

Project Name: 504 Myrtle Avenue

Project Number: 13CVCP110K

Site Management Reporting Period: July 2020 to June 2021

Inspection Date: June 23, 2021

Inspector and Certifier: Spiro Dongaris, P.E./Evan Greenberg, E.I.T.

Report Submittal Date: July 21, 2021

Report Preparer: Athenica Environmental Services, Inc. on behalf of 504 Myrtle Residential Owner LLC.

Site Inspection and Certification Letter Report

504 Myrtle Residential Owner LLC hereby submits a Site Management Inspection and Certification Report for the property located at 504 Myrtle Avenue in the Clinton Hill section of Brooklyn, New York for the reporting period, 2020 to 2021, pursuant to the Site Management Plan (SMP) that is included in the OER approved Remedial Action Report (RAR), dated August 2017. The Site is identified as Block 1905 and Lot 7503 (previously Lot 30) 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

An engineered Composite Cover System that has been built on the Site prevents exposure to residual soil/fill. The Composite Cover System installed beneath the building at the Site is comprised of a 6-inch thick reinforced concrete slab on a 6-inch layer of crushed bluestone and 1-foot thick foundation side-walls. The concrete slab is underlain by a vapor barrier system, discussed in further detail below. The building slab covers the entire site footprint.

Vapor Barrier System

Following the limited excavations and removal of existing cellar slab, and prior to pouring the new concrete slab, a 46-mil membrane consisting of Grace Preprufe® 300R was installed across the entire cellar floor. Grace Preprufe® 16R 32-mil membrane and 59-mil Bituthene 4000 was also installed along the vertical foundation sidewalls to grade. All penetrations through the Preprufe membrane were sealed utilizing Grace Liquid Bithuthene and Grace tape. The professional engineer for the Vapor Barrier System was Shaik Saad, P.E. The contractor for construction of the Vapor Barrier System was Sky Materials, located in Maspeth, NY.

Sub-Grade Ventilation System/ Active Sub-Slab Depressurization System

The sub-grade parking garage in the basement at the Site is equipped with an air exchange system to provide continuous ventilation to the sub-grade parking area as required by NYC Building Code ventilation that prevents the buildup of any vapors within the structure.

Exposure to soil vapor is prevented beneath the non-parking space of the basement by a Sub-Slab Depressurization System (SSDS) that has been built on the Site. This SSDS consists of one loop of fabric wrapped schedule 40 perforated 4-inch PVC pipes aligned horizontally beneath the northern area of the building slab where ventilated sub-grade parking is not present. The fabric-wrapped schedule 40 perforated 4-inch PVC pipes were embedded within the 6-inch thick layer of ¾-inch blue stone placed at the bottom of excavation. The system loop of perforated pipes was connected to lateral schedule 40 non-perforated 4-inch PVC pipes and then to a vertical riser pipe consisting of 4-inch cast iron. Vapors from beneath the slab are collected in the lateral, perforated pipes and vented via the riser to a Radon Away High Suction In-Line Radon Fan (model GP-501) permanently mounted at a minimum of 10 feet on an exhaust stack above the finished roof of the building. The SSDS piping terminates with a vertical condensate bypass, discharging at least 10 feet from air intakes of HVAC systems or from operable windows. The radon fan on the roof is hardwired to the building electrical system. This system is equipped with a visible and audible Vacuum Monitor/Alarm with electronic light and audio when suction fails (model 28001-2) indicating loss of system vacuum or malfunctioning and a visible Dwyer Magnehelic dial type vacuum gauge (model 2004-M). The SSDS alarm and gauge are mounted directly on a solid PVC riser protruding from the slab in a storage room in the sub-grade floor of the building. Stickers indicating the content of the riser pipe, purpose of alarm, and in case of emergency contact number for responsible individual for immediate assistance are mounted on

the visible portion of the SSD system that consist of a 4-inch cast-iron riser extending from the solid PVC riser in the sub-grade floor of the building up to the rooftop mounted fan. As part of the SSD system installation, two pressure monitoring probes were permanently installed beneath the vapor barrier and were terminated in the slab with limited access manhole cover situated in the two utility rooms in the basement of the building. Each pressure monitoring probe consisted of a 3-inch long stainless steel filter installed in layer of ¾-inch blue stone and connected to the surface via a ¼-inch PVC pipe equipped with a manual shut-off valve.

