0
				Note: Fill material to 10 ft bgs	0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	4
BORING NO.	PDI-7

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-8**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	30	(0-2") (2-4') (4-6')	PDI-8 (0-2") PDI-8 (2-4') PDI-8 (4-6')	0-6" Concrete	0.0
				6"-3' Brown silty SAND with fill material including pieces of concrete and asphalt, no odor, dry	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-9' Brown silty SAND, no odor, moist	0.0
					0.0
5	55				0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				9-10' Brown silty SAND, no odor, wet	0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
1/12/2022	-	-	10	9

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	3
BORING NO.	PDI-8

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-9**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40	(2-4') (4-6')	PDI-9 (2-4') PDI-9 (4-6')	0-4" Concrete	0.0
				4"-5' Brown silty SAND with fill material including pieces of concrete and asphalt, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 5 ft bgs	0.0
5	48			5-10' Brown silty SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	PDI-9

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-10**

PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance (Type Method Depth): Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
				0-3" Concrete	0.0
				3"-3' Dark brown silty SAND with fill material including pieces of asphalt, concrete, and glass, no odor, slightly moist	0.0
					0.0
					0.0
	32	(2-4')	PDI-10 (2-4')		0.0
		(4-6')	PDI-10 (4-6')	Note: Fill material to 3 ft bgs	0.0
				3-10' Brown silty SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
5					0.0
					0.0
					0.0
					0.0
	45				0.0
					0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2

BORING NO. **PDI-10**

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-11**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. | Datum NAVD-88 | Boring Location See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☑ Geoprobe ☐ Winch
☑ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance — Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	50	(2-4') (4-6')	PDI-11 (2-4') PDI-11 (4-6')	0-4' Dark brown silty SAND with fill material including pieces of asphalt, concrete, and brick, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-8' Brown silty SAND, no odor, moist	0.0
					0.0
5	48				0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				8-10' Brown to orange brown well-graded SAND, no odor, moist	0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	PDI-11

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

Form #3000

GEOPROBE BORING REPORT

BORING NO. **PDI-12**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

Rig			Hammer Type	Drilling Mud	Casing Advance (Type Method Depth)
☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Direct Push
☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	
☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
☐ Skid	☐ Hand auger	☐ Cutting Head			

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40	(2-4') (4-6')	PDI-12 (2-4') PDI-12 (4-6')	0-4' Dark brown silty SAND with fill material including pieces of asphalt and brick, no odor, slightly moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-10' Brown silty SAND, no odor, moist	0.0
					0.0
5	48				0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	2
BORING NO.	PDI-12

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO.	PDI-13
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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/13/2022
DRILLER	N. Turro	DATE FINISHED	1/13/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	40			0-4' Dark brown silty SAND with fill material including pieces of asphalt and brick, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
					0.0
				4-5' Brown silty SAND, no odor, moist	0.0
					0.0
5	48	(7-8')	PDI-13 (7-8')	5-8' Brown to orange brown well-graded SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				8-10' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
1/13/2022	-	-	10	8

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	PDI-13

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-14**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/13/2022
DRILLER	N. Turro	DATE FINISHED	1/13/2022

Elevation ft. | Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	50			0-6" Concrete	0.0
				6"-4' Dark brown to black silty SAND with fill material including pieces of asphalt, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Brown silty SAND, no odor, moist	0.0
					0.0
5	55	(7-8')	PDI-14 (7-8')	5-8' Brown to orange brown well-graded SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				8-10' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
1/13/2022	-	-	10	8

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.) 10
Rock Cored (Linear ft.) -
Number of Samples 1

BORING NO. PDI-14

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-15**

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PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/13/2022
DRILLER	N. Turro	DATE FINISHED	1/13/2022

Elevation	ft.	Datum	NAVD-88	Boring Location	See Site Plan

Item	Casing	Sampler	Core Barrel	Rig Make & Model	Geoprobe 6610DT		Hammer Type	Drilling Mud	Casing Advance
Type	-			☐ Truck	☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	Type Method Depth
Inside Diameter (in.)	-			☐ ATV	☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track	☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid	☐ Hand auger	☐ Cutting Head	Drilling Notes:		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
				0-1.5' Concrete	0.0
				1.5-4' Dark brown to black silty SAND with fill material including pieces of asphalt, no odor, moist	0.0
					0.0
					0.0
	50				0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Brown silty SAND, no odor, moist	0.0
					0.0
5				5-8' Brown to orange brown well-graded SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
	55	(7-8')	PDI-15 (7-8')		0.0
					0.0
				8-10' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
1/13/2022		-	10	8

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	PDI-15

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. PDI-16

Page 1 of 1

PROJECT	40 Bruckner Blvd- Pre-Design Investigation	**H&A FILE NO.**	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	40 Bruckner Realty LLC	**FIELD REP.**	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	1/13/2022
DRILLER	N. Turro	**DATE FINISHED**	1/13/2022

Elevation	ft.	**Datum**	NAVD-88	**Boring Location**	See Site Plan

Item	**Casing**	**Sampler**	**Core Barrel**
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model Geoprobe 6610DT

☐ Truck	☐ Tripod	☐ Cat-Head
☐ ATV	☑ Geoprobe	☐ Winch
☑ Track	☐ Air Track	☐ Roller Bit
☐ Skid	☐ Hand auger	☐ Cutting Head

Hammer Type	**Drilling Mud**	**Casing Advance**
☐ Safety	☐ Bentonite	**Type Method Depth**
☐ Doughnut	☐ Polymer	Direct Push
☑ Automatic	☑ None	

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0					
	24			0-6" Concrete	0.0
				6"-4' Dark brown to black silty SAND with fill material including pieces of asphalt, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Brown silty SAND, no odor, moist	0.0
					0.0
5	20	(7-8')	PDI-16 (7-8')	5-8' Brown to orange brown well-graded SAND, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				8-10' Brown to orange brown well-graded SAND, no odor, wet	0.0
					0.0
					0.0
					0.0
10				END OF EXPLORATION 10 FT BGS	
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
1/13/2022	-	-	10	8

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	10
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	**PDI-16**

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. **PDI-17**

Page 1 of 1

PROJECT	40 Bruckner Blvd- Pre-Design Investigation	H&A FILE NO.	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	PROJECT MGR.	M. Conlon
CLIENT	40 Bruckner Realty LLC	FIELD REP.	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	DATE STARTED	1/12/2022
DRILLER	N. Turro	DATE FINISHED	1/12/2022

Elevation ft. Datum NAVD-88 | Boring Location: See Site Plan

Item	Casing	Sampler	Core Barrel
Type	-		
Inside Diameter (in.)	-		
Hammer Weight (lb.)	-		
Hammer Fall (in.)	-		

Rig Make & Model: Geoprobe 6610DT

- ☐ Truck ☐ Tripod ☐ Cat-Head
- ☐ ATV ☑ Geoprobe ☐ Winch
- ☑ Track ☐ Air Track ☐ Roller Bit
- ☐ Skid ☐ Hand auger ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☑ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing Advance Type Method Depth: Direct Push

Drilling Notes:

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	52	(0-2")	PDI-17 (0-2")	0-3' Brown silty SAND with fill material including pieces of asphalt, concrete, and brick, no odor, moist	0.0
					0.0
					0.0
					0.0
				Note: Fill material to 3 ft bgs	0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Brown silty SAND, no odor, moist	0.0
					0.0
5				END OF EXPLORATION 5 FT BGS	
10					
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft.)	5
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	PDI-17

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

GEOPROBE BORING REPORT

BORING NO. PDI-18

PROJECT	40 Bruckner Blvd- Pre-Design Investigation	**H&A FILE NO.**	0200734-002
LOCATION	40 Bruckner Blvd, Bronx, NY	**PROJECT MGR.**	M. Conlon
CLIENT	40 Bruckner Realty LLC	**FIELD REP.**	S. Commisso
CONTRACTOR	Eastern Environmental Solutions	**DATE STARTED**	1/12/2022
DRILLER	N. Turro	**DATE FINISHED**	1/12/2022

Elevation	ft.	**Datum** NAVD-88		**Boring Location**	See Site Plan			
Item	**Casing**	**Sampler**	**Core Barrel**	**Rig Make & Model**	Geoprobe 6610DT	**Hammer Type**	**Drilling Mud**	**Casing Advance**
Type	-			☐ Truck ☐ Tripod	☐ Cat-Head	☐ Safety	☐ Bentonite	**Type Method Depth**
Inside Diameter (in.)	-			☐ ATV ☑ Geoprobe	☐ Winch	☐ Doughnut	☐ Polymer	Direct Push
Hammer Weight (lb.)	-			☑ Track ☐ Air Track	☐ Roller Bit	☑ Automatic	☑ None	
Hammer Fall (in.)	-			☐ Skid ☐ Hand auger	☐ Cutting Head	**Drilling Notes:**		

Depth (ft.)	Recovery (in.)	Sample Depth (ft)	Sample ID	Visual-Manual Identification & Description	PID (ppm)
0	50	(0-2")	PDI-18 (0-2")	0-3' Brown silty SAND with fill material including pieces of asphalt, concrete, and brick, no odor, moist	0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Note: Fill material to 4 ft bgs	0.0
				4-5' Brown silty SAND, no odor, moist	0.0
					0.0
5				END OF EXPLORATION 5 FT BGS	
10					
15					

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Boring	Water
				N/A

Sample ID

- **O** Open End Rod
- **T** Thin Wall Tube
- **U** Undisturbed Sample
- **S** Split Spoon Sample
- **G** Geoprobe

Summary

Overburden (Linear ft.)	5
Rock Cored (Linear ft.)	-
Number of Samples	1
BORING NO.	**PDI-18**

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil descriptions based on a modified Burmister method of visual-manual identification as practiced by Haley & Aldrich, Inc.

APPENDIX C

Analytical Laboratory Reports
(Sharefile)

APPENDIX D

Data Usability Summary Reports & Electronic Data Deliverable Submittal

Haley & Aldrich, Inc.
600 South Meyer Ave
Suite 100
Tucson, AZ 85701
520.289.8621

Data Usability Summary Report

Project Name: 40 Bruckner Blvd

Project Description: Soil Samples

Sample Date(s): 12 January 2022

Analytical Laboratory: Alpha Analytical – Mansfield, MA

Validation Performed by: Katherine Miller

Validation Reviewed by:

Validation Date: 16 February 2022

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the samples described above. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability:

1. Sample Delivery Group Number L2206877
2. Precision and Accuracy [for SDG(s) above]

This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (USEPA) *National Functional Guidelines (NFG) for Inorganic Data Review* and the Quality Assurance Project Plan (QAPP), herein referred to as the specified limits (see references section).

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). Results found between the MDL and RL are flagged "J" as estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOP). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and therefore usable; any exceptions are noted in the following pages.

For more detailed quality control (QC) information see Explanations section.

1. Sample Delivery Group Number L2206877

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number L22006877, dated 14 February 2022. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Analyses
PDI-5 (2-4)	N	L2206877-01	1/12/2022	SO	A
PDI-1 (2-4)	N	L2206877-02	1/12/2022	SO	A
PDI-1 (4-6)	N	L2206877-03	1/12/2022	SO	A
PDI-10 (2-4)	N	L2206877-04	1/12/2022	SO	A
PDI-12 (2-4)	N	L2206877-05	1/12/2022	SO	A
PDI-11 (2-4)	N	L2206877-06	1/12/2022	SO	A
PDI-4 (2-4)	N	L2206877-07	1/12/2022	SO	A
PDI-4 (4-6)	N	L2206877-08	1/12/2022	SO	A
PDI-4 (8-10)	N	L2206877-09	1/12/2022	SO	A
PDI-7 (2-4)	N	L2206877-10	1/12/2022	SO	A
PDI-2 (2-4)	N	L2206877-11	1/12/2022	SO	A
PDI-2 (4-6)	N	L2206877-12	1/12/2022	SO	A
PDI-2 (6-8)	N	L2206877-13	1/12/2022	SO	A
PDI-2 (8-10)	N	L2206877-14	1/12/2022	SO	A

Method Holding Time			
A	SW6010DR	METALS, TCLP	180 days/180 days

 # days/# days notation indicates the holding time is # days for extraction and then an additional 3 days for analysis.

1.2 CASE NARRATIVE

The laboratory report case narrative lists various quality control exceedances (e.g., continuing calibration blank) not required by this review and no qualifiers were therefore applied.

1.3 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.4 REPORTING LIMITS AND SAMPLE DILUTIONS

The RLs for the samples within this SDG met or were below the minimum RL requirements specified by the project-specific QAPP with the following exceptions: Soil limits will vary marginally based on the volume of sample used for analysis. These variations are not considered to be significant.
The following results were rejected in favor of alternative results.

Sample ID	Lab ID	Analyte/ Method	Result (mg/L)	Issue/Explanation
PDI-12 (2-4) PDI-4 (2-4) PDI-4 (4-6) PDI-4 (8-10) PDI-2 (4-6)	L2206877-05 L2206877-07 L2206877-08 L2206877-09 L2206877-12	Lead	varies	The result was found below the laboratory reporting limit and is therefore estimated.

1.5 REPORTING BASIS (WET/DRY)

Refer to section E 1.1. Soil/sediment data in this SDG were reported on a dry weight basis.

Where reported, Percent solid results were reviewed and found to be within limits.

1.6 LABORATORY CONTROL SAMPLES

Refer to section E 1.3. Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS/LCSD) analyses exhibited recoveries and RPDs within the specified limits.

1.7 MATRIX SPIKE SAMPLES

Refer to section E 1.4. The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD):

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
L2206877-01	PDI-5 (2-4')	A

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits.

1.8 BLANK SAMPLE ANALYSIS

Refer to section E 1.5. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

The analysis of the blank samples for field quality control was free of target compounds.

1.9 DUPLICATE SAMPLE ANALYSIS

Refer to section E 1.6. The following samples were used for laboratory duplicate analysis and the RPDs were all below 20 percent (or the absolute difference rule was satisfied if detects were less than 5x the RL.

No field duplicates were collected in this data set.

1.10 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable except for rejected data noted below. A summary of qualifiers applied to this SDG are shown in Table I.

2. Precision and Accuracy [for SDG(s) above]

Refer to section E 1.7. Some measurement of analytical accuracy and precision was reported for each method with the site samples.

Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.1 Reporting Basis (Wet/Dry)
  - Soil samples can be reported on either a wet (as received) or dry weight basis. Dry weight data indicate calculations were made to compensate for the moisture content of the soil sample.
  - Percent (%) solids should be appropriately considered when evaluating analytical results for non-aqueous samples. Sediments with high moisture content may or may not be successfully analyzed by routine analytical methods. Samples should have ≥ 30% solids to be appropriately quantified.
- E 1.2 Surrogate Recovery Compliance
  - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determining the efficiency of the extraction procedure by evaluating the percent recovery (%R) of the compounds.
- E 1.3 Laboratory Control Samples
  - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.4 Matrix Spike Samples
  - Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effects of the sample matrix on the sample preparation procedures and measurement methodologies.
  - For inorganic methods, when a matrix spike recovery falls outside of the control limits and the sample result is less than four times the spike added, a post digestion spike (PDS) is performed.
- E 1.5 Blank Sample Analysis
  - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
  - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
  - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
  - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.

- E 1.7 Precision and Accuracy
  - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (%RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
  - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%Rec) of certain spiked compounds. This can be assessed using LCS, BS, MS, and/or surrogate recoveries.
- E 1.23 Serial Dilutions
  - Inorganic analysis requires a serial dilution analysis, which determines whether significant physical or chemical interferences exists because of the sample matrix. If the original sample concentration is greater than 50x the MDL, the %D must be ≤ 10%.

Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
  - EB Equipment Blank Sample
  - FB Field Blank Sample
  - FD Field Duplicate Sample
  - N Primary Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg microgram per kilogram
  - µg/L microgram per liter
  - µg/m3 microgram per cubic meter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
  - ppb v/v parts per billion volume/volume
  - pCi/L picocuries per liter
- Matrices:
  - AA Ambient Air
  - GS Soil Gas
  - GW/WG Groundwater
  - QW Water Quality
  - IA Indoor Air
  - SE Sediment
  - SO Soil
  - WQ Water Quality control matrix
- Table Footnotes
  - NA Not applicable
  - ND Non-detect
  - NR Not reported
- Abbreviations
  - %D Percent Difference
  - %R Percent Recovery
  - %RSD Percent Relative Standard Deviation
  - Abs Diff Absolute Difference
  - VOC Volatile Organic Compounds
  - SVOC Semi-Volatile Organic Compounds
  - BPJ Best Professional Judgement
  - CCB Continuing Calibration Blank
  - CCV Continuing Calibration Verification
  - CCVL Continuing Calibration Verification Low
  - COC Chain of Custody
  - CRI Collision Reaction Interface
  - DUSR Data Usability Summary Report
  - EMPC Estimated Maximum Possible Concentration
  - GC Gas Chromatograph

- GPC Gel Permeation Chromatography
- ICAL Initial Calibration
- ICB Initial Calibration Blank
- ICP/MS Inductively Coupled Plasma/ Mass Spectrometry
- ICV Initial Calibration Verification
- ICVL Initial Calibration Verification Low
- IPA Isopropyl Alcohol
- LCS/LCSD Laboratory Control Sample/Laboratory Control Sample Duplicate
- MDL Laboratory Method Detection Limit
- MS/MSD Matrix Spike/Matrix Spike Duplicate
- ND Non-Detect
- NFG National Functional Guidelines
- GC/MS Gas Chromatography/Mass Spectrometry
- BS Blank Spike
- TIC Tentatively Identified Compound
- PCB Polychlorinated Biphenyl
- PDS Post Digestion Spike
- PEM Performance Evaluation Mixture
- PFAS Per- and Polyfluoroalkyl Substances
- QAPP Quality Assurance Project Plan
- QC Quality Control
- Ra-226 Radium-226
- Ra-228 Radium-228
- RL Laboratory Reporting Limit
- RPD Relative Percent Difference
- TPU Total Propagated Uncertainty
- RT Retention Time
- RRF Relative Response Factors
- SDG Sample Delivery Group
- SOP Laboratory Standard Operating Procedures
- SPE Solid Phase Extraction
- USEPA U.S. Environmental Protection Agency

Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or “ND”.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - J+ The result is an estimated quantity, but the result may be biased high.
  - J- The result is an estimated quantity, but the result may be biased low.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.
  - NJ The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.
  - S Result is suspect. See DUSR for details.

References

1. Haley & Aldrich, Inc, 2021. Quality Assurance Project Plan. Property Characterization Work Plan. 40 Bruckner Boulevard Bronx, New York. January.

2. United States Environmental Protection Agency, 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.

3. United States Environmental Protection Agency, 2020c. National Functional Guidelines for High Resolution Superfund Methods Data Review. EPA-542-R-20-007. November.

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-1 (2-4)	L2206877-02	SW6010DR	Lead	0.518			
PDI-5 (2-4)	L2206877-01	SW6010DR	Lead	1.35			
PDI-1 (4-6)	L2206877-03	SW6010DR	Lead	2.62			
PDI-10 (2-4)	L2206877-04	SW6010DR	Lead	0.587			
PDI-11 (2-4)	L2206877-06	SW6010DR	Lead	3.66			
PDI-12 (2-4)	L2206877-05	SW6010DR	Lead	0.114	J	J	BRL
PDI-4 (2-4)	L2206877-07	SW6010DR	Lead	0.181	J	J	BRL
PDI-4 (4-6)	L2206877-08	SW6010DR	Lead	0.3	J	J	BRL
PDI-4 (8-10)	L2206877-09	SW6010DR	Lead	0.084	J	J	BRL
PDI-7 (2-4)	L2206877-10	SW6010DR	Lead	6.66			
PDI-2 (2-4)	L2206877-11	SW6010DR	Lead		U	U	PLU
PDI-2 (4-6)	L2206877-12	SW6010DR	Lead	0.094	J	J	BRL
PDI-2 (6-8)	L2206877-13	SW6010DR	Lead	0.589			
PDI-2 (8-10)	L2206877-14	SW6010DR	Lead	9.57			

Reason Code Glossary :

DUP: Laboratory Duplicate RPD Exceedance
EXE: Exceed calibration curve
FDP: Field Duplicate RPD or Absolute Difference Exceedance
LCS: Laboratory Control Sample Exceedance
MSD: Matrix Spike Exceedance
SRL: Serial Dilution Exceedance
SUR: Surrogate exceedance

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Data Usability Summary Report

Project Name: 40 Bruckner Blvd

Project Description: Soil Samples

Sample Date(s): 12 through 13 January 2022

Analytical Laboratory: Alpha Analytical – Mansfield, MA

Validation Performed by: Christian Olson

Validation Reviewed by: Katherine Miller

Validation Date: 21 January 2022

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the samples described above. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability:

1. Sample Delivery Group Number L2201757
2. Sample Delivery Group Number L2201949
3. Precision and Accuracy [for SDG(s) above]

This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (USEPA) *National Functional Guidelines (NFG) for Inorganic Data Review* and *National Functional Guidelines (NFG) for Organic Data Review* and the Quality Assurance Project Plan (QAPP), herein referred to as the specified limits (see references section).

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). Results found between the MDL and RL are flagged "J" as estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOP). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and therefore usable; any exceptions are noted in the following pages.

For more detailed quality control (QC) information see Explanations section.

1. Sample Delivery Group Number L2201757

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number L2201757, dated 18 January 2022. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Analyses
PDI-5 (2-4)	N	L2201757-01	1/12/2022	SO	A, B, C, D, E, F, G
PDI-5 (4-6)	N	L2201757-02	1/12/2022	SO	A, B, C, D, E, F, G
PDI-5 (6-8)	N	L2201757-03	1/12/2022	SO	A, B, C, D, E, F, G
PDI-5 (8-10)	N	L2201757-04	1/12/2022	SO	A, B, C, D, E, F, G
PDI-1 (2-4)	N	L2201757-05	1/12/2022	SO	A, B, C, D, E, F, G
PDI-1 (4-6)	N	L2201757-06	1/12/2022	SO	A, B, C, D, E, F, G
PDI-1 (6-8)	N	L2201757-07	1/12/2022	SO	A, B, C, D, E, F, G
PDI-1 (8-10)	N	L2201757-08	1/12/2022	SO	A, B, C, D, E, F, G
DUP-01-01122022	FD	L2201757-09	1/12/2022	SO	A, B, C, D, E, F, G
DUP-02-01-01122022	FD	L2201757-10	1/12/2022	SO	A, B, C, D, E, F, G
PDI-10 (2-4)	N	L2201757-11	1/12/2022	SO	A, B, C, D, E, F, G
PDI-10 (4-6)	N	L2201757-12	1/12/2022	SO	A, B, C, D, E, F, G
PDI-12 (2-4)	N	L2201757-13	1/12/2022	SO	A, B, C, D, E, F, G
PDI-12 (4-6)	N	L2201757-14	1/12/2022	SO	A, B, C, D, E, F, G
PDI-11 (2-4)	N	L2201757-15	1/12/2022	SO	A, B, C, D, E, F, G
PDI-11 (4-6)	N	L2201757-16	1/12/2022	SO	A, B, C, D, E, F, G
PDI-4 (2-4)	N	L2201757-17	1/12/2022	SO	A, B, C, D, E, F, G
PDI-4 (4-6)	N	L2201757-18	1/12/2022	SO	A, B, C, D, E, F, G
PDI-4 (6-8)	N	L2201757-19	1/12/2022	SO	A, B, C, D, E, F, G
PDI-4 (8-10)	N	L2201757-20	1/12/2022	SO	A, B, C, D, E, F, G
PDI-7 (2-4)	N	L2201757-21	1/12/2022	SO	A, B, C, D, E, F, G
PDI-7 (4-6)	N	L2201757-22	1/12/2022	SO	A, B, C, D, E, F, G
PDI-7 (6-8)	N	L2201757-23	1/12/2022	SO	A, B, C, D, E, F, G
PDI-7 (8-10)	N	L2201757-24	1/12/2022	SO	A, B, C, D, E, F, G
PDI-8 (0-2)	N	L2201757-25	1/12/2022	SO	A, G
PDI-8 (2-4)	N	L2201757-26	1/12/2022	SO	A, B, C, D, E, F, G
PDI-8 (4-6)	N	L2201757-27	1/12/2022	SO	A, B, C, D, E, F, G
PDI-17 (0-2)	N	L2201757-28	1/12/2022	SO	A, G
PDI-18 (0-2)	N	L2201757-29	1/12/2022	SO	A, G
PDI-9 (2-4)	N	L2201757-30	1/12/2022	SO	A, B, C, D, E, F, G
PDI-9 (4-6)	N	L2201757-31	1/12/2022	SO	A, B, C, D, E, F, G
PDI-2 (2-4)	N	L2201757-32	1/12/2022	SO	A, B, C, D, E, F, G
PDI-2 (4-6)	N	L2201757-33	1/12/2022	SO	A, B, C, D, E, F, G
PDI-2 (6-8)	N	L2201757-34	1/12/2022	SO	A, B, C, D, E, F, G

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Analyses
PDI-2 (8-10)	N	L2201757-35	1/12/2022	SO	A, B, C, D, E, F, G
TRIP BLANK-01122022	TB	L2201757-36	1/12/2022	WQ	G
FB-01-01122022	FB	L2201757-37	1/12/2022	WQ	A, B, C, D, E, F, G
FB-02-01122022	FB	L2201757-38	1/12/2022	WQ	A, B, C, D, E, F, G

Method Holding Time			
A	Total Dissolved Solids	SM 2540E	7 days
B	Metals, Total/Dissolved	SW6010D	180 days/180 days
C	Metals, Total/Dissolved	SW6020B	180 days/180 days
D	TCLP/SPLP Mercury	SW7470A	28days/28 days
E	Mercury	SW7471B	28 days/48 hours
F	TCLP/SPLP Semi-Volatile Organic Compounds (SVOCs)	SW8270D	14/7/40 days
G	Volatile Organic Compounds	SW8260C	14 days

 # days/# days notation indicates the holding time is # days for extraction and then an additional 3 days for analysis.

1.2 CASE NARRATIVE

The laboratory report case narrative lists various quality control exceedances (e.g., continuing calibration blank) not required by this review and no qualifiers were therefore applied.

1.3 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.4 REPORTING LIMITS AND SAMPLE DILUTIONS

The RLs for the samples within this SDG met or were below the minimum RL requirements specified by the project-specific QAPP with the following exceptions: Soil limits will vary marginally based on the volume of sample used for analysis. These variations are not considered to be significant.
The following results were rejected in favor of alternative results.

Sample ID	Lab ID	Analyte/ Method	Result (ug/kg)	Issue/Explanation
DUP-02-01-01122022	L2201757-10	Naphthalene	680 E	Exceed calibration curve
PDI-7 (2-4)	L2201757-21	Pyrene	7800 E	Exceed calibration curve
PDI-7 (2-4)	L2201757-21	Fluoranthene	8400 E	Exceed calibration curve
DUP-02-01-01122022	L2201757-10	8260	Various	Reject of High level methanol in favor of Low Level except for naphthalene
PDI-12 (2-4)	L2201757-13	8260	Various	Rejected initial l in favor of reanalysis
PDI-4 (6-8)	L2201757-19	8260	Various	Rejected high level and improperly preserved samples in favor of the initial

1.5 REPORTING BASIS (WET/DRY)

Refer to section E 1.1. Soil/sediment data in this SDG were reported on a dry weight basis.

Where reported, Percent solid results were reviewed and found to be within limits.

1.6 SURROGATE RECOVERY COMPLIANCE

Refer to section E 1.2. The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified QC limits, with the following exceptions:

Method	Sample ID	Lab ID	Surrogate	Dilution	%R	Qualification
Semivolatile Organics	PDI-5 (4-6')	L2201757-02	2-fluorophenol phenol-d6 nitrobenzene-d5 2-fluorobiphenyl 2,4,6-tribromophenol 4-terphenyld14	20x	0%	None, dilution >5x
EPA 5035	PDI-12 (2-4')	L2201757-13	4-Bromofluorobenzene*	1x	131%	J+/NA (ignore, as these results rejected, see Section 1.4)
EPA 5035	PDI-4 (6-8')	L2201757-19	4-Bromofluorobenzene*	1x	138%	J+/NA

* *See section 1.12 for compounds targeted by 4-Bromofluorobenzene*

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1.7 LABORATORY CONTROL SAMPLES

Refer to section E 1.3. Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS/LCSD) analyses exhibited recoveries and RPDs within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	8260C	WG1594118-3 WG1594118-4	Bromomethane	140%/160%	J/NA	None, All samples ND
LCS	GC/MS	WG1594118-3 WG1594118-4	Napthalene	67%	J/UJ	36-38
LCS/LCSD	GC/MS	WG1594118-3 WG1594118-4	Acetone	RPD = 24	J/NA	36-38
LCS/LCSD	GC/MS	WG1594118-3 WG1594118-4	2-Butanone	RPD = 29	J/NA	36 -38
LCS	GC/MS	WG1594118-3 WG1594118-4	trans-1,4-Dichloro-2-butene	67%	J/UJ	36-38
LCS/LCSD	GC/MS	WG1593638-2 WG1593638-3	Benzoic Acid	5%/4%	J/UJ	21-24,26-27,30-35
LCS/LCSD	GC/MS	WG1593591-2 WG1593591-3	Benzoic Acid	RPD = 68	J/NA	None, All samples ND
LCS/LCSD	EPA 5035 low	WG1594821-3 WG1594821-4	2-Butanone	68%/64%	J/UJ	01, 06
LCS/LCSD	EPA 5035 high	WG1594823-3 WG1594823-4	2-Butanone	68%/64%	J/UJ	10
LCS/LCSD	GC/MS	WG1594202-2 WG1594202-3	4-Chloroaniline	RPD = 39	J/NA	37-38
LCS	GC/MS	WG1594202-2 WG1594202-3	4-Nitroaniline	50%	J/UJ	37-38

1.8 MATRIX SPIKE SAMPLES

Refer to section E 1.4. The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD):

<table>
<tr><th>Lab Sample Number</th><th>Matrix Spike/ Matrix Spike Duplicate Sample Client ID</th><th>Method(s)</th></tr>
<tr><td>L2201757-01</td><td>PDI-5 (2-4’)</td><td rowspan="2">Total Metals</td></tr>
<tr><td>L2201757-21</td><td>PDI-7 (2-4’)</td></tr>
</table>

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

<table>
<tr><th>Sample Type</th><th>Method</th><th>Parent Sample</th><th>Analyte</th><th>%R/RPD</th><th>Qualifier</th><th>Affected Samples</th></tr>
<tr><td rowspan="10">MS</td><td rowspan="10">B/C</td><td rowspan="6">PDI-5 (2-4’)</td><td>Aluminum
Calcium
Iron
Lead
Manganese
Zinc</td><td>Varies</td><td>NA</td><td>None, native sample > 4x the spike added</td></tr>
<tr><td>Barium</td><td>59%</td><td>J-/UJ</td><td rowspan="5">01-20</td></tr>
<tr><td>Magnesium</td><td>198%</td><td>J+/NA</td></tr>
<tr><td>Potassium</td><td>138%</td><td>None, PDS within limits</td></tr>
<tr><td>Thalium</td><td>66%</td><td>J-/UJ</td></tr>
<tr><td>Mercury</td><td>0%</td><td>None, PDS within limits</td></tr>
<tr><td rowspan="4">PDI-7 (2-4’)</td><td>Aluminum
Calcium
Iron
Lead
Magnesium
Manganese
Zinc</td><td>Varies</td><td>NA</td><td>None, native sample > 4x the spike added</td></tr>
<tr><td>Barium</td><td>37%</td><td>None, PDS within limits</td><td rowspan="3">21-24,26-27,30-35</td></tr>
<tr><td>Copper</td><td>207%</td><td>J+/NA</td></tr>
<tr><td>Thallium</td><td>70%</td><td>None, PDS within limits</td></tr>
</table>

1.9 BLANK SAMPLE ANALYSIS

Refer to section E 1.5. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred with the following exceptions:

Blank Type	Batch ID	Analyte Detected in Blank	Concentration (µg/L)	Qualifier	Affected Samples
Method Blank	WG1594109-5	2-Butanone	3.7	RL U	None, all samples ND
	WG1595241-5	2-Butanone	130	RL U	
	WG1595243-5	2-Butanone	2.6	RL U	

The analysis of the blank samples for field quality control was free of target compounds with the following exceptions:

Blank Type	Date of Blank	Analyte Detected in Blank	Concentration	Qualifier	Affected Samples
Field Blank	1/12/2022	Barium	0.00019 mg/L	RL U	None, All samples >2x Blank Result
		Benzoic acid	9.7 µg/L		None, all samples ND
		Barium	0.00044 mg/L		None, All samples >2x Blank Result
		Copper	0.00104 mg/L		None, All samples >2x Blank Result
		Di-n-octyl phthalate	3.1 µg/L		None, all samples ND or >2x blank result

1.10 DUPLICATE SAMPLE ANALYSIS

Refer to section E 1.6. The following samples were used for laboratory duplicate analysis and the RPDs were all below 20 percent (or the absolute difference rule was satisfied if detects were less than 5x the RL) with the following exceptions

Lab Sample Number	Laboratory Duplicate Sample Client ID	Method(s)	Analyte	% RPD	Affected Samples	Qualification
L2201757-01	PDI-5 (2-4')	B/C	Arsenic	24	01-20	J/UJ
			Manganese	23		J/UJ
			Mercury	58		J/UJ

The following sample(s) were used for field duplicate analysis.

Primary Sample ID	Duplicate Sample ID	Method(s)
PDI-5 (8-10)	DUP-01	A, B, C, D, E, F, G
PDI-1 (8-10)	DUP-02	A, B, C, D, E, F, G

RPDs were all below 50 percent for soil (or the absolute difference rule was satisfied if detects were less than 5x the RL) with the following exceptions:

Field Duplicate RPD Calculations:

Method(s): G				
Analyte (µg/kg)	Primary Sample ID PDI-5 (8-10)	Duplicate Sample ID DUP-01	% RPD	Qualification
Xylene	1.2	ND	NA	J/UJ, Abs Diff > RL
Analyte (µg/kg)	Primary Sample ID PDI-1 (8-10)	Duplicate Sample ID DUP-02	% RPD	Qualification
Naphthalene	1	1400	NA	J/UJ, Abs Diff > RL

1.11 SERIAL DILUTIONS

Refer to section E 1.23. The %Ds for the serial dilution performed on L2201757-01 were within the limits required by the EPA with the following exceptions:

Sample ID	Metal	Sample Result (mg/kg)	Sample MDL (mg/kg)	50x MDL (mg/kg)	%D	Qualifier	Affected Samples/Explanation
L2201757-01	Aluminum	3320	2.25	112.5	40	J/UJ	01-20
	Barium	363	0.145	7.25	43		
	Iron	9890	0.752	37.6	46		
	Magnesium	1930	1.28	64	37		
	Manganese	238	0.132	6.6	44		
	Calcium	61300	29.1	1455	35		

1.12 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable except for rejected data noted below. A summary of qualifiers applied to this SDG are shown in Table I.

2. Sample Delivery Group Number L2201949

2.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number L2201757, dated 20 January 2022. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Analyses
PDI-6 (2-4)	N	L2201949-01	1/13/2022	SO	A, B, C, D, E, F, G
PDI-6 (4-6)	N	L2201949-02	1/13/2022	SO	A, B, C, D, E, F, G
PDI-6 (6-8)	N	L2201949-03	1/13/2022	SO	A, B, C, D, E, F, G
PDI-6 (6-8)	N	L2201949-03	1/13/2022	SO	A, B, C, D, E, F, G
PDI-6 (8-10)	N	L2201949-04	1/13/2022	SO	A, B, C, D, E, F, G
PDI-3 (2-4)	N	L2201949-05	1/13/2022	SO	A, B, C, D, E, F, G
PDI-3 (4-6)	N	L2201949-06	1/13/2022	SO	A, B, C, D, E, F, G
PDI-3 (4-6)	N	L2201949-06	1/13/2022	SO	A, B, C, D, E, F, G
PDI-3 (6-8)	N	L2201949-07	1/13/2022	SO	A, B, C, D, E, F, G
PDI-3 (8-10)	N	L2201949-08	1/13/2022	SO	A, B, C, D, E, F, G
PDI-15 (7-8)	N	L2201949-09	1/13/2022	SO	A, G
PDI-13 (7-8)	N	L2201949-10	1/13/2022	SO	A, G
PDI-16 (7-8)	N	L2201949-11	1/13/2022	SO	A, G
PDI-14 (7-8)	N	L2201949-12	1/13/2022	SO	A, G
DUP-03-01132022	FD	L2201949-13	1/13/2022	SO	A, B, C, D, E, F, G
FB-03-01132022	FB	L2201949-14	1/13/2022	WQ	A, B, C, D, E, F, G
FB-03-01132022	FB	L2201949-14	1/13/2022	WQ	A, B, C, D, E, F, G
TRIP BLANK-01132022	TB	L2201949-15	1/13/2022	WQ	G

Method Holding Time			
A	Total Dissolved Solids	SM 2540E	7 days
B	Metals, Total/Dissolved	SW6010D	180 days/180 days
C	Metals, Total/Dissolved	SW6020B	180 days/180 days
D	TCLP/SPLP Mercury	SW7470A	28days/28 days
E	Mercury	SW7471B	28 days/48 hours
F	TCLP/SPLP Semi-Volatile Organic Compounds (SVOCs)	SW8270D	14/7/40 days
G	Volatile Organic Compounds	SW8260C	14 days

 # days/# days notation indicates the holding time is # days for extraction and then an additional 3 days for analysis.

2.2 CASE NARRATIVE

The laboratory report case narrative lists various quality control exceedances (e.g., continuing calibration blank) not required by this review and no qualifiers were therefore applied.

