PERIODIC REVIEW REPORT

For the Property Located at
West 19th Street Development Site, New York, NY

Prepared for
IAC/InterActiveCorp
550 West 18th Street
New York, NY 10011

Prepared by

61 Broadway
Suite 1601
New York, NY 10006

March 9, 2016

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1 INTRODUCTION

1.1 SITE SUMMARY

The Site, 80 Eleventh Avenue (Block 690, Lot 12 and Block 690, Lot 54), is one parcel of numerous parcels that comprise the former West 18th Street Gas Works Site, a former manufactured gas plant (MGP) operated by predecessors of Consolidated Edison Company of New York (Con-Ed). Former MGP operations impacted subsurface soil, groundwater, and soil vapor conditions on the Site.

The Site was redeveloped with a modern ten-story office building and was concurrently remediated circa 2008. Remediation was conducted pursuant to a Brownfield Cleanup Agreement (BCA), Index No. W2-1012-04-07, between the volunteers (multiple entities) and the New York State Department of Environmental Conservation (NYSDEC)**.** In August 2006, Remedial Engineering, P.C. submitted a Final Engineering Report to NYSDEC that presented the results of environmental remediation as required by the NYSDEC. On August 31, 2006, NYSDEC issued a Certificate of Completion approving the completion of the active remediation outlined in the Site BCA.

The institutional and engineering controls that comprised part of the Site remedy are summarized below.

1.1.1 Institutional Control (IC)

An environmental easement was recorded for the Site on August 2, 2006. The environmental easement imposes Site use restrictions, required monitoring and maintenance of the engineering controls, and prohibits any modification or removal of the engineering controls without prior notification and/or approval of the NYSDEC.

1.1.2 Engineering Controls (ECs)

Two engineering controls comprise a portion of the Site remedy:

- Subsurface barriers, consisting of:
    - A barrier layer (comprised of a mud slab, waterproof/vapor barrier membrane, structural concrete slab and foundation walls); and
    - Site perimeter watertight sheeting and grouting.
- Continuous venting of the garage sub level of the building with an active mechanical venting system.

The Site perimeter watertight sheeting and grouting is located beneath the building foundation, and is therefore presumed to be in place and functional.

1.2 EFFECTIVENESS OF REMEDIAL PROGRAM

The Site Management Plan (SMP) prepared by Turner Construction Company and dated July 18, 2006, outlines the inspection, operation and maintenance activities for the barrier layer and the venting system. Following initial occupancy (January 2008), IAC/Georgetown 19th Street LLC (IAC) has implemented the Monitoring Plan (MP) and Operations and Maintenance Plan (OMP) contained within the SMP. The institutional and engineering controls have been certified and approved on an annual basis between 2007 and 2015. The most recent certification was submitted to NYSDEC on March 12, 2015.

The Site remediation, with the exception of the ongoing monitoring, and operations and maintenance, has been completed. Each annual certification, including the certification for 2016 discussed herein, has demonstrated that that remedy continues to be effective in achieving the remedial objective for the Site: the protection of human health and the environment.

1.3 COMPLIANCE

No areas on non-compliance relative to the SMP were identified during the reporting period.

1.4 RECOMMENDATIONS SUMMARY

No changes to the SMP are recommended at this time. Changes to the frequency for submittal of PRRs or for discontinued site management are not recommended at this time.

2 SITE OVERVIEW

2.1 SITE LOCATION

The Site (Tax Block 690, Lot 46) is located in the West Chelsea neighborhood of Manhattan, between West 18th and West 19th Streets and Tenth and Eleventh Avenues. The Hudson River is approximately 200 feet to the west. The area around the Site contains a mix of commercial, residential, and industrial establishments. High-rise residential buildings are located on blocks immediately to the north, east and south of the Site.

