

388 Bridge Street
Brooklyn, New York

NYSDEC BCP Site No. C224134

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 the reporting period (January 3, 2023 to January 3, 2024). 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 2023 include the following:

- Routine system inspections of the on-Site Soil Vapor Extraction (SVE) system;
- Vapor Carbon disposal from the SVE system;
- Conversion of the off-Site SSDS from an active to passive system.
- Routine system checks of the off-Site ECs including the components of the (now) passive SSDS at 80 Willoughby Street (Former Saint Joseph's High School [Former SJHS]);
- Annual groundwater sampling and monitoring;
- 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 Fleming, Lee Shue Environmental Engineering and Geology D.P.C. (FLS). It was determined that the ECs and ICs remain effective and continue to be protective of public health and the environment during the reporting period. 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 were collected on a semi-annual basis, starting in March 2016. In July 2019, NYSDEC approved a

request to reduce the groundwater monitoring schedule from semi-annual to annual. During the most recent groundwater monitoring event conducted in March 2023 (report dated May 28, 2023), PCE was the only chlorinated volatile organic compound (VOC) exceeding NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values (TOGS). Concentrations of PCE have remained largely the same compared to the two previous sampling events and remain well below pre-treatment maximum concentrations.

An evaluation of the remedy is further discussed in Section 2. Compliance with the 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 Downtown 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 the former SJHS (as of September 2020 utilized as the Brooklyn Prospect Downtown Elementary Charter School) 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. A Site Location Map and Site Plan are included as Figures 1 and 2, respectively. The boundaries of the Site are more fully described in Appendix A - Metes and Bounds.

Prior to redevelopment the Site historically operated with several commercial storefronts, including a dry-cleaners from 1950 to 2006. Redevelopment of the Site to its current condition includes the 53-story residential building with retail spaces on the ground floors and parking from the sub cellar to the 3rd floor of the building.

1.2 Investigations and Remediation

Remedial investigations completed at the Site between May 2008 and July 2008 found several underground storage tanks (USTs). Additional remedial investigations on-Site detected soils indicative of urban fill with elevated levels of semi-volatile organic compounds and metals. Elevated levels of chlorinated VOCs were also 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. The off-Site investigations found elevated levels of chlorinated VOCs from the Site at the Former SJHS only.

The Site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index # A2-0623-07-09, which was executed on August 10, 2009 and with the NYSDEC-approved Remedial Action Work Plan dated April 2012. 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.

Remedial activities were completed at the Site from 2008 to 2012. Contaminated soils were excavated to 15 ft. below sidewalk grade (bsg.) on the former Lot 118 and to and 25 ft-bsg on the former Lot 37 for redevelopment purposes. Contamination in groundwater and vapor was addressed by the installation of an SVE system and SSDS in 2013. An SSDS was installed in the former SJHS to address to mitigate soil vapor concerns off-Site.

1.3 Remedial Action Objectives

The Remedial Action Objectives (RAO) for Site are as follows:

Soil

RAOs for Public Health Protection:

- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

Groundwater

RAOs for Public Health Protection:

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.

RAOs for Environmental Protection:

- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.

Soil Vapor

RAOs for Public Health Protection:

- Prevent inhalation of, or exposure to, contaminated soil vapors.
- Prevent contaminated soil vapor from migrating into on-Site proposed buildings or to adjacent off-site buildings.

RAOs for Environmental Protection

- Remove/reduce soil vapor levels under the site and control its off-site migration to the extent practicable given potential off-Site sources and area background levels.

2.0 REMEDY EVALUATION

2.1 Remedy Performance, Effectiveness and Protectiveness

2.1.1 Soil

Contaminated soils were excavated as a part of the remedial action. During intrusive Site work excavated soils were screened for indications of contamination (by visual means, odor, and monitoring with a photoionization detector). Following excavation, end-point samples were collected to evaluate the remedial action and achievement of soil cleanup objectives (SCOs). All remaining soil met Track 2 Restricted Use Soil Cleanup Objectives (RUSCOs). Excavated soils were disposed off-Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal.

2.1.2 Groundwater

Groundwater monitoring at the Site is conducted annually to monitor natural attenuation of chlorinated VOCs. Groundwater is collected from three (3) on-Site monitoring wells that previously operated at SVE extraction wells. The SVE wells were converted to monitoring wells in 2016, following the installation of the new SVE system on-Site.

As discussed in the annual groundwater report, dated June 9, 2023, PCE was the only compound detected (15 µg/L) above its TOGS Class GA AWQS of 5 µg/L. All other compounds were non-detect or at concentrations below their respective AWQS standards. Overall concentrations of PCE remain well below historical maximums and have been approaching asymptotic levels since groundwater monitoring began in 2016. Groundwater analytical results are presented in Table 1.

2.1.3 Soil Vapor

Soil vapor intrusion is prevented by several engineering controls on-Site. These include:

- The composite cover, which consists of a 4- to 8-ft. thick concrete slab underlain by a waterproofing membrane (Preprufe 300R and 160R).
- Operation of an 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*;

- An SSDS as a preventative measure from residual contamination at the Site, to be activated upon decommissioning of the SVE system; and
- Operation of a passive SSDS at the off-Site former SJHS.

Monitoring of the SVE system is conducted quarterly to assess the removal of chlorinated VOCs from beneath the Site. Results from these events are included in Table 2 and demonstrate a large reduction in the concentrations of chlorinated VOCs in soil vapor since system start-up, however, elevated levels of PCE continue to be detected in samples collected from the influent. FLS recommends continued operation of the SVE system.

The annual inspection of the off-Site ECs demonstrated that they 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. Overall, the Site's remedy remains effective at achieving the remedial goals for the Site and remains and protective of human health.

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:

- Compliance with the Environmental Easement and the SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. The Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted residential and commercial use provided that the long-term Engineering and Institutional Controls included in the SMP are employed;
- The property may not be used for a higher level of use, such as unrestricted use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- Vegetable gardens and farming on the property are prohibited;

- The property owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

The Site remains compliant with all institutional controls during the reporting period.

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 an SVE system (to be eventually converted to an SSDS upon the Department's approval to discontinue operation of the SVE), and a composite cover system.

3.2.1 Composite Cover System

Exposure to residual contamination is prevented by a composite cover system placed over Track 2 Restricted Residential soils on-Site. The composite cover system is comprised of a vapor barrier and concrete building slabs. The composite cover will range between 4 and 6 feet-thick on the former Lot 37 and will be 8 inches thick on the former Lot 118. The vapor barrier consisted of a pre-applied waterproofing membrane (Preprufe 300R and 160R) that integrally bonds to poured concrete. The Preprufe 300R membrane was used under the foundation slab while the Preprufe 160R was applied to the below grade foundation walls.

The composite cover system is a permanent control and the quality and integrity of this system is inspected at defined, regular intervals in accordance with the SMP in perpetuity. The composite cover was inspected as a part of the Site wide inspection conducted December 4, 2023 and no deficiencies were identified. Photographs of the composite cover system and entire Site inspection are included in Appendix D.

3.2.2 Soil Vapor Extraction System (SVE)

Soil vapor intrusion is mitigated on-Site by the SVE system. The system was originally installed in 2013. In 2016, the system was altered to concentrate vacuum pull from a single SVE extraction well (SVE-2). The operates on a single blower, and vapor is treated through two (2) carbon vessels in series and exhausts at the 5th Floor terrace roof. Figure 3 presents the SVE extraction well locations.

Performance of the SVE system is evaluated on a quarterly basis. Quarterly inspections consist of collection of system readings (i.e., temperature, pressure and vacuum), and sampling of the treatment system. Samples are collected from sampling ports at the influent, midstream and effluent locations in the treatment series. Results from these events are included in Table 2 and demonstrate a large reduction in the concentrations of chlorinated VOCs in soil vapor since system start-up. The SVE remains functional and effective.

3.2.3 SSDS

The SSDS will not be operational until the SVE system is fully decommissioned. The active SVE system extracts soil vapors from a limited area where the bulk of the PCE mass remains.

3.2.4 Off-Site SSDS

Per NYSDEC approval, on October 9, 2023 the off-Site SSDS was converted from an active to a passive system (discussed in more detail in the next section). The SSDS performance was evaluated on quarterly basis. Evaluation of the system consisted of an inspection of the system and collection of vacuum readings from monitoring points installed in the cellar of the building. The Off-Site SSDS remains functional and protective of human health.

3.3 Corrective Measures

3.3.1 Institutional Controls

There were no deficiencies observed during the reporting period that would require corrective measures for the ICs.

3.3.2 Composite Cover

There were no deficiencies identified that would require corrective measures for the composite cover.

3.3.3 SVE System

There were no deficiencies identified that would require corrective measures for the SVE System.

3.3.3 Off-Site SSDS

The off-Site ECs were previously comprised of an active SSDS and basement pressurization system (BPS) in the form of a kitchen hood exhaust. On October 21, 2021, NYSDEC approved a request by Tenen Environmental to discontinue the operation of the active SSDS at the Former SJHS on the condition that the BPS be decommissioned. During renovations of the school in 2022, the kitchen hood exhaust was decommissioned. On October 9, 2023, modifications to the off-Site SSDS were made to convert from active to passive.

From 2022 – 2023 the roof space at the Former SJHS property has undergone renovation by its owner as a playground for the school. As a part of these renovations the SSDS piping and effluent location was relocated from the eastern side of the building to the NYSDEC approved location on the western side of the building, away from the playground and any operable windows, air intakes etc. During the 2022 PRR inspection, FLS noted the stack had been installed inaccurately, and should be relocated to the edge of the parapet and above the adjacent roofline. On October 9, 2023 while converting the SSDS from active to passive per NYSDEC approval, FLS relocated the effluent stack towards the edge of the existing parapet and adjusted the stack height to emit approximately 2-feet above the adjacent roofline. The inspection confirmed that these alterations were completed and that the passive system is operating as intended. Modifications to the SSDS effluent piping are shown on Figure 8.

3.4 Certification of Engineering and Institutional Controls

On December 11, 2023, Jordan Arey and Landon Silverman of FLS conducted the annual inspection of Site, under direct supervision from Arnold F. Fleming, P.E. On December 28, 2023,

Benjamin Hess of FLS, conducted the annual inspection of off-Site engineering controls, under direct supervision from Arnold F. Fleming, P.E. The signed EC/IC Certification Form is provided as Appendix B.

4.0 MONITORING PLAN COMPLIANCE

4.1 Components of the Monitoring Plan

Table 3 describes the monitoring requirements by media as approved in the SMP. Tables 4 and 5 describe the monitoring requirements by remedial system for on- and off-Site, respectively, as approved in the SMP.

Table 3 – Monitoring Requirements by Media

Media	Frequency	Analysis or Measurement
Groundwater	Annually	VOCs and geochemical parameters
Soil Vapor	Quarterly	VOCs from SVE System

The table below describes the requirements of the monitoring plan by remedial technologies.

Table 4 – Monitoring Requirement by Remedial System – On-Site

Remedial Technology	Frequency	Parameter(s)
Composite Cover System	Annually	Intact
SVE System	Quarterly	Monitor vacuum, inspect piping and exhaust.
SSDS	Quarterly	Monitor vacuum (once operational)

Table 5 – Monitoring Requirement by Remedial System – Off-Site

Remedial Technology	Frequency	Parameter(s)
Composite Cover System	Annually	Intact
SSDS	Quarterly	Monitor vacuum, inspect piping and exhaust

4.2 Summary of Monitoring Completed

4.2.1 Groundwater

On March 28, 2023 groundwater samples were collected and analyzed for VOCs and geochemical parameters including nitrate, nitrite, sulfate, ferrous iron, total organic carbon, and dissolved organic carbon. As discussed in the annual groundwater monitoring report (submitted to NYSDEC

June 13, 2023), PCE was the only contaminant of concern detected at concentrations above the TOGS 5 µg/L standard. PCE exceeded this standard only in SVE-MW-4 (15 µg/L), while the concentration of PCE in SVE-MW-1 (4.9 µg/L) was just below the TOGS standard. PCE concentrations remain largely the same compared to previous sampling events with the exception of SVE-MW-5 where PCE was non-detect for the first time since monitoring began in March 2016. PCE concentrations remain well below pre-treatment concentrations, and concentrations of trichloroethylene (TCE) and cis-1, 2-dichloroethylene continue to remain below their TOGS standards (5 µg/L) in all three monitoring wells. Additionally, concentrations of chloroform remained below the TOGS standard of 7.0 µg/L in all wells during this reporting period.

4.2.2 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 1.4-liter summa canisters provided by SGS Accutest Laboratories using 2-hour flow regulators and were analyzed for VOCs by EPA Method TO-15.

The quarterly soil vapor monitoring analytical results shown in Table 2 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. Figures 4 and 6 present PCE mass removal by system from 2013 and 2016, respectively. Figures 5 and 7 present TCE mass removal by system from 2013 and 2016, respectively.

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

- The highest historical concentrations of PCE (39,700 µg/m³) and TCE (120 µg/m³) detected at the 2013 SVE system inlet were recorded on July 3, 2013, one week after the system was turned on.
- Thirty-seven (37) sampling events, including thirty-two (32) quarterly events, have been completed since the modification of the 2016 SVE system.

- In the most recent sampling event, the SVE inlet readings of PCE and TCE were 1,570 $\mu\text{g}/\text{m}^3$ and 3.4 $\mu\text{g}/\text{m}^3$, respectively. When compared to the highest concentrations detected (sample collected July 3, 2013), concentrations of PCE and TCE have been reduced approximately 96.05% and 97.17%, respectively.
- New carbon was installed in the lead and lag carbon vessels on January 4, 2024 following evidence of carbon saturation in the December 2023 sampling event. Spent carbon was disposed of at an approved facility (EPA ID No. NYD080631369). Waste disposal manifests and post-carbon replacement soil vapor sampling results will be included in the 2024 PRR, as the carbon replacement occurred outside of this year's reporting period.
- To date, a total of ninety-two (92) soil vapor sampling (monthly/quarterly/quality control) events have been completed since initial system installation in 2013. As of the date of the last SVE sampling event, December 4, 2023, a total of 131.35 kg of PCE and 0.43 kg of TCE have been removed and treated from the Site since the system startup in 2013. Graphs showing the cumulative mass removal for PCE and TCE from initial system startup to the 2016 system modification are presented in Figure 4 and 5, respectively.
- As of the date of the last SVE sampling event, December 4, 2023, the modified SVE system has removed a total of 43.48 kg of PCE and 0.14 kg of TCE since 2016 (Figure 6 and 7).

4.3 Monitoring Deficiencies

All remedial systems are functioning as intended and there are no discernable deficiencies.

4.4 Conclusions and Recommendations for Changes

The monitoring has demonstrated that the ECs are operating properly and are accomplishing the RAOs.

5.0 OPERATION AND MAINTENANCE PLAN COMPLIANCE

The Operation and Maintenance Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the Site. In general, this includes periodic inspection and monitoring of the on-Site and off-Site ECs.

5.1 Components of the O&M Plan

5.1.1 SVE System

The SVE system was installed in 2013, prior to completion of the building construction, as a remedial measure to remove remaining residual contamination and reduce the health hazard for future occupants of the building. In 2016 the SVE system was decommissioned and a downsized SVE system was installed, and began operation. The SVE is designed to run continuously and without an operator. The SVE system draws airflow from the subsurface via vacuum, thereby promoting volatilization of residual contaminants. The system treats soil vapor through two (2) carbon vessels in series before emitting treated vapor through the exhaust stack located on the roof of the 5th Floor terrace.

Routine equipment maintenance and inspection are conducted on the SVE in accordance with the manufacturers' products requirements/recommendations, and the approved SMP. On a quarterly basis, a qualified environmental professional inspects the SVE system for the following:

- Visual inspection of all accessible piping, gauges, fan and other components. Any obvious leaks will be remedied. Any faulty components will be repaired or replaced. If there is any indication that the fan requires repair, it must be returned to the factory for repair as it has no user-serviceable parts.
- Inspect SVE exhaust location to ensure that it is in compliance with NYSDOH requirements with respect to air intakes and operable windows.
- Determine if any HVAC modifications were made which may affect the operation of the SVE.

In the event that the warning device is triggered, which may indicate reduced effectiveness at the operating conditions, or the system becomes damaged the following actions will be taken:

- A qualified professional will inspect the system to determine the cause of damage or reduced performance;
- After making any repairs, the system will be restarted.

5.1.2 On-Site SSDS

The SSDS was installed as a remedial measure to reduce the health hazard for future occupants of the building. Once operation of the SVE system is terminated, the SSDS will operate as an active system providing the required negative differential pressure beneath the building foundation for the life of the building. After SVE operation is approved to be discontinued in writing by NYSDEC, a diagnostic test will be performed to determine the proper fan size to replace the SVE blowers. Diagnostic testing results will be provided to NYSDEC for review and approval prior to installation of the SSDS fan.

Once operational, routine equipment maintenance and inspection will be conducted on the SSDS system. System operation manual, design information, manufacturer's instructions and drawings will be provided to NYSDEC as an addendum to this SMP. The qualified environmental professional will perform a quarterly inspection consisting of the following:

- Visual inspection of all accessible piping, gauges, fan and other components. Any obvious leaks will be remedied. Any faulty components will be repaired or replaced. If there is any indication that the fan requires repair, it must be returned to the factory for repair as it has no user-serviceable parts.
- Inspect SSDS exhaust location to ensure that it is in compliance with NYSDOH requirements with respect to air intakes and operable windows.
- Determine if any HVAC modifications were made which may affect the operation of the SSDS.
- Inspect the concrete slab for cracks or holes. Any visible cracks or holes will be repaired.

In the event that the warning device is triggered, which may indicate reduced effectiveness at the operating conditions, or the system becomes damaged the following actions will be taken:

- A qualified professional will inspect the system to determine the cause of damage or reduced performance.

- After making any repairs, the system will be restarted.
- If the system cannot provide a negative pressure differential of greater than -0.002 in-WC, it will be redesigned.

5.1.3 Off-Site SSDS

The SSDS at the Former SJHS was installed and is currently in operation to reduce the health hazard for occupants of the school. The SSDS operated as an active system from November 2009 to October 2023 when it was subsequently converted to a passive system. The passive system provides the required negative differential pressure beneath the building foundation. The negative differential pressure is created by a series of 1-foot by 1-foot sub-slab pits that are piped to manifold, and then into a single riser and exhausted above the roof of the building.

On October 21, 2021 the NYSDEC approved a request to discontinue the operation of the off-Site SSDS, on the condition that the BPS kitchen hood exhaust be decommissioned. During renovations of the school conducted in 2022, the kitchen hood exhaust was decommissioned. On October 9, 2023, the SSDS was converted from active to passive. The SSDS fan was disconnected from the in-line exhaust header. The effluent was rerouted four feet to the western edge of the building and equipped with a 4-in wind powered turbine to aid in passive depressurization beneath the slab. Figure 8 presents the off-Site SSDS layout and alterations.

Routine equipment maintenance and inspection has been conducted on the SSDS system. System operation manual, design information, manufacturer's instructions and drawings are located in Appendix Q of approved SMP. The off-site SSDS was initially inspected on a monthly basis. Per NYSDEC approval issued on May 19, 2016, the qualified environmental professional will perform a quarterly inspection consisting of the following:

- Confirm passive SSDS is functioning and is maintaining a negative differential pressure at the riser.
- Collect differential pressure readings from accessible SSDS monitoring ports.
- Visual inspection of all accessible piping, gauges, and other components. Any obvious leaks will be remedied. Any faulty components will be repaired or replaced.

- Inspect SSDS exhaust location to ensure that it is in compliance with NYSDOH requirements with respect to air intakes and operable windows.
- Determine if any HVAC modifications were made which may affect the operation of the SSDS.
- Inspect the concrete slab for cracks or holes. Any visible cracks or holes will be repaired.

In the event that the warning device is triggered, which may indicate reduced effectiveness at the operating conditions, or the system becomes damaged the following actions will be taken:

- A qualified professional will inspect the system to determine the cause of damage or reduced performance.

5.2 Summary of O&M Completed

5.2.1 SVE System

Operation and maintenance, as defined above, of the SVE was completed on a quarterly basis. The system O&M logs completed during the reporting period are included as Appendix C.

5.2.2 On-Site SSDS

Operation and maintenance, as defined above, will be performed upon the Department's approval to discontinue operation of the SVE system.

5.2.3 Off-Site SSDS

Operation and maintenance, as defined above, of the Off-Site SSDS was completed on a quarterly basis. On October 9, 2023, the SSDS was converted from active to passive. The SSDS fan was disconnected from the in-line exhaust header. The effluent was rerouted four feet to the western edge of the building and equipped with a 4-in wind powered turbine to aid in passive depressurization beneath the slab. The system O&M logs completed during the reporting period are included as Appendix C.

5.3 Evaluation of Remedial Systems

5.3.1 SVE System

Based on the results of O&M activities performed during the reporting period, the SVE system continues to operate as intended and be protective of human health and the environment.

5.3.2 On-Site SSDS

Evaluation of the On-Site SSDS will be performed upon the Department's approval to discontinue operation of the SVE system.

5.3.3 Off-Site SSDS

Based on the results of O&M activities performed during the reporting period, the off-Site SSDS continues to operate as intended and be protective of human health and the environment.

5.4 O&M Deficiencies

There were no deficiencies in the O&M plan during the reporting period.

5.5 Conclusions and Recommendations for Improvements

The ECs are operating properly and are accomplishing the RAOs.

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 2023.
- Per the October 21, 2021 NYSDEC approval, the off-Site SSDS was converted to passive during the reporting period. The ECs and ICs were in place and remained effective at the Former SJHS in 2023.
- 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 annual groundwater sampling was properly implemented and results of PCE and TCE continue to show declining or asymptotic trends.

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

- The on-site ECs and ICs will continue in operation and monitoring in 2024.
- Groundwater monitoring will continue to be conducted on an annual basis. The results will be prepared and submitted to the Department in an Annual Groundwater monitoring report.
- The off-Site EC will continue to operate in passive mode.
- An annual inspection of the ECs will be conducted and the results presented in the 2024 PRR.

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 2, 2025.

Tables

Table 2 - SVE Sampling Results June 2013 - December 2021
388 Bridge Street Brooklyn, New York

Compound/ Date	System installation date	Sampling Frequency Sample ID NYSDOH Guidance ¹	PCE			TCE		
			Tetrachloroethylene			Trichloroethylene		
			SVE-INLET 30	SVE-MIDSTREAM 30	SVE-OUTLET 30	SVE-INLET 2	SVE-MIDSTREAM 2	SVE-OUTLET 2
6/28/2013	2013	Monthly	29400	1650	124	51	4.3	0.42
7/3/2013	2013	Monthly	39700	1690	22	120	5.9	1.5
7/10/2013	2013	Monthly	29800	80.7	73.9	73.1	0.42	0.42
7/17/2013	2013	Monthly	8750	486	40	37	4.8	0.42
7/24/2013**	2013	Non-routine	12	433	45	0.42	2.2	0.42
7/31/2013	2013	Monthly	6850	163	31	19	0.42	0.42
8/7/2013	2013	Monthly	4710	264	39	17	1.3	0.42
8/14/2013	2013	Monthly	6750	475	39	30	1.7	0.42
8/28/2013	2013	Monthly	5580	364	26	22	1.3	0.42
9/11/2013	2013	Monthly	4650	321	NS	16	1.2	NS
9/25/2013	2013	Monthly	5440	291	NS	21	1.1	NS
10/9/2013	2013	Monthly	3040	232	30	14	0.42	0.42
10/23/2013	2013	Monthly	4950	356	NS	18	1.2	NS
11/6/2013	2013	Monthly	4400	311	NS	17	1.1	NS
11/20/2013	2013	Monthly	5280	174	70.5	17	0.64	0.22
12/4/2013	2013	Monthly	4140	334	45	14	0.97	0.1
12/18/2013	2013	Monthly	5160	516	78.7	20	2.4	0.39
1/2/2014	2013	Monthly	2840	248	18	10	1.6	0.32
1/15/2014	2013	Monthly	7050	1470	62	20	5.3	0.42
1/29/2014	2013	Monthly	8540	263	NS	19	2.2	NS
2/12/2014	2013	Monthly	8000	664	31	23	4.5	0.42
2/27/2014	2013	Monthly	9900	14	83.4	26	1.9	0.81
3/12/2014	2013	Monthly	4240	1170	140	11	6.4	0.81
3/26/2014	2013	Monthly	1630	156	50	7	0.51	0.81
4/23/2014	2013	Monthly	3230	317	48	11	1.4	1
5/20/2014	2013	Monthly	2530	269	39	7	0.91	0.1
6/18/2014	2013	Monthly	1510	41	27	6.4	0.48	0.7
7/23/2014	2013	Monthly	5230	466	22	17	3.6	0.35
8/27/2014	2013	Monthly	3860	579	35	13	4	0.44
9/24/2014	2013	Monthly	2960	529	26	28	7.5	0.75

Table 2 - SVE Sampling Results June 2013 - December 2021
388 Bridge Street Brooklyn, New York

Compound/ Date	System installation date	Sampling Frequency Sample ID NYSDOH Guidance ¹	PCE			TCE		
			Tetrachloroethylene			Trichloroethylene		
			SVE-INLET	SVE-MIDSTREAM	SVE-OUTLET	SVE-INLET	SVE-MIDSTREAM	SVE- OUTLET
10/15/2014	2013	Non-routine	1380	NS	NS	7	NS	NS
10/16/2014	2013	Non-routine	2430	NS	NS	9.1	NS	NS
10/17/2014	2013	Non-routine	14400	NS	NS	28	NS	NS
10/20/2014	2013	Non-routine	1020	NS	NS	4.8	NS	NS
10/21/2014	2013	Non-routine	1250	NS	NS	4.4	NS	NS
10/22/2014	2013	Non-routine	324	NS	NS	1.6	NS	NS
10/29/2014	2013	Monthly	3040	385	18	10	6.4	0.75
11/26/2014	2013	Monthly	3560	524	22	17	9.7	1.1
12/15/2014	2013	Non-routine	315	NS	NS	0.81	NS	NS
12/16/2014	2013	Non-routine	202	NS	NS	1.4	NS	NS
12/17/2014	2013	Non-routine	7730	NS	NS	13	NS	NS
12/18/2014	2013	Non-routine	207	NS	NS	1.6	NS	NS
12/19/2014	2013	Non-routine	142	NS	NS	0.59	NS	NS
12/22/2014	2013	Non-routine	65	NS	NS	0.4	NS	NS
12/30/2014	2013	Monthly	7660	589	1.3	13	8.1	0.16
1/29/2015	2013	Monthly	5450	990	38	13	8.1	0.91
2/26/2015	2013	Monthly	6760	1170	35	14	9.1	1
3/27/2015	2013	Monthly	3490	1990	58	13	17	1.3
4/29/2015	2013	Monthly	5110	834	60	11	9.1	2
5/27/2015	2013	Monthly	4060	800	54	9.7	11	1.6
6/23/2015	2013	Monthly	4300	530	44	9.7	8.6	1.2
7/30/2015	2013	Monthly	5830	1180	54	12	13	1.4
8/26/2015	2013	Monthly	3490	599	8.8	12	12	1.1
9/23/2015	2013	Monthly	6250	1060	28	16	16	1.1
10/28/2015	2013	Monthly	4130	759	36	20	12	1.1

Table 2 - SVE Sampling Results June 2013 - December 2021
388 Bridge Street Brooklyn, New York

Compound/ Date	System installation date	Sampling Frequency Sample ID NYSDOH Guidance ¹	PCE			TCE		
			Tetrachloroethylene			Trichloroethylene		
			SVE-INLET 30	SVE-MIDSTREAM 30	SVE-OUTLET 30	SVE-INLET 2	SVE-MIDSTREAM 2	SVE-OUTLET 2
Installation of new system completed in the 1 Q 2016								
*1/26/2016	2013	Non-routine	0.31	0.31	NS	0.2	0.2	NS
3/30/2016	2016	Non-routine	487	16	NS	8.6	10	NS
3/31/2016	2016	Quarterly	NS	NS	8.1	NS	NS	15
8/5/2016	2016	Quarterly	3410	80	0.81	28	0.52	0.2
9/20/2016	2016	Quarterly	10800	399	5.4	31	4.9	2
12/9/2016	2016	Quarterly	275	334	6.8	2.9	6.4	2.6
3/17/2017	2016	Quarterly	773	13	10	7.5	1.3	4.9
6/13/17	2016	Quarterly	99.7	712	189	2.9	13	12
9/26/2017	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
1/11/19	2016	QC	-	4400	-	-	20	-
5/7/19	2016	Quarterly	976	556	450	4.7	3.6	17
6/7/19	2016	Quarterly	3.4	24	62	0.81 J	4.9	2.8
9/5/19	2016	Quarterly	34	442	4.2	1.8	2.7	ND
12/20/19	2016	Quarterly	1.4	3.6	4.3	ND	ND	ND
3/19/20	2016	Quarterly	1.4	5.3	ND	ND	1	ND
6/8/20	2016	Quarterly	2220	5110	632	6.4	9.1	4.3
7/22/20	2016	QC	5	1.5	0.49	1.5	2.9	1.4
9/30/20	2016	Quarterly	1630	286	ND	7.5	3	ND
12/9/20	2016	Quarterly	1700	150	ND	4.8	2.5	ND
3/30/21	2016	Quarterly	2020	773	1.6	5.1	5.9	ND
6/24/21	2016	Quarterly	2030	1650	4.1	5.9	6.4	2
9/23/21	2016	Quarterly	6920	1930	2620	11	9.1	13
10/12/21	2016	QC	1730	125	17	6.4	7	3.8
12/9/21	2016	Quarterly	1610	111	ND	11	1.8	ND
3/22/22	2016	Quarterly	1460	1060	ND	4.7	5.9	ND
5/24/2022	2016	Quarterly	9800	10000	1000	7.4	9.8	8.3
9/21/2022	2016	Quarterly	41	40	ND	1.7	ND	ND
12/1/2022	2016	Quarterly	4130	256	6.8	8.6	2.3	1.5
3/28/2023	2016	Quarterly	2540	364	2.6	ND	2.4	ND
7/17/2023	2016	Quarterly	47	2600	2.2	1.5	15	ND
9/28/2023	2016	Quarterly	2880	1020	3.5	8.1	5.3	4.6
12/4/2023	2016	Quarterly	1570	1070	20	3.4	5.2	2.1

Notes:

All concentrations measured in ug/m3

Exceedences to NYSDOH Guidance values highlighted in yellow

* A new and downsized system was installed in 2016 with prior approval of NYSDEC

** SVE Inlet data from 7/24/13 appears to be invalid based on results. It is suspected to have been a bad summa cannister. Data collected at this event is not to be used in future analyses. Sampling event was marked as Non-Routine

¹ : NYSDOH Guidance for Evaluating Soil Vapor Intrusion. Revised PCE and TCE values as per 2013 & 2014 DOH Guidance/ FactSheet

SVE-INLET: Sample collected at the port prior to the carbon treatment

SVE-MIDSTREAM: Sample collected after 1st carbon treatment but before 2nd carbon treatment

SVE-OUTLET: Sample collected after 2nd carbon treatment

Criteria for Termination of SVE System: If the contaminant concentrations in soil vapor become asymptotic to a lower level over an extended period of time, FLS will conclude the SVE system has reached the limit of its effectiveness and request discontinuing operation. The SVE system will remain in place and operational until permission to discontinue use is granted in writing by the NYSDEC.

Table 6
388 Bridge Street
Responsible Parties

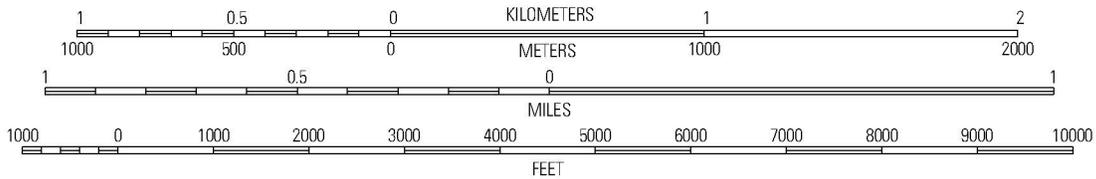
NYSDEC Site #	Development Work	Responsible Party
BCP Site C224134		
	On-Site Building (New Development Building)	384 Bridge Street, LLC
	Off-Site Buiding (80 Willoughby Street)	384 Bridge Street, LLC



Figures



SCALE 1:24 000



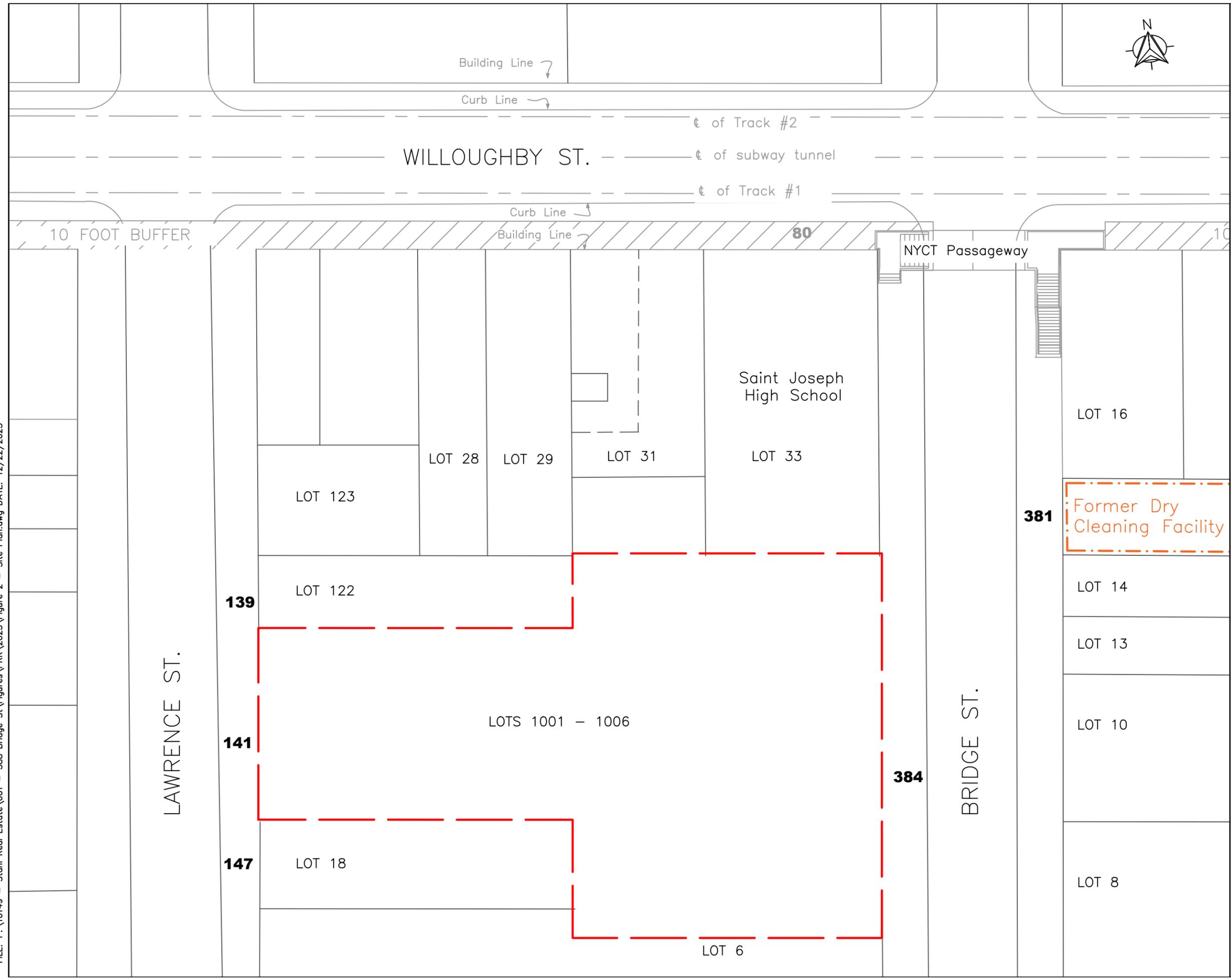
CONTOUR INTERVAL 10 FEET

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

FIGURE 1: SITE LOCATION MAP



SITE: 388 Bridge Street
 Brooklyn, New York



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

384 Bridge Street
Brooklyn, NY
BCP Site #C224134

Figure 2

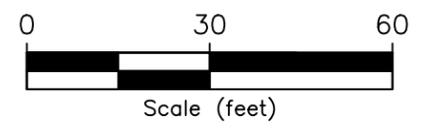
Site Plan

January 2017

Project Number
10149-001

LEGEND

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



Saint Joseph High School



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

388 Bridge Street
Brooklyn, NY
BCP Site # C224134

Figure 3

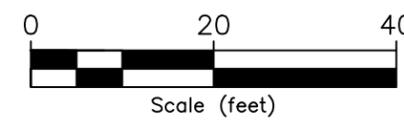
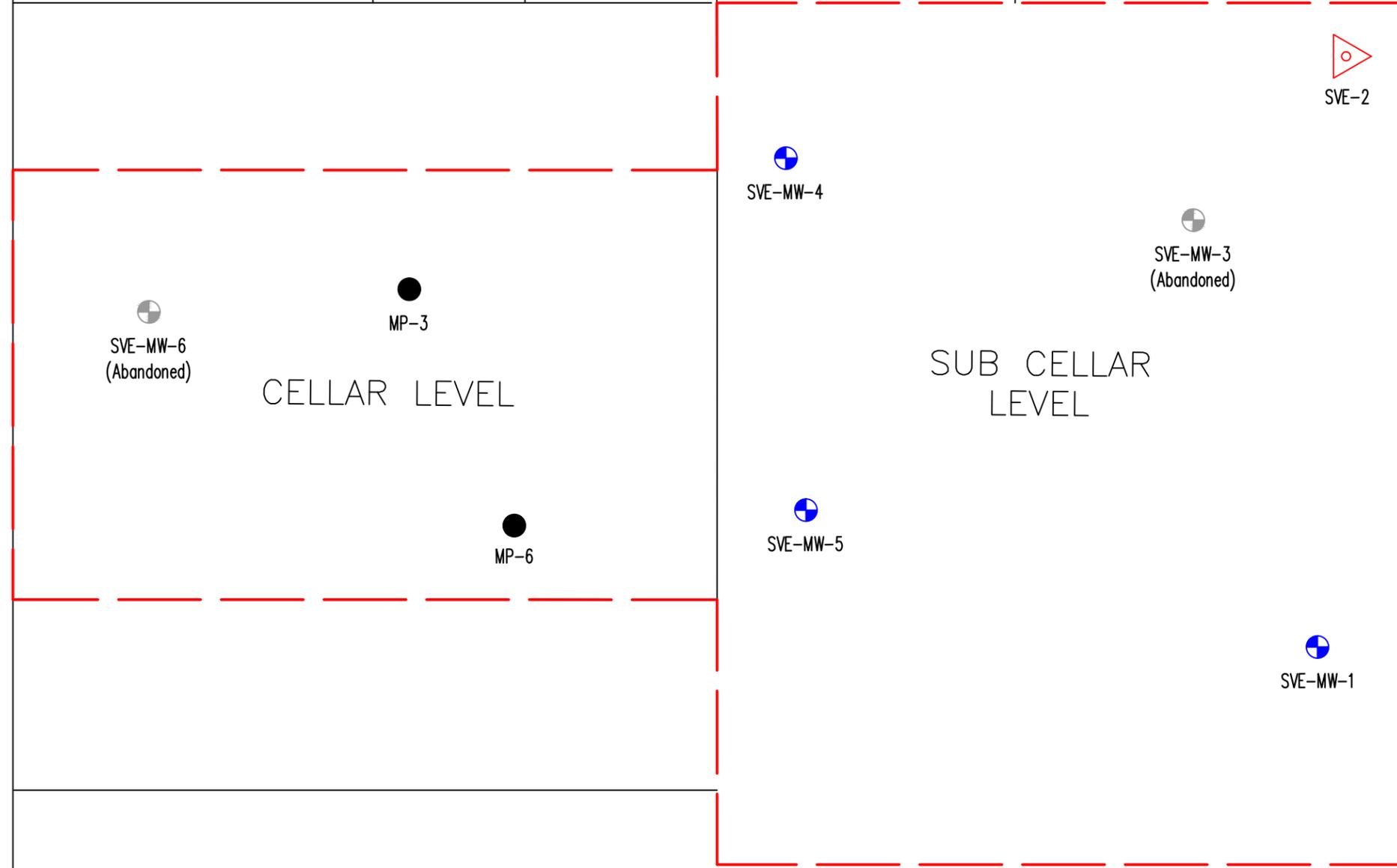
SVE and Groundwater Monitoring Well Locations

January 2019

Project Number
10149-001