2.3 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

2.4 REPORTING LIMITS AND SAMPLE DILUTIONS

The MDLs/RLs for the samples within this SDG met or were below the minimum RL requirements specified by the project-specific QAPP with the following exceptions: Soil limits will vary marginally based on the volume of sample used for analysis. These variations are not considered to be significant.

2.5 REPORTING BASIS (WET/DRY)

Refer to section E 1.1. Per QAPP requirements, data in this SDG were reported on a dry weight basis.

Percent solid results were reviewed and found to be within limits.

2.6 SURROGATE RECOVERY COMPLIANCE

Refer to section E 1.2. The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified QC limits.

2.7 LABORATORY CONTROL SAMPLES

Refer to section E 1.3. Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS/LCSD) analyses exhibited recoveries and RPDs within the specified limits with the following exceptions:

Sample	Method	Batch ID	Analyte	%R	Qualifier	Affected
LCS/LCSD	SVOCs	WG1594202-2 WG1594202-3	4-chloroaniline	35%, RPD=39	J/UJ	14
LCS	SVOCs		4-Nitroaniline	50%	J/UJ	14
LCS	SVOCs	WG1594452-2 WG1594452-3	3,3'-Dichlorobenzidine	32%	J/UJ	01-08,13
LCS	SVOCs		4-Chloroaniline	33%	J/UJ	01-08,13
LCS/LCSD	SVOCs		2,4-Dinitrophenol	RPD=67	J/UJ	01-08,13
LCS/LCSD	SVOCs		Benzoic acid	0/0%	J/UJ	01-08,13

2.8 MATRIX SPIKE SAMPLES

Refer to section E 1.4. The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD):

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
L2201949-01	PDI-6 (2-4')	Total Metals

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

<table>
<tr><th>Sample Type</th><th>Method</th><th>Parent Sample</th><th>Analyte</th><th>%R/RPD</th><th>Qualifier</th><th>Affected Samples</th></tr>
<tr><td rowspan="7">MS</td><td rowspan="7">B/C</td><td rowspan="7">PDI-6 (2-4')</td><td>Aluminum
Iron
Manganese</td><td>Varies</td><td>NA</td><td>None, native sample > 4x the spike added</td></tr>
<tr><td>Calcium</td><td>284%</td><td rowspan="6">J+/None</td><td rowspan="6">01-08,13</td></tr>
<tr><td>Copper</td><td>130%</td></tr>
<tr><td>Lead</td><td>309%</td></tr>
<tr><td>Magnesium</td><td>223%</td></tr>
<tr><td>Potassium</td><td>133%</td></tr>
<tr><td>Zinc</td><td>170%</td></tr>
</table>

2.9 BLANK SAMPLE ANALYSIS

Refer to section E 1.5. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred with the following exceptions:

<table>
<tr><th>Blank Type</th><th>Batch ID</th><th>Analyte Detected in Blank</th><th>Concentration (µg/L)</th><th>Qualifier</th><th>Affected Samples</th></tr>
<tr><td rowspan="2">Method Blank</td><td rowspan="2">WG1594734-1</td><td>Iron, Total</td><td>0.564</td><td>RL U</td><td rowspan="2">None, all samples >2x blank result</td></tr>
<tr><td>Sodium, Total</td><td>2.72</td><td>RL U</td></tr>
</table>

The analysis of the blank samples for field quality control was free of target compounds with the following exceptions:

Blank Type	Date of Blank	Analyte Detected in Blank	Concentration	Qualifier	Affected Samples
Field Blank	1/13/2022	Benzoic Acid	9.6 mg/L	NA	None, all samples are ND

2.10 DUPLICATE SAMPLE ANALYSIS

Refer to section E 1.6. The following samples were used for laboratory duplicate analysis and the RPDs were all below 20 percent (or the absolute difference rule was satisfied if detects were less than 5x the RL) with the following exceptions

Lab Sample Number	Laboratory Duplicate Sample Client ID	Method(s)	Analyte	% RPD	Affected Samples	Qualification
L2201949-01	PDI-6 (2-4')	B/C	Chromium	27	01-08, 13	J/UJ
			Copper	25		J/UJ
			Lead	71		J/UJ
			Zinc	52		J/UJ
			Mercury	83		J/UJ

The following sample(s) were used for field duplicate analysis.

Primary Sample ID	Duplicate Sample ID	Method(s)
PDI-6 (8-10)	DUP-03	A, B, C, D, E, F, G

RPDs were all below 50 percent for soil (or the absolute difference rule was satisfied if detects were less than 5x the RL) with the following exceptions:

Field Duplicate RPD Calculations:

Method(s): G				
Analyte (mg/kg)	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
	PDI-6 (8-10)	DUP-03		
Barium	10.8	18.3	52	J/UJ, RPD > 50%

2.11 SERIAL DILUTIONS

Refer to section E 1.23. The %Ds for the serial dilution performed on L2201949-01 were within the limits required by the EPA.

2.12 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable as no data was rejected. A summary of qualifiers applied to this SDG are shown in Table I.

3. Precision and Accuracy [for SDG(s) above]

Refer to section E 1.7. Some measurement of analytical accuracy and precision was reported for each method with the site samples.

Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.1 Reporting Basis (Wet/Dry)
  - Soil samples can be reported on either a wet (as received) or dry weight basis. Dry weight data indicate calculations were made to compensate for the moisture content of the soil sample.
  - Percent (%) solids should be appropriately considered when evaluating analytical results for non-aqueous samples. Sediments with high moisture content may or may not be successfully analyzed by routine analytical methods. Samples should have ≥ 30% solids to be appropriately quantified.
- E 1.2 Surrogate Recovery Compliance
  - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determining the efficiency of the extraction procedure by evaluating the percent recovery (%R) of the compounds.
- E 1.3 Laboratory Control Samples
  - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.4 Matrix Spike Samples
  - Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effects of the sample matrix on the sample preparation procedures and measurement methodologies.
  - For inorganic methods, when a matrix spike recovery falls outside of the control limits and the sample result is less than four times the spike added, a post digestion spike (PDS) is performed.
- E 1.5 Blank Sample Analysis
  - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
  - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
  - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
  - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.

- E 1.7 Precision and Accuracy
  - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (%RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
  - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%Rec) of certain spiked compounds. This can be assessed using LCS, BS, MS, and/or surrogate recoveries.
- E 1.23 Serial Dilutions
  - Inorganic analysis requires a serial dilution analysis, which determines whether significant physical or chemical interferences exists because of the sample matrix. If the original sample concentration is greater than 50x the MDL, the %D must be ≤ 10%.

Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
  - EB Equipment Blank Sample
  - FB Field Blank Sample
  - FD Field Duplicate Sample
  - N Primary Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg microgram per kilogram
  - µg/L microgram per liter
  - µg/m3 microgram per cubic meter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
  - ppb v/v parts per billion volume/volume
  - pCi/L picocuries per liter
- Matrices:
  - AA Ambient Air
  - GS Soil Gas
  - GW/WG Groundwater
  - QW Water Quality
  - IA Indoor Air
  - SE Sediment
  - SO Soil
  - WQ Water Quality control matrix
- Table Footnotes
  - NA Not applicable
  - ND Non-detect
  - NR Not reported
- Abbreviations
  - %D Percent Difference
  - %R Percent Recovery
  - %RSD Percent Relative Standard Deviation
  - Abs Diff Absolute Difference
  - VOC Volatile Organic Compounds
  - SVOC Semi-Volatile Organic Compounds
  - BPJ Best Professional Judgement
  - CCB Continuing Calibration Blank
  - CCV Continuing Calibration Verification
  - CCVL Continuing Calibration Verification Low
  - COC Chain of Custody
  - CRI Collision Reaction Interface
  - DUSR Data Usability Summary Report
  - EMPC Estimated Maximum Possible Concentration
  - GC Gas Chromatograph

- GPC Gel Permeation Chromatography
- ICAL Initial Calibration
- ICB Initial Calibration Blank
- ICP/MS Inductively Coupled Plasma/ Mass Spectrometry
- ICV Initial Calibration Verification
- ICVL Initial Calibration Verification Low
- IPA Isopropyl Alcohol
- LCS/LCSD Laboratory Control Sample/Laboratory Control Sample Duplicate
- MDL Laboratory Method Detection Limit
- MS/MSD Matrix Spike/Matrix Spike Duplicate
- ND Non-Detect
- NFG National Functional Guidelines
- GC/MS Gas Chromatography/Mass Spectrometry
- BS Blank Spike
- TIC Tentatively Identified Compound
- PCB Polychlorinated Biphenyl
- PDS Post Digestion Spike
- PEM Performance Evaluation Mixture
- PFAS Per- and Polyfluoroalkyl Substances
- QAPP Quality Assurance Project Plan
- QC Quality Control
- Ra-226 Radium-226
- Ra-228 Radium-228
- RL Laboratory Reporting Limit
- RPD Relative Percent Difference
- TPU Total Propagated Uncertainty
- RT Retention Time
- RRF Relative Response Factors
- SDG Sample Delivery Group
- SOP Laboratory Standard Operating Procedures
- SPE Solid Phase Extraction
- USEPA U.S. Environmental Protection Agency

Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or “ND”.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - J+ The result is an estimated quantity, but the result may be biased high.
  - J- The result is an estimated quantity, but the result may be biased low.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.
  - NJ The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.
  - S Result is suspect. See DUSR for details.

References

1. Haley & Aldrich, Inc, 2021. Quality Assurance Project Plan. Property Characterization Work Plan. 40 Bruckner Boulevard Bronx, New York. January.

2. United States Environmental Protection Agency, 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.

3. United States Environmental Protection Agency, 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-20-005. November.

4. United States Environmental Protection Agency, 2020c. National Functional Guidelines for High Resolution Superfund Methods Data Review. EPA-542-R-20-007. November.

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-5 (2-4)	L2201757-01	SW6010D	Aluminum	3320		J	SRL
PDI-5 (2-4)	L2201757-01	SW6010D	Arsenic	4.4		J	DUP
PDI-5 (2-4)	L2201757-01	SW6010D	Barium	363		J-	MSD, SRL
PDI-5 (2-4)	L2201757-01	SW6010D	Calcium	61300		J	SRL
PDI-5 (2-4)	L2201757-01	SW6010D	Iron	9890		J	SRL
PDI-5 (2-4)	L2201757-01	SW6010D	Magnesium	1930		J+	MSD, SRL
PDI-5 (2-4)	L2201757-01	SW6010D	Manganese	238		J	DUP, SRL
PDI-5 (2-4)	L2201757-01	SW6010D	Thallium		U	UJ	MSD
PDI-5 (2-4)	L2201757-01	SW7471B	Mercury	0.436		J	DUP
PDI-5 (2-4)	L2201757-01	SW8260C	2-Butanone (Methyl Ethyl Ketone)		U	UJ	LCS
PDI-5 (4-6)	L2201757-02	SW6010D	Aluminum	3980		J	SRL
PDI-5 (4-6)	L2201757-02	SW6010D	Arsenic	3.88		J	DUP
PDI-5 (4-6)	L2201757-02	SW6010D	Barium	59.8		J-	MSD, SRL
PDI-5 (4-6)	L2201757-02	SW6010D	Calcium	4480		J	SRL
PDI-5 (4-6)	L2201757-02	SW6010D	Iron	10600		J	SRL
PDI-5 (4-6)	L2201757-02	SW6010D	Magnesium	1970		J+	MSD, SRL
PDI-5 (4-6)	L2201757-02	SW6010D	Manganese	198		J	DUP, SRL
PDI-5 (4-6)	L2201757-02	SW6010D	Thallium		U	UJ	MSD
PDI-5 (4-6)	L2201757-02	SW7471B	Mercury	0.152		J	DUP
PDI-5 (6-8)	L2201757-03	SW6010D	Aluminum	5960		J	SRL
PDI-5 (6-8)	L2201757-03	SW6010D	Arsenic	2.2		J	DUP
PDI-5 (6-8)	L2201757-03	SW6010D	Barium	36.8		J-	MSD, SRL
PDI-5 (6-8)	L2201757-03	SW6010D	Calcium	7160		J	SRL
PDI-5 (6-8)	L2201757-03	SW6010D	Iron	9630		J	SRL
PDI-5 (6-8)	L2201757-03	SW6010D	Magnesium	3690		J+	MSD, SRL
PDI-5 (6-8)	L2201757-03	SW6010D	Manganese	303		J	DUP, SRL
PDI-5 (6-8)	L2201757-03	SW6010D	Thallium		U	UJ	MSD
PDI-5 (6-8)	L2201757-03	SW7471B	Mercury	0.112		J	DUP
PDI-5 (8-10)	L2201757-04	SW6010D	Aluminum	5370		J	SRL
PDI-5 (8-10)	L2201757-04	SW6010D	Arsenic	1.72		J	DUP
PDI-5 (8-10)	L2201757-04	SW6010D	Barium	21.2		J-	MSD, SRL
PDI-5 (8-10)	L2201757-04	SW6010D	Calcium	392		J	SRL
PDI-5 (8-10)	L2201757-04	SW6010D	Iron	9060		J	SRL
PDI-5 (8-10)	L2201757-04	SW6010D	Magnesium	2240		J+	MSD, SRL
PDI-5 (8-10)	L2201757-04	SW6010D	Manganese	292		J	DUP, SRL
PDI-5 (8-10)	L2201757-04	SW6010D	Thallium		U	UJ	MSD
PDI-5 (8-10)	L2201757-04	SW7471B	Mercury		U	UJ	DUP
PDI-5 (8-10)	L2201757-04	SW8260C	Xylene (total)	1.2	J	J	FDP

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-1 (2-4)	L2201757-05	SW6010D	Aluminum	6840		J	SRL
PDI-1 (2-4)	L2201757-05	SW6010D	Arsenic	4.78		J	DUP
PDI-1 (2-4)	L2201757-05	SW6010D	Barium	135		J-	MSD, SRL
PDI-1 (2-4)	L2201757-05	SW6010D	Calcium	31400		J	SRL
PDI-1 (2-4)	L2201757-05	SW6010D	Iron	14400		J	SRL
PDI-1 (2-4)	L2201757-05	SW6010D	Magnesium	8340		J+	MSD, SRL
PDI-1 (2-4)	L2201757-05	SW6010D	Manganese	324		J	DUP, SRL
PDI-1 (2-4)	L2201757-05	SW6010D	Thallium		U	UJ	MSD
PDI-1 (2-4)	L2201757-05	SW7471B	Mercury	0.772		J	DUP
PDI-1 (4-6)	L2201757-06	SW6010D	Aluminum	4610		J	SRL
PDI-1 (4-6)	L2201757-06	SW6010D	Arsenic	4.33		J	DUP
PDI-1 (4-6)	L2201757-06	SW6010D	Barium	77.6		J-	MSD, SRL
PDI-1 (4-6)	L2201757-06	SW6010D	Calcium	8430		J	SRL
PDI-1 (4-6)	L2201757-06	SW6010D	Iron	12500		J	SRL
PDI-1 (4-6)	L2201757-06	SW6010D	Magnesium	5080		J+	MSD, SRL
PDI-1 (4-6)	L2201757-06	SW6010D	Manganese	233		J	DUP, SRL
PDI-1 (4-6)	L2201757-06	SW6010D	Thallium		U	UJ	MSD
PDI-1 (4-6)	L2201757-06	SW7471B	Mercury	0.549		J	DUP
PDI-1 (4-6)	L2201757-06	SW8260C	2-Butanone (Methyl Ethyl Ketone)		U	UJ	LCS
PDI-1 (6-8)	L2201757-07	SW6010D	Aluminum	6180		J	SRL
PDI-1 (6-8)	L2201757-07	SW6010D	Arsenic	2.54		J	DUP
PDI-1 (6-8)	L2201757-07	SW6010D	Barium	43.1		J-	MSD, SRL
PDI-1 (6-8)	L2201757-07	SW6010D	Calcium	4770		J	SRL
PDI-1 (6-8)	L2201757-07	SW6010D	Iron	10900		J	SRL
PDI-1 (6-8)	L2201757-07	SW6010D	Magnesium	4290		J+	MSD, SRL
PDI-1 (6-8)	L2201757-07	SW6010D	Manganese	257		J	DUP, SRL
PDI-1 (6-8)	L2201757-07	SW6010D	Thallium		U	UJ	MSD
PDI-1 (6-8)	L2201757-07	SW7471B	Mercury	0.283		J	DUP
PDI-1 (8-10)	L2201757-08	SW6010D	Aluminum	5120		J	SRL
PDI-1 (8-10)	L2201757-08	SW6010D	Arsenic	1.53		J	DUP
PDI-1 (8-10)	L2201757-08	SW6010D	Barium	22.6		J-	MSD, SRL
PDI-1 (8-10)	L2201757-08	SW6010D	Calcium	644		J	SRL
PDI-1 (8-10)	L2201757-08	SW6010D	Iron	8610		J	SRL
PDI-1 (8-10)	L2201757-08	SW6010D	Magnesium	2020		J+	MSD, SRL
PDI-1 (8-10)	L2201757-08	SW6010D	Manganese	246		J	DUP, SRL
PDI-1 (8-10)	L2201757-08	SW6010D	Thallium		U	UJ	MSD
PDI-1 (8-10)	L2201757-08	SW7471B	Mercury		U	UJ	DUP
PDI-1 (8-10)	L2201757-08	SW8260C	Naphthalene	1	J	J	FDP

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
DUP-01-01122022	L2201757-09	SW6010D	Aluminum	5140		J	SRL
DUP-01-01122022	L2201757-09	SW6010D	Arsenic	1.86		J	DUP
DUP-01-01122022	L2201757-09	SW6010D	Barium	30.4		J-	MSD, SRL
DUP-01-01122022	L2201757-09	SW6010D	Calcium	285		J	SRL
DUP-01-01122022	L2201757-09	SW6010D	Iron	8420		J	SRL
DUP-01-01122022	L2201757-09	SW6010D	Magnesium	2080		J+	MSD, SRL
DUP-01-01122022	L2201757-09	SW6010D	Manganese	260		J	DUP, SRL
DUP-01-01122022	L2201757-09	SW6010D	Thallium		U	UJ	MSD
DUP-01-01122022	L2201757-09	SW7471B	Mercury		U	UJ	DUP
DUP-01-01122022	L2201757-09	SW8260C	Xylene (total)		U	UJ	FDP
DUP-02-01-01122022	L2201757-10	SW6010D	Aluminum	5970		J	SRL
DUP-02-01-01122022	L2201757-10	SW6010D	Arsenic	1.83		J	DUP
DUP-02-01-01122022	L2201757-10	SW6010D	Barium	28.3		J-	MSD, SRL
DUP-02-01-01122022	L2201757-10	SW6010D	Calcium	558		J	SRL
DUP-02-01-01122022	L2201757-10	SW6010D	Iron	10400		J	SRL
DUP-02-01-01122022	L2201757-10	SW6010D	Magnesium	2200		J+	MSD, SRL
DUP-02-01-01122022	L2201757-10	SW6010D	Manganese	248		J	DUP, SRL
DUP-02-01-01122022	L2201757-10	SW6010D	Thallium		U	UJ	MSD
DUP-02-01-01122022	L2201757-10	SW7471B	Mercury		U	UJ	DUP
DUP-02-01-01122022	L2201757-10	SW8260C	2-Butanone (Methyl Ethyl Ketone)		U	UJ	LCS
DUP-02-01-01122022	L2201757-10	SW8260C	Naphthalene	680	E	R	EXE
DUP-02-01-01122022	L2201757-10	SW8260C	Naphthalene	1400		J	FDP
DUP-02-01-01122022	L2201757-10	SW8260C	Various		Various	R	Reject of High level methanol in favor of Low Level except for naphthalene
PDI-10 (2-4)	L2201757-11	SW6010D	Aluminum	5710		J	SRL
PDI-10 (2-4)	L2201757-11	SW6010D	Arsenic	10.8		J	DUP
PDI-10 (2-4)	L2201757-11	SW6010D	Barium	688		J-	MSD, SRL
PDI-10 (2-4)	L2201757-11	SW6010D	Calcium	16100		J	SRL
PDI-10 (2-4)	L2201757-11	SW6010D	Iron	35400		J	SRL
PDI-10 (2-4)	L2201757-11	SW6010D	Magnesium	2140		J+	MSD, SRL
PDI-10 (2-4)	L2201757-11	SW6010D	Manganese	569		J	DUP, SRL
PDI-10 (2-4)	L2201757-11	SW6010D	Thallium		U	UJ	MSD
PDI-10 (2-4)	L2201757-11	SW7471B	Mercury	0.853		J	DUP
PDI-10 (4-6)	L2201757-12	SW6010D	Aluminum	4950		J	SRL
PDI-10 (4-6)	L2201757-12	SW6010D	Arsenic	1.92		J	DUP
PDI-10 (4-6)	L2201757-12	SW6010D	Barium	26.2		J-	MSD, SRL
PDI-10 (4-6)	L2201757-12	SW6010D	Calcium	466		J	SRL

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-10 (4-6)	L2201757-12	SW6010D	Iron	9540		J	SRL
PDI-10 (4-6)	L2201757-12	SW6010D	Magnesium	1980		J+	MSD, SRL
PDI-10 (4-6)	L2201757-12	SW6010D	Manganese	323		J	DUP, SRL
PDI-10 (4-6)	L2201757-12	SW6010D	Thallium		U	UJ	MSD
PDI-10 (4-6)	L2201757-12	SW7471B	Mercury		U	UJ	DUP
PDI-12 (2-4)	L2201757-13	SW6010D	Aluminum	2700		J	SRL
PDI-12 (2-4)	L2201757-13	SW6010D	Arsenic	12.5		J	DUP
PDI-12 (2-4)	L2201757-13	SW6010D	Barium	114		J-	MSD, SRL
PDI-12 (2-4)	L2201757-13	SW6010D	Calcium	1690		J	SRL
PDI-12 (2-4)	L2201757-13	SW6010D	Iron	27400		J	SRL
PDI-12 (2-4)	L2201757-13	SW6010D	Magnesium	876		J+	MSD, SRL
PDI-12 (2-4)	L2201757-13	SW6010D	Manganese	168		J	DUP, SRL
PDI-12 (2-4)	L2201757-13	SW6010D	Thallium		U	UJ	MSD
PDI-12 (2-4)	L2201757-13	SW7471B	Mercury	3.08		J	DUP
PDI-12 (2-4)	L2201757-13	SW8260C	Various		Various	R	Rejected original in favor of reanalysis
PDI-12 (4-6)	L2201757-14	SW6010D	Aluminum	4710		J	SRL
PDI-12 (4-6)	L2201757-14	SW6010D	Arsenic	1.59		J	DUP
PDI-12 (4-6)	L2201757-14	SW6010D	Barium	19.7		J-	MSD, SRL
PDI-12 (4-6)	L2201757-14	SW6010D	Calcium	712		J	SRL
PDI-12 (4-6)	L2201757-14	SW6010D	Iron	8870		J	SRL
PDI-12 (4-6)	L2201757-14	SW6010D	Magnesium	1840		J+	MSD, SRL
PDI-12 (4-6)	L2201757-14	SW6010D	Manganese	233		J	DUP, SRL
PDI-12 (4-6)	L2201757-14	SW6010D	Thallium		U	UJ	MSD
PDI-12 (4-6)	L2201757-14	SW7471B	Mercury		U	UJ	DUP
PDI-11 (2-4)	L2201757-15	SW6010D	Aluminum	6830		J	SRL
PDI-11 (2-4)	L2201757-15	SW6010D	Arsenic	7.03		J	DUP
PDI-11 (2-4)	L2201757-15	SW6010D	Barium	748		J-	MSD, SRL
PDI-11 (2-4)	L2201757-15	SW6010D	Calcium	12900		J	SRL
PDI-11 (2-4)	L2201757-15	SW6010D	Iron	31100		J	SRL
PDI-11 (2-4)	L2201757-15	SW6010D	Magnesium	2980		J+	MSD, SRL
PDI-11 (2-4)	L2201757-15	SW6010D	Manganese	333		J	DUP, SRL
PDI-11 (2-4)	L2201757-15	SW6010D	Thallium		U	UJ	MSD
PDI-11 (2-4)	L2201757-15	SW7471B	Mercury	0.917		J	DUP
PDI-11 (4-6)	L2201757-16	SW6010D	Aluminum	4750		J	SRL
PDI-11 (4-6)	L2201757-16	SW6010D	Arsenic	1.8		J	DUP
PDI-11 (4-6)	L2201757-16	SW6010D	Barium	16		J-	MSD, SRL
PDI-11 (4-6)	L2201757-16	SW6010D	Calcium	524		J	SRL

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-11 (4-6)	L2201757-16	SW6010D	Iron	9350		J	SRL
PDI-11 (4-6)	L2201757-16	SW6010D	Magnesium	1850		J+	MSD, SRL
PDI-11 (4-6)	L2201757-16	SW6010D	Manganese	193		J	DUP, SRL
PDI-11 (4-6)	L2201757-16	SW6010D	Thallium		U	UJ	MSD
PDI-11 (4-6)	L2201757-16	SW7471B	Mercury		U	UJ	DUP
PDI-4 (2-4)	L2201757-17	SW6010D	Aluminum	5040		J	SRL
PDI-4 (2-4)	L2201757-17	SW6010D	Arsenic	3.53		J	DUP
PDI-4 (2-4)	L2201757-17	SW6010D	Barium	136		J-	MSD, SRL
PDI-4 (2-4)	L2201757-17	SW6010D	Calcium	20900		J	SRL
PDI-4 (2-4)	L2201757-17	SW6010D	Iron	12600		J	SRL
PDI-4 (2-4)	L2201757-17	SW6010D	Magnesium	13300		J+	MSD, SRL
PDI-4 (2-4)	L2201757-17	SW6010D	Manganese	261		J	DUP, SRL
PDI-4 (2-4)	L2201757-17	SW6010D	Thallium		U	UJ	MSD
PDI-4 (2-4)	L2201757-17	SW7471B	Mercury	0.906		J	DUP
PDI-4 (4-6)	L2201757-18	SW6010D	Aluminum	2420		J	SRL
PDI-4 (4-6)	L2201757-18	SW6010D	Arsenic	7.29		J	DUP
PDI-4 (4-6)	L2201757-18	SW6010D	Barium	108		J-	MSD, SRL
PDI-4 (4-6)	L2201757-18	SW6010D	Calcium	5570		J	SRL
PDI-4 (4-6)	L2201757-18	SW6010D	Iron	13200		J	SRL
PDI-4 (4-6)	L2201757-18	SW6010D	Magnesium	2690		J+	MSD, SRL
PDI-4 (4-6)	L2201757-18	SW6010D	Manganese	130		J	DUP, SRL
PDI-4 (4-6)	L2201757-18	SW6010D	Thallium		U	UJ	MSD
PDI-4 (4-6)	L2201757-18	SW7471B	Mercury	2.61		J	DUP
PDI-4 (6-8)	L2201757-19	SW6010D	Aluminum	4100		J	SRL
PDI-4 (6-8)	L2201757-19	SW6010D	Arsenic	7.3		J	DUP
PDI-4 (6-8)	L2201757-19	SW6010D	Barium	97.4		J-	MSD, SRL
PDI-4 (6-8)	L2201757-19	SW6010D	Calcium	27500		J	SRL
PDI-4 (6-8)	L2201757-19	SW6010D	Iron	11200		J	SRL
PDI-4 (6-8)	L2201757-19	SW6010D	Magnesium	2940		J+	MSD, SRL
PDI-4 (6-8)	L2201757-19	SW6010D	Manganese	140		J	DUP, SRL
PDI-4 (6-8)	L2201757-19	SW6010D	Thallium		U	UJ	MSD
PDI-4 (6-8)	L2201757-19	SW7471B	Mercury	0.571		J	DUP
PDI-4 (6-8)	L2201757-19	SW8260C	1,2,4-Trimethylbenzene	0.66	J	J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	1,2-Dichlorobenzene	11		J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	1,2-Dichlorobenzene	140	J	J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	1,2-Dichlorobenzene	0.53	J	J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	1,3,5-Trimethylbenzene	0.64	J	J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	1,3-Dichlorobenzene	0.27	J	J+	SUR

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-4 (6-8)	L2201757-19	SW8260C	1,4-Dichlorobenzene	1.3	J	J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	1,4-Dichlorobenzene	19	J	J+	SUR
PDI-4 (6-8)	L2201757-19	SW8260C	Various		Various	R	Rejected high level and improperly preserved samples
PDI-4 (8-10)	L2201757-20	SW6010D	Aluminum	2440		J	SRL
PDI-4 (8-10)	L2201757-20	SW6010D	Arsenic	3.81		J	DUP
PDI-4 (8-10)	L2201757-20	SW6010D	Barium	60.2		J-	MSD, SRL
PDI-4 (8-10)	L2201757-20	SW6010D	Calcium	7280		J	SRL
PDI-4 (8-10)	L2201757-20	SW6010D	Iron	7880		J	SRL
PDI-4 (8-10)	L2201757-20	SW6010D	Magnesium	1650		J+	MSD, SRL
PDI-4 (8-10)	L2201757-20	SW6010D	Manganese	92.9		J	DUP, SRL
PDI-4 (8-10)	L2201757-20	SW6010D	Thallium		U	UJ	MSD
PDI-4 (8-10)	L2201757-20	SW7471B	Mercury	0.075		J	DUP
PDI-7 (2-4)	L2201757-21	SW6010D	Copper	48.8		J+	MSD
PDI-7 (2-4)	L2201757-21	SW8270D	Benzoic acid		U	UJ	LCS
PDI-7 (2-4)	L2201757-21	SW8270D	Fluoranthene	8400	E	R	EXE
PDI-7 (2-4)	L2201757-21	SW8270D	Pyrene	7800	E	R	EXE
PDI-7 (4-6)	L2201757-22	SW6010D	Copper	34		J+	MSD
PDI-7 (4-6)	L2201757-22	SW8270D	Benzoic acid		U	UJ	LCS
PDI-7 (6-8)	L2201757-23	SW6010D	Copper	31.2		J+	MSD
PDI-7 (6-8)	L2201757-23	SW8270D	Benzoic acid		U	UJ	LCS
PDI-7 (8-10)	L2201757-24	SW6010D	Copper	28		J+	MSD
PDI-7 (8-10)	L2201757-24	SW8270D	Benzoic acid		U	UJ	LCS
PDI-8 (2-4)	L2201757-26	SW6010D	Copper	9.81		J+	MSD
PDI-8 (2-4)	L2201757-26	SW8270D	Benzoic acid		U	UJ	LCS
PDI-8 (4-6)	L2201757-27	SW6010D	Copper	8.06		J+	MSD
PDI-8 (4-6)	L2201757-27	SW8270D	Benzoic acid		U	UJ	LCS
PDI-9 (2-4)	L2201757-30	SW6010D	Copper	26.3		J+	MSD
PDI-9 (2-4)	L2201757-30	SW8270D	Benzoic acid		U	UJ	LCS
PDI-9 (4-6)	L2201757-31	SW6010D	Copper	22.4		J+	MSD
PDI-9 (4-6)	L2201757-31	SW8270D	Benzoic acid		U	UJ	LCS
PDI-2 (2-4)	L2201757-32	SW6010D	Copper	25.8		J+	MSD
PDI-2 (2-4)	L2201757-32	SW8270D	Benzoic acid		U	UJ	LCS
PDI-2 (4-6)	L2201757-33	SW6010D	Copper	19.7		J+	MSD
PDI-2 (4-6)	L2201757-33	SW8270D	Benzoic acid		U	UJ	LCS
PDI-2 (6-8)	L2201757-34	SW6010D	Copper	61		J+	MSD
PDI-2 (6-8)	L2201757-34	SW8270D	Benzoic acid		U	UJ	LCS
PDI-2 (8-10)	L2201757-35	SW6010D	Copper	22.2		J+	MSD

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-2 (8-10)	L2201757-35	SW8270D	Benzoic acid		U	UJ	LCS
TRIP BLANK-01122022	L2201757-36	SW8260C	Naphthalene		U	UJ	LCS
TRIP BLANK-01122022	L2201757-36	SW8260C	trans-1,4-Dichloro-2-butene		U	UJ	LCS
FB-01-01122022	L2201757-37	SW8260C	Naphthalene		U	UJ	LCS
FB-01-01122022	L2201757-37	SW8260C	trans-1,4-Dichloro-2-butene		U	UJ	LCS
FB-01-01122022	L2201757-37	SW8270D	4-Nitroaniline		U	UJ	LCS
FB-01-01122022	L2201757-37	SW8270D	Naphthalene		U	UJ	LCS
FB-02-01122022	L2201757-38	SW8260C	Naphthalene		U	UJ	LCS
FB-02-01122022	L2201757-38	SW8260C	trans-1,4-Dichloro-2-butene		U	UJ	LCS
FB-02-01122022	L2201757-38	SW8270D	4-Nitroaniline		U	UJ	LCS
FB-02-01122022	L2201757-38	SW8270D	Naphthalene		U	UJ	LCS
PDI-6 (2-4)	L2201949-01	SW6010D	Calcium	1510		J+	MSD
PDI-6 (2-4)	L2201949-01	SW6010D	Chromium	10.1		J	DUP
PDI-6 (2-4)	L2201949-01	SW6010D	Copper	13.9		J+	MSD, DUP
PDI-6 (2-4)	L2201949-01	SW6010D	Lead	41.1		J+	MSD, DUP
PDI-6 (2-4)	L2201949-01	SW6010D	Magnesium	1680		J+	MSD
PDI-6 (2-4)	L2201949-01	SW6010D	Potassium	511		J+	MSD
PDI-6 (2-4)	L2201949-01	SW6010D	Zinc	73.9		J+	MSD, DUP
PDI-6 (2-4)	L2201949-01	SW7471B	Mercury	0.103		J	DUP
PDI-6 (2-4)	L2201949-01	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-6 (2-4)	L2201949-01	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-6 (2-4)	L2201949-01	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-6 (2-4)	L2201949-01	SW8270D	Benzoic acid		U	UJ	LCS
PDI-6 (4-6)	L2201949-02	SW6010D	Calcium	848		J+	MSD
PDI-6 (4-6)	L2201949-02	SW6010D	Chromium	8.25		J	DUP
PDI-6 (4-6)	L2201949-02	SW6010D	Copper	8.91		J+	MSD, DUP
PDI-6 (4-6)	L2201949-02	SW6010D	Lead	26.5		J+	MSD, DUP
PDI-6 (4-6)	L2201949-02	SW6010D	Magnesium	1560		J+	MSD
PDI-6 (4-6)	L2201949-02	SW6010D	Potassium	439		J+	MSD
PDI-6 (4-6)	L2201949-02	SW6010D	Zinc	35.2		J+	MSD, DUP
PDI-6 (4-6)	L2201949-02	SW7471B	Mercury	0.233		J	DUP
PDI-6 (4-6)	L2201949-02	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-6 (4-6)	L2201949-02	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-6 (4-6)	L2201949-02	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-6 (4-6)	L2201949-02	SW8270D	Benzoic acid		U	UJ	LCS
PDI-6 (6-8)	L2201949-03	SW6010D	Calcium	405		J+	MSD
PDI-6 (6-8)	L2201949-03	SW6010D	Chromium	12.6		J	DUP
PDI-6 (6-8)	L2201949-03	SW6010D	Copper	5.54		J+	MSD, DUP