Prior to remediation, the Site consisted of a two-story brick structure (demolished prior to the start of remediation) that served as a mid- to long-term parking garage and a small vacant lot in the southwestern part of the property. Remedial investigations were performed in 2002 and 2003 by Blasland, Bouck and Lee, Inc. (BBL). Soil, groundwater, and soil vapor were found to be contaminated primarily with volatile and semi-volatile compounds.

2.2 REMEDIATION CHRONOLOGY

The Remedial Action Work Plan prepared by BBL was developed to achieve several remedial goals, including the removal of impacted soil to a depth of 15 feet, limiting the migration of subsurface contaminants on and off the Site, and preventing the exposure of future Site occupants to any vapors or impacted material.

In 2005, foundation piles were installed and excavation of impacted soil commenced. Across the Site, the excavation depth varied from 12 feet to 25 feet. A subsurface perimeter barrier wall was installed to ensure any remaining contamination is contained such that it cannot migrate off the Site. As part of the foundation construction design, a barrier layer was installed to prevent the potential intrusion of volatile organic vapors into the building. Once the foundation was completed, a basement level mechanical venting system was installed to prevent vapors from accumulating in the unlikely event of a vapor barrier breach. The NYSDEC issued a Certificate of Completion on August 31, 2006.

No changes to the selected remedy or the Site have occurred since remedy selection.

3 EVALUATION OF REMEDY

IAC has completed nine certifications (2007-2015) for the IC/ECs at the Site which have been approved by NYSDEC. Each year, the inspection of the venting system has determined that the system continues to function as designed, and the initial inspection of the barrier layer has identified cracks, staining, effloresence or observations of water that require repair. Each year, as necessary, repairs have been made to the barrier layer system and re-inspection has determined that the barrier layer continues to function as designed. At the completion of the inspection/repair process, a certification has been made to NYSDEC that the engineering controls continue to function as designed and the remedy remains protective of public health and the environment.

4 IC/EC PLAN COMPLIANCE REPORT

4.1 IC/EC REQUIREMENTS AND COMPLIANCE

4.1.1 Institutional Control

The institutional control for the Site is an environmental easement. The easement stipulates the following:

1. Designates the Site for commercial and/or industrial use only (not residential use);
2. Requires monitoring and maintenance of the engineering controls developed for the Site;
3. Grants NYSDEC uncontrolled access to the Site;
4. Stipulates that any disturbance or alteration to the barrier layer may occur only after notification to and/or approval from the NYSDEC;
5. Requires annual certification of the engineering controls.

The SMP further restricts the use of groundwater at the Site without proper treatment or permission from the NYSDEC.

John E. Osborn P.C., as part of the 2016 annual certification, has confirmed with the City of New York Register's Office for the Borough of Manhattan that the easement remains in place, and no changes or legal amendments have been made to the easement filing.

4.1.2 Engineering Controls

Two engineering controls comprise a portion of the Site remedy:

- Subsurface barriers, consisting of:
  - A barrier layer (comprised of a mud slab, waterproof/vapor barrier membrane, structural concrete slab and foundation walls); and
  - Site perimeter watertight sheeting and grouting.
- Continuous venting of the garage sub level of the building with an active mechanical venting system.

The Site perimeter watertight sheeting and grouting is located beneath the building foundation, and is therefore presumed to be in place and functional. The SMP does not provide an OMP or an MP for this engineering control.

4.1.2.1 Barrier Layer

As part of the 2016 certification process, Integral visited the Site on January 14, 2016, and inspected the perimeter foundation walls and the foundation slab. Integral did not observe any evidence of efflorescence or water infiltration in the basement concrete walls, and therefore the barrier layer is effectively inhibiting water infiltration.

4.1.2.2 Venting System

As part of the 2016 certification process, Integral performed an inspection of the venting system to verify that the fans are meeting design air flows consistent with the requirements of the SMP. Integral found the system to be operating consistent with design criteria. The datasheets are included in Appendix A.

