

388 Bridge Street  
Brooklyn, New York

NYSDEC BCP Site No. C224134

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# 2018 ANNUAL PERIODIC REVIEW REPORT AND ENGINEERING CERTIFICATION

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## EXECUTIVE SUMMARY

This Periodic Review Report (PRR) documents the activities subject to the Site Management Plan (SMP) for 388 Bridge Street (Site) for calendar year 2018. The Site (BCP No. C224134) was remediated under the Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC). The engineering and institutional controls (EC/IC) are maintained in accordance with the NYSDEC-approved SMP.

The purpose of this PRR and Annual Certification is to document on-going Site management activities associated with the permanent ECs and ICs in place at the Site, and to certify that these controls are being maintained in accordance with the SMP.

The Site management activities conducted in 2018 include the following:

- Routine system inspections of the on-Site SVE system;
- Routine system check of the sub-slab depressurization system (SSDS), a component of the vapor mitigation system implemented at the Site;
- Routine system check of the off-Site ECs including the SSDS and basement pressurization system (BPS), components of the vapor mitigation systems implemented at Saint Joseph's High School (SJHS);
- Visual inspection of the basement floor and perimeter for signs of vapor intrusion;
- Visual inspection of the concrete slab to determine the absence of cracks and fissures.

The implementation of remedial action, Site management activities, and continuous media monitoring were performed by FLS under direct supervision of Arnold F. Fleming, P.E. It was determined that ECs and ICs remain effective and continue to be protective of public health and environment. The SVE data collected during monitoring demonstrated that the concentration of tetrachloroethylene (PCE) in the soil vapor has reduced significantly since system start-up in 2013. Groundwater samples have been collected on a semi-annual basis, starting in March 2016. PCE and cis-1,2-dichloroethylene were the only chlorinated VOCs exceeding TOGS during the most recent groundwater monitoring event conducted in September 2018. During the September 2018

monitoring event, PCE concentrations in each well were higher than in previous sampling events. However, PCE concentrations continue to decline overall compared to pre-remediation concentrations.

Compliance with the EC/IC Plan is further discussed in Section 3. Compliance with the media monitoring plan is discussed in Section 4 and compliance with the Operation and Maintenance of the ECs is discussed in Section 5. Conclusions with recommendations are provided in Section 6.

## **1.0 SITE OVERVIEW**

### **1.1 Site Description**

The Site is located in the Brooklyn, Kings County, New York and is identified as Block 152 and Lots 1001-1006 (formerly Lots 37 and 118) on the current New York City Tax Map. The Site is an approximately 0.46-acre area bounded by SJHS and a portion of a 5-story commercial building (Lots 33 and 31, respectively) to the north, a fabric discount store (Lot 6) and ASA Institute of Business (Lot 18) to the south, Bridge Street to the east, and Lawrence Street to the west. The Site Location and Layout are included as Figures 1 and 2, respectively. The boundaries of the Site are more fully described in Appendix A - Metes and Bounds. Responsible parties are listed in Table 1.

### **1.2 Site Development Status**

The development on the Site includes the 53-story residential building with retail spaces on the ground floors and parking from the sub cellar to the 3<sup>rd</sup> floor of the building. Overall building construction on the Site has been completed since the 2017 PRR submittal. The development footprint is a lot line-to-lot line building as shown in Figure 2.

### **1.3 Nature and Extent of Contamination**

Remedial investigations completed at the Site between May 2008 and July 2008 found several underground storage tanks (UST). NYSDEC spill number #0801499 was opened and then subsequently closed on August 18, 2009 after removal of these USTs. Additional remedial investigations on the Site detected soils indicative of urban fill with elevated levels of semi-volatile

organic compounds and metals. Also, elevated levels of chlorinated volatile organic compounds (VOC) were detected in groundwater and soil vapor samples. Off-Site remedial investigations were completed to determine potential off-Site impacts from the historic dry cleaning tenant which operated on the Site until 1982. The offsite investigations found elevated levels of chlorinated VOCs from the Site at SJHS only.

Of note, a diagnostic testing conducted by FLS in 2015 confirmed that the remaining PCE contamination in soil vapor beneath the building was primarily present in the area of SVE well 2. The SVE system was modified in 2016 to more effectively target the area where soil vapor contamination remains.

#### **1.4 Site Remediation**

The Site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index # A2-0623-07-09, which was executed on August 10, 2009. The BCA was amended on July 13, 2010, to correct the Site size, add a survey map, and add R, K & G Associates, LLC as a Remedial Party.

The Site was remediated in accordance with the NYSDEC-approved Remedial Action Work Plan dated April 2012, which enumerated the following remedial activities:

1. Excavation of soil/fill for development purposes. The soil was screened for indications of contamination (by visual means, odor, and monitoring with a photoionization detector) of all excavated soil during intrusive Site work. All remaining soil met Track 2 RUSCOs;
2. Off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;
3. Collection and analysis of end-point samples to evaluate attainment of Track 2 RUSCOs;
4. Installation of a SVE system to remove soil vapor above New York State Department of Health (NYSDOH) air guideline values (AGV), as listed in the NYSDOH *Final Guidance for Evaluating Vapor Intrusion in the State of New York, October 2006*;
5. Installation of an active SSDS as a preventative measure from residual contamination at the Site;

6. Construction and maintenance of an engineered composite cover consisting of a vapor barrier and a concrete pressure slab to prevent human exposure to residual contaminated soil/fill remaining under the Site;
7. Monitoring natural attenuation of groundwater;
8. Installation of an active SSDS, BPS, and sealing of the elevator pit at SJHS, which borders the Site to the north, to address off-Site soil vapor contamination;
9. And development of an SMP for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) ECs /ICs, (2) monitoring, (3) operation and maintenance and (4) reporting.

## **2.0 REMEDY EVALUATION**

The annual inspection of the on-Site ECs, which includes the SSDS, composite cover system, and SVE system, demonstrated that the ECs continue to perform as designed and continue to be protective of human health and the environment.

The groundwater sampling results are included in Table 2 and shows that PCE concentrations continue to decline overall compared to pre-remediation concentrations. The SVE monitoring results are included in Table 3 and demonstrate a large reduction in the concentrations of chlorinated VOCs in soil vapor since system start-up. These data are discussed further in Section 4.

The annual inspection of the off-Site ECs, which include the SSDS, BPS, and composite cover system, demonstrated that the off-site ECs also continue to perform as designed and continue to be protective of human health and the environment. The EC details and inspection results are discussed in Section 5.

## **3.0 INSTITUTIONAL AND ENGINEERING CONTROLS COMPLIANCE**

### **3.1 Institutional Controls**

The ICs are non-physical controls, such as Site use restrictions, implemented in order to protect human health and the environment. The SMP requires annual certification of the ICs for the Site to ensure that they continue to be implemented in order to prevent exposure to residual contamination. The ICs for the Site include the SMP, Soils/Materials Management Plan, groundwater use, use restrictions, provisions for deed restrictions and environmental easements, EC/IC plans, and the Operation, Maintenance and Monitoring plan.

### **3.2 Engineering Controls**

The ECs are physical controls employed to contain, stabilize, and monitor residual contamination. Since residual contaminated soil, groundwater, and soil vapor exists beneath the Site, the ECs will continue to remain protecting human health and the environment. The on-Site ECs required by the SMP consist of a SSDS, a SVE system, and a composite cover system. The SSDS will not be operational until the SVE system is fully decommissioned. Of note, the SVE system installed in 2013 was modified in 2016. The active SVE system extracts soil vapors from a limited area where the bulk of the PCE mass remains. Groundwater is monitored at the other areas where soil vapor extractions ceased. Off-Site ECs required by the SMP and implemented at SJHS consist of an active SSDS, BPS, and a composite cover system.

The SMP requires an annual inspection and certification of the ECs to ensure that they continue to perform as designed and continue to be protective of human health and the environment.

### **3.3 Certification of Engineering and Institutional Controls**

The owner and the developer parties are responsible for overseeing, documenting, and certifying that the work at the Site was performed by or on behalf of each and done in accordance with the applicable SMP. The annual certifications were performed by Arnold F. Fleming on behalf of 384 Bridge Street, LLC. The completed EC/IC Certification Form is provided as Appendix B.

## **4.0 MONITORING PLAN COMPLIANCE**

### **4.1 Groundwater Monitoring**

The majority of the existing groundwater monitoring wells were demolished during building construction. As outlined in the SMP, semi-annual groundwater monitoring is conducted to confirm natural attenuation of chlorinated VOCs in groundwater. Following the modification of the SVE system in January 2016, five of the six SVE wells were converted to groundwater monitoring wells. Of these five, two wells (SVE-MW-3 and SVE-MW-6) were subsequently abandoned as they did not extend into the groundwater table. The SVE and groundwater monitoring well locations are shown on Figure 3.

In 2018, the semi-annual groundwater monitoring events were completed on March 14, 2018 and September 12, 2018. Reports summarizing groundwater monitoring events were prepared by FLS and submitted to NYSDEC. Copy of these reports are presented in Appendix E.

### **4.2 Groundwater Monitoring Results**

Since March 2016, groundwater samples have been collected on a semi-annual basis and are analyzed for VOCs and geochemical parameters including nitrate, nitrite, sulfate, ferrous iron, total organic carbon, and dissolved organic carbon.

As discussed in the groundwater monitoring reports dated June 2018 and November 2018, PCE and cis-1, 2-DCE were the only contaminants of concern detected at concentrations above the NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values (TOGS). In the March 2018 groundwater sampling event analytical results indicate chloroform concentrations above the TOGS in two of the monitoring wells (SVE-MW-4 and SVE-MW-5).

During the September 2018 groundwater monitoring event, PCE was present in concentrations that exceed the TOGS of 5 µg/L in all three of the monitoring wells sampled: SVE-MW-1 (7.3 µg/L), SVE-MW-4 (72 µg/L), and SVE-MW-5 (39.5 µg/L). Trichloroethylene (TCE) was detected in two of the three wells at concentrations below the TOGS. Cis-1, 2-DCE was the only other exceedance of the Site's contaminants of concern and was observed in SVE-MW-4 (6.8 µg/L).

Table 2 shows the results of the groundwater sample analyses compared to the Standards and shows that PCE concentrations continue to decline overall compared to pre-remediation concentrations.

### **4.3 Soil Vapor Monitoring**

The soil vapor monitoring was completed in accordance with the SMP. The objectives of the soil vapor monitoring in conjunction with the SVE system on the Site are to (1) track system performance and (2) monitor for carbon breakthrough. Quarterly sampling of soil vapor was conducted at the system prior to the carbon treatment (influent), after the first carbon treatment unit (midstream), and after the second carbon treatment unit (outlet). Samples were collected with 1-liter summa canisters provided by SGS Accutest Laboratories using 2-hour flow regulators and were analyzed for VOCs by EPA Method TO-15.

### **4.4 Soil Vapor Monitoring Results**

The quarterly soil vapor monitoring analytical results shown in Table 3 were reviewed, and compared to the NYSDOH AGVs for PCE and TCE. The analytical results show that concentrations of PCE and TCE above the AGVs remain in the soil vapor beneath the building.

The results and findings of the soil vapor sampling of the SVE system, are summarized below:

- The highest historical concentrations of PCE (39,700  $\mu\text{g}/\text{m}^3$ ) and TCE (120  $\mu\text{g}/\text{m}^3$ ) detected at the 2013 SVE system inlet were recorded on July 3, 2013, one week after the system was turned on.
- Overall, the system installed in 2013 effectively removed 87.88 kg of PCE and 0.30 kg of TCE from June 2013 through October 2016. Graphs showing the cumulative mass removal for PCE and TCE are presented in Figure 4 and 5, respectively.
- Twelve (12) quarterly events have been completed since the modification of the 2016 SVE system.
- New carbon was installed in the lead and lag carbon vessels on December 21, 2017 prior to the collection of the 2017 SVE samples. Spent carbon was disposed of at an approved facility under EPA ID No. NYD981079932.

