

Project Name: 972-976 Leggett Avenue, Bronx, NY 10455
Project Number: 16CVCP073X
Site Management Reporting Period: 2024 to 2025
Inspection Date: July 1, 2025
Inspector: Szabolcs David, Gallagher Bassett Technical Services (GBTS)
Certifier: Daniel Bellucci, Bellucci Engineering, PLLC
Submittal Date: July 17, 2025
Report Preparer: Caroline Clark on behalf of K & R Preservation, LLC

Appendices:

- A Figure
- B Site Photographs

Site Management Inspection and Certification Letter Report

K & R Preservation, LLC hereby submits a Site Management Inspection and Certification Report for the property located at 972-976 Leggett Avenue in the Woodstock section of Bronx, New York for the reporting period of 2024 to 2025, pursuant to the Site Management Plan (SMP) that is included in the OER approved Remedial Action Report (RAR), dated October, 2017.

K & R Preservation, LLC could not certify that engineering controls were functioning as designed during the 2021 to 2022 reporting period as the active sub-slab depressurization system (SSDS) was functioning at a reduced capacity in the southeastern corner of the building. To determine if the active SSDS should be repaired or modified to a passive system, a Soil Vapor Intrusion (SVI) study was completed during the 2022 to 2023 heating season.

The Letter Report of Soil Vapor Intrusion Study (May 2023,) concluded that remaining volatile organic compounds (VOCs) in sub-slab vapor did not represent a significant threat of SVI and recommended the active SSDS be modified to a passive system. OER approved the conversion of the SSDS to passive operation on May 18, 2023.

However, due to the dry cleaning facility operating in the building (Olando Cleaners), OER requested (via a conference call, June 2023), that the SSDS system remain active pending a review by New York State Department of Health (NYSDOH).

The NYSDOH approved the SSDS conversion on April 7, 2025. A revised SMP will be submitted and the SSDS converted (fans will be shut off and left in place per OER).

The SMP inspection for the 2024 – 2025 reporting period was conducted in accordance with the inspection protocols and schedules provided in the RAR (October 2017).

1.0 ENGINEERING CONTROLS

Engineering Controls were employed in the Remedial Action to assure permanent protection of public health by eliminating human exposure to residual materials remaining at the Site. The Engineering Control for this property is:

- Active Sub-Slab Depressurization System

Soil vapor intrusion is prevented by an active SSDS installed below the basement slab at the Site. There are four (4) separate subsystems, with a total of five (5) extraction points and three (3) extraction pits.

The extraction locations were designed to create a maximum radius of influence (i.e., the horizontal distance the negative sub-slab pressure fields extend) and to create a minimum negative pressure field of 0.004-inch water column (in. w.c.) beneath the building footprint. A figure showing the SSDS is provided in Appendix A.

Extraction points were installed by coring 6-inch holes through the concrete slabs and hand-excavating accessible soils located immediately beneath the floor slabs. Four-inch diameter, non-perforated cast iron pipe is positioned vertically within each suction point to target depths immediately beneath the building slabs, and is sealed with concrete and caulk. Each extraction point is backfilled with crushed stone to prevent soil and/or fine grained material from being drawn into the system.

The above-slab piping components are constructed of 4-inch diameter cast iron and serve as riser pipes. Manifold piping is routed horizontally along basement ceiling spaces, and all riser piping is located adjacent to interior walls or columns and is equipped with butterfly valves to equalize negative pressure distributions if necessary.

The SSDS subsystem installed beneath the dry cleaner serves as an Enhanced SSDS (e-SSDS). Discharge piping for the e-SSDS is equipped with granular activated carbon (GAC) drums utilized to reduce volatile organic compound (VOC) levels within extracted soil vapor, prior to discharge to outdoor ambient air. The GAC drums are located on raised platform beside the extraction pit. All system piping is positively pitched, allowing condensate to drain toward the extraction points.

A Fantech HP190SL vacuum blower was installed for each SSDS subsystem. Pressure gauges and sub-slab monitoring points (SSMPs) were installed in accessible areas at the ground level to enable measurement of vacuum pressures established within system piping and beneath floor slabs. During the 2021 – 2023 reporting period, inadequate vacuum was measured in SSMP VM-07 which is located 25 feet from suction point SP-7. Therefore, a new permanent monitoring point (VM-07B) was installed 17 feet from SP-7 at the reduced sphere of influence.