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-6 (6-8)	L2201949-03	SW6010D	Lead	2.47	J	J+	MSD, DUP
PDI-6 (6-8)	L2201949-03	SW6010D	Magnesium	1450		J+	MSD
PDI-6 (6-8)	L2201949-03	SW6010D	Potassium	350		J+	MSD
PDI-6 (6-8)	L2201949-03	SW6010D	Zinc	11.7		J+	MSD, DUP
PDI-6 (6-8)	L2201949-03	SW7471B	Mercury		U	UJ	DUP
PDI-6 (6-8)	L2201949-03	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-6 (6-8)	L2201949-03	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-6 (6-8)	L2201949-03	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-6 (6-8)	L2201949-03	SW8270D	Benzoic acid		U	UJ	LCS
PDI-6 (8-10)	L2201949-04	SW6010D	Barium	10.8		J	FDP
PDI-6 (8-10)	L2201949-04	SW6010D	Calcium	259		J+	MSD
PDI-6 (8-10)	L2201949-04	SW6010D	Chromium	6.06		J	DUP
PDI-6 (8-10)	L2201949-04	SW6010D	Copper	6.93		J+	MSD, DUP
PDI-6 (8-10)	L2201949-04	SW6010D	Lead	2.57	J	J+	MSD, DUP
PDI-6 (8-10)	L2201949-04	SW6010D	Magnesium	1490		J+	MSD
PDI-6 (8-10)	L2201949-04	SW6010D	Potassium	380		J+	MSD
PDI-6 (8-10)	L2201949-04	SW6010D	Zinc	14.1		J+	MSD, DUP
PDI-6 (8-10)	L2201949-04	SW7471B	Mercury		U	UJ	DUP
PDI-6 (8-10)	L2201949-04	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-6 (8-10)	L2201949-04	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-6 (8-10)	L2201949-04	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-6 (8-10)	L2201949-04	SW8270D	Benzoic acid		U	UJ	LCS
PDI-3 (2-4)	L2201949-05	SW6010D	Calcium	2600		J+	MSD
PDI-3 (2-4)	L2201949-05	SW6010D	Chromium	9.25		J	DUP
PDI-3 (2-4)	L2201949-05	SW6010D	Copper	11.2		J+	MSD, DUP
PDI-3 (2-4)	L2201949-05	SW6010D	Lead	29.4		J+	MSD, DUP
PDI-3 (2-4)	L2201949-05	SW6010D	Magnesium	2980		J+	MSD
PDI-3 (2-4)	L2201949-05	SW6010D	Potassium	694		J+	MSD
PDI-3 (2-4)	L2201949-05	SW6010D	Zinc	32.4		J+	MSD, DUP
PDI-3 (2-4)	L2201949-05	SW7471B	Mercury	0.078		J	DUP
PDI-3 (2-4)	L2201949-05	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-3 (2-4)	L2201949-05	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-3 (2-4)	L2201949-05	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-3 (2-4)	L2201949-05	SW8270D	Benzoic acid		U	UJ	LCS
PDI-3 (4-6)	L2201949-06	SW6010D	Calcium	3210		J+	MSD
PDI-3 (4-6)	L2201949-06	SW6010D	Chromium	15.2		J	DUP
PDI-3 (4-6)	L2201949-06	SW6010D	Copper	24.9		J+	MSD, DUP
PDI-3 (4-6)	L2201949-06	SW6010D	Lead	39.8		J+	MSD, DUP

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
PDI-3 (4-6)	L2201949-06	SW6010D	Magnesium	4380		J+	MSD
PDI-3 (4-6)	L2201949-06	SW6010D	Potassium	1790		J+	MSD
PDI-3 (4-6)	L2201949-06	SW6010D	Zinc	116		J+	MSD, DUP
PDI-3 (4-6)	L2201949-06	SW7471B	Mercury	0.186		J	DUP
PDI-3 (4-6)	L2201949-06	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-3 (4-6)	L2201949-06	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-3 (4-6)	L2201949-06	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-3 (4-6)	L2201949-06	SW8270D	Benzoic acid		U	UJ	LCS
PDI-3 (6-8)	L2201949-07	SW6010D	Calcium	643		J+	MSD
PDI-3 (6-8)	L2201949-07	SW6010D	Chromium	10.8		J	DUP
PDI-3 (6-8)	L2201949-07	SW6010D	Copper	5.7		J+	MSD, DUP
PDI-3 (6-8)	L2201949-07	SW6010D	Lead	5.24		J+	MSD, DUP
PDI-3 (6-8)	L2201949-07	SW6010D	Magnesium	1550		J+	MSD
PDI-3 (6-8)	L2201949-07	SW6010D	Potassium	360		J+	MSD
PDI-3 (6-8)	L2201949-07	SW6010D	Zinc	18.8		J+	MSD, DUP
PDI-3 (6-8)	L2201949-07	SW7471B	Mercury		U	UJ	DUP
PDI-3 (6-8)	L2201949-07	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-3 (6-8)	L2201949-07	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-3 (6-8)	L2201949-07	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-3 (6-8)	L2201949-07	SW8270D	Benzoic acid		U	UJ	LCS
PDI-3 (8-10)	L2201949-08	SW6010D	Calcium	265		J+	MSD
PDI-3 (8-10)	L2201949-08	SW6010D	Chromium	6.22		J	DUP
PDI-3 (8-10)	L2201949-08	SW6010D	Copper	5.94		J+	MSD, DUP
PDI-3 (8-10)	L2201949-08	SW6010D	Lead	1.9	J	J+	MSD, DUP
PDI-3 (8-10)	L2201949-08	SW6010D	Magnesium	1260		J+	MSD
PDI-3 (8-10)	L2201949-08	SW6010D	Potassium	253		J+	MSD
PDI-3 (8-10)	L2201949-08	SW6010D	Zinc	10		J+	MSD, DUP
PDI-3 (8-10)	L2201949-08	SW7471B	Mercury		U	UJ	DUP
PDI-3 (8-10)	L2201949-08	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
PDI-3 (8-10)	L2201949-08	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
PDI-3 (8-10)	L2201949-08	SW8270D	4-Chloroaniline		U	UJ	LCS
PDI-3 (8-10)	L2201949-08	SW8270D	Benzoic acid		U	UJ	LCS
DUP-03-01132022	L2201949-13	SW6010D	Barium	18.3		J	FDP
DUP-03-01132022	L2201949-13	SW6010D	Calcium	247		J+	MSD
DUP-03-01132022	L2201949-13	SW6010D	Chromium	6.81		J	DUP
DUP-03-01132022	L2201949-13	SW6010D	Copper	8.26		J+	MSD, DUP
DUP-03-01132022	L2201949-13	SW6010D	Lead	3.35	J	J+	MSD, DUP
DUP-03-01132022	L2201949-13	SW6010D	Magnesium	1890		J+	MSD

Sample Name	Sample ID	Method	Analyte	Result	Laboratory Qualifiers	Validation Qualifiers	Reason for Qualifier
DUP-03-01132022	L2201949-13	SW6010D	Potassium	403		J+	MSD
DUP-03-01132022	L2201949-13	SW6010D	Zinc	18.1		J+	MSD, DUP
DUP-03-01132022	L2201949-13	SW7471B	Mercury		U	UJ	DUP
DUP-03-01132022	L2201949-13	SW8270D	2,4-Dinitrophenol		U	UJ	LCS
DUP-03-01132022	L2201949-13	SW8270D	3,3'-Dichlorobenzidine		U	UJ	LCS
DUP-03-01132022	L2201949-13	SW8270D	4-Chloroaniline		U	UJ	LCS
DUP-03-01132022	L2201949-13	SW8270D	Benzoic acid		U	UJ	LCS
FB-03-01132022	L2201949-14	SW8270D	4-Chloroaniline		U	UJ	LCS
FB-03-01132022	L2201949-14	SW8270D	4-Nitroaniline		U	UJ	LCS

Reason Code Glossary :

DUP: Laboratory Duplicate RPD Exceedance
EXE: Exceed calibration curve
FDP: Field Duplicate RPD or Absolute Difference Exceedance
LCS: Laboratory Control Sample Exceedance
MSD: Matrix Spike Exceedance
SRL: Serial Dilution Exceedance
SUR: Surrogate exceedance

Conlon, Mari

From: Munz, Keila
Sent: Monday, March 14, 2022 4:49 PM
To: nyenvdata@dec.ny.gov
Cc: Daniel.McNally@dec.ny.gov; Conlon, Mari; Bellew, James
Subject: 40 Bruckner Blvd - C203146 - Data Submittal
Attachments: 20220314 1642.C203146.NYSDEC_MERGE.zip

Please find attached the data submittal for the 40 Bruckner Blvd (C203146) facility. Submittal includes soil sampling data from January 2022.

Keila T. Munz
Senior Scientist

Haley & Aldrich, Inc.
465 Medford Street | Suite 2200
Boston, MA 02129

T: (617) 886-7590

www.haleyaldrich.com

APPENDIX E

Daily Reports

DAILY FIELD REPORT

Project	NYSDEC Site C203146 - Former Mill Sanitary Wiping Cloth Site	Report No.	1
Location	40 Bruckner Boulevard, Bronx, NY	Date	1/12/2021
Client	40 Bruckner Realty LLC	Page	1 of 1
Contractor	Eastern Environmental Solutions	File No.	0200734-002
Weather	Partly Sunny	Temperature	25-35° F

0700 S. Commisso of H&A and Eastern Environmental Solutions on-Site
0705 Calibrate and set up air monitoring equipment, health & safety tailgate, site walk, mobilize Geoprobe Rig (6610DT) onto Site
0730 Mobilize to the southeastern and southern portions of the site (rear yard) and install PDI-10, PDI-12, and PDI-11 to 10 ft bgs
0900 Mobilize to interior of building along Alexander Avenue, install PDI-17 and PDI-18 to 5 ft bgs and install PDI-8 and PDI-9 to 10 ft bgs
1030 Mobilize to northeastern portion of the building along Bruckner Blvd and install PDI-4 and PDI-7 to 10 ft bgs
1200 Mobilize to northwestern portion of the building and install PDI-1 and PDI-5 to 10 ft bgs.
1330 Mobilize to PDI-2, multiple refusals encountered, off-set boring to the south and install PDI-2 to 10 ft bgs
1415 Filling out Chain of Custody, site preparation, housekeeping
1445 Eastern Environmental Solutions off-site
1500 Collect field blank, break down air monitoring equipment
1530 Relinquish samples to Alpha Analytical
1535 S. Commisso off-Site

Photo 1: View of soil boring installation at location PDI-5.

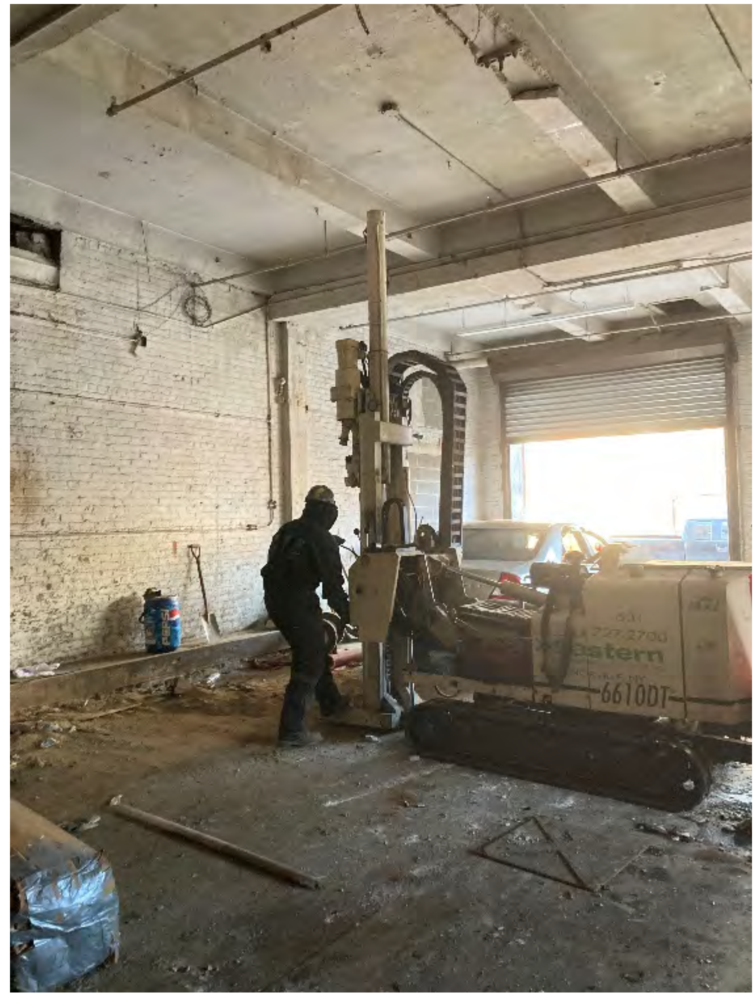

Photo 2: View of soil boring installation at location PDI-17.

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LEGEND

APPROXIMATE SITE BOUNDARY

PROPOSED SOIL BORING

0 40 80

SCALE IN FEET

NOTE
AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

PRE-DESIGN INVESTIGATION
SAMPLE LOCATION MAP

DECEMBER 2021

FIGURE 1

Former Mill Sanitary Wiping Cloth Site – BCP Site C203146
40 Bruckner Boulevard, Bronx, NY
0200734-000
Air Monitoring Log

Date:	1/12/2022
Personnel:	S. Commisso
Weather:	Partly Sunny
Humidity:	44%
Temperature:	25-35° F
Wind Direction:	N

Particulate Background:	No visible dust
PID Background (ppm):	0.0

Site Map:

Time	Dust Particulates	PID		Notes
	Visual Dust (Y/N)	PID (ppm)	Odors (Y/N)	Activities/Additional Monitoring
715	N	0.0	N	No additional particulate monitoring necessary
730	N	0.0	N	No additional particulate monitoring necessary
745	N	0.0	N	No additional particulate monitoring necessary
800	N	0.0	N	No additional particulate monitoring necessary
815	N	0.0	N	No additional particulate monitoring necessary
830	N	0.0	N	No additional particulate monitoring necessary
845	N	0.0	N	No additional particulate monitoring necessary
900	N	0.0	N	No additional particulate monitoring necessary
915	N	0.0	N	No additional particulate monitoring necessary
930	N	0.0	N	No additional particulate monitoring necessary
945	N	0.0	N	No additional particulate monitoring necessary
1000	N	0.0	N	No additional particulate monitoring necessary
1015	N	0.0	N	No additional particulate monitoring necessary
1030	N	0.0	N	No additional particulate monitoring necessary
1045	N	0.0	N	No additional particulate monitoring necessary
1100	N	0.0	N	No additional particulate monitoring necessary
1115	N	0.0	N	No additional particulate monitoring necessary
1130	N	0.0	N	No additional particulate monitoring necessary

Former Mill Sanitary Wiping Cloth Site – BCP Site C203146
40 Bruckner Boulevard, Bronx, NY
0200734-000
Air Monitoring Log

Time	Dust Particulates	PID		Notes
	Visual Dust (Y/N)	PID (ppm)	Odors (Y/N)	Activities/Additional Monitoring
1145	N	0.0	N	No additional particulate monitoring necessary
1200	N	0.0	N	No additional particulate monitoring necessary
1215	N	0.0	N	No additional particulate monitoring necessary
1230	N	0.0	N	No additional particulate monitoring necessary
1245	N	0.0	N	No additional particulate monitoring necessary
1300	N	0.0	N	No additional particulate monitoring necessary
1315	N	0.0	N	No additional particulate monitoring necessary
1330	N	0.0	N	No additional particulate monitoring necessary
1345	N	0.0	N	No additional particulate monitoring necessary
1400	N	0.0	N	No additional particulate monitoring necessary
1415	N	0.0	N	No additional particulate monitoring necessary
1430	N	0.0	N	No additional particulate monitoring necessary
1445	N	0.0	N	No additional particulate monitoring necessary
1500	N	0.0	N	No additional particulate monitoring necessary

DAILY FIELD REPORT

Project	NYSDEC Site C203146 - Former Mill Sanitary Wiping Cloth Site	**Report No.**	2
Location	40 Bruckner Boulevard, Bronx, NY	**Date**	1/13/2022
Client	40 Bruckner Realty LLC	**Page**	1 of 1
Contractor	Eastern Environmental Solutions	**File No.**	0200734-002
Weather	Partly Cloudy	**Temperature**	35-40° F

0700 S. Commisso of H&A and Eastern Environmental Solutions on-Site, calibrate and set up air monitoring equipment

0745 Mobilize to northern portion of the building and install PDI-6 and PDI-3 to 10 ft bgs

0900 Mobilize to southern portion of the Site and install PDI-13, PDI-14, PDI-15, and PDI-16 to 10 ft bgs.

0950 Complete all Pre-Design Investigation soil borings

1000 Collect field blank

1015 Filling out Chain of Custody, housekeeping

1040 Relinquish samples to Alpha Analytical

1050 S. Commisso and Eastern Environmental Solutions off-Site

Photo 1: View of soil boring installation at location PDI-14.

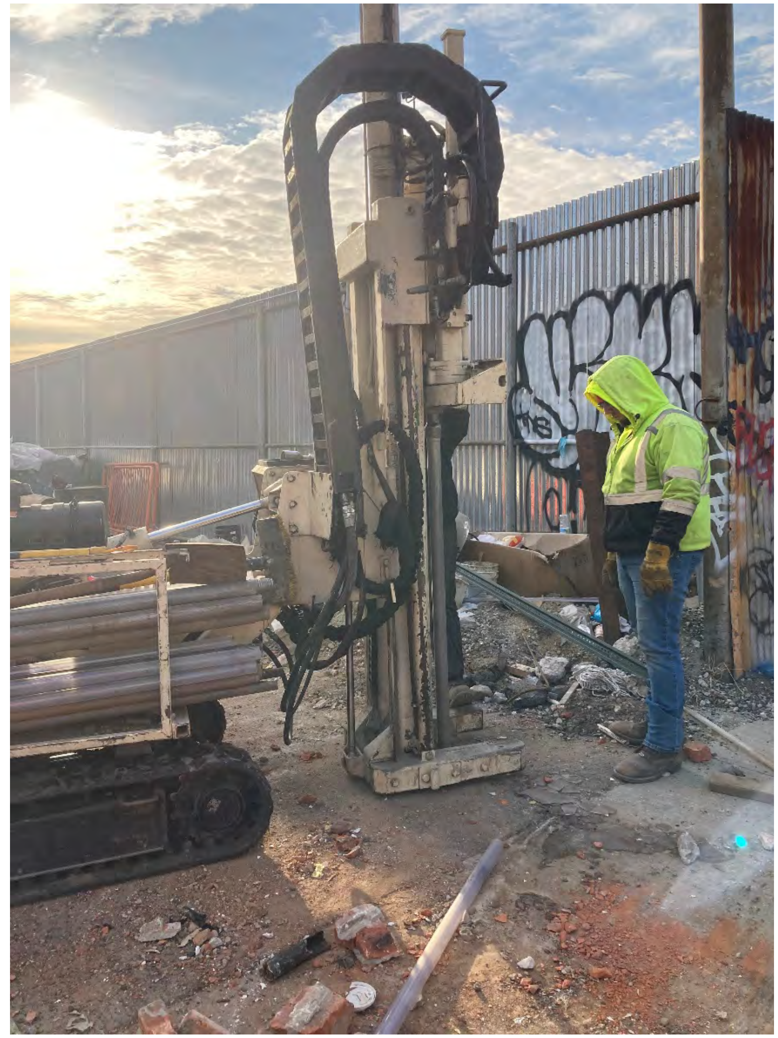

Photo 2: View of soil boring installation at location PDI-16.

Former Mill Sanitary Wiping Cloth Site – BCP Site C203146
40 Bruckner Boulevard, Bronx, NY
0200734-000
Air Monitoring Log

Date:	1/13/2022
Personnel:	S. Commisso
Weather:	Partly Sunny
Humidity:	60%
Temperature:	35-40° F
Wind Direction:	S

Site Map:

Particulate Background:	No visible dust
PID Background (ppm):	0.0

	Dust Particulates	PID		Notes
Time	Visual Dust (Y/N)	PID (ppm)	Odors (Y/N)	Activities/Additional Monitoring
700	N	0.0	N	No additional particulate monitoring necessary
715	N	0.0	N	No additional particulate monitoring necessary
730	N	0.0	N	No additional particulate monitoring necessary
745	N	0.0	N	No additional particulate monitoring necessary
800	N	0.0	N	No additional particulate monitoring necessary
815	N	0.0	N	No additional particulate monitoring necessary
830	N	0.0	N	No additional particulate monitoring necessary
845	N	0.0	N	No additional particulate monitoring necessary
900	N	0.0	N	No additional particulate monitoring necessary
915	N	0.0	N	No additional particulate monitoring necessary
930	N	0.0	N	No additional particulate monitoring necessary
945	N	0.0	N	No additional particulate monitoring necessary
1000	N	0.0	N	No additional particulate monitoring necessary
1015	N	0.0	N	No additional particulate monitoring necessary
1030	N	0.0	N	No additional particulate monitoring necessary
1045	N	0.0	N	No additional particulate monitoring necessary

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LEGEND

APPROXIMATE SITE BOUNDARY

PROPOSED SOIL BORING

N

0 40 80

SCALE IN FEET

NOTE

AERIAL IMAGERY SOURCE: ESRI

HALEY ALDRICH

40 BRUCKNER BOULEVARD
BRONX, NEW YORK

PRE-DESIGN INVESTIGATION
SAMPLE LOCATION MAP

DECEMBER 2021

FIGURE 1

APPENDIX G

Construction Health and Safety Plan

HALEY & ALDRICH, INC.

CONSTRUCTION HEALTH AND SAFETY PLAN

FOR

40 Bruckner Boulevard

Project/File No. 0200734-002

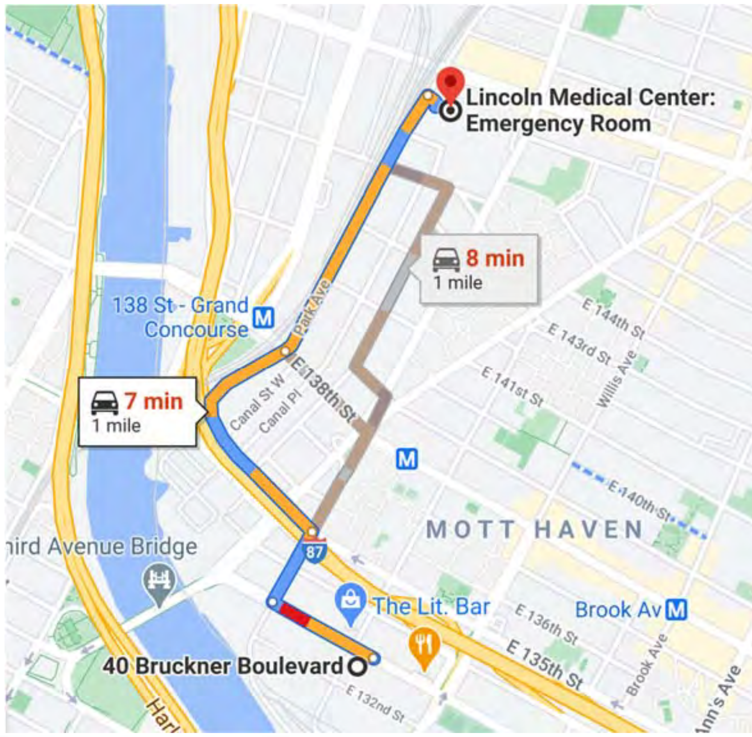
Prepared By: Commisso, Sarah **Date: 10-12-2021**

EMERGENCY INFORMATION

Project Name: 40 Bruckner Boulevard	**H&A File No:** 0200734-002
Location: **40 Bruckner Boulevard, Bronx, NY**	
Client/Site Contact: Phone Number:	40 Bruckner Realty LLC Schwimmer, Jacob 718.701.5680
H&A Project Manager: Office Phone Number: Cell Phone Number:	Conlon, Mari Cate 646.277.5688 347.271.1521
Regional Health & Safety Manager: Office Phone Number: Cell Phone Number:	Ferguson, Brian 617.886.7439 617.908.2761
Nearest Hospital: Address: (see map on next page) Phone Number:	**Lincoln Medical Center: Emergency Room** 234 E 149th Street Bronx, NY 10451 718.579.5784
Nearest Occ. Health Clinic: Address: (see map on next page) Phone Number:	**NYC Health and Hospitals/Gotham Health, Belvis** 545 E 142nd Street Bronx, NY 10454 844.692.4692
Liberty Mutual Claim Policy	**WC6-Z11-254100-030**
Other Local Emergency Response Number:	911
Other Ambulance, Fire, Police, or Environmental Emergency Resources:	911

Emergency Hospital

Lincoln Medical Center: Emergency Room
234 E 149th Street
Bronx, NY, 10451
718.579.5784



40 Bruckner Blvd

The Bronx, NY 10454

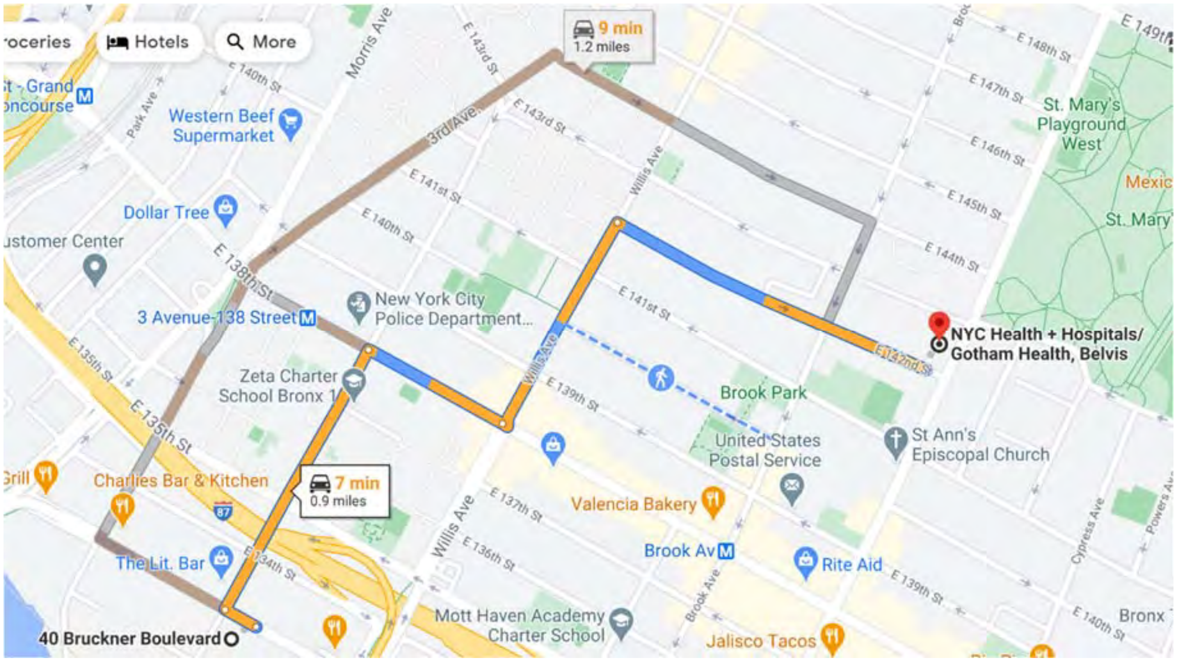
1. Head northwest on Bruckner Blvd toward Alexander Ave — 0.2 mi
2. Turn right onto Lincoln Ave — 0.1 mi
3. Turn left onto E 135th St — 0.3 mi
4. Continue onto Park Ave — 0.4 mi
5. Turn right — 148 ft

Lincoln Medical Center: Emergency Room

234 E 149th St, The Bronx, NY 10451

Clinic

NYC Health and Hospitals/Gotham Health, Belvis
545 E 142nd Street
Bronx, NY 10454
844.692.4692



40 Bruckner Blvd
The Bronx, NY 10454

1. Head northwest on Bruckner Blvd toward Alexander Ave

164 ft

2. Turn right at the 1st cross street onto Alexander Ave

0.3 mi

3. Turn right onto E 138th St

0.1 mi

4. Turn left onto Willis Ave

0.2 mi

5. Turn right onto E 142nd St/Piccirilli Pl
Continue to follow E 142nd St

0.3 mi

NYC Health + Hospitals/Gotham Health, Belvis
545 E 142nd St, The Bronx, NY 10454

STOP WORK

In accordance with H&A Stop Work Policy (OP1035), any individual has the right to refuse to do work that they believe to be unsafe, and they have the obligation and responsibility to stop others from working in an unsafe manner without fear of retaliation. STOP Work Policy is the stop work policy for all personnel and subcontractors on the Site. When work has been stopped due to an unsafe condition, H&A site management (e.g., Project Manager, Site Safety Manager) and the H&A Senior Project Manager will be notified immediately. Reasons for issuing a stop work order include, but are not limited to:

- The belief/perception that injury to personnel or accident-causing significant damage to property or equipment is imminent.
- A H&A subcontractor is in breach of site safety requirements and / or their own site HASP.
- Identifying a sub-standard condition (e.g., severe weather) or activity that creates an unacceptable safety risk as determined by a qualified person.

Work will not resume until the unsafe act has been stopped OR sufficient safety precautions have been taken to remove or mitigate the risk to an acceptable degree. Stop work orders will be documented as part of an on-site stop work log, on daily field reports to include the activity(ies) stopped, the duration, person stopping work, person in-charge of stopped activity(ies), and the corrective action agreed to and/or taken. Once work has been stopped, only the H&A SM or SSO can give the order to resume work. H&A senior management is committed to support anyone who exercises his or her “Stop Work” authority.

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

Project Name	40 Bruckner Boulevard	**Project Number**	0200734-002
Project Start Date	11/1/2021	**Project End Date**	11/1/2022
Client Site/Contact: Office Phone Number:	Schwimmer, Jacob 718.701.5680		
H&A Project Manager: Office Phone Number: Cell Phone Number:	Conlon, Mari Cate 646.277.5688 347.271.1521		
H&A Site Safety Officer: Office Phone Number: Cell Phone Number:	Commisso, Sarah 646.277.5693 516.317.9861		
APPROVALS: The following signatures constitute approval of this Health & Safety Plan			
Electronic Signatures Mari Cate Conlon Project Manager – Mari Cate Conlon		10/26/21 Date	
This document is valid for a maximum time period of one year after completion. The document must be reviewed if the scope of work or nature of site hazards changes and must be updated as warranted.			

PROJECT INFORMATION

Site Overview/History					
Site Classification	Vacant	**Site Status**	Vacant warehouse	**Regulatory Authority**	OSHA

Project Summary

The approximately 41,240 square-foot property located in the Mott Haven neighborhood of the Bronx, New York is identified as Block 2295, Lot 51 on the New York City Tax Map. Currently the Site is vacant.

The project is currently within the New York City E-Designation database under E-143. The requirements under the E-Designation program are satisfaction of the requirements for Hazardous Material and Air components with the New York City Office of Environmental Remediation (NYCOER). The air requirement for this E-Designation is that HVAC fuel is limited to natural gas. Additionally, the E-Designation requires underground gasoline storage tanks testing protocol, and window wall attenuation and alternate ventilation. The proposed development will include the construction of a 12-story residential building with a one-level cellar encompassing the entire Site footprint and extending approximately 20 feet below grade.

Scope of Work: Remedial Oversight

Project Tasks

Task:	**Remedial Oversight**
Perform remedial oversight during implementation of the approved remedy including community air monitoring.	
Start Date: 11/1/2021	End Date: 11/1/2022
H&A Site Supervisor: Conlon, Mari Cate	Subcontractor: N/A

INTRODUCTION

This project specific Construction Health and Safety Plan (CHASP) has been developed by Haley & Aldrich, Inc. (Haley & Aldrich) to establish the procedures necessary for protection from potential contaminated soils resulting from the excavation of soil at 40 Bruckner Boulevard, Bronx, New York (the Site) due to the redevelopment plans for the Site. This CHASP is intended to supplement the Client's Corporate Safety Management Program (CSMP). The procedures in this plan have been developed based on current knowledge regarding the hazards which are known or anticipated for the operations to be conducted at this Site.

SITE HAZARDS

This CHASP covers only the hazards associated with potential chemical exposures. Physical hazards such as injuries from typical excavation field work activities, including the operation of heavy equipment, noise exposure, heat and cold stress, electrical hazards, fire hazards, and general safety hazards associated with walking on working surfaces (trip and fall) are covered by the Client's CSMP.

Site activities may pose chemical exposure hazards. Potential chemical exposure hazards include skin contact, ingestion and inhalation hazards which may result from the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and inorganic metallic elements (metals) on-Site. The potential adverse health effects form these detected contaminants are diverse. Many of these compounds are known or suspected to result in chronic illness from long-term exposures. However, due to the limited nature of the proposed work, only acute effects are a potential concern. See Section 2.0 for detailed chemical hazard information.

PROJECT TEAM

The organizational structure established for the implementation of health and safety requirements established by this CHASP are outlined in the CSMP. Personnel who have been assigned specific authority to implement and enforce the provisions of this CHASP are identified below.

Name	Project Title/Assigned Role	Phone Numbers
Mari Conlon	Project Manager	Work: 646-277-5688 Mobile: 347-271-1521
Sarah Commisso	Site Supervisor	Work: 646-277-5693 Mobile: 516-317-9861

The control of Site hazards is dependent upon the degree to which management enforces compliance and employees cooperate with the specified health and safety requirements. Therefore, personnel at all levels of the organization must recognize their individual responsibility to comply. All activities covered by this CHASP must be conducted in compliance with this CHASP and with applicable federal, state, and local health and safety regulations, including 29 CFR 1910.120. Personnel covered by this CHASP who cannot or will not comply must be excluded from Site activities by the Project Superintendent, as defined in the CSMP.

WORK ACTIVITIES

Excavation and Soil Screening

Field personnel will screen excavated material for visual, olfactory, and instrumental indicators suggestive of a potential chemical or petroleum release. Instrument screening for the presence of VOCs may be performed with a duly calibrated Photoionization detector (PID). Impacted material shall be segregated and disposed in accordance with federal, state and city regulations.

Stockpiling

As part of excavation activities, potentially impacted soil may be stockpiled pending waste characterization analysis. Visibly contaminated soil shall be segregated and stockpiled on at least 10 millimeters of plastic sheeting; reusable soil and fill shall be segregated and stockpiled separately from unusable fill, concrete and other debris. Stockpiles will be covered with 6 millimeters anchored plastic sheeting when not in use and overnight.

Soil Sampling

Soil samples (waste characterization, endpoint, or delineation, may be collected during construction, as required.

Backfilling

Backfilling is not anticipated at the Site however, areas of the Site that may be over-excavated will be backfilled to development grade. Imported material will consist of clean fill that meets the 6 New York Codes, Rules and Regulations (NYCRR) Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives (UU SCOs) or other acceptable fill material such as virgin stone from a permitted mine or quarry or recycled concrete aggregate (RCA), from a New York State Department of Environmental Conservation (NYSDEC)-registered facility.

Dewatering

Dewatering will be part of construction activities. In this case, a dewatering contractor will be responsible for handling contaminated dewatering fluids in accordance with federal, state, and local regulations. Dewatering fluids will be discharged to the local sewer system after treatment and with an approved permit. Alternatively, containerized storage may allow for testing of groundwater prior to, and after, treatment and before disposal.

HAZARD ASSESSMENT

The following hazard assessment applies only to the activities within the scope of this CHASP.

CHEMICAL HAZARDS AND KNOWN/SUSPECT CHEMICALS OF CONCERN

The chemical hazard information provided below is based on the data provided in previous environmental investigations including the Limited Phase II Subsurface Investigation Report (Phase II) (prepared by EBC dated December 2020) and the Remedial Investigation Report (prepared by Haley & Aldrich dated October 2021). During the investigations, representative Site soils were sampled for VOCs, SVOCs, Target Analyte List (TAL) metals, pesticides, polychlorinated biphenyl (PCBs), per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. Groundwater was encountered approximately 8 to 13 feet (ft) below ground surface (bgs). Contaminants of concern identified at the Site during these investigations include pesticide, metal, and SVOC impacts to soil, metal and CVOC impacts to groundwater, and VOC impacts to soil vapor. Constituents with exceeding concentrations and their respective health effects are listed below for reference. Information presented is based upon established Occupational Safety and Health Administration (OSHA) permissible exposure limits (PEL) and The National Institute for Occupational Safety and Health (NIOSH) recommended exposure limits (RELs). All other analytical parameters were reported within acceptable levels for Site urban residential land use. See Section 4.0 for a description of the PPE that should be used for this Site.

Table 1. Health Hazards for Site Contaminants of Concern

Chemicals	REL/PEL/STEL (ppm)	Health Hazards
Benzo(a)anthracene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.
Benzo(a)pyrene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.
Benzo(b)fluoranthene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.
Dibenzo(a,h)anthracene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.
Indeno(1,2,3-cd)pyrene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.
Benzo(k)fluoranthene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.
Chrysene	PEL = 0.2 mg/m^3 TWA REL = 0.1 mg/m^3 TWA	Irritation to respiratory system, bladder, kidneys, skin; dermatitis, bronchitis, cumulative lung damage; suspect human carcinogen.