- To date, a total of sixty seven (67) soil vapor sampling (monthly/quarterly) events have been completed. In the most recent sampling event, the SVE inlet readings of PCE and TCE were 1 and 0.91  $\mu\text{g}/\text{m}^3$ , respectively. When comparing to the highest concentrations detected (sample collected July 3, 2013), there is a reduction in concentrations of PCE and TCE of 99.9% and 99.2%, respectively.
- As of the date of the last SVE sampling event, December 18, 2018, the 2016 SVE system has removed a total of 16.91 Kg of PCE and 0.08 Kg of TCE (Figure 6 and 7).
- As of the date of the last SVE sampling event, December 18, 2018, a total of 104.79 g of PCE and 0.38 Kg of TCE have been removed and treated from the Site.

## **5.0 OPERATION AND MAINTENANCE PLAN COMPLIANCE**

### **5.1 Site Inspections**

The inspections of the ECs were conducted by FLS on a quarterly basis. FLS inspected the on-Site SVE system, the on-Site and off-Site SSDSs, the on-Site and off-Site composite covers, and the off-Site BPS system. The quarterly inspection reports, which tabulate both SVE system readings and on and off-Site vacuum readings are included as Appendix C. Site and SVE system photographs are included in Appendix D.

The inspections consisted of the following elements:

- Inspection of the on-Site SVE system, including temperature and pressure readings at the system's components;
- Pressure readings were collected at the SVE extraction wells using digital manometer;
- Inspections of the on-Site and off-Site SSDSs including differential pressure readings using digital manometer at each of the monitoring points;
- Inspection of the BPS at the off-Site property (SJHS);
- Inspections of the composite cover systems, including the conditions of the on-Site and off-Site buildings' foundation slab and sidewalls; and
- Inspections of the basement floor and perimeter for signs of moisture intrusion.

### **5.2 Inspection Results**

The ECs for the Site were inspected and continue to perform as designed, protecting human health and the environment. There are no areas where the composite cover systems appeared impaired, compromised or otherwise damaged.

The off-Site SSDS and BPS are functioning normally and no breakdowns or repairs were recorded in 2018. There were no modifications made to the HVAC system at either the on-Site development building or the off-Site SJHS that would have impacted the SSDSs (or the BPS).

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Compliance with the SMP**

Based on the evaluation of the inspections and monitoring data, FLS concludes the following:

- The ECs and ICs were in place and remained effective at the Site in 2018.
- The ECs and ICs were in place and remained effective at SJHS off-Site in 2018.
- The operation and maintenance activities were conducted properly.
- The quarterly soil vapor sampling of the SVE system was properly implemented. There has been a significant reduction in concentrations of PCE and TCE since SVE system start-up in 2013.
- The groundwater sampling was properly implemented and the PCE concentrations are above the Standard of 5 µg/L.

Based on the evaluation of the inspections and monitoring data, FLS recommends the following:

- All ECs and ICs both at the Site and off-Site will continue in operation and monitoring in 2019.
- The soil vapor sampling of the SVE system will continue to monitor system performance, breakthrough of carbon, and potential for conversion to SSDS operation only.
- Groundwater monitoring will continue to be conducted on a semi-annual basis. These results will evaluate the natural attenuation occurring in the subsurface.

### **6.2 Future PRR Submittals**

In accordance with the approved SMP, PRRs will be submitted on an annual basis. The next PRR is due no later than February 4, 2020.

# TABLES



**388 Bridge Street  
Table 1: Responsible Parties**

**Table 1  
388 Bridge Street  
Responsible Parties**

<b>NYSDEC SITE #</b>	<b>DEVELOPMENT WORK</b>	<b>RESPONSIBLE PARTY</b>
BCP Site C224134	On-Site Building (New Development Building)	384 Bridge Street LLC
	Off-Site Building (Saint Joseph's High School)	384 Bridge Street LLC



Table 2 - Groundwater Analytical Results  
 BCP No. C224134  
 388 Bridge Street, Brooklyn NY