4.2 IC/EC CERTIFICATION

Integral has determined that the barrier layer and venting systems continue to function as designed. John E. Osborn, P.C. has determined that the environmental easement remains in place. As such, Integral confirms that the remedy continues to be protective of human health and the environment. The ICs and ECs have been certified in the Engineering Controls Certification Form (Appendix B).

5 BARRIER LAYER INSPECTION

5.1 OBSERVATIONS

As part of the 2016 certification process, Integral visited the Site on January 14, 2016, and inspected the perimeter foundation walls and the foundation slab.

At the time of the visual inspection, the below-grade level of the building was being used for parking, storage, and mechanical equipment. The building was occupied at the time of the inspection and cars were parked in the garage portion of the below-grade level. Integral inspected the unobstructed[1] concrete floor slab and foundation walls for visible cracks and any evidence of water infiltration, as well as looked for areas of stain growth, sediment deposits, and efflorescence build-up.

5.1.1 Foundation Slab Observations

A traffic-bearing waterproofing coating is applied to the foundation slab in the parking portion of the below-grade level, as well as in the mechanical and storage rooms along the north and east perimeter walls. The traffic-bearing waterproofing coating prevents the determination of whether there are small-width (hairline) cracks in the concrete slab on grade. However, Integral did not observe cracks through the traffic-bearing waterproofing coating, and did not notice any pockets of water trapped under the traffic-bearing waterproofing coating.

Traffic-bearing waterproofing coating is not applied in the storage rooms along the west foundation wall, and the floor in these rooms showed no evidence of water infiltration during this reporting period.

5.1.2 Foundation Wall Observations

The foundation wall is a cast-in-place reinforced concrete wall that encloses the entire perimeter of the below-grade space. The interior of the wall is typically painted with white or gray paint. In locations where the slab on grade has a traffic-bearing waterproofing coating, the coating extends vertically up the wall for 4 to 6 inches. There are also several penetrations through the north foundation wall where underground utilities enter the building.

During the inspection, Integral did not observe any evidence of water infiltration during this reporting period.

[1] One small section of the foundation wall was not inspected (see Figure 1) as it was inaccessible.

5.2 DISCUSSION AND RECOMMENDATIONS

Based on the 2016 inspection, the barrier layer is effectively inhibiting water infiltration.

6 MONITORING PLAN COMPLIANCE & O&M PLAN COMPLIANCE

6.1 COMPONENTS

The OMP was developed to provide procedures to operate and maintain institutional and engineering controls on the Site. The OMP includes a detailed protocol to be followed in the event that any compliance issues are noted in connection with the environmental easement during annual inspection of the institutional controls. The OMP also includes repair procedures for the engineering controls that are part of the Site remedy. These repairs may become necessary as determined through evaluation of Site information gathered in accordance with the Monitoring Plan. These operation and maintenance actions ensure that the Site remedy continues to be effective for the protection of public health and the environment through continued implementation of the engineering and institutional controls.

6.1.1 Barrier Layer

IAC instructs its management team to perform preventative maintenance of the barrier layer. The team has been instructed to monitor daily activities that have the potential to compromise the integrity of the barrier layer. Examples of such activities would include, but are not limited to:

1. Movement or storage of heavy objects with the potential to affect the integrity of the barrier layer;
2. Installation of floor drains, elevator pits or other building features that may compromise the barrier layer;
3. Spilled liquid or chemicals in direct contact with the barrier layer;
4. Activities (e.g., foundation construction) at adjacent properties.

The management team has been instructed to look for and report to the Building Manager any actions or conditions that have the potential to compromise the intended remedial function of the barrier layer. The Building Manager will immediately contact a dedicated qualified professional to determine if these activities have impacted the integrity of the barrier layer and if the barrier layer requires repair.

