

Atlantic Chestnut – Lot 1

**250 Euclid Avenue
Brooklyn, Kings County, New York**

Periodic Review Report

Reporting Period: December 28, 2022 through April 28, 2024

NYSDEC Site Number: C224234

AKRF Project Number: 12492

Prepared for:

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P.E. CERTIFICATION

I, Michelle Lapin, am currently a registered professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the Site Management Plan protocols, and I certify that the documentation of site management activities is accurately presented in the Periodic Review Report for the 250 Euclid Avenue site located in Brooklyn, New York, BCP Site No. C224234 (the “Site”).

For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

- a) The institutional controls and engineering controls employed at this Site are unchanged from the date the controls were put in place, or last approved by the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER);
- b) Nothing has occurred that would impair the ability of such control to protect public health and the environment;
- c) Nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control; and
- d) Access to the Site will continue to be provided to NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of this control.

Michelle Lapin, P.E.
NYS Professional Engineer #073934-1

6/28/2024

Date



Signature

EXECUTIVE SUMMARY

This Periodic Review Report (PRR) was prepared on behalf of Atlantic Chestnut Affordable Housing LLC, Atlantic Chestnut I Housing Development Fund Corporation, and Atlantic Chestnut I Associates L.P. (the “Applicant”) by AKRF, Inc. (AKRF) to document post-remediation activities conducted at 250 Euclid Avenue in the East New York neighborhood of Brooklyn, New York (hereinafter referred to as the “Site”). The Site is identified on the New York City Tax Map as Brooklyn Borough Tax Block 4143, Lot 1. Historically, Lot 1 encompassed the entirety of Block 4143. The New York City Department of Finance (NYCDOF) issued a tax lot apportionment in January 2016 to support the redevelopment of the Site, which redefined Lot 1 as Lot 1 (the Site), and Lots 2, and 3.

Atlantic Chestnut Affordable Housing LLC entered into a Brownfield Cleanup Agreement (BCA, Index No. C224234-05-16) with the New York State Department of Environmental Conservation (NYSDEC or the “Department”) on May 26, 2016 as a Volunteer. A BCA Amendment was issued in February 2022, which documented the change of address from 3264 Fulton Street to 250 Euclid Avenue, added Atlantic Chestnut I Associates L.P. and Atlantic Chestnut I Housing Development Fund Corporation as Requestors/Volunteers, documented the change of ownership from Atlantic Chestnut Affordable Housing LLC to Atlantic Chestnut I Housing Development Fund Corporation, and provided proof that the Site is an affordable housing project. A second BCA Amendment was issued in October 2022, which added Atlantic Chestnut I Associates L.P. as a beneficial owner of the Site. A Site Location map is provided as Figure 1. A figure showing the boundaries of the Site is provided as Figure 2.

Investigation and remedial activities at the Site were completed between 2018 and 2022 under the NYSDEC Brownfield Cleanup Program (BCP).

The purpose of this PRR is to document the Site management activities associated with the Site’s Engineering and Institutional Controls and to certify that the controls are being implemented in accordance with the NYSDEC-approved Site Management Plan (SMP) dated December 2022. The reporting period for this PRR is December 30, 2022 through April 30, 2024.

Based on the inspections and data summarized in this report, the following conclusions were developed:

- The IC/EC Certification Form for the Site was completed based on results from Site monitoring and inspections described in this report. The monitoring and inspection findings indicate that all ICs/ECs at the Site remain in place and effective, excepted as noted in this PRR.
- The ECs at the Site are in good condition and performing as designed, including the Site cover system, the SSDS, and the SVE system.
- SVE Performance Evaluation Soil Sampling – Soil samples collected at the location of residual contamination that the SVE system is designed to remediate resulted in low CVOC detections, indicating that the SVE system may be successfully treating remaining contamination in the vadose zone. However, the SVE system vapor samples indicate that contaminant mass is still being removed from the SVE treatment zone. As such, though these sample results may form the basis of an SVE discontinuation request in the future, the SVE system will continue to operate until a formal request is approved.
- Groundwater Contamination Trends and Monitoring Protocol – CVOC concentrations in groundwater samples are exhibiting downward trends and/or consistently low concentrations. Based on the analytical results of the June 2024 quarterly monitoring and sampling event, a formal request may be submitted to discontinue groundwater sampling and abandon the injection wells on the basis that groundwater CVOC concentrations have become asymptotic at levels well below the respective Class GA AWQSS.

In summary, the remedy remains effective and protective of human health and the environment and remains in compliance with the requirements set forth in the SMP. Inspections and maintenance, as required, will continue to be performed in accordance with the SMP.

1.0 INTRODUCTION

This Periodic Review Report (PRR) was prepared on behalf of Atlantic Chestnut Affordable Housing LLC, Atlantic Chestnut I Housing Development Fund Corporation, and Atlantic Chestnut I Associates L.P. (the “Applicant”) by AKRF, Inc. (AKRF) to document pertinent post-remediation activities at the 250 Euclid Avenue in the East New York neighborhood of Brooklyn, New York (hereinafter referred to as the “Site”). The Site is enrolled in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) under Site ID C224234.

The Site is identified on the New York City Tax Map as Brooklyn Borough Tax Block 4143, Lot 1. Historically, Lot 1 encompassed the entirety of Block 4143. The New York City Department of Finance (NYCDOF) issued a tax lot apportionment in January 2016 to support the redevelopment of the Site, which redefined Lot 1 as Lot 1 (the Site), and Lots 2, and 3.

After completion of the remedial work described in the Remedial Action Work Plan (RAWP), some contamination was left at the Site, which is hereafter referred to as “remaining contamination.” A Final Engineering Report (FER) detailing Site remedial activities and the extent of the remaining contamination, and Site Management Plan (SMP) providing detailed descriptions of all procedures required to manage known and potential residual contamination were prepared by AKRF and approved by NYSDEC in December 2022. A Certificate of Completion (CoC) was issued on December 30, 2022.

Institutional and Engineering Controls (ICs and ECs) were incorporated into the Site remedy (and detailed in the FER and SMP) to control exposure to remaining contamination, thereby ensuring protection of public health and the environment. An Environmental Easement (EE) was granted to NYSDEC and recorded with the NYC Office of the City County Register of the City of New York on December 29, 2022 (Kings County Recording Identifier number for the filing is CFRN 2022000464417), which will require compliance with the SMP, and the ICs/ECs placed on the Site.

Ongoing Site management activities are being performed in accordance with the NYSDEC-approved SMP dated December 2022. This PRR summarizes the Site management activities conducted during the reporting period of December 30, 2022 through April 30, 2024.

2.0 SITE BACKGROUND

2.1 Site History

Historic records indicate that the Site was developed with residences and a road in 1887 and with industrial and manufacturing uses, including the Columbia Machine Works and Malleable Iron Company, the Columbia Cable and Electric Corporation, Blue Ridge Farms, Inc., and Chloe Foods Corp., between 1908 and 2012. Blue Ridge Farms, Inc. and Chloe Foods Corp. are listed on multiple federal and state databases. Prior uses that may have contributed to Site contamination include blacksmithing and stamping, a brass foundry, wood working, a blacksmith, a machine shop, tank and engine rooms, an iron works, wire braiding, and cable manufacturing. The Site has remained vacant since a July 2012 fire caused severe structural damage to the former Site buildings on the southern portion of the Site. Demolition of the Site buildings was completed as part of the remedial action between July and December 2016. Past owners of Block 4143, Lot 1 include: Columbia Electric Realty, Inc. in 1980; Avnal, Inc. from 1980 to 1984; Blue Ridge Farms, Inc. from 1984 to 2004; 3301 Atlantic Avenue, LLC from 2004 to 2013; Sapphire Luxury Estates, LLC from 2013 to 2014; Atlantic Chestnut, LLC from 2014 to 2015; Atlantic Chestnut Affordable Housing, LLC from 2015 to June 2021; and Atlantic Chestnut I Housing Development Fund Corporation from June 2021 to present.

2.2 Geology

Prior to development, the stratigraphy of the Site, from the surface down, generally consisted of fill material comprising sand, silt, and gravel with some concrete, brick, asphalt, and coal ash to varying depths up to approximately 12 feet below surface grade, underlain by apparent native sand, silt, gravel and clay up to 110 feet below surface grade. According to geologic maps of the area, bedrock is expected to be in excess of 300 feet below surface grade at the Site and surrounding area.

2.3 Hydrogeology

Based on Site-specific groundwater measurements, depth to groundwater beneath the Site is approximately 30 feet below sidewalk grade. Groundwater flows in a southerly direction beneath the Site and south-adjacent lots. Groundwater elevation and site-specific flow is illustrated on Figure 3.

2.4 Nature and Extent of Contamination Prior to Remediation

The contamination, present in shallow and deep soil/fill, shallow groundwater, and soil vapor across the Site, was related to the Site's historic industrial and manufacturing uses. The results of AKRF's SI, RI, and RDI were compared to NYSDEC Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs), Unrestricted Use Soil Cleanup Objectives (UUSCOs), and/or the Protection of Groundwater Soil Cleanup Objectives (PGWSCOs) for soil, the NYSDEC Class GA Ambient Water Quality Standard and Guidance Values (AWQSGVs) for groundwater, and the New York State Department of Health (NYSDOH) Soil Vapor Intrusion Guidance for soil vapor.

The primary contaminants of concern (COCs) included: the chlorinated volatile organic compounds (CVOCs) tetrachloroethene (PCE) and trichloroethene (TCE) in soil, groundwater, and soil vapor. Additional soil COCs include: the volatile organic compounds (VOCs) cis-1,2-dichloroethene (cis-1,2-DCE) and methylene chloride; the semi-volatile organic compounds (SVOCs) benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene (members of a subset of SVOCs known as polycyclic aromatic hydrocarbons [PAHs]); and the metals arsenic, copper, hexavalent chromium, lead, mercury, and zinc. Additional groundwater COCs include the VOC chloroform,

and the total and/or dissolved metals manganese, iron, and sodium. Additional soil vapor COCs include petroleum- and refrigerant-related compounds.

The elevated detections of PAHs and metals in shallow fill were attributable to historic filling, undocumented discharges due to the on-site fire in 2012, and/or other historic commercial operations at the Site. The presence of petroleum-related compounds in soil vapor were related to underground storage tanks (USTs) and aboveground storage tanks (ASTs) identified during the course of investigation and remediation. The presence of the solvent-related compounds TCE (in shallow and deep soil/fill, shallow groundwater, and soil vapor), PCE (in shallow groundwater and soil vapor), chloroform (in shallow groundwater), and carbon tetrachloride (in soil vapor) were likely related to the historic manufacturing operations at the Site.

3.0 SITE REMEDIATION

3.1 Site Remediation

The Site was remediated in accordance with the remedy selected by NYSDEC, which was outlined in the February 2020 RAWP, April 2020 Decision Document (DD), and the October 2022 Remedy Addendum Letter. The factors considered during the selection of the remedy are those listed in 6 New York Codes, Rules, and Regulations (NYCRR) 375-1.8. The selected remedy consisted of the following items:

1. Installation of support of excavation (SOE) necessary to enable excavation of contaminated soil.
2. Excavation and proper management of on-site soil that exceeded the RRSCOs in the upper 2 feet and soils exceeding the PGWSCOs for CVOCs between 2 and 19 feet below grade. Approximately 34,350 tons of soil were excavated as part of the remedial activities.
3. Removal of one 10,000-gallon AST during building demolition.
4. Removal of two USTs (one 550-gallon gasoline tank and one 250-gallon waste/used oil tank) and related contaminated soil during remedial excavation.
5. Off-site disposal of all soil/fill removed from the Site in accordance with all federal, state, and local rules and regulations for handling, transport, and disposal.
6. Import and on-site placement of 6,430 tons of approved clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) to replace the excavated soil and/or establish the designed development grades as necessary.
7. Collection and analysis of 269 confirmation samples and 14 documentation samples that included site-wide, tank, and hotspot/area of concern endpoint samples across the Site. The sampling was conducted in accordance with Section 5.4 of DER-10.
8. Installation of an active sub-slab depressurization system (SSDS) below the new building foundation to prevent vapor intrusion into the proposed building.
9. Installation and operation of a soil vapor extraction (SVE) system on the south-central portion of the Site to remediate soil with CVOCs above the PGWSCOs at soil boring L1-RI/RDI-SB-11 (Track 4 portion) that could not be feasibly excavated and disposed of off-site.
10. Implementation of an in-situ groundwater treatment program that included one in-situ chemical oxidation (ISCO) injection event conducted in January 2022 to reduce contaminant concentrations in groundwater on the south-central portion of the Site to meet AWQSGVs, and installation of an ISCO system for potential future use in the same area, which shall be used in the event that post-remediation groundwater contaminant concentrations do not achieve the remedial action objectives.
11. Installation of post-remedial groundwater monitoring wells and implementation of a groundwater monitoring protocol to confirm attainment of the remedial action objectives with respect to groundwater contamination.
12. Recording of an EE against the property to implement certain ICs, including: requiring the remedial parties/Site owners to complete and submit a periodic certification of ICs and ECs to the Department; allowing the use and development of the controlled property for Restricted Residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws; restricting the use of groundwater as a source of potable or process water without necessary

water quality treatment, as determined by NYSDOH; and requiring compliance with a Site-specific NYSDEC-approved SMP.

13. Preparation of an SMP for long term management of remaining contamination as required by the EE, including plans for: (1) ICs and ECs, (2) monitoring, (3) operation and maintenance, and (4) reporting.

3.2 Summary of Remaining Contamination

3.2.1 Soil

Soil quality was characterized during the RI and SRI conducted as part of the BCP. Where feasible, soil exceeding the lowest of the PGWSCOs, UUSCOs, and/or RRSCOs was excavated and removed (to varying depths) from the Site in accordance with the RAWP and the DD. Soil endpoint samples were collected from the base of the excavations and portions of the Site were either remediated to a Track 2 cleanup (regions of the Site where endpoint sample results met the RRSCOs and PGWSCOs for CVOCs), or a Track 4 cleanup (regions of the Site where endpoint sample results did not meet that criteria and remaining contamination was left in-place).

3.2.2 Groundwater

Groundwater quality was characterized during RI and SRI investigations conducted as part of the BCP. The groundwater beneath the Site was found to have concentrations of CVOCs, specifically TCE, above the AWQSGVs and groundwater treatment was included as a component of the DD. A groundwater treatment program was completed at the Site to treat elevated concentrations of TCE; however, low-level concentrations exceeding the AWQSGVs remained post-treatment.

Groundwater use at the Site is also subject to the ICs documented within the EE and is restricted for use as a source of potable or process water without necessary water quality treatment as determined by NYSDOH.

4.0 SITE MANAGEMENT REQUIREMENTS OF ICS AND ECS

The SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the remedial action. The following subsections detail the ICs and ECs, their components, and the requirements of each IC and EC to protect human health and the environment from underlying residually contaminated media. A photographic log is provided as Appendix A and includes representative photographs of work conducted during the reporting period.

4.1 Institutional Controls (ICs)

A series of IC are required by the Decision Document to: (1) implement, maintain, and monitor the ECs; (2) prevent future exposure to any remaining contamination; and (3) limit the use and development of the Site to restricted residential, commercial, and/or industrial uses only. Adherence to these ICs is required by the EE and is being implemented under the SMP. ICs identified in the EE may not be discontinued without an amendment to, or an extinguishment of the EE. The ICs include:

1. The Site may be used only for restricted residential, commercial or institutional uses;
2. All ECs must be operated and maintained as specified in this SMP;
3. All ECs on the Site must be inspected and certified at a frequency and in a manner defined in this SMP;
4. The use of groundwater underlying the Site is prohibited without necessary water quality treatment as determined by NYSDOH or the New York City Department of Health and Mental Hygiene (NYCDOHMH) to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from NYSDEC;
5. Any soil vapor or groundwater public health monitoring must be performed as defined in this SMP;
6. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP;
7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
9. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
10. Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the EE;
11. The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated; and
12. In-ground vegetable gardens and farming on the Site are prohibited.