The Professional Engineer for the Remedial Action, Phil Bell, PE, served as the design engineer and certified the Active SSDS. He thoroughly evaluated the SSDS design, inspected the system during construction, verified the performance of each SSDS subsystem, and confirmed that the effluent discharge points are a minimum of 10 feet from any operable window or air intake for any building.

The contractor for SSDS extraction point/pit, piping and fan installation was EAI, Inc. The contractor for all other system components was Obar Systems, Inc. (Obar).

2.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls (ICs) are required under the Remedial Action to assure permanent protection of public health by eliminating human exposure to residual materials remaining at the Site. The Institutional Controls for the Remedial Action are:

- Recorded an OER-approved Declaration of Covenant and Restrictions (DCR) with the deed with the Bronx County Clerk. The DCR includes a description of all ECs and ICs, summarizes the requirements of the Site Management Plan, and notes that the property owner and property owner's successors and assigns are required to comply with the approved SMP;
- Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a written certification that evaluates their performance in a manner and at a frequency to be determined by OER;
- Access to the portion of the basement impacted by elevated PCE concentrations is limited by keeping doors locked at all times and a fan is evacuating vapors that may accumulate in the space;
- Engineering Controls will not be discontinued without prior OER approval;
- OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;
- Vegetable gardens and farming in residual soil/fill on the Site are prohibited;

- Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;
- All future activities on the Site that will disturb residual soil/fill must be conducted pursuant to the Soil/Materials Management provisions of the SMP, or otherwise approved by OER; and,
- The Site is intended to be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

3.0 INSPECTION NARRATIVE

The site inspection was performed by Szabolcs David of GBTS. The date of the inspection was July 1, 2025. Inspection photographs are provided in Appendix B.

Active Sub-Slab Depressurization System

All active SSDS subsystems were evaluated by visually inspecting piping and fans, checking the fans for signs of failure, and documenting visual U-manometer and audible alarm visual gauge readings from the suction points and riser pipes, and manometer readings from the SSMPs (see below). Visible system components were in good condition, with no indications of damage or equipment failure (fans).

Table 1: U-manometer Readings (July 1, 2025)

All instrument readings shown as inch w.c.

Suction Point ID	Visual Reading
SP-1	-2.8
SP-2	-1.5
SP-3	-1.5
SP-4	-3.3
SP-5	-3.3
SP-6	-3.4
SP-7	-3.7
SP-8	-3.7

Table 2: Visual Gauge Reading (July 1, 2025)

All instrument readings shown as inch w.c.

Riser Pipe/Suction Point ID	Alarm Reading
RP-1	-1.816
RP-2	-0.868
SP-7	-1.816
SP-4	-1.678

All vacuum measurements were recorded with an Infiltec DM1 Micro-Manometer at SSMPs and demonstrated adequate vacuum (-0.004 inch w.c. or less) except for VM-01 (inaccessible due to excessive water), VM-06 (inaccessible due to excessive water), VM-07 (inadequate vacuum documented since the 2021-2023 reporting period), and VM-07B.

Table 3: Vacuum Measurements at Sub-Slab Monitoring Points (July 1, 2025)

All instrument readings shown as inch w.c.

Monitoring Point	Instrument Reading
VM-01	Not measured
VM-02	-0.089
VM-03	-0.021
VM-04	-0.040
VM-05	-0.015
VM-06	Not measured
VM-07	-0.001
VM-07B	-0.002

Enhanced Sub-Slab Depressurization System

On a semi-annual basis, vapor samples are to be collected from pre- and post-carbon treatment sampling ports to determine if the GAC drums should be removed and replaced.

GBTS requested relief from collecting vapor samples as the GAC drums are scheduled to be removed for disposal following the SSDS conversion. OER approved the request on July 7, 2025.

4.0 STATUS OF ENGINEERING AND INSTITUTIONAL CONTROLS

Are the Engineering Controls and Institutional Controls employed at the Site continuing to perform as designed and continuing to be protective of human health and the environment?

