

Project Name: 411 Wales & 408 Concord Avenue, Bronx, NY 10454

Project Number: E-475

Site Management Reporting Period: 7/31/2019 – 7/31/2020

Inspection Date: 8/7/2020

Certifier: Kevin Boger, PE

Report Submittal Date: 8/18/2020

Report Preparer: TRC Engineers, Inc. on behalf of Civic 411 Wales Corporation

Site Inspection and Certification Letter Report

Civic 411 Wales Corporation hereby submits a Site Management Inspection and Certification Report for the property located at 411 Wales and 408 Concord Avenue in the Mott Haven section of Bronx, New York for the reporting period, 7/31/2019 to 7/31/2020, pursuant to the Site Management Plan (SMP) that is included in the OER approved Remedial Action Report (RAR), dated September 2019. The Site is identified as Block 2574 and Lot 82 on the New York City Tax Map.

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 Site has three (3) Engineering Control Systems. Engineering Controls for this property are:

Composite Cover System

Exposure to residual soil/fill is prevented by an engineered Composite Cover System that has been built on the Site. This Composite Cover System consists of 6 inches of concrete slab underlain by 6 inches of aggregate at the 411 Wales Site and 6 inches of concrete slab underlain by 12 inches of aggregate at the 408 Concord Site. The composite cover system serves to prevent human exposure to residual soil/fill remaining under the Site. The Contractor for the cover construction was Kel-Mar Designs, Inc.

Vapor Barrier System

Exposure to soil vapor is prevented by a Vapor Barrier System that has been integrated into the school construction. The Vapor Barrier System for the 408 Concord building consists of a spray-applied, 60-mils thick, water-based gas vapor barrier membrane (Liquid Boot), a 105 mils thick,

polypropylene, staple fiber, non-woven geotextile fabric (UltraShield G-1000), and a 20-mil, high performance polyethylene-EVOH copolymer geomembrane (VI-20 Geomembrane). The vapor barrier was installed by Kel-Mar Designs, Inc. The gas vapor barrier was applied to create a continuous vapor tight barrier beneath the entire construction, with durable seals to every wall, beam, footing, and penetration to ensure a single contiguous impermeable membrane layer. Smoke testing was performed by the gas vapor barrier installer and was observed by a representative of the Professional Engineer to ensure no breaks or holes are present. The contractor for the Vapor Barrier System construction was EAI, Inc. For the 411 Wales building, a VI-20 geomembrane was installed beneath the extent of the first floor concrete slab; however, a spray-applied gas vapor barrier was not applied beneath the 411 Wales building.

Active Sub-Slab Depressurization System

Exposure to soil vapor is prevented by a Sub-Slab Depressurization System (SSDS) that has been built on the Site. This SSDS consists of three (3) branches of 6" cast iron pipes and sub-slab pits, which are aligned horizontally beneath the 411 Wales and 408 Concord building slabs and attached to vertical riser pipes, identified as VR-1, VR-2, and VR-3, which convey vapors via three (3) 6-inch cast iron pipes aligned vertically through the building and vented above the roof of the Site building. The slabs of the two buildings were underlain with a gas permeable layer comprised of 6 inches of ¾-inch recycled concrete aggregate and 12 inches of ¾-inch recycled concrete aggregate, respectively. Three (3) New York Blower Company Compact Pressure Blower vacuum blowers were installed inline on the roof level and an alarm system and manometers were installed in an accessible area in custodial engineer's office to enable measurement of the vacuum pressure established by the system. The contractor for the Active Sub-Slab Depressurization System construction was Kel-Mar Designs, Inc. The PE for the Remedial Action has inspected the system and confirmed that the effluent discharge point is a minimum of 10 feet from any operable window or air intake for any building. The SSDS has been connected to the Building Management System (BMS). Upon startup, vacuum gauge readings were noted and proper functioning of alarm lights were noted.

2.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls 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:

- (1) An OER-approved Declaration of Covenant and Restrictions (DCR) with the deed with the Bronx County Clerk will be recorded following completion of the Site Management Plan. The DCR will include a description of all ECs and ICs, summarize the requirements of the Site Management Plan, and will note that the property owner and property owner's successors and assigns are required to comply with the approved SMP;
- (2) The property will continue to be registered with an E-Designation by the NYC Department of Buildings. Property owner and property owner's successors and assigns are required to comply with the approved SMP;
- (3) Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of ECs and ICs. The property owner and property owner's successors and assigns will inspect ECs and ICs and submit to OER a written certification that evaluates their performance on an annual basis;
- (4) Engineering Controls will not be discontinued without prior OER approval;
- (5) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of ECs and ICs;
- (6) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;
- (7) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;
- (8) 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;
- (9) The Site is intended to be used for restricted residential use as a charter school 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 Robert Bowden under the supervision of Kevin Boger, PE. The date of the inspection was 8/7/2020.