Client Sample ID: Lab Sample ID: Date Sampled: Matrix:	Units	NY TOGS Class GA GW Standards	SVE-MW-1						SVE-MW-4						SVE-MW-5					
			JC17514-1	JC28127-3	JC39116-1	JC51891-1	JC62395-1	JC62395-1	JC17514-2	JC28127-2	JC39116-2	JC51891-2	JC62395-3	JC62395-3	JC17514-3	JC28127-1	JC39116-3	JC51891-3	JC62395-2	JC73688-3
			3/31/2016	9/20/2016	3/17/2017	9/26/2017	3/14/2018	9/12/2018	3/31/2016	9/20/2016	3/17/2017	9/26/2017	3/14/2018	9/12/2018	3/31/2016	9/20/2016	3/17/2017	9/26/2017	3/14/2018	9/12/2018
Groundwater			Groundwater						Groundwater						Groundwater					
<b>GC/MS Volatiles (SW846 8260C)</b>																				
Acetone	ug/l	-	ND (3.3)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (6.0)	ND (3.3)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (6.0)	ND (3.3)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (6.0)
Benzene	ug/l	1	ND (0.24)	ND (0.14)	ND (0.14)	ND (0.17)	ND (0.17)	ND (0.43)	ND (0.24)	ND (0.14)	ND (0.14)	ND (0.17)	ND (0.17)	ND (0.43)	ND (0.24)	ND (0.14)	ND (0.14)	ND (0.17)	ND (0.17)	ND (0.43)
Bromochloromethane	ug/l	5	ND (0.37)	ND (0.46)	ND (0.46)	ND (0.38)	ND (0.38)	ND (0.48)	ND (0.37)	ND (0.46)	ND (0.46)	ND (0.38)	ND (0.38)	ND (0.48)	ND (0.37)	ND (0.46)	ND (0.46)	ND (0.38)	ND (0.38)	ND (0.48)
Bromodichloromethane	ug/l	-	ND (0.23)	ND (0.55)	ND (0.55)	ND (0.22)	ND (0.22)	ND (0.58)	ND (0.23)	ND (0.55)	ND (0.55)	ND (0.22)	ND (0.22)	ND (0.58)	ND (0.23)	ND (0.55)	ND (0.55)	ND (0.22)	ND (0.22)	ND (0.58)
Bromoform	ug/l	-	ND (0.23)	ND (0.34)	ND (0.34)	ND (0.42)	ND (0.42)	ND (0.63)	ND (0.23)	ND (0.34)	ND (0.34)	ND (0.42)	ND (0.42)	ND (0.63)	ND (0.23)	ND (0.34)	ND (0.34)	ND (0.42)	ND (0.42)	ND (0.63)
Bromomethane	ug/l	5	ND (0.42)	ND (0.46)	ND (0.46)	ND (1.4)	ND (1.4)	ND (1.6)	ND (0.42)	ND (0.46)	ND (0.46)	ND (1.4)	ND (1.4)	ND (1.6)	ND (0.42)	ND (0.46)	ND (0.46)	ND (1.4)	ND (1.4)	ND (1.6)
2-Butanone (MEK)	ug/l	-	ND (5.6)	ND (1.9)	ND (1.9)	ND (4.8)	ND (4.8)	ND (6.9)	ND (5.6)	ND (1.9)	ND (1.9)	ND (4.8)	ND (4.8)	ND (6.9)	ND (5.6)	ND (1.9)	ND (1.9)	ND (4.8)	ND (4.8)	ND (6.9)
Carbon disulfide	ug/l	60	ND (0.25)	ND (0.33)	ND (0.33)	ND (0.23)	ND (0.23)	ND (0.95)	ND (0.25)	ND (0.33)	ND (0.33)	ND (0.23)	ND (0.23)	ND (0.95)	ND (0.25)	ND (0.33)	ND (0.33)	ND (0.23)	ND (0.23)	ND (0.95)
Carbon tetrachloride	ug/l	5	ND (0.22)	ND (0.54)	ND (0.54)	ND (0.34)	ND (0.34)	ND (0.55)	ND (0.22)	ND (0.54)	ND (0.54)	ND (0.34)	ND (0.34)	ND (0.55)	ND (0.22)	ND (0.54)	ND (0.54)	ND (0.34)	ND (0.34)	ND (0.55)
Chlorobenzene	ug/l	5	ND (0.19)	ND (0.17)	ND (0.17)	ND (0.24)	ND (0.24)	ND (0.56)	ND (0.19)	ND (0.17)	ND (0.17)	ND (0.24)	ND (0.24)	ND (0.56)	ND (0.19)	ND (0.17)	ND (0.17)	ND (0.24)	ND (0.24)	ND (0.56)
Chloroethane	ug/l	5	ND (0.34)	ND (0.44)	ND (0.44)	ND (0.59) <sup>a</sup>	ND (0.59) <sup>a</sup>	ND (0.73)	ND (0.34)	ND (0.44)	ND (0.44)	ND (0.59) <sup>a</sup>	ND (0.59) <sup>a</sup>	ND (0.73)	ND (0.34)	ND (0.44)	ND (0.44)	ND (0.59) <sup>a</sup>	ND (0.59) <sup>a</sup>	ND (0.73)
Chloroform	ug/l	7	1.7	1	1.3	ND (0.29)	1.2	2.9	0.89 J	1.3	0.93 J	3.6	10.7	5.7	0.79 J	0.85 J	0.71 J	9.9	9.9	6.5
Chloromethane	ug/l	5	ND (0.41)	ND (0.96)	ND (0.96)	ND (0.53) <sup>a</sup>	ND (0.53)	ND (0.76)	ND (0.41)	ND (0.96)	ND (0.96)	ND (0.53) <sup>a</sup>	ND (0.53)	ND (0.76)	ND (0.41)	ND (0.96)	ND (0.96)	ND (0.53) <sup>a</sup>	ND (0.53)	ND (0.76)
Cyclohexane	ug/l	-	ND (0.28)	ND (0.73)	ND (0.73)	ND (0.63)	ND (0.63)	ND (0.78)	ND (0.28)	ND (0.73)	ND (0.73)	ND (0.63)	ND (0.63)	ND (0.78)	ND (0.28)	ND (0.73)	ND (0.73)	ND (0.63)	ND (0.63)	ND (0.78)
1,2-Dibromo-3-chloropropane	ug/l	0.04	ND (0.99)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (1.2) a	ND (0.99)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (1.2) a	ND (0.99)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (1.2) <sup>a</sup>
Dibromochloromethane	ug/l	-	ND (0.15)	ND (0.23)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.56)	ND (0.15)	ND (0.23)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.56)	ND (0.15)	ND (0.23)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.56)
1,2-Dibromoethane	ug/l	0.0006	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.21)	ND (0.21)	ND (0.48)	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.21)	ND (0.21)	ND (0.48)	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.21)	ND (0.21)	ND (0.48)
1,2-Dichlorobenzene	ug/l	3	ND (0.19)	ND (0.23)	ND (0.23)	ND (0.50)	ND (0.50)	ND (0.53)	ND (0.19)	ND (0.23)	ND (0.23)	ND (0.50)	ND (0.50)	ND (0.53)	ND (0.19)	ND (0.23)	ND (0.23)	ND (0.50)	ND (0.50)	ND (0.53)
1,3-Dichlorobenzene	ug/l	3	ND (0.23)	ND (0.19)	ND (0.19)	ND (0.50)	ND (0.50)	ND (0.54)	ND (0.23)	ND (0.19)	ND (0.19)	ND (0.50)	ND (0.50)	ND (0.54)	ND (0.23)	ND (0.19)	ND (0.19)	ND (0.50)	ND (0.50)	ND (0.54)
1,4-Dichlorobenzene	ug/l	3	ND (0.27)	ND (0.21)	ND (0.21)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.27)	ND (0.21)	ND (0.21)	ND (0.50)	ND (0.50)	ND (0.51)	ND (0.27)	ND (0.21)	ND (0.21)	ND (0.50)	ND (0.50)	ND (0.51)
Dichlorodifluoromethane	ug/l	5	ND (0.90)	ND (0.70)	ND (0.70)	ND (1.9) <sup>a</sup>	ND (1.9)	ND (1.4)	ND (0.90)	ND (0.70)	ND (0.70)	ND (1.9) <sup>a</sup>	ND (1.9)	ND (1.4)	ND (0.90)	ND (0.70)	ND (0.70)	ND (1.9) <sup>a</sup>	ND (1.9)	ND (1.4)
1,1-Dichloroethane	ug/l	5	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.57)	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.57)	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.57)
1,2-Dichloroethane	ug/l	0.6	ND (0.18)	ND (0.39)	ND (0.39)	ND (0.20)	ND (0.20)	ND (0.60)	ND (0.18)	ND (0.39)	ND (0.39)	ND (0.20)	ND (0.20)	ND (0.60)	ND (0.18)	ND (0.39)	ND (0.39)	ND (0.20)	ND (0.20)	ND (0.60)
1,1-Dichloroethene	ug/l	5	ND (0.51)	ND (0.20)	ND (0.20)	ND (0.47)	ND (0.47)	ND (0.59)	ND (0.51)	ND (0.20)	ND (0.20)	ND (0.47)	ND (0.47)	ND (0.59)	ND (0.51)	ND (0.20)	ND (0.20)	ND (0.47)	ND (0.47)	ND (0.59)
cis-1,2-Dichloroethene	ug/l	5	ND (0.27)	ND (0.31)	ND (0.31)	ND (0.50)	ND (0.50)	ND (0.51)	0.85 J	1.6	0.79 J	1.3	0.68 J	6.8	0.34 J	ND (0.31)	ND (0.31)	1.4	0.52 J	2.3
trans-1,2-Dichloroethene	ug/l	5	ND (0.65)	ND (0.36)	ND (0.36)	ND (0.40)	ND (0.40)	ND (0.54)	ND (0.65)	ND (0.36)	ND (0.36)	ND (0.40)	ND (0.40)	ND (0.54)	ND (0.65)	ND (0.36)	ND (0.36)	ND (0.40)	ND (0.40)	ND (0.54)
1,2-Dichloropropane	ug/l	1	ND (0.39)	ND (0.33)	ND (0.33)	ND (0.24)	ND (0.24)	ND (0.51)	ND (0.39)	ND (0.33)	ND (0.33)	ND (0.24)	ND (0.24)	ND (0.51)	ND (0.39)	ND (0.33)	ND (0.33)	ND (0.24)	ND (0.24)	ND (0.51)
cis-1,3-Dichloropropene	ug/l	-	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.25)	ND (0.25)	ND (0.47)	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.25)	ND (0.25)	ND (0.47)	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.25)	ND (0.25)	ND (0.47)
trans-1,3-Dichloropropene	ug/l	-	ND (0.19)	ND (0.26)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.43)	ND (0.19)	ND (0.26)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.43)	ND (0.19)	ND (0.26)	ND (0.26)	ND (0.22)	ND (0.22)	ND (0.43)
1,4-Dioxane	ug/l	-	ND (41)	ND (32)	ND (32)	ND (52)	ND (52)	ND (69)	ND (41)	ND (32)	ND (32)	ND (52)	ND (52)	ND (69)	ND (41)	ND (32)	ND (32)	ND (52)	ND (52)	ND (69)
Ethylbenzene	ug/l	5	ND (0.27)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.60)	ND (0.27)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.60)	ND (0.27)	ND (0.20)	ND (0.20)	ND (0.22)	ND (0.22)	ND (0.60)
Freon 113	ug/l	5	ND (0.52)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.9)	ND (0.52)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.9)	ND (0.52)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.9)
2-Hexanone	ug/l	-	ND (1.7)	ND (1.5)	ND (1.5)	ND (3.3)	ND (3.3)	ND (2.0)	ND (1.7)	ND (1.5)	ND (1.5)	ND (3.3)	ND (3.3)	ND (2.0)	ND (1.7)	ND (1.5)	ND (1.5)	ND (3.3)	ND (3.3)	ND (2.0)
Isopropylbenzene	ug/l	5	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.25)	ND (0.25)	ND (0.65)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.25)	ND (0.25)	ND (0.65)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.25)	ND (0.25)	ND (0.65)
Methyl Acetate	ug/l	-	ND (1.9)	ND (1.5)	ND (1.5)	ND (3.1)	ND (3.1)	ND (0.80)	ND (1.9)	ND (1.5)	ND (1.5)	ND (3.1)	ND (3.1)	ND (0.80)	ND (1.9)	ND (1.5)	ND (1.5)	ND (3.1)	ND (3.1)	ND (0.80)
Methylcyclohexane	ug/l	-	ND (0.22)	ND (0.78)	ND (0.78)	ND (1.8)	ND (1.8)	ND (0.60)	0.31 J	ND (0.78)	ND (0.78)	ND (1.8)	ND (1.8)	ND (0.60)	ND (0.22)	ND (0.78)	ND (0.78)	ND (1.8)	ND (1.8)	ND (0.60)
Methyl Tert Butyl Ether	ug/l	10	ND (0.24)	ND (0.34)	ND (0.34)	ND (0.25)	ND (0.25)	ND (0.51)	0.24 J	ND (0.34)	ND (0.34)	ND (0.25)	ND (0.25)	ND (0.51)	ND (0.24)	ND (0.34)	ND (0.34)	ND (0.25)	ND (0.25)	ND (0.51)
4-Methyl-2-pentanone(MIBK)	ug/l	-	ND (1.0)	ND (1.2)	ND (1.2)	ND (3.0)	ND (3.0)	ND (1.9)	ND (1.0)	ND (1.2)	ND (1.2)	ND (3.0)	ND (3.0)	ND (1.9)	ND (1.0)	ND (1.2)	ND (1.2)	ND (3.0)	ND (3.0)	ND (1.9)
Methylene chloride	ug/l	5	ND (0.73)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.73)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.73)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Styrene	ug/l	5	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.24)	ND (0.24)	ND (0.70)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.24)	ND (0.24)	ND (0.70)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.24)	ND (0.24)	ND (0.70)
1,1,2,2-Tetrachloroethane	ug/l	5	ND (0.21)	ND (0.39)	ND (0.39)	ND (0.17)	ND (0.17)	ND (0.65)	ND (0.21)	ND (0.39)	ND (0.39)	ND (0.17)	ND (0.17)	ND (0.65)	ND (0.21)	ND (0.39)	ND (0.39)	ND (0.17)	ND (0.17)	ND (0.65)
Tetrachloroethene	ug/l	5	11.9	11.8	9.7	2.4	7.4	7.3	12.5	11.9	11.6	34.6	28.7	72	12.1	11.3	6.6	32	21.5	39.3
Toluene	ug/l	5	ND (0.16)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.25)	ND (0.53)	ND (0.16)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.25)	ND (0.53)	ND (0.16)	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.25)	ND (0.53)
1,2,3-Trichlorobenzene	ug/l	5	ND (0.23)	ND (0.20)	ND (0.20)	ND (0.50)	ND (0.50)	ND (0.50) a	ND (0.23)	ND (0.20)	ND (0.20)	ND (0.50)	ND (0.50)	ND (0.50) a	ND (0.23)	ND (0.20)	ND (0.20)	ND (0.50)	ND (0.50)	ND (0.50) a
1,2,4-Trichlorobenzene	ug/l	5	ND (0.21)	ND (0.25)	ND (0.25)	ND (0.50)	ND (0.50)	ND (0.50) a	ND (0.21)	ND (0.25)	ND (0.25)	ND (0.50)	ND (0.50)	ND (0.50) a	ND (0.21)	ND (0.25)	ND (0.25)	ND (0.50)	ND (0.50)	ND (0.50) a
1,1,1-Trichloroethane	ug/l	5	ND (0.25)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.25)	ND (0.54)	ND (0.25)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.25)	ND (0.54)	ND (0.25)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.25)	ND (0.54)
1,1,2-Trichloroethane	ug/l	1	ND (0.21)	ND (0.28)	ND (0.28)	ND (0.24)	ND (0.24)	ND (0.53)	ND (0.21)	ND (0.28)	ND (0.28)	ND (0.24)	ND (0.24)	ND (0.53)	ND (0.21)	ND (0				

Table 3 - SVE Sampling Results  
 BCP No. C224134  
 388 Bridge Street, Brooklyn, New York

Sample Date	System Install. Date	Compound	Tetrachloroethylene			Trichloroethylene		
		Sample ID	SVE- INLET	SVE- MIDSTREAM	SVE-OUTLET	SVE- INLET	SVE-MIDSTREAM	SVE- OUTLET
		NYSDOH AGV / Sampling Frequency	30	30	30	2	2	2
6/28/13	2013	Monthly	29400	1650	124	51	4.3	0.42
7/3/13	2013	Monthly	39700	1690	22	120	5.9	1.5
7/10/13	2013	Monthly	29800	80.7	73.9	73.1	0.42	0.42
7/17/13	2013	Monthly	8750	486	40	37	4.8	0.42
7/24/13**	2013	Non-routine	12	433	45	0.42	2.2	0.42
7/31/13	2013	Monthly	6850	163	31	19	0.42	0.42
8/7/13	2013	Monthly	4710	264	39	17	1.3	0.42
8/14/13	2013	Monthly	6750	475	39	30	1.7	0.42
8/28/13	2013	Monthly	5580	364	26	22	1.3	0.42
9/11/13	2013	Monthly	4650	321	NS	16	1.2	NS
9/25/13	2013	Monthly	5440	291	NS	21	1.1	NS
10/9/13	2013	Monthly	3040	232	30	14	0.42	0.42
10/23/13	2013	Monthly	4950	356	NS	18	1.2	NS
11/6/13	2013	Monthly	4400	311	NS	17	1.1	NS
11/20/13	2013	Monthly	5280	174	70.5	17	0.64	0.22
12/4/13	2013	Monthly	4140	334	45	14	0.97	0.1
12/18/13	2013	Monthly	5160	516	78.7	20	2.4	0.39
1/2/14	2013	Monthly	2840	248	18	10	1.6	0.32
1/15/14	2013	Monthly	7050	1470	62	20	5.3	0.42
1/29/14	2013	Monthly	8540	263	NS	19	2.2	NS
2/12/14	2013	Monthly	8000	664	31	23	4.5	0.42
2/27/14	2013	Monthly	9900	14	83.4	26	1.9	0.81
3/12/14	2013	Monthly	4240	1170	140	11	6.4	0.81
3/26/14	2013	Monthly	1630	156	50	7	0.51	0.81
4/23/14	2013	Monthly	3230	317	48	11	1.4	1
5/20/14	2013	Monthly	2530	269	39	7	0.91	0.1
6/18/14	2013	Monthly	1510	41	27	6.4	0.48	0.7
7/23/14	2013	Monthly	5230	466	22	17	3.6	0.35
8/27/14	2013	Monthly	3860	579	35	13	4	0.44

Table 3 - SVE Sampling Results  
 BCP No. C224134  
 388 Bridge Street, Brooklyn, New York