The ICs were adhered to during the reporting period.

4.2 Engineering Controls (ECs)

Since remaining contaminated soil, and groundwater exist beneath the Site, ECs are required to protect human health and the environment. The ECs are detailed in the following sub-sections.

4.2.1 Sub-Slab Depressurization System (SSDS)

An active SSDS was installed to mitigate the potential for sub-slab vapor intrusion into the new building. The SSDS applies negative pressure beneath the building slab. SSDS effluent vapors are exhausted to the atmosphere via discharge stacks.

The SSDS layout is shown on Figure 4 and a process and instrumentation diagram (P&ID) is provided as Figure 5.

The major components of the SSDS include:

- A minimum 6-inch thick gas-permeable aggregate stratum underlain by a non-woven geotextile fabric beneath the entire SSDS treatment area;
- Five slotted polyvinyl chloride (PVC) SSDS legs (L1-VR-1A, L1-VR-1B, L1-VR-1C, L1-VR-1D, and L1-VR-1E) located beneath the northern and western portions of the Site;
- Four slotted PVC SSDS legs (L1-VR-2A, L1-VR-2B, L1-VR-2C, and L1-VR-2D) located beneath the southern and eastern portions of the Site;
- Two sub-slab condensate drains installed on lines L1-VR2A and L1-VR-2B;
- Four vacuum monitoring points (VMPs), MP-1 through MP-4, installed beneath the building slabs to measure induced vacuum;
- Communication and pipe sleeves through concrete foundation elements to facilitate vacuum propagation underneath the entire building slab;
- Two SSDS leg manifolds, one located in the northwestern portion of the Site (L1-VR-1) which combine L1-VR-1A through L1-VR-1E into a 6-inch cast iron riser pipe, and one located in the southeastern portion of the Site (L1-VR-2) which combine L1-VR-2A through L1-VR-2D into a 6-inch cast iron riser pipe;
- Accessories, including: cleanouts, sample ports, vacuum indicators/pressure gauges, flow meters, butterfly valves, and differential pressure switches;
- Riser pipes L1-VR-1 and L1-VR-2, which extend from the manifolds to the 10th and 14th floor roofs, respectively;
- Two roof-mounted fans (L1-SF-1 and L1-SF-2);
- Two 7-foot tall, 6-inch diameter galvanized steel rooftop exhaust stacks fitted with rain caps; and
- A control panel equipped with an alarm station to notify select personnel of alarm conditions.

4.2.2 Soil Vapor Extraction System

An SVE system was installed on the south-central portion of the Site to remediate remaining soil with CVOCs above the PGWSCOs at soil boring L1-RI/RDI-SB-11 that could not be feasibly excavated and disposed of off-site. The major components of the SVE system include:

1. Two 4-inch diameter SVE wells (L1-RA-SVE-01, and L1-RA-SVE-02) constructed with approximately 13 feet of screen (screened from 28 feet to 15 feet below grade) above the observed groundwater interface in the south-central portion of the Site.
2. Four 2-inch diameter groundwater monitoring wells (L1-R1-MW-05R, L1-R1-MW-06R, L1-R1-MW-07R, and L1-R1-MW-08R2) which serve as the VMPs.
3. 4-inch diameter solid subsurface PVC piping connecting the SVE wells to the building interior on the southeastern portion of the Site.
4. Accessories on the individual SVE lines, including throttling valves, sample ports, vacuum/air flow rate reading ports, and pipe cleanouts.
5. A manifold, which combines the two SVE lines into a single 6-inch diameter cast iron pipe, L1-RA-VR-3, on the southeastern portion of the Site.
6. One SVE blower, with a variable frequency drive (VFD) to throttle blower operation to appropriate conditions (vacuum and air flow rate), high temperature and low vacuum sensors, inlet particulate and moisture filters, and an inlet dilution valve.
7. A control panel equipped with a telemetry system to notify select personnel of alarm conditions.
8. A GAC vapor treatment system comprising two 400-pound carbon units in series.
9. A vertical riser, consisting of a 6-inch cast iron pipe extending from the equipment room to an exterior location, located approximately 20 feet from any operable windows or air intakes, and 10 feet above the 11th floor roof surface.
10. One 10-foot tall, 6-inch diameter galvanized steel rooftop exhaust stack fitted with a rain cap.

An SVE system Site plan is provided as Figure 6. An SVE system P&ID are shown as Figure 7.

4.2.3 Groundwater Treatment

An ISCO program consisting of the injection of sodium permanganate, and post-injection groundwater monitoring was selected and approved by NYSDEC, as summarized in the RAWP and DD. If deemed necessary by post-injection groundwater monitoring results, subsequent polishing treatment round(s) may be implemented using the network of permanent injection points that were installed within the proposed new building foundation. The groundwater treatment will occur in accordance with applicable federal, state, and local laws and guidelines, including proper notification of relevant governmental and regulatory agencies.

The ISCO system comprises the following components:

1. Three permanent injection wells (CIW-01, CIW-02, and CIW-03) comprising 2-inch diameter, 10-foot long, 0.020-inch slotted PVC well screen installed directly below the groundwater interface.
2. Underground conveyance tubing comprising dedicated 1-inch Schedule 40 high-density polyethylene (HDPE) piping installed beneath the crawlspace slab, and into an equipment room in the southeastern portion of the building's eastern partial cellar.
3. Aboveground tubing stubbed up within the building cellar to be connected, if necessary in the future, to a manifold comprising individual line valves, threaded

caps, flow meters, pressure gauges, and totalizers to control and document injection parameters during any potential future injection event.

Procedures for operating and maintaining the Contingency ISCO System are documented in the SMP.

5.0 REMEDY PERFORMANCE EVALUATION AND MAINTENANCE

The SMP describes the measures for evaluating the performance and effectiveness of the ICs/ECs. The annual Site-wide inspections, SSDS and SVE system inspections and monitoring, and groundwater monitoring were conducted in accordance with the SMP (except as noted below). The Site management monitoring inspections completed during this reporting period are summarized in the following sections.

5.1 Site-Wide and Site Cover System Inspection

The Site-Wide inspection was conducted on January 4, 2024. Based on the inspection results, all ICs and ECs remain in compliance with the SMP, and remain effective and protective of human health and the environment. The Site-Wide Inspection Log is included in Appendix B.

5.2 Intrusive Site Work

During the reporting period, multiple Site maintenance and construction tasks were conducted that either breached the Site cover system, and/or disturbed the remaining contamination zone. The tasks are detailed in the following sections.

5.2.1 Site Cover Modification

To complete the courtyard improvements as part of the proposed new development, the non-building portion of the Site cover system was modified between June and October 2023. All work was conducted in accordance with the SMP. Formal notifications of invasive work to the Site cover system were submitted to NYSDEC via email in May and June 2023. The Site cover system modifications are shown on Figure 8 and consisted of:

- Temporary excavation and off-site disposal of clean fill to enable installation of utilities (electric and irrigation piping) (see Sections 5.2.1.1 and 5.2.1.2);
- Import and placement of clean fill and topsoil (see Section 5.2.1.3); and
- Installation of impervious material (concrete, stone pavers, and masonry curbing) (see Section 5.2.1.4).

In addition, a formal Excavation Work Plan (EWP) was submitted to NYSDEC in August 2023 to detail the scope and extents of a larger area of courtyard construction, outside of the Site cover system, related to construction of a mechanical equipment concrete pad for a ground floor commercial (supermarket) tenant. In the May and June 2023 email notifications and the August 2023 EWP submittal, the relevant scopes of work and health and safety monitoring requirements were specified.

5.2.1.1 Excavation and Reuse of Existing Site Cover System Materials

Excavation and backfilling/reuse of existing Site cover system clean fill occurred between June 10, 2023 and October 30, 2023. Clean fill that was part of the Site cover system above the demarcation layer was excavated and temporarily stockpiled at grade while electrical or irrigation utility lines, or paving elements such as curbs and curb footings, were installed below grade. The demarcation layer was not breached, and no field-screened evidence of contamination was noted. As such, all excavated soil was backfilled into the excavations from which it originated.

AKRF staff oversaw all excavation and backfilling work and conducted work zone and community air monitoring for dust and VOCs in accordance with the SMP. No exceedances of the work zone particulates or VOC action levels or stop-work levels were noted during construction. The EWP is provided in Appendix C, and daily reports are provided in Appendix L.

5.2.1.2. Off-Site Disposal of Excess Site Cover System Soil

Following excavation and backfilling, approximately 300 cubic yards of Site cover system soil required off-site disposal. As backfill material was required at the adjacent Atlantic Chestnut Lot 2 BCP site (BCP Site ID 224235), requests were submitted to NYSDEC to use the excess materials that met the lower of the PGWSCOs and RRSCOs from the Site for approval as backfill material at the Atlantic Chestnut Lot 2 BCP site. The requests were approved by NYSDEC in September 2023.

In September and October 2023, Monadnock Construction of Brooklyn, New York transported the material from the Site to Atlantic Chestnut Lot 2, during which, AKRF conducted oversight and air monitoring in accordance with the Site's SMP and Atlantic Chestnut Lot 2's RAWP and SMP. Field documentation and a soil transport tracking table are provided in Appendix D.

5.2.1.3. Import of Additional Soil for Courtyard Improvements

Additional soil import was needed to raise the courtyard grade to target elevations and support the landscaped areas. During the reporting period, approximately 1,200 cubic yards of clean fill were sampled, approved by NYSDEC, and imported to the Site for use as planting bed or horticultural soil from Naturcycle of Manorville, New York. The planting bed and horticultural soils included a blend of compost, topsoil, and sand from a NYSDEC Solid Waste-permitted source.

Prior to import activities, AKRF inspected the clean fill at the source facility. The inspection consisted of field screening the designated stockpiles of clean fill using a photoionization detector (PID) and inspecting the stockpile for any visual or olfactory signs of contamination. Following the field screening, which did not indicate any elevated PID readings or visual or olfactory signs of contamination, AKRF collected a two samples (LI-IMP-02 and L1-IMP-03), with each sample comprising a set of multiple grab and composite samples according to the sampling frequencies required in DER-10.

Each sample comprised a five-point composite for analysis of the NYSDEC Part 375 list of SVOCs, pesticides, PCBs, herbicides, metals, and per- and polyfluoroalkyl substances (PFAS) and a grab sample from a representative discrete location for analysis of NYSDEC Part 375 VOCs. Summaries of the sampling results are provided in Appendix E.

All samples met the comparison criteria and NYSDEC issued approval letters for all import requests on August 16, 2023. The import requests and approval documentation are provided in Appendix E.

Import activities occurred in August and September 2023, with AKRF oversight in accordance with the SMP. As the imported material was placed on top of the existing clean soil that was part of the Site cover system, the demarcation layer was not disturbed and did not require replacement.

5.2.1.4. Courtyard Paving

The balance of the courtyard was capped with minimum 6-inch thick concrete paving stones, which form an impervious barrier in those areas. A survey, delineating paved areas from landscaped areas, is provided in Appendix F. Photographs of the work and completed work areas are provided in Appendix A.

5.2.2 Monitoring Well Installation

Two of the permanent two-inch post-remedial groundwater monitoring wells (L1-RA-MW-07, and L1-RA-MW-09) were damaged during courtyard construction and needed to be reinstalled. Reinstallation work occurred on January 3, 2024. Monitoring wells MW-07 was overdrilled and replaced at approximately the same location, while MW-9 was abandoned in accordance with CP-49, and reinstalled at a new location agreed upon with NYSDEC, as the former location was within the building footprint of the Atlantic Chestnut Lot 2 proposed superstructure construction.

Well construction consisted of 10 feet of two-inch schedule 40 PVC well screen straddling the water table with solid riser installed to the ground surface. Following installation, the wells were developed to remove any fines within the well column and to hydraulically connect the wells to the aquifer. The wells were developed until turbidity was below 50 nephelometric turbidity units (NTUs) and well parameters stabilized.

Soil cuttings and purged groundwater generated as part of the well installation work were drummed and are pending disposal; a contained-in determination will be submitted prior to seeking approval from a disposal facility, and off-site disposal of the drums is expected to occur in 3rd quarter 2024.

The well locations are shown on Figure 2. A survey of the new well locations and the groundwater treatment area are in Appendix F. Well construction, development, and sampling logs are provided in Appendix G.

5.2.3 SVE Performance Soil Sampling

On October 27, 2023, a soil boring was advanced at the location of soil boring L1-RI/RDI-SB-11 to assess current soil contamination conditions following SVE operation. Soil samples were collected at depths of 21-23 feet below grade (bg) and 31-32 feet bg, which were the intervals where previous sampling showed remaining contamination. Blind duplicate, field duplicate, and trip blank QA/QC samples were also collected for analysis in accordance with the SMP and Quality Assurance Project Plan (QAPP). The soil samples were placed in laboratory supplied jars and submitted to Eurofins for analysis of CVOCs via EPA Method 8260 with Category B deliverables.

The analytical results showed that no CVOCs were detected above their respective PGWSCOs in either soil sample, with only a trace detection of TCE [0.0039 part per million (ppm)] in the 21-23 feet bg sample.

Though any soil represented by the new samples collected in 2024 indicate that residual soil contamination may have been remediated, the SVE system vapor samples indicate that contaminant mass is still being removed from the vadose zone. As such, though these sample results may form the basis of an SVE discontinuation request in the future, the SVE system will continue to operate until a formal request is approved. The next influent sampling event is scheduled for October 2024.

5.3 Post-Remedial Groundwater Monitoring and Sampling

Groundwater monitoring was not conducted in the 1st and 2nd quarters of 2023, as AKRF submitted a letter to NYSDEC requesting discontinuation of post-remedial groundwater monitoring and sampling. On September 14, 2023, NYSDEC rejected the request and post-remedial groundwater sampling resumed that month. Groundwater monitoring and sampling was conducted in September and December 2023, and March 2024. The next groundwater sampling event was completed on June 25, 2024.

During each sampling event, groundwater samples were collected from monitoring wells L1-RA-MW-05, L1-RA-MW-06, L1-RA-MW-07R2, L1-RA-MW-08R, and L1-RA-MW-09R in accordance with United States Environmental Protection Agency (EPA) low-flow sampling methodology and the Site-specific QAPP (included as Appendix H of the SMP). Matrix spike, matrix spike duplicate, blind duplicate, equipment duplicate, and trip blank QA/QC samples were also collected and submitted for analysis in accordance with the SMP and QAPP. Groundwater samples were collected using dedicated and decontaminated sampling equipment. Prior to collecting the groundwater samples, the depth to groundwater and the total well depth were measured at each of the groundwater monitoring wells using an oil/water interface probe attached to a measuring tape accurate to 0.01 foot. Free phase product was not detected in the groundwater monitoring wells during installation, purging, or sampling. Purging of the wells continued with a submersible pump until water quality indicators stabilized. All purge water from the groundwater monitoring wells was containerized in labeled, New York State Department of Transportation (NYSDOT)-approved, 55-gallon drums for off-site disposal at a permitted facility. Groundwater sampling logs are provided in Appendix G.

The groundwater samples were submitted to Eurofins Environment Testing Northeast LLC of Edison, New Jersey (Eurofins) for analysis of CVOCs by EPA Method 8260D. CVOc sample results in groundwater are summarized in Table 1. Analytical laboratory data reports and Data Usability Summary Reports (DUSRs) are provided in Appendix G. As of the date of this report, all five monitoring wells remain in good condition and are secure within the Site to allow for future sampling events to continue as planned.

5.3.1 Groundwater Analytical Results

Groundwater analytical results are included as Table 1.

As depicted below in Chart C1, TCE concentrations have exhibited decreasing trends since the injection events, with all detections during the reporting period remaining at or below approximately 1 microgram per liter ($\mu\text{g/L}$), below the Class GA AWQSGV of 5 $\mu\text{g/L}$.

