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## BY ELECTRONIC MAIL

March 22, 2012

Mr. R. Scott Deyette  
Chief, Inspection Unit  
Remedial Bureau C  
Division of Environmental Remediation  
New York State Department of  
Environmental Conservation  
625 Broadway  
Albany, New York 12233-7014

Re: West 19<sup>th</sup> Street Development Site  
NYSDEC BCP Site No. C231017  
Certification of Institutional Controls/Engineering Controls

Dear Mr. Deyette:

Enclosed please find the annual certification package for the above-referenced Brownfield Cleanup Program site. Enclosed with this letter are:

1. The completed Institutional and Engineering Controls Certification Form;

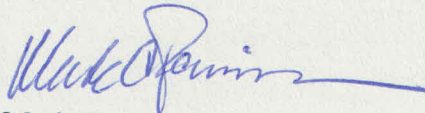
R. Scott Deyette  
March 22, 2013  
Page 2

2. The Periodic Review Report prepared by Integral Engineering P.C. (formerly "ELM Engineering, P.C."), including descriptions of Integral Engineering's inspection of the structure and the subsequent grout injection work, and Integral's report on the testing and balancing of the ventilation system.

Pursuant to the recommendations in Section I.D of the 2012 PRR for the referenced site, as approved by the Department on April 30, 2012, these inspections have been carried out by a qualified Professional Engineer licensed in the State of New York. The certification bears the stamp of licensed P.E. Keith Brodock.

Please call me if there are any questions. Thank you for your attention to this matter.

Sincerely,




Mark C. Pennington

Cc: Christian Bryan, IAC  
Keith Brodock, Integral Engineering P. C.  
Lauren Smith, Georgetown

**PERIODIC REVIEW REPORT**

**For the Property Located at**  
**West 19<sup>th</sup> Street Development Site, New York, NY**

*Prepared for*  
**IAC/InterActiveCorp**  
550 West 18<sup>th</sup> Street  
New York, NY 10011

*Prepared by*  
The logo for Integral Engineering P.C. features the word "integral" in a blue, lowercase, sans-serif font. A stylized, light brown vertical line with a curved top and bottom passes through the letter "i". Below "integral", the words "engineering p.c." are written in a smaller, blue, lowercase, sans-serif font.  
267 Broadway  
Fifth Floor  
New York, NY 10007

March 22, 2013



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Figure 1. Vapor Barrier Repair Locations

# 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 18<sup>th</sup> 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 19<sup>th</sup> 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 2012. The most recent certification was submitted to NYSDEC March 12, 2012 and approved on April 30, 2012.

The Site remediation, with the exception of the ongoing monitoring, and operations and maintenance, has been completed. Each annual certification, including the certification for 2013 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**

As a result of Superstorm Sandy, the venting system was destroyed, but IAC acted quickly to reinstall the system, which is now operational. On October 29, 2012, Hurricane Sandy hit the New York City area. The subsequent storm surge caused total flooding of the parking garage of the Site, which rendered the venting system inoperable. All heating, ventilation, and air conditioning (HVAC) components, including the venting system fans, had to be fully replaced. IAC began replacing and recommissioning system components as soon as the storm had passed. The venting system was replaced in-kind, and commissioned by HVAC engineers on February 20, 2013. Integral Engineering conducted the annual inspection of the system on March 5, 2013, and found the fans to be operating consistent with the requirements set forth in the OMP.

During the replacement operation, no indoor air testing was conducted, consistent with NYSDEC's approval in April, 2008 of revised monitoring procedures recognizing that air testing was not feasible (see Appendix D for a copies of the March 13, 2008 correspondence to NYSDEC requesting the revisions, and NYSDEC's April 25, 2008 letter approving the March 13, 2008 request). Throughout the repairs, the parking garage door was open.



## **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 six certifications (2007-2012) 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<sup>1</sup>, and the initial inspection of the barrier layer has identified cracks, staining, efflorescence or observations of water that require repair. Each year, 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.

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<sup>1</sup> See Section 4.1.2.2 for a discussion of the damage from Superstorm Sandy.