Lead	PEL = 0.05 mg/m^3 TWA REL = 0.05 mg/m^3 TWA	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
Mercury	PEL = 0.1 mg/m^3 TWA REL = 0.05 mg/m^3 TWA	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
Arsenic	PEL = 0.010 mg/m^3 TWA REL = 0.002 mg/m^3 TWA	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, resp irritation, hyperpigmentation of skin, [potential occupational carcinogen]
Copper, Total	PEL = 1 mg/m^3 TWA REL = 1 mg/m^3 TWA	irritation eyes, nose, pharynx; nasal septum perforation; metallic taste; dermatitis; In Animals: lung, liver, kidney damage; anemia
Selenium, Total	PEL = 0.2 mg/m^3 TWA REL = 0.2 mg/m^3 TWA	irritation eyes, skin, nose, throat; visual disturbance; headache; chills, fever; dyspnea (breathing difficulty), bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; In Animals: anemia; liver necrosis, cirrhosis; kidney, spleen damage
Sodium, Total	REL = 1 mg/m^3 TWA PEL = None	irritation eyes, skin, upper respiratory system; dermatitis; epistaxis (nosebleed); cough, dyspnea (breathing difficulty)

VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS

The SVOC compounds identified in the soils at the Site exceeded the New York State Department of Environmental Conservation (NYSDEC) standards promulgated in the Part 375 Restricted Residential criteria. If Site conditions are dry, the generation of contaminated dusts may pose a potential inhalation hazard. Therefore, dust levels should be controlled with wetting, if necessary, as described in Section 3.2. Odors will also be controlled and monitored via photoionization detectors stationed at the perimeters in accordance with standard CAMP procedures. In addition, repeated contact with certain SVOC compounds have been associated with the development of skin cancer. Contact with the skin may cause photosensitization of the skin, producing skin burns after subsequent exposure to ultraviolet radiation. Protective measures, such as the wearing of chemically resistant gloves, are appropriate when handling SVOC contaminated materials.

METALS

Various metals including copper, lead, mercury, and arsenic were detected in concentrations exceeding NYSDEC Part 375 Restricted Residential criteria in soil samples collected and are attributed to historic fill materials present throughout the Site. Overexposure to metal compounds has been associated with a variety of local and systemic health hazards, both acute and chronic in nature, including lung damage, neurological effects, gastrointestinal effects, kidney and liver damage, allergic dermatitis, and other skin disorders. Exposure to metals is most commonly through inhalation and ingestion of dust. Therefore, dust levels should be controlled with wetting, if necessary, as described in Section 3.2.

ADDITIONAL HAZARD ASSESSMENTS

Additional Site-specific hazards present during project work include simultaneous operations, hot temperatures, sun and slips and trips.

Site Hazards and Controls

Site Hazard Summary		
Slips, Trips, Falls	Hot Temperatures	Cold Temperatures
Sun	Urban Fill	COVID-19

COVID-19

Hazard Information

See attached:

- Fact Sheet HASP Add – This provides general information on the COVID-19 risk and the second page is the HASP Amendment form that will need to be completed for every project (current projects and future) – COVID-19 should be treated the same as any potential project risk.
- Fact Sheet COVID-19 Field Guidance Hygiene – This fact sheet provides guidance to staff performing field work on hygiene practices to undertake to reduce the risk of exposure in the field. The documentation includes information on proper PPE and disinfection.
- Fact Sheet Field Cleaning and Disinfection COVID-19 – This fact sheet provides guidance on cleaning and disinfecting field offices.
- Fact Sheet Field Cloth Face Covering – This fact sheet provides guidance on face covering practices.

Controls

See attachments.

SUN

Hazard Information

Acute excessive exposure to solar radiation may cause painful sunburn, and chronic exposure may contribute to eye damage and skin cancer. The average peak intensity of solar ultraviolet (UV) radiation is at midday. Most of the total daily UV is received between 10 AM and 2 PM. UV radiation can reflect off of water, concrete, light colored surfaces, and snow. Cloud cover can reduce UV levels, but overexposure may still occur.

Use the shadow test to determine sun strength: If your shadow is shorter than you are, the sun´s rays are at their peak, and it is important to protect yourself.

Controls

- Wear light-colored, closely woven clothing, which covers as much of the body as practicable.
- Use sunscreens with broad spectrum protection (against both UVA and UVB rays) and sun protection factor (SPF) values of 30 or higher. Ideally, about 1 ounce of sunscreen (about a shot glass or palmful) should be used to cover the arms, legs, neck, and face of the average adult. Sunscreen needs to be reapplied at least every 2 hours to maintain protection.
- Hats should be worn and should be wide brimmed, protecting as much of the face, ears, and neck as possible. Hats should also provide ventilation around the head. Sunscreen should be applied to areas around the head not protected by the hat (ears, lips, neck, etc.).
- Wear sunglasses while working outdoors. Sunglasses should allow no more than 5% of UVA and UVB penetration and must also meet the ANSI Z87.1 standard for safety glasses.
- Use natural or artificial shade, where possible.

HOT TEMPERATURES (HEAT STRESS)

Hazard Information

Heat stress may occur at any time work is being performed at elevated ambient temperatures. Heat stress is one of the most common and potentially serious illnesses associated with outdoor work during hot seasons; therefore, regular monitoring and other preventative measures are vital. Site workers must learn to recognize and treat various forms of heat stress.

H&A employees and their subcontractors should be aware of potential health effects and/or physical hazards of working when there are hot temperatures or a high heat index.
Staff members should consult OP 1015 Heat Stress for additional information regarding hot weather hazards.

Heat Stress Conditions

<u>Heat Rash</u>: Caused by continuous exposure to heat and humid air and aggravated by chafing clothes. Decreases ability to tolerate heat.
Symptoms: Mild red rash, especially in areas of the body on contract with protective gear.
Treatment: Decrease amount of time in protective gear and provide powder to help absorb moisture and decrease chaffing.

<u>Heat Cramps</u>: Caused by perspiration that is not balanced by adequate fluid intake. Heat cramps are often the first sign of a condition that can lead to heat stroke. This condition is much less dangerous than heat stroke, but it nonetheless must be treated.
Symptoms: Acute painful spasms of voluntary muscles (e.g., abdomen and extremities).
Treatment: Remove the victim to a cool area and loosen clothing. Have the patient drink 1 to 2 cups water immediately, and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1 to 2 gallons per day.

<u>Heat Exhaustion</u>: A state of definite weakness or exhaustion caused by the loss of fluids from the body.

Symptoms: Pale, clammy, moist skin, profuse perspiration and extreme weakness. Body temperature is normal, pulse is weak and rapid, and breathing is shallow. The person may have a headache, may vomit, and may be dizzy.

Treatment: Remove the person to a cool place, loosen clothing, and place in a head-low position. Provide bed rest. Consult physician, especially in severe cases. The normal thirst mechanism is not sensitive enough to ensure body fluid replacement. Have patient drink 1 to 2 cups water immediately and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1 to 2 gallons per day.

Heat Stroke: An acute and dangerous reaction to heat exposure caused by failure of heat regulating mechanisms of the body; the individual´s temperature control system that causes sweating stops working correctly. Body temperature rises so high that brain damage and death will result if the person is not cooled quickly.

Symptoms: Red, hot, dry skin, although person may have been sweating earlier; nausea; dizziness; confusion; extremely high body temperature; rapid respiratory and pulse rate; unconsciousness or coma.

Treatment: Cool the victim quickly and obtain immediate medical assistance. If the body temperature is not brought down fast, permanent brain damage or death may result. Soak the victim in cool but not cold water, sponge the body with rubbing alcohol or cool water, or gently pour water on the body to reduce the temperature to a safe level (102°F). Observe the victim and obtain medical help. Do not give coffee, tea or alcoholic beverages.

Controls

Practice heat stress management:

- Workers should drink 16 ounces of water before beginning or restarting work after a break. Water should be maintained at 50 to 60 degrees Fahrenheit (°F). Workers should drink one to two 4-ounce cups of water every 30 to 60 minutes during work. The use of alcohol during non-working hours and the intake of caffeine during working hours can lead to an increase in susceptibility to heat stress. Monitor for signs of heat stress (shown in Heat Stress Conditions above).
- Workers should acclimate to site work conditions by slowly increasing workloads (i.e., do not begin site work activities with extremely demanding activities). This acclimation process may require up to two weeks.
- In hot weather, field activities should be conducted in the early morning or evening when temperatures are cooler. Rotate shifts of workers with potential heat stress exposure.
- Adequate shelter should be available to protect personnel from heat, which can decrease physical efficiency and increase the probability of heat stress. Erect temporary shade at the workstation if necessary. A cool area for rest breaks should be designated, preferably air-conditioned.
- Cooling devices should be used to aid natural body ventilation. Note: These devices add weight, and their use should be balanced against worker efficiency.

COLD TEMPERATURES

Hazard Information

Cold stress may occur at any time work is being performed during low ambient temperatures and high velocity winds. Because cold stress is common and potentially serious illnesses are associated with outdoor work during cold seasons, regular monitoring and other preventative measures are vital.

Staff members should consult OP1003-Cold Stress for additional information on cold weather hazards.

Cold Stress Conditions

<u>Frostbite</u>: Localized injury resulting from cold is included in the generic term "frostbite. There are several degrees of damage.

Symptoms: Frost nip or incident frostbite; sudden blanching or whitening of the skin.

- Superficial frostbite: Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- Deep frostbite: Tissues are cold, pale, and solid; extremely serious injury.

Treatment:

- Bring the victim indoors and heat the areas quickly in water between 102° and 105° F.
  - Never place frostbitten tissue in hot water as the area will have a reduced heat awareness and such treatment could result in burns.
- Give the victim a warm drink (not coffee, tea, or alcohol).
  - The victim should not smoke or do anything that will inhibit blood circulation.
- Keep the frozen parts in warm water or covered with warm clothes for 30 minutes even though the tissue will be very painful as it thaws.
  - Elevate the injured area and protect it from injury.
  - Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas.
- Keep victim warm and get medical care immediately following first aid treatment.
- After thawing, the victim should try to move the injured areas slightly, but no more than can be done without assistance.

Do <u>NOT</u>:

- Rub the frostbitten area(s)
- Use ice, snow, gasoline, or anything cold on frostbite
- Use heat lamps or hot water bottles to rewarm the frostbitten area
- Place the frostbitten area near a hot stove

<u>Hypothermia:</u> Significant loss of body heat that is also a potential hazard during cold weather operations. Hypothermia is characterized as "moderate" or "severe".
Symptoms:

- Early hypothermia - Chills, pale skin, cold skin, muscle rigidity, depressed heart rate, and disorientation
- Moderate hypothermia - Any combination of severe shivering, abnormal behavior, slowing of movements, stumbling, weakness, repeated falling, inability to walk, collapse, stupor, or unconsciousness
- Severe hypothermia - Extreme skin coldness, loss of consciousness, faint pulse, and shallow, infrequent or apparently absent respiration

Death is the ultimate result of untreated hypothermia. The onset of severe shivering signals danger to personnel; exposure to cold shall be immediately terminated for any severely shivering worker.

Treatment: Staff members should seek emergency medical treatment in the event of hypothermia. The following actions can be taken prior to obtaining medical treatment:

- Gently place patients in an environment most favorable to reducing further heat loss from evaporation, radiation, conduction, or convection.
- Remove wet clothing and replace it with dry blankets or sleeping bags.
- Initiate active external rewarming with heat packs (e.g., hot water bottles, chemical packs, etc.) placed in the areas of the armpits, groin, and abdomen.
- Be aware of the risk of causing body surface burns from excessive active external rewarming.

In dire circumstances, rescuers may provide skin-to-skin contact with patients when heat packs are unavailable and such therapy would not delay evacuation.

Controls

- Recognize the environmental and workplace conditions that may be dangerous.
  - When the temperature is below 41° F, workers should be aware that cold stress is a potential hazard.
- Learn signs of cold-induced illnesses and injuries and how to help affected staff members.
  - Observe fellow staff members for signs of cold stress and administer first aid, where necessary.
- Staff members should maintain a clothing level that keeps them warm but dry (not sweating).
  - Staff should wear thermal clothing including gloves and footwear and beneath chemical resistant clothing, when appropriate.
  - Workers should have a spare set of clothing in case work clothes are not warm enough or become wet.
  - If a worker begins to sweat, he/she should remove a layer.
  - If clothing becomes wet and temperatures are below 36° F, clothing must be immediately replaced with dry clothing.
- A warm area for rest breaks should be designated.
  - In cold temperatures, rotate shifts of workers with potential cold stress exposure or take periodic breaks to allow recovery from cold stress.
  - Do not go into the field alone when cold stress could occur.
- Avoid fatigue or exhaustion because energy is needed to keep muscles warm.
- Workers should drink warm liquids (non-alcoholic, non-caffeinated) periodically throughout their shifts so they do not get dehydrated.

URBAN FILL

Hazard Information

Urban Fill consists of historically placed soil materials commonly found in urban areas, and typically comprised of a heterogeneous mixture of granular and fine-grained solids containing various proportions of gravel and cobbles, construction and demolition debris, coal ash, wood ash or other deleterious materials. Urban fill usually contains anthropogenic levels of metals, petroleum hydrocarbons and/or PAHs due to non-point sources and/or which originated prior to placement.

Controls

- Physical Hazards: Urban fill can contain debris such as glass, ceramics, rebar, wire, wood, nails and other objects that contain sharp edges. Personnel should use caution and wear appropriate gloves (e.g., leather) to prevent cuts associated with handling material contain sharp and abrasive edges.
- Personal Hygiene: Always wash hands prior and after eating and drinking. Take off work boots prior to getting in your car and going home which will help prevent introducing potentially contaminated soils to your car and home. Wash work clothing separately from non-work clothes to prevent clothing impacted by soil from urban fill to be cross contaminated with other clothing. Use chemical resistant gloves when handling soil to prevent contact with skin.
- Control the dust from urban fill material. Measures should be taken to prevent dust, such as wetting the material or covering the stockpiles.

SLIPS AND TRIPS

Hazard Information

Slip and trip injuries are the most frequent injuries to workers. Both slips and trips result from some kind of unintended or unexpected change in the contact between the foot and the ground or walking surface. This shows that good housekeeping, quality of walking surfaces (flooring), awareness of surroundings, selection of proper footwear, and appropriate pace of walking are critical to preventing fall accidents.

Site workers will be walking on a variety of irregular surfaces that may affect their balance. Extra care must be taken to walk cautiously near any surfaces that are unfamiliar or may have unseen slip or trip hazards such as rivers because the bottom of the river bed maybe slick and may not be visible. Rocks, gradient changes, sandy bottoms, and debris may be present but not observable.

Controls

- Take your time and pay attention to where you are going.
- Adjust your stride to a pace that is suitable for the walking surface and the tasks you are doing.
- Check the work area to identify hazards - beware of trip hazards such as wet floors, slippery floors, and uneven surfaces or terrain.
- Establish and utilize a pathway free of slip and trip hazards.
- Choose a safer walking route.
- Carry loads you can see over and are not so heavy as to increase your trip/slip probability.
- Keep work areas clean and free of clutter.
- Communicate hazards to on-site personnel and mitigate hazards as appropriate.

TASK SPECIFIC HAZARDS

Task Description

Remedial Oversight –Remedial oversight may require working in close proximity to heavy equipment and may be exposed to many of the same hazards as the subcontractor. It is imperative that staff are aware of emergency stops and establish communication protocols with the drillers prior to the start of work. See OP 1002 Drilling Safety.

Potential Hazards			
Noise	Heavy Equipment	Ergonomics	Line of Fire
Ground Disturbance			

Top Task Specific Hazards

Overhead Utilities

When work is undertaken near overhead electrical lines, the distance maintained from those lines shall also meet the minimum distances for electrical hazards as defined in Table 1 below. Note: utilities other than overhead electrical utilities need to be considered when performing work

Table 1 Minimal Radial Clearance Distances *

Normal System Voltage Kilovolts (kV)	Required Minimal Radial Clearance Distance (feet/meters)
0 – 50	10/3.05
51 – 100	12/3.66
101 – 200	15/4.57
201 – 300	20/6.1
301 – 500	25/7.62
501 – 750	35/10.67
750 – 1000	45/13.72

* For those locations where the utility has specified more stringent safe distances, those distances shall be observed.

Controls

- To prevent damage, guy wires shall be visibly marked and work barriers or spotters provided in those areas where work is being conducted.
  - When working around guy wires, the minimum radial clearance distances for electrical power shall be observed.
- The PM shall research and determine if the local, responsible utility or client has more restrictive requirements than those stated in Table 1.
- If equipment cannot be positioned in accordance with the requirements established in Table 1 the lines need to be de-energized.

Ground Disturbance

Ground disturbance is defined as any activity disturbing the ground. Ground disturbance activities include, but are not limited to, excavating, trenching, drilling (either mechanically or by hand), digging, plowing, grading, tunneling and pounding posts or stakes.

Because of the potential hazards associated with striking an underground utility or structure, the operating procedure for underground utility clearance shall be followed prior to performing any ground disturbance activities.
See OP1020 Working Near Utilities

Controls

Prior to performing ground disturbance activities, the following requirements should be applied:

- Confirm all approvals and agreements (as applicable) either verbal or written have been obtained.
- Request for line location has been registered with the applicable One-Call or Dial Before You Dig organization, when applicable
    - Whenever possible, ground disturbance areas should be adequately marked or staked prior to the utility locators site visit.
- Notification to underground facility operator/owner(s) that may not be associated with any known public notification systems such as the One-Call Program regarding the intent to cause ground disturbance within the search zone.
- Notifications to landowners and/or tenant, where deemed reasonable and practicable.
- Proximity and Common Right of Way Agreements shall be checked, if the line locator information is inconclusive.

Underground Utilities

Various forms of underground/overhead utility lines or conveyance pipes may be encountered during site activities. Prior to the start of intrusive operations, utility clearance is mandated, as well as obtaining authorization from all concerned public utility department offices. Should intrusive operations cause equipment to come into contact with utility lines, the SSO, Project Manager, and Regional H&S Manager shall be notified immediately. Work will be suspended until the client and applicable utility agency is contacted and the appropriate actions for the situation can be addressed.

See OP1020 Work Near Utilities for complete information.

Controls

- Obtain as-built drawings for the areas being investigated from the property owner;
- Visually review each proposed soil boring locations with the property owner or knowledgeable site representative;
- Perform a geophysical survey to locate utilities;
- Hire a private line locating firm to determine the location of utility lines that are present at the property;
- Identifying a no-drill or dig zone;
- Hand dig or use vacuum excavation in the proposed ground disturbance locations if insufficient data is unavailable to accurately determine the location of the utility lines.

Noise

Working around heavy equipment (drill rigs, excavators, etc.) often creates excessive noise. The effects of noise can include physical damage to the ear, pain, and temporary and/or permanent hearing loss. Workers can also be startled, annoyed, or distracted by noise during critical activities. Noise monitoring data that indicates that work locations within 25 feet of operating heavy equipment (e.g., drill rigs, earthworking equipment) can result in exposure to hazardous levels of noise (levels greater than 85 dBA).

See OP 1031 Hearing Conservation for additional information.

Controls

- Personnel are required to use hearing protection (earplugs or earmuffs) within 25 feet of any operating piece of heavy equipment.
- Limit the amount of time spent at a noise source.
- Move to a quiet area to gain relief from hazardous noise sources.
- Increase the distance from the noise source to reduce exposure.

Heavy Equipment

Staff members must be careful and alert when working around heavy equipment, since equipment failure or breakage and limited visibility can lead to accidents and worker injury. Heavy equipment such as cranes, drills, haul trucks, or other can fail during operation increasing the likelihood of worker injury. Equipment of this nature should be visually inspected and checked for proper working order prior to the commencement of field work. Those that operate heavy equipment must meet all of the requirements to operate heavy equipment. Haley & Aldrich, Inc. staff members that supervise projects or are associated with such high risk projects that involve digging or drilling should use due diligence when working with a construction firm.

See OP1052 Heavy Equipment for additional information.

Controls

- Only approach equipment once you have confirmed contact with the operator (e.g., the operator places the bucket on the ground).
- Maintain visual contact with operators at all times and keep out of the strike zone whenever possible.
- Always be alert to the position of the equipment around you.
- Always approach heavy equipment with an awareness of the swing radius and traffic routes of each piece of equipment and never go beneath a hoisted load.
- Avoid fumes created by heavy equipment exhaust.
- Understand the site traffic pattern and position yourself accordingly.

Line of Fire

Line of fire refers to the path an object will travel. Examples of line of fire typically observed on project sites include lifting/hoisting, lines under tension, objects that can fall or roll, pressurized objects, springs or stored energy, work overhead, and vehicles and heavy equipment.

Controls

The following precautions should be observed for work overhead:

- Never walk under a suspended load.
- Communicate to other workers when entering a lifting/hoisting zone, even if for a short period.
- Balance the load prior to lifting.
- Rigging equipment shall never be loaded in excess of its maximum safe loading limit.
- Establish a drop zone, an area below any work being performed aloft. Drop zone size depends on work scope and potential for falling tools and equipment. Keep the drop zone clear of people.
- If work at the structure base is unavoidable, inform the worker above. Make sure work stops and they secure tools and equipment prior to performing the work below.
- Materials should never be dropped from height. Use tool bags and hand lines when providing tools and equipment to the employee aloft

The following precautions should be observed for tension and pressure:

- Be aware and stay clear of tensioned lines such as cable, chain and rope.
- Use only correct gripping devices. Select proper equipment based on size and load limit.
- Be cautious of torque stresses that drilling equipment and truck augers can generate. Equipment can rotate unexpectedly long after applied torque force has been stopped.
- Springs come in a variety of shapes and sizes, and can release tremendous energy if compression as tension is suddenly released.
- Ensure tanks are stored upright and are in good condition, and be aware of potential failures or pressurized lines and fittings
- Items under tension and pressure can release tremendous energy if it is suddenly released.

The following precautions should be observed for objects that can fall or roll:

- Not all objects may be overhead; be especially mindful of top-heavy items and items being transported by forklift or flatbed.
- Secure objects that can roll such as tools, cylinders and pipes.
- Stay well clear of soil cuttings, soil stockpiles generated during drilling operations and excavations, be aware that chunks of dirt, rocks, and debris can fall or roll.
- Establish a drop zone that is free of any tools and/or debris.

The following precautions should be observed for working in proximity to vehicles and heavy equipment:

- Use parking brakes and wheel chocks for any vehicle or equipment parked on an incline.
- When working near moving, heavy equipment such as line trucks and cranes, remain in operator’s full view. Obtain operator’s attention prior to approaching equipment.
- Vacate the back of the bucket truck when the boom is being moved or cradled. Get the operator’s attention if you must get into the back of the truck so he or she can stop boom movement.

Take precautions for all pedestrian and vehicle traffic when positioning vehicles and equipment at a job site.

Posture/Ergonomics

Most Work-related Musculoskeletal Disorders (WMSDs) are caused by Ergonomic Stressors. Ergonomic Stressors are caused by poor workplace practices and/or insufficient design, which may present ergonomic risk factors. These stressors include, but are not limited to, repetition, force, extreme postures, static postures, quick motions, contact pressure, vibration, and cold temperatures.

WMSDs are injuries to the musculoskeletal system, which involves bones, muscles, tendons, ligaments, and other tissues in the system. Symptoms may include numbness, tightness, tingling, swelling, pain, stiffness, fatigue, and/or redness. WMSD are usually caused by one or more Ergonomic Stressors. There may be individual differences in susceptibility and symptoms among employees performing similar tasks. Any symptoms are to be taken seriously and reported immediately.

Controls

Recommended controls, including Administrative, Work Practice, and/or Engineering Controls, will be put in place based on the interview results and/or after an ergonomic assessment. H&S and/or HP will work with staff members and their staff managers to implement Administrative and Work Practice Controls to control risk associated with ergonomic stressors. In addition, simple Engineering Controls may be implemented, such as use of a keyboard and/or mouse tray, replacing a mouse with a more ergonomic model, and/or changing workstation set up.

Generated Waste

Excess sample solids, decontamination materials, rags, brushes, poly sheeting, etc. that are determined to be free of contamination through field or laboratory screening can usually be disposed into client-approved, on-site trash receptacles. Uncontaminated wash water may be discarded onto the ground surface away from surface water bodies in areas where infiltration can occur. Contaminated materials must be segregated into liquids or solids and drummed separately for off-site disposal.

All wastes generated shall be containerized in an appropriate container (i.e. open or closed top 55-gallon drum, roll-off container, poly tote, cardboard box, etc.) as directed by the PM. Prior to putting waste containers into service, the containers should be inspected for damages or defects. Waste containers should be appropriately labeled indicating the contents, date the container was filled, owner of the material (including address) and any unique identification number, if necessary. Upon completion of filling the waste container, the container should be inspected for leaks and an appropriate seal.

Slippery Surfaces

Both slips and trips result from some a kind of unintended or unexpected change in the contact between the feet and the ground or walking surface. This shows that good housekeeping, quality of walking surfaces (flooring), selection of proper footwear, and appropriate pace of walking are critical for preventing fall accidents.

Slips happen where there is too little friction or traction between the footwear and the walking surface. Common causes of slips are:

- wet or oily surfaces
- occasional spills

- weather hazards
- loose, unanchored rugs or mats
- flooring or other walking surfaces that do not have same degree of traction in all areas

Weather-related slips and falls become a serious hazard as winter conditions often make for wet or icy surfaces outdoors. Even wet leaves or mud can create treacherous walking conditions. Spills and leaks inside can also lead to slips and falls.

- Evaluate the work area to identify any conditions that may pose a slip hazard.
- Address any spills, drips or leaks immediately.
- Mark areas where slippery conditions exist.
- Select proper footwear or enhance traction with additional PPE.

Where conditions are uncertain or environmental conditions result in slippery surfaces walk slowly, take small steps, and slide feet on wet or slippery surfaces.

Congested Area

- Provide barricades, fencing, warning signs or signals and adequate lighting to protect people while working in or around congested areas.
- Vehicles and heavy equipment with restricted views to the rear should have functioning back-up alarms that are audible above the surrounding noise levels. Whenever possible, use a signaler to assist heavy equipment operators and/or drivers in backing up or maneuvering in congested areas.
- Lay out traffic control patterns to eliminate excessive congestion.
- Workers in congested areas must wear high visibility clothing at all times.
- Be aware of Line of Fire hazards when performing work activities in congested areas.
- Hazards associated with SIMOPs should be discussed daily at Tailgate Safety Meetings.

AIR MONITORING

Community air monitoring may be conducted in compliance with the NYSDOH Generic CAMP outlined below:

Monitoring for dust and odors will be conducted during all ground intrusive activities by the FTL. Continuous monitoring on the perimeter of the work zones for odor, VOCs, and dust may be required for all ground intrusive activities such as soil excavation and handling activities. The work zone is defined as the general area in which machinery is operating in support of remediation activities. A portable PID will be used to monitor the work zone and for periodic monitoring for VOCs during activities such as soil and groundwater sampling and soil excavation.

The site perimeter will be monitored for fugitive dust emissions by visual observations as well as instrumentation measurements (if required). When required, particulate or dust will be monitored continuously with real-time field instrumentation that will meet, at a minimum, the performance standards from DER-10 Appendix 1B.

If VOC monitoring is required, the following actions will be taken based on VOC levels measured:

- If total VOC levels exceed 5 ppm above background for the 15-minute average at the 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 VOC levels at the downwind perimeter of the hot 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 VOC level is above 25 ppm at the perimeter of the hot zone, activities will be shut down.

If dust monitoring with field instrumentation is required, the following actions will be taken based on instrumentation measurements:

- If the downwind particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression must be employed. Work may continue with dust suppression techniques provided that downwind PM10 levels do not exceed 150 $\mu g/m^3$ above the background level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM10 levels are greater than 150 $\mu g/m^3$ above the background level, work must be stopped and a reevaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

VAPOR EMISSION RESPONSE

If the ambient air concentration of organic vapors exceeds 5 ppm above background, activities will be halted or odor controls will be employed and monitoring continued. Work practices to minimize odors and vapors include limiting the time that the excavations remain open, minimizing stockpiling of contaminated-source soil, and minimizing the handling of contaminated material. Offending odor and organic vapor controls may include the application of foam suppressants or tarps over the odor or VOC source areas. Foam suppressants may include biodegradable foams applied over the source material for short-term control of the odor and VOCs.

If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: direct load-out of soils to trucks for off-site disposal; use of chemical odorants in spray or misting systems; and, use of staff to monitor odors in surrounding neighborhoods.

If the organic vapor level decreases below 5 ppm above background, sampling and boring and well installation can resume, provided:

- The organic vapor level 200 feet downwind of the hot zone or half the distance to the nearest residential or commercial structure, whichever is less, is below 1 ppm over background, and
- More frequent intervals of monitoring, as directed by the HSO or FTL, are conducted

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 odor 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 hot 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 5 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 tasks will occur:

- The local police authorities will immediately be contacted by the HSO or FTL 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 HSO or FTL; and
- All Emergency contacts will go into effect as appropriate.

DUST SUPPRESSION TECHNIQUES

Preventative measures for dust generation may include wetting site fill and soil, construction of an engineered construction entrance with gravel pad, a truck wash area, covering soils with tarps, and limiting vehicle speeds to five miles per hour.

PERSONAL EXPOSURE MONITORING

No asbestos, lead-based paint, or radiological hazards have been identified within the vicinity of the proposed excavation area at the Site (see Section 2.0). Therefore, personal exposure monitoring is not required during excavation.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) will be donned as detailed below for the activities covered by this CHASP. Based on available analytical data and the proposed intrusive activities, the contractor anticipates that all activities will require Level D or Modified Level D PPE.

GENERAL SITE WORK

General Site work conducted outside the soil excavation areas, operators of heavy equipment, and non-intrusive activities which do not generate dust will require Level D protective equipment. Level D is defined as:

- Steel-toed boots
- Hardhat
- Eye protection
- Hearing protection (carried on person at all time and donned when appropriate)
- Work clothes (sleeved shirts and pants)

Workers shall wear appropriate hearing protection during designated hearing protection-required tasks (such as, jack hammering, pile driving etc.). To reduce the exposure to noise, personnel working in areas of excessive noise must use hearing protectors (earplugs or earmuffs) in accordance with the CSMP. When lacking actual data from sound level meters or noise dosimeters is unavailable, if it is necessary to raise one's voice above a normal conversational level to communicate with others within 3 to 5 feet away, hearing protection should be worn.

EXCAVATION AREAS AND OTHER SOIL HANDLING

Personnel working in the areas of excavation, but not operating heavy equipment, and any other personnel potentially contacting contaminated materials will be required to wear Modified Level D PPE. Modified Level D PPE provides minimal skin protection (i.e., hand/glove protection along with standard work clothes with optional coveralls). Modified Level D is defined as:

- Hardhat
- Eye protection
- Hearing protection (as warranted see above)
- Steel-toed work boots
- Tyvek Coveralls
- Disposable nitrile chemically resistant gloves

Increased PPE, such as Level C or Level B, is not anticipated to be required on the Site.

SITE CONTROL

The overall purpose of site control is to minimize potential contamination of workers, protect the public from the site's hazards, and prevent vandalism. Site control is especially important in emergency situations. The degree of site control necessary depends on site characteristics, site size, and the surrounding community. The following information identifies the elements used to control the activities and movements of people and equipment at the project site.

Communication

Internal
H&A site personnel will communicate with other H&A staff member and/or subcontractors or contractors with:

- Face-to-Face Communication at a minimum of 6ft distance

External
H&S site personnel will use the following means to communicate with off-site personnel or emergency services.

- Cell Phones

Visitors

Project Site
Will visitors be required to check-in prior to accessing the project site?

- Yes
- All Visitors shall be briefed on COVID-19 protocols and PPE. Visitors not briefed, or that do not have the appropriate PPE will be asked to leave the site.

Visitor Access
Authorized visitors that require access to the project site need to be provided with known information with respect to the site operations and hazards as applicable to the purpose of their site visit. Authorized visitors must have the required PPE and appropriate training to access the project site.

Zoning

Work Zone
The work zone will be clearly delineated to ensure that the general public or unauthorized worker access is prevented. The following will be used:

- Flagging tape
- Cones
- Proper Signage

Project Site - Access

Work Hours
The following measure(s) will be used to control site entry and exit during site hours.

- Site is gated a fenced

After Hours
The following measure(s) will be used to control site entry and exit during hours that the site is not operating.

- None

Site Traffic Control
Is the work planned to be conducted on a public roadway or a public right-of-way?

- No

DECONTAMINATION AND WORK ZONES

Work zones are intended to control the potential spread of contamination throughout the site and to assure that only authorized individuals are permitted into potentially hazardous areas. Any person working in an area where the potential for exposure to site contaminants exists will only be allowed access after providing the HSO with proper training and medical documentation.

Work zones on Site will be temporary or dynamic, encompassing the work area(s) actively being worked in on that particular day(s). Site personnel will be advised of the current work area(s) as part of site safety meetings.

Exclusion Zone (EZ) is the area where contamination does or could occur. Decontamination of field equipment will also be conducted in the Contaminant Reduction Zone (CRZ) which will be located on the perimeter of the EZ. The EZ and the CRZ will be clearly delineated by cones, tapes or other means.

Support zone will consist of an area outside the areas of excavation and soil handling, where equipment and support vehicles will be located. Eating, drinking and smoking will be permitted only in this area and not in the work zone. Sanitary facilities will be located on Site. In addition, potable water and water and soap for hand washing will be available on Site.

OTHER SITE CONTROL AND SAFETY MEASURES

The following measures are designed to augment the specific health and safety guidelines provided in this plan. These issues will form the basis of the Site coordination and daily safety meetings discussed (Section 7.4).

- The Site hazards will be evaluated by the Client's Project Superintendent using the Site Safety Checklist as defined by the CSMP.
- No one is to perform field work alone. Team members must be intimately familiar with the procedures for initiating an emergency response.
- Avoidance of contamination is of the utmost importance. Whenever possible, avoid contact with contaminated (or potentially contaminated) surfaces or materials. Walk around (not through) puddles and dis-colored surfaces. Do not kneel on the ground or set equipment on the ground.
- Eating, drinking, chewing gum or tobacco, smoking or any practice that increases the probability of hand-to-mouth transfer and ingestion of materials is prohibited except in the support zone after proper decontamination as defined in Section 6.0.
- The use of alcohol or drugs is prohibited during the conduct or field operations.
- Safety equipment (PPE) will be required for all field personnel unless otherwise approved by the subcontractor's health and safety representatives and/or the Project Superintendent.

SITE SECURITY

The Site shall be unoccupied during Site work except for Contractor personnel and subcontractors. If possible, access to the work areas during field work will be limited by closing site gates to reduce unauthorized pedestrian traffic. The Client's Project Superintendent is responsible for identifying the presence of all employees on Site.

Equipment left on Site during off hours must be locked, immobilized and/or otherwise secured to prevent theft or unauthorized use or access. The Contractor and subcontractors' employees will not be permitted on Site during off-hours without specific client approval.

PERSONAL DECONTAMINATION STATION

Personal decontamination will be conducted by following a systematic procedure of cleaning and removal of PPE. The Contractor will supply decontamination equipment to allow PPE to be brushed to remove gross contamination and then scrubbed clean in a detergent solution and then rinsed clean. To facilitate this, a three-basin wash system will be set up on site by the Contractor.

Disposable PPE, such as Tyvek coveralls, gloves, and hearing protection, etc. will be placed in trash bags in an on-Site container pending a disposal. Alternative chemical decontamination procedures, such as steam-cleaning reusable rubber outer boots, may be used if necessary. Steps required in a decontamination sequence will depend on the level of protection worn in accordance with Section 4.0:

1. Remove and wipe clean hard hat
2. Brush boots and gloves of gross contamination
3. Scrub boots and gloves clean
4. Rinse boots and gloves
5. Dry non-disposable equipment with paper towels
6. Remove Tyvek coveralls
7. Remove eye protection
8. Remove chemically resistant gloves

EQUIPMENT DECONTAMINATION

Hand tools and portable equipment will be decontaminated upon leaving the site using the same procedures for personal decontamination. Wooden tools are difficult to decontaminate because they absorb chemicals. Wooden hand tools will be kept on Site for the project duration and handled only by protected workers. At the end of the Site activities, wooden tools will be discarded if they cannot be decontaminated properly.

Large equipment (i.e. trucks, vehicles, etc.) will be decontaminated in an area near the entrance to the Site. Decontamination of large equipment will mitigate the risk of spreading potentially-contaminated soil off-Site. The contractor will use a combination of long-handled brushed, rods and shovels for general exterior cleaning and dislodging contaminated soil caught in tires and the undersides of vehicles and equipment.

Prior to leaving the Site, large equipment will be inspected to assure that excess material has not adhered to the equipment. If needed, the contractor will clean the large equipment, including washing tires and undercarriages with a hose to remove excess adhered soil prior to leaving the Site.
Exposed excavated material will be covered on each truck after loading. The cover will be secured and remain in place until the container has reached the disposal facility.

MEDICAL MONITORING AND TRAINING REQUIREMENTS

Training records for Site personnel and subcontractors shall be provided by the Contractor prior to on-Site work and will be maintained on Site.