PCE concentrations during the reporting period also remained at or below 1 $\mu\text{g/L}$, below the Class GA AWQSGV of 5 $\mu\text{g/L}$, as shown in Chart C2.

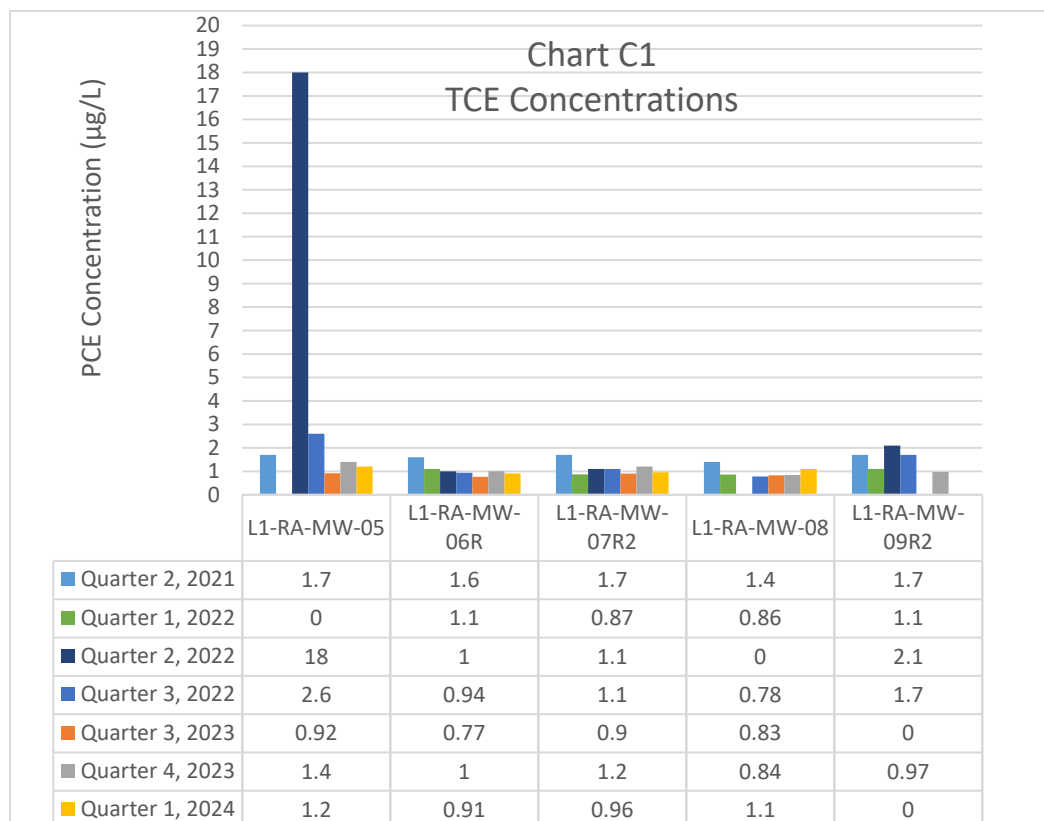
Trans-1,2-DCE concentrations during the reporting period generally remained at or below 1.8 $\mu\text{g/L}$, except for a detection of 5.7 $\mu\text{g/L}$ in well L1-MW-05R in September 2023, which is slightly above the Class GA AWQSGV of 5 $\mu\text{g/L}$. A summary of trans-1,2-DCE detections is shown in Chart C3.

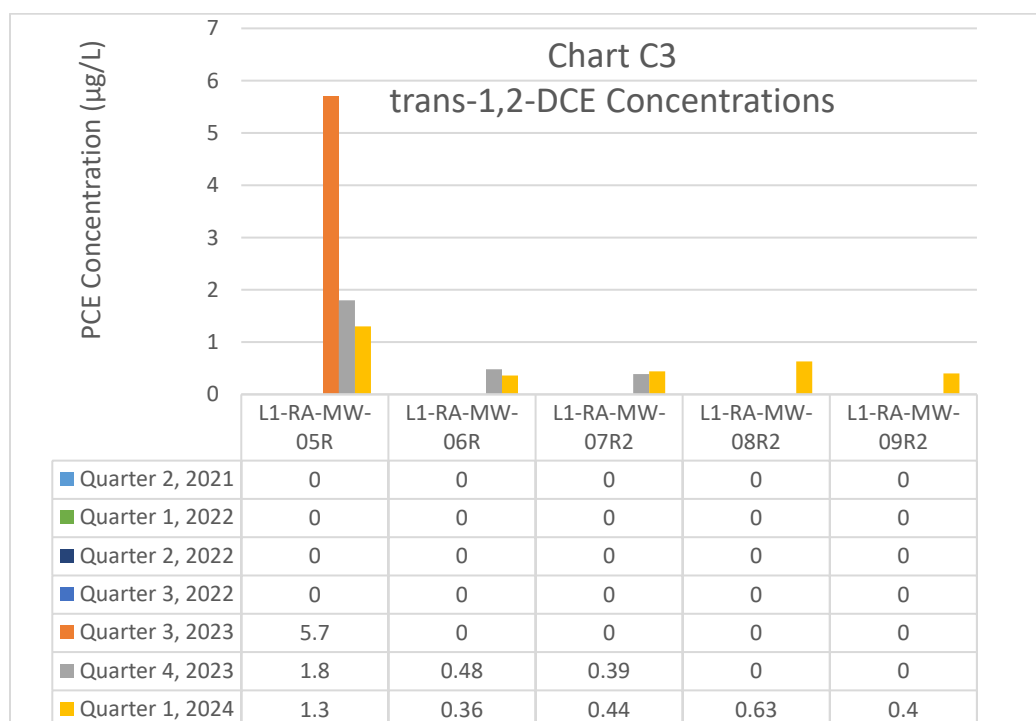
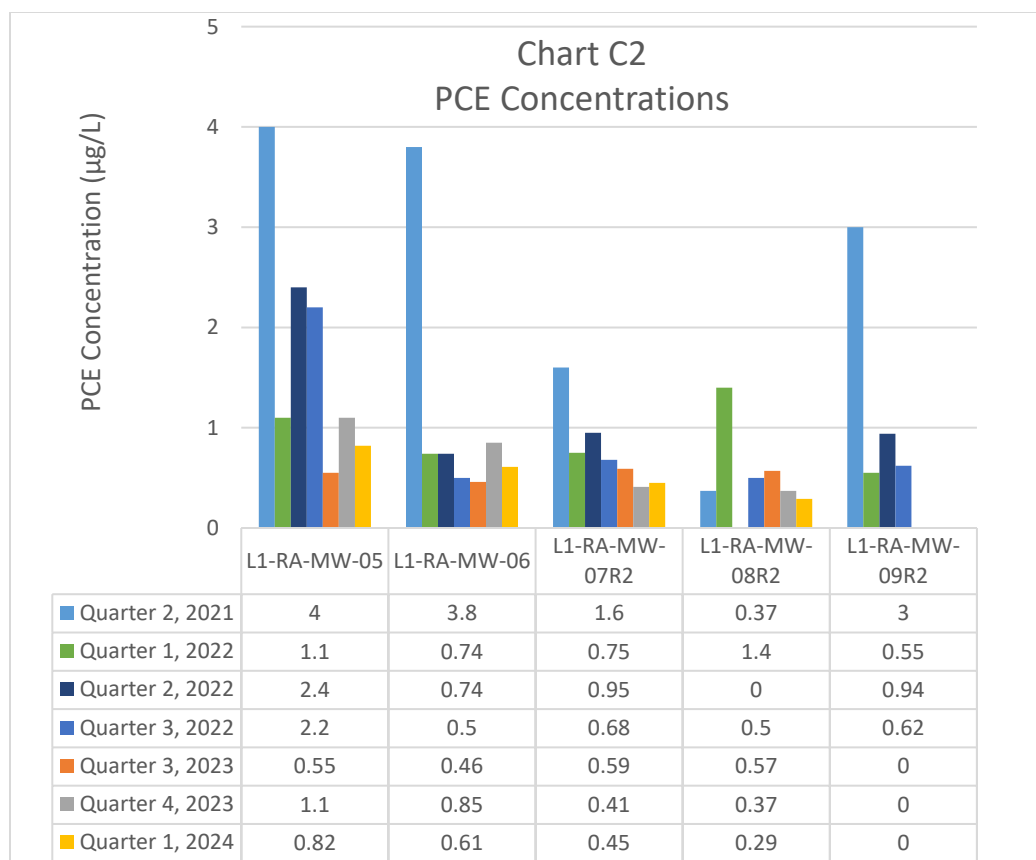
Cis-1,2-DCE and vinyl chloride were not detected in any groundwater samples throughout the reporting period.

Based on the overall groundwater sampling results, it is suspected that sodium permanganate in the saturated zone is continuing to remediate groundwater CVOC contamination. PCE concentrations either decreased or remained at consistently low levels at L1-MW-05R and the remaining wells, indicating that PCE contaminant mass is being remediated. The PCE breakdown process resulted in a spike in TCE concentrations in L1-MW-05R in September 2022, but concentrations have been decreasing since then. TCE concentrations in the remaining wells are also decreasing or consistently low. Trans-1,2-DCE detections lagged behind the PCE/TCE trends, with no trans-1,2-DCE detections until September 2023, when an elevated detection was observed in L1-MW-05R. However, all wells are exhibiting decreases since then.

Pending the results of the June 2024 sampling event, a formal request may be submitted to discontinue groundwater sampling and abandon the injection wells on the basis that

groundwater CVOC concentrations have become asymptotic at levels well below the respective Class GA AWQs.





5.4 SVE system Operation, Maintenance, and Inspections

5.4.1 Routine and Detailed Inspection Results

During the PRR reporting period, AKRF conducted monthly inspections of the SVE system. Routine inspection events consisted of: visual inspections noting individual SVE line readings for air flow rate, vacuum, and PID reading; blower/accessory readings, pre- and post-blower particulate filters vacuum and air flow rate readings; and pre- and post-granular-activated carbon (GAC) treatment VOC screening. The routine inspections also noted any unusual conditions (e.g., unusual odors, spills, leaks, blower noise, etc.) if observed.

In accordance with the SMP, SVE system inspections will continue on a quarterly basis in the subsequent reporting period. The routine and detailed inspections were documented in the inspection logs provided in Appendix H.

5.4.2 SVE system Extracted Vapor Sampling Results

In accordance with the SMP, extracted vapor samples were collected from the SVE system following the initial system startup, approximately six months afterwards in April 2023, and approximately one year after initial system startup in October 2023. AKRF collected vapor samples from the carbon treatment system influent, intermediate, and effluent ports. The samples were collected in dedicated 1-liter Tedlar® bags at an approximate air flow rate of 0.1 liter per minute. Once filled, the Tedlar® bags were removed and the sample port closed. The grab samples were field-screened for VOCs using a calibrated PID. The air samples were submitted under chain-of-custody protocol to Eurofins of Burlington, Vermont and analyzed for VOCs by EPA Method TO-15 with Category B deliverables. For QA/QC purposes, one trip blank (empty, unused Tedlar® bag) was submitted with the field samples for VOC analysis. The complete laboratory analytical data reports and DUSRs are provided in Appendix I. TCE concentrations during the quarterly sampling events are summarized below in Table A.

Table A
SVE system Extracted Vapor Results for TCE

	Influent			Intermediate 1			Effluent		
	October 2022	April 2023	October 2023	October 2022	April 2023	October 2023	October 2022	April 2023	October 2023
TCE µg/m³	180	280	110	620	83	280	230	110	380
Note: µg/m ³ = micrograms per cubic meter									

As noted in Table A, reporting period carbon effluent concentrations ranged from 110 µg/m³ to 380 µg/m³ and carbon influent concentrations ranged from 110 µg/m³ to 280 µg/m³. All VOC results in SVE system extracted vapor samples are summarized in Table 2. The non-linear trend in effluent vapor TCE concentrations is expected to have been

caused by preferential pathways in the carbon vessel. Effluent vapor monitoring results are discussed in Section 5.4.3.

Based on the reporting period analytical data, a carbon changeout was conducted in November 2023, replacing both carbon drums with two new 400-pound carbon vessels.

5.4.3 DAR-1 Analyses

The SVE system effluent sampling data was used to conduct modeling analysis in accordance with NYSDEC Division of Air Resources (DAR) Air Guide-1 (AG-1). The modeling analysis results were then compared to the Annual Guideline Concentrations (AGCs) and Short-term Guideline Concentrations (SGCs). The analysis was performed using NYSDEC DAR-1 Air Guide-1 Policy (Policy DAR-1: Guidelines for the Control of Toxic Ambient Air Contaminants, November 12, 1997), which simulates the atmospheric processes that disperse pollutants from an emissions source to predict concentrations at selected downwind receptor locations. The procedures in the DAR-1 policy are used to model conservative, worst-case annual and short-term concentrations based on the laboratory analytical results and exhaust stack parameters for comparison to the NYSDOH AGCs and SGCs.

The model results indicated that no VOCs detected in the effluent samples would exceed their respective SGCs or AGCs at the closest sensitive receptors. The results of the modeling analysis are provided in Appendix I.

5.5 SSDS Operation, Maintenance, and Inspections

In addition to what was installed at the time of COC issuance, additional work was conducted on the SSDS during the reporting period prior to startup ahead of building occupancy, including:

- Aboveground piping and component installation;
- Aboveground pipe pressure testing, and
- System startup of the SSDS.

Following startup, SSDS inspections were conducted in accordance with the SMP. Documentation of all SSDS tasks is provided as Appendix J.

5.5.1 Aboveground Piping and Component Installation

During the reporting period, the SSDS riser pipes were reconfigured to extend the riser pipe to new termination points on the finished building roofs. Following riser pipe installation, suction fans, VFDs, permanent exhaust stacks, alarms, and some additional gauges were installed between June and September 2023.

5.5.2 Aboveground Pipe Pressure Testing

In November 2023, the entire length of aboveground piping from the cellar to the SSDS fan inlets was pressure tested. The pressure tests confirmed that the cast iron piping can withstand a pressure of 1-2 psi for 30 minutes.

5.5.3 System Startup and Inspections

In December 2023, the SSDS was successfully started up and tested for full functionality, including measurements of induced vacuum at the four vacuum monitoring points to confirm that the SSDS is generating induced vacuum as designed.

During the reporting period, AKRF conducted routine inspections consisting of: visual inspections noting individual SSDS line readings for air flow rate, vacuum, and PID

reading; and fan/accessory readings. The routine inspections also noted any unusual conditions (e.g., unusual gauge readings, fan noises, etc.) if observed.

In accordance with the SMP, SSDS inspections will continue on a quarterly basis in 2024. The routine and detailed inspections were documented in the inspection logs provided in Appendix J.

5.6 Health and Safety Monitoring

As discussed throughout this PRR, HASP protocol was adhered to during all on-site work. The HASP, a component of the SMP, includes requirements for work zone air monitoring and community air monitoring, designated personal protection equipment, and decontamination procedures. The HASP also includes a CAMP, which establishes protocols for VOC and particulate air monitoring to be conducted at the Site perimeter if work zone perimeter concentrations approach the applicable community action levels.

The CAMP required air monitoring during remedial optimization activities to ensure that proper protections were employed to protect workers and the neighboring community. AKRF personnel performed air monitoring during all soil disturbance and soil handling activities using a MiniRae PID and a particulate meter (DustTrak II Aerosol Monitor). At the beginning of each shift with soil handling, background concentrations were recorded.

Sporadic instances of elevated instantaneous work zone VOC and dust readings were noted throughout the fieldwork, but none resulted in work zone or perimeter air monitoring 15-minute action level exceedances. Elevated concentrations were typically caused by humidity/rain, vehicle movement, or water vapor from drilling activities. When elevated instantaneous concentrations were noted, work was either paused to eliminate the cause, or water was used to spray down exposed soil areas. Air monitoring results are included in the daily reports in the relevant work-specific appendices. Daily Report are enclosed as Appendix L.