## **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);
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 2013 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 2013 certification process, Integral Engineering visited the Site on January 9 and 16, 2013, and inspected the perimeter foundation walls and the foundation slab. Integral Engineering observed isolated evidence of efflorescence and water infiltration in the basement concrete walls. As a result of the observations, Integral Engineering recommended grout injection to repair the observed cracks, staining, efflorescence, or observations of water in the barrier layer. Grout injection was performed by Starbrite Waterproofing Co., Inc. on March 12 and 13, 2013, in accordance the OMP. Integral Engineering re-inspected the barrier layer at the completion of the grout repair program and determined that the barrier layer is effectively inhibiting water infiltration. The findings are documented in Section 5.

#### **4.1.2.2 Venting System**

As part of the 2013 certification process, Integral Engineering performed an inspection of the venting system on March 5, 2013, to verify that the fans are meeting design air flows consistent with the requirements of the SMP. Integral Engineering found the system to be operating consistent with design criteria. The datasheets are included in Appendix A.

##### *Superstorm Sandy*

As a result of Superstorm Sandy, the venting system was destroyed, but IAC acted quickly to reinstall the system, which is now operational. On October 29, 2012, Hurricane Sandy hit the New York City area. The subsequent storm surge caused total flooding of the parking garage of the Site, which rendered the venting system inoperable. All heating, ventilation, and air conditioning (HVAC) components, including the venting system fans, had to be fully replaced. IAC began replacing and recommissioning system components as soon as the storm had passed. The venting system was replaced in-kind, and commissioned by HVAC engineers on February 20, 2013. Integral Engineering conducted the annual inspection of the system on March 5, 2013, and found the fans to be operating consistent with the requirements set forth in the OMP.

During the replacement operation, no indoor air testing was conducted, consistent with NYSDEC's approval in April, 2008 of revised monitoring procedures recognizing that air testing was not feasible (see Appendix D for a copies of the March 13, 2008 correspondence to NYSDEC requesting the revisions, and NYSDEC's April 25, 2008 letter approving the March 13, 2008 request). Throughout the repairs, the parking garage door was open.

## **4.2 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.

### **4.3 IC/EC CERTIFICATION**

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



## **5 BARRIER LAYER INSPECTION AND REPAIRS**

### **5.1 OBSERVATIONS**

As part of the 2013 certification process, Integral Engineering visited the Site on January 9 and 16, 2013, and inspected the perimeter foundation walls and the foundation slab. Integral Engineering observed isolated evidence of efflorescence and water infiltration in the basement concrete walls.

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 Engineering inspected the unobstructed 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 Engineering 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, but the floor in these rooms showed no evidence of current or previous water infiltration.

#### **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 in. There are also several penetrations through the north foundation wall where underground utilities enter the building.

During the inspection, Integral Engineering observed isolated instances of active water infiltration, predominantly near the slab-wall interface locations. Also observed were several isolated areas with evidence of previous water infiltration, such as stain growth, sediment deposits, and efflorescence build-up.

#### **5.1.2.1 Active Water Infiltration in Foundation Wall**

- Location 1 – An active water infiltration was found at the intersection of two walls near the floor. The building manager informed Integral Engineering that leaking was visible from the crack during rain events. The location had evidence of previous repairs.
- Location 7 – An active water infiltration was found along the West foundation wall near the floor. The area surrounding the crack was found to contain moisture during the inspection.

#### **5.1.2.2 Foundation Wall Evidence of Previous Water Infiltration**

- Location 2 – Staining was observed on the North foundation wall surrounding a small hairline crack.
- Location 3 – Efflorescence build-up was observed on the East foundation wall was near the floor. Evidence of previous repairs was noted.
- Location 4 – A small hairline crack was observed running vertically along the South foundation wall.
- Location 5 – Staining was observed around the area of a previous repair done in 2012.

Location 6 was initially determined by Integral Engineering to be a hairline crack that needed repair. However, upon further investigation, it was determined that the crack was due to typical concrete shrinkage and didn't exhibit any signs or evidence of moisture or vapor leaks.

### **5.2 DISCUSSION AND RECOMMENDATIONS**

Integral Engineering's discussion and recommendations for repairs to the barrier-layer system, as part of the OMP, are contained below.

#### **5.2.1 Observations of and Recommendations for 2012 Repairs**

In 2012, nine locations with evidence of water infiltration were grout injected. In 2013, Integral Engineering observed that eight of the nine previous repairs appear to be effective in terms of preventing water infiltration; we observed active infiltration at only one former repair location, Location 5 described above, and a repair was completed there in 2013. Integral Engineering did not recommend any further action with regards to the previously repaired areas that do not have active water infiltration.