Sample Date	System Install. Date	Compound	Tetrachloroethylene			Trichloroethylene		
		Sample ID	SVE- INLET	SVE- MIDSTREAM	SVE-OUTLET	SVE- INLET	SVE-MIDSTREAM	SVE- OUTLET
		NYSDOH AGV / Sampling Frequency	30	30	30	2	2	2
9/24/14	2013	Monthly	2960	529	26	28	7.5	0.75
10/15/14	2013	Non-routine	1380	NS	NS	7	NS	NS
10/16/14	2013	Non-routine	2430	NS	NS	9.1	NS	NS
10/17/14	2013	Non-routine	14400	NS	NS	28	NS	NS
10/20/14	2013	Non-routine	1020	NS	NS	4.8	NS	NS
10/21/14	2013	Non-routine	1250	NS	NS	4.4	NS	NS
10/22/14	2013	Non-routine	324	NS	NS	1.6	NS	NS
10/29/14	2013	Monthly	3040	385	18	10	6.4	0.75
11/26/14	2013	Monthly	3560	524	22	17	9.7	1.1
12/15/14	2013	Non-routine	315	NS	NS	0.81	NS	NS
12/16/14	2013	Non-routine	202	NS	NS	1.4	NS	NS
12/17/14	2013	Non-routine	7730	NS	NS	13	NS	NS
12/18/14	2013	Non-routine	207	NS	NS	1.6	NS	NS
12/19/14	2013	Non-routine	142	NS	NS	0.59	NS	NS
12/22/14	2013	Non-routine	65	NS	NS	0.4	NS	NS
12/30/14	2013	Monthly	7660	589	1.3	13	8.1	0.16
1/29/15	2013	Monthly	5450	990	38	13	8.1	0.91
2/26/15	2013	Monthly	6760	1170	35	14	9.1	1
3/27/15	2013	Monthly	3490	1990	58	13	17	1.3
4/29/15	2013	Monthly	5110	834	60	11	9.1	2
5/27/15	2013	Monthly	4060	800	54	9.7	11	1.6
6/23/15	2013	Monthly	4300	530	44	9.7	8.6	1.2
7/30/15	2013	Monthly	5830	1180	54	12	13	1.4
8/26/15	2013	Monthly	3490	599	8.8	12	12	1.1
9/23/15	2013	Monthly	6250	1060	28	16	16	1.1
10/28/15	2013	Monthly	4130	759	36	20	12	1.1
*1/26/2016	2013	Non-routine	0.31	0.31	NS	0.2	0.2	NS

Table 3 - SVE Sampling Results  
 BCP No. C224134  
 388 Bridge Street, Brooklyn, New York

Sample Date	System Install. Date	Compound	Tetrachloroethylene			Trichloroethylene		
		Sample ID	SVE- INLET	SVE- MIDSTREAM	SVE-OUTLET	SVE- INLET	SVE-MIDSTREAM	SVE- OUTLET
		NYSDOH AGV / Sampling Frequency	30	30	30	2	2	2
3/30/16	2016	Non-routine	487	16	NS	8.6	10	NS
3/31/16	2016	Quarterly	NS	NS	8.1	NS	NS	15
8/5/16	2016	Quarterly	3410	80	0.81	28	0.52	0.2
9/20/16	2016	Quarterly	10800	399	5.4 J	31	4.9	2
12/9/16	2016	Quarterly	275	334	6.8	2.9	6.4	2.6
3/17/17	2016	Quarterly	773	13	10	7.5	1.3	4.9
6/13/17	2016	Quarterly	99.7	712	189	2.9	13	12
9/26/17	2016	Quarterly	10600	6580	5780	25	24	40
12/21/17	2016	Quarterly	4.7	33	21	6.4	4.1	5.3
3/14/18	2016	Quarterly	44.1	1.9	1.6	0.65	7.1	3.8
6/26/18	2016	Quarterly	16.8	26.9	0.31	0.8	1.5	ND (0.047)
9/12/18	2016	Quarterly	8.3	20.2	0.58	0.51	1.2	1.2
12/18/18	2016	Quarterly	1	727	5.7	0.91	3.2	1.6

Notes:

All concentrations measured in ug/m<sup>3</sup>

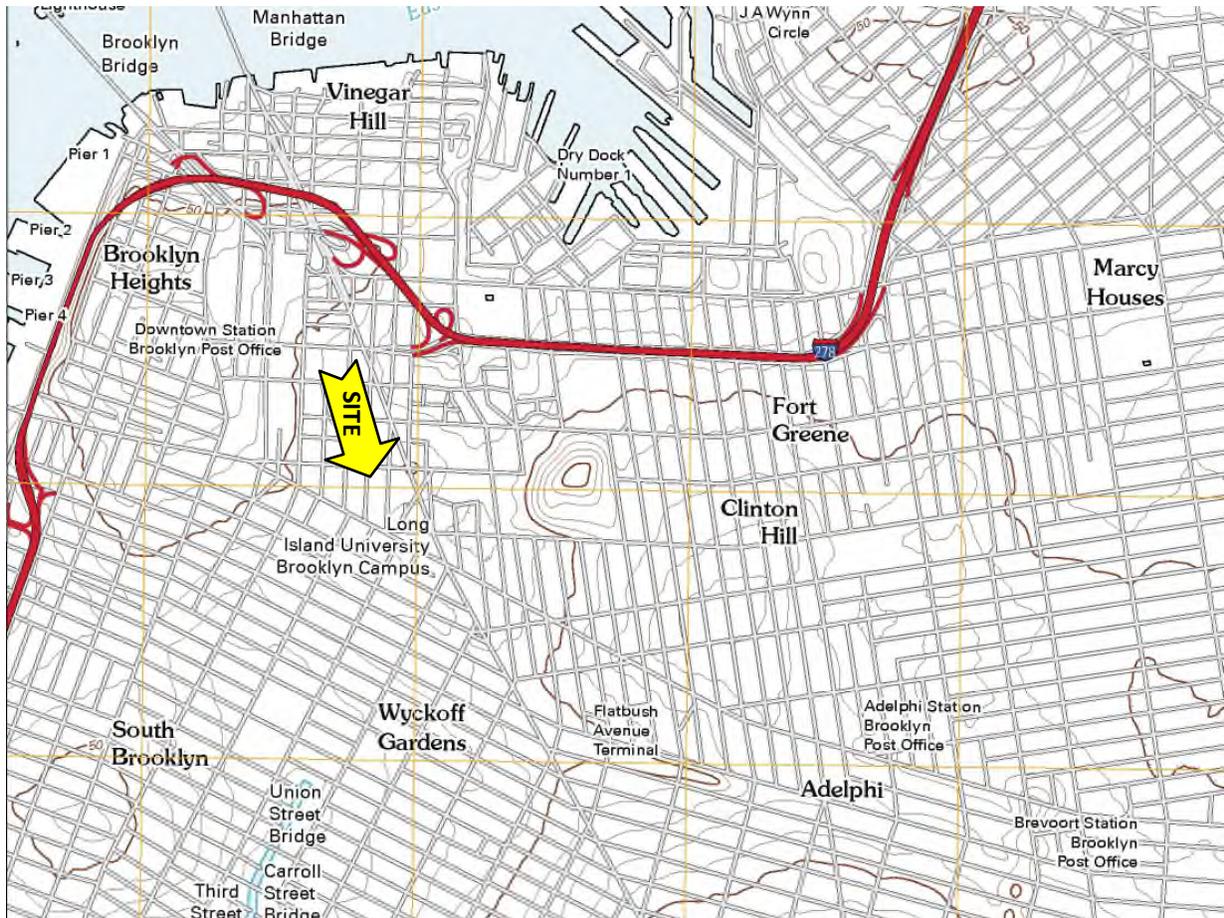
Exceedences to NYSDOH Air Guideline Values highlighted in orange

\* A new and downsized system was installed in 2016

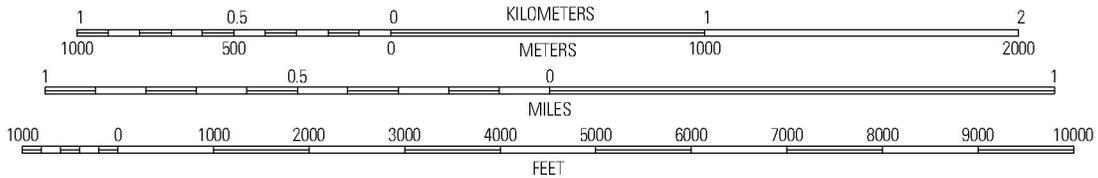
\*\* SVE Inlet data from 7/24/13 appears to be invalid based on results, data collected at this event is not to be used in future analyses

# FIGURES





SCALE 1:24 000



CONTOUR INTERVAL 10 FEET

Site: *Brooklyn Quadrangle, New York 7.5 Minute series USGS Topographic Map (79287)\*  
*Obtained from United States Geological Survey topography compiled 2010*



*Environmental Management & Consulting*  
 158 West 29th Street, New York, NY 10001

## Figure 1 – Site Location

January 2019

388 Bridge Street  
 Brooklyn, New York



Environmental Management & Consulting

158 West 29th Street, 9th Fl.  
New York, NY 10001

384 Bridge Street  
Brooklyn, NY  
BCP Site #C224134

### Figure 2

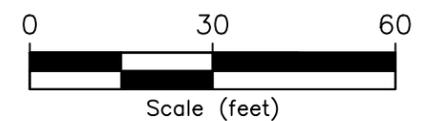
## Site Plan

January 2019

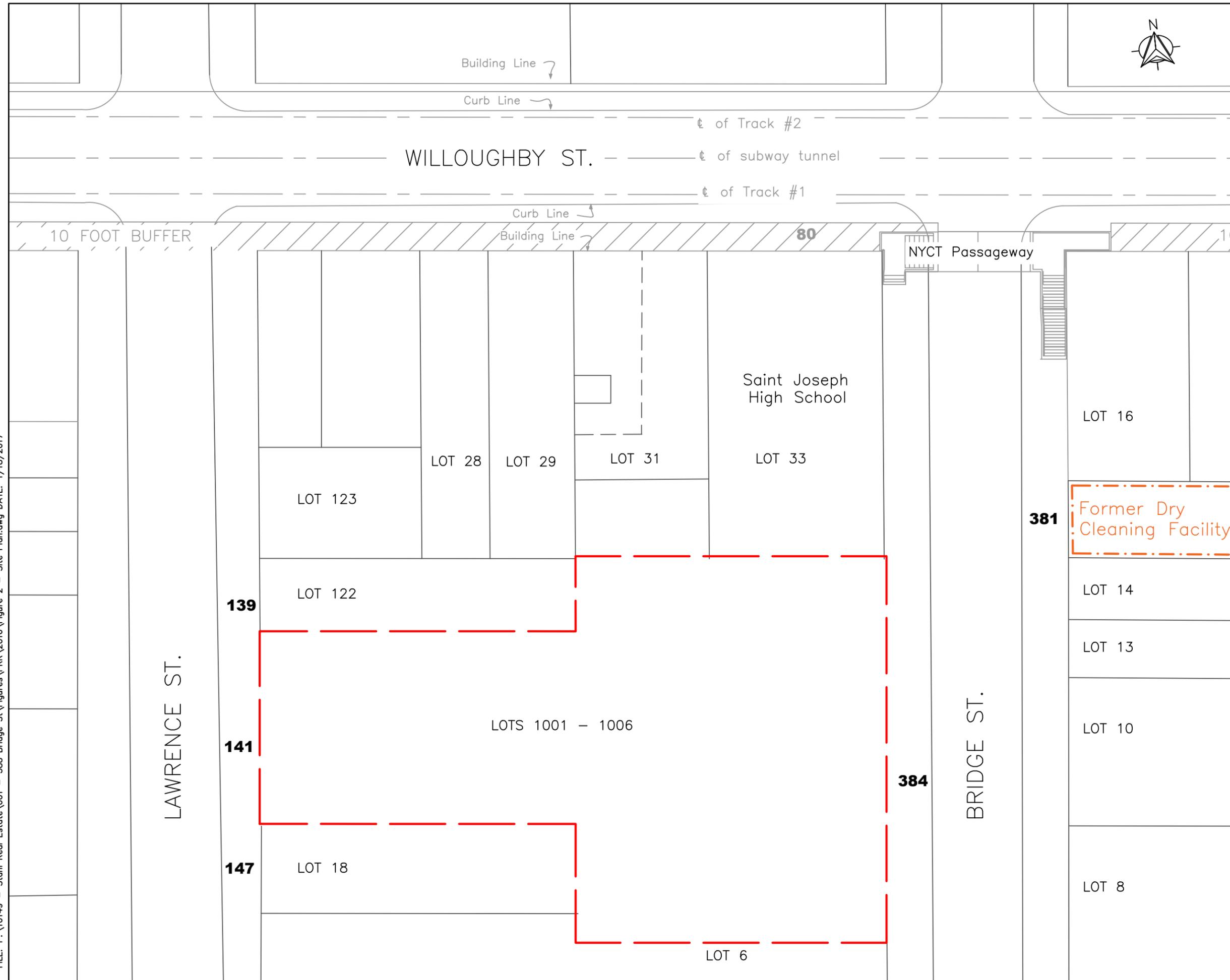
Project Number  
**10149-001**

### LEGEND

- 384** Site Address
- Site Boundary/  
Development Footprint



FILE: P:\10149 - Stahl Real Estate\001 - 388 Bridge St\Figures\PRR\2016\Figure 2 - Site Plan.dwg DATE: 1/18/2017





Environmental Management & Consulting

158 West 29th Street, 9th Fl.  
New York, NY 10001

388 Bridge Street  
Brooklyn, NY  
BCP Site # C224134

### Figure 3

## SVE and Groundwater Monitoring Well Locations

January 2019

Project Number  
**10149-001**

### LEGEND

-  Site Boundary
-  Active SVE Well
-  Groundwater Monitoring Well
-  Vacuum Monitoring Point

Saint Joseph  
High School



Bridge St.