6.0 SITE MANAGEMENT SCHEDULE

Monitoring and inspections will continue to be performed in accordance with the SMP to evaluate performance and effectiveness of the remedy at the Site. SVE system extracted vapor sampling will continue on a semi-annual basis. Groundwater monitoring, and SVE system and SSDS inspections and monitoring will continue quarterly. In addition to the annual PRR, quarterly reports will be submitted to NYSDEC for review.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this PRR is to document the Site management activities and findings associated with the ICs and ECs, and to certify that the controls are being implemented in accordance with the NYSDEC. The IC/EC Certification Form is provided in Appendix K.

Based on the inspections and data summarized in this report, the following conclusions were developed:

- The IC/EC Certification Form for the Site was completed based on results from Site monitoring and inspections described in this report. The monitoring and inspection findings indicate that all ICs/ECs at the Site remain in place and effective, excepted as noted in this PRR.
- The ECs at the Site are in good condition and performing as designed, including the Site cover system, the SSDS, and the SVE system.
- SVE Performance Evaluation Soil Sampling – Soil samples collected at the location of residual contamination that the SVE system is designed to remediate resulted in low CVOC detections, indicating that the SVE system may be successfully treating remaining contamination in the vadose zone. However, the SVE system vapor samples indicate that contaminant mass is still being removed from the SVE treatment zone. As such, though these sample results may form the basis of an SVE discontinuation request in the future, the SVE system will continue to operate until a formal request is approved.
- Groundwater Contamination Trends and Monitoring Protocol – CVOC concentrations in groundwater samples are exhibiting downward trends and/or consistently low concentrations. Based on the analytical results of the June 2024 quarterly monitoring and sampling event, a formal request may be submitted to discontinue groundwater sampling and abandon the injection wells on the basis that groundwater CVOC concentrations have become asymptotic at levels well below the respective Class GA AWQSS.

In summary, the remedy remains effective and protective of human health and the environment and remains in compliance with the requirements set forth in the SMP. Inspections and maintenance, as required, will continue to be performed in accordance with the SMP.

TABLES

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event		Baseline	Baseline	1-Month Post Injection	1-Month Post Injection	1-Month Post Injection	3-Month Post Injection	3-Month Post Injection	6-Month Post Injection	Post-Rem 01
AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		L1-RI-MW-5_20210427	L1-RI-MW-X01_20210427	L1-RA-MW-05R_20220222	L1-RA-MW-05R_20220223	L1-RA-MW-X05_20220223	L1-RA-MW-05R_20220421	L1-RA-MW-X05_20220421	L1-RA-MW-05R_20220916	L1-RA-MW-05R_20230927
		460-233021-2	460-233021-5	460-252995-3	460-253100-3	460-253100-4	460-256707-1	460-256707-3	460-265698-1	460-289068-1
		4/27/2021 (Baseline)	4/27/2021 (Baseline)	2/22/2022	2/23/2022	2/23/2022	4/21/2022	4/21/2022	9/16/2022	09/27/2023
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
		1	1	1	1	1	1	1	1	1
Compound	AWQSGV	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	CONC Q	
1,1,1-Trichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1-Dichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Carbon Tetrachloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloroform	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.58 J	1.0 U
Cis-1,2-Dichloroethylene	5	1 U	1 U	1 U	1 U	1 U	1	0.95 J	0.32 J	1.0 U
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Tetrachloroethylene (PCE)	5	4	3.6	1 U	1.1	1.2	2.4	2.2	2.2	0.55 J
Trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5.7
Trichloroethylene (TCE)	5	1.7	1.5	1 U	1 U	0.38 J	18	18	2.6	0.92 J
Vinyl Chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event		Post-Rem 02	Post-Rem 03	6-Month Post Injection	Baseline	1-Month Post Injection	3-Month Post Injection	6-Month Post Injection	Post-Rem 01	Post-Rem 01
AKRF Sample ID Laboratory Sample ID Date Sampled Unit Dilution Factor		1-RA-MW-05R_2023120	1-RA-MW-05R_2024031	L1-RA-MW-X07_20220916	L1-RDI-MW-6S_20210427	L1-RA-MW-06R_20220223	L1-RA-MW-06R_20220421	L1-RA-MW-06R_20220916	1-RA-MW-06R_2023092	1-RA-MW-X06_202309
		460-294223-1	460-300388-1	460-265698-4	460-233021-6	460-253100-2	460-256707-2	460-265698-2	460-289068-2	460-289068-3
		12/08/2023	03/18/2024	9/16/2022	4/27/2021 (Baseline)	2/23/2022	4/21/2022	9/16/2022	09/27/2023	09/27/2023
		1	1	mg/kg 1	mg/kg 1	mg/kg 1	mg/kg 1	mg/kg 1	1	1
Compound	AWQSGV			CONC Q	CONC Q	CONC Q	CONC Q	CONC Q		
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Carbon Tetrachloride	5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	0.66 J	1 U	0.71 J	1.2	0.81 J	1.2	1.2
Cis-1,2-Dichloroethylene	5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Tetrachloroethylene (PCE)	5	1.1	0.82 J	2.1	3.8	0.74 J	0.74 J	0.5 J	0.46 J	0.51 J
Trans-1,2-Dichloroethene	5	1.8	1.3	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Trichloroethylene (TCE)	5	1.4	1.2	2.4	1.6	1.1	1	0.94 J	0.77 J	0.75 J
Vinyl Chloride	2	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event	Post-Rem 02	Post-Rem 02	Post-Rem 03	Baseline	1-Month Post Injection	3-Month Post Injection	6-Month Post Injection	Post-Rem 01	Post-Rem 02
AKRF Sample ID	1-RA-MW-06R_2023120	L1-RA-MW-X07_20231208	1-RA-MW-06R_2024031	L1-RDI-MW-7S_20210427	L1-RA-MW-07R_20220222	L1-RA-MW-07R_20220420	L1-RA-MW-07R_20220915	1-RA-MW-07R_2023100	1-RA-MW-07R2_202401
Laboratory Sample ID	460-294223-2	460-294223-3	460-300388-2	460-233021-3	460-252995-2	460-256660-4	460-265595-1	460-289488-1	460-296248-1
Date Sampled	12/08/2023	12/08/2023	03/18/2024	4/27/2021 (Baseline)	2/22/2022	4/20/2022	9/15/2022	10/02/2023	01/10/2024
Unit				mg/kg	mg/kg	mg/kg	mg/kg		
Dilution Factor	1	1	1	1	1	1	1	1	1
Compound	AWQSGV			CONC Q	CONC Q	CONC Q	CONC Q		
1,1,1-Trichloroethane	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethane	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethene	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloroethane	0.61.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Carbon Tetrachloride	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Chloroform	70.82 J	1.0 U	2.6	1 U	1 U	1 U	0.64 J	1.0 U	0.38 J
Cis-1,2-Dichloroethylene	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Methylene Chloride	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U
Tetrachloroethylene (PCE)	50.85 J	1.1	0.61 J	1.6	0.75 J	0.95 J	0.68 J	0.59 J	0.41 J
Trans-1,2-Dichloroethene	50.48 J	1.7	0.36 J	1 U	1 U	1 U	1 U	1.0 U	0.39 J
Trichloroethylene (TCE)	51.0	1.4	0.91 J	1.7	0.87 J	1.1	1.1	0.90 J	1.2
Vinyl Chloride	21.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event		Post-Rem 03	Baseline	1-Month Post Injection	3-Month Post Injection	Post-Rem 01	Post-Rem 02	Post-Rem 03	Post-Rem 03	Baseline
AKRF Sample ID		1-RA-MW-07R2_202403	L1-RDI-MW-8S_20210427	L1-RA-MW-08R_20220222	L1-RA-MW-08R2_20220915	1-RA-MW-08R2_2023100	1-RA-MW-08R2_2023120	1-RA-MW-08R2_202403	1-RA-MW-X08_20240	L1-RDI-MW-9S_20210427
Laboratory Sample ID		460-300388-3	460-233021-4	460-252995-1	460-265595-2	460-289488-2	460-294223-6	460-300388-4	460-300388-8	460-233021-1
Date Sampled		03/18/2024	4/27/2021 (Baseline)	2/22/2022	9/15/2022	10/02/2023	12/08/2023	03/18/2024	03/18/2024	4/27/2021 (Baseline)
Unit			mg/kg	mg/kg	mg/kg					mg/kg
Dilution Factor		1	1	1	1	1	1	1	1	1
Compound	AWQSGV		CONC Q	CONC Q	CONC Q					CONC Q
1,1,1-Trichloroethane	5	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
1,1-Dichloroethane	5	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
1,1-Dichloroethene	5	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
1,2-Dichloroethane	0.6	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
Carbon Tetrachloride	5	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
Chloroform	7	1.0 U	1 U	1 U	0.76 J	1.0 U	1.0 U	1.0 U	1.0 U	1 U
Cis-1,2-Dichloroethylene	5	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
Methylene Chloride	5	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U
Tetrachloroethylene (PCE)	5	0.45 J	0.37 J	1.4	0.5 J	0.57 J	0.37 J	0.29 J	0.72 J	3
Trans-1,2-Dichloroethene	5	0.44 J	1 U	1 U	1 U	1.0 U	1.0 U	0.63 J	1.2	1 U
Trichloroethylene (TCE)	5	0.96 J	1.4	0.86 J	0.78 J	0.83 J	0.84 J	1.1	1.2	1.7
Vinyl Chloride	2	1.0 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event	1-Month Post Injection	3-Month Post Injection	6-Month Post Injection	Post-Rem 02	Post-Rem 03	Baseline	1-Month Post Injection	3-Month Post Injection	6-Month Post Injection
AKRF Sample ID	L1-RA-MW-09R_20220223	L1-RA-MW-09R_20220420	L1-RA-MW-09R_20220915	-RA-MW-09R2_202401	-RA-MW-09R2_202403	FB-GW-01_20210427	FB-GW-02_20220222	FB-GW-03_20220420	FB-GW-04_20220915
Laboratory Sample ID	460-253100-1	460-256660-1	460-265595-3	460-296248-2	460-300388-6	460-233021-7	460-252995-4	460-256660-2	460-265595-4
Date Sampled	2/23/2022	4/20/2022	9/15/2022	01/10/2024	03/18/2024	4/27/2021 (Baseline)	2/22/2022	4/20/2022	9/15/2022
Unit	mg/kg	mg/kg	mg/kg			mg/kg	mg/kg	mg/kg	mg/kg
Dilution Factor	1	1	1	1	1	1	1	1	1
Compound	AWQSGV CONC Q	CONC Q	CONC Q			CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	5 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	5 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	5 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Chloroform	7 1 U	0.42 J	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Cis-1,2-Dichloroethylene	5 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U
Methylene Chloride	5 1 U	1 U	1 U	1.0 U	1.0 U	0.69 J	1 U	1 U	1 U
Tetrachloroethylene (PCE)	5 0.55 J	0.94 J	0.62 J	1.0 U	0.59 J	1 U	1 U	1 U	1 U
Trans-1,2-Dichloroethene	5 1 U	1 U	1 U	1.0 U	0.40 J	1 U	1 U	1 U	1 U
Trichloroethylene (TCE)	5 1.1	2.1	1.7	0.97 J	1.3	1 U	1 U	1 U	1 U
Vinyl Chloride	2 1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event	Post-Rem 01	Post-Rem 02	Post-Rem 03	Baseline	1-Month Post Injection	3-Month Post Injection	6-Month Post Injection	6-Month Post Injection
AKRF Sample ID	FB-GW-04_20230927	FB-GW-05_20231208	FB-GW-06_20240318	TB-GW-01_20210427	TB-GW-02_20220222	TB-GW-03_20220420	TB-GW-04_20220915	TB-GW-05_20220916
Laboratory Sample ID	460-289068-4	460-294223-5	460-300388-7	460-233021-8	460-252995-5	460-256660-3	460-265595-5	460-265698-3
Date Sampled	09/27/2023	12/08/2023	03/18/2024	4/27/2021 (Baseline)	2/22/2022	4/20/2022	9/15/2022	9/16/2022
Unit				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Dilution Factor	1	1	1	1	1	1	1	1
Compound	AWQSGV			CONC Q	CONC Q	CONC Q	CONC Q	CONC Q
1,1,1-Trichloroethane	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.61.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Chloroform	71.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Cis-1,2-Dichloroethylene	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	51.0 U	1.0 U	1.0 U	0.69 J	1 U	1 U	0.6 J	1 U
Tetrachloroethylene (PCE)	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Trans-1,2-Dichloroethene	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Trichloroethylene (TCE)	51.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	21.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U

Table 1
Atlantic Chestnut Lot - 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Chlorinated Volatile Organic Compounds (CVOCs)

Sampling Event		Post-Rem 01	Post-Rem 01	Post-Rem 02	Post-Rem 02	Post-Rem 03
AKRF Sample ID		TB-GW-04_20230927	TB-GW-05_20231002	TB-GW-05_20231208	TB-GW-06_20240110	TB-GW-07_20240318
Laboratory Sample ID		460-289068-5	460-289488-3	460-294223-4	460-296248-3	460-300388-5
Date Sampled		09/27/2023	10/02/2023	12/08/2023	01/10/2024	03/18/2024
Unit						
Dilution Factor		1	1	1	1	1
Compound	AWQSGV					
1,1,1-Trichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cis-1,2-Dichloroethylene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1.0 U	1.0	1.0 U	1.0 U	1.0 U
Tetrachloroethylene (PCE)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethylene (TCE)	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 1
Atlantic Chestnut - Lot 1
250 Euclid Avenue, Brooklyn, NY
Baseline and Post-Injection Groundwater Analytical Results
Notes

DEFINITIONS

J : The concentration given is an estimated value.

NR : Not reported.

NS : No standard.