#### **5.2.2 Foundation Slab Recommendations**

Consistent with the previous year's findings, the pattern and size of the small-width cracks in the concrete topping slab inside of the storage rooms are typical for concrete shrinkage cracks. These cracks result from the loss of moisture from the surface of the concrete during curing, are

typically shallow in depth, and would not allow water to penetrate through the slab. Therefore, Integral Engineering believes that they do not represent a breach or significant damage to the barrier-layer system. The isolated growth of the cracks may be attributed to environmental factors, such as temperature and humidity. Integral Engineering recommends no remedial action be taken at this time in this area.

### **5.2.3 Foundation Wall Recommendations**

Per the OMP, only cracks where the water is actively discharging through the crack are required to be repaired, and suspected breaches in the barrier-layer system should be monitored. However, upon completion of our inspection, we recommended that all of the locations listed above in Section 5.1.2.1 and 5.1.2.2 be repaired using the grout injection technique described in the OMP; this included not only repair of areas of active water infiltration, but also other potential breaches in the barrier-layer system (locations with stain growth, sediment deposits, and efflorescence build-up indicating previous water infiltration).

## **5.3 REPAIRS**

All repairs related to the recommendations were performed by Starbrite Waterproofing on March 12 and 13, 2013, under the observation of Integral Engineering. All areas slotted for repairs were grout injected following the OMP guidelines.

The locations of all repairs are shown in plan view (by number) in Figure 1. Pictures of the repairs can be found in Appendix B.

## **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. As discussed in Section 4.1.2.2, the venting system engineering control was briefly inactive due to catastrophic damage resulting from Superstorm Sandy. IAC replaced the system components in-kind as quickly as feasibly possible, and the venting system is currently operating 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 2013 annual certification process, both the ICs and ECs for the Site have been documented to be currently in place and functional as designed. Integral Engineering confirms that the remedy continues to be protective of human health and the environment.

Integral Engineering 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 Engineering (212-962-4303 x308) with any questions regarding this Periodic Review Report.



## FIGURES

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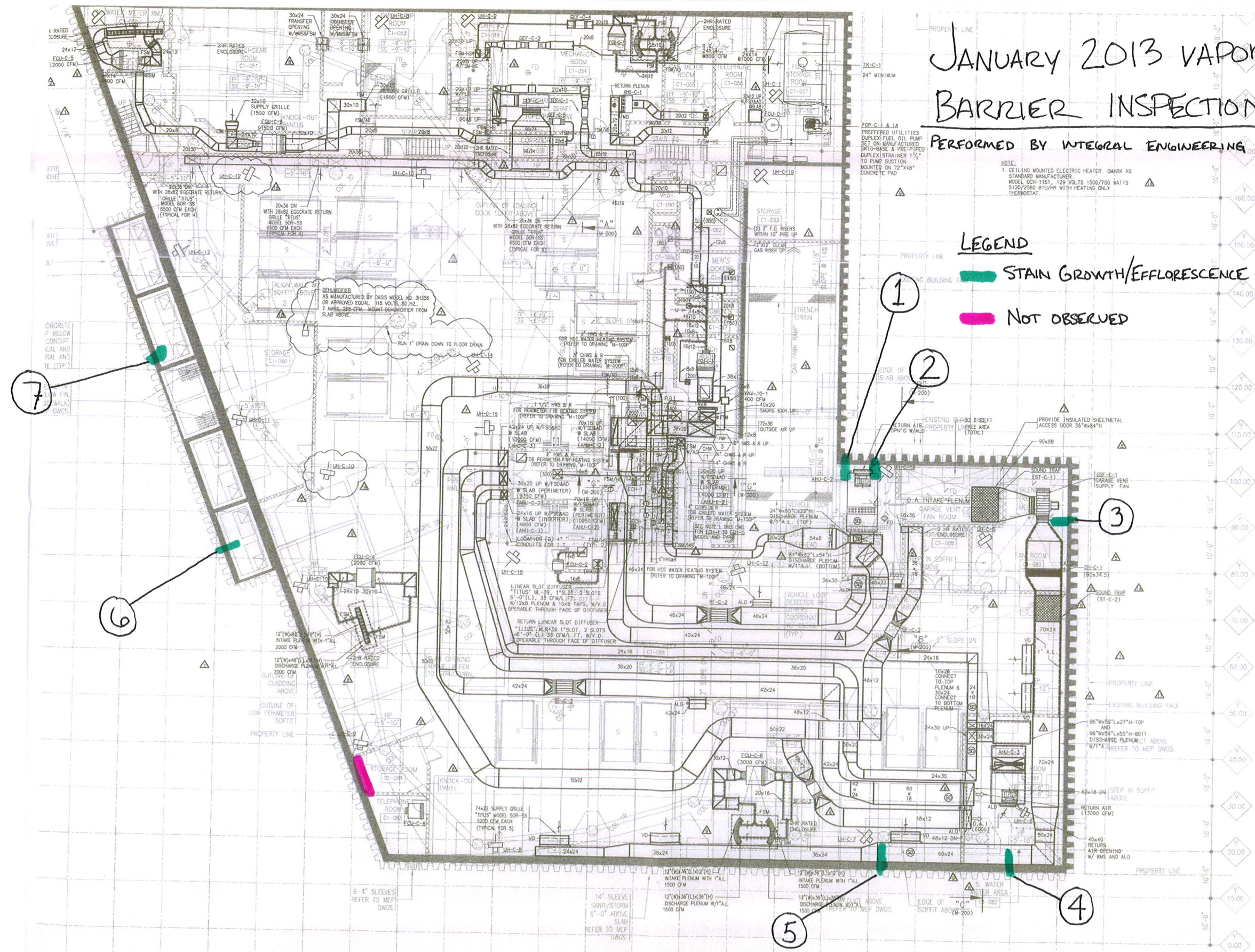
# JANUARY 2013 VAPOR BARRIER INSPECTION