MEDICAL MONITORING

Respiratory protection is not required by the levels of soil contamination. Therefore, no medical monitoring requirements will be instituted for this project.

TRAINING

All personnel covered by this CHASP must have completed the appropriate training requirements specified in 29 CFR 1910.1200 Hazard Communication and 29 CFR 1910.120(e).

Completion of the 40-hour HAZWOPER training program as detailed in OSHA's 29 CFR 1910.120(e) is required for all employees as well as an annual 8-hour refresher training required to maintain competency and ensure a safe work environment. In addition, all employees must complete the OSHA 10-hour Construction Safety and Health training. Site specific training will also be provided including summary of the site hazards, chemical hazards, site layout, rally points, etc. for all new employees entering the site.

Also, at least one contractor employee must be on Site during all activities to act as the Site Foreman and will be responsible for identifying existing and predictable hazards in surroundings or working conditions that are unsanitary, hazardous, or dangerous to Site workers and or the community, and will have the authorization to take prompt corrective measures to eliminate them. This individual must have documentation of at least three days of supervised field experience as well as completion of the specified 8-hour training course for managers and supervisors. Records of certifications and training should be kept by the Contractor.

SUBCONTRACTORS

Subcontractors will be required to provide to the Contractor Project (Site) Manager specific written documentation that each individual assigned to this project has completed the medical monitoring and training requirements specified above. This information must be provided prior to their performing any work on site.

SITE SAFETY MEETINGS

Prior to the commencement of on-Site investigative activities, a Site safety meeting will be held to review the specific requirements of this CHASP. Sign-off sheets will be collected at this meeting (see Appendix A). Short safety refresher meetings will be conducted daily or as conditions or work activates change. In addition, the Project Superintendent will document that Site visitors have had the required training in accordance with 29 CFR 1910.120 and will provide documented pre-entry safety briefings.

EMERGENCY ACTION

OSHA defines emergency response as any "response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result in an uncontrolled release of a hazardous substance." The Contractor personnel covered by this CHASP may not participate in any emergency response where there are potential safety or health hazards (i.e., fire, explosion, or chemical exposure). The Contractor response actions will be limited to evacuation and medical/first aid as described within this section below.

The basic elements of an emergency evacuation plan include employee training, alarm systems, escape routes, escape procedures, critical operations or equipment, rescue and medical duty assignments, designation of responsible parties, emergency reporting procedures, and methods to account for all employees after evacuation.

EMPLOYEE INFORMATION

General training regarding emergency evacuation procedures are included in the Contractor initial and refresher training courses. Also as described, employees must be instructed in the specific aspects of emergency evacuation applicable to the Site as part of the site safety meeting prior to the commencement of all on-site activities. On-Site refresher or update training is required anytime escape routes or procedures are modified or personnel assignments are changed. This information will be provided during the Site safety meetings (see Section 7.4) will be documented by the contractor.

EMERGENCY SIGNAL AND ALARM SYSTEM

An emergency communication system must be in effect at all sites. The most simple and effective emergency communication system in many situations will be direct verbal communications. Each site must be assessed at the time of initial Site activity and periodically as the work progresses. Verbal communications must be supplemented anytime voices cannot be clearly perceived above ambient noise levels (i.e., noise from heavy equipment, trucks, etc.) and anytime a clear line-of-sight cannot be easily maintained amongst all personnel because of distance, terrain or other obstructions. The Contractor will maintain an air horn (or whistle) on-Site that will be used to signal an emergency so that it can be heard over other construction noises on-Site.

EMERGENCY CONTACTS

Police:	911
Fire:	911
Ambulance:	911
NYC Health + Hospitals/Woodhull:	718-975-2270 (non-emergency)

HOSPITAL LOCATION

The Lincoln Medical Center- Emergency room is located at 234 E 149th Street, Bronx, NY, 10451. Appendix B presents a hospital route map.

INCIDENT REPORTING PROCEDURES

Any incident (other than minor first aid treatment) resulting in injury, illness or property damage requires an accident investigation and report. The investigation should be initiated as soon as emergency conditions are under control. The purpose of this investigation is not to attribute blame but to determine the pertinent facts so that repeat or similar occurrences can be avoided.

The investigation should begin while details are still fresh in the mind of anyone involved. The person administering first aid may be able to start the fact gathering process if the injured are able to speak. Pertinent facts must be determined. Questions beginning with who, what, when, where, and how are usually most effective to discover ways to improve job performance in terms of efficiency and quality of work, as well as safety and health concerns.

SPILL CONTROL

Small spills/releases will be contained as close to the source as possible and an MSDS will be reviewed to determine the proper containment and clean up procedures. Procedures for containment can include sorbent materials such as sorbent pads and sand. Contractors should maintain spill kits for potential releases from on site vehicles. In the event a spill cannot be contained and is above the reportable requirements, NYSDEC will be notified.

APPENDICES

Appendix A – Emergency Response Plan

Appendix B – Acknowledgement Form

APPENDIX A: EMERGENCY RESPONSE PLAN

Medical

If there is an injury or illness associated with an H&A staff member on the job-site stop work, stabilize the situation and secure the site. Assess the severity of the injury or illness to determine the appropriate course of action as listed below.

<u>First Aid Injury</u>
First aid will be addressed using the on-site first aid kit. H&A employees are not required or expected to administer first aid/CPR to any H&A staff member, Contractor, or Civilian personnel at any time and it is H&A´s position that those who do are doing it do so on their behalf and not as a function of their job.

- <u>Injury or illness requiring clinic/hospital visit **WITHOUT** ambulance service</u>

  Injuries or illnesses requiring hospital service without ambulance services include minor lacerations, minor sprains, etc. The following action will be taken:

  - The H&A SSO will ensure prompt transportation of the injured person to the clinic or hospital identified in the safety plan.
  - Another H&A staff member, or contractor on-site, will always drive the injured staff member to the medical facility and remain at the facility until the staff member has been discharged. Staff members will not self-transport to the clinic or hospital.
  - If the injured staff member is able to return to the job site the same day, he/she will bring with him/her a statement from the doctor containing such information as:

- Date
- Employee´s name
- Diagnosis
- Date he/she is able to return to work, regular or light duty

- Date he/she is to return to doctor for follow-up appointment, if necessary
- Signature and address of doctor

<u>Injury or illness requiring a hospital visit **WITH** ambulance service</u>

Injuries or illnesses requiring hospital service with ambulance services include severe head injuries, severe lacerations, heart attacks, heat stroke, etc. The following steps will be taken immediately:

- Call for ambulance service and notify the H&A SSO.
- Comfort the individual until ambulance service arrives.
- While the injured employee is being transported, the H&A SSO will contact the medical facility to be utilized.
- One designated representative will accompany the injured employee to the medical facility and remain at the facility until final diagnosis and other relevant information is obtained.

Notifications

For all injuries or illness notify the SSO and PM who in turn will contact Corporate H&S. Within 24 hours the injured staff member or PM will complete the H&S Reporting Form found on HANK. Minor cuts, scratches, and bruises shall also be reported through the H&S Reporting Form. Notify the client in accordance with their notification protocol. Depending on severity, Human Potential will as promptly as possible following an injury or illness, ensure appropriate notification has been made to the family of the individual involved.

Severe Weather

Where the threat of electrical storms and the hazard of lightning exist, staff shall ensure that there is the ability to detect when lightning is in the near vicinity and when there is a potential for lightning and to notify appropriate site personnel of these conditions. The weather forecast will be checked on a daily basis and communicated at the daily safety tailgate meetings.

When lightning is detected or observed the information will be communicated to all crews in the field for appropriate action. Field supervisors will make the decision to stay put or to leave the work site. A location will be identified to marshal field staff in the event that staff are required to leave the job site. A similar decision process will be used during heavy rain events.
Staff shall seek appropriate shelter and not stay in the open

Evacuation Alarms

Verbal Communication will be used to communicate the evacuation alarm.

Emergency Services

Cellular phone will be used to contact Emergency Services.

Emergency Evacuation Plan

The site evacuation plan is as follows:

1. Establish a designated meeting area to conduct a head count in the event of an emergency evacuation.
2. If the work area is not near an emergency exit, exit via the closest route and meet at the designated meeting area.
3. Notify emergency response personnel (fire, police and ambulance) of the number of missing or unaccounted for employees and their suspected location.
4. Administer first aid will in the meeting area as necessary.

Under no circumstances should any personnel re-enter the site area without the approval of the corporate H&S manager, the H&S coordinator, and the fire department official in charge.

ROLES AND RESPONSIBILITIES

REGIONAL HEALTH AND SAFETY MANAGER (RHSM)

The Haley & Aldrich RHSM, Brian Ferguson, is a full-time Haley & Aldrich staff member, trained as a safety and health professional, who is responsible for the interpretation and approval of this Safety Plan. Modifications to this Safety Plan cannot be undertaken by the PM or the SSO without the approval of the RHSM.

Specific duties of the RHSM include:

- Approving and amending the Safety Plan for this project
- Advising the PM and SSOs on matter relating to health and safety
- Recommending appropriate personal protective equipment (PPE) and air monitoring instrumentation
- Maintaining regular contact with the PM and SSO to evaluate the conditions at the property and new information which might require modifications to the HASP and
- Reviewing and approving JSAs developed for the site-specific hazards.

PROJECT MANAGER (PM)

The Haley & Aldrich PM, Mari Cate Conlon, is responsible for ensuring that the requirements of this HASP are implemented at that project location. Some of the PM´s specific responsibilities include:

- Assuring that all personnel to whom this HASP applies have received a copy of it;
- Providing the RHSM with updated information regarding environmental conditions at the site and the scope of site work;
- Providing adequate authority and resources to the on-site SSO to allow for the successful implementation of all necessary safety procedures;
- Supporting the decisions made by the SSO;
- Maintaining regular communications with the SSO and, if necessary, the RHSM;
- Coordinating the activities of all subcontractors and ensuring that they are aware of the pertinent health and safety requirements for this project;
- Providing project scheduling and planning activities; and
- Providing guidance to field personnel in the development of appropriate Job Safety Analysis (JSA) relative to the site conditions and hazard assessment.

SITE SAFETY OFFICER

The SSO, Sarah Commisso, is responsible for field implementation of this HASP and enforcement of safety rules and regulations. SSO functions may include some or all:

- Act as H&A´s liaison for health and safety issues with client, staff, subcontractors, and agencies.
- Verify that utility clearance has been performed by H&A subcontractors.
- Oversee day-to-day implementation of the Safety Plan by H&A personnel on site.
- Interact with subcontractor project personnel on health and safety matters.
- Verify use of required PPE as outlined in the safety plan.
- Inspect and maintain H&A safety equipment, including calibration of air monitoring instrumentation used by H&A.

- Perform changes to HASP and document as needed and notify appropriate persons of changes.
- Investigate and report on-site accidents and incidents involving H&A and its subcontractors.
- Verify that site personnel are familiar with site safety requirements (e.g., the hospital route and emergency contact numbers).
- Report accidents, injuries, and near misses to the H&A PM and Regional Health and Safety Manager (RHSM) as needed.

The SSO will conduct initial site safety orientations with site personnel (including subcontractors) and conduct toolbox and safety meetings thereafter with H&A employees and H&A subcontractors at regular intervals and in accordance with H&A policy and contractual obligations. The SSO will track the attendance of site personnel at H&A orientations, toolbox talks, and safety meetings.

FIELD PERSONNEL

Haley & Aldrich personnel are responsible for following the health and safety procedures specified in this HASP and for performing their work in a safe and responsible manner. Some of the specific responsibilities of the field personnel are as follows:

- Reading the HASP in its entirety prior to the start of on-site work;
- Submitting a completed Safety Plan Acceptance Form and documentation of medical surveillance and training to the SSO prior to the start of work;
- Attending the pre-entry briefing prior to beginning on-site work;
- Bringing forth any questions or concerns regarding the content of the Safety Plan to the PM or the SSO prior to the start of work;
- Stopping work when it is not believed it can be performed safely;
- Reporting all accidents, injuries and illnesses, regardless of their severity, to the SSO;
- Complying with the requirements of this safety plan and the requests of the SSO; and
- Reviewing the established JSAs for the site-specific hazards on a daily basis and prior to each shift change, if applicable.

VISITORS

Authorized visitors (e.g., Client Representatives, Regulators, Haley & Aldrich management staff, etc.) requiring entry to any work location on the site will be briefed by the Site Supervisor on the hazards present at that location. Visitors will be escorted at all times at the work location and will be responsible for compliance with their employer´s health and safety policies. In addition, this safety plan specifies the minimum acceptable qualifications, training and personal protective equipment which are required for entry to any controlled work area; visitors must comply with these requirements at all times. Unauthorized visitors, and visitors not meeting the specified qualifications, will not be permitted within established controlled work areas.

APPENDIX B: HEALTH & SAFETY PLAN ACKNOWLEDGEMENT FORM

Note: Only H&A employees sign this page.

I hereby acknowledge receipt and briefing on this Health & Safety Plan prior to the start of on-site work and declare that I understand and agree to follow the provisions and procedures set forth herein while working on this site.

PRINTED NAME	SIGNATURE	DATE

APPENDIX H

Citizen Participation Plan

NEW YORK STATE | Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan
for
Former Mill Sanitary Wiping Cloth Site
40 Bruckner Boulevard

August 2021

BCP Site C203146
40 Bruckner Boulevard
Bronx, New York 10454

Contents

* * * * *

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: **40 Bruckner Realty LLC ("Applicant")**
Site Name: **Former Mill Sanitary Wiping Cloth Site**
Site Address: **40 Bruckner Boulevard, Bronx, NY 10454**
Site County: **Bronx County**
Site Number: **C203146**

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 CP Plan 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 web-site. 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;
- 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 CP Plan 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 had 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 (CP) Plan	Before start of Remedial Investigation **Note:** Applicant must submit CP Plan to NYSDEC for review and approval within 20 days of the effective date of the BCA.
Before NYSDEC Approves Remedial Investigation (RI) Work Plan:	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period	Before NYSDEC approves RI Work Plan. If RI Work Plan 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 Work Plan (RWP):	
• Distribute fact sheet to site contact list about draft RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RWP. 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.

Contaminants of concern for the Site include chlorinated volatile organic compounds (VOCs), metals, and polyaromatic hydrocarbons (PAHs). To further characterize the impacts to the subsurface, a supplemental remedial investigation will be conducted in October-November 2021 in accordance with the work plan to be approved by NYSDEC. During ground intrusive activities, the community will be protected from contamination migration using air monitoring protocols and management of investigation derived waste as detailed in the Remedial Investigation Work plan to be approved by NYSDEC. Additional details are provided in Section 4.

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.

Because there is a large Hispanic-American population near the Site, all future fact sheets will be translated into Spanish.

For additional information, visit:
https://popfactfinder.planning.nyc.gov/profile/643/demographic

4. Site Information

Appendix C contains a map identifying the location of the site.

Site Description

The 0.95 acre "Site" consists of one tax parcel (2-2295-51) with an address of 40 Bruckner Boulevard, Bronx, New York.

Section	Block	Lot	Official Address	Acreage
2	2295	51	40 Bruckner Boulevard	0.95

The Site is located in an industrial area of the Mott Haven neighborhood of the Bronx, NY on the southwest side of Bruckner Boulevard between Alexander Avenue and Willis Avenue and approximately 600 ft north of the Harlem River. Adjacent properties include:

Direction	Adjoining Property	Surrounding Properties
North	Multiple Owners Mixed residential and commercial buildings	Mixed Use/ Varies (Reference Appendix B)
South	Miscellaneous Owner; Con Edison	Mixed Use/ Varies (Reference Appendix B
East	Multi-family elevator buildings Owner; 329 East 132nd Street JV LLC and Multi-family elevator buildings Owner; 70 Bruckner Housing Development Fund Co. Inc.	Mixed Use/ Varies (Reference Appendix B
West	Commercial and office buildings; Owner: 26 Bruckner LLC and Industrial and manufacturing Owner: 36 Bruckner Associates	Mixed Use/ Varies (Reference Appendix B

History of Site Use, Investigation, and Cleanup

The Site was developed as early as 1891 with a repair shop in the southwest corner and a machine shop on the east corner of the Site, while the rest of the Site remained vacant. Train tracks ran on a curve along the south, southeast and east sides of the property. By 1908, the Site was developed with an office and a milk company next to the machine shop, which transitions to “Borden’s Farm Product” with a wagon house, stable, and lumber yard by 1935. In 1944, the former machine shop and repair shop had been razed and the former “Borden’s Farm Product” became a scrap and rubber storage facility. From the mid-1940s to the late 1980s, the Site was used for various industrial purposes and included an area for sorting and bailing rags, a rag stage area, a rag laundry, a paper stage, and by 1968, a wastepaper facility began operations in the east corner of the Site. Additionally, in the mid-1960s, the train tracks running along the south, southeast and east sides of the property were no longer present. In 1965, the Site is listed in City Directories as “Mill Sanitary Wiping Cloth Corp” and is listed as this facility until the mid-1990s.The Site remained relatively unchanged until the early-1990s when the former buildings labeled “Sorting and Bailing Rags” and “Wastepaper Facility” were converted to auto repair shops. The Site then remained relatively unchanged through the mid-2000s. From the mid- to late-2000s, several commercial operations were run at the Site, including, without limitation, NYC Water Works Inc. The current fee owner, 40 Bruckner LLC, purchased the Site from D. Benedetto Inc in December 2011. The Requestor, 40 Bruckner Realty LLC, is currently in a 99-year lease agreement of the Site with 40 Bruckner LLC.

A Phase I Environmental Site Assessment (Phase I) was completed by Roux Associates in January 2019 for 40 Bruckner LLC, and a Limited Phase II Subsurface Investigation (Phase II) was completed by Environmental Business Consultants (EBC) in December 2020 for JCS Realty.

Upon review of the analytical results of the Phase II, the project was referred to the NYSDEC due to, among other things, elevated levels of chlorinated VOCs, metals, and polyaromatic hydrocarbons (PAHs) in soil. While the Phase II helped characterize the soil at the Site, it did not determine the nature and extent of contamination. Additionally, no sampling was completed of groundwater and soil vapor.

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 onsite, 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 in its Application proposes that the site will be used for restricted residential purposes.

To achieve this goal, the Applicant will conduct any remaining investigation and cleanup activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement 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 overseen by the New York City Office of Environmental Remediation (NYCOER) before it entered into the BCP. For the partial investigation, NYSDEC will determine if the data are useable. In addition, the Applicant has submitted a Remedial Investigation Work Plan which is being reviewed by the NYSDEC. NYSDEC will determine if the investigation goals and requirements of the BCP have been met or if additional work is needed before a remedy can be selected.

The Applicant will conduct an investigation of the site officially called a "remedial investigation" (RI). This investigation will be performed with NYSDEC oversight. The Applicant must develop a remedial investigation workplan, which is subject to public comment.

The site investigation has several goals:

1) Define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
2) Identify the source(s) of the contamination;
3) Assess the impact of the contamination on public health and the environment; and
4) Provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

The Applicant submits a draft “Remedial Investigation Work Plan” to NYSDEC for review and approval. NYSDEC makes the draft plan available to the public review during a 30-day public comment period.

When the investigation is complete, the Applicant will prepare and submit a report that summarizes the results. This report also will 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 if the site poses a significant threat to public health or 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 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 Work Plan”. The Remedial Work Plan describes the Applicant’s proposed remedy for addressing contamination related to the site.

When the Applicant submits a draft Remedial Work Plan for approval, NYSDEC would announce the availability of the draft plan 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 New York State Department of Health (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.

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 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 cleanup requirements have been achieved or will be achieved for the site, it will approve the Final Engineering Report (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 and engineering controls 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.

An *institutional control* 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* 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):

Daniel McNally
Project Manager
NYSDEC
Division of Environmental Remediation
625 Broadway, Albany, NY 12233
(518) 402-9767
Daniel.McNally@dec.ny.gov

Thomas B. Panzone
Public Participation Specialist
NYSDEC Region 2
47-40 21st Street,
Long Island City, NY 11101
(718) 482-4953
Thomas.panzone@dec.ny.gov

New York State Department of Health (NYSDOH):

Stephen Lawrence
Project Manager
NYSDOH
Empire State Plaza,
Corning Tower Rm. 1787
Albany, NY 12237
(518) 402-0450

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:
**Repositories may be temporarily unavailable due to COVID-19 precautions. If you cannot access the online repository, please contact the NYSDEC project manager listed below for assistance.*

Bronx Community Board 1
3024 3rd Avenue Bronx, NY 10455
Attn: Cedric Loftin
Phone: 718-585-7117
Hours: (call for appointment)

Mott Haven Library
321 E 140th Street, Bronx, NY 10454
Attn: Kathleen Carrasco
Phone: 718-665-4878

Appendix B - Site Contact List

Owners, Residents, Occupants:

The Site is currently vacant.

Tenant	Contact Name	Phone	Mailing Address	Email
40 Bruckner Realty LLC	Jacob Schwimmer	(718) 701-5680	199 Lee Avenue, Suite 1088 Brooklyn, NY 11211	jschwimmer@jcsrealtyny.com

Owner	Contact Name	Phone	Mailing Address	Email
40 Bruckner LLC	Peter Benedetto II	(212) 532-1497	280 Madison Avenue New York, New York 10016	Peter2@dombenrealty.com

Executive:

Role	Name	Phone	Mailing Address	Email
NYC Mayor	Mayor William De Blasio	212-NEW-YORK	City Hall New York, NY 10007	https://www1.nyc.gov/office-of-the-mayor/mayor-contact.page
NYC Department of City Planning Commissioner	Marisa Lago	212-720-3300	120 Broadway 31st Floor New York. NY 10271	https://www1.nyc.gov/site/planning/about/email-the-director.page
Bronx Borough President	Ruben Diaz Jr.	718-590-3557	851 Grand Concourse, 3rd Floor, Bronx, NY 10451	webmail@bronxbp.nyc.gov

Bronx Community Board 1 District Manager	Cedric Loftin	718-585-7117	3030 3rd Avenue, Bronx, NY 10455	Brxcb1@optonline.net
NY Senate District 29 Senator	Jose M. Serrano	212-828-5829	1916 Park Avenue, Suite 202, New York, NY 10037	serrano@nysenate.gov
NY State Assembly District 84 Member	Amanda Septimo	718-292-2901	384 E 149th Street, Suite 202, Bronx, NY 10455	septimoa@nyassembly.gov
NYC Comptroller	Hon. Scott Stringer		1 Centre Street New York, NY 10007	
Hon. Jumaane Williams	Public Advocate		1	1 Centre Street New York, NY 10007
NYC Councilman	Hon. Diana Ayala		105 East 116th Street New York, NY 10029	
US House Representatives	Ritchie Torres		1231 Lafayette Avenue 4th Floor Bronx, NY 10474	
NYC Office of Environmental Remediation	Mark McIntyre, Director		100 Gold Street - 2nd Floor New York, NY 10038	
Office of Environmental	Julie Stein		NYC Dept. of Environmental Protection	

Assessment & Planning			96-05 Horace Harding Expressway Flushing, NY 11373	
U.S. Senator	Hon Charles Schumer		780 Third Avenue, Suite 2301 New York, NY 11373	
U.S. Senator	Hon. Kirsten Gillibrand		780 Third Avenue, Suite 2601 New York, NY 11373	
Bronx County Clerk	Kevin Rothermel		851 Grand Concourse Room 118 Bronx, NY 10451	

Adjacent Properties:

Owner/Entity Name	Contact Name	Site Use	Property Address	Owner Mailing Address
70 Bruckner Housing Development Fund Co. Inc.	Peter Fine	Multi-family elevator buildings	70 Bruckner Boulevard	155 Avenue of the Americas, 3rd Floor, New York, NY 10013
329 East 132nd Street JV LLC	Neill Weissman	Multi-family elevator buildings	329 East 132nd Street	55 Bruckner Boulevard, Bronx, NY 10454
26 Bruckner LLC	Bradford N. Sweet	Commercial and office buildings	26 Bruckner Boulevard	210 East 86th Street, Suite 404, New York, NY 10028

36 Bruckner Associates	Jerome Yates	Industrial and manufacturing	36 Bruckner Boulevard	36 Bruckner Boulevard, Bronx, NY 10454
Con Edison	Unknown	Miscellaneous	East 132 Street	Cooper Station P.O. Box 138, New York, NY 10276
Bruckner Lofts LLC	Unknown	Mixed residential and commercial buildings	39 Bruckner Boulevard	55 W. 47th Street, Suite 340, New York, NY 10036
Bruk Equities LLC	Iskyo Aronov	Mixed residential and commercial buildings	41 Bruckner Boulevard	116-55 Queens Boulevard, Suite 206, Forest Hills, NY 11375
Brates, Eva	Eva Brates	Mixed residential and commercial buildings	43 Bruckner Boulevard	60 Garlen Road, Katonah, NY 10536
Brates, Adam	Adam Brates	Mixed residential and commercial buildings	45 Bruckner Boulevard	60 Garlen Road, Katonah, NY 10536
Brates, Arthur	Arthur Brates	Mixed residential and commercial buildings	47 Bruckner Boulevard	60 Garlen Road, Katonah, NY 10536
Garcia, Ida	Ida Garcia	Mixed residential and commercial buildings	49 Bruckner Boulevard	168 Longview Terrace, Yonkers, NY 10710
51 Bruckner LLC	David Aaron	Mixed residential and commercial buildings	51 Bruckner Boulevard	4925 Collins Avenue #11E, Miami, Fl 33140

Badillo, Oscar	Oscar Badillo	Mixed residential and commercial buildings	53 Bruckner Boulevard	70 Farrington Road, Matawan, NJ 07747
Resident/Business Owner	Unknown	Mixed residential and commercial buildings	55 Bruckner Boulevard	Unknown
Vasquez, Hector	Hector Vasquez	Mixed residential and commercial buildings	57 Bruckner Boulevard	1806 Bedford Avenue, Merrick, NY 11566
134 Street Holding Corp.	Unknown	Mixed residential and commercial buildings	59 Bruckner Boulevard	65 Bruckner Boulevard, Bronx, NY 10454
MPM 61 LLC	Moshe Altmark	Mixed residential and commercial buildings	61 Bruckner Boulevard	2447 3rd Avenue, Bronx, NY 10451
MPM 63 LLC	Adi Altmark	Multi-family walk-up buildings	63 Bruckner Boulevard	360 Lexington Avenue, 12th Floor, New York, NY 10017
MPM 65 LLC	Adi Altmark	Mixed residential and commercial properties	65 Bruckner Boulevard	2447 Third Avenue, Bronx, NY 10451
Creative Lifestyles	Unknown	Commercial and office buildings	67 Bruckner Boulevard	67 Bruckner Boulevard, Bronx, NY 10454
MPM 67, LLC	Paul Esposito	Mixed residential and commercial buildings	69 Bruckner Boulevard	2447 Third Avenue, Bronx, NY 10451

Local News and Media:

Owner/Entity Name	Type	Address	Phone	Website
Mott Haven Herald	Online	N/A	N/A	http://www.motthavenherald.com/
Spectrum 1 News	Television	75 Ninth Avenue New York, NY 10011	212-379-3311	https://www.ny1.com/nyc/bronx
New York Daily News		4 New York Plaza New York, NY 10004		
New York Post		1211 Avenue of the Americas New York, NY 10036		

Hoy Nueva York
15 Metrotech Center Floor 7
Brooklyn, NY 11201

El Diario La Prensa
15 Metrotech Center Floor 7
Brooklyn, NY 11201

Bronx Times Reporter
3604 East Tremont Avenue
Bronx, NY 10465

Inner City Press
P.O. Box 20047 Dag Hammarsjold Station
New York, NY 10017

Public Water Supply:

Public water supply is a shared responsibility between the New York City Department of Environmental Protection (NYCDEP) and the Municipal Water Finance Authority.

Owner/Entity Name	Contact	Address	Phone	Email
NYCDEP	Vincent Sapienza - Commissioner	59-17 Junction Blvd. Flushing, NY 11373	718-595-6565	ltcp@dep.nyc.gov
NYC Municipal Water Finance Authority	Olga Chernat-Executive Director	255 Greenwich Street 6th Floor New York, NY 10007	212-788-5889	N/A

School or Day Care located on or proximal to the site:

There are no schools or daycares located on the Site. The following schools or day care facilities are located within ½-mile radius to the site:

School/Day Care Name	Approximate distance from Site in feet and (directional)	Administrator	Phone	Address
Bruckner Forever Young Social Adult Day Care	299’ (east)	N/A	917-891-8753	80 Bruckner Boulevard, Bronx, NY 10454
Learning through Play Pre-K Center	528’ (east)	N/A	718-401-0510	105 Willis Ave, Bronx, NY 10454
South Bronx Classical Charter School II	1056’ (northeast)	Ariel Amaya	718-292-9526	333 E 135th Street, Bronx, NY 10454
Zeta Charter School Bronx 1	1056’ (northeast)	Emily A. Kim	929-376-9987	222 Alexander Avenue, Bronx, NY 10454

Bronx Elementary School 43	2112’ (east)	Rafael Alvarez	718-292-4502	165 Brown Place, Bronx, NY 10454
Mott Haven Academy Charter School	2112’ (east)	Jessica Nauiokas	718-292-7015	170 Brown Place, Bronx, NY 10454
New York City Montessori Charter School	2640’ (northeast)	N/A	347-226-9094	423 E 138th Street, Bronx, NY 10454
Stars of Tomorrow Daycare Center Inc.	2112’ (north)	N/A	917-473-6455	423 E 138th Street, Bronx, NY 10454
Amy’s Family WeeCare	2640’ (east)	N/A	646-956-4501	520 E 137th Street, Bronx, NY 10454

PS 154 Jonathan D Hyatt
333 EAST 135 STREET
Bronx, NY10454

WINIFRED WHEELER DAY CARE CENTER
200 ALEXANDER AVENUE
BRONX, NY10454

PS 043 Jonas Bronck
165 BROWN PLACE
Bronx, NY10454

Document Repository:

Owner/Entity Name	Contact	Address	Phone	Email
Bronx Community Board 1	Cedric Loftin	3030 3rd Avenue, Bronx, NY 10455	718-585-7117	Brxcb1@optonline.net
Mott Haven Library	Kathleen Carrasco	321 E 140th Street, Bronx, NY 10454	718-665-4878	kathleencarrasco@nypl.org

Community Board:

Owner/Entity Name	Contact	Address	Phone	Email
Bronx Community Board 1	Cedric Loftin	3030 3rd Avenue, Bronx, NY 10455	718-585-7117	Brxcb1@optonline.net

Community, Civic, Religious and Other Environmental Organizations:

Evelyn Oliver - Director
Consolidated Edison Corporate Affairs
511 Theodore Fremd Avenue
Rye, NY 10580

Gabriel de Jesus
40th Police Precinct Council
257 Alexander
Bronx, NY 10454

Engine 83 Ladder 29
FDNY
618 EAST 138 STREET
Bronx, NY 10454

NYCHA – Mitchel Houses
Management Development Office
225 Alexander Avenue
Bronx, NY 10454

NYCHA – Mitchel Houses
Senior Center
188 Lincoln Avenue
Bronx, NY 10454

NYCHA – Mitchel Houses
Daycare Center
200 Alexander Avenue
Bronx, NY 10454

NYCHA – Mitchel Houses
Community Center
210 Alexander Avenue
Bronx, NY 10454

NYCHA – Mitchel Houses
President – Resident Association
225 Alexander Avenue
Bronx, NY 10454

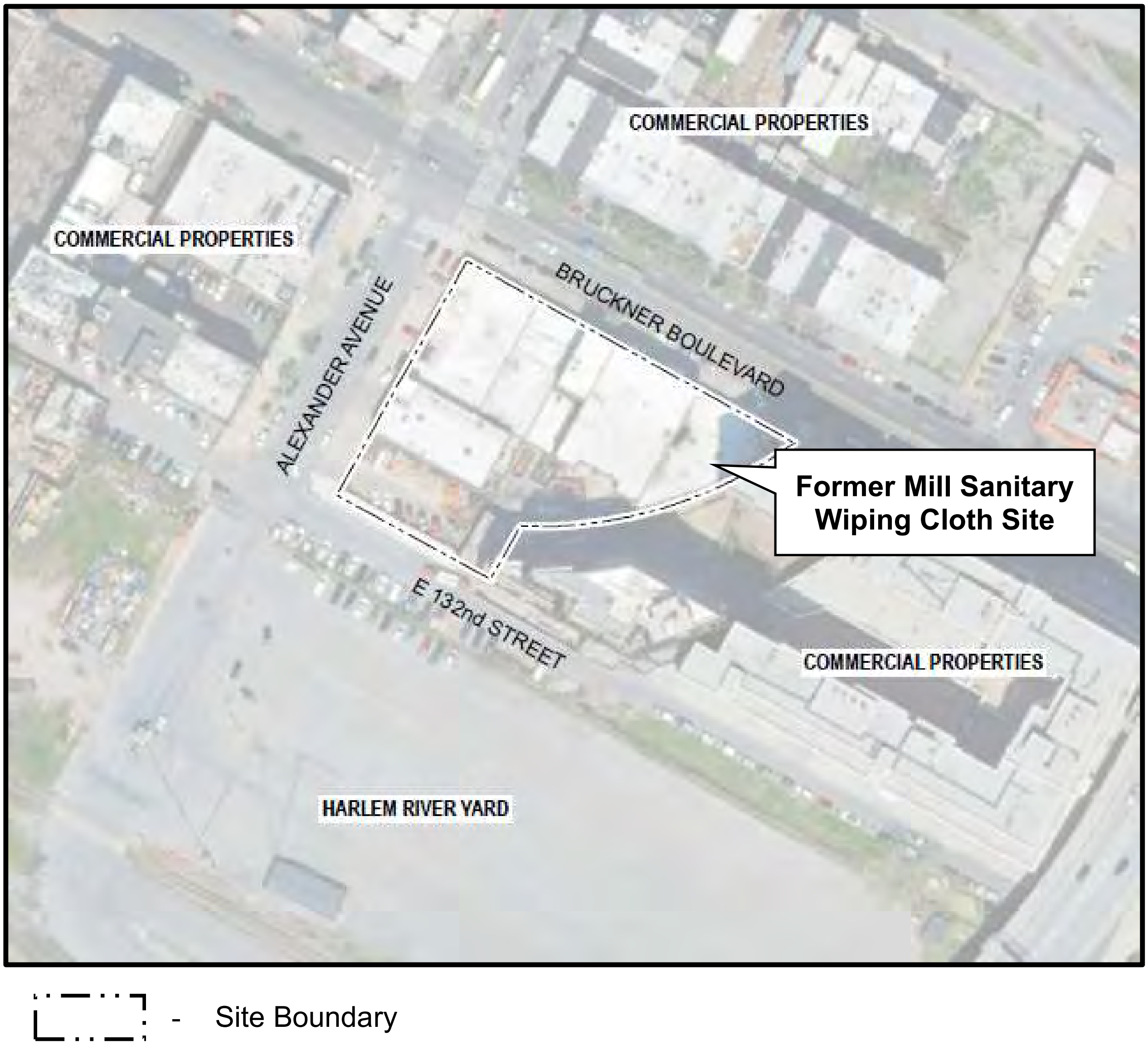
Community, Civic, Religious and Other Environmental Organizations Cont.:

Sustainable South Bronx
Jennifer Mitchell, Executive Director
1647 Macombs Road, Ground Floor
Bronx, NY 10453
Tel: (646) 400-5430
Fax: (347) 892-3442
Email: info@ssbx.org