The system has been in full operation since March 4, 2016. The design engineer for the Active SSDS is Shaik Saad, P.E. The contractor for underground piping construction of the active SSDS was Sky Materials located in Maspeth, New York.

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) 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;
- (2) 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;
- (3) Engineering Controls will not be discontinued without prior OER approval;
- (4) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;
- (5) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;

(6) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;

(7) 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;

(8) 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 inspections were performed by Evan Greenberg, EIT, under the immediate direction of Spiro Dongaris, PE, of Athenica Environmental Services Inc. (Athenica). The date of the inspection was June 28, 2021.

All reasonably accessible portions of the composite cover system were visually inspected for cracks, penetrations, perforations, and impairments. No significant damage to the composite cover system was observed that would impact the function of the EC. Minor stress cracks were observed on the concrete building slab; however, based on the presence of a vapor barrier system beneath the building slab and the *de minimis* nature of the cracks they are not expected to impair the Site's protection from soil vapor intrusion.

All accessible components of the sub-grade ventilated parking were inspected, including the vents, ducting, and exhaust fans, located on the roof of the single-story portion of the Site. No leaks were observed around any of the exhaust fans. Carbon monoxide detectors were inspected, and found to be operational.

All accessible components of the active SSDS were inspected, including the Magnehelic vacuum gauge, pressure alarm, riser pipes, radial fans, and vent pipes. The vacuum reading at the gauge was observed to be -0.6 inches water column, indicative of sufficient vacuum pressure. At the time of inspection, the alarm unit appeared to be disconnected and non-functional. Athenica reconnected the alarm during the inspection; the alarm was determined to function correctly. During the inspections, the two sub-slab monitoring points were not accessible.

The vent pipe located on the roof of the building was located a minimum of 10 feet from accessible areas and from any air intakes. No leaks were observed, and the fan appeared to function to its design capacity.

Monthly inspections were not performed prior to Athenica's Inspection on October 31, 2019, and no records had been kept on-Site. Athenica instructed building management to perform these inspections, and provided a copy of a monthly inspection checklist to keep on-Site.

A photolog and Annual Inspection Checklist, conducted for 2021, are provided as attachments.

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: Institutional controls employed at the Site remain as protective of human health and the environment as their initial intent. Engineering controls, including the composite cover system, vapor barrier system, sub-grade ventilation system, and SSDS also remain protective of human health and the environment.

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

Response: The institutional and engineering controls are protective of human health and the environmental.

- Are any changes needed to the remedial systems or controls?

Response: No. The alarm unit needs to be plugged in at all times.

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

Response: **Yes**

- Are site records complete and up to date?

Response: **Yes**

- Have monthly SSDS inspections by building superintendents been performed, certified on inspection checklists, and maintained on file on site?

Response: **Yes**

5.0 DEVIATIONS IN PERFORMANCE OF ENGINEERING AND INSTITUTIONAL CONTROLS

Following the reconnection of the alarm system, the SSDS performs properly.

6.0 NEXT INSPECTION

In accordance with the Site management plan, the next inspection will be performed in 2022.

7.0 CERTIFICATION

I, Spiro Dongaris, P.E., certify the following:

- I am a New York State Licensed Professional Engineer;
- The 504 Myrtle Avenue site, site number 13CVCP109K was inspected on June 28, 2021;
- I prepared this Site Inspection and Certification Letter Report;
- Engineering Controls or Institutional Controls employed at the Site continue to be in place and continue to be protective of human health and the environment;
- Activities on the Site that have disturbed residual soil/fill material have been in accordance with the Soil/Materials Management Plan in the SMP;
- 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.

Spiro I. Dongaris

PE Name

[Handwritten Signature]

PE Signature



7/21/21

Date

Site Management Inspection Checklist

Prepared By: Evan Greenberg

WEATHER	Snow	Rain	Overcast	Partly Cloudy	Sun
TEMP.	< 32	32-50	50-70	70-85	>85

VCP Project No.:	13CVCP110K	E-Number Project No.:	11EH-N358K	Date:	1/28/11
Project Name:	504 Myrtle Avenue				

Consultant: Athenica Environmental Services, Inc.	Owner: 504 Myrtle Residential Owner LLC
--	--

