Project Name: 233 Landing Road – Bronx, NY

Project Number: 15TMP0334X

Site Management Reporting Period: 2020

Inspection Date: December 1, 2020

Inspector and Certifier: Matthew M. Carroll

Report Submittal Date: 07/30/2021

Report Preparer: Tenen Environmental, LLC on behalf of Bowery Residents' Committee

Site Inspection and Certification Letter Report

Bowery Residents' Committee hereby submits a Site Management Inspection and Certification Report for the property located at 233 Landing Road in the Fordham Manor section of the Bronx, New York for the reporting period, 2020, pursuant to the Site Management Plan (SMP) that is included in the OER approved Remedial Action Report (RAR), dated November 2017. The Site is identified as Block 3236 and Lot 25 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 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 is comprised of ten inches of concrete building foundation slab and a minimum of two feet of clean fill or concrete cover.

Vapor Barrier System

Mitigation of potential soil vapor from offsite was addressed with a combination of building slab and vapor barrier. The vapor barrier utilized was a Grace Florprufe 120 20-mil polyethylene vapor barrier membrane installed beneath the building slab and along the exterior of the foundation walls. The vapor barrier system extends throughout the area occupied by the footprint of the new building. As stated in the design specifications, all vapor barrier seams, penetrations, and repairs were sealed either by the tape method or weld method, according to the manufacturer's recommendations and instructions.

Active Sub-Slab Depressurization System

Potential exposure to soil vapor is prevented by a Sub-Slab Depressurization System (SSDS) that has been built on the Site. This SSDS consists of four loops beneath the building footprint. These four loops connect to three risers vented to the roof with three suction fans.

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 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 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 ECs and ICs;

(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 inspection was performed by Matthew M. Carroll. The date of the inspection was 12/01/2020.

Site inspection was completed by persons with knowledge of the mechanical systems in the building and familiarity with the property. The building superintendents accompanied Tenen personnel during the inspection. Site reporting of EC certifications is discussed in this inspection report for the completion of the third year of site management.

Composite Cover System

EC inspections of the composite cover include observations of the conditions of the concrete building slab, landscaped areas and concrete sidewalks. The composite cover was inspected for cracks, holes or other openings that could provide access to the soil/fill below the cover. If any cracks, holes or other openings were observed in the composite cover during the EC inspection, the inspector would make a recommendation that such cracks, holes or openings be immediately filled and/or sealed as necessary.

Current status: No cracks, holes or other openings were observed during site inspections. The composite cover system is a permanent control and the quality and integrity of this system has been inspected annually as per the SMP. An annual inspection checklist is included in Appendix 1. Additional information on the composite cover design is included in Appendix A of the SMP.

Vapor Barrier System

Due to the presence of the concrete slab, the EC inspection of the vapor barrier could not be made. The EC vapor barrier inspection consisted of 1) observations of the concrete slab for visible cracks and gaps; and 2) inspection of any exposed portions (seams and edges) of the vapor barrier. Additional vapor barrier tape or sealant would be recommended to repair potential holes in the vapor barrier or sealant along the vapor barrier edges or seams.

Current status: No visible cracks and/or gaps were observed during inspection. There are no exposed portions (seams or edges) of the vapor barrier. The vapor barrier system is a permanent control and the quality and integrity of this system has been inspected annually as per the SMP.

An annual inspection checklist is included in Appendix 1. Additional information on the vapor barrier system is included in Appendix B of the SMP.

Active Sub-Slab Depressurization System

EC inspection of the SSDS components included the following:

- Observe visible components (fan, vacuum alarm/monitor, vacuum gauge, tubing, riser pipe, etc.) for physical wear, damage and operational issues, and replace as necessary;
- Remove any blockages in vacuum monitor and gauge tubing and riser pipe taps;
- Verify operation of vacuum monitor by disconnecting tubing from riser pipe and noting if the building notification system goes into alarm mode;
- Verify operation of vacuum gauge by disconnecting tubing from riser pipe and noting if the indicator moves to zero (check high and low pressure ports to see if they are plugged correctly);
- Inspect riser pipe penetrations in concrete slab for proper seal;
- Inspect riser pipe connections at fan for leaks and tightness; and
- Inspect power to fan by operating dedicated switch.

Current status: The findings of the EC inspection of SSDS components were as follows:

- No physical wear, damage or operational issues were visibly noted;
- When testing the vacuum alarm/monitor, the tubing that connects the vacuum alarm/monitor to the riser pipe was disconnected and the low set point raised above the current reading. As designed, the building system went into alarm and the indicator moved to zero. The building system went back on-line when the tubing was reconnected to the riser pipe;
- Riser pipe connections were properly sealed; and
- Power to the fan was inspected and found to be working.