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

µg/L : micrograms per liter

STANDARDS

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

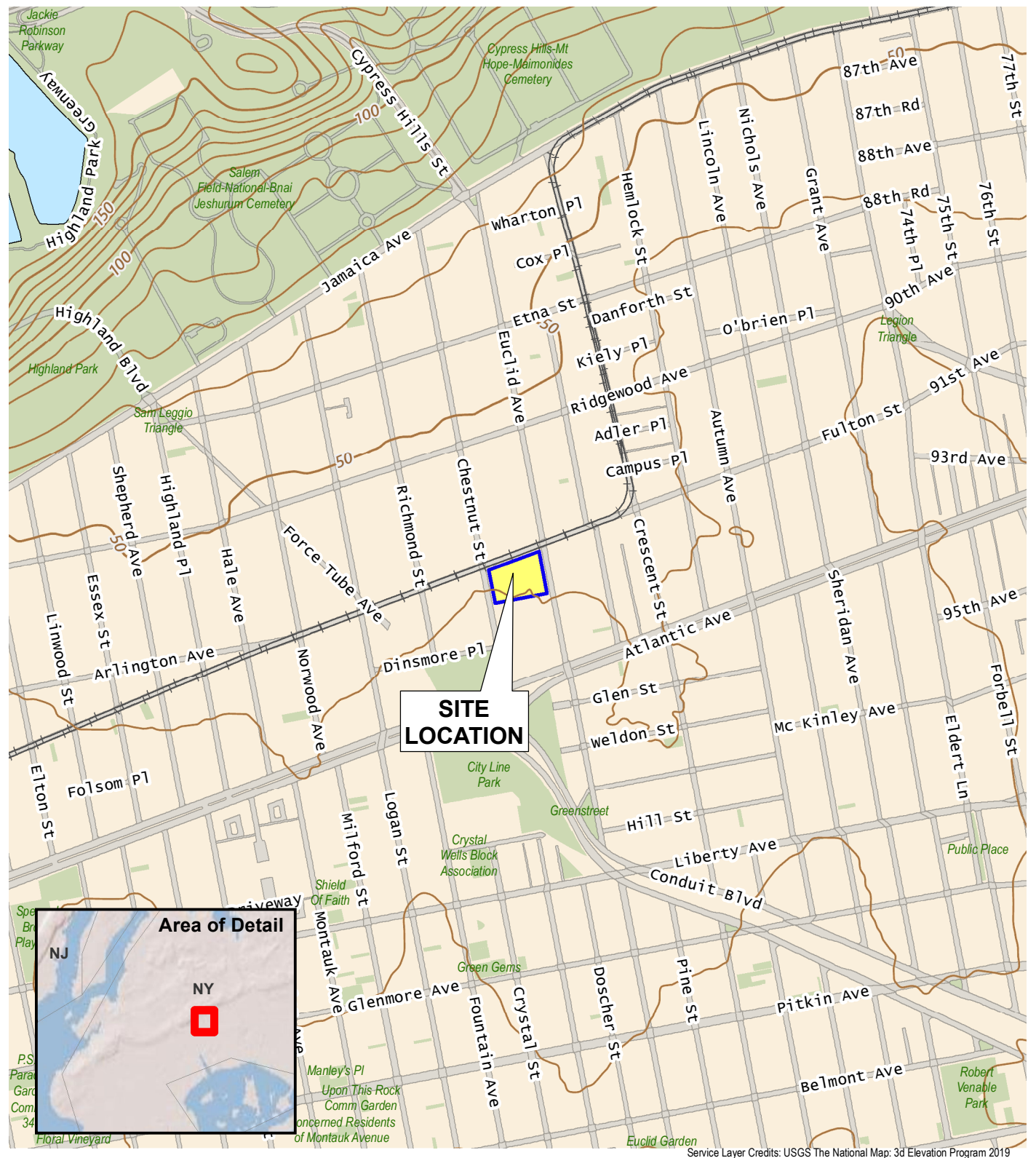
Exceedances of NYSDEC Class GA AWQSGVs are highlighted in bold font

Table 2
Atlantic Chestnut - Lot 1
250 Euclid Avenue, Brooklyn, NY
SVE System Vapor Sampling
Soil Vapor Analytical Results
Chlorinated Volatile Organic Compounds

Client ID			L1-SVE-INF_20221026	L1-SVE-INT_20221026	L1-SVE-EFF_20221026	L1-TB-01SVE_20221026	L1-SVE-INF_20230419	L1-SVE-INT_20230419	L1-SVE-EFF_20230419	L1-TB-01SVE_20230419	L1-SVE-INF_20231016	L1-SVE-INT_20231016	L1-SVE-EFF_20231016	L1-TB-01SVE_20231016
Lab Sample ID			200-65506-1	200-65506-2	200-65506-3	200-65506-4	200-67823-1	200-67823-2	200-67823-3	200-67823-4	200-70341-1	200-70341-2	200-70341-3	200-70341-4
Date Sampled			10/26/2022	10/26/2022	10/26/2022	10/27/2022	04/19/2023	04/19/2023	04/19/2023	04/19/2023	10/16/2023	10/16/2023	10/16/2023	10/16/2023
Dilution		Reporting Unit	1	2.98	1, 2	1	1	1	1	1	4	4	10	1
TO-15	1,1,1-Trichloroethane	ug/m3	1.1 U	3.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.20 U	4.4 U	4.4 U	11 U	0.20 U
TO-15	1,1,2,2-Tetrachloroethane	ug/m3	1.4 U	4.1 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.20 U	5.5 U	5.5 U	14 U	0.20 U
TO-15	1,1,2-Trichloroethane	ug/m3	1.1 U	3.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.79 U	4.4 U	4.4 U	11 U	0.79 U
TO-15	1,1-Dichloroethane	ug/m3	0.81 U	2.4 U	0.94	0.81 U	0.81 U	0.81 U	0.23 J	0.81 U	3.2 U	3.2 U	8.1 U	0.81 U
TO-15	1,1-Dichloroethene	ug/m3	0.20 U	0.60 U	0.55	0.20 U	0.20 U	0.20 U	0.20 U	0.085 J	0.80 U	0.80 U	2.0 U	0.20 U
TO-15	1,2-Dichloroethane	ug/m3	0.81 U	2.4 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.083 J	3.2 U	3.2 U	8.1 U	1.6 U
TO-15	1,2-Dichloroethene, Total	ug/m3	5.3	8.8	85	1.6 U	2.2	2.0	21	1.1 U	340	480	960	1.1 U
TO-15	cis-1,2-Dichloroethene	ug/m3	4.3	7.5	76	0.082 J	1.8	1.6	19	0.81 U	2.0	2.1	3.8	0.81 U
TO-15	Tetrachloroethene	ug/m3	98	8.6	7.1	1.4 U	1.8	36	1.6	0.85	53	5.0 J	5.0 J	0.20 U
TO-15	trans-1,2-Dichloroethene	ug/m3	0.92	1.2 J	9.5	0.79 U	0.38 J	0.36 J	2.1	1.1 U	340	490	960	1.1 U
TO-15	Trichloroethene	ug/m3	180	620	230 D	0.28	280 D	83	110	1.4 U	100	280	380	1.4 U
TO-15	Vinyl chloride	ug/m3	0.20 U	0.60 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.27 J	0.80 U	0.80 U	2.0 U	1.4 U

FIGURES

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Service Layer Credits: USGS The National Map: 3d Elevation Program 2019



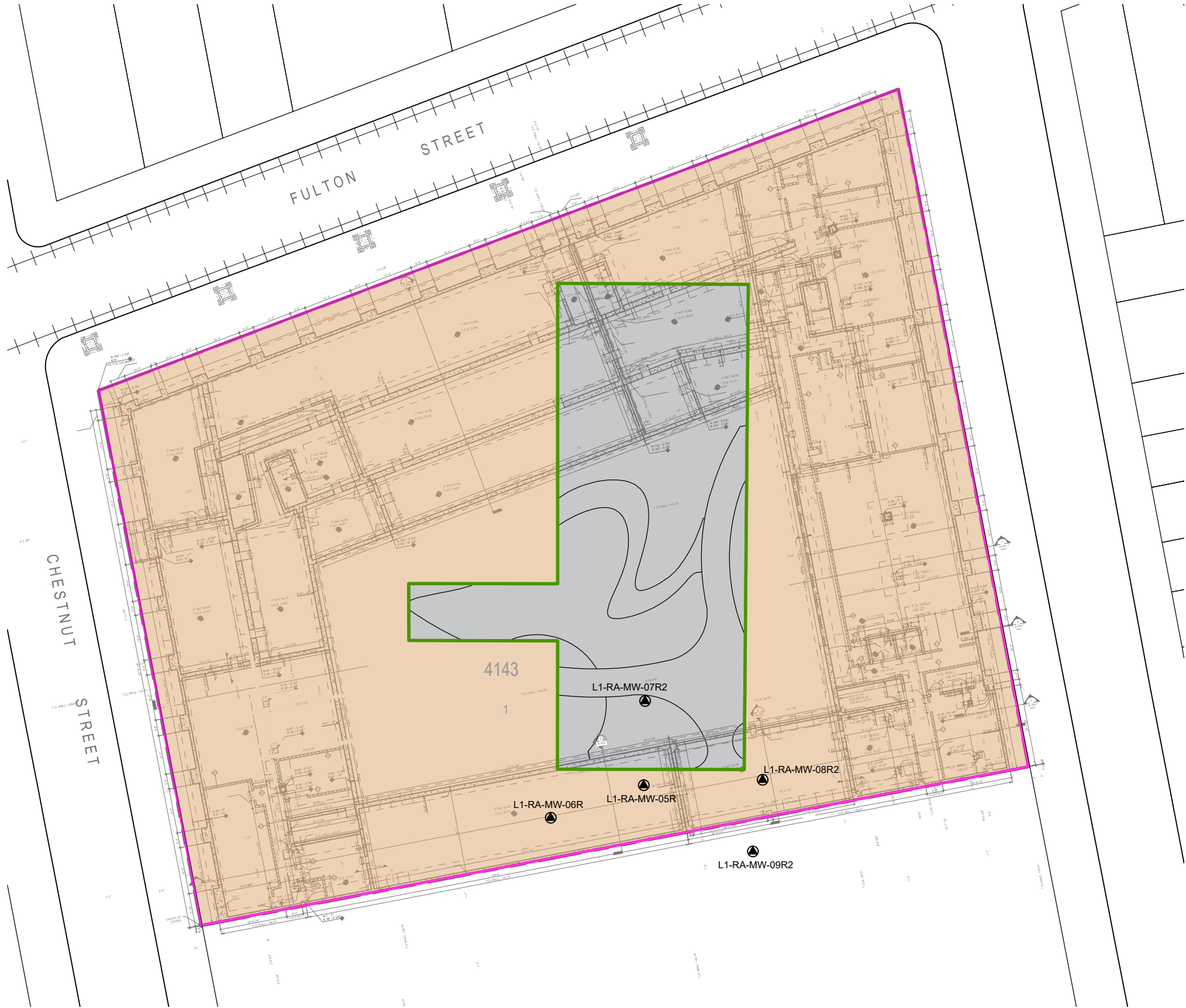
440 Park Avenue South, New York, NY 10016

Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York

SITE LOCATION

DATE	9/26/2022
PROJECT NO.	12492
FIGURE	1

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



PROJECT SITE BOUNDARY
 NYCT ELEVATED SUBWAY TRACKS
 LOT BOUNDARY
 BLOCK NUMBER
 EXTENT OF TRACK 2 REMEDIAL EXCAVATION
 EXTENT OF TRACK 4 REMEDIAL EXCAVATION



Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York



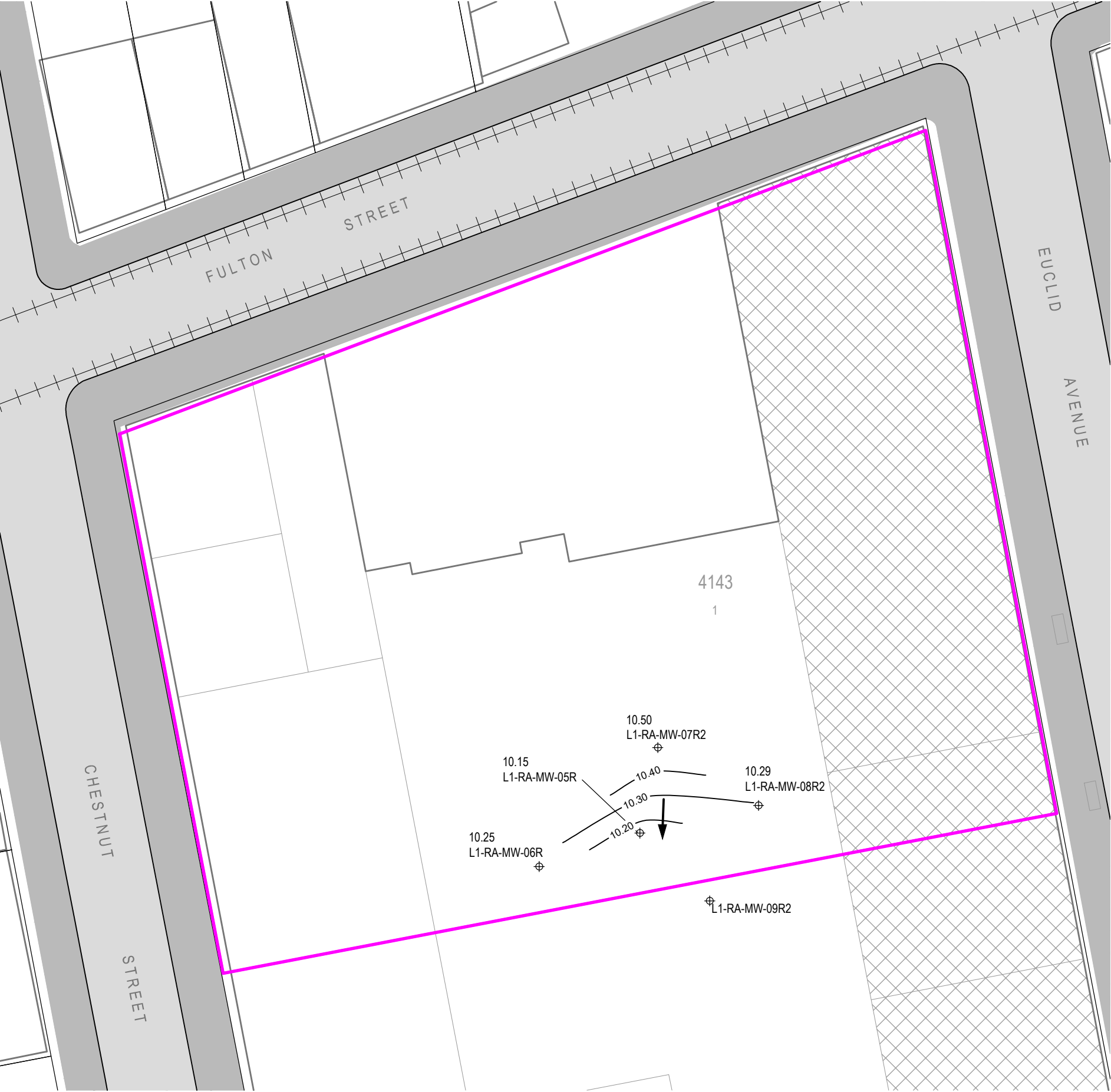
SITE PLAN WITH GROUNDWATER MONITORING WELL LOCATIONS

DATE
6/28/2024

PROJECT NO.
12492

FIGURE
2

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

1

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BCP SITE BOUNDARY

LOT BOUNDARY

BLOCK NUMBER

FORMER BUILDING LINE

LIRR SUBTERRANEAN TRACKS

MTA RAILROAD ELEVATED TRACKS

APPROXIMATE EXTENT OF FORMER PARTIAL CELLAR

GROUNDWATER MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR IN FEET (DASHED WHERE INFERRED)

GROUNDWATER FLOW DIRECTION

↑

Monitoring Well ID	Top of Casing	Depth to Groundwater	Groundwater Elevation
L1-RA-MW-05R	35.75*	25.60	10.15
L1-RA-MW-06R	35.75	25.50	10.25
L1-RA-MW-07R2	40.22	29.72	10.50
L1-RA-MW-08R2	39.45	29.16	10.29
L1-RA-MW-09R2	38.28	NA	NA

* CASING ELEVATION FOR L1-RA-MW-05R ESTIMATED BASED ON SURFACE ELEVATION RELATIVE TO L1-RA-MW-06R DUE TO INCORRECT SURVEY DATA.

NOTE: L1-RA-MW-09R DATA NOT COLLECTED AS MONITORING WELL WAS INACCESSIBLE DURING SAMPLING EVENT.