Operation/System	Yes	No	Comments
System blower running?	✓		
Observed leaks around blower/exhaust stack?		✓	
Vacuum gauge operational?	✓		
Vacuum gauge reading:	0.6		
Alarm system green light on?	✓		found offline, repaired
Alarm system audible function operational?	✓		
Observed leaks around gauge or alarm?		✓	

Active SSDS Magnehelic Vacuum Gauge Readings:

-0.6

Problems Encountered:

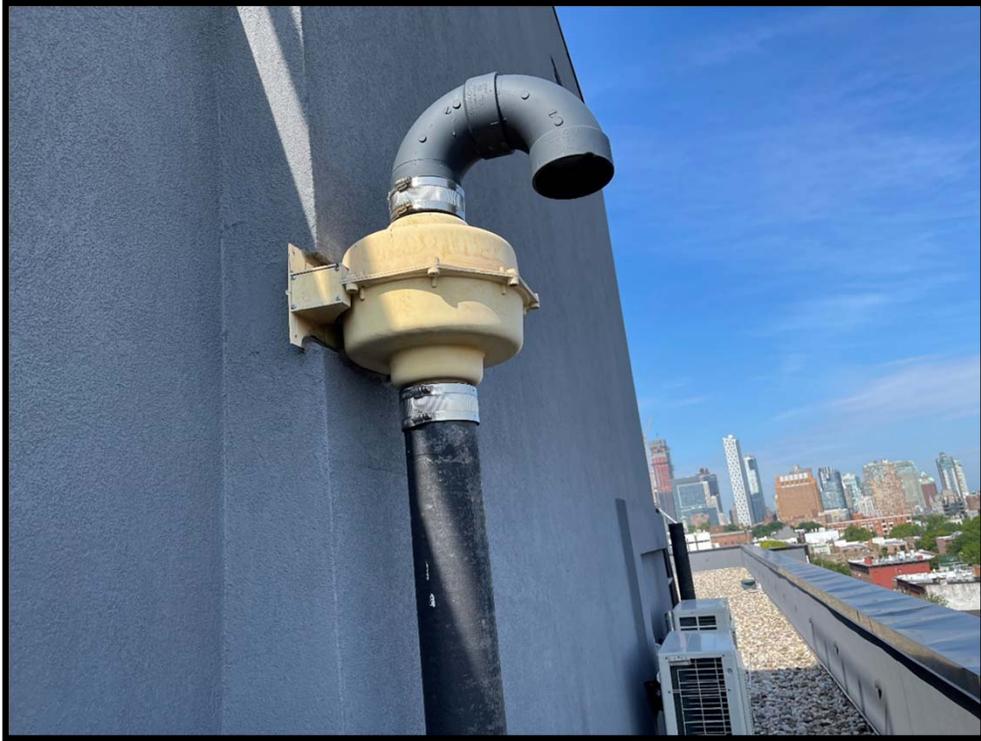
alarm unplugged

Recommendations:

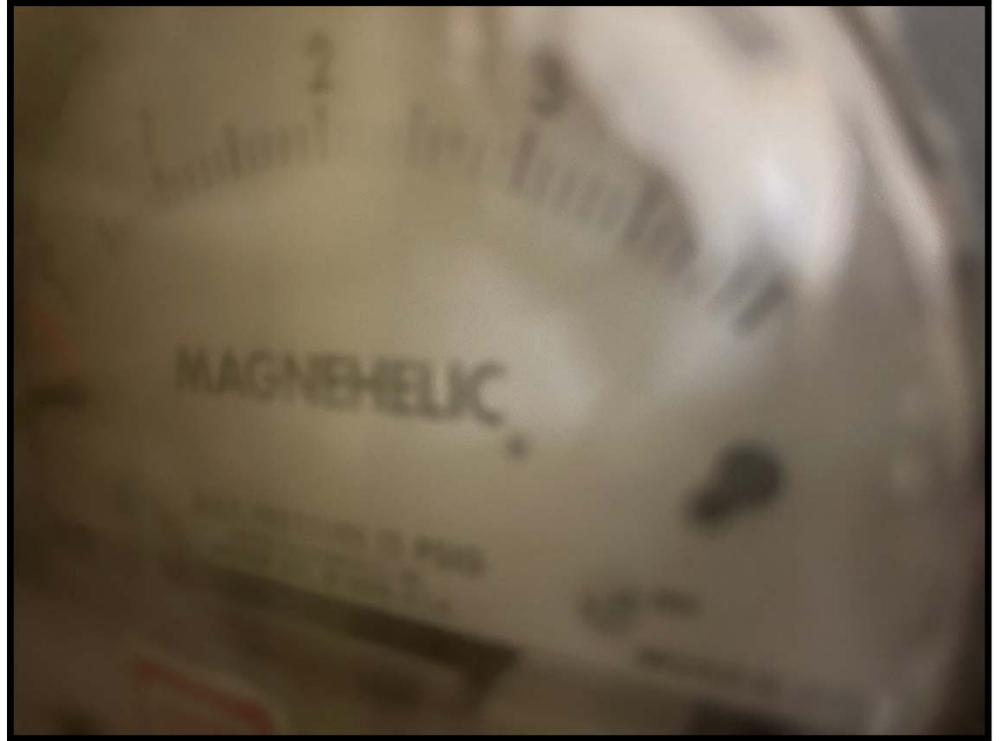
Date and Time of Inspection: 6/28

Building Superintendent Name: Byron Bize

Building Superintendent Signature: [Signature]



View of the blower fan on the roof.



View of the magnehelic gauge.



View of the ventilated parking garage alarm unit.



View of the ventilated parking garage.

Active Sub-Slab Depressurization System (SSDS) Monthly Building Superintendent Inspection Form
 504 Myrtle Avenue, Brooklyn, New York (13CVCP110K)

This system was designed and installed to protect building occupants and must be operating properly
 If any problems arise with the system, contact Athenica Environmental Services at 718-784-7490 or call NYCOER at 212-788-8841 if no response

2020 504 Myrtle Avenue												
Month	1/20	2/20	3/20	4/20	5/20	6/20	7/20	8/20	9/20	10/20	11/20	12/20
Date (ENTER DATE)	1/23	2/15	3/7	4/11	5/13	6/21	7/3	8/5	4-Sep	2-Oct	6-Nov	4-Dec
System blower running? (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observed leaks around blower/exhaust stack? (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N
Vacuum gauge operational? (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vacuum gauge reading: (ENTER NUMBER ON GAUGE)	1.2	1.1	1.0	1.2	1.1	1.0	1.2	1.1	1.1	1.1	1.0	1.1
Alarm system green light on? (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observed leaks around gauge or alarm? (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N
Alarm audible when low pressure detected UNPLUG TUBE FROM ALARM. (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Inspector's Initials (ENTER INITIALS)	AB	AB	AB									

To be signed at end of year

Building Superintendent Name: Asmir Brdakic

Building Superintendent Signature: AB

This checklist must be completed, signed, and kept on file at the building location; this file must be available upon request.

Notes/Comments

Active Sub-Slab Depressurization System (SSDS) Monthly Building Superintendent Inspection Form
 504 Myrtle Avenue, Brooklyn, New York (13CVCP110K)

This system was designed and installed to protect building occupants and must be operating properly
 If any problems arise with the system, contact Athenica Environmental Services at 718-784-7490 or call NYCOER at 212-788-8841 if no response

2021 504 Myrtle Avenue												
Month	1/21	2/21	3/21	4/21	5/21	6/21	7/21	8/21	9/21	10/21	11/21	12/21
Date (ENTER DATE)	1/8	2/5	3/5	4/2	5/7	6/4	7/19					
System blower running? (Y/N)	Y	Y	Y	Y	Y	Y	Y					
Observed leaks around blower/exhaust stack? (Y/N)	N	N	N	N	N	N	N					
Vacuum gauge operational? (Y/N)	Y	Y	Y	Y	Y	Y	Y					
Vacuum gauge reading: (ENTER NUMBER ON GAUGE)	1.1	1.2	1.2	1.1	1.1	1.1	1.1					
Alarm system green light on? (Y/N)	Y	Y	Y	Y	Y	Y	Y					
Observed leaks around gauge or alarm? (Y/N)	N	N	N	N	N	N	N					
Alarm audible when low pressure detected UNPLUG TUBE FROM ALARM. (Y/N)	Y	Y	Y	Y	Y	Y	Y					
Inspector's Initials (ENTER INITIALS)	AB	AB	AB	AB	AB	AB	BB					

To be signed at end of year

Building Superintendent Name: _____

Building Superintendent Signature: _____

This checklist must be completed, signed, and kept on file at the building location; this file must be available upon request.

Notes/Comments