A pressure field extension test was completed on December 1, 2020. All measurements were above negative (-) 0.02 inches of water column (in-wc). A field photo log is included in Appendix 2. A layout and the readings from the pressure monitoring points is included in Appendix 3.

All findings during this review period indicate the system is working effectively as per individual operating instructions. All SSDS components were inspected and found to be working properly; the active SSDS is functioning as designed. Additional information on the SSDS is included in Appendix C of the SMP. Monthly SSDS maintenance inspection forms, completed by the building superintendent, are included in Appendix 1, and maintained on file on Site.

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: The installed system has manometers on the bulkhead near the fans. While not required for verification of system operation, these are proposed to be moved to the risers as they pass through the roof level. In addition, monitoring point MP-5 was not observed during either inspection; however, the pressure field extension and operation of the SSDS were confirmed through the remaining four monitoring points and operating fan.
- 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, available inspection reports are attached. Building superintendent to provide additional quarterly reports as available or copied by Tenen during 2020 inspection.

5.0 DEVIATIONS in PERFORMANCE of ENGINEERING and INSTITUTIONAL CONTROLS

No known deviations in the performance of the Engineering and Institutional Controls.

6.0 NEXT INSPECTION

The next Site Management Inspection will be performed in 2021, and the Site Inspection and Certification Letter Report will be submitted by July 30, 2022.

7.0 CERTIFICATION

I, Matthew M. Carroll, certify the following:

- I am a Professional Engineer;
- I inspected 233 Landing Stret site, site number 15TMP0334X on 12/1/2020;
- 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;
- Activities on the Site that have disturbed residual soil/fill material have been in accordance with the Soil/Materials Management Plan in the SMP;
- 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;
- 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; and,
- The Site continues to be registered as an E-Designated property by the NYC Department of Buildings.

QEP Name: Matthew M. Carroll, PE

QEP Signature 

Date: 07/30/2021

Attachment 1 – Inspection Form

Quarterly and Annual SSDS OM&M Checklist

Inspection Date: December 1, 2020

Inspectors Name/Company: Matthew Carroll / Tenen Environmental

Routine Quarterly Inspections - General Systems Operation			
SSDS General System Operations *(circle the appropriate observed condition)*			
Observation	**Vertical Riser Location**		
	VR-1	**VR-2**	**VR-3**
Monitoring Points	(Intact) / Damaged	(Intact) / Damaged	(Intact) / Damaged
Audible Vacuum Leaks Near/From Extraction Points	Yes / (No)	Yes / (No)	Yes / (No)
Water Present/Damaged Observed Near Riser	Yes / (No)	Yes / (No)	Yes / (No)
Electrical System Components	(Intact) / Damaged	(Intact) / Damaged	(Intact) / Damaged
Inspection of Vacuum Gauges	(Intact) / Damaged	(Intact) / Damaged	(Intact) / Damaged
Floor Conditions near Extraction Points (i.e., cracking)	(Intact) / Damaged	(Intact) / Damaged	(Intact) / Damaged
Labeling of SSDS System and Electrical Components	(Intact) / Damaged	(Intact) / Damaged	(Intact) / Damaged
Blower Location/Number			
BVR-1	(Operating) / Not Operating		
BVR-2	(Operating) / Not Operating		
BVR-3	(Operating) / Not Operating		
Blower Number	**Static Vac "w.c. ***	**Gate Valve (% Open)**	
BVR-1	N/A		
BVR-2	N/A		
BVR-3	N/A		
Riser Number	**Static Vac "w.c.***	**Gate Valve (% Open)**	
VR-1	3.0"		
VR-2	3.0"		
VR-3	1.5"		

Note: *Vacuum level should be > 1 "w.c.

Quarterly and Annual SSDS OM&M Checklist

Annual Monitoring Results	
System Component	**Reading**
Riser Pipe (Interior)	
MP-1	N/A
MP-2	N/A
MP-3	2.75"
MP-4	N/A
MP-5	N/A

Note: Vacuum level should be >1"w.c.

The following questions should be answered following every inspection:

Please include any comments or observations here. At a minimum, if you answered 'damaged' or 'not operating' to any of the checklist items above, please provide further information.

MP-5 could not be located. MP-1, MP-2 and MP-4 could not be opened.

Have any modifications or upgrades been made to the heating, ventilation, or air conditioning (HVAC) system since the last inspection? If yes, please explain.

YES | (NO)

Have any changes or upgrades been made to the building or has any new construction occurred since the last inspection? If yes, please explain.

YES | (NO)