0 20 40 80
SCALE IN FEET

Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York

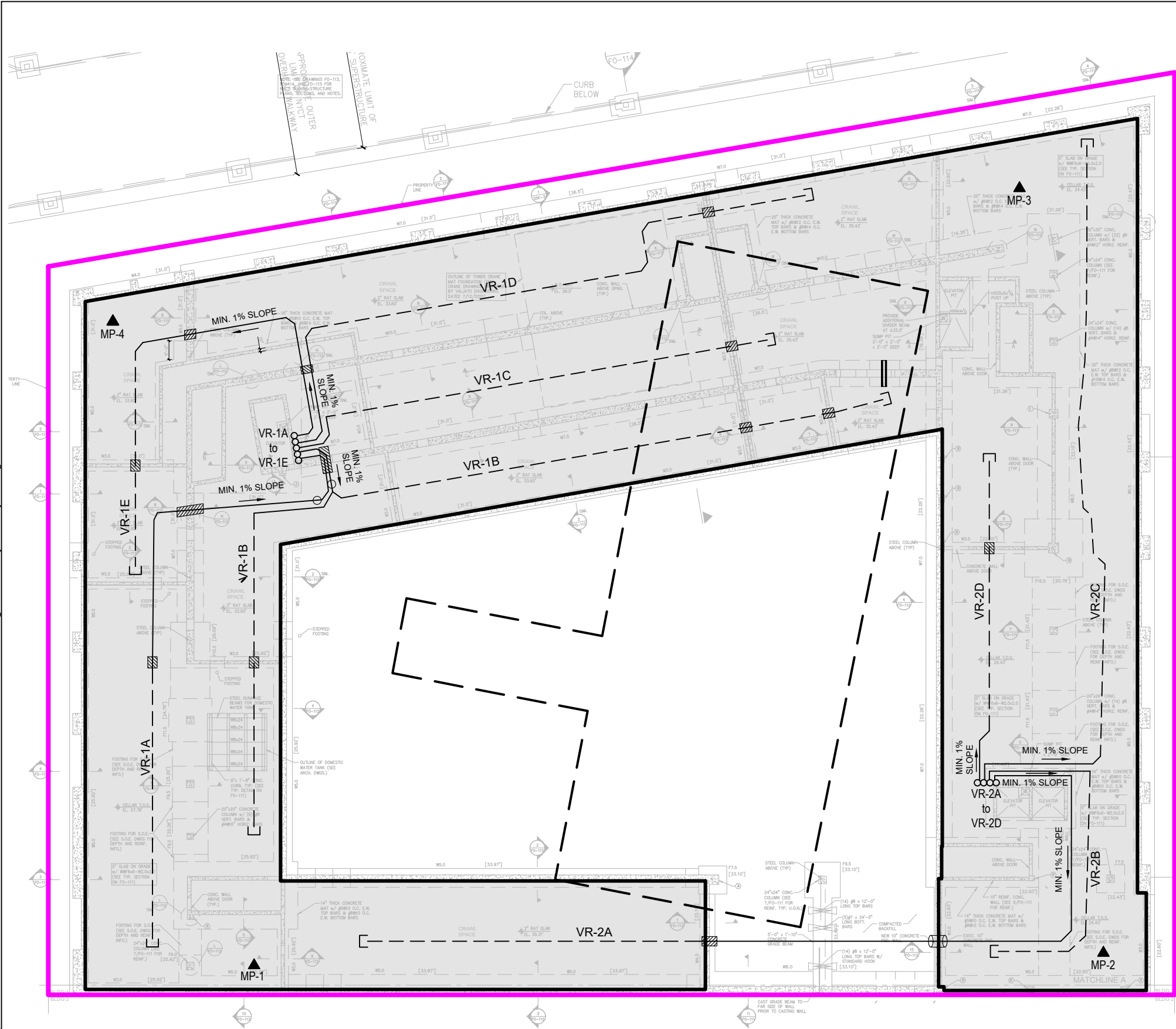
DATE
6/28/2024

PROJECT NO.
12492

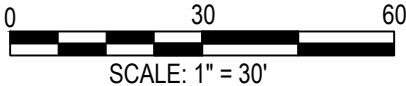
FIGURE
3

SEPTEMBER-OCTOBER 2024 GROUNDWATER CONTOUR MAP

440 Park Avenue South, New York, NY 10016



- LEGEND**
- SITE BOUNDARY
 - 4" Ø SLOTTED SCHEDULE 40 PVC PIPE BENEATH SLAB WITH ENDCAP
 - 4" Ø SOLID SCHEDULE 40 PVC PIPE BENEATH SLAB
 - PIPE SLEEVE THROUGH FOUNDATION ELEMENT
 - COMMUNICATION SLEEVE THROUGH GRADE BEAM
 - SONOTUBE THROUGH FOUNDATION ELEMENT
 - CONDENSATE DRAIN
 - 4" Ø VERTICAL RISER PENETRATION LOCATION WITH ID
 - VACUUM MONITORING POINT LOCATION WITH ID
 - EXTENT OF GAS PERMEABLE AGGREGATE UNDER SLAB
 - EXTERIOR COURTYARD AND BREEZEWAY (NO BUILDING FOUNDATION OR VAPOR BARRIER)
 - EXTENT OF VAPOR BARRIER
 - EXTENT OF TRACK 4 AREA



Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York



440 Park Avenue South, New York, NY 10016

SUB-SLAB DEPRESSURIZATION SYSTEM LAYOUT PLAN

DATE	12/27/2022
PROJECT NO.	12492
FIGURE	4



CLEANOUT

BUTTERFLY VALVE

VACUUM / PRESSURE GAUGE

DIFFERENTIAL PRESSURE SWITCH

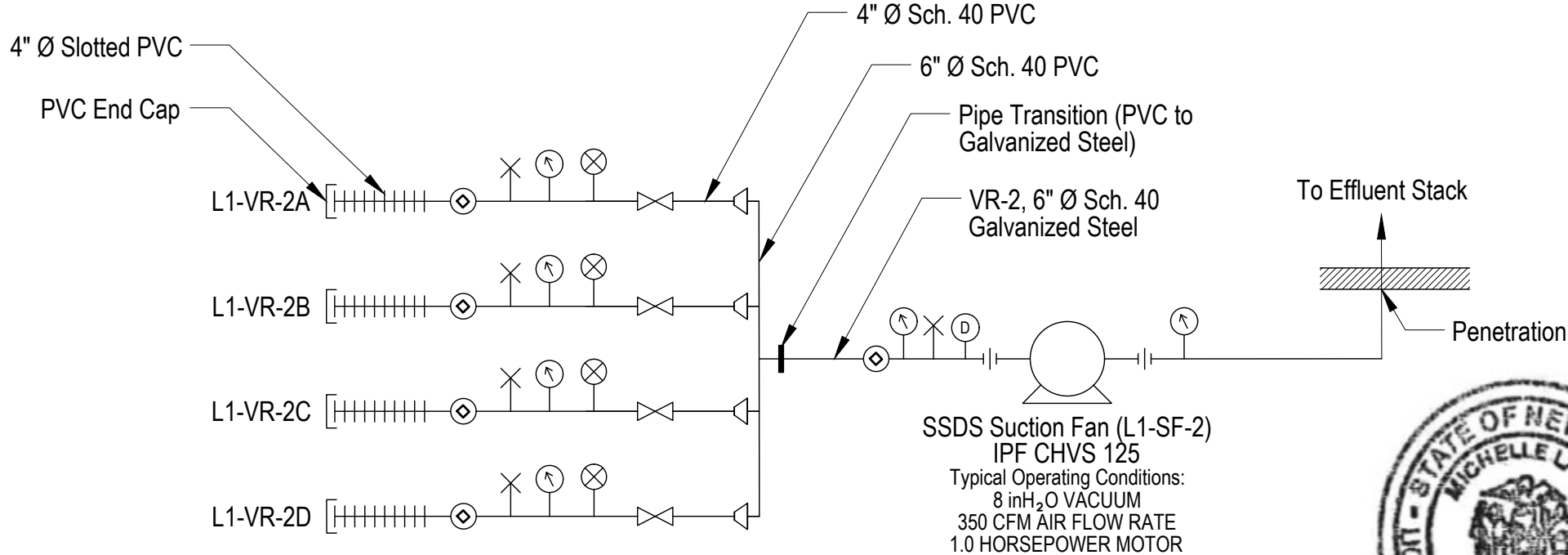
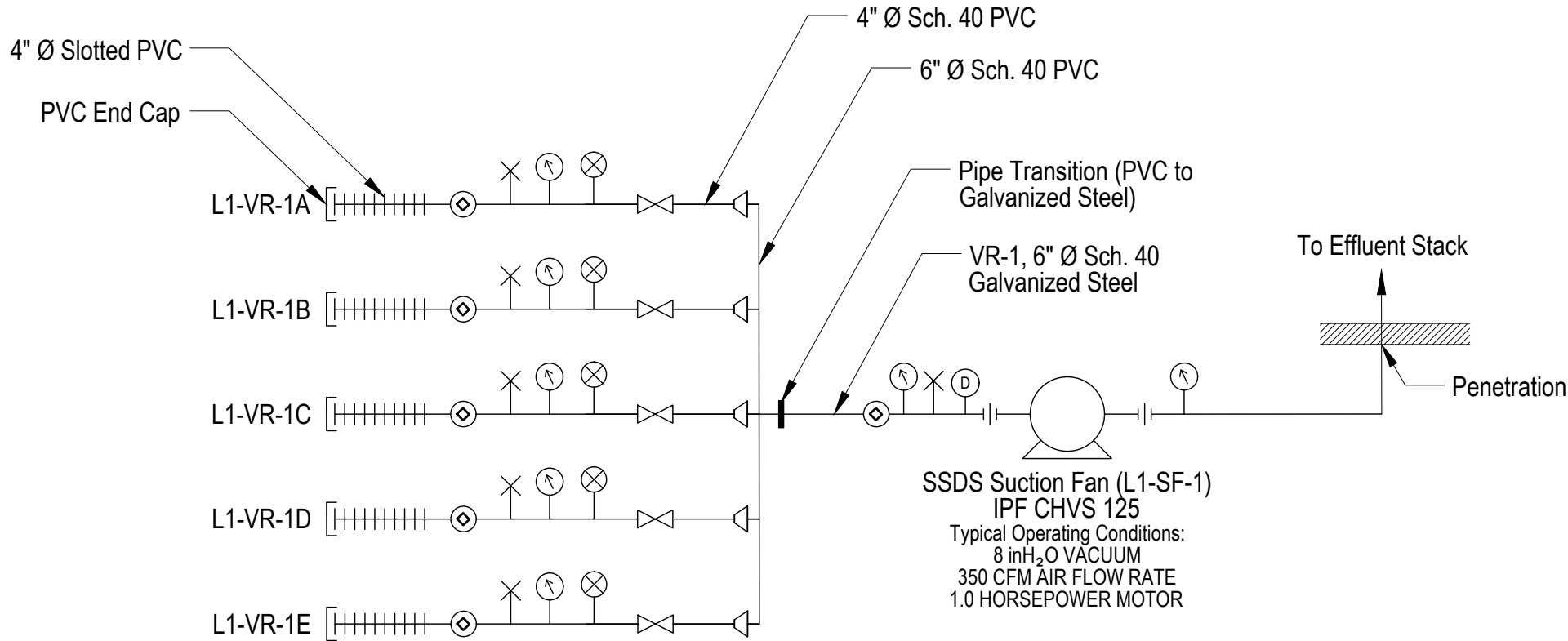
SAMPLE PORT

FLOW METER

4" x 6" PVC REDUCER

UNION

LEGEND



Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York



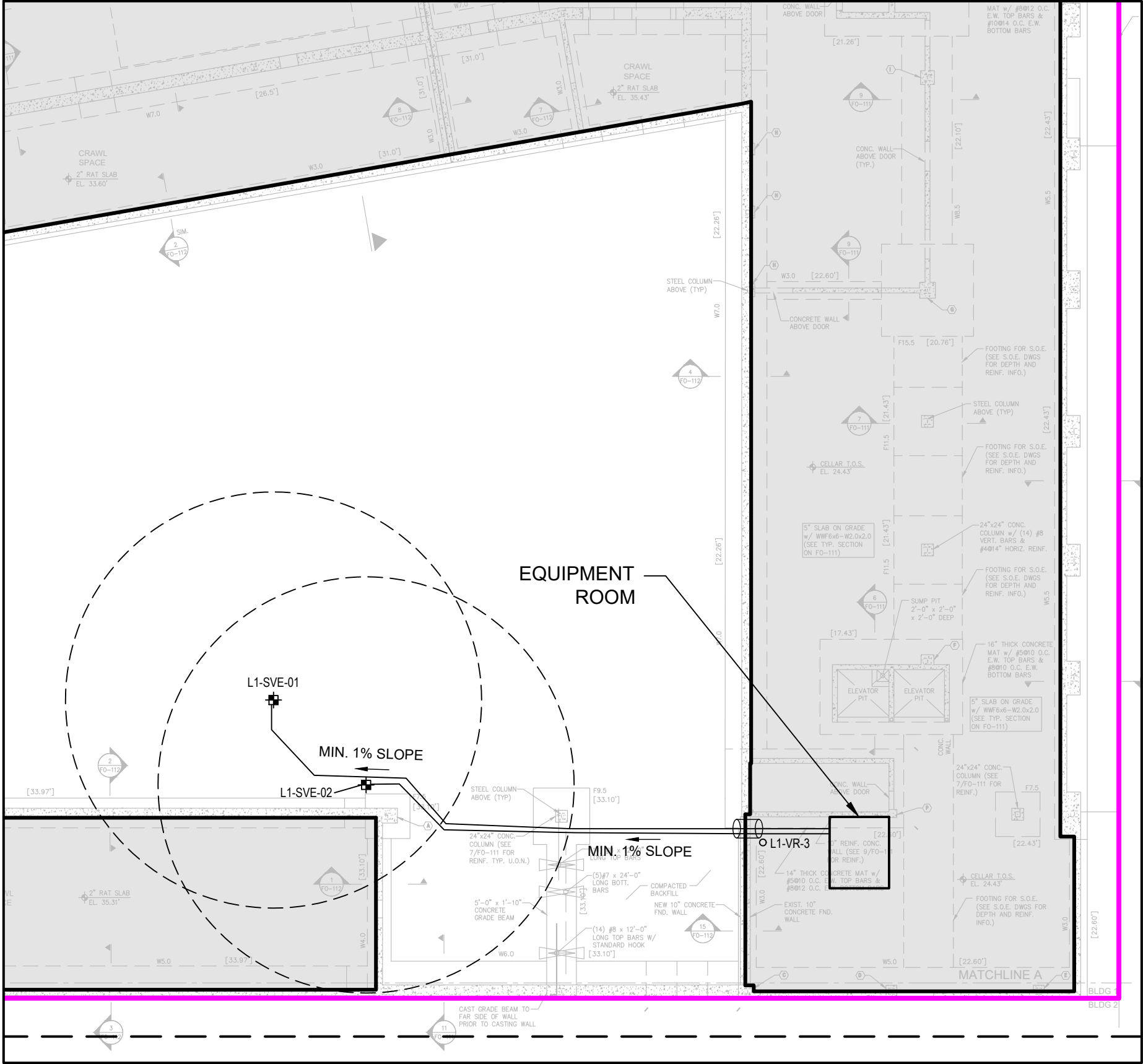
440 Park Avenue South, New York, NY 10016

SUB-SLAB DEPRESSURIZATION SYSTEM
PROCESS AND INSTRUMENTATION DIAGRAM

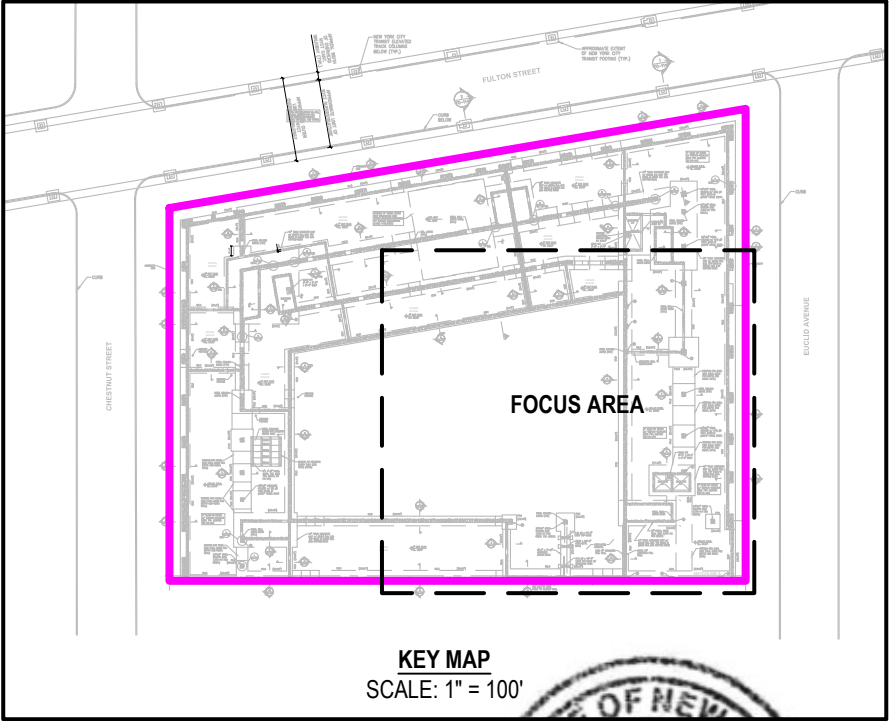
DATE
12/22/2022

PROJECT NO.
12492

FIGURE
5



FOCUS AREA
SCALE: 1" = 20'