SVE-2



SVE-MW-4



SVE-MW-3  
(Abandoned)



SVE-MW-6  
(Abandoned)



MP-3

CELLAR LEVEL



SVE-MW-5



MP-6

SUB CELLAR  
LEVEL

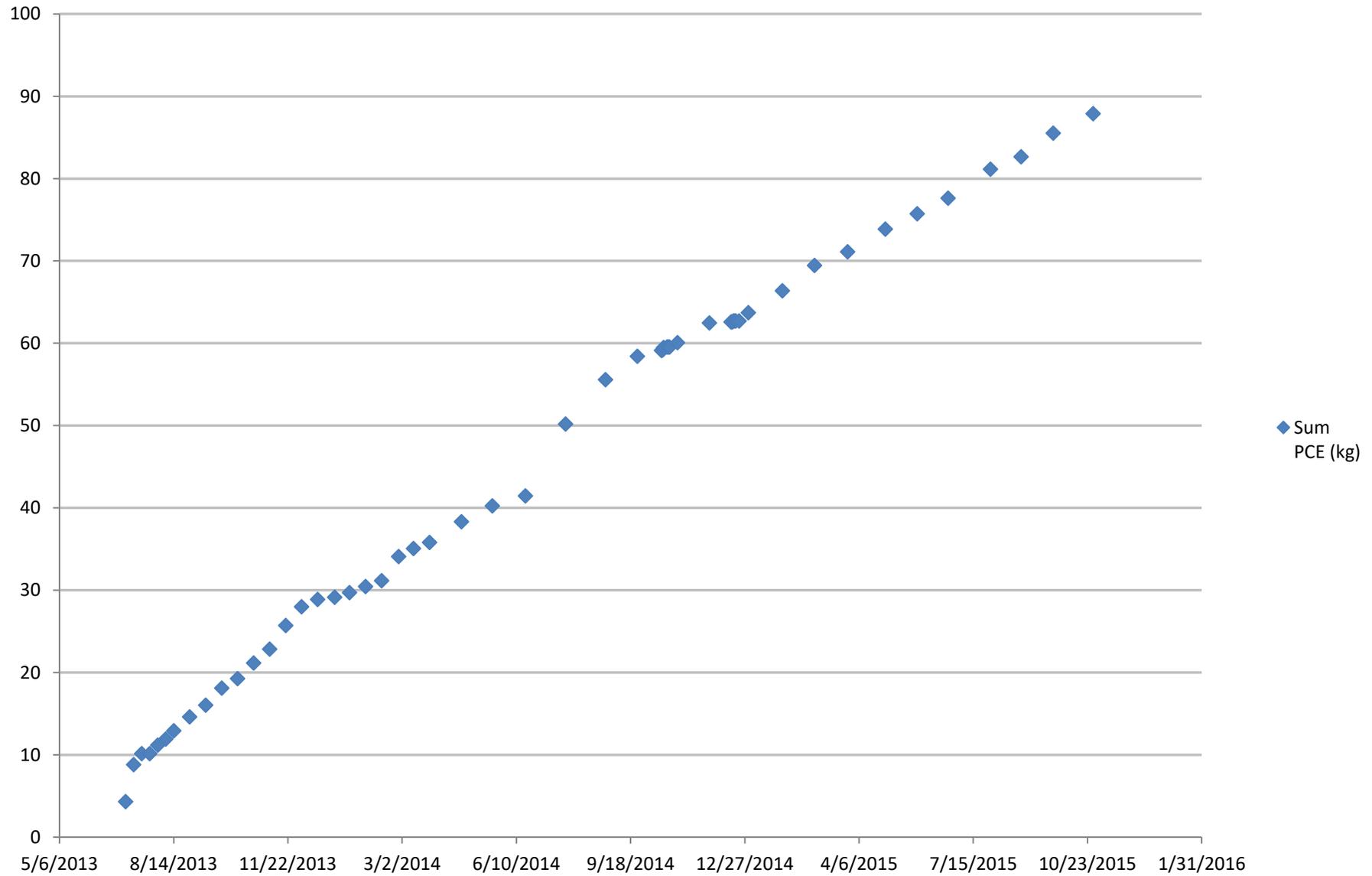


SVE-MW-1

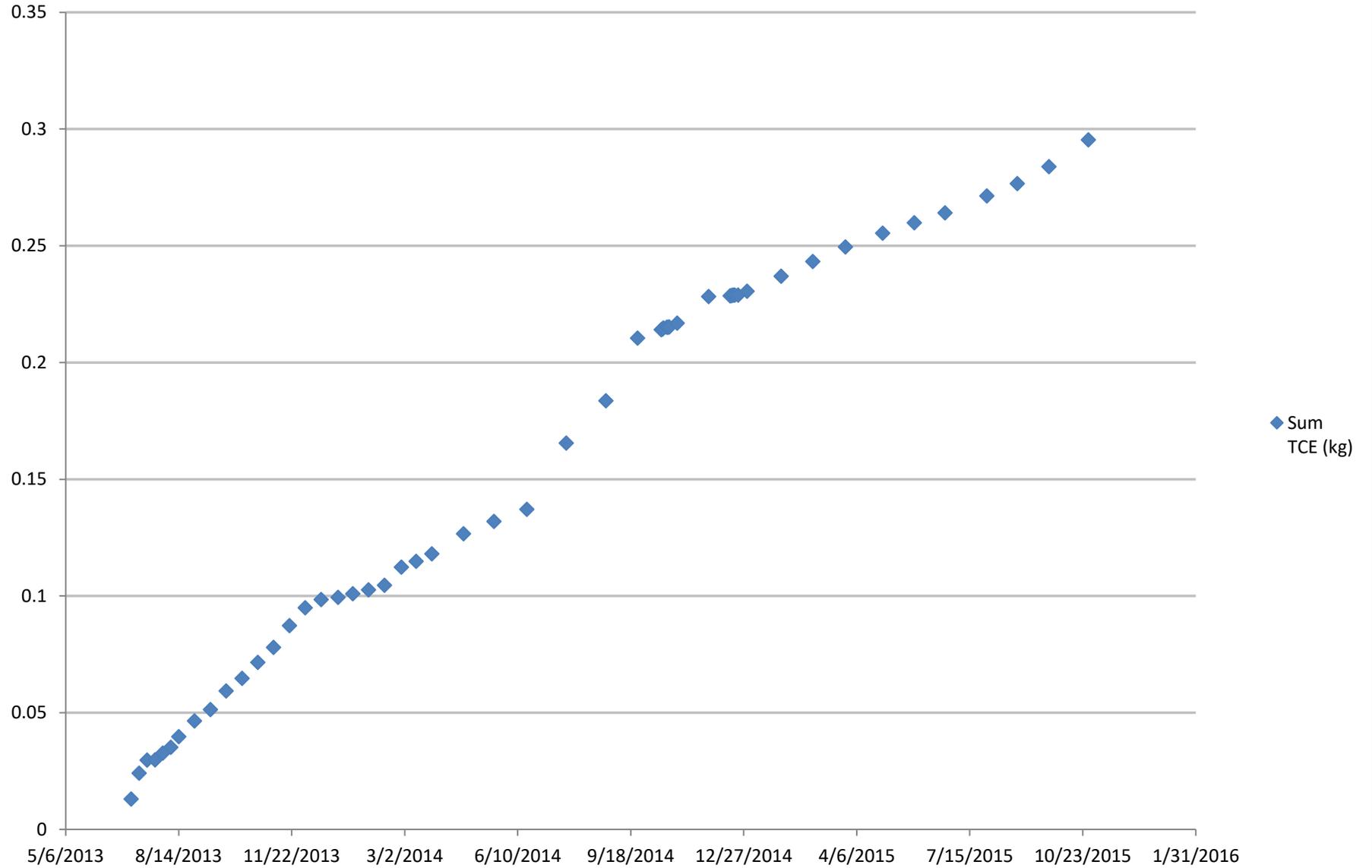


Scale (feet)

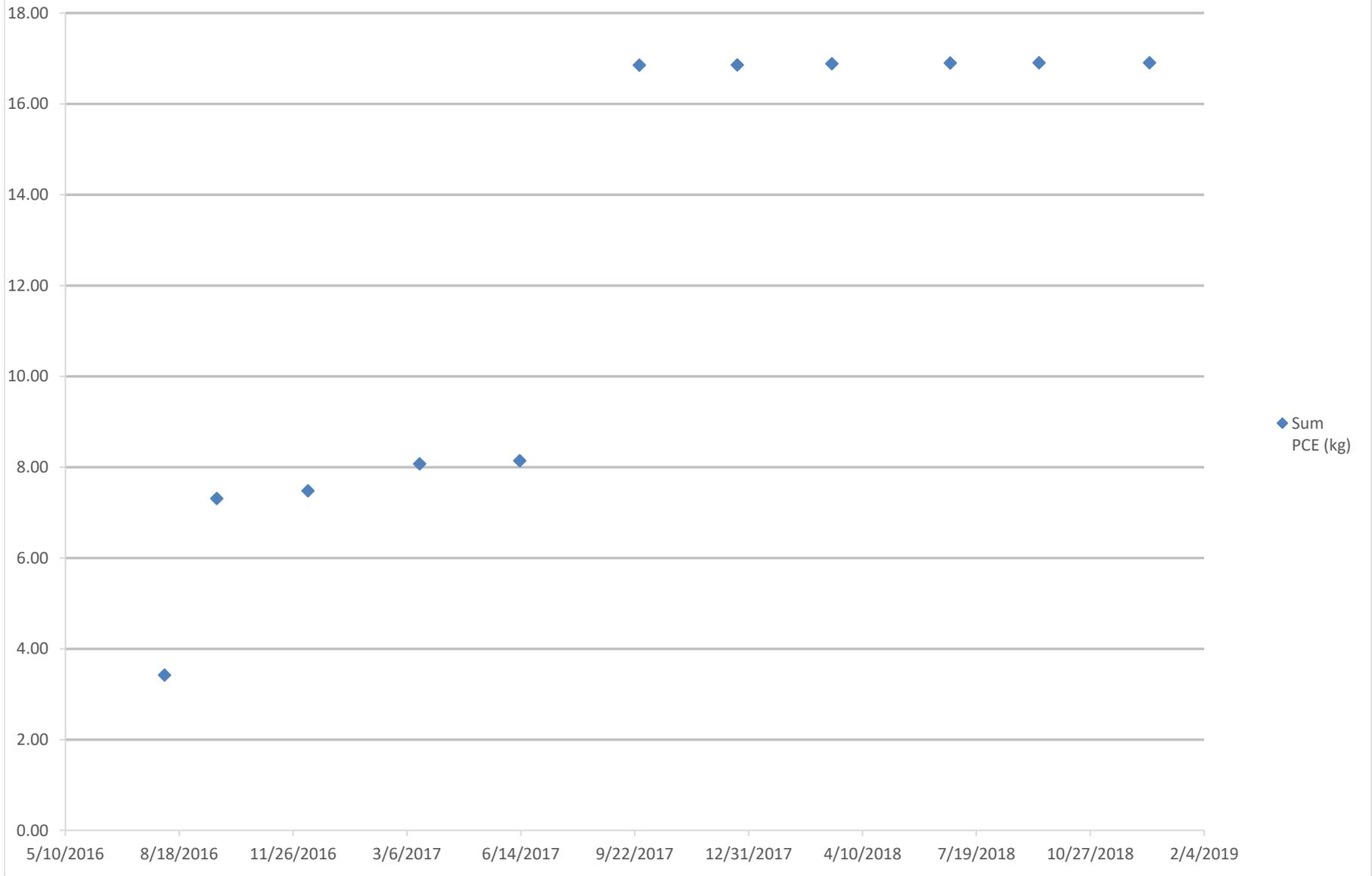
**Figure 4. 2013 SVE System  
Contaminant Mass Removal - PCE**