6.1.2 Venting System

The OMP requires the venting system to be maintained and operated in accordance with its manufacturer's specifications. IAC has instructed their management team to be aware of the operating standards of the venting system and to make observations that may indicate that the system is not in compliance with its operation standards, including but not limited to:

1. Persistent odors or exhaust in the cellar of the building; and
2. Fans are not operational.

The management team has been instructed to look for and report any actions or conditions that have the potential to compromise the intended function of the venting system to the Building Manager. The Building Manager will immediately contact the dedicated qualified professional to determine if these activities have impacted the function of the venting system and if the venting system requires repair. As necessary, preventative maintenance (e.g., replacing filters, cleaning lines, etc.) repairs and/or adjustments will be made to ensure the system's continued effectiveness.

6.2 SUMMARY OF O&M COMPLETED

Monitoring consistent with the protocol described in Section 6.1 was performed by the building management team during the reporting period.

6.3 CONCLUSIONS/RECOMMENDATIONS FOR MONITORING PLAN COMPLIANCE

Based on the results of the O&M activities completed during the reporting period, the engineering controls continue to perform as designed. The operating engineering controls are protective of human health and the environment.

7 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

The requirements of the SMP were met during the reporting period. As part of the 2016 annual certification process, both the ICs and ECs for the Site have been documented to be currently in place and functional as designed. Integral confirms that the remedy continues to be protective of human health and the environment.

Integral does not recommend changing the frequency of the submittal of Periodic Review Reports at this time.

Please feel free to contact James L'Esperance at Integral (212-440-6708) with any questions regarding this Periodic Review Report.

FIGURE 1

BARRIER LAYER REPAIRS LOCATIONS

West 19th Street

11th Avenue

West 18th Street

Not Observed

Repaired in February 2015

0 10 20
Feet

N

REV	DATE	DESCRIPTION	APP
0			

2-23-2016			1" = 20'	Figure_vapor_barrier_2016.dwg	E014
DATE	DATE	DATE	DWG SCALE	DWG No.	PROJ No.
EB					
DRN	DES	CHK			

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PERIODIC REVIEW REPORT
IAC BUILDING
550 WEST 18TH STREET
NEW YORK, NY 10011

Vapor Barrier Repair Locations

FIGURE
1
OF **1**

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APPENDIX A

FAN INSPECTION REPORT

Summary

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	January 14, 2016

System	Design CFM	Actual CFM	% of Design
GSF-C-1	26,000	27,495	105.8%
GEF-C-1	26,000	25,464	97.9%
GEF-C-2	800	833	104.2%
GEF-C-4	1,000	992	99.2%
GEF-C-5	800	806	100.7%

GSF-C-1

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	January 14, 2016

General

Motor HP:	20	Motor RPM:	1777
Voltage Rated:	200	Voltage Actual:	208
Amperage Rated:	57	Amperage Actual:	42.4

Velocity Readings (FPM)

2088	2017	2033
2117	2185	2191
2187	2167	2122
2062	2143	2068

Calculations

Duct Shape	Rectangular	Design CFM	26,000
Height (in)	26	**Total CFM**	**27,495**
Width (in)	72	% of Design	105.8%
Area (ft^2)	13.00		

GEF-C-1

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	January 14, 2016

General

Motor HP:	20	Motor RPM:	1782
Voltage Rated:	200	Voltage Actual:	208
Amperage Rated:	54.3	Amperage Actual:	32.7

Flow Readings (CFM)

1508	1481	1560
1523	1718	1668
1595	1748	1623
1561	1589	1524

Calculations

Duct Shape	Rectangular	Design CFM	26,000
Height (in)	24	**Total CFM**	**25,464**
Width (in)	96	% of Design	97.9%
Area (ft^2)	16.00		

GEF-C-2

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	January 14, 2016

General

Motor HP:	0.5	Motor RPM:	1717
Voltage Rated:	200	Voltage Actual:	162
Amperage Rated:	1.8	Amperage Actual:	1.7

Flow Readings (CFM)