All SSDS accessories were found to be in good condition and were functioning properly. No cracks in the cellar floor or penetrations of the GVB were noted. The Annual Inspection Form, Monitoring Point Inspection Checklist, and Photolog are attached. Annual refresher training was conducted with the custodial staff while onsite. Please note that the custodian indicated that frequent inspections of the SSDS equipment are completed to confirm it is functioning properly; however, they have not been completing the monthly inspection forms. As part of the refresher training TRC reminded the custodian of the forms required during the monthly SSDS inspection, and the custodian indicated he would keep a record of the inspections on these forms moving forward.

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.
- Has anything occurred that impairs the ability of the Engineering Controls or Institutional Controls to protect public health and the environment?
Response: No.
- Are any changes needed to the remedial systems or controls?
Response: No.
- Has compliance with this SMP been maintained during this reporting period?
Response: Yes
- Are site records complete and up to date?
Response: No, as indicated above the custodian did not complete the SSDS Monthly Inspection Forms.
- Have monthly SSDS inspections by building superintendents been performed, certified on inspection checklists, and maintained on file on site?
Response: The custodian indicated monthly inspections of the SSDS have been completed; however, the inspection forms have not been filled out.

5.0 DEVIATIONS in PERFORMANCE of ENGINEERING and INSTITUTIONAL CONTROLS

There are no deviations in the expected performance of Engineering and Institutional Controls as described in the SMP.

6.0 NEXT INSPECTION

The next Site Management Inspection will be performed in Summer 2021, and the Site Inspection and Certification Letter Report will be submitted by July 30, 2021.

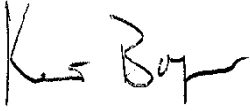
7.0 CERTIFICATION

I, Kevin Boger, PE, certify the following:

- I am a Professional Engineer;
- 411 Wales and 408 Concord Avenue, site number E-475, was inspected under my supervision on 8/7/2020;
- I prepared this Site Inspection and Certification Letter Report;
- Engineering Controls or Institutional Controls employed at the Site continue to be in place and perform as designed and continue to be protective of human health and the environment;
- There have been no activities on the Site that have disturbed residual soil/fill material;
- Site records are complete and up to date;
- Nothing has occurred on the Site that impairs the ability of Engineering Controls or Institutional Controls to protect public health and the environment;
- No changes are needed to the remedial systems or engineering controls;
- Compliance with the Site Management Plan has been maintained;
- All Engineering Controls remain in place;
- Vegetable gardening and farming in residual soils has been prevented;
- Groundwater underlying the Site is not being utilized without treatment rendering it safe for the intended purpose has been prevented;
- The Site has not been used for a higher level of use other than the restricted residential, use addressed by the Remedial Action;
- The Site continues to be registered as an E-Designated property by the NYC Department of Buildings;

- The Site continues to have an OER-approved Declaration of Covenants and Restrictions recorded with the property deed by the Bronx County Clerk.

Kevin Boger, PE

A handwritten signature in black ink, appearing to read "Kevin Boger". The signature is stylized with a large "K" and a cursive "Boger".

8/18/20

Attachments:

- Annual Inspection Form
- Annual Monitoring Point Inspection Checklist
- Photolog

ATTACHMENTS

ANNUAL INSPECTION FORM

ANNUAL INSPECTION FORM
411 Wales Avenue

| | | |
|-------------------------|----------------------------------|---------------------------|
| Inspector's Name/Title: | Robert Bowden / Project Engineer | Weather Conditions: Sunny |
| Inspection Date: | 8/7/2020 | Air Temperature (°F): 75 |
| Inspection Time: | 12:30 PM | |
| Comments: | | |

A. PRE INSPECTION CHECKLIST

- | | |
|---|---|
| ✓ | * Schedule Annual Inspection when school is not occupied by students. |
| * | * Review Monthly Inspection Checklists from prior 12 months. |
| ✓ | * Meet with Custodial Engineer and Principal to solicit comments/concerns regarding the operation of the Engineering Controls over the last 12 months. |
| ✓ | * Conduct Annual Refresher Training with Engineering Controls team |
| ✓ | * Follow proper safety protocols including lockout/tagout. |
| ✓ | * Comments: Custodial engineer has been performing frequent inspections of Engineering Controls, but has not been completing Monthly Inspection Forms. Going forward, Custodial Engineer will complete forms and retain for TRC review. |