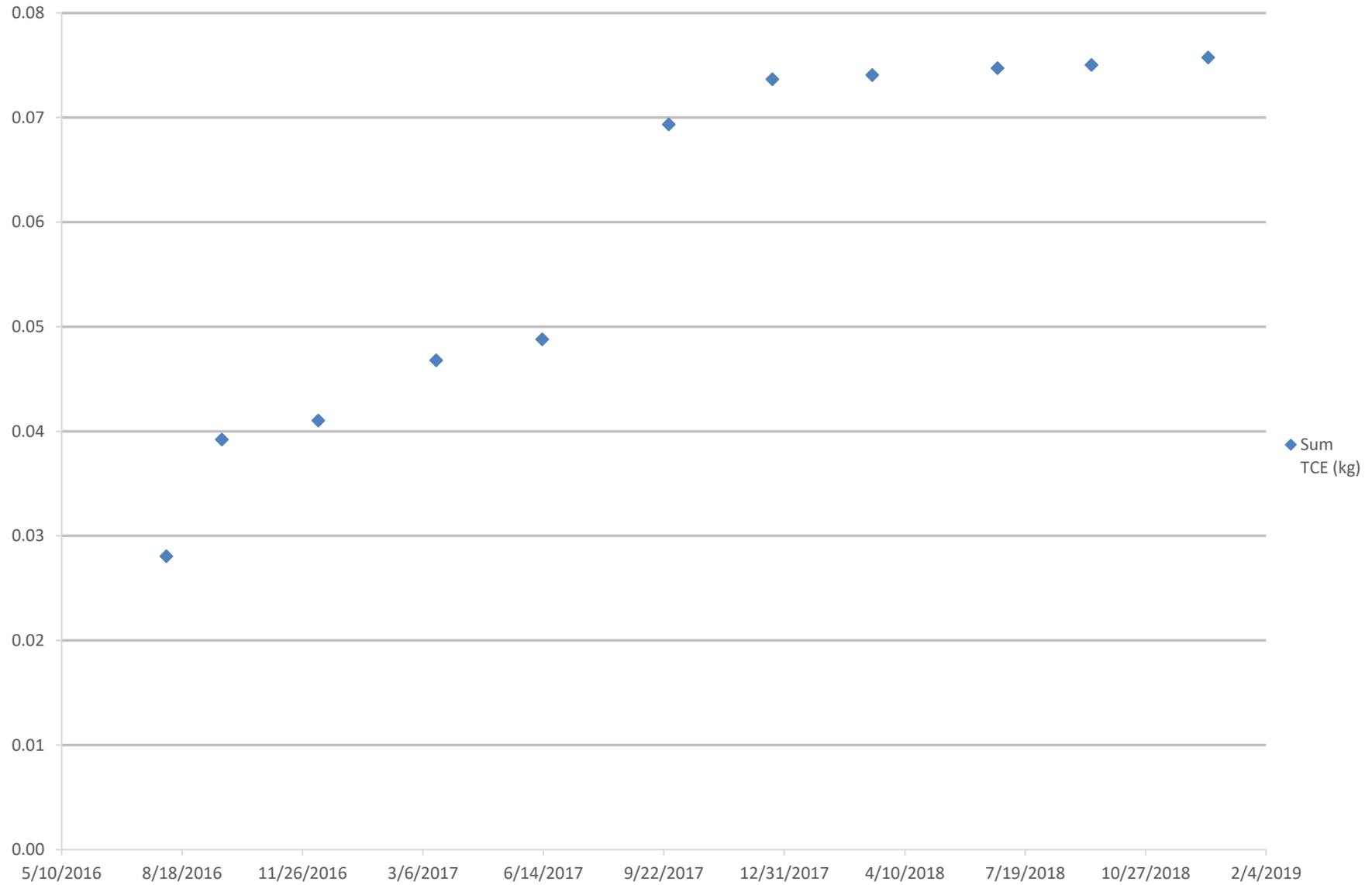
**Figure 5. 2013 SVE System  
Contaminant Mass Removal - TCE**



**Figure 6. 2016 SVE System  
Contaminant Mass Removal - PCE**



**Figure 7. 2016 SVE System  
Contaminant Mass Removal - TCE**



# APPENDIX A

## Metes and Bounds



**SCHEDULE "A"**  
**ENVIRONMENTAL EASEMENT**  
**PROPERTY DESCRIPTION**

The Condominium (in the Building located at and known as The Bridge Street Condominium and by Street Number 384-394 Bridge Street, New York), designated and described as Units Parking, Commercial 1, Commercial 2, Lower 80/20, Upper 80/20 and Divisible (hereinafter called the "Unit") in the Declaration (hereinafter called "Declaration") made by the Sponsor under the Condominium Act of The State of New York (Article 9-B of the Real Property Law of the State of New York), dated March 21, 2012 and recorded June 14, 2012 in the Office of the Register, the City of New York, County of New York, in CRFN 2012000231607 establishing a plan for Condominium ownership of said Building and the land upon which the same is erected (hereinafter sometimes collectively called the "Property") and also designated and described as Tax Lot Nos. 1001-1006 Block 152, Borough of Brooklyn, on the Tax Map of the Real Property Assessment Department of the City of New York and on the Floor Plans of said Building certified by Professional Engineer, on and filed as Condominium Plan No. 3222 on June 14, 2012 in the aforesaid Register's Office.

Together with an undivided 100 percent interest in the common elements of the property described in the Declaration.

The land upon which the Building containing the Unit is erected as follows:

Legal Description of Environmental Easement Area (former Lots 37 & 118 Block 152 Joined as one)

“Being the same piece or parcel of Land conveyed to R, K, & G Associates from 1929 Realty, Inc., by deed dated June 15, 1977 recorded in Reel 926 Page 725 and also the same parcel of land conveyed to 384 Bridge Street LLC from 141 Lawrence Street LLC, by deed dated December 19, 2011 recorded as CRFN: 2012000020329 in the Office of City Register of the City of New York.”

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the Westerly side of Bridge Street distant 100 feet southerly from the corner formed by the intersection of the Westerly side of Bridge Street and the Southerly side of Willoughby Street;

RUNNING THENCE Westerly parallel with Willoughby Street 107 feet 6 inches;

THENCE Southerly parallel with Bridge Street 25.0 feet;

THENCE Westerly parallel with Willoughby Street 107 feet 6 inches to the Easterly side of Lawrence Street;

THENCE Southerly along the easterly side of Lawrence Street 62 feet;

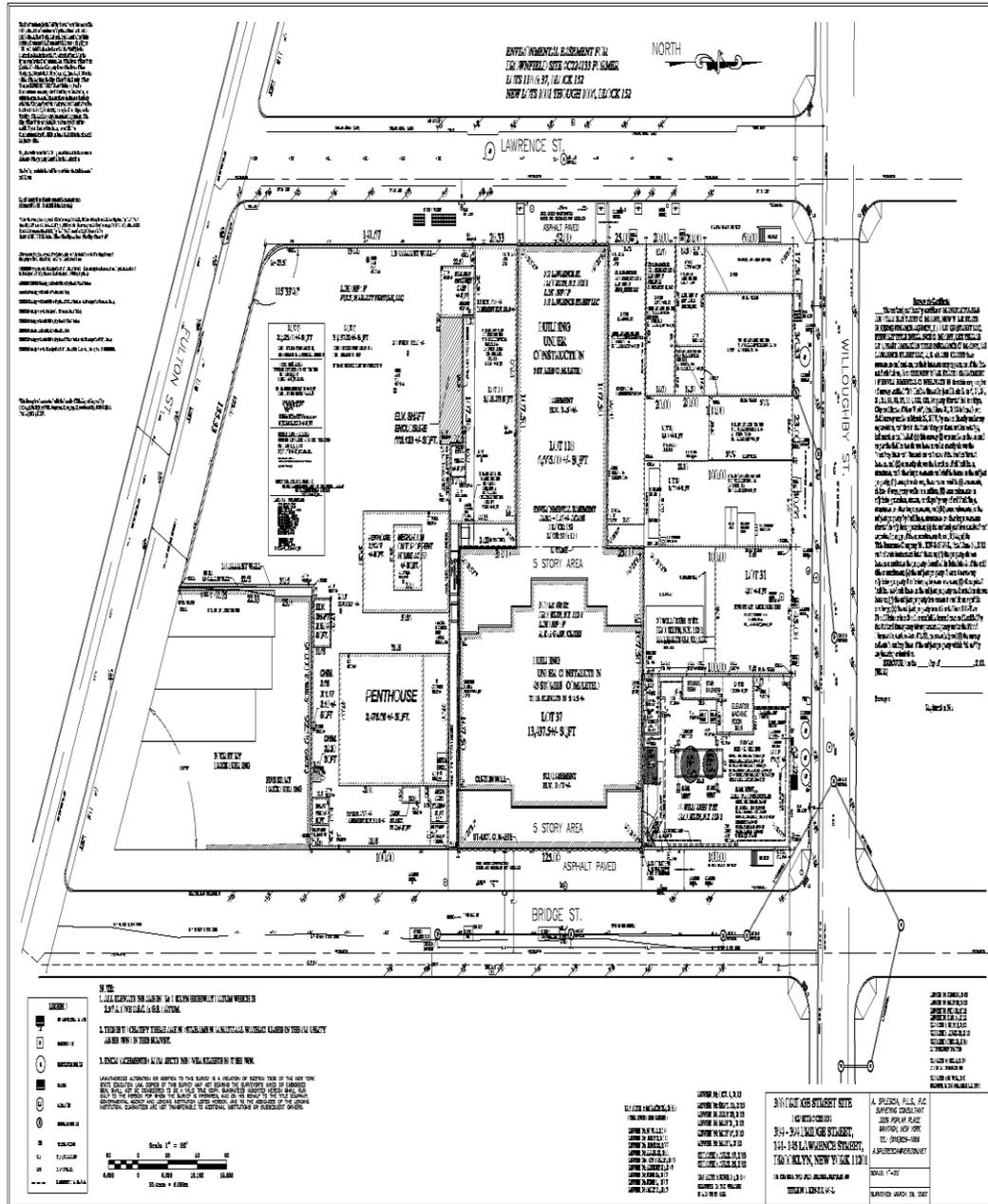
THENCE Easterly parallel with Willoughby Street 107 feet 6 inches;

THENCE Southerly parallel with Bridge Street 38.0 feet;

THENCE Easterly parallel with Willoughby Street 107 feet 6 inches to the Westerly side of Bridge Street;

THENCE Northerly along the Westerly side of Bridge Street 125.0 feet to the point or place of BEGINNING.