590	649	588	428
510	647	611	429
417	627	621	511
402	641	634	422

Calculations

Duct Shape	Rectangular	Design CFM	800
Height (in)	10	**Total CFM**	**833**
Width (in)	22	% of Design	104.2%
Area (ft^2)	1.53		

GEF-C-4

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	January 14, 2016

General

Motor HP:	0.5	Motor RPM:	1716
Voltage Rated:	200	Voltage Actual:	172
Amperage Rated:	2.5	Amperage Actual:	1.8

Flow Readings (CFM)

760	686	659
755	756	701
780	667	695
766	740	694

Calculations

Duct Shape	Rectangular	Design CFM	1,000
Height (in)	18	**Total CFM**	**992**
Width (in)	11	% of Design	99.2%
Area (ft^2)	1.38		

GEF-C-5

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	January 14, 2016

General

Motor HP:	20	Motor RPM:	1619
Voltage Rated:	200	Voltage Actual:	169
Amperage Rated:	2.5	Amperage Actual:	1.9

Flow Readings (CFM)

656	694	750	650
755	750	765	740
638	780	790	742
687	778	770	655

Calculations

Duct Shape	Rectangular	Design CFM	800
Height (in)	8	**Total CFM**	**806**
Width (in)	20	% of Design	100.7%
Area (ft^2)	1.11		

APPENDIX B

ENGINEERING CONTROLS CERTIFICATION FORM

ENCLOSURE 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Box 1

Site Details

Site No. **C231017**

Site Name **19th Street Development Site**

Site Address: 80 11th Avenue Zip Code: 10011
City/Town: New York
County: New York
Site Acreage: 0.7

Reporting Period: February 11, 2015 to February 11, 2016

	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 275-1.11(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? Commercial and Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

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 Site Owner, Remedial Party or Designated Representative Date

Box 3

SITE NO. C231017

Description of Institutional Controls

Parcel	Owner	Institutional Control
690-12	Responsive Realty, LLC	Landuse Restriction Site Management Plan
690-54	Responsive Realty, LLC	Landuse Restriction Site Management Plan

Box 4

Description of Engineering Controls

Parcel	Institutional Control
690-12	Subsurface Barriers Vapor Mitigation
690-54	Subsurface Barriers Vapor Mitigation

Engineering Controls Details for Site No. C231017

Parcel: 690-12

An Environmental Easement for the property was filed on July 21, 2006, restricting future use to industrial/commercial, and requiring: 1) monitoring and maintenance of the subsurface barrier, 2) continuous operation of a sub-level ventilation system and 3) annual certification.

Parcel: 690-54

An Environmental Easement for the property was filed on July 21, 2006, restricting future use to industrial/commercial, and requiring: 1) monitoring and maintenance of the subsurface barrier, 2) continuous operation of a sub-level ventilation system and 3) annual certification.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking ñYESòbelow that:

    a. The Periodic Review Report and all attachments were prepared under the direction of, and reviewed by, the party making the 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. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional Control or Engineering Control listed in Boxes 3 and/or 4, I certify by checking ñYESòbelow that all of the following statements are true:

    a. The Institutional Control and/or 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 human 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
☑	☐

IF THE ANSWER TO EITHER 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 Site Owner, Remedial Party or Designated Representative | Date

Box 6

Control Certifications
Site No. C231017

Site Owner or Designated Representative Signature

I certify that all information and statement in Boxes 1, 2 & 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 THOMAS VITISSIDI at 555 West 18TH Street N.Y. 10011
print name print business address

am certifying as Owner's Representative (Owner or Remedial Party)

for the site named in the Site Details section of this form.

Signature of Site Owner or Representative Rendering Certif ication

2/3/16
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer 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 ñÀòmisdemeanor, pursuant to Section 210.45 of the Penal Law.

I James P. L'Esperance, P.E. at 61 Broadway STE 1601, New York, NY

print name print business address

am certifying as a Professional Engineer for the Owner.

Owner or Remedial Party

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date
		3/9/2016