Response: Yes, ECs and ICs employed at the Site continue to perform and protect human health and the environment. GBTS (during the 2021-2023, 2023-2024, and 2024-2025 reporting periods) observed that the SSDS in the southeastern corner of the building had a reduced radius of influence. The SVI study completed during the 2022-2023 heating season, to determine if the active SSDS needed repair, concluded that the SSDS in passive mode prevented SVI.

Has anything occurred that impairs the ability of the Engineering Controls or Institutional Controls to protect public health and the environment?

Response: The SSDS will be converted to passive mode and the GAC drums will be permanently removed. No vapor data is available for the reporting period of 2023-2024 or 2024 - 2025 to determine the effectiveness of VOCs removal.

Are any changes needed to the remedial systems or controls?

Response: OER and NYSDOH have approved the conversion of the SSDS to passive. The SSDS will be converted to passive (fans will be shutoff and left in place) and the GAC drums will be removed.

Has compliance with this SMP been maintained during this reporting period?

Response: No, the property owner did not complete monthly inspections during the reporting period. The monthly inspections will no longer be required once the SSDS is converted to passive.

Are Site records complete and up to date?

Response: The Site Management Plan calls for routine monthly inspections by on-Site personnel, which did not occur. GBTS advised the property owner that monthly inspections will no longer be required following the SSDS conversion. The updated SMP (once approved by OER) will be provided to the property owner to maintain at the site.

5.0 DEVIATIONS IN PERFORMANCE OF ENGINEERING AND INSTITUTIONAL CONTROLS

Deviations in performance were observed in the active SSD systems. Inadequate vacuum was measured at SSMPs (VM-07 and VM-07B) associated with suction point SP-7. This deviation is not relevant as the SSDS will be converted to passive.

6.0 NEXT INSPECTION

The next Site Management Inspection will be performed in 2026, and the Site Management Inspection and Certification Letter Report will be submitted by July 31, 2026.

7.0 CERTIFICATION

I, Daniel Bellucci, certify the following:

- I am a Qualified Environmental Professional;
- Szabolcs David inspected 972-976 Leggett Ave. site, site number 16CVP073X, on July 1, 2025, under my direct supervision;
- Caroline Clark prepared this Site Inspection and Certification Letter Report under my direct supervision;
- Engineering Controls or Institutional Controls employed at the Site continue to be in place and are performing as designed. Although the active SSDS's radius of influence is reduced it prevents SVI;
- Activities on the Site that could have disturbed residual soil/fill material were done in accordance with the Soil/Materials Management Plan in the SMP;
- Site records are not complete and up to date as monthly observations by building personnel were not conducted. The monthly inspections will no longer be required following the SSDS conversion.;
- Nothing has occurred on the Site that impairs the ability of Engineering Controls or Institutional Controls to protect public health and the environment. Despite deficiencies and deviations discussed in sections 4.0 and 5.0, the SVI study completed during the 2022-2023 heating season confirmed that the SSDS in passive mode prevents vapor intrusion;
- No changes are needed to the remedial systems or engineering controls. However, the SSD system will be modified to passive mode;
- An OER-approved Declaration of Covenant and Restrictions (DCR) has been recorded with the Bronx County Clerk;

- Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a written certification that evaluates their performance in a manner and at a frequency to be determined by OER;
- Access to portions of the basement impacted by elevated PCE concentrations are limited by keeping doors locked at all times and signs posted on doors;
- Engineering Controls will not be discontinued without prior OER approval;
- OER maintains the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;
- Vegetable gardens and farming in residual soil/fill on the Site remains prohibited;
- Use of groundwater underlying the Site without treatment rendering it safe for its intended use remains prohibited;
- All future activities on the Site that will disturb residual soil/fill must be conducted pursuant to the Soil/Materials Management provisions of the SMP, or otherwise approved by OER; and,
- The Site is intended to be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