# SURVEY



# APPENDIX B

## Engineering Controls / Institutional Controls Certifications





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. <b>C224134</b>		
<b>Site Name 388 Bridge Street</b>		
Site Address: 384-394 Bridge Street and 141-145 Lawrence Street		Zip Code: 11201
City/Town: Brooklyn		
County: Kings		
Site Acreage: 0.460		
Reporting Period: January 03, 2018 to January 03, 2019		
		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"/>
<b>If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.</b>		
5. Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO
	<b>Box 2</b>	
	YES	NO
6. Is the current site use consistent with the use(s) listed below? Residential, Restricted-Residential, 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>		
<b>A Corrective Measures Work Plan must be submitted along with this form to address these issues.</b>		
Signature of Owner, Remedial Party or Designated Representative	Date	

**Box 2A**

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

YES  NO

**If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.**

9. Are the assumptions in the Qualitative Exposure Assessment still valid?  
(The Qualitative Exposure Assessment must be certified every five years)

YES  NO

**If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.**

**SITE NO. C224134**

**Box 3**

**Description of Institutional Controls**

Parcel

Owner

Institutional Control

**1-152-1001**

**R,K&G Associates, LLC**

Ground Water Use Restriction  
Soil Management Plan  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

- land use restriction
- groundwater use restriction
- soil management plan

**1-152-1002**

**R,K&G Associates, LLC**

Ground Water Use Restriction  
Soil Management Plan  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

- land use restriction
- groundwater use restriction
- soil management plan

**1-152-1003**

**R,K&G Associates, LLC**

Ground Water Use Restriction  
Soil Management Plan  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

- land use restriction
- groundwater use restriction
- soil management plan

**1-152-1004**

**R,K&G Associates, LLC**

Ground Water Use Restriction  
Soil Management Plan  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

- land use restriction
- groundwater use restriction
- soil management plan

**1-152-1005**

**R,K&G Associates, LLC**

Ground Water Use Restriction  
Soil Management Plan  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

- land use restriction
- groundwater use restriction

- soil management plan

1-152-1006

384 Bridge Street LLC

Ground Water Use Restriction  
Soil Management Plan  
Landuse Restriction  
Monitoring Plan  
Site Management Plan  
O&M Plan  
IC/EC Plan

- land use restriction
- groundwater use restriction
- soil management plan

Box 4

### Description of Engineering Controls

Parcel

Engineering Control

1-152-1001

Vapor Mitigation  
Air Sparging/Soil Vapor Extraction

- composite cover system
- sub-slab depressurization system
- soil vapor extraction system
- monitored natural attenuation of groundwater
- adjacent off-site vapor mitigation system

1-152-1002

Vapor Mitigation  
Air Sparging/Soil Vapor Extraction

- composite cover system
- sub-slab depressurization system
- soil vapor extraction system
- monitored natural attenuation of groundwater
- adjacent off-site vapor mitigation system

1-152-1003

Vapor Mitigation

- composite cover system
- sub-slab depressurization system
- soil vapor extraction system
- monitored natural attenuation of groundwater
- adjacent off-site vapor mitigation system

1-152-1004

Vapor Mitigation

- composite cover system
- sub-slab depressurization system
- soil vapor extraction system
- monitored natural attenuation of groundwater
- adjacent off-site vapor mitigation system

1-152-1005

Vapor Mitigation

- composite cover system
- sub-slab depressurization system
- soil vapor extraction system
- monitored natural attenuation of groundwater
- adjacent off-site vapor mitigation system

1-152-1006

Vapor Mitigation

- composite cover system
- sub-slab depressurization system
- soil vapor extraction system
- monitored natural attenuation of groundwater
- adjacent off-site vapor mitigation system

**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.

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. C224134

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 ARNOLD F. FLEMING at 158 W 29<sup>th</sup> ST. NY NY 10001  
print name print business address

am certifying as OWNERS REPRESENTATIVE (Owner or Remedial Party)

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

Arnold F. Fleming  
Signature of Owner, Remedial Party, or Designated Representative  
Rendering Certification

1/14/19  
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 ARNOLD F. FLEMING at 158 W 29th St NY NY 10001  
print name print business address

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



Arnold F. Fleming  
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

11/4/19  
Date

Stamp  
(Required for PE)

# APPENDIX C

## Quarterly Inspection Checklists



**388 Bridge Street  
SVE OMM and Pressure Readings**

Date 1/11/2018 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 47

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	---	
		Air speed	fpm	---	
		Flow	cfm	---	
		Temp.	°F	---	
	VI 101	Pressure	inwc	21	12:30
Post- Moist. Separator / Pre- Blower	VI 102	Pressure	inwc	38	12:30
	F-102	Dilution Valve	---	---	
Pre- Blower / Before Heat Exchanger	PI 101	Pressure	inwc	21	12:30
	TI 101	Temp.	°F	110	12:30
After heat exchanger / Pre- Carbon Treatment	PI 103	Pressure	inwc	12	12:30
	TI 102	Temp.	°F	95	12:30
Between Carbon Units	PI 104	Pressure	inwc	8	12:30
Post- Carbon Treatment	PI 105	Pressure	inwc	2	12:30

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	
SVE Well #3	---	Sub-cellar garage	Abandoned
SVE Well #4	---	Sub-cellar garage	Converted to monitoring well
SVE Well #5	---	Sub-cellar garage	Converted to monitoring well
SVE Well #6	---	Cellar workshop	Abandoned
SSDS MP #1	---	Not installed	
SSDS MP #2	---	Not installed	
SSDS MP #3	---	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	---	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	locked
R2	---	Boiler Room	
R3	---	Boiler Room	
R4	---	Boiler Room	
R5	---	Workshop	
R6	---	Back Storage Room	locked
R7	---	Storage Room hallway	
R8	---	Storage Room entrance	
R9	---	Cafeteria area	beneath floor
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	locked
R13	---	Kitchen storage	

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial/Final Vacuum
SVE inlet					
SVE midstream					
SVE outlet					

Notes
Annual SMP inspection 0 gallons in VLS

**388 Bridge Street  
SVE OMM and Pressure Readings**

Date 3/14/2018 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 47

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	---	
		Air speed	fpm	---	
		Flow	cfm	---	
		Temp.	°F	---	
	VI 101	Pressure	inwc	22	11:30
Post- Moist. Separator / Pre- Blower	VI 102	Pressure	inwc	40	11:30
	F-102	Dilution Valve	---	---	
Pre- Blower / Before Heat Exchanger	PI 101	Pressure	inwc	16	11:30
	TI 101	Temp.	°F	102	11:30
After heat exchanger / Pre- Carbon Treatment	PI 103	Pressure	inwc	4	11:30
	TI 102	Temp.	°F	85	11:30
Between Carbon Units	PI 104	Pressure	inwc	1	11:30
Post- Carbon Treatment	PI 105	Pressure	inwc	1	11:30

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	
SVE Well #3	---	Sub-cellar garage	Abandoned
SVE Well #4	---	Sub-cellar garage	Converted to monitoring well
SVE Well #5	---	Sub-cellar garage	Converted to monitoring well
SVE Well #6	---	Cellar workshop	Abandoned
SSDS MP #1	---	Not installed	
SSDS MP #2	---	Not installed	
SSDS MP #3	-0.01	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	0.002	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	locked
R2	-0.025	Boiler Room	
R3	---	Boiler Room	
R4	---	Boiler Room	
R5	---	Workshop	
R6	0	Back Storage Room	locked
R7	-0.018	Storage Room hallway	
R8	-0.051	Storage Room entrance	
R9	---	Cafeteria area	beneath floor
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	locked
R13	---	Kitchen storage	inaccessible

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial/Final Vacuum
SVE inlet	FC572	A1119	11:48	13:48	29/2
SVE midstream	FC506	A388	11:47	13:47	30/6
SVE outlet	FC615	A424	11:46	13:46	28.5/7

Notes
Annual SMP inspection 0 gallons in VLS

**388 Bridge Street  
SVE OMM and Pressure Readings**

Date 6/26/2018 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 80

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	---	
		Air speed	fpm	---	
		Flow	cfm	---	
		Temp.	°F	---	
	VI 101	Pressure	inwc	20	11:30
Post- Moist. Separator / Pre- Blower	VI 102	Pressure	inwc	10	11:30
	F-102	Dilution Valve	---	---	
Pre- Blower / Before Heat Exchanger	PI 101	Pressure	inwc	14	11:30
	TI 101	Temp.	°F	128	11:30
After heat exchanger / Pre- Carbon Treatment	PI 103	Pressure	inwc	6	11:30
	TI 102	Temp.	°F	114	11:30
Between Carbon Units	PI 104	Pressure	inwc	0	11:30
Post- Carbon Treatment	PI 105	Pressure	inwc	0.1	11:30

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	
SVE Well #3	---	Sub-cellar garage	Abandoned
SVE Well #4	---	Sub-cellar garage	Converted to monitoring well
SVE Well #5	---	Sub-cellar garage	Converted to monitoring well
SVE Well #6	---	Cellar workshop	Abandoned
SSDS MP #1	---	Not installed	
SSDS MP #2	---	Not installed	
SSDS MP #3	-0.051	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	-0.026	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	locked
R2	-0.025	Boiler Room	
R3	---	Boiler Room	
R4	---	Boiler Room	
R5	---	Workshop	
R6	-1.09	Back Storage Room	locked
R7	-0.207	Storage Room hallway	
R8	-0.0246	Storage Room entrance	
R9	---	Cafeteria area	beneath floor
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	locked
R13	-1.075	Kitchen storage	inaccessible

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial/Final Vacuum
SVE inlet	FC559	A415	9:33	11:33	30+/3
SVE midstream	FC348	A1151	9:34	11:34	31/3
SVE outlet	FC715	A490	9:35	11:35	30/3

Notes
Annual SMP inspection 0 gallons in VLS

**388 Bridge Street  
SVE OMM and Pressure Readings**

Date 9/12/2018 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 80

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	---	
		Air speed	fpm	---	
		Flow	cfm	---	
		Temp.	°F	---	
	VI 101	Pressure	inwc	20	11:30
Post- Moist. Separator / Pre- Blower	VI 102	Pressure	inwc	8	11:30
	F-102	Dilution Valve	---	---	
Pre- Blower / Before Heat Exchanger	PI 101	Pressure	inwc	13	11:30
	TI 101	Temp.	°F	122	11:30
After heat exchanger / Pre- Carbon Treatment	PI 103	Pressure	inwc	6.5	11:30
	TI 102	Temp.	°F	112	11:30
Between Carbon Units	PI 104	Pressure	inwc	0	11:30
Post- Carbon Treatment	PI 105	Pressure	inwc	0.1	11:30

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	
SVE Well #3	---	Sub-cellar garage	Abandoned
SVE Well #4	---	Sub-cellar garage	Converted to monitoring well
SVE Well #5	---	Sub-cellar garage	Converted to monitoring well
SVE Well #6	---	Cellar workshop	Abandoned
SSDS MP #1	---	Not installed	
SSDS MP #2	---	Not installed	
SSDS MP #3	---	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	---	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	locked
R2	-0.253	Boiler Room	
R3	---	Boiler Room	
R4	---	Boiler Room	
R5	---	Workshop	
R6	-1.09	Back Storage Room	locked
R7	-0.204	Storage Room hallway	
R8	0.004	Storage Room entrance	
R9	---	Cafeteria area	beneath floor
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	locked
R13	-1.086	Kitchen storage	

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial/Final Vacuum
SVE inlet	MC206	A696	11:15	13:15	30+
SVE midstream	FC317	A1151	11:15	13:15	28
SVE outlet	FC306	A587	11:15	13:15	30+

Notes
Annual SMP inspection 0 gallons in VLS

**388 Bridge Street  
SVE OMM and Pressure Readings**

Date 12/18/2018 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 35

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	---	
		Air speed	fpm	---	
		Flow	cfm	---	
		Temp.	°F	---	
	VI 101	Pressure	inwc	22	10:15
Post- Moist. Separator / Pre- Blower	VI 102	Pressure	inwc	40	10:15
	F-102	Dilution Valve	---	---	
Pre- Blower / Before Heat Exchanger	PI 101	Pressure	inwc	16	10:15
	TI 101	Temp.	°F	101	10:15
After heat exchanger / Pre- Carbon Treatment	PI 103	Pressure	inwc	5.75	10:15
	TI 102	Temp.	°F	82	10:15
Between Carbon Units	PI 104	Pressure	inwc	2	10:15
Post- Carbon Treatment	PI 105	Pressure	inwc	0	10:15