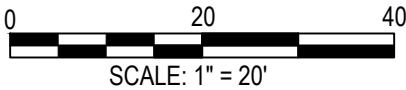


KEY MAP
SCALE: 1" = 100'



LEGEND

- SITE BOUNDARY
- L1-SVE-01 SOIL VAPOR EXTRACTION WELL WITH ID
- L1-VR-3 4" Ø VERTICAL RISER PENETRATION LOCATION WITH ID
- SONOTUBE THROUGH GRADE BEAM
- 4" Ø SOLID SCHEDULE 40 PVC PIPE BENEATH SLAB
- EXTENT OF GAS PERMEABLE AGGREGATE UNDER SLAB
- EXTENT OF VAPOR BARRIER
- SOIL VAPOR EXTRACTION WELL LOCATION WITH 35-FOOT RADIUS OF INFLUENCE



Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York

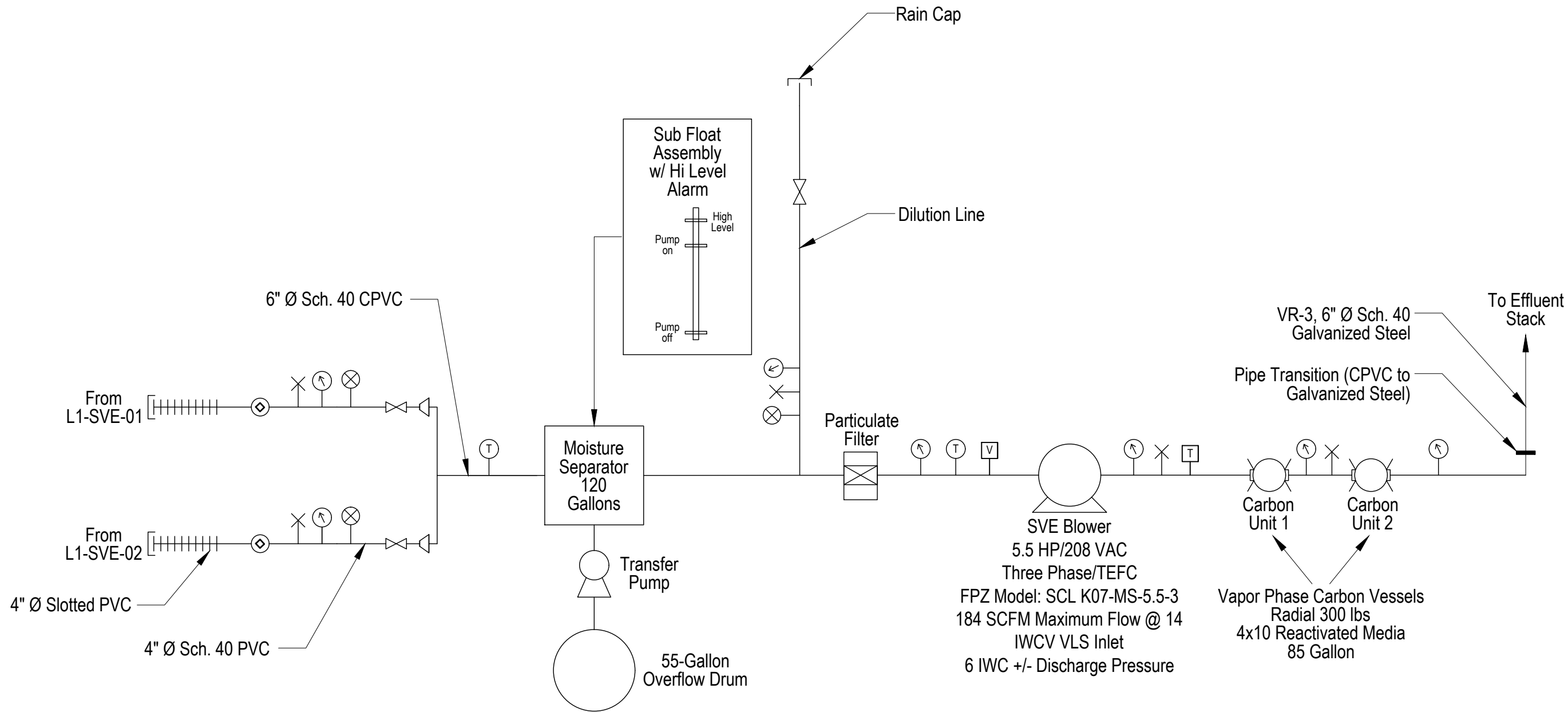


440 Park Avenue South, New York, NY 10016

SOIL VAPOR EXTRACTION SYSTEM LAYOUT PLAN

DATE
12/20/2022
PROJECT NO.
12492
FIGURE
6

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LEGEND

	BUTTERFLY VALVE		BLOWER INFLUENT LOW VACUUM SENSOR (WIRED TO CONTROL PANEL)
	RELIEF VALVE		BLOWER EFFLUENT HIGH TEMP SENSOR (WIRED TO CONTROL PANEL)
	VACUUM / PRESSURE GAUGE		4" x 6" PVC REDUCER
	TEMPERATURE GAUGE		CLEANOUT
	SAMPLE PORT		
	FLOW METER		



Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York

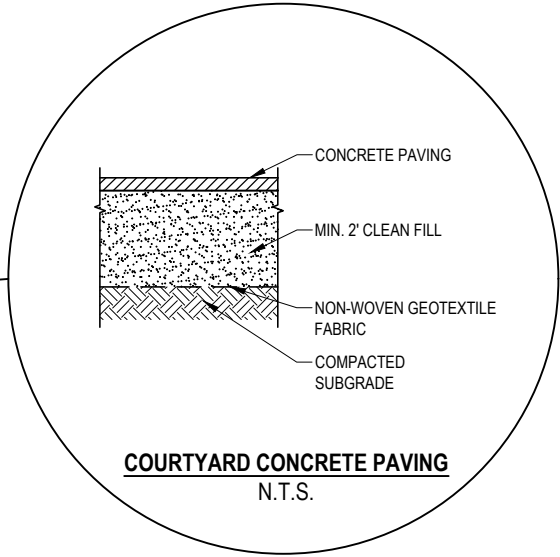
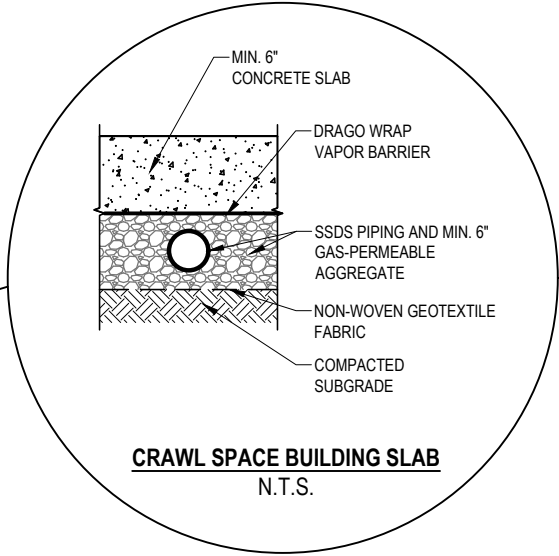
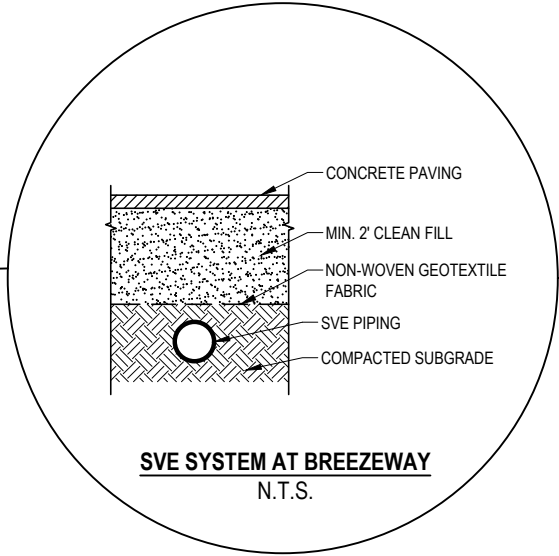
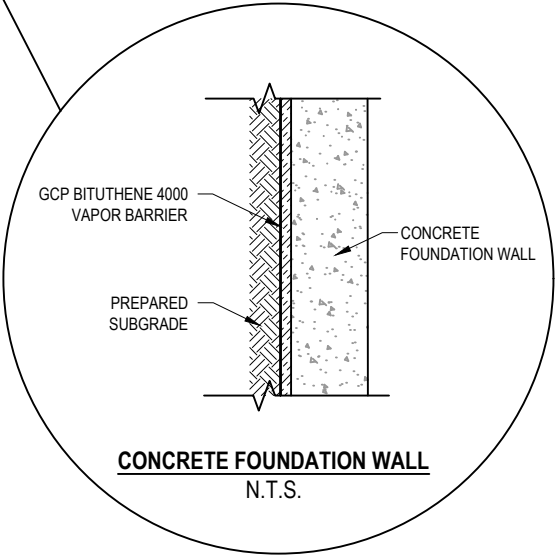
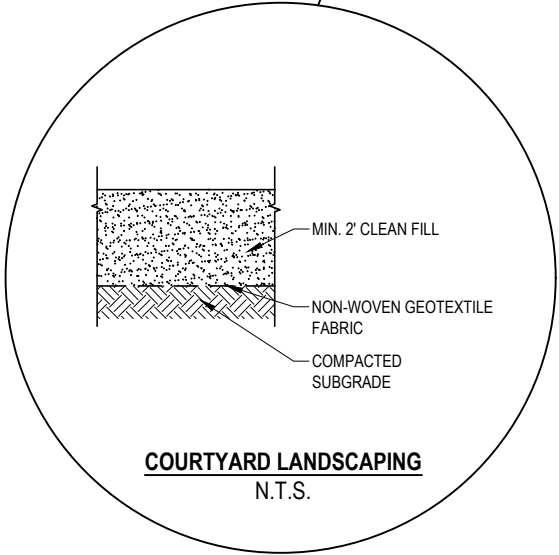
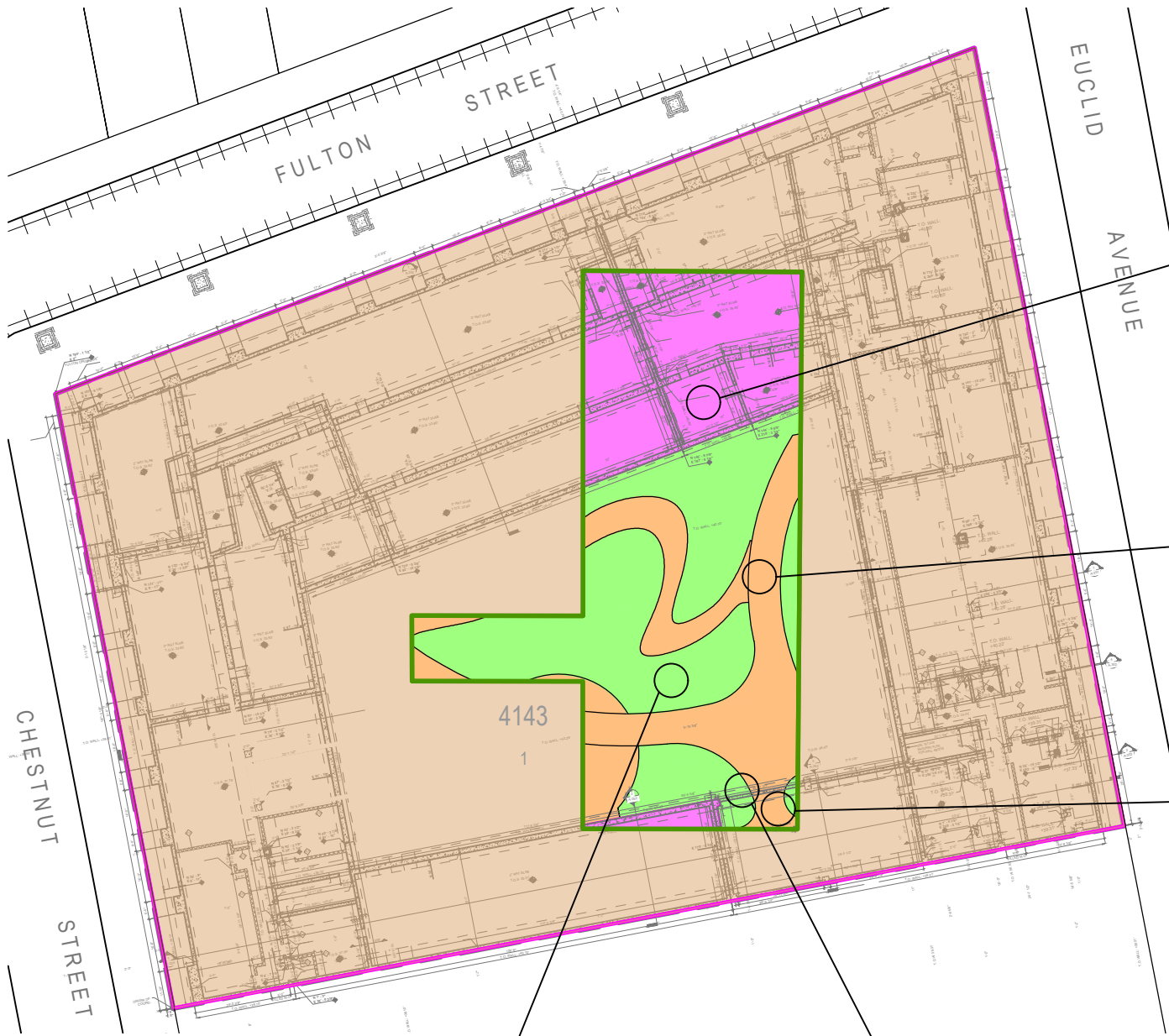
**SOIL VAPOR EXTRACTION SYSTEM
PROCESS AND INSTRUMENTATION DIAGRAM**

AKRF
440 Park Avenue South, New York, NY 10016

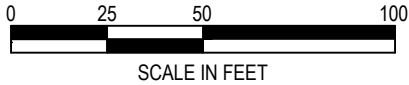
DATE
12/22/2022
PROJECT NO.
12492
FIGURE
7

©2024 AKRF, Inc. Q:\Projects\12492 - ATLANTIC CHESTNUT - LOT 1\Technical\Hazmat\PRR\CAD\12492 Fig 2 Site Cover System Plan.dwg last save: epark 6/28/2024 4:08 AM

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



- LEGEND**
- PROJECT SITE BOUNDARY
 - NYCT ELEVATED SUBWAY TRACKS
 - LOT BOUNDARY
 - BLOCK NUMBER
 - EXTENT OF TRACK 2 REMEDIAL EXCAVATION
 - EXTENT OF TRACK 4 REMEDIAL EXCAVATION



Atlantic Chestnut - Lot 1
250 Euclid Avenue
Brooklyn, New York

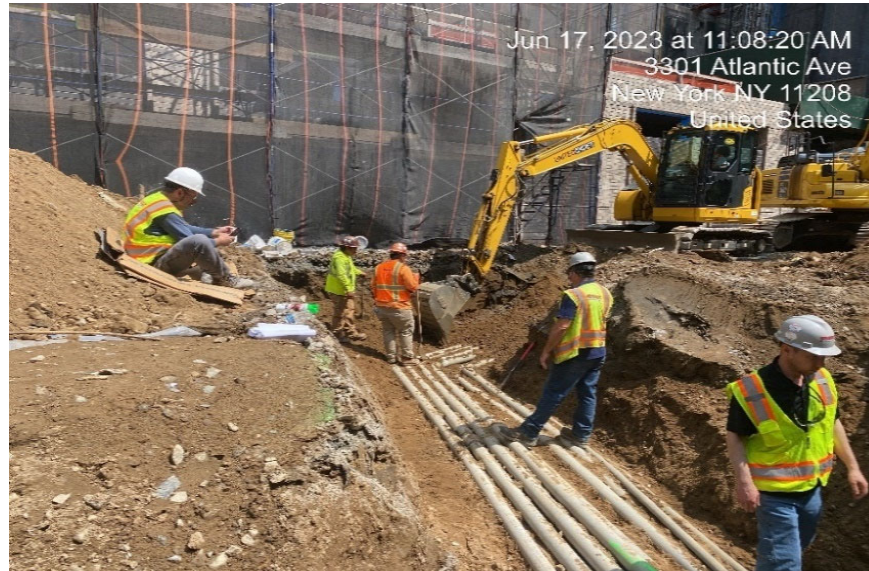
AS-BUILT SITE COVER SYSTEM



DATE	6/28/2024
PROJECT NO.	12492
FIGURE	8

APPENDIX A
PHOTOGRAPHIC LOG

Appendix A- Photograph Log



1 - Excavation of courtyard area to expose existing utility lines for addition of concrete protection around utility lines.