PE Name: Daniel Bellucci

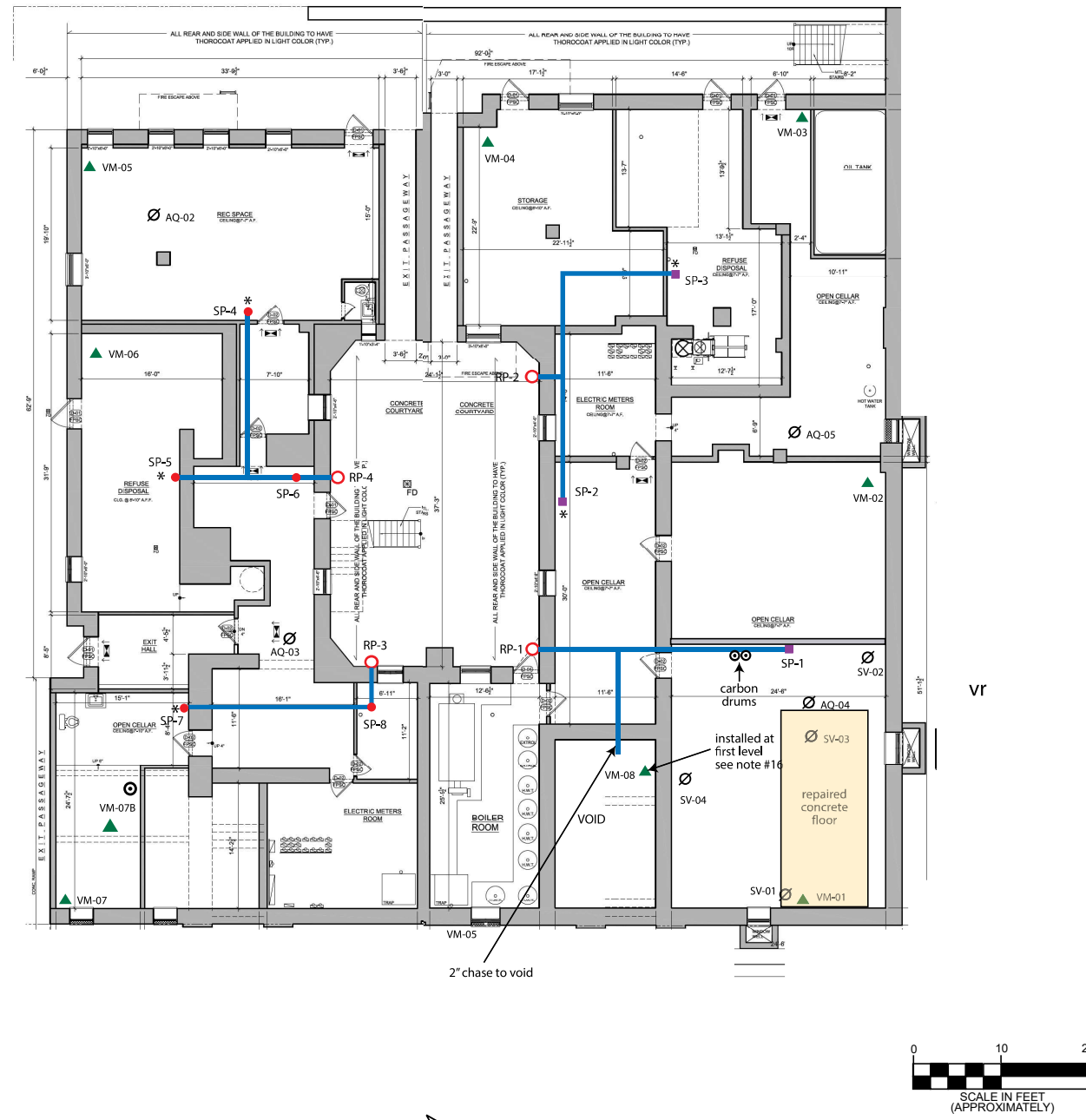
PE Signature: 

Date: July 17, 2025

APPENDIX A

Figure

Ø AQ-01



Notes:

1. Seven (7) suction pits (3'x3'x1') and one (1) suction point shall be constructed at the indicated locations, following the specifications in Figure 1B and 1C: Sub-slab Depressurization System Details #3 and #4. Suction pits designated with an asterisk (*) may be replaced with suction points if, in the opinion of the installation contractors, such a change will not affect the effectiveness of the SSD System.
2. Piping materials above and below ground shall comply with materials specified in NYC DOB Sanitary Drainage Code, Tables 702.1 (aboveground) and Table 702.2 (belowground). Cast iron, 4" inside diameter (ID), with corresponding cast iron no-hub couplers at all pipe unions, is recommended for inter-slab and above-slab piping. If approval is secured from NYC DOB, the following materials are acceptable: perforated, 4" ID Schedule 40 PVC pipe for sub-slab piping; and non-perforated, 4" ID Schedule 40 PVC pipe for piping at and above the concrete slab.
3. Unless approval is secured from NYC DOB, sub-slab suction pit piping shall consist of 4" ID non-perforated cast iron (6" ID for the northeastern suction pit connected to RP-1) and sub-slab suction point piping shall consist of 4" ID perforated cast iron piping. Sub-slab suction pit piping shall be covered with 3" min. of aggregate ASTM size #5 (or equivalent).
4. Sub-slab and overhead piping shall be pitched down from the riser pipe towards suction pits or points at 1/8" per foot (1% slope) to facilitate condensation drainage.
5. Riser pipes shall be 4" diameter non-perforated cast iron. Pre-treatment riser piping (prior to carbon drums) for the northeastern suction pit shall be 6" ID non-perforated cast iron transitioning to 4" ID post-treatment (after carbon drums) riser piping.
6. Appropriate fire stop details shall be installed at any location in which the riser pipe penetrates a fire rated wall and all joints shall be sealed with plumber's cement (or similar product) to be applied according to the manufacturer's specifications.
7. Overhead piping and riser pipe inside the building shall be mounted to the nearest building column, beam or supporting structure. Riser pipes outside the building shall be mounted to the nearest external building component with stabilizing straps and supports at the roof level.
8. Location of sub-slab and overhead piping and riser pipes subject to change based upon final site design and integration with building renovation design.
9. Riser pipe termination shall extend at least 6" above the parapet, and at least 10' from other buildings, HVAC intakes, windows or doors.
10. A powered fan shall be installed at each riser pipe termination following specifications in Figure 1A: Sub-slab Depressurization System Detail #1. Fan size to be determined by vacuum testing after suction pits are constructed.
11. Sub-slab monitoring points shall be installed after installation of all Sub-slab Depressurization System components, with exception of the fan, for field testing and monitoring purposes. Locations are shown generally here; exact locations will be determined in the field and in consultation with the environmental consultant. Sub-slab negative pressure will be considered adequate if measurements using valid pressure gauges are equal to or greater than -0.004 inches of water.
12. U-manometers or equivalent pressure gauges shall be installed at each riser pipe inside the building at visible locations as visual indicators of negative pressure.
13. A 4-inch butterfly valve (or approved equal) shall be installed at an accessible location in each vertical pipe connecting the sub-slab piping to the horizontal overhead piping.
14. All U-manometers, visible SSDS piping in the exterior and interior portions of the building, and powered fans shall be clearly labeled as "Sub-Slab Venting System" by means of tag, stencil or other approved marking.
15. General Contractor shall provide shop and coordination drawings for approval.
16. An additional suction point shall be installed above the unexcavated area at level if inadequate negative pressure is identified at the Level 1 monitoring point (after system completion). The suction point would be manifolded to RP-1 at the exterior courtyard area.

Legend:

suction pit	suction point
riser	monitoring point
4" horizontal overhead Schedule 40 PVC pipe	pilot test boring
soil vapor sample location	

Location of Sub-Slab Depressurization System	
972-976 Leggett Avenue Borough of Bronx, New York	
File: 21003-0063	Scale as shown
May 2023	Appendix B

APPENDIX B

Site Photographs

APPENDIX B – PHOTOGRAPHS



1. Typical U-manometer reading, suction point SP-1



2. Typical audible alarms, suction points RP-1 and RP-2



3. Typical digital manometer reading, SSMP VM-05



4. Excessive water at SSMP VM-01

APPENDIX B – PHOTOGRAPHS



5. Excessive water at SSMP VM-06