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	
SVE Well #3	---	Sub-cellar garage	Abandoned
SVE Well #4	---	Sub-cellar garage	Converted to monitoring well
SVE Well #5	---	Sub-cellar garage	Converted to monitoring well
SVE Well #6	---	Cellar workshop	Abandoned
SSDS MP #1	---	Not installed	
SSDS MP #2	---	Not installed	
SSDS MP #3	-0.419	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	-0.054	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	locked
R2	-0.068	Boiler Room	
R3	---	Boiler Room	not found
R4	---	Boiler Room	not found
R5	---	Workshop	covered
R6	---	Back Storage Room	locked
R7	-0.009	Storage Room hallway	
R8	-0.083	Storage Room entrance	
R9	---	Cafeteria area	beneath floor
R10	---	East Storage room	inaccessible
R11	-0.008	East Storage room	covered, but accessible
R12	---	Stairwell	locked
R13	-2.137	Kitchen storage	

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial/Final Vacuum
SVE inlet	FC465	A544	10:09	12:09	29/6.5
SVE midstream	FC679	M327	10:11	10:27	24/1
SVE outlet	FC503	A397	10:12	12:12	30/6
SVE midstream-2	MC029	M423	10:28	12:30	30/24

Notes
Annual SMP inspection 0 gallons in VLS

# APPENDIX D

## Site Photographs



Appendix D - Photograph Log  
388 Bridge Street

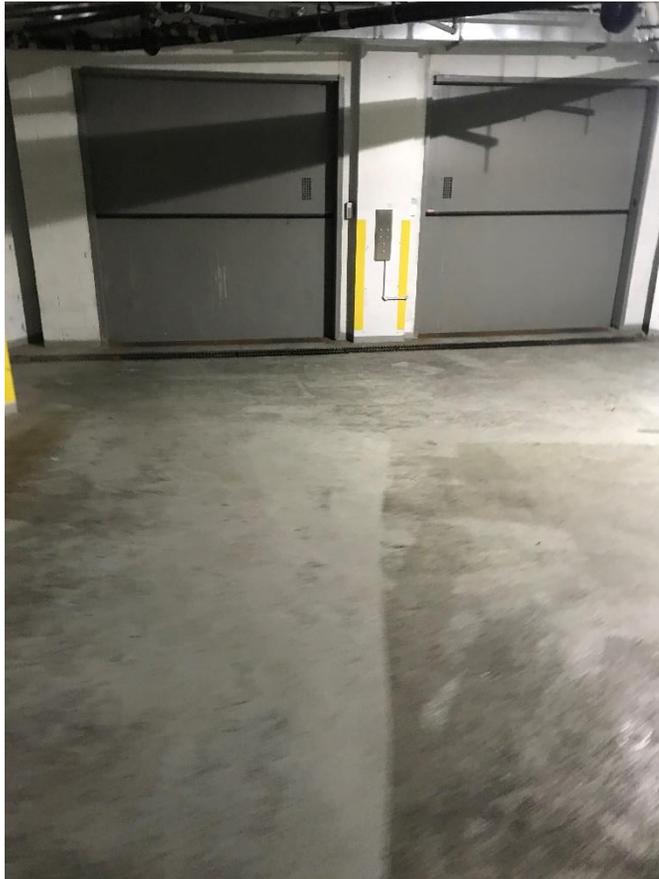


Photo 1: Cellar slab

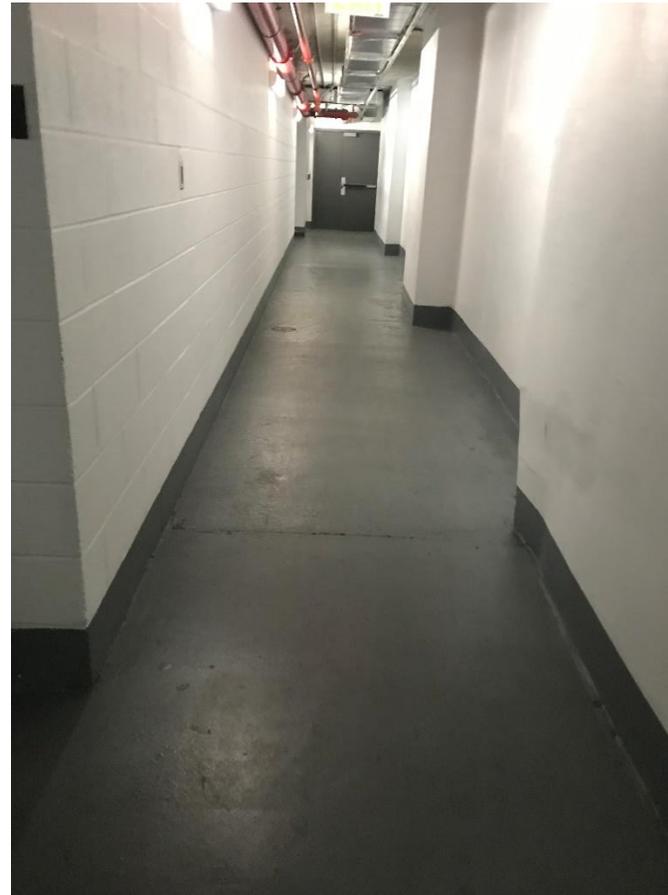


Photo 2: Cellar hallway slab



Appendix D - Photograph Log  
388 Bridge Street



Photo 3: Sub-cellar slab



Photo 4: Sub-cellar slab



Appendix D - Photograph Log  
388 Bridge Street



Photo 5: SVE inlet piping to knockout tank

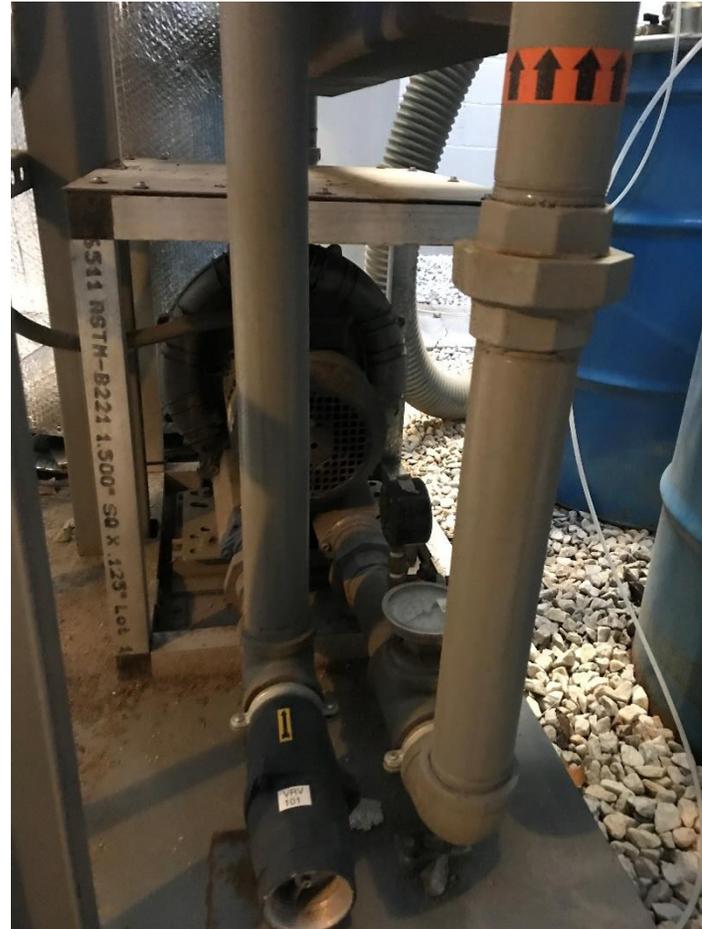


Photo 6: SVE blower inlet and outlet piping



Appendix D - Photograph Log  
388 Bridge Street



Photo 7: SVE system

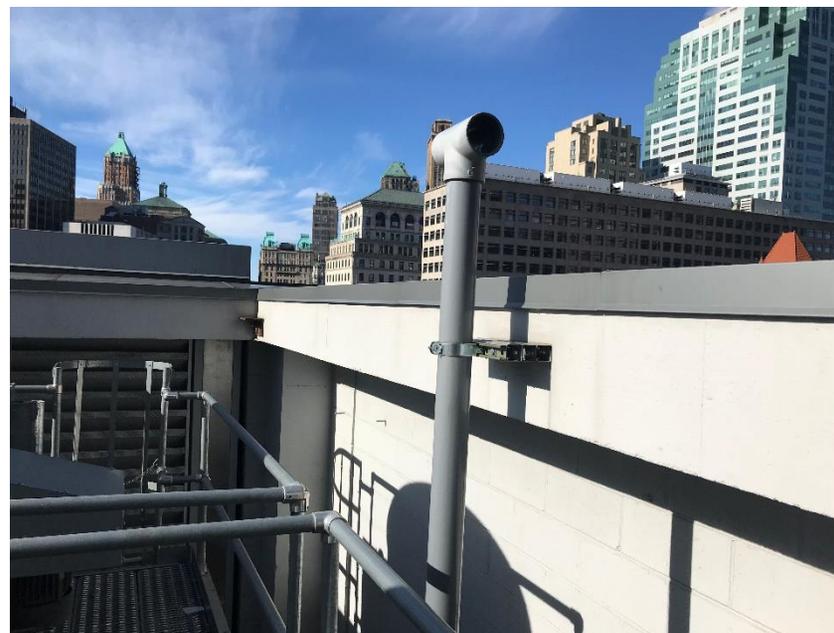


Photo 8: SVE system exhaust stack



Appendix D - Photograph Log  
388 Bridge Street



Photo 9: SJHS basement slab



Photo 10: SJHS SSDS piping in boiler room and extraction point R2



Appendix D - Photograph Log  
388 Bridge Street



Photo 11: SJHS boiler room



Photo 12: SJHS cafeteria floor



Appendix D - Photograph Log  
388 Bridge Street

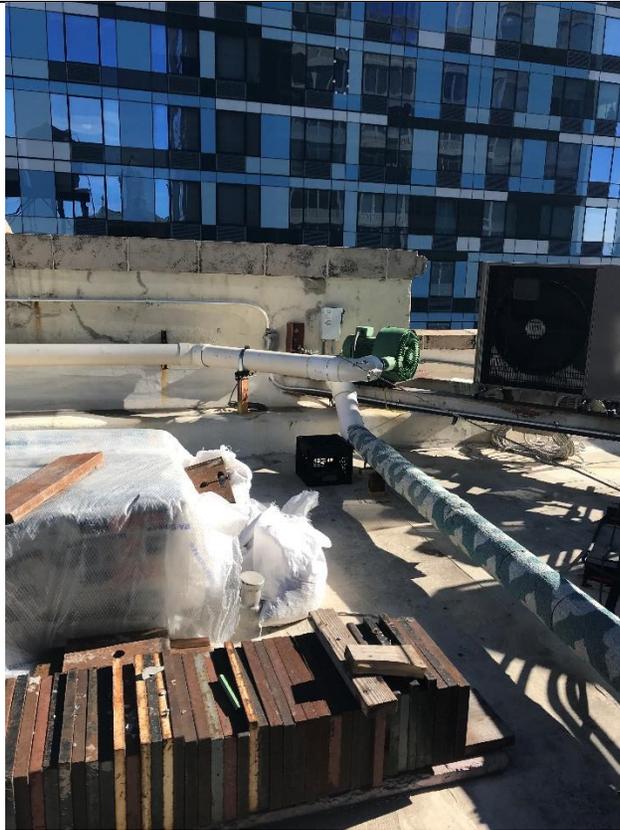


Photo 13: SJHS SSDS blower



Photo 14: SJHS SSDS stack