PERFORMED BY INTEGRAL ENGINEERING

## LEGEND

STAIN GROWTH/EFFLORESCENCE

NOT OBSERVED





## **APPENDIX A**

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### **FAN INSPECTION REPORT**

## GSF-C-1

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	March 5, 2013

### General

Motor HP:	20	Motor RPM:	1762
Voltage Rated:	200	Voltage Actual:	198
Amperage Rated:	57	Amperage Actual:	40.9

### Velocity Readings (FPM)

1995	2190	2216	2367
2156	2414	2399	2412
2212	2694	2541	1845
2194	2134	2341	1982

### Calculations

Duct Shape	Rectangular	Design CFM	26,000
Height (in)	24	Average FPM	2,256
Width (in)	70	<b>Total CFM</b>	<b>26,317</b>
Area (ft <sup>2</sup> )	11.67	% of Design	101.2%

## GEF-C-1

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	March 5, 2013

### General

Motor HP:	20	Motor RPM:	1761
Voltage Rated:	200	Voltage Actual:	204
Amperage Rated:	54.3	Amperage Actual:	42.5

### Velocity Readings (FPM)

1549	1627	1423	1574
1615	1845	1824	1690
1623	1799	1834	1624
1598	1574	1602	1591

### Calculations

Duct Shape	Rectangular	Design CFM	26,000
Height (in)	24	Average FPM	1,650
Width (in)	96	<b>Total CFM</b>	<b>26,392</b>
Area (ft <sup>2</sup> )	16.00	% of Design	101.5%

## GEF-C-2

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	March 5, 2013

### General

Motor HP:	0.5	Motor RPM:	1717
Voltage Rated:	200	Voltage Actual:	160
Amperage Rated:	1.8	Amperage Actual:	1.7

### Velocity Readings (FPM)

680	702	691	685
679	805	860	705
678	827	832	673
693	704	720	698

### Calculations

Duct Shape	Rectangular	Design CFM	800
Height (in)	8	Average FPM	727
Width (in)	20	<b>Total CFM</b>	<b>808</b>
Area (ft <sup>2</sup> )	1.11	% of Design	101.0%



## GEF-C-4

Project: IAC Fan Inspection  
Engineer: James L'Esperance  
Date: March 5, 2013

### General

Motor HP:	0.5	Motor RPM:	1718
Voltage Rated:	200	Voltage Actual:	177
Amperage Rated:	2.5	Amperage Actual:	1.9

### Velocity Readings (FPM)

690	701	710	698
730	782	768	772
761	793	790	734
721	704	736	731

### Calculations

Duct Shape	Rectangular	Design CFM	1,000
Height (in)	20	Average FPM	739
Width (in)	10	<b>Total CFM</b>	<b>1,026</b>
Area (ft <sup>2</sup> )	1.39	% of Design	102.6%