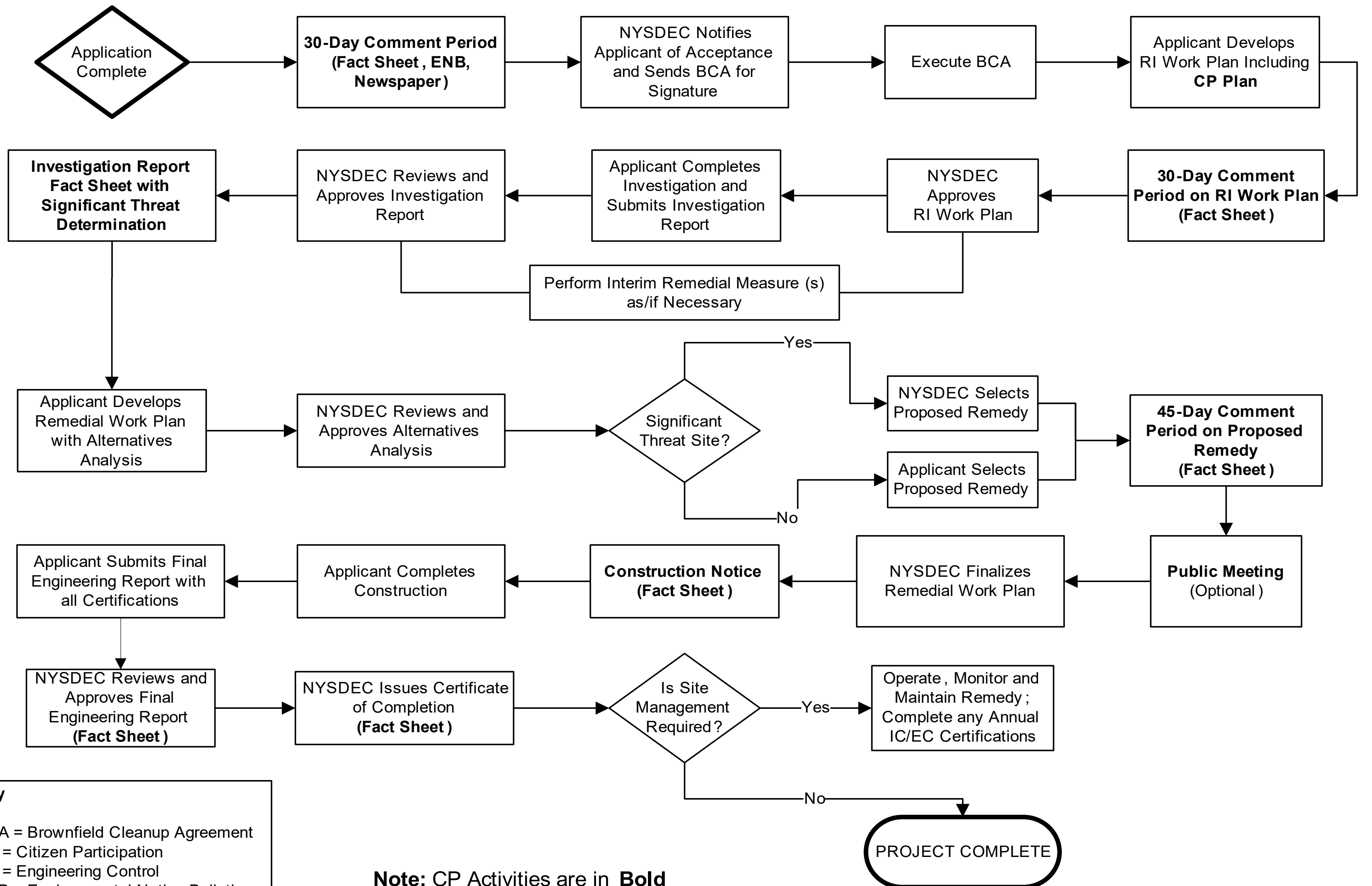
Bronx Land Trust
148 West 37th Street, 13th Floor
New York, NY 10018
Tel: 212-244-2288 **Error! Hyperlink reference not valid.**

For A Better Bronx
Contact: Marian Feinberg, Executive Director
199 Lincoln Avenue, Suite 213/214
Bronx, NY 10454
Phone: 718-292-4344
Fax: 718-665-0833
Email: marian.fabb@earthlink.net

Appendix C - Site Location Map



Appendix D– Brownfield Cleanup Program Process



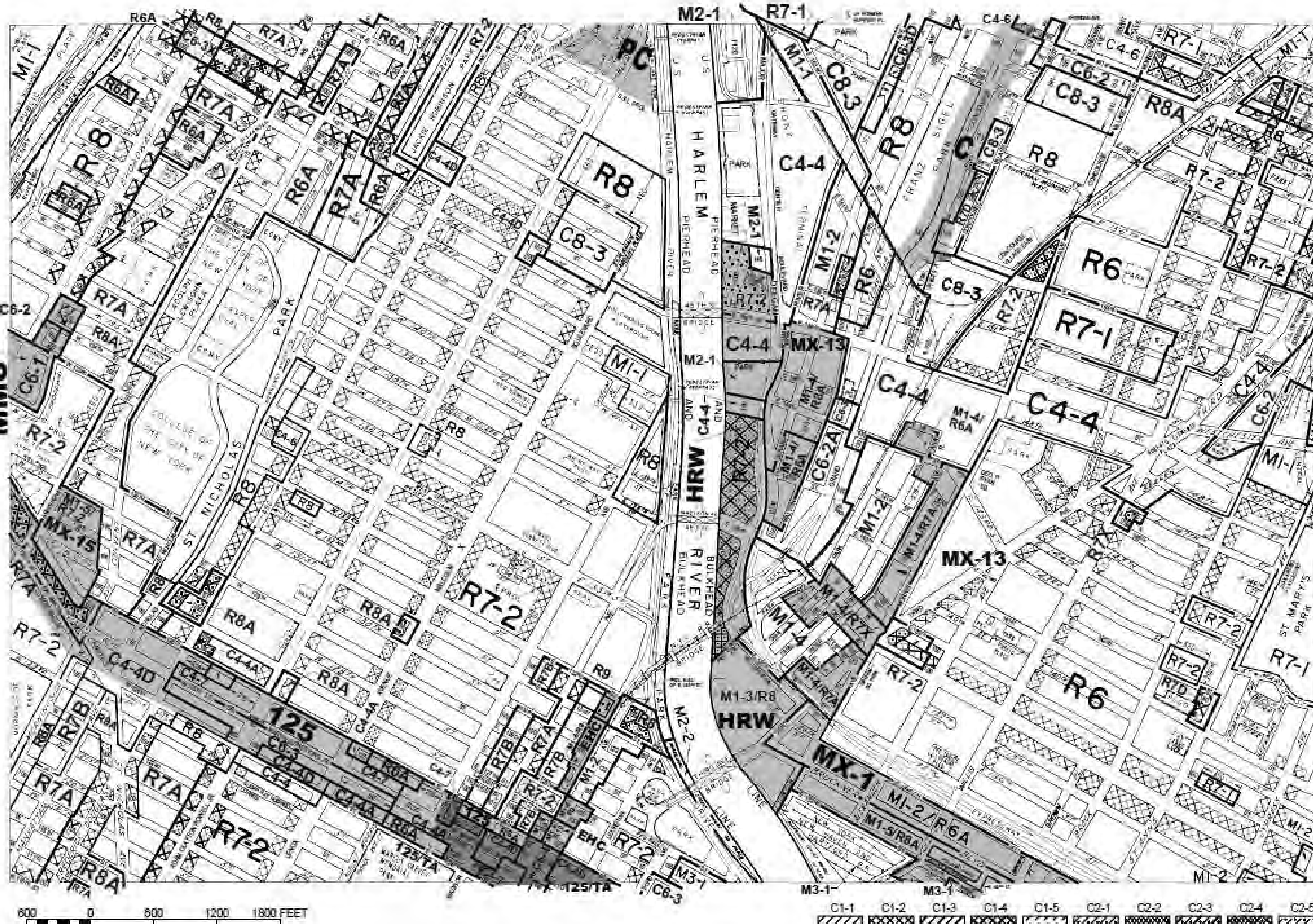
Note: CP Activities are in **Bold**

Key

BCA = Brownfield Cleanup Agreement
CP = Citizen Participation
EC = Engineering Control
ENB = Environmental Notice Bulletin
IC = Institutional Control
RI = Remedial Investigation

APPENDIX I

Zoning Map



NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

ZONING MAP

THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:

The number(s) and/or letter(s) that follows an R, C or M district designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

R — RESIDENTIAL DISTRICT

C — COMMERCIAL DISTRICT

M — MANUFACTURING DISTRICT

SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.

AREA(S) REZONED

Effective Date(s) of Rezoning:

[illegible]

Special Requirements:

For a list of lots subject to CEQR environmental requirements, see APPENDIX C.

For a list of lots subject to "D" restrictive declarations, see APPENDIX D.

For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.

MAP KEY

	3b	3d
5c	**6a**	6c
5d	6b	6d

ZONING MAP **6a**

NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.

APPENDIX J

Project Personnel Resumes

HALEY ALDRICH

SCOTT A. UNDERHILL, P.E.

Senior Environmental Remediation Engineer

EDUCATION

M.S., Environmental Engineering, State University of New York

B.S., Civil Engineering, State University of New York

PROFESSIONAL REGISTRATIONS

1998/ NY: Professional Engineer (Reg. No. 075332)

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120)

8-Hour Hazardous Waste Operations and Emergency Response Supervisor Training

Project Management Training

8-Hour Hazardous Waste Operations and Emergency Response Refresher

Scott has 25 years of experience as an environmental engineer. His diverse background includes the investigation, design, installation, and operation of remediation systems for soil, water, and air; design of water and wastewater treatment facilities; energy studies; and numerical modeling of environmental media. Scott has worked for federal, state and industrial clients throughout the United States, most recently working on the remediation of contaminated sites, such as manufactured gas plant (MGP) and chlorinated solvent, in the Northeast and Midwest.

RELEVANT PROJECT EXPERIENCE

New Jersey Natural Gas, Former MGP Remediation, Toms River, New Jersey. Construction project manager for the construction inspection oversight of a former MGP that consists of the removal and off-site disposal of 6,800 cubic yards of impacted soils, dewatering during excavation that produced over 12,000,000 gallons of water to handle, treat and dispose, and in situ solidification (ISS) of 85,000 cubic yards of soil to depths of 45 feet. Engineering oversight services provided during construction included attending weekly meetings, reviewing contractor submittals, issuing field orders and work change directives, reviewing and responding to change order requests, developing change orders, responding to request for information, and documenting remediation activities in a remedial action report.

Duke Energy, Former MGP Remediation, Cincinnati, Ohio. Lead design engineer for a design/build remediation project at a former MGP that consists of the removal and off-site disposal of 75,000 cubic yards of impacted soils, dewatering during excavations, and ISS of over 150,000 cubic yards of soil to depths of 60 feet below ground surface. Engineering services provided during construction included weekly engineering calls, working with contractor to develop engineering solutions to changes in field conditions, reviewing contractor submittals, issuing field orders, developing change orders, and documenting remediation activities in a construction completion report.

AEP, Former MGP Remediation, Three Rivers, Michigan. Lead design engineer for a design/build remediation project at a former manufactured gas plant (MGP) that consists of the installation of a four-cell sheeting system, installation and operation of a dewatering system that removed and discharged 420,000 gallons of water, and removal and off-site disposal of 5,400 cubic yards of impacted soils. Engineering services included developing full set of design drawings and specifications and provided engineering oversight during construction included weekly engineering calls, working to develop engineering solutions to changes in field conditions, and documenting remediation activities in a construction completion report.

American Electric Power, Former MGP Remediation, Dowagiac, Michigan. Lead design engineer for a design/build remediation project at a former manufactured gas plant (MGP) that consists of the removal and off-site disposal of 1,000 tons of impacted soils. Engineering services included developing full set of design drawings and specifications and provided engineering oversight during construction included weekly engineering calls, working to develop engineering solutions to changes in field conditions, and documenting remediation activities in a construction completion report.

New York State Energy and Gas, Former MGP Remediation, Lockport, New York. Project manager for the remedial design of a former MGP that consists of the removal of 4,000 cubic yards of impacted soils, overburden non-aqueous phase liquid (NAPL) collection trench, 600 linear feet of bedrock grout wall, bedrock NAPL collection wells and the removal of 1,200 cubic yards of impacted sediment from the NYS Barge Canal. Design required submission of work plan, pilot test for grout wall implementation, and New York State Department of Environmental Conservation (NYSDEC) approval of final design drawing, report and specifications. Program director for the engineering oversight services provided during construction which included attending weekly meetings, reviewing contractor submittals, reviewing and approving change orders, responding to request for information, and certifying the construction completion report.

New York State Energy and Gas, Former MGP Remediation, Norwich, New York. Project manager for design and construction management, including design of an ISS system of 52,000 cubic yards of soil and NAPL recovery, in situ chemical oxidation (ISCO) and enhanced in situ bioremediation systems for the off-site groundwater plume. Scott managed preparation of work plans for submission to the NYSDEC and on-site construction management services during remediation of the on-site ISS services. Scott managed the operation and maintenance of the NAPL recovery system from 2009-2016 which resulted in the recovery of almost 100,000 gallons of total fluids or 40,000 gallons of NAPL. Due to the large quantities of NAPL encountered off-site, initiated and obtained NYSDEC approval in 2015 for a modification to the Record of Decision to all for ISS of the off-site soils rather than NAPL recovery and ISCO. Program director for the design package for the ISS treatment of 11,500 cubic yards of soil and NAPL.

New York State Energy and Gas, Former MGP Remediation, Ithaca, New York. Project manager for remedial design of a former MGP plant that consisted of the removal of 11,000 tons of impacted soils within sheet piling down to a depth of 18 feet, temporary relocation of a sewer main, and three injection events for in situ chemical oxidation (ISCO) treatment of coal tar stringers. Design requires submission of work plan, pilot test for ISCO implementation, and NYSDEC approval of final design drawing, report and specifications. Program director for the engineering oversight services provided during construction which included attending weekly meetings, reviewing contractor submittals, reviewing and approving change orders, responding to request for information, and certifying the construction completion report.

New York State Department of Environmental Conservation, New York. Program manager of three standby engineering services contracts issued by the NYSDEC for the investigation, design, construction oversight, and site management of inactive hazardous waste sites within New York. Responsible for overall program management, including budgeting, schedule and quality deliverable to the NYSDEC for over 100 individual work assignments valued at over $35,000,000, which was managed by a team of over 12 project managers. As required, acted as engineer-of-record for many sites, which required approval of feasibility studies, remedial designs, construction completion reports, and periodic review reports.

United States Army Corps of Engineers, Former Scotia Naval Depot, Scotia, New York. Project manager for the design and installation of a 900-foot-long, 45-foot-high and 0.25-foot-thick permeable reactive barrier (PRB) wall containing zero valent iron. The PRB was installed to treat a chlorinated solvent groundwater plume. In addition, four large commercial buildings (80,000 square feet) over a portion of the groundwater plume were fitted with sub-slab depressurization systems to mitigate indoor air concerns. As project manager, Scott was responsible for project deliverables, costs, schedule and quality for the $10MM remediation project.

New York State Department of Environmental Conservation, Scotia New York. Remedial design lead and engineer of record for the development and issuance of two feasibility studies (on-site and off-site) for a large, complex inactive hazardous waste site. An estimated 7,000 gallons of tetrachloroethylene (PCE) released to the environment created a groundwater plume almost ¾ mile in length and impacting numerous residential supply wells. The on-site feasibility study evaluated remedial technologies selecting excavation and in situ thermal treatment for a present worth cost of $14,000,000. The off-site feasibility study selected ISCO/bioremediation and downgradient permeable reactive barrier wall to treat the plume with concentrations greater than 100 μg/L with a present worth cost of $13,000,000. Also designed an aeration system as an interim remedial measure to treat PCE impacts to local surface water detention pond and stream.

New York State Department of Environmental Conservation, Scotia New York. Project manager for the design and construction oversight of the installation of water line to a residential neighborhood affected by a PCE plume. The design consisted of engineering calculations, basis of design, drawings, and specifications for the installation of 8,800 linear feet of water main and 100 residential connections. Construction services included reviewing contractor submittals and invoices, overseeing contractor work, responding to request for information and attending weekly construction meetings.

New York State Energy and Gas, Former MGP Remediation, Homer, New York. Project manager for design and construction management, including design of a permanent watertight barrier wall system, in situ stabilization system within the utility corridor and a temporary water treatment plant as part of the remediation of 25,000 cubic yards of soil. Scott managed preparation of work plans for submission to the NYSDEC and on-site construction management services during remediation. Scott managed air monitoring, scheduling of trucks for off-site disposal of impacted soil, and preparation of daily reports and a final closure report.

New York State Energy and Gas, Former MGP Remediation, Mechanicville, New York. Project manager for design and construction management, including the design of a temporary watertight barrier wall system and temporary water treatment system as part of a remediation of 10,000 cubic yards of soil. The project also included the evaluation and development of alternatives for the recovery of coal tar contamination in the fractured bedrock underlying the site, which included performing multiple long-term NAPL recovery pump tests. Project manager for the engineering oversight services provided during construction which included attending weekly meetings, reviewing contractor submittals, reviewing and approving change orders, responding to request for information, and certifying the construction completion report.

New York State Department of Environmental Conservation, Poughkeepsie, New York. Engineer of record for the design and construction oversight of the thermal treatment of soil and groundwater at an inactive hazardous waste site impacted with chlorinated solvents. The design consisted of engineering calculations, basis of design, drawings, and specifications for the installation 100 electrodes to treat the 0.5-acre plume. Construction services included reviewing contractor submittals and invoices, overseeing contractor work, responding to request for information and attending regular construction meetings.

New York State Department of Environmental Conservation, Poughkeepsie, New York. Project engineer for the design and implementation of a full-scale pilot test of in situ enhanced bioremediation to treatment of soil and groundwater at an inactive hazardous waste site impacted with chlorinated solvents. The pilot study consisted of direct injection of approximately 4,150 gallons of 60% edible vegetable oil (EVO) and 7,825 pounds zero-valent iron (ZVI) at 75 points. Scott managed development of design and bid package, selected and oversaw injection contractor, and reviewed follow-on sampling reports.

United States Army Corps of Engineers, Griffiss Air Force Base, Rome, New York. Project engineer for land farming treatment of over 50,000 cubic yards of petroleum impacted soils. Activities included design of a land farming approach in a performance based contract to successfully remediate the soils within a three-year contract period. Due to an aggressive remediation approach, all soils were remediated within two years.

New York State Electric and Gas, Cortland Homer Manufactured Gas Plant Demolition Procurement, Homer, New York. Project manager for procuring a contractor to demolish the southern portion of the MGP building as defined by the demolition drawings. Work included developing a request for proposal with final demolition drawings, specifications, and bid schedule and overseeing successful completion of the building demolition.

New York State Energy and Gas, Former MGP Remediation, Oneonta, New York. Project engineer for the design of temporary water treatment system as part of the remediation of a former MGP site.

US Air National Guard, Site Management and Project Close-Out for Site 2 – Pesticide Burial Pit, Stewart ANGB, Newburg, New York. Project manager for preparation of a site management plan (SMP) and periodic review report (PRR) for Site 2 - Pesticide Burial Pit Area at the 105th Airlift Wing (AW), New York Air National Guard (ANG), and Stewart International Airport. Due to negotiations with the NYSDEC, Site 2 was delisted.

US Air National Guard, Remedial Design and Remedial Action, Site 15, Hancock ANGB, New York. Project engineer for the bioremediation of a petroleum groundwater plume. The project included the design, installation and operation of a 15 well biosparing system for the on-site source area and the injection of calcium peroxide for the downgradient plume. Responsible for the remedial action work plan, construction completion report and annual periodic review reports.

US Air National Guard, Interim Remedial Action and Focused Feasibility Study, Sites 3 and 6, Stratton ANGB, New York. Project manager for an interim remedial measure and focused feasibility study at Site 3 contaminated with chlorinated solvents, and Site 6 contaminated with petroleum hydrocarbons. At Site 6, managed removal of 6,200 tons of contaminated soil, installation of a horizontal well network below the water table, and injection of a substrate into the groundwater to enhance biodegradation of the contaminants. At Site 3, managing removal of 600 tons of contaminated soils from four hot spots, delineation of the nature and extent of groundwater contamination by installing and sampling new wells.

BP, Pilot-Scale Soil Thermal Treatment, Rumaila, Iraq. Primary author of a pilot scale work plan for the treatment of heavily-impacted soils at the Rumaila Well Field. Work plan included the evaluation of several thermal desorption units capable of being shipped to the location, transportation logistics, compound design for placement of the unit and utility requirements to operate the TDU.

Confidential Client, Lagoon Biocell Design, Maybrook, New York. Project engineer for the design of a membrane lined biocell for the treatment of 25,000 cubic yards of soils impacted with petroleum and pyridine compounds associated with former waste lagoons. Design also included the use of enhanced bioremediation for the contaminants of concern in groundwater. Scott managed development of a design in accordance with the remedial design and remedial action framework developed by the United States Environmental Protection Agency (USEPA).

Chevron, Malabalay Remediation Project, Philippines. Project engineer for remedial design sub-slab depressurization system and vapor barrier for the redevelopment of a gasoline station for a Jolibee Store in Malabalay. Project was completed within budget and on-time given challenging field conditions.

Confidential Client, Solid Waste Disposal Area, Kisladag, Turkey. Project engineer responsible for the development of a feasibility study to evaluate 1,250 cubic meters of petroleum impacted soil as a waste storage area at an active mining facility in Turkey. Remedial alternatives evaluated included land farming, windrow composting, bioremediation in piles, in situ solidification, and capping.

Chevron, Remedial Design and construction Oversight, Service Station/Residential House, Manila, Philippines. Project engineer for the design and implementation of a sub-slab barrier system and vapor collection system at a residential home downgradient from a gas station. Travelled to site to oversee installation and quality control of the first sub-slab barrier system to be installed in the Philippines. Project was recognized by Chevron for being completed with zero accidents.

BEM Systems, Remedial Design and Remedial Action, Site 6, Schenectady ANGB, New York. Project manager for the design and implementation of the in situ chemical oxidation of chlorinated hydrocarbon impacted groundwater at Site 6. Project included supporting the development and issuance of the Record of Decision (ROD), submission and approval of the remedial design and implementation of the injection of sodium permanganate to treat the residual groundwater plume at Site 6.

Navy, Light Non-Aqueous Phase Liquid (LNAPL) Modeling Effort, Pearl Harbor, HI. Provided technical support for investigation and modeling of several large LNAPL plumes at the Shipyard GSA at Pearl Harbor. The modeling effort included applying the van Genuchten method to properly estimating the LNAPL plume size, volume, distribution, transport, and potential release to the harbor.

New York State Department of Environmental Conservation, Remediation System Installation, National Heatset Printing, East Farmingdale, New York. Project engineer supporting the installation and evaluation of a pilot study evaluating the use of an innovative technology - density driven convection (DDC) and in-well stripping – for the treatment of a large chlorinated solvent plume in a sandy aquifer on Long Island.

NYSDEC, Remedial Design and Construction Oversight, North East Alloy and Metals Site, Utica, New York. Project engineer for the design of a sub-slab depressurization system (SSDS) at a residential house above a chlorinated solvent plume. The design utilized two fans and six vacuum points installed over a concrete slab. Oversaw contractor's installation of the system including sealing of the concrete floor cracks and documented installed system met the performance requirements of the design.

Confidential Client, Remediation System Pilot Study and Evaluation, Schenectady, New York. Project engineer responsible for technical evaluation and comparison of a traditional and an innovative thermal enhanced soil vapor extraction system below a concrete slab. The innovative thermal enhanced soil vapor extraction (TESVE) system removed over 99.99% of the volatile compounds and over 96% of the semi volatile compounds in the unsaturated zone and outperformed the traditional TESVE system.

NYSDEC, Remedial Design and Construction Oversight, Utility Manufacturing Site, New Hampstead, New York. Project engineer for the design of nine SSDSs at three industrial buildings above a chlorinated solvent plume. The design utilized 30 fans and 30 vacuum points installed over a concrete slab. Oversaw contractor's installation of the system and documented that the installed system met the performance requirements of the design.

NYSDEC, Remediation System Optimization, Multiple Sites, New York. Provided technical support for the optimization and improvements of a number of remediation systems currently operated under the NYSDEC contract (D004445). System evaluations and improvements included the Becker Electronic pump-and treat system; NOW Corporation pump-and-treat system; SMS Industries biosparge (PhoSTER) system; Kingsbury Landfill pump and treat system, Fort Edward phytoremediation system; and Korkay soil vapor extraction/air sparging system.

NYSDEC, Site Management, Multiple Sites, New York. Provided technical support, final review and engineering certification for periodic reviews on the following sites: Armonk; Becker Electronics; Dzus Fasteners; Fort Edward Landfill; Kingsbury Landfill; Korkay; Liberty Industries; Now Corporation; Old Agway; ServeAll; and SMS Industries.

NYSDEC, Remedial Design, BB&S Treated Lumber Site, Southampton, New York. Project engineer reviewing preliminary design concepts of the groundwater remedy selected in the ROD for this former wood pressure treating site. The site was contaminated primarily with chromium, which was associated with the former wood preservative chromated copper arsenate (CCA). Using results from the pre-design investigations, prepared a Supplemental Feasibility Study (FS) that formed the basis for NYSDEC to amend the ROD for the site. The Amended ROD revised the groundwater remedy for the site from groundwater pump and treat to providing an alternative water-supply to authorized homes and businesses, and ongoing monitoring of plume attenuation.

New York State Department of Environmental Conservation, Construction Oversight, Freeman's Bridge Site, Scotia, New York. Quality assurance/quality control (QA/QC) manager for the certification report of completion for the remediation of contaminated soils using low-temperature thermal desorption at the 34 Freeman's Bridge Road site.

New York State Office of General Services (NYSOGS), Remediation System Optimization, Multiple Sites, New York. Provided technical support for optimization and improvements of a number of remediation systems operated under the NYSOGS contract. System evaluations and improvements included the Bedford Hills pump-and-treat system and the Highland Residential pump-and-treat system.

Bank of New York, Brownfield Remediation Monthly Site Visits, Flushing, New York. Project manager for periodic site visits to review progress of work performed by Creamer Environmental, Inc., the remedial contractor working on behalf of Muss Development. Scott managed the review of the remedial progress in relation to the proposed schedule, budget, and New York State Department of Environmental Conservation approved work plans. Scott managed preparation of a site observation report with information pertaining to construction status; permits, tests, and certifications; subcontracts; change orders; and contractor's completion schedule.

Remediation System Design, Fort Drum Military Reservation, New York. Scott designed a 150-well multiphase extraction and air sparging system for remediation of a 200,000-gallon gasoline-contaminated area and oversaw installation, start-up, and operation of the complex remedial systems.

Solvent Site Remediation, Batavia, New York. Scott designed and implemented injection of whey powder solution for the bioremediation of a chlorinated solvent site.

Railyard, Oneonta, New York. Scott designed, installed, and operated two 8-well soil vapor extraction and air sparging system at an industrial facility.

Railyard Site, North Creek, New York. Scott implemented an innovative application of Fenton's reagent to remediate diesel-contaminated soil at a historic railyard. Was awarded an Engineering Excellence Award by the American Consulting Engineering Council.

Toluene Site, Pittsburgh, Pennsylvania. Scott optimized a 20-well soil vapor extraction and air sparge system at an industrial facility in an urban area.

Town of Windham, Wastewater Treatment Plant, Windham, New York. Scott designed a new 250,000-gpd wastewater treatment plant that used tertiary filtration, microfiltration, and ultraviolet disinfection.

Ski Windham, Wastewater Treatment Plant, Windham, New York. Scott designed tertiary filtration, microfiltration, and ultraviolet disinfection for a treatment plant upgrade.

Wastewater Treatment Plant Upgrade, Endicott, New York. Scott designed solids contact tanks, secondary clarifiers, ultraviolet disinfection system, and pumping station as part of the upgrade of the 10-mgd wastewater treatment plant.

New York State, Gas-to-Energy Studies, New York. Scott evaluated the potential of using landfill gas from Colonie Landfill at Mohawk Paper mills boilers.

New York State, Sludge-to-Energy Study, Glens Falls, New York. Scott evaluated the potential of using dried paper sludge from a paper manufacturer as feed material and energy source at a cement kiln.

Groundwater and Soil Vapor Treatment, Pease AFB, NH, and Loring AFB, Maine. Scott designed, installed, and operated in-situ treatment systems at the former bases, including two groundwater pump-and-treat systems, four soil vapor extraction and air sparging systems, and 16 bioventing systems.

Hydrocarbon Cleanup, Pease AFB, New Hampshire. Scott evaluated and implemented the use of natural attenuation to remediate more than 60 petroleum hydrocarbon plumes.

Remedial Action, Loring AFB, Maine. Field engineer responsible for eight remedial actions including oversight of three subcontractors.

Oak Ridge National Laboratory, RI Report, Oak Ridge, Tennessee. Scott prepared remedial investigation report for a radioactive waste burial.

Radioactive Waste Disposal Sitting Study, Nebraska. Scott provided hydrologic modeling support for the safety analysis and license application permit for siting a low-level radioactive waste disposal site.

PUBLICATIONS

"Subsurface Solution," with C.H. Floess, T. Blazicek, M. Thorpe, S. McDonough and R. Doshi, *American Society of Civil Engineering Magazine*, pp. 76-81,86. September 2012.

"In Situ Chemical Oxidation of Saturated and Unsaturated Petroleum-Containing Soils at a Historic Railroad Site," with A.R. Vitolins, B.R. Nelson, L.M. Thomas, *Contaminated Soil Sediment and Water, International Issue*, pp. 38-40, 2001.

"Development and Application of a Geographically-Based Groundwater Flow and Solute Transport Model," Master's Thesis, State University of New York at Buffalo, 1993.

INVITED LECTURER OR SPEAKER

"Developing a Water Supply System in Rural Haiti," Albany, New York Celebration of Engineer's Week. February 16, 2012.

"Remediation of a Former MGP Site in Norwich, New York: A Case Study," with C. Floess and T. Blazicek, 27th Annual Conference on Contaminated Soils, Amherst, Massachusetts, October 17-20, 2011.

"Developing a Water Supply System in Rural Zimbabwe,". Albany, 7 June 2016, New York Celebration of Engineer's Week. February 15, 2008.

"Remediation of Petroleum-Containing Soil and Groundwater at a Former Rail Yard Locomotive Fueling Area," with S. Compston, B.R. Nelson, L.M. Thomas, 20th Annual Conference on Contaminated Soils, Amherst, Massachusetts, October 18-21, 2004.

"Optimization of an LNAPL Recovery System Based on the Observational Approach," with S. Taylor and A. Ditto, ASCE International Water Resources Engineering Conference in Seattle, Washington, August 8-11, 1999.

"Natural Attenuation of 60 Petroleum Groundwater Plumes at Pease Air Force Base, New Hampshire, USA," with S. Szojka and J. Flagg, 6th FZK/TNO International Conference on Contaminated Soils, Edinburgh, Scotland. May 17-21, 1998.

"Bioremediation of Petroleum Contaminated Soils at Loring Air Force Base, Maine," with P. Forbes and J.A. Mueller, Fourth International Conference on Bioremediation, New Orleans, Louisiana, April 28-May 2, 1997.

"Expedited CERCLA Removal Actions at Loring AFB," with T.R. Wood, D. St. Peter, D.S. Hopkins and J.A. Mueller, Maine. 11th Annual Conference on Contaminated Soils, Amherst, Massachusetts, October 21-24, 1996.

"Innovative Investigative Technique for Characterization of Radioactive Disposal Trenches," with J.B. Cange and S.A. Blair, Superfund XVI Conference, Washington D.C., November 6-8, 1995.

"Development of a Geographically Based Groundwater Flow and Solute Transport Model," with S.W. Taylor and J.V. DePinto, ASCE International Groundwater Symposium, San Antonio, Texas, August 14-18, 1995.

"Modeling Surface Water Flow and Contaminant Flux from a Mixed Waste Burial Ground," with R.A. Lambert and J.B. Cange, 21st Environmental Symposium. San Diego, California, April 18-21, 1995.

"Who's Taking Out the Garbage?", ASCE Environmental Engineering Division Conference. Reno, Nevada, July 6-10, 1991.

JAMES BELLEW

Senior Client Leader

EDUCATION

M.S., Environmental Geology, Queens College
B.S., Geology, Pre-Law, Environmental Science, Binghamton University

PROFESSIONAL SOCIETIES

American Council of Engineering Companies, Member, 2017
Urban Land Institute, Member, 2016
Business Council of New York, Member, 2018

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120)
30-Hour OSHA Construction Safety and Heath
8-hour OSHA Site Supervisor Certification
OSHA Confined Space Entry Training Certification
Erosion and Sediment Control, New York, No. 006925
USDOT/IATA Training on the Shipping and/or Transportation of Hazardous Materials

James Bellew is a senior client leader and geologist with experience in bedrock, soil and groundwater investigation and an emphasis on remedial design and implementation and will focus his time at Haley & Aldrich serving the Buildings and Infrastructure markets. His experience also includes completion of numerous Phase I Environmental Site Assessments and Phase II Environmental Site Investigations, development of conceptual site models, site characterization, environmental permitting, environmental compliance reports as well as remedial design and implementation. He has been involved with numerous projects within the New York State Superfund Program, New York State Brownfield Clean-up Program and New York City Office of Environmental Remediation E-Designation Program.

James has designed, estimated and managed large-scale remediation jobs in a variety of settings in the New York/New Jersey metropolitan area. He has performed construction management services on large scale projects requiring abatement of asbestos-containing materials and polychlorinated biphenyls (PCBs). He has direct experience developing and implementing operation, maintenance and monitoring programs for groundwater and soil remediation systems.

James has also worked on large scale remediation projects for Manufactured Gas Product (MGP) in the lower New York Region from former operations associated with National Grid and Con Edison. He has also designed, installed, operated and maintained remedial systems at retail petroleum stations for Hess Amerada, British Petroleum, Sunoco and Shell in addition to providing operation and maintenance programs for chemical injection and petroleum systems for New York State Department of Environmental Conservation (NYSDEC) Superfund and Environmental Protection Agency (EPA) Superfund Sites.

RELEVANT PROJECT EXPERIENCE

Development, Former BP Station, Elmhurst Queens, NY. James was responsible for the preparation of a full environmental impact statement with respect to a mixed-use development proposed in Elmhurst Queens. The work includes a full impact assessment of the proposed construction with respect to the neighborhood, evaluation of green/open spaces for the community and environmental site investigation and remediation services.

New York State Superfund Site, Former Nuhart Plastics Site, New York State Superfund Site, Brooklyn, NY. Senior Project Manager for a feasibility study and remedial planning for a former plasticizer facility with on- and off-site pollutant concerns. Project was a high-profile New York State Superfund Site that required compliance with the

NYSDEC, the New York City Office of Environmental Remediation (NYCOER), and local regulatory agencies. Ongoing work was the operation and maintenance (O&M) activities related to two large groundwater plumes impacted by light non-aqueous liquids (LNAPL) with phthalates and trichloroethene (TCE), which extend downgradient of the Site. Completed the first remedial action design for Lot 57 with is enrolled in the NYCOER E-Designation program. The Site will include two additional developments within the former manufacturing building footprint.

New York State Brownfield Site, Former Delta Metals Site, Brooklyn, NY. Senior Project manager for the remedial investigation and remedial action design for the former Delta Metal Products Company. Project is under the New York State Brownfield Cleanup program as a Participant where TCE and tetrachloroethene (PCE) were encountered in soil and groundwater. James successfully delineated the vertical and lateral extents of the plumes which were identified as an upgradient, on-site and downgradient plume. Investigation results triggered the NYSDEC to utilize its call-out contract to perform a plume trackdown for the immediate area and identify additional Potentially Responsible Parties. The design for an Air Sparge Soil Vapor Extraction system has been accepted and the project is currently in construction.

Manufacturing-Industrial, Hess Amerada, Bogota and Edgewater, NJ. James provided construction management services for the demolition of two waterfront terminals, one each on the Hackensack and Hudson rivers. Demolition included oversight, planning and coordination of activities related to asbestos abatement, demolition of buildings, thirty holding tanks, piping structures, containment structures and storm water structures.

Manufacturing-Industrial, PQ Corporation, Northeastern United States. James designed and implemented a three phased program for handling PCBs containing materials on approximately 100 tank structures at large, active industrial sites, which included coating removal, encapsulation, demolition, and Toxic Substances Control Act (TSCA) remediation. He was responsible for development of the overall program, specifications, drawings, bid packages, construction oversight and project administration until closure. Program also included design and oversight of a new façade and roof upgrades completed concurrently to client operations.

Development, New York State Brownfield Site, Former Cascade Laundry, Brooklyn, NY. James was responsible for environmental and construction management services required to successfully navigate seven-building redevelopment project through the NYSDEC Brownfield Cleanup Program (BCP). Project included site investigation, design, and remediation for development of seven buildings within a 2-acre site in Brooklyn, New York. Remediation included excavation of approximately 40,000 cubic yards of soil, groundwater extraction and treatment, underground storage tank (UST) removal, design and installation of a Sub Slab Depressurization System (SSDS) and ex situ chemical oxidation of groundwater impacted by petroleum.

Development, New York City Brownfield Site - 520-534 West 29th Street, New York, NY. James was responsible for environmental site investigation and remediation activities required to successfully navigate the project through the New York City Office of Environmental Remediation's (NYCOER's) E-Designation and Voluntary Cleanup Programs. Project included demolition of for existing buildings and development of two separate mixed-use buildings.

Development, New York State Brownfield Site, BJ's Wholesale, Brooklyn, NY. James managed construction oversight activities at an 8-acre peninsula in Gravesend Bay being redeveloped by BJ's Wholesale Club (BJ's) into a "big-box" warehouse and parking garage, and a publicly accessible, waterfront open space. Implemented a comprehensive community air monitoring plan (CAMP), managed the design and installation of a passive sub slab depressurization system, and oversaw handling and off-site disposal of impacted material generated by BJ's (the Lessee for the subject site) during their foundation construction activities.