2 - Temporary stockpile of clean fill on polyethylene sheeting prior to use as backfill following completion of excavation.



3 - Backfilling following completion of excavation.



4 – Formwork for foundation elements, view facing southwest.



5 - Formwork for courtyard playground elements, view facing northwest.



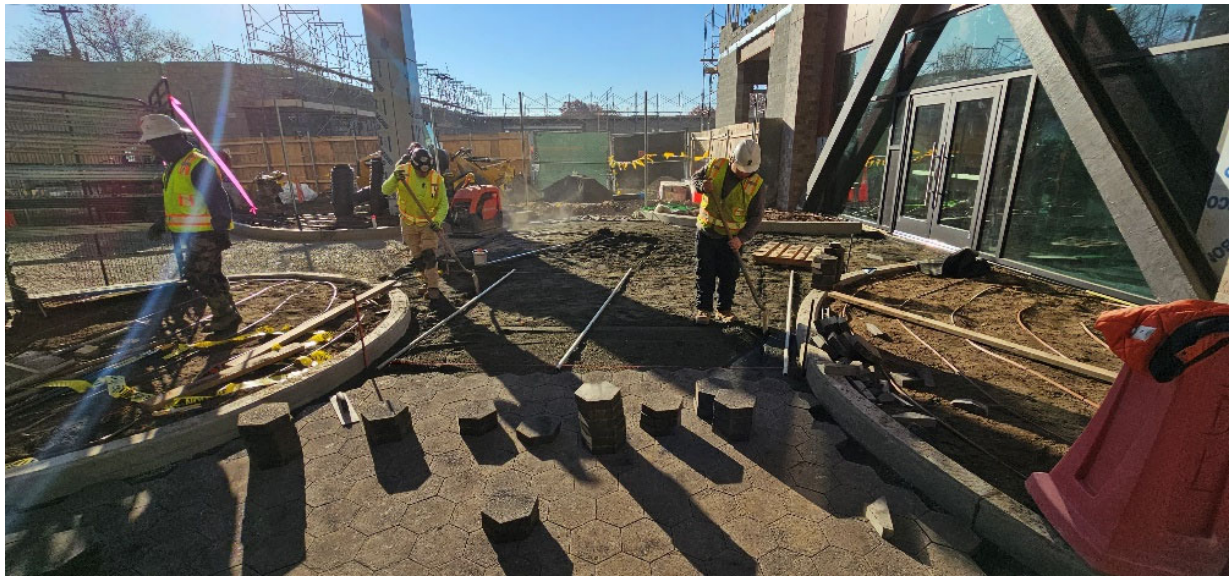
6 - Formwork for courtyard sidewalks, view facing southwest.



7 - Formwork for courtyard sidewalks, view facing northwest.



8 - Placing imported topsoil over imported clean fill, view facing northwest.



9 – Placing and grading subgrade layer before placing pavement in the courtyard, view facing south.



10 – Purging a monitoring well as part of the post-remedial groundwater sampling event.



11 - Redrilling a groundwater monitoring well.



12 - The courtyard after completion, view facing northwest.



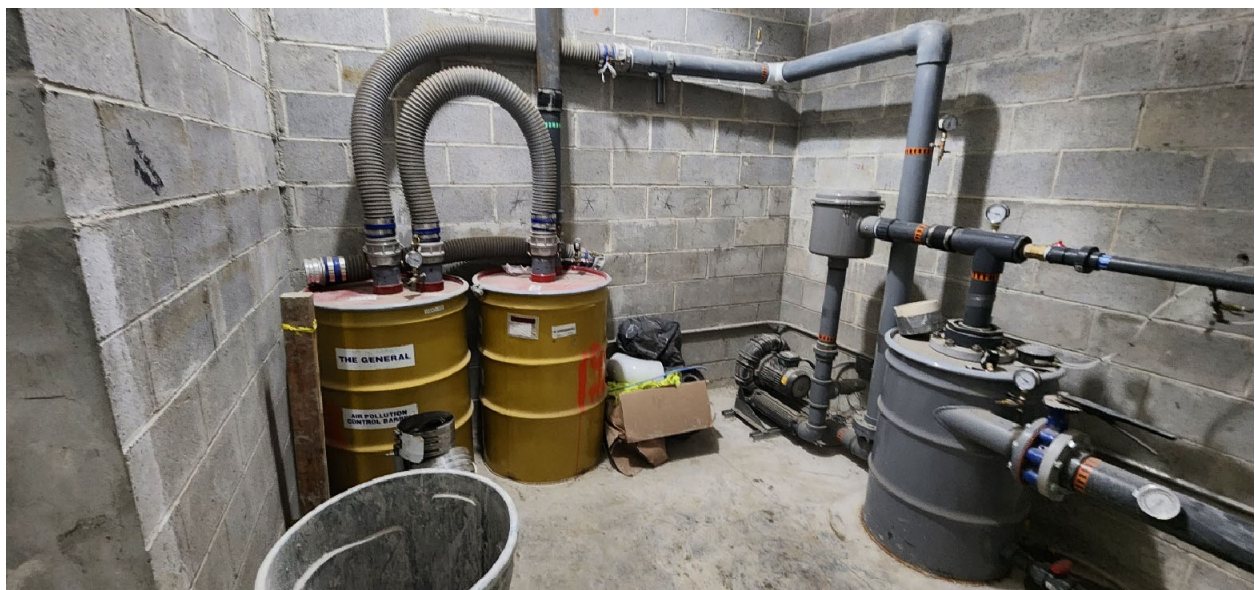
13 - The courtyard after completion, view facing northwest.



14 – SSDS gauges in the west manifold closet.



15 – SSDS and SVE riser pipe pressure testing.



16 – SVE system equipment.



20 - SSDS manifold in the southeastern manifold closet.



21 - SSDS fan and exhaust on the roof.

APPENDIX B
SITE-WIDE INSPECTION LOG

Annual Site-Wide Inspection**Overview of Annual Site-Wide Inspection requirements:**

- 1) General Site conditions at time of inspection;
- 2) SMP-related Site Activities being conducted, upcoming SMP-related tasks;
- 3) Institutional Control (IC) Checklist (SMP, FMP maintained on-Site, routine SMP tasks being conducted);
- 4) Evaluation of Engineering Controls; and
- 5) Site Documentation.

1) General Site conditions at time of inspection:

NAME: Marco Balletta	DATE: January 4, 2024
TIME: 9:00 AM	WEATHER: 40° F, Cloudy
Annual Inspection or Emergency Inspection (if emergency, specify nature)? ANNUAL	

Notes: THE SITE IS USED AS A RESIDENTIAL BUILDING, WITH GROUND FLOOR COMMERCIAL SPACES (CURRENTLY UNOCCUPIED), AND AN OPEN-AIR COURTYARD IN THE CENTRAL PORTION OF THE SITE.

2) Are any SMP-related site activities currently being conducted (SSDS and SVE Operation)?

☒ YES ☐ NO

Notes/Details:

SITE COVER SYSTEM IS INTACT WITH NO REPAIRS RECOMMENDED. IMPROVEMENTS TO THE SITE COVER SYSTEM WERE MADE IN THE COURTYARD, INCLUDING INSTALLATION OF CLEAN FILL AND TOPSOIL IN LANDSCAPED AREAS, AND INSTALLATION OF CLEAN FILL AND IMPERVIOUS MATERIALS (CONCRETE, STONE PAVERS, AND MASONRY CURBING).

ROUTINE INSPECTION OF THE SSDS AND SVE SYSTEM OPERATIONS, AS-NEEDED MAINTENACE OF SSDS AND SVE SYSTEM, QUARTERLY GROUNDWATER MONITORING, AND SEMI-ANNUAL SVE EXTRACTED VAPOR SAMPLING ARE BEING PERFORMED.

3) IC Checklist (SMP maintained on-Site, routine SMP tasks being conducted)

Copy of SMP on-Site?	☒ YES ☐ NO
Building Use Still Consistent with SMP (Restricted Residential, Commercial, Industrial)?	☒ YES ☐ NO

Have the required SMP tasks been conducted during the reporting period?SSDS inspections/monitoring ☒ YES ☐ NOSVE system monitoring ☒ YES ☐ NOQuarterly groundwater monitoring/sampling ☒ YES ☐ NO

Notes: Groundwater monitoring was not conducted in the 1st and 2nd quarters of 2023, as AKRF submitted a letter to NYSDEC requesting discontinuation of post-remedial groundwater monitoring and sampling. On September 14, 2023, NYSDEC rejected the request and post-remedial groundwater sampling resumed that month. Groundwater monitoring and sampling was conducted in September and December 2023, and March 2024. The next groundwater sampling event was completed on June 25, 2024.

4) Evaluation of ECs

Environmental Control Type: SVE System	
Is the SVE system currently operating?	☒ YES ☐ NO
If no, describe reason/alarm condition(s):	
Are the various gauges and components of system and the digital control panel clean?	☒ YES ☐ NO
Have any problems occurred that require corrective action to the treatment system components or well access manifolds?	☐ YES ☒ NO
If yes, describe:	

SVE System operations have also been documented using the applicable inspections logs that are provided as part of the PRR.

Notes: NONE

Environmental Control Type: Active SSDS	
Are there any unusual odors, spills or leaks near the SSDS piping in the basement? If yes, describe source and plans for repair:	☐ YES ☒ NO
Are the above grade components of the SSDS clean?	☒ YES ☐ NO
Is the SSDS blower running? If no, describe:	☒ YES ☐ NO
Any evidence of SSDS piping tampering, vandalism or damage on the SSDS piping or system components? If yes, describe:	☐ YES ☒ NO

SSDS operations have also been documented using the applicable inspections logs that are provided as part of the PRR.

Notes: NONE**5) Site documentation**

Including updates regarding notification to NYSDEC regarding any changes to Site conditions/operations, routine reporting to NYSDEC, etc.).

Notes: COURTYARD CONSTRUCTION AND RELATED SITE COVER SYSTEM IMPROVEMENTS WILL REQUIRE UPDATE TO SMP. SITE MANAGEMENT WILL CONTINUE IN ACCORDANCE WITH SMP.

APPENDIX C
INTRUSIVE ACTIVITIES DOCUMENTATION

APPENDIX D
SOIL DISPOSAL DOCUMENTATION

APPENDIX E
SOIL IMPORT DOCUMENTATION

APPENDIX F
UPDATED SITE SURVEY

APPENDIX G
QUARTERLY GROUNDWATER SAMPLING AND MONITORING WELL MAINTENANCE DOCUMENTATION

APPENDIX H
SVE INSPECTION AND SAMPLING LOGS

APPENDIX I
SVE EXTRACTED VAPOR SAMPLING DOCUMENTATION

APPENDIX J
SSDS OPERATION AND MAINTENANCE DOCUMENTATION

APPENDIX K
IC/EC CERTIFICATION FORM



Site Details

Box 1

Site No. C224234

Site Name Atlantic Chestnut - Lot 1

Site Address: 250 Euclid Avenue Zip Code: 11208
City/Town: Brooklyn
County: Kings
Site Acreage: 1.517

Reporting Period: December 30, 2022 to April 30, 2024

YES NO

- | | | | |
|----|--|-------------------------------------|-------------------------------------|
| 1. | Is the information above correct? | ☒ | ☐ |
| | If NO, include handwritten above or on a separate sheet. | | |
| 2. | Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | ☐ | ☒ |
| 3. | Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | ☐ | ☒ |
| 4. | Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | ☐ | ☒ |

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development? ☐ ☐

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below? ☒ ☐
Restricted-Residential, Commercial, and Industrial
7. Are all ICs in place and functioning as designed? ☒ ☐

EXCEPT AS DISCUSSED IN THE PERIODIC REVIEW REPORT

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

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

Signature of Owner, Remedial Party or Designated Representative

Date _____

Description of Institutional ControlsParcelOwnerInstitutional Control**4143-1**

Atlantic Chestnut Affordable Housing LLC

Ground Water Use Restriction
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

The property may be used for: restricted residential; commercial, industrial;

All ECs must be operated and maintained as specified in this SMP;

All ECs must be inspected at a frequency and in a manner defined in the SMP.

The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the NYCDOH;

Groundwater and other environmental or public health monitoring must be performed as defined in the SMP.

Data and information pertinent to Site Management of the Controlled property must be reported at the frequency and in a manner defined in the SMP.

All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;

The potential for vapor intrusion must be evaluated for any buildings developed on the site.

Box 4**Description of Engineering Controls**ParcelEngineering Control**4143-1**

Groundwater Treatment System
Vapor Mitigation
Cover System
Monitoring Wells

Engineering controls include a site cover system to prevent future exposure to remaining contamination in soil, and a sub-slab depressurization system (SSDS) for vapor mitigation installed at the on-site building. The SSDS will be operated, monitored and maintained per the SMP.

Periodic Review Report (PRR) Certification Statements

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

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

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

YES NO

☒ ☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

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

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

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

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

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

YES NO

☒ ☐

EXCEPT AS DISCUSSED IN THE PERIODIC REVIEW REPORT

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C224234

Box 6

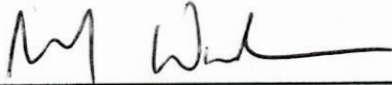
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michael Wadman at 902 Broadway, 13th Floor, New York, NY, 10010,
print name print business address

am certifying as Owner (Owner or Remedial Party)

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



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

6/27/2024

Date

EC CERTIFICATIONS

Box 7

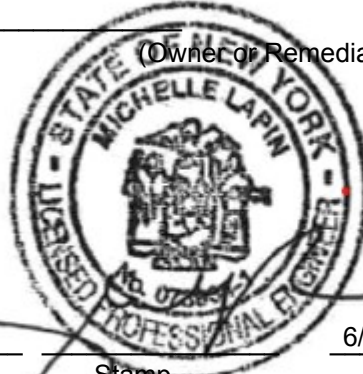
Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michelle Lapin, PE at 440 Park Avenue South, Floor 7, New York , NY 10016,
print name print business address

am certifying as a for the Owner

(Owner or Remedial Party)





Signature of , for the Owner or Remedial Party,
Rendering Certification

Stamp
(Required for PE)

6/28/2024
Date

APPENDIX L
DAILY REPORTS