## GEF-C-5

Project:	IAC Fan Inspection
Engineer:	James L'Esperance
Date:	March 5, 2013

### General

Motor HP:	20	Motor RPM:	1707
Voltage Rated:	200	Voltage Actual:	180
Amperage Rated:	2.5	Amperage Actual:	1.9

### Velocity Readings (FPM)

794	827	821	805
812	901	881	820
806	884	892	826
790	829	841	782

### Calculations

Duct Shape	Rectangular	Design CFM	800
Height (in)	8	Average FPM	832
Width (in)	20	<b>Total CFM</b>	<b>924</b>
Area (ft <sup>2</sup> )	1.11	% of Design	115.5%

## Summary

Project: IAC Fan Inspection  
Engineer: James L'Esperance  
Date: March 5, 2013

System	Design CFM	Actual CFM	% of Design
GSF-C-1	26,000	26,317	101.2%
GEF-C-1	26,000	26,392	101.5%
GEF-C-2	800	808	101.0%
GEF-C-4	1,000	1,026	102.6%
GEF-C-5	800	924	115.5%



## **APPENDIX B**

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### **BARRIER LAYER REPAIRS**

### **PICTURES**

**Appendix B  
2013 IAC Repairs**

					
Location 1 – Before repair.				Location 1 – After repair.	
					
Location 2 – Before repair.				Location 2 – After repair.	

**Appendix B  
2013 IAC Repairs**



Location 3 – Before repair.



Location 3 – After repair.



Location 4 – Before repair.



Location 4 – After repair.



## Appendix B 2013 IAC Repairs



Location 5 – Before repair.



Location 5 – After repair.



Location 7 – Before repair.



Location 7 – After repair.

## **APPENDIX C**

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### **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



Site Details		Box 1
Site No.	C231017	
<b>Site Name 19th Street Development Site</b>		
Site Address: 80 11th Avenue      Zip Code: 10011 City/Town: New York County: New York Site Acreage: 0.7		
Reporting Period: February 11, 2012 to February 11, 2013		
		YES      NO
1. Is the information above correct?		<input checked="" type="checkbox"/> <input type="checkbox"/>
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?		<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/> <input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
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?		<input type="checkbox"/> <input checked="" type="checkbox"/>

Box 2	
	YES      NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	<input checked="" type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>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.</b>	
A Corrective Measures Work Plan must be submitted along with this form to address these issues.	
Signature of Owner, Remedial Party or Designated Representative	Date

**SITE NO. C231017**

**Box 3**

**Description of Institutional Controls**

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
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**

<u>Parcel</u>	<u>Engineering Control</u>
690-12	Subsurface Barriers Vapor Mitigation
690-54	Subsurface Barriers Vapor Mitigation

**Engineering Control Details for Site No. C231017**

**Parcel: 690-12**

An Environmental Easement for the property was filed on July 31, 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 3) annual certification.

An Environmental Easement for the property was filed on July 31, 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 3) annual certification.

**Parcel: 690-54**

An Environmental Easement for the property was filed on July 31, 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 3) annual certification.

### Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below 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 or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below 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 public 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.

\* VENTING SYSTEM TEMPORARILY DOWN DUE TO DAMAGE FROM SUPERSTORM SANDY. THE SYSTEM HAS BEEN REPLACED IN-KIND AND IS CURRENTLY OPERATING. SEE PERIODIC REVIEW REPORT FOR MORE DETAILS.

YES NO



**IF THE ANSWER TO 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 Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date

IC CERTIFICATIONS  
SITE NO. C231017

Box 6

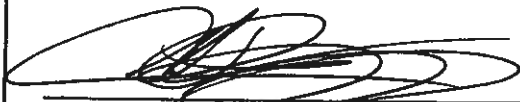
**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 1, 2, and 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 CHRISTIAN BRYAN at 555 W. 18<sup>TH</sup> STREET  
print name print business address

am certifying as OWNER (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.



Signature of Owner, Remedial Party, or Designated Representative  
Rendering Certification

3/23/13  
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 "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I KEITH P. BRODOCK at INTEGRAL ENGINEERING, 267 BROADWAY, NEW YORK,  
print name print business address NY, 10007

am certifying as a Professional Engineer for the OWNER  
(Owner or Remedial Party)



[Signature]  
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp  
(Required for PE)

3/22/13

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER ANY DOCUMENT THAT BEARS THE SEAL OF A PROFESSIONAL ENGINEER, UNLESS THE PERSON IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER.