Development, New York State Brownfield Site, Coney Island, Brooklyn, NY. James provided environmental services during the rehabilitation and expansion of a 1970s-era mixed-use complex, which covers an area equivalent to three city block. He facilitated the BCP applications for two adjacent parcels within the complex impacted by historic dry-cleaning uses. Site investigations performed had documented the presence of PCE in soil gas and was delineated over three separate structural slabs in commercial and residential space utilizing a mobile laboratory. He designed and installed two sub-slab depressurization systems and prepared Remedial Investigation Work Plan which outlined work required to delineate the vertical and horizontal extent of the impacted soils, soil vapor and groundwater at both BCP sites. The system was designed with below slab suction pits, remote sensing vacuum monitoring points, and a variable frequency drive blower tied into the monitoring points for optimization and power savings.

Development, New York City Brownfield Site, Hospitals, Memorial Sloan Kettering Cancer Center (MSKCC), New York, NY. Project Manager for environmental remediation for this MSKCC development project. James was directly responsible for subsurface investigation and remediation activities, large MGP gas holder removal (from former Con Edison Operations), UST removal, daily status updates to the NYCOER, implementation of the CAMP and the management, handling, characterization, and off-site disposal of MGP impacted soil and dewatering fluids.

New York State Spill Remediation, Metropolitan Transportation Agency Bridges and Tunnels, New York, NY. James managed investigation for underground storage tank removal, excavation of 600 cubic yards of petroleum impacted soil, design and installation of a groundwater extraction and treatment system and post remediation samples. Implemented the In Situ Chemical Oxidation program for the injection of 54,000 gallons of 8 percent solution Fenton's Reagent and the O&M of the petroleum spill with respect to the Fenton's performance and the plume migration.

Various Public Schools, New York City School Construction Authority, New York, NY. James oversaw environmental remediation proposed for several school development sites, including PS 312, P.S. 281 and PS 27K. Assisted in the design and implementation of the remediation programs for the sites for petroleum spills, PCB TSCA contamination and hazardous lead hot spots.

Development, i.Park Edgewater, Edgewater, NJ. James designed and oversaw the environmental remediation on-site. Implemented the construction plan for remediation of arsenic, pitch- and PCB-impacted soil for excavation and off-site disposal of 20,000 tons. He managed the air monitoring system on-site which consisted of four permanent stations set upwind and downwind on-site for volatile organic compound (VOC) and particulate migration off-site. Also, James performed redesigns throughout the project to keep within the current schedule and budget.

Development, New York State Brownfield, Queens West, Long Island City, NY. Assistant Project Manager for oversight of the Environmental Remediation on-site. James implemented the construction plan for remediation of 20,000 cubic yards of LNAPL on the Site; he assisted in design and oversight of the In Situ Chemical Oxidation mixing on-site. The project was eventually developed into three large towers and a new school.

Manufactured Gas Plant, National Grid, Rockaway, NY. James aided in the design and implementation of the soil characterization plan for MGP impacted sands. After delineation of the contamination plume, helped draft work plans and site layout of the negative pressure tent. He performed and trained the on-site staff on the use of personal air monitoring equipment and provided assistance with design considerations on the installation of a waterloo barrier to be advanced to minus 80 feet below grade surface. James also helped with the design and permitting for the groundwater treatment system installed on-site.

Manufactured Gas Plant, Con Edison, New York, NY. Environmental engineer for responsible party for all environmental issues associated with this job, including transportation and disposal of 8,000 tons of MGP contaminated soil from former Con Edison operations. James scheduled weekly work for all civil and environmental tasks on the job. He was responsible for the design and installation of the dewatering treatment system with a daily discharge of 25,000 gallons per day of MGP-impacted water.

New York State Superfund Project, NYSDEC, Hicksville, NY. James performed O&M and reporting on the Site's Potassium Permanganate Injection system, which was on a timed system; maintained the system, troubleshooting problems and ensuring that the proper ratios were being injected. He performed the fieldwork for analysis and drafted interim reports for the project manager.

Retail Petroleum, New York State Spills Program, Hess Amerada, Various Locations, NY. James designed installed and maintained groundwater and soil vapor remedial systems at over 30 retail petroleum stations for Hess. Responsible for ensuring that the remedial systems were operating properly and performing repairs as necessary during operation. He performed groundwater and soil vapor monitoring and drafted O&M reports for the NYSDEC. Plume size ranged from within the retail station property with monitoring off-site impacts in local neighborhoods greater than a 3-mile radius.

Retail Petroleum, New York State Spills Program, British Petroleum, Various Locations, NY. James designed installed and maintained groundwater and soil vapor remedial systems at over 10 retail petroleum stations for BP. He was responsible for ensuring that the remedial systems were operating properly and performing repairs necessary during operation. He performed groundwater and soil vapor monitoring and drafted O&M reports for the NYSDEC. Plume size ranged from within the retail station property with monitoring off-site impacts in local neighborhoods greater than a 2-mile radius.

Development, 524 West 19th Street, New York, NY (Metal Shutter Homes). Responsible party for all environmental and civil issues associated with this job, including transportation and disposal of 5,000 tons of MGP contaminated soil from former Con Edison operations. James scheduled weekly work for all civil and environmental tasks on the job. He successfully redesigned the grout cutoff wall connections to the installed steel sheeting with a secant wall installed off-site. He provided technical guidance for drilling 4-foot diameter exploratory casings for subsurface anomalies. Additionally, James was responsible for the design and installation of the dewatering treatment system with a daily discharge of 25,000 gallons per day of MGP impacted water.

EPA Superfund Site, Newtown Creek Superfund, Brooklyn, NY. James aided in the design of the pump and treat system installed at Peerless Importers. He also aided in the design and installation of the harbor boom set up. Operated and Maintained groundwater/LNAPL extraction systems on-site and performed monthly site gauging as part of the O&M plan.

MARI C. CONLON

Project Manager

EDUCATION

M.S., Geology, Boston College
B.S., Geology with a minor in Economics and Business, Lafayette College

PROFESSIONAL REGISTRATIONS

NY: Professional Geologist (License No. 000769)

PROFESSIONAL SOCIETIES

Big Apple Brownfield Awards, Co-Chair, 2018-2019
Big Apple Brownfield Awards Nomination Committee, 2016-2017

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120)
10-Hour OSHA Construction Safety
8-Hour OSHA Supervisor of Hazardous Waste (29 CFR 1910.120 & 29 CFR 1926.65)

Mari is a project manager with experience in soil, groundwater and soil vapor investigation and a focus on remedial design and implementation, and will focus her time at Haley & Aldrich serving the environmental and real estate markets. She is also experienced in completion of numerous Phase I Environmental Site Assessments and Phase II Environmental Site Investigations, site characterization, hazardous materials analysis, regulatory closure reports as well as remedial design and implementation.

Mari has experience in composing site closure documentation including Remedial Closure Reports and Noise Installation Reports reviewed by the Office of Environmental Remediation as well as Final Engineering Reports reviewed by the New York State Department of Environmental Conservation. Her background includes developing and complying with approved site management plans overseeing the operation and maintenance of on-site engineering controls and ensuring the protection of human health and the environment.

Mari has also worked on city rezoning proposals by performing work associated with and composing the Hazardous Materials Analysis chapter included in Final Environmental Impact Statements published by New York City Department of Planning. Analysis methods were performed in accordance with the City Environmental Quality Review (CEQR) guidelines for neighborhoods including East New York, Brooklyn, Jerome Avenue, Brooklyn, Inwood, and Manhattan.

RELEVANT PROJECT EXPERIENCE

State and City Agencies

School Construction Authority, Waste Characterization and Excavation Materials Disposal Plan, Brooklyn, New York. Project manager for consulting services for New York Public School 127. Services included composition of an Excavated Materials Disposal Plan, collection of waste characterization samples and preparation of and preparation of a findings and recommendations report.

Department of City Planning, Rezoning Environmental Impact Statement, Bronx, New York. Project lead for analysis and composing the Hazardous Materials Chapter as per City Environmental Quality Review (CEQR) Technical Manual guidelines included in the Final Environmental Impact Statement (FEIS) for an approximately 92-block area primarily along Jerome Avenue and its east-west commercial corridors in the Bronx. The review assessed the potential for the presence of hazardous materials in soil and/or groundwater at both the projected and potential development sites identified in the reasonable worst-case development scenario under the proposed East New York Rezoning Proposal. Procedures involved site inspections and review of historic Sanborn fire insurance maps, city directories and city/state regulatory databases. The assessment identified that each of the 146 projected and potential development sites has some associated concern regarding environmental conditions. As a result, the proposed zoning map actions include (E) designations (E-366) for all privately-held projected and potential development sites.

Department of City Planning, Rezoning Environmental Impact Statement, Brooklyn, New York. Project lead for performance analysis and composing the Hazardous Materials Chapter as per CEQR Technical Manual guidelines included in the FEIS for an approximately 190-block area of East New York, Cypress Hills, and Ocean Hill neighborhoods of Brooklyn, New York. The review assessed the potential for the presence of hazardous materials in soil and/or groundwater at both the projected and potential development sites identified in the reasonable worst-case development scenario under the proposed East New York Rezoning Proposal. Procedures involved site inspections and review of historic Sanborn fire insurance maps, city directories and city/state regulatory databases. The assessment identified that each of the 186 projected and potential development sites has some associated concern regarding environmental conditions. As a result, the proposed zoning map actions include (E) designations (E-366) for all privately-held projected and potential development sites.

Redevelopment and Remediation

Titan Equity Group, Hotel Redevelopment, Bronx, New York. Project manager for a hotel redevelopment in the south Bronx. The site has been assigned New York City Office of Environmental Remediation (NYC OER) E-Designation status for hazardous materials, noise and air quality. Services included completion of a remedial investigation, composition of a Remedial Investigation Report and development of Hazardous Material Remedial Action Work Plan and Air Quality/Noise Remedial Action Plan as per NYC OER requirements.

The Related Companies, Chelsea Mixed-Use Redevelopment, New York, New York. Field geologist for oversight of the remediation of a mixed-use residential and commercial building, the second of a two-building development on 30th Street. Contaminants of concern included volatile and semi-volatile organic compounds associated with historic operations and underground storage tanks (USTs) located on the Site. The Site was given an E-designation (E-142) for hazardous materials and noise as part of the Highline/West Chelsea rezoning proposal. To satisfy the requirements of the E-designation program, soil was excavated to at least 12 feet below grade and bottom endpoint collected showing no contaminants of concern exceeding the New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives (SCO). By achieving Unrestricted Use SCOs, no engineering controls were necessary, although the building slab was included as part of development, and removal of the hazardous materials E-designation was requested.

Tishman Speyer, Long Island City Residential Development, Long Island City, New York. Field geologist for remedial oversight and implementation of a Community Air Monitoring Program during concurrent remediation and development of three Brownfield Cleanup Program (BCP) sites located in Long Island City, New York. The Sites were grossly contaminated with creosote, a carcinogenic chemical formed from the distillation of various tars. Remediation strategies included soil excavation and in-situ soil stabilization. To prevent migration of groundwater off-site, a temporary and later a permanent capture well system was installed on the western boundary of the property. The BCP site located on the western portion of the property left residual contamination in place requiring installation of a sub-slab depressurization system.

Queens West Development Corporation, Queens Waterfront Development, Long Island City, New York. Field geologist for performance of site management post remedial action. Services included annual groundwater monitoring, evaluation of engineering and institutional controls completion and Period Review Reports. In addition to conducting annual site management activities, responsibilities included composing a work plan to evaluate the transition from active sub-slab depressurization systems to passive. Upon NYSDEC approval, active systems were shut down for 30 days prior to a sub-slab vapor sampling event evaluation soil vapor, indoor and outdoor air conditions for potential vapor intrusion risk. As results indicated no evidence of vapor intrusion, continued pressure monitoring was conducted for from the existing monitoring ports for one year assessing whether negative pressure was held by the existing slab by stack-effect or other passive processes.

Jim Beam Brands Co., Brownfield Cleanup Program Remediation Site, Long Island City, New York. Field geologist for oversight of the installation of an Electrical Resistive Heating (ERH) system implemented in order to remediate trichloroethylene groundwater plumes in shallow/intermediate and deep groundwater on- and off-site. The Site, a former stapler manufacturing facility, underwent various remedies, including a Soil Vapor Extraction system, air sparging, ozone injection and chemical oxidation using potassium permanganate injections, which resulted in little reduction to contamination levels and rebounding chlorinated solvents. Components of the ERH system installed included electrodes for delivery of steam, vapor recovery wells, and groundwater monitoring wells. The site is currently under remediation in the state BCP program.

Due Diligence and Site Characterization

Manufacturing Plants, Multiple Investors, Environmental and Compliance Assessment Portfolio United States. Project lead for completion of Phase I Environmental Site Assessments (ESAs) and Limited Compliance Reviews for multiple auto parts manufacturing facilities throughout the United States. Services included completion of Phase I ESAs in accordance with the American Society for Testing and Materials E1527-13 requirements and a limited review of each facility's compliance liabilities including issues pertaining to the Resource Conservation and Recovery Act, Greenhouse Gas Emission Standards and Tier II Emergency and Hazardous Chemical Inventory reporting requirements.

ARM Parking, Environmental Site Assessment and Subsurface Investigation, Brooklyn, New York. Project manager for site assessment and subsurface investigation of parking facility in Sunset Park neighborhood, Brooklyn, New York. Services included ground penetrating radar survey for former and current petroleum USTs, completion of a subsurface investigation of soils and composition of Limited Subsurface Investigation Report.

Spill Consulting

The Trump Organization, Spill Consulting Services, New York, New York. Project manager for consulting services provided after incidental release of calcium carbonate ice rink paint to the Central Park Pond from Wollman Rink. Services included liaising with NYSDEC regarding violations, consent order and required corrective action. Corrective action included designing alterations to the existing on-site drainage plans and routing all meltwater containing paint into the combined sewer system. Coordination was required with property owner, operations personnel, New York City Department of Parks and NYSDEC.

Richmond Gardens Apartments, Spill Management and Closure Services, Staten Island, New York. Project lead responsible for spill closure activities and reporting for Spill 1105661 located at the Richmond Gardens Apartment Complex in the Richmond neighborhood of Staten Island, New York. The spill was opened in 2011 when several underground storage tanks were identified adjacent to the apartments at Jersey Street and Hendricks Avenue. The tanks were cleaned and removed and impacted soils surrounding the tank area excavated to the extent possible. Excavation of all impacted material was not feasible due to the proximity of the tanks to the apartment buildings. Residual contamination in soil and groundwater remained and was monitored through 2016. Upon reviewing the groundwater monitoring data from over 12 consecutive quarters, it was apparent monitored natural attenuation was not a feasible option and an in situ chemical oxidation (ISCO) remedy was approved by NYSDEC. Due to success of the pilot test, the ISCO injection event was implemented utilizing pressure pulse technology to deliver the alkaline activated persulfate solution to the subsurface.

BRIAN FITZPATRICK, CHMM

Corporate Director, Health and Safety

EDUCATION

M.P.A., Environmental Policy, Syracuse University
B.S., Environmental Science, University of Massachusetts-Amherst
A.S., Chemistry, Valley Forge Military Junior College
Commissioned Officer, United States Army

CERTIFICATIONS

Certified Hazardous Materials Manager (Reg. No. 13454)
Certified Department of Transportation Shipper
Certified International Air Transport Authority Shipper

PROFESSIONAL SOCIETIES

Alliance of Hazardous Materials Professionals
Academy of Certified Hazardous Materials Managers, New England Chapter

SPECIAL STUDIES AND COURSES

Department of Transportation
International Air Transport Authority
Incident Commander
Confined Space Entry and Rescue
Radiation Safety Officer
RCRA Hazardous Waste
Massachusetts Industrial Waste Water Operator Grade 2I (expired)

AWARDS

Presidents Club Award (one million hours worked without a recordable injury, Cabot Corporation
Chancellors Award for Excellence, Syracuse University

Brian has over 25 years of experience in developing, implementing, and managing a wide range of environmental, health, and safety (EH&S) solutions for a variety of clients. Brian has served as the Health and Safety Manager and Incident Commander at several research and development sites and has managed extensive programs to maintain and clean contaminated sites under Federal and State regulatory programs. He has provided expertise in managing EH&S programs as a consultant, and has actively developed, implemented, and managed these programs as an EH&S professional for various industries.

Brian is currently working as the Chief Health and Safety Officer for Haley & Aldrich, Inc. He, and his staff, are involved in every project Haley & Aldrich, Inc. undertakes. Brian is involved on several projects, directly overseeing the health and safety on the project site of our staff, our contractors, and the public. Brian also acts as support for our on-site health and safety staff on other larger construction and remediation projects.

Through Brian's leadership our safety culture and focus extend from the top of our organization to each and every Haley & Aldrich employee as well as subconsultants and subcontractors. Utilizing a Behavior Based Safety approach, Haley & Aldrich expects every project team member to play an important role in making our projects safe and has given authority to every Haley & Aldrich employee, subconsultant, and subcontractor to stop any activity at any time for health or safety concerns. Our record illustrates that our hard work is paying off. The company has gone 4 years without a lost time injury, and our TRIR and EMR have consistently improved each of the last 3 years.

RELEVANT PROJECT EXPERIENCE

Haley & Aldrich, Inc., Burlington, Massachusetts. As Chief Health and Safety Officer, Brian has led and facilitated the development and implementation of corporate health and safety (H&S) improvement plans to enhance compliance and improve H&S performance. In Brian's time with Haley & Aldrich, Inc., the company has realized dramatic improvement on H&S goals and in Key Performance Indicators. Brian is responsible for developing a risk competence culture, where our staff are empowered to look for and engage to address risk before anyone is injured. Brian oversees the development, implementation and continuous improvement of all H&S programs for the company. Additional responsibilities include:

- Developing a safety culture through incident reporting, root cause analysis, behavior-based safety, hazard recognition and risk assessment, communication, and developing leaders;
- Monitoring proposed and existing SH&E regulations and legislation to determine their impact on operations and to ensure continued compliance;
- Overseeing the safety, industrial hygiene, and toxicology programs for over 600 staff members engaged in remediation, construction, health and safety, consulting, and general office work across 28 offices in the United States and on assignment to international project sites;
- Continuously seeks to improve H&S performance as measured by the OSHA Incident Rating (IR) and Worker's Compensation Experience Modification Rating (EMR), as well as Leading Indicators developed with the management team; and
- Participating in the corporate audit program as an auditor or lead auditor;

Energy Client, California. As Chief Health and Safety Officer, Brian led and facilitated the Alliance Partnership Safety Council in 2017, is still an active contributor to the council, and hosts routine contractor safety forums for the client. Brian is actively involved in the development and implementation of program safety, health, and environmental (SH&E) plans to ensure safe operations on project sites. Brian developed permits and Health and Safety Plans for large projects and routinely audits the site safety. Additional responsibilities include:

- Driving reporting and behavior-based safety initiatives to support our internal safety culture and developing monthly summary reports to illustrate performance to our client.
- Develop, assess and continuously improve site safety plans and practices, including specific safety protocols for working safely over and around water.
- Worked as an extension of the client's organization to provide assurance that the remedy was completed safely and consistent with client-specific requirements.
- Support on-site safety personnel in ensuring the health and safety of the general public, our staff, and our sub-contracted employees.
- Audits and visits sites to ensure compliance with our internal policies and client-specific requirements.

Energy Client, Ohio. As Chief Health and Safety Officer, Brian supports the project team in developing and executing client and project specific health and safety measures, such as a site specific Health and Safety Plan, Job Hazard Analyses, Industrial Hygiene program, and site specific training. Brian also routinely visits the site to assess current practices and condition and to ensure continuous improvement. Additional responsibilities include:

- Develop, assess, and continuously improve site safety plans and practices, including specific safety protocols to comply with supplemental EH&S requirements such as the Duke Health and Safety Handbook, Environmental Supplemental, and EHS Keys to Life.
- Develop, assess, and continuously improve site safety plans and practices to address the risks associated with the work being performed on site, as well as the environmental conditions and simultaneous operations, including trenching and excavation, hot work, work over and near water, heavy equipment, HAZWOPER, etc.
- Worked as an extension of the client's organization to provide assurance that the remedy was completed safely and consistent with client-specific requirements.
- Support on-site safety personnel in ensuring the health and safety of the general public, our staff, and our sub-contracted employees.
- Audits and visits site to ensure compliance with our internal policies and client-specific requirements.

BRIAN A. FERGUSON

Senior Engineer

EDUCATION

M. S. Geotechnical Engineering, Tufts University, Medford, Massachusetts; 2012

B. S. Civil Engineering, State University of New York - Environmental, Science, and Forestry, Syracuse, New York; 2000

Ass. Science Degree in Applied Science and Technology (Nuclear Engineering), Thomas A. Edison State College, Trenton, New Jersey; 2000

PROFESSIONAL SOCIETIES

Order of the Engineer – 2000

Boston Society of Civil Engineers (BSCE)

American Society of Civil Engineers (ASCE)

SPECIAL STUDIES AND COURSES

American Concrete Institute – Certified Field Technician Certified Grade 1

Radiation Safety and Operations of Nuclear Testing Equipment – Troxler

40-Hour OSHA Hazardous Waste Operations Training (+ 8-Hour annual refresher)

10-Hour OSHA Construction training

Confined Space Entry Training

16-Hour Asbestos Operations and Maintenance

Mr. Ferguson has over six years of experience serving as project engineer on a variety of real estate development projects. His project experience has included monitoring field investigations and performing construction oversight, performing due diligence and engineering analyses, performing geotechnical analyses and developing geotechnical recommendations, and preparing geotechnical reports and project specifications.

In addition to providing engineering design support, Mr. Ferguson has managed and participated in a number of field service activities. Field work has included construction monitoring and documentation of contractors' deep and shallow foundation related construction, including slurry walls, caissons, pile driving, pile cap installation, earthwork, backfilling and compaction, installation of soldier pile and wood lagging support systems, installation of tie backs, reading inclinometers, conducting in-place field unit weight tests, tie-back load testing, seismograph installation, monitoring, and evaluating, and preparation of footing bearing surfaces. Other responsibilities have included site development activities, including placement of utilities and subgrade preparation for roads; observations and testing to determine that work is completed in compliance with contract documents; on-site soil management; sampling of soil and groundwater for chemical laboratory testing and conducting in situ field screening; maintenance of job records including pile driving logs, results of field density tests, records of caisson and footing installations; preparation of daily field reports; in contact with key personnel; and resolution of field related problems.

RELEVANT PROJECT EXPERIENCE

St. Elizabeths Hostpital – West Campus Forensic Evaluations, Washington, D.C. Project Engineer for forensic evaluations on the adaptive reuse of former hospital buildings. Responsibilities included coordination of a field exploration program, including test borings and test pits to obtain subsurface information for project design and construction, overseeing multiple field personnel, subcontractors, assisting with project management, reviewing subcontractors invoices, reviewing and summarizing subsurface data and writing data reports.

TUFTS University, New Central Energy Plant, Medford, MA. Project engineer for a new Central Energy Plant that will house new co-generation steam boilers, centralized chilled water and electrical transformer switchgear that is planned to occupy approximately 20,000 square feet across two or three levels. Responsibilities included coordination of construction monitoring, observing SOE and footing installation, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings.

Lahey Hospital and Medical Center – Stilts Infill Project, Burlington, MA Project Engineer for an addition to the existing Stilts building on the Lahey campus. Responsibilities included coordination and overseeing geotechnical and environmental subsurface investigations, coordination of construction monitoring, observing footing installation, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings.

Gloucester Beauport Hotel, Gloucester, MA Project engineer for a four story hotel with a seawall constructed adjacent to tidal beach. Responsibilities included coordination and overseeing geotechnical and environmental subsurface investigations, coordination of construction monitoring, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings, design and implementation of a sub-slab gas mitigation system.

275 Wyman Street, New Office Building, Waltham, MA. Project engineer for a new office building and parking garage founded on a shallow foundation system. Responsibilities included preparing proposals, assisting with management and planning of a subsurface investigation program, summarizing subsurface data and reviewing geotechnical test boring logs, coordination of construction monitoring and instrumentation monitoring programs, reviewing weekly field construction reports, reviewing and responding to specialty geotechnical design submittals and RFIs by others and attending project meetings.

Suffolk University - 20 Somerset Street, Boston, MA Project engineer for design of 8-story academic building with two levels of below grade finished space. Responsibilities included coordination of construction monitoring, observing SOE and footing installation, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings.

Worcester State University, New Student Housing, Worcester, MA Project engineer for design and construction of a 7-story residence/dining hall with a single level basement and a major site retaining wall structure. Responsibilities included overseeing geotechnical subsurface investigations, provided foundation recommendations and specifications, and prepared a retaining wall contract document. Responsibilities included coordination of construction monitoring, excavation and construction of footings, and soil reuse and management, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings.

University of Massachusetts Boston, General Academic Building No.1, Boston, MA. Project engineer responsible for assisting project manager in preliminary foundation engineering recommendations and construction considerations for a new academic building on a part of Columbia Point, a historic landfill area. Assisted in design phase services that included preparing foundation support design recommendations including the use of high allowable stresses for 190-ft long end-bearing H-piles and application of Slickcoat coating to address downdrag concerns and reduce foundation costs.

Waltham Watch Factory, Waltham, MA project engineer for redevelopment of former watch factory. Responsibilities included construction oversight of new precast parking garage, utilitiy upgrades, soil remediation and management, installation of gas mitigation systems, assisting with project management, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings.

Massachusetts Green High Performance Computing Center, Holyoke, MA. Project engineer for 60,000 sq. ft high level computing center and associated support utilities. Redevelopment of the site included recycling 50,000 cy of construction debris into the site fills at this historic site along the Connecticut River. Responsibilities included coordinating geotechnical and environmental field investigations, coordination of construction monitoring, seismic analysis, reviewing weekly field construction reports, reviewing and responding to geotechnical design submittals and attending project meetings.

The Shops at Riverwood, Hyde Park, MA. The project consisted of the redevelopment of a colonial era paper mill. The multi-building complex was demolished and the concrete and brick from the previous buildings were recycled. The project involved crushing 50,000 cy of brick and concrete and placement of excavated soils and recycled brick and concrete as compacted fill materials to support proposed buildings, pavement areas, and achieve 5 to 9 ft. raises in grade. Field Representative was responsible for management and reuse of brick and concrete stockpiles, in-place density testing, coordination of test pits, installation of soldier pile and versa-lok walls, and backfilling of underground vaults. Remedial activities included: excavation of 5,000 cy of petroleum contaminated soils, on-site cement batching in a pug mill, and placement of compacted recycled materials in roadway areas; delineation, excavation and off-site disposal of TSCA-regulated PCB contaminated soils associated with historical Askarel transformers and dioxin-contaminated soils associated with historical bleaching operations; and disposition of 1,000 tons of paper mill sludge encountered within an abandoned granite-walled sluiceway structure. In addition, assisted with weekly project meetings, maintaining a record of material reuse, and providing weekly field reports.

Harvard Law School, Cambridge, MA. The Harvard Law School project is located on Massachusetts Avenue in Cambridge. The project consisted of a multistory building above ground with 5 levels below ground for a parking garage. Field Representative was responsible for overseeing the installation of slurry walls into bedrock and LBEs with three installation rigs while monitoring the removal of urban fill and transfer to several different receiving facilities from another portion of the site. The slurry walls were constructed into bedrock. Other Field Representative activities were: testing of the slurry, management of the excavated soils, and record keeping of the Contractor’s obstruction and down time of the equipment. In addition, assisted with weekly project meetings, maintaining a record of obstruction and machine time, and providing weekly field reports.

SARAH COMMISSO

Staff Geologist

EDUCATION

B.S., Geological Sciences with a minor in Chemistry, Binghamton University

SPECIAL STUDIES AND COURSES

40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120)
8-Hour OSHA HAZWOPER Refresher Training
10-Hour OSHA Construction Safety Training
8-Hour DOT Hazmat Employee & RCRA Hazardous Waste Generator Training

Sarah is a geologist with experience in remedial site investigations, subsurface investigations, geotechnical drilling investigations, preparation of technical reports, and data collection and analysis. She also has extensive experience with conducting Phase I Environmental Site Assessments and Phase II Environmental Site Assessments, and other forms of environmental due diligence. She has performed soil, groundwater, and soil vapor sampling events, geotechnical drilling projects, and has drafted site investigation plans and reports. Sarah regularly utilizes computer programs such as Microsoft Excel, Microsoft Word, and Adobe Acrobat DC in her daily job functions.

She will focus her time at Haley & Aldrich serving the Building and Infrastructure markets with performing site reconnaissance to observe existing conditions and features, monitor subsurface exploration activities to collect soil, bedrock, groundwater, as well as other pertinent information for project design, and assist in the development of remedial work plans.

RELEVANT PROJECT EXPERIENCE

Environmental Experience

Confidential Environmental Client, 590-594 Myrtle Avenue, Brooklyn, New York. As lead field geologist, Sarah was responsible for the oversight of the excavation and remediation of the property under the New York City Office of Environmental Remediation. During remediation Sarah observed and documented the excavation and proper disposal of on-site soil required for the installation of foundation elements. In addition, she oversaw the proper cleaning and removal of three underground storage tanks encountered during site wide excavation. After excavation was complete, she inspected the installation of a sub-slab vapor barrier and conducted the community air monitoring program during the course of remedial action.

Confidential Environmental Client, Former NuHart Plastics Manufacturing Plant, Brooklyn, New York. Sarah worked as a field geologist for multiple monitoring events which consisted of the removal of light non-aqueous-phase liquid (LNAPL) performed in compliance with the site-specific, New York State Department of Environmental Conservation (NYSDEC)-approved Operation, Maintenance, and Monitoring Plan (OM&M Plan) for the product recovery system. Additionally, she assisted in drafting a Supplemental Remedial Investigation Work Plan to address remaining contamination at the Site and determine a course for remedial action.

Multiple Confidential Clients, Brownfield Cleanup Program Applications and Remedial Investigation Work Plans for NYSDEC. Sarah has completed writing several Brownfield Cleanup Program Applications for various clients in New York State. In writing the applications, Sarah reviewed previous subsurface investigations of the site, and historical information to help get underutilized and abandoned contaminated properties into the Brownfield Cleanup Program to be remediated and redeveloped under NYSDEC. After completing the application, she prepared a Remedial Investigation Work Plan to strategically investigate site contamination so proper Remedial Action can take place.

Confidential Environmental Clients, Excavation Oversight and CAMP Monitoring, Various Sites, Bronx and Brooklyn, New York. Sarah served as field geologist for several projects under the NYC Mayor's Office of Environmental Remediation (NYCOER) program and New York State Brownfield Cleanup Program (NYSBCP). Her responsibilities included performing excavation oversight, air monitoring, vapor barrier installation oversight, and logging trucks for off-site disposal.

Multiple Clients, Phase I Environmental Site Assessments (ESAs) and Due Diligence, Multiple Locations in New York, New Jersey, and Massachusetts. Sarah conducted Phase I ESAs, for buyers on a variety of properties including commercial, industrial, and residential sites in New York, New Jersey, and Massachusetts. She has experience conducting site reconnaissance and reviewing historical site documentation to identify recognized environmental conditions at the sites.

Multiple Clients, Phase II, Multiple Locations, New York. As field geologist, Sarah conducted Phase II ESAs on a variety of different sites. She assisted with the development of sampling plans primarily based off previous environmental investigations and due diligence. Primary responsibilities for Phase II investigations included oversight of the installation of test borings and/or test pits, the installation of groundwater monitoring wells, and soil vapor points.

Geotechnical Engineering Experience

Smithsonian Institution Revitalization of the Historic Core, Washington, D.C. Sarah supported a team providing geotechnical engineering services for the renovation of several Smithsonian Institution buildings adjacent to the National Mall. Sarah was responsible for the oversight of geotechnical borings using hollow-stem augur and mud-rotary techniques as well as rock coring operations. Sarah classified soil samples using the Unified Soil Classification System, analyzed bedrock samples, and analyzed the geology of the Washington D.C. area.

Parcel B Development, Washington, D.C. Sarah was the lead field Geologist for the geotechnical investigation for the development of the Parcel B Site adjacent to the D.C. United Stadium in Washington D.C. Sarah was responsible for the oversight of geotechnical borings using hollow stem augur and mud rotary techniques. She observed and coordinated pressure meter testing of several borings and observed the installation of several groundwater monitoring wells to investigate impacted groundwater on the property. Additionally, based on her soil classifications in the field, she drafted boring logs and analyzed subsurface conditions at the site.

APPENDIX K

Quality Assurance Project Plan

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QUALITY ASSURANCE PROJECT PLAN
40 BRUCKNER BOULEVARD
BRONX, NEW YORK

by
Haley & Aldrich of New York
New York, New York

for
New York State Department of Environmental Conservation
Albany, New York

File No. 0200734-002
October 2021

Executive Summary

This Quality Assurance Project Plan (QAPP) outlines the scope of the quality assurance and quality control (QA/QC) activities associated with the site monitoring activities associated with the Remedial Action Work Plan (RAWP) for 40 Bruckner Boulevard (Site) in the Bronx, New York.

Protocols for sample collection, sample handling and storage, chain-of-custody procedures, and laboratory and field analyses are described herein or specifically referenced to related project documents.

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1. Project Description

This Quality Assurance Project Plan (QAPP) has been prepared as a component of the RAWP for the 40 Bruckner Boulevard Site in the Bronx, New York.

1.1 PROJECT OBJECTIVES

The primary objective for data collection activities is to collect sufficient data necessary to monitor the nature of any remaining soil impacts.

1.2 SITE DESCRIPTION AND HISTORY

The general Site description and Site history is provided in the Site Description and History Summary that accompanies the RAWP.

1.3 LABORATORY PARAMETERS

The laboratory parameters for soil include:

- Target Compound List volatile organic compounds (VOCs) using EPA method 8260B
- Target Compound List semi-volatile organic compounds (SVOCs) using EPA method 8270C
- Total Analyte List (TAL) Metals using EPA method 6010
- Polychlorinated biphenyls (PCBs) using EPA method 8082
- Pesticides using EPA 8081
- Per- and polyfluoroalkyl substances (PFAS) using EPA method 537
- 1,4-Dioxane using EPA method 8260B

Note: 1,4-Dioxane and PFAS sampling techniques will be conducted following the NYSDEC, Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) under NYSDEC Part 375 Remedial Program released in June 2021 and Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC's Part 375 Remedial Programs release June 2019.

Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

1.4 SAMPLING LOCATIONS

The RAWP provides the locations of confirmation soil samples that will be collected.

2. Project Organization and Responsibilities

This section defines the roles and responsibilities of the individuals who will perform the RAWP monitoring activities. A NYSDOH certified analytical laboratory will perform the analyses of environmental samples collected at the Site.

2.1 MANAGEMENT RESPONSIBILITIES

The Project Manager is responsible for managing the implementation of the RAWP and monitoring and coordinating the collection of data. The Project Manager is responsible for technical quality control and project oversight. The Project Manager responsibilities include the following:

- Acquire and apply technical and corporate resources as needed to ensure performance within budget and schedule restraints;
- Review work performed to ensure quality, responsiveness, and timeliness;
- Communicate with the client point of contact concerning the progress of the monitoring activities;
- Assure corrective actions are taken for deficiencies cited during audits of RAWP monitoring activities; and
- Overall Site health and safety plan compliance.

2.2 QUALITY ASSURANCE RESPONSIBILITIES

The Quality Assurance team will consist of a Quality Assurance Officer and the Data Validation staff. Quality Assurance responsibilities are described as follows:

2.2.1 Quality Assurance (QA) Officer

The QA Officer reports directly to the Project Manager and will be responsible for overseeing the review of field and laboratory data. Additional responsibilities include the following:

- Assure the application and effectiveness of the QAPP by the analytical laboratory and the project staff;
- Provide input to the Project Manager as to corrective actions that may be required as a result of the above-mentioned evaluations;
- Prepare and/or review data validation and audit reports.

The QA Officer will be assisted by the data validation staff in the evaluation and validation of field and laboratory generated data.

2.2.2 Data Validation Staff

The data validation staff will be independent of the laboratory and familiar with the analytical procedures performed. The validation will include a review of each validation criterion as prescribed by the guidelines presented in Section 9.2 of this document and be presented in a Data Usability Summary Report (DUSR) for submittal to the QA Officer.

2.3 LABORATORY RESPONSIBILITIES

Laboratory services in support of the RAWP monitoring include the following personnel:

2.3.1 Laboratory Project Manager

The Laboratory Project Manager will report directly to the QA Officer and Project Manager and will be responsible for ensuring all resources of the laboratory are available on an as-required basis. The Laboratory Project Manager will also be responsible for the approval of the final analytical reports.