B. SUB-SLAB DEPRESSURIZATION SYSTEM INSPECTION

- | | |
|---|---|
| ✓ | * Walk the entire roof surface, custodial office, and applicable storage rooms of school building |
| ✓ | * Inspect fan stack guy wires. |
| ✓ | * Record vacuum gauge reading on riser pipes or SSDS fan(s). |
| ✓ | * Ensure all SSDS accessories listed in section 15880 are functioning properly. |
| ✓ | * Inspect bolts and set screws for tightness and rusty condition. |
| ✓ | * Inspect SSDS fan(s) for cleanliness. Clean exterior surfaces only. Remove dust and grease on motor housing, |
| ✓ | * Are the indicator lights on the Alarm Indication Station functioning properly? |
| ✓ | * Is the spare fan unit present at the school? |
| ✓ | * Inspect monitoring points (look for obstructions, check manhole/bolts, quick connects). |
| | * Comments (see or hear anything unusual?): N/A |

C. INSPECTION

Walk all of the cellar floor

- | | |
|-----|--|
| ✓ | * Review all cracks or other openings identified in first floor during previous inspections. Confirm repairs have been made. |
| ✓ | * Any new visible cracks/penetrations/work in the floor? |
| ✓ | * Any new visible opening (unintended) in the floor? |
| ✓ | * Any new visible cracks in accessible pits? |
| ✓ | * Note the length of any new cracks/openings in the floor. |
| N/A | * Draw approximate location of floor cracks/openings that appear to have potential leak through vapor barrier. |
| | Comments: No cracks/ new penetrations noted at cellar floor or first floor. |

D. Repair

Summarize needed/completed repairs to Engineering Controls:

N/A

Inspector's Signature:

RC Bowden

**ANNUAL MONITORING POINT INSPECTION
CHECKLIST**

411 Wales Avenue

Annual Monitoring Point Inspection Checklist

Inspect all monitoring point locations for obstructions; check the manhole covers (and bolts) along with the quick connections inside the manhole.

| Monitoring Point ID | Room Number | Any obstructions over MP | Manhole cover secure and bolts in tact | Comments |
|---------------------|-------------------------------------|--|--|------------------------|
| MP-1 | Bottom of Gymnasium Stairwell ST1-1 | Y / <input checked="" type="radio"/> N | <input checked="" type="radio"/> Y / N | No deficiencies noted. |
| MP-2 | Room 145B | Y / <input checked="" type="radio"/> N | <input checked="" type="radio"/> Y / N | No deficiencies noted. |
| MP-3 | Northwest corner of Gymnasium | Y / <input checked="" type="radio"/> N | <input checked="" type="radio"/> Y / N | No deficiencies noted. |
| MP-4 | Room 130 | Y / <input checked="" type="radio"/> N | <input checked="" type="radio"/> Y / N | No deficiencies noted. |
| MP-5 | Room 119 | Y / <input checked="" type="radio"/> N | <input checked="" type="radio"/> Y / N | No deficiencies noted. |
| MP-6 | Room 104 | Y / <input checked="" type="radio"/> N | <input checked="" type="radio"/> Y / N | No deficiencies noted. |

ANNUAL INSPECTION PHOTOLOG

Engineering Controls – Annual Inspection

Photograph Log – 8/7/2020



Photo 1: Inspection of SSDS fan, SF-1, and associated rooftop SSDS accessories.




Photo 2: Inspection of SSDS fans, SF-2 and SF-3, and associated rooftop SSDS accessories.



Photo 3: Inspection of SSDS monitoring point, MP-5.



Photo 4: Inspection of interior of SSDS monitoring point, MP-4.

| | | | | | |
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| TRC Job No. | Photographs Taken By: | Page No. | Client: | Site Name & Address: |  |
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Engineering Controls – Annual Inspection

Photograph Log – 8/7/2020



Photo 5: Inspection of alarm indication stations for SSDS.



Photo 6: Inspection of composite cover system for Site.



Photo 7: Cellar of building inspected for cracks and holes. No deficiencies noted.



Photo 8: Spare SSDS fan stored in cellar of school building.

| TRC Job No. | Photographs Taken By: | Page No. | Client: | Site Name & Address: | TRC |
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