## **APPENDIX D**

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### INDOOR AIR TESTING

### CORRESPONDENCE



New York State Department of Environmental Conservation  
Division of Environmental Remediation

Remedial Bureau C, 15th Floor

625 Broadway, Albany, New York 12233-7014

Phone: (518) 402-9662 • FAX: (518) 402-9679

Website: www.dec.state.ny.us



Alexander B. Grannis  
Commissioner

April 25, 2008

Mark C. Pennington  
John E. Osborne, P.C.  
841 Broadway, Suite 500  
New York, NY 10003-4023

Re: IC/EC Certification Approval  
West 19<sup>th</sup> Street Development  
Manhattan, Site No. C231017

Dear Mr. Pennington:

The New York State Department of Environmental Conservation has reviewed and hereby approve the certification of institutional and engineering controls for the above referenced site, dated March 24, 2008.

If you have any questions, please contact me at (518) 402-9686 or at the address listed above.

Sincerely,

William S. Ottaway, P.E.  
Environmental Engineer 2  
MGP Remedial Section  
Division of Environmental Remediation

Enclosure

cc: Gardiner Cross, NYSDEC  
Christian Bryan, InterActiveCorp  
Peter Zimmerman, BLM, LLC  
Joseph Rose, Georgetown  
Mark Chertok, Sive, Padget & Reisel



ENVIRONMENTAL LIABILITY MANAGEMENT, LLC

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267 Broadway, 5<sup>th</sup> Floor  
New York, NY 10007  
Tel: (212) 962-4301  
Fax: (212) 962-4302

March 13, 2008

Mr. William Ottoway  
New York State Department of Environmental Conservation  
Remedial Bureau C, 11th Floor  
625 Broadway  
Albany, NY 12233-7014

Re: Annual Certification - 19<sup>th</sup> Street Development Site – New York State  
Department of Environmental Conservation Brownfields Cleanup Program  
Site No. C231017

Dear Mr. Ottoway,

Environmental Liability Management, LLC (ELM) has been retained by IAC/Interactive Corporation (IAC) to manage and oversee the annual certification requirements as required by the New York State Department of Environmental Conservation (NYSDEC). ELM would like to present the following information to you for your use while reviewing the annual certification for the IAC site.

- Consistent with Section 4 of the Operations and Maintenance Plan (OMP), ELM notified NYSDEC via telephone of any and all engineering control (EC) repairs being performed under the direction and supervision of Turner Construction in advance of the EC repairs being performed.
- Consistent with the Monitoring Plan, ELM herein provides a notice of a change in the monitoring procedures. ELM did not collect photo ionization detector (PID) readings at the site. This approach was based on the conclusion that the PID readings would not provide reliable information to identify potential vapor infiltration. The rationale supporting this conclusion is as follows:
  1. Ambient conditions would have interfered with PID monitoring. This would include potential interference with vapor concentration measurement stemming from motor vehicle exhaust in the operational parking garage; chemical storage throughout the

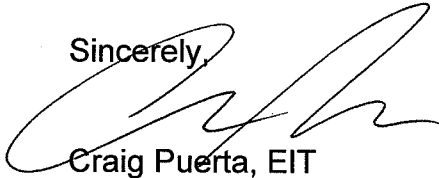
basement of the building in the non-garage areas and fresh paint fumes from construction activities within the basement space;

2. The potential need for monitoring was eliminated by use of a conservative approach to crack repair. Specifically, ELM and the structural consultant Simpson Gumphertz & Hager (SGH) recommended expedited repair of cracks in accordance with best management practices, even though most observed cracks did not require repair for structural reasons;
3. Independent Testing and Balancing (HVAC Consultant) determined the HVAC system was in good operating condition meeting manufacturer's specifications, and thus the requirements of the SMP. As such, it was reasonable to conclude that any ambient vapors, regardless of their source, are being effectively managed and vented.

As a result of the above conditions, ELM would like to propose removing the PID monitoring requirement from the Site Management Plan (SMP). ELM has determined that the PID monitoring does not provide reliable information and potential vapor intrusion is best managed by prompt repair of the structural components and continuous operation of the HVAC system.

ELM wishes to maintain communications with the NYSDEC pertaining to the above points, and would be happy to further discuss any aspects of the annual certification at your convenience.

Sincerely,



Craig Puerta, EIT  
Project Manager

Cc: IAC Certification Team