2.3.2 Laboratory Operations Manager

The Laboratory Operations Manager will report to the Laboratory Project Manager and will be responsible for coordinating laboratory analysis, supervising in-house chain-of-custody reports, scheduling sample analyses, overseeing data review and overseeing preparation of analytical reports.

2.3.3 Laboratory QA Officer

The Laboratory QA Officer will have sole responsibility for review and validation of the analytical laboratory data. The Laboratory QA Officer will provide Case Narrative descriptions of any data quality issues encountered during the analyses conducted by the laboratory. The QA Officer will also define appropriate QA procedures, overseeing QA/QC documentation.

2.3.4 Laboratory Sample Custodian

The Laboratory Sample Custodian will report to the Laboratory Operations Manager and will be responsible for the following:

- Receive and inspect the incoming sample containers;
- Record the condition of the incoming sample containers;
- Sign appropriate documents;
- Verify chain-of-custody and its correctness;
- Notify the Project Manager and Operations Manager of sample receipt and inspection;
- Assign a unique identification number and enter each into the sample receiving log;
- Initiate transfer of samples to laboratory analytical sections; and
- Control and monitor access/storage of samples and extracts.

2.3.5 Laboratory Technical Personnel

The laboratory technical staff will have the primary responsibility in the performance of sample analysis and the execution of the QA procedures developed to determine the data quality. These activities will include the proper preparation and analysis of the project samples in accordance with the laboratory's Quality Assurance Manual (QAM) and associated Standard Operating Procedures (SOP).

2.4 FIELD RESPONSIBILITIES

2.4.1 Field Coordinator

The Field Coordinator is responsible for the overall operation of the field team and reports directly to the Project Manager. The Field Coordinator works with the project Health & Safety Officer (HSO) to conduct operations in compliance with the project Health & Safety Plan (HASP). The Field Coordinator will facilitate communication and coordinate efforts between the Project Manager and the field team members.

Other responsibilities include the following:

- Develop and implement field-related work plans, ensuring schedule compliance, and adhering to management-developed project requirements;
- Coordinate and manage field staff;
- Perform field system audits;
- Oversee quality control for technical data provided by the field staff;
- Prepare and approve text and graphics required for field team efforts;
- Coordinate and oversee technical efforts of subcontractors assisting the field team;
- Identify problems in the field; resolve difficulties in consultation with the Project QAO, and Project Manager; implement and document corrective action procedures; and,
- Participate in preparation of the final reports.

2.4.2 Field Team Personnel

Field Team Personnel will be responsible for the following:

- Perform field activities as detailed in the RAWP and in compliance with the QAPP.
- Immediately report any accidents and/or unsafe conditions to the Site Health & Safety Officer and take reasonable precautions to prevent injury.

3. Sampling Procedures

3.1 SAMPLE CONTAINERS

Sample containers for each sampling task will be provided by the laboratory performing the analysis. The containers will be cleaned by the manufacturer to meet or exceed the analyte specifications established in the U.S. EPA, "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers", April 1992, OSWER Directive #9240.0-0.5A. Certificates of analysis for each lot of sample containers used will be maintained by the laboratory.

The appropriate sample containers, preservation method, maximum holding times, and handling requirements for each sampling task are provided in Table I.

3.2 SAMPLE LABELING

Each sample will be labeled with a unique sample identifier that will facilitate tracking and cross-referencing of sample information:

- Sample Identifier-Month Day Year

Equipment rinse blank and field duplicate samples also will be numbered with a unique sample identifier to prevent analytical bias of field QC samples.

3.3 FIELD QC SAMPLE COLLECTION

3.3.1 Field Duplicate Sample Collection

3.3.1.1 Soil Samples

Soil field duplicates will be collected as specified in the following procedure:

1. Soils will be sampling directly from acetate liners.
2. Soil for VOC analysis will be removed from the sampling device as specified in laboratory requirements.
3. Soil for non-VOC analysis will be removed from the sampling device and collected into clean laboratory provided containers.

4. Custody Procedures

Sample custody is addressed in three parts: field sample collection, laboratory analysis, and final project files. Custody of a sample begins when it is collected by or transferred to an individual and ends when that individual relinquishes or disposes of the sample.

A sample is under custody if:

1. The item is in actual possession of a person;
2. The item is in the view of the person after being in actual possession of the person;
3. The item was in actual possession and subsequently stored to prevent tampering; or
4. The item is in a designated and identified secure area.

4.1 FIELD CUSTODY PROCEDURES

Field personnel will keep written records of field activities on applicable preprinted field forms or in a bound field notebook to record data collecting activities. These records will be written legibly in ink and will contain pertinent field data and observations. Entry errors or changes will be crossed out with a single line, dated, and initialed by the person making the correction. Field forms and notebooks will be periodically reviewed by the Field Coordinator.

The beginning of each entry in the logbook or preprinted field form will contain the following information:

- Date
- Start time
- Weather
- Names of field personnel (including subcontractors)
- Level of personal protection used at the Site
- Names of all visitors and the purpose of their visit.

For each measurement and sample collected, the following information will be recorded:

- Detailed description of sample location,
- Equipment used to collect sample or make measurement and the date equipment was calibrated,
- Time sample was collected,
- Description of the sample conditions,
- Depth sample was collected (if applicable),
- Volume and number of containers filled with the sample; and,
- Sampler's identification.

4.1.1 Field Procedures

The following procedure describes the process to maintain the integrity of the samples:

- Upon collection samples are placed in the proper containers. In general, samples collected for organic analysis will be placed in pre-cleaned glass containers and samples collected for inorganic analysis will be placed in pre-cleaned plastic (polyethylene) bottles.

- Samples will be assigned a unique sample number and will be affixed to a sample label.

- Samples will be properly and appropriately preserved by field personnel in order to minimize loss of the constituent(s) of interest due to physical, chemical, or biological mechanisms.

- Appropriate volumes will be collected to ensure that the appropriate reporting limits can be successfully achieved and that the required QC sample analyses can be performed.

4.1.2 Transfer of Custody and Shipment Procedures

- A chain-of-custody (COC) record will be completed at the time of sample collection and will accompany each shipment of project samples to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until the samples are relinquished to the laboratory. Sample transfer will require the individuals relinquishing and receiving the samples to sign, date and note the time of sample transfer on the COC record.

- Samples will be shipped or delivered in a timely fashion to the laboratory so that holding times and/or analysis times as prescribed by the methodology can be met.

- Samples will be transported in containers (coolers) which will maintain the refrigeration temperature for those parameters for which refrigeration is required in the prescribed preservation protocols.

- Samples will be placed in an upright position and limited to one layer of samples per cooler. Additional bubble wrap or packaging material will be added to fill the cooler. Shipping containers will be secured with strapping tape and custody tape for shipment to the laboratory.

- When samples are split with the NYSDEC representatives, a separate chain-of-custody will be prepared and marked to indicate with whom the samples are shared. The person relinquishing the samples will require the representative's signature acknowledging sample receipt.

- If samples are sent by a commercial carrier, a bill of lading will be used. A copy of the bill of lading will be retained as part of the permanent record. Commercial carriers will not sign the custody record as long as the custody record is sealed inside the sample cooler and the custody tape remains intact.

- Samples will be picked up by a laboratory courier or transported to the laboratory the same day they are collected unless collected on a weekend or holiday. In these cases, the samples will be stored in a secure location until delivery to the laboratory. Additional ice will be added to the cooler as needed to maintain proper preservation temperatures.

4.2 LABORATORY CHAIN-OF-CUSTODY PROCEDURES

A sample custodian will be designated by the laboratory and will have the responsibility to receive all incoming samples. Once received, the custodian will document if the sample is received in good condition (i.e., unbroken, cooled, etc.) and that the associated paperwork, such as chain-of-custody forms have been completed. The custodian will sign the chain-of-custody forms.

The custodian will also document if sufficient sample volume has been received to complete the analytical program. The sample custodian will then place the samples into secure, limited access storage (refrigerated storage, if required). The sample custodian will assign a unique number to each incoming sample for use in the laboratory. The unique number will then be entered into the sample-receiving log with the verified time and date of receipt also noted.

Consistent with the analyses requested on the chain-of-custody form, analyses by the laboratory's analysts will begin in accordance with the appropriate methodologies. Samples will be removed from secure storage with internal chain-of-custody sign-out procedures followed.

4.3 STORAGE OF SAMPLES

Empty sample bottles will be returned to secure and limited access storage after the available volume has been consumed by the analysis. Upon completion of the entire analytical work effort, samples will be disposed of by the sample custodian. The length of time that samples are held will be at least thirty (30) days after reports have been submitted. Disposal of remaining samples will be completed in compliance with all Federal, State and local requirements.

4.4 FINAL PROJECT FILES CUSTODY PROCEDURES

The final project files will be the central repository for all documents with information relevant to sampling and analysis activities as described in this QAPP. The Haley & Aldrich Project Manager will be the custodian of the project file. The project files including all relevant records, reports, logs, field notebooks, pictures, subcontractor reports and data reviews will be maintained in a secured, limited access area and under custody of the Project Director or his designee.

The final project file will include the following:

- Project plans and drawings
- Field data records
- Sample identification documents and soil boring/monitoring well logs
- All chain-of-custody documentation
- Correspondence
- References, literature
- Laboratory data deliverables
- Data validation and assessment reports
- Progress reports, QA reports
- Final report

The laboratory will be responsible for maintaining analytical logbooks, laboratory data and sample chain of custody documents. Raw laboratory data files and copies of hard copy reports will be inventoried and maintained by the laboratory for a period of six (6) years at which time the laboratory will contact the Haley & Aldrich Project Manager regarding the disposition of the project related files.

5. Calibration Procedures and Frequency

5.1 FIELD INSTRUMENT CALIBRATION PROCEDURES

Several field instruments will be used for both on-site screening of samples and for health and safety monitoring, as described in the Health and Safety Plan (HASP). On-site air monitoring for health and safety purposes may be accomplished using a vapor detection device, such as a Photo-ionization Detector (PID).

Field instruments will be calibrated at the beginning of each day and checked during field activities to verify performance. Instrument specific calibration procedures will be performed in accordance with the instrument manufacturer's requirements.

5.2 LABORATORY INSTRUMENT CALIBRATION PROCEDURES

Reference materials of known purity and quality will be utilized for the analysis of environmental samples. The laboratory will carefully monitor the preparation and use of reference materials including solutions, standards, and reagents through well-documented procedures.

All solid chemicals and acids/bases used by the laboratory will be rated as "reagent grade" or better. All gases will be "high" purity or better. All Standard Reference Materials (SRMs) or Performance Evaluation (PE) materials will be obtained from approved vendors of the National Institute of Standards and Technology (formerly National Bureau of Standards), the U.S. EPA Environmental Monitoring Support Laboratories (EMSL), or reliable Cooperative Research and Development Agreement (CRADA) certified commercial sources.

6. Analytical Procedures

Analytical procedures to be utilized for analysis of environmental samples will be based on referenced USEPA analytical protocols and/or project specific SOP.

6.1 FIELD ANALYTICAL PROCEDURES

Field analytical procedures include the qualitative measurement of Volatile Organic Compounds (VOC) during the collection of soil samples.

6.2 LABORATORY ANALYTICAL PROCEDURES

Laboratory analyses will be based on the U.S. EPA methodology requirements promulgated in:

- "Test Methods for Evaluating Solid Waste," SW-846 EPA, Office of Solid Waste, and promulgated updates, 1986.

6.2.1 List of Project Target Compounds and Laboratory Detection Limits

The laboratory reporting limits (RLs) and associated method detection limits (MDLs) for the target analytes and compounds for the environmental media to be analyzed are presented in Table I. MDLs have been experimentally determined by the project laboratory using the method provided in 40 CFR, Part 136 Appendix B.

Laboratory parameters for soil samples are listed in the RAWP. Laboratory parameters for disposal samples will be determined by the disposal facility after an approved facility has been determined.

6.2.2 List of Method Specific Quality Control (QC) Criteria

The laboratory SOPs include a section that presents the minimum QC requirements for the project analyses. Section 7.0 references the frequency of the associated QC samples for each sampling effort and matrix.

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7. Internal Quality Control Checks

This section presents the internal quality control checks that will be employed for field and laboratory measurements.

7.1 FIELD QUALITY CONTROL

7.1.1 Field Blanks

Internal quality control checks will include analysis of field blanks to validate equipment cleanliness. Whenever possible, dedicated equipment will be employed to reduce the possibility of cross-contamination of samples.

7.1.2 Trip Blanks

Trip blanks samples will be prepared by the project laboratory using ASTM Type II or equivalent water placed within pre-cleaned 40 milliliter (ml) VOC vials equipped with Teflon septa. Trip blanks will accompany each sample delivery group (SDG) of environmental samples collected for analysis of VOCs.

Trip blank samples will be placed in each cooler that stores and transports project samples that are to be analyzed for VOCs.

7.2 LABORATORY PROCEDURES

Procedures which contribute to maintenance of overall laboratory quality assurance and control include appropriately cleaned sample containers, proper sample identification and logging, applicable sample preservation, storage, and analysis within prescribed holding times, and use of controlled materials.

7.2.1 Field Duplicate Samples

The precision or reproducibility of the data generated will be monitored through the use of field duplicate samples. Field duplicate analysis will be performed at a frequency of 1 in 20 project samples.

Precision will be measured in terms of the absolute value of the relative percent difference (RPD) as expressed by the following equation:

$$RPD = [|R1-R2|/[(R1+R2)/2]] \times 100\%$$

Acceptance criteria for duplicate analyses performed on solid matrices will be 100% and aqueous matrices will be 35%. RPD values outside these limits will require an evaluation of the sampling and/or analysis procedures by the project QA Officer and/or laboratory QA Director. Corrective actions may include re-analysis of additional sample aliquots and/or qualification of the data for use.

7.2.2 Matrix Spike Samples

Ten percent of each project sample matrix for each analytical method performed will be spiked with known concentrations of the specific target compounds/analytes.

The amount of the compound recovered from the sample compared to the amount added will be expressed as a percent recovery. The percent recovery of an analyte is an indication of the accuracy of an analysis within the site-specific sample matrix. Percent recovery will be calculated for MS/MSD using the following equation.

$$\%\ Recovery = \frac{Spiked\ Sample\ -\ Background}{Known\ Value\ of\ Spike} \times 100\%$$

If the quality control value falls outside the control limits (UCL or LCL) due to sample matrix effects, the results will be reported with appropriate data qualifiers. To determine the effect a non-compliant MS recovery has on the reported results, the recovery data will be evaluated as part of the validation process.

7.2.3 Laboratory Control Sample (LCS) Analyses

The laboratory will perform LCS analyses prepared from Standard Reference Materials (SRMs). The SRMs will be supplied from an independent manufacturer and traceable to NIST materials with known concentrations of each target analyte to be determined by the analytical methods performed. In cases where an independently supplied SRM is not available, the LCS may be prepared by the laboratory from a reagent lot other than that used for instrument calibration.

The laboratory will evaluate LCS analyses in terms of percent recovery using the most recent laboratory generated control limits.

LCS recoveries that do not meet acceptance criteria will be deemed invalid. Analysis of project samples will cease until an acceptable LCS analysis has been performed. If sample analysis is performed in association with an out-of-control LCS sample analysis, the data will be deemed invalid.

Corrective actions will be initiated by the Haley & Aldrich QA Officer and/or Laboratory QA Officer to investigate the problem. After the problem has been identified and corrected, the solution will be noted in the instrument run logbook and re-analysis of project samples will be performed, if possible.

The analytical anomaly will be noted in the sample delivery group (SDG) Case Narrative and reviewed by the data validator. The data validator will confirm that appropriate corrective actions were implemented and recommend the applicable use of the affected data.

7.2.4 Surrogate Compound/Internal Standard Recoveries

For VOCs, surrogates will be added to each sample prior to analysis to establish purge and trap efficiency. Quantitation will be accomplished via internal standardization techniques.

The recovery of surrogate compounds and internal standards will be monitored by laboratory personnel to assess possible site-specific matrix effects on instrument performance.

For semi-volatile organics analyses, surrogates will be added to the raw sample to assess extraction efficiency. Internal standards will be added to all sample extracts and instrument calibration standard immediately before analysis for quantitation via internal standardization techniques.

Method specific quality control (QC) limits are provided in the attached laboratory method SOPs. Surrogate compound/internal standard recoveries that do not fall within accepted QC limits for the analytical methodology performed will have the analytical results flagged with data qualifiers as appropriate by the laboratory and will not be noted in the laboratory report Case Narrative.

To ascertain the effect non-compliant surrogate compound/internal standard recoveries may have on the reported results, the recovery data will be evaluated as part of the validation process. The data validator will provide recommendations for corrective actions including but not limited to additional data qualification.

7.2.5 Calibration Verification Standards

Calibration verification (CV) standards will be utilized to confirm instrument calibrations and performance throughout the analytical process. CV standards will be prepared as prescribed by the respective analytical protocols. Continuing calibration will be verified by compliance with method-specific criteria prior to additional analysis of project samples.

Non-compliant analysis of CV standards will require immediate corrective action by the project laboratory QA officer and/or designated personnel. Corrective action may include re-analysis of each affected project sample, a detailed description of the problem, the corrective action undertaken, the person who performed the action, and the resolution of the problem.

7.2.6 Laboratory Method Blank Analyses

Method blank sample analysis will be performed as part of each analytical batch for each methodology performed. If target compounds are detected in the method blank samples, the reported results will be flagged by the laboratory in accordance with standard operating procedures. The data validator will provide recommendations for corrective actions including but not limited to additional data qualification.

8. Data Quality Objectives

Sampling that will be performed as described in the RAWP is designed to produce data of the quality necessary to achieve the minimum standard requirements of the field and laboratory analytical objectives described below. These data are being obtained with the primary objective to assess levels of contaminants of concern associated with the Site.

The overall project data quality objective (DQO) is to implement procedures for field data collection, sample collection, handling, and laboratory analysis and reporting that achieve the project objectives. The following section is a general discussion of the criteria that will be used to measure achievement of the project DQO.

8.1 PRECISION

8.1.1 Definition

Precision is defined as a quantitative measure of the degree to which two or more measurements are in agreement. Precision will be determined by collecting and analyzing field duplicate samples and by creating and analyzing laboratory duplicates from one or more of the field samples. The overall precision of measurement data is a mixture of sampling and analytical factors. The analytical results from the field duplicate samples will provide data on sampling precision. The results from duplicate samples created by the laboratory will provide data on analytical precision. The measurement of precision will be stated in terms of relative percent difference (RPD).

8.1.2 Field Precision Sample Objectives

Field precision will be assessed through collection and measurement of field duplicate samples at a rate of 1 duplicate per 20 investigative samples. The RPD criteria for the project field duplicate samples will be +/- 100% for soil for parameters of analysis detected at concentrations greater than 5 times (5X) the laboratory reporting limit (RL).

8.1.3 Laboratory Precision Sample Objectives

Laboratory precision will be assessed through the analysis of laboratory control and laboratory control duplicate samples (LCS/LCSD).

8.2 ACCURACY

8.2.1 Definition

Accuracy relates to the bias in a measurement system. Bias is the difference between the observed and the "true" value. Sources of error are the sampling process, field contamination, preservation techniques, sample handling, sample matrix, sample preparation and analytical procedure limitations.

8.2.2 Field Accuracy Objectives

Sampling bias will be assessed by evaluating the results of field equipment rinse and trip blanks. Equipment rinse and trip blanks will be collected as appropriate based on sampling and analytical methods for each sampling effort.

If non-dedicated sampling equipment is used, equipment rinse blanks will be collected by passing ASTM Type II water over and/or through the respective sampling equipment utilized during each sampling effort. One equipment rinse blank will be collected for each type of non-dedicated sampling equipment used for the sampling effort. Equipment rinse blanks will be analyzed for each target parameter for the respective sampling effort for which environmental media have been collected. (Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.)

Trip blank samples will be prepared by the laboratory and provided with each shipping container that includes containers for the collection of samples for the analysis of VOC.

8.3 LABORATORY ACCURACY OBJECTIVES

Analytical bias will be assessed through the use of laboratory control samples (LCS) and Site-specific matrix spike (MS) sample analyses. LCS analyses will be performed with each analytical batch of project samples to determine the accuracy of the analytical system.

One (1) set of MS/MSD analyses will be performed with each batch of twenty (20) project samples collected for analysis to assess the accuracy of the identification and quantification of analytes within the Site-specific sample matrices. Additional sample volume will be collected at sample locations selected for the preparation of MS/MSD samples so that the standard laboratory reporting limits (RLs) are achieved.

The accuracy of analyses that include a sample extraction procedure will be evaluated through the use of system monitoring or surrogate compounds. Surrogate compounds will be added to each sample, standard, blank, and QC sample prior to sample preparation and analysis. Surrogate compound percent recoveries will provide information on the effect of the sample matrix on the accuracy of the analyses.

8.4 REPRESENTATIVENESS

8.4.1 Definition

Representativeness expresses the degree to which sample data represent a characteristic of a population, a parameter variation at a sampling point or an environmental condition. Representativeness is a qualitative parameter that is dependent upon the design of the sampling program. The representativeness criterion is satisfied through the proper selection of sampling locations, the quantity of samples and the use of appropriate procedures to collect and analyze the samples.

8.4.2 Measures to Ensure Representativeness of Field Data

Representativeness will be addressed by prescribing sampling techniques and the rationale used to select sampling locations. Sampling locations may be biased (based on existing data, instrument surveys, observations, etc.) or unbiased (completely random or stratified-random approaches).

8.5 COMPLETENESS

8.5.1 Definition

Completeness is a measure of the amount of valid (usable) data obtained from a measuring system compared to the total amount of the anticipated to be obtained. The completeness goal for all data uses is that a sufficient amount of valid data be generated so that determinations can be made related to the intended data use with a sufficient degree of confidence.

8.5.2 Field Completeness Objectives

Completeness is a measure of the amount of valid measurements obtained from measurements taken in this project versus the number planned. Field completeness objective for this project will be greater than (>) 90%.

8.5.3 Laboratory Completeness Objectives

Laboratory data completeness objective is a measure of the amount of valid data obtained from laboratory measurements. The evaluation of the data completeness will be performed at the conclusion of each sampling and analysis effort.

The completeness of the data generated will be determined by comparing the amount of valid data, based on independent validation, with the total laboratory data set. The completeness goal will be >90%.

8.6 COMPARABILITY

8.6.1 Definition

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another.

8.6.2 Measures to Ensure Comparability of Laboratory Data

Comparability of laboratory data will be measured from the analysis of Standard Reference Materials (SRM) obtained from either EPA Cooperative Research and Development Agreement (CRADA) suppliers or the National Institute of Standards and Technology (NIST). The reported analytical data will also be presented in standard units of mass of contaminant within a known volume of environmental media. The standard units for various sample matrices are as follows:

- Solid Matrices – mg/kg of media (Dry Weight).
- Aqueous Matrices – ng/L for PFAS analyses, ug/L of media for organic analyses, and mg/L for inorganic analyses.

8.7 LEVEL OF QUALITY CONTROL EFFORT

If non-dedicated sampling equipment is used, equipment rinse blanks will be prepared by field personnel and submitted for analysis of target parameters. Equipment rinse blank samples will be analyzed to check for potential cross-contamination between sampling locations that may be introduced during the investigation. One (1) equipment rinse blank will be collected per sampling event to the extent that non-dedicated sampling equipment is used.

If necessary, A separate equipment rinse blank sample will be collected for PFAS using the sample collection procedure described in Section 8.1.1 of the NYSDEC-approved Avangrid Field Sampling Plan. (Note: If dedicated or disposable sampling equipment is used, equipment rinse samples will not be collected as part of that field effort.)

Trip blanks will be used to assess the potential for contamination during sample storage and shipment. Trip blanks will be preserved and handled in the same manner as the project samples. One (1) trip blank will be included along with each shipping container containing project samples to be analyzed for VOC.

Method blank samples will be prepared by the laboratory and analyzed concurrently with all project samples to assess potential contamination introduced during the analytical process.

Field duplicate samples will be collected and analyzed to determine sampling and analytical reproducibility. One (1) field duplicate will be collected for every 20 or fewer investigative samples collected for off-Site laboratory analysis.

Matrix spikes will provide information to assess the precision and accuracy of the analysis of the target parameters within the environmental media collected. One (1) matrix spike/matrix spike duplicate (MS/MSD) will be collected for every 20 or fewer investigative samples per sample matrix.

(Note: Soil MS/MSD samples require triple sample volume for VOC only. Aqueous MS/MSD samples require triple the normal sample volume for VOC analysis and double the volume for the remaining parameters.)

9. Data Reduction, Validation and Reporting

Data generated by the laboratory operation will be reduced and validated prior to reporting in accordance with the following procedures:

9.1 DATA REDUCTION

9.1.1 Field Data Reduction Procedures

Field data reduction procedures will be minimal in scope compared to those implemented in the laboratory setting. The pH, conductivity, temperature, turbidity, DO, ORP and breathing zone VOC readings collected in the field will be generated from direct read instruments. The data will be written into field logbooks immediately after measurements are taken. If errors are made, data will be legibly crossed out, initialed and dated by the field member, and corrected in a space adjacent to the original entry.

9.1.2 Laboratory Data Reduction Procedures

Laboratory data reduction procedures are provided by the appropriate chapter of USEPA, "Test Methods for Evaluating Solid Waste", SW-846, Third Edition. Errors will be noted; corrections made with the original notations crossed out legibly. Analytical results for soil samples will be calculated and reported on a dry weight basis.

9.1.3 Quality Control Data

Quality control data (e.g., laboratory duplicates, surrogates, matrix spikes, and matrix spike duplicates) will be compared to the method acceptance criteria. Data determined to be acceptable will be entered into the laboratory information management system.

Unacceptable data will be appropriately qualified in the project report. Case narratives will be prepared which will include information concerning data that fell outside acceptance limits and any other anomalous conditions encountered during sample analysis.

9.2 DATA VALIDATION

Data validation procedures of the analytical data will be performed by the Haley & Aldrich QA Officer or designee using the following documents as guidance for the review process:

- "U.S. EPA National Functional Guidelines for Organic Data Review", and the "U.S. EPA National Functional Guidelines for Inorganic Data Review".

- The specific data qualifiers used will be applied to the reported results as presented and defined in the EPA National Functional Guidelines. Validation will be performed by qualified personnel at the direction of the Haley & Aldrich QAO. Tier 1 data validation (the equivalent of USEPA's Stage 2A validation) will be performed to evaluate data quality.

- The completeness of each data package will be evaluated by the Data Validator. Completeness checks will be administered on all data to determine that the deliverables are consistent with the NYSDEC Analytical Services Protocol (ASP) Category A and Category B data package requirements. The validator will determine whether the required items are present and request copies of missing deliverables (if necessary) from the laboratory.

9.3 DATA REPORTING

Data reporting procedures will be carried out for field and laboratory operations as indicated below:

- Field Data Reporting: Field data reporting will be conducted principally through the transmission of report sheets containing tabulated results of measurements made in the field and documentation of field calibration activities.

- Laboratory Data Reporting: The laboratory data reporting package will enable data validation based on the protocols described above. The final laboratory data report format will include the QA/QC sample analysis deliverables to enable the development of a data usability summary report (DUSR) based on Department DER-10 Appendix 2B.

10. Performance and System Audits

A performance audit is an independent quantitative comparison with data routinely obtained in the field or the laboratory. Performance audits include two separate, independent parts: internal and external audits.

10.1 FIELD PERFORMANCE AND SYSTEM AUDITS

10.1.1 Internal Field Audit Responsibilities

Internal audits of field activities will be initiated at the discretion of the Project Manager and will include the review of sampling and field measurements. The audits will verify that all procedures are being followed. Internal field audits will be conducted periodically during the project. The audits will include examination of the following:

- Field sampling records, screening results, instrument operating records
- Sample collection
- Handling and packaging in compliance with procedures
- Maintenance of QA procedures
- Chain-of-custody reports

10.1.2 External Field Audit Responsibilities

External audits may be conducted by the Project Coordinator at any time during the field operations. These audits may or may not be announced and are at the discretion of the NYSDEC. The external field audits can include (but are not limited to) the following:

- Sampling equipment decontamination procedures
- Sample bottle preparation procedures
- Sampling procedures
- Examination of health and safety plans
- Procedures for verification of field duplicates
- Field screening practices

10.2 LABORATORY PERFORMANCE AND SYSTEM AUDITS

10.2.1 Internal Laboratory Audit Responsibilities

The laboratory system audits are typically conducted by the laboratory QA Officer or designee on an annual basis. The system audit will include an examination of laboratory documentation including sample receiving logs, sample storage, chain-of-custody procedures, sample preparation and analysis and instrument operating records.

At the conclusion of internal system audits, reports will be provided to the laboratory's operating divisions for appropriate comment and remedial/corrective action where necessary. Records of audits and corrective actions will be maintained by the Laboratory QA Officer.

10.2.2 External Laboratory Audit Responsibilities

External audits will be conducted as required, by the NYSDOH or designee. External audits may include any of the following:

- Review of laboratory analytical procedures
- Laboratory on-site visits
- Submission of performance evaluation samples for analysis

Failure of any of the above audit procedures can lead to laboratory de-certification. An audit may consist of but not limited to:

- Sample receipt procedures
- Custody, sample security and log-in procedures
- Review of instrument calibration logs
- Review of QA procedures
- Review of log books
- Review of analytical SOPs
- Personnel interviews

A review of a data package from samples recently analyzed by the laboratory can include (but not be limited to) the following:

- Comparison of resulting data to the SOP or method
- Verification of initial and continuing calibrations within control limits
- Verification of surrogate recoveries and instrument timing results
- Review of extended quantitation reports for comparisons of library spectra to instrument spectra, where applicable
- Assurance that samples are run within holding times

11. Preventive Maintenance

11.1 FIELD INSTRUMENT PREVENTIVE MAINTENANCE

The field equipment preventive maintenance program is designed to ensure the effective completion of the sampling effort and to minimize equipment down time. Program implementation is concentrated in three areas:

- Maintenance responsibilities
- Maintenance schedules
- Inventory of critical spare parts and equipment

The maintenance responsibilities for field equipment will be assigned to the task leaders in charge of specific field operations. Field personnel will be responsible for daily field checks and calibrations and for reporting any problems with the equipment. The maintenance schedule will follow the manufacturer's recommendations. In addition, the field personnel will be responsible for determining that an inventory of spare parts will be maintained with the field equipment. The inventory will primarily contain parts that are subject to frequent failure, have limited useful lifetimes and/or cannot be obtained in a timely manner.

11.2 LABORATORY INSTRUMENT PREVENTIVE MAINTENANCE

Analytical instruments at the laboratory will undergo routine and/or preventive maintenance. The extent of the preventive maintenance will be a function of the complexity of the equipment.

Generally, annual preventive maintenance service will involve cleaning, adjusting, inspecting and testing procedures designed to deduce instrument failure and/or extend useful instrument life. Between visits, routine operator maintenance and cleaning will be performed according to manufacturer's specifications by laboratory personnel.

Maintenance records will be placed on file at the laboratory and can be made available upon request.

12. Specific Routine Procedures Used to Assess Data Precision, Accuracy, and Completeness

12.1 FIELD MEASUREMENTS

Field generated information will be reviewed by the Field Coordinator and typically include evaluation of bound logbooks/forms, data entry and calculation checks. Field data will be assessed by the Project Coordinator who will review the field results for compliance with the established QC criteria that are specified in Section 7.0 of this QAPP. The accuracy of pH and specific conductance will be assessed using daily instrument calibration, calibration check, and blank data. Accuracy will be measured by determining the percent recovery (% R) of calibration check standards. Precision of the pH and specific conductance measurements will be assessed on the basis of the reproducibility of duplicate readings of a field sample and will be measured by determining the relative percent difference (RPD). Accuracy and precision of the soil VOC screening will be determined using duplicate readings of calibration checks. Field data completeness will be calculated using the following equation:

$$\text{Completeness} = \frac{\text{Valid (usable) Data Obtained}}{\text{Total Data Planned}} \times 100$$

12.2 LABORATORY DATA

Surrogate, internal standard and matrix spike recoveries will be used to evaluate data quality. The laboratory quality assurance/quality control program will include the following elements:

- Precision, in terms of relative percent difference (RPD), will be determined by relative sample analysis at a frequency of one duplicate analysis for each batch of ten project samples or a frequency of 10 percent (10%). RPD is defined as the absolute difference of duplicate measurements divided by the mean of these analyses normalized to percentage.

- Accuracy, in terms of percent recovery (recovery of known constituent additions or surrogate recoveries), will be determined by the analysis of spiked and unspiked samples. MS/MSD will be used to determine analytical accuracy. The frequency of MS/MSD analyses will be one project sample MS/MSD per set of 20 project samples.

- One method blank will be prepared and analyzed with each batch of project samples. The total number of method blank sample analyses will be determined by the laboratory analytical batch size.

- Standard Reference Materials (SRMs) will be used for each analysis. Sources of SRM's include the U.S. EPA, commercially available material from CRADA certified vendors and/or laboratory produced solutions. SRMs, when available and appropriate, will be processed and analyzed on a frequency of one per set of samples.

- Completeness is the evaluation of the amount of valid data generated versus the total set of data produced from a particular sampling and analysis event. Valid data is determined by independent confirmation of compliance with method-specific and project-specific data quality objectives. The calculation of data set completeness will be performed by the following equation.

$$\frac{Number\ of\ Valid\ Sample\ Results}{Total\ Number\ of\ Samples\ Planned}\ X\ 100 = \%\ Complete$$

13. Quality Assurance (QA) Reports

Critically important to the successful implementation of the QA Plan is a reporting system that provides the means by which the program can be reviewed, problems identified, and programmatic changes made to improve the plan.

QA reports to management can include:

- Audit reports, internal and external audits with responses
- Performance evaluation sample results; internal and external sources
- Daily QA/QC exception reports/corrective actions

QA/QC corrective action reports will be prepared by the Haley & Aldrich QA Officer when appropriate and presented to the project and/or laboratory management personnel so that performance criteria can be monitored for all analyses from each analytical department. The updated trend/QA charts prepared by the laboratory QA personnel will be distributed and reviewed by various levels of the laboratory management.

References

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4. United States Environmental Protection Agency, (1992). Specifications and Guidance for Contaminant-Free Sample Containers. OSWER Directive 9240.0-05A, April 1992.

5. United States Environmental Protection Agency. U.S. EPA National Functional Guidelines for Organic Data Review. U.S. EPA 540/R-2017-002.

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7. United States Environmental Protection Agency. Test Methods for Evaluating Solid Waste, Office of Solid Waste, U.S. EPA, SW-846, November 1986, with updates.

8. New York State Department of Environmental Conservation, NYSDEC Analytical Services Protocol (ASP), Bureau of Environmental Investigation, 1991 with updates.

9. New York State Department of Environmental Conservation, NYSDEC, Division of Environmental Remediation, Technical Guidance for Site Investigation and Remediation, DER-10, May 2010.

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TABLES

TABLE I
SUMMARY OF ANALYSIS METHOD, PRESERVATION METHOD, HOLDING TIME, SAMPLE SIZE REQUIREMENTS AND SAMPLE CONTAINERS
40 Bruckner Boulevard
Bronx, NY

Analysis/Method	Sample Type	Preservation	Holding Time	Volume/Weight	Container
Volatile Organic Compounds/8260C	Soil	1 - 1 Vial MeOH/2 Vial Water	14 days	120 mL	3 - 40ml glass vials
Semivolatile Organic Compounds/8270D	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Pesticides/8081B	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Polychlorinated Biphenyls/8082A	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
Metals/6010D	Soil	Cool, 4 ± 2 °C	180 days	60 mL	1 - 2 oz Glass
PFAS 537	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass
1,4-Dioxane 8270	Soil	Cool, 4 ± 2 °C	14 days	250 mL	1 - 8 oz Glass

Notes:
1. Refer to text for additional information.

APPENDIX L

Estimated Remedial Action Project Schedule

Estimated Remedial Action Project Schedule
40 Bruckner Boulevard, Bronx, NY
BCP Project C203146

ESTIMATED PROJECT SCHEDULE		2021			2022												2023					
Task	**Description**	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
1	Design, Investigation and Permitting																					
2	NYSDEC RAWP Review																					
3	45-Day Public Comment Period																					
4	Implementation of RAWP																					
6	Preparation of FER and SMP (if required)																					
7	NYSDEC & NYSDOH Review of FER & SMP (if required)																					
8	Issuance of COC																					

Notes:

1. Schedule is estimated and subject to change.
2. Implementation of RAWP does not include completion of building construction
3. NYSDEC - New York State Department of Environmental Conservation
4. NYSDOH - New York State Department of Health
5. BCP - Brownfield Cleanup Program
6. RAWP - Remedial Action Work Plan
7. FER - Final Engineering Report
8. SMP - Site Management Plan
9. COC - Certificate of Completion
10. COC issuance estimated for June 2023 and prior to December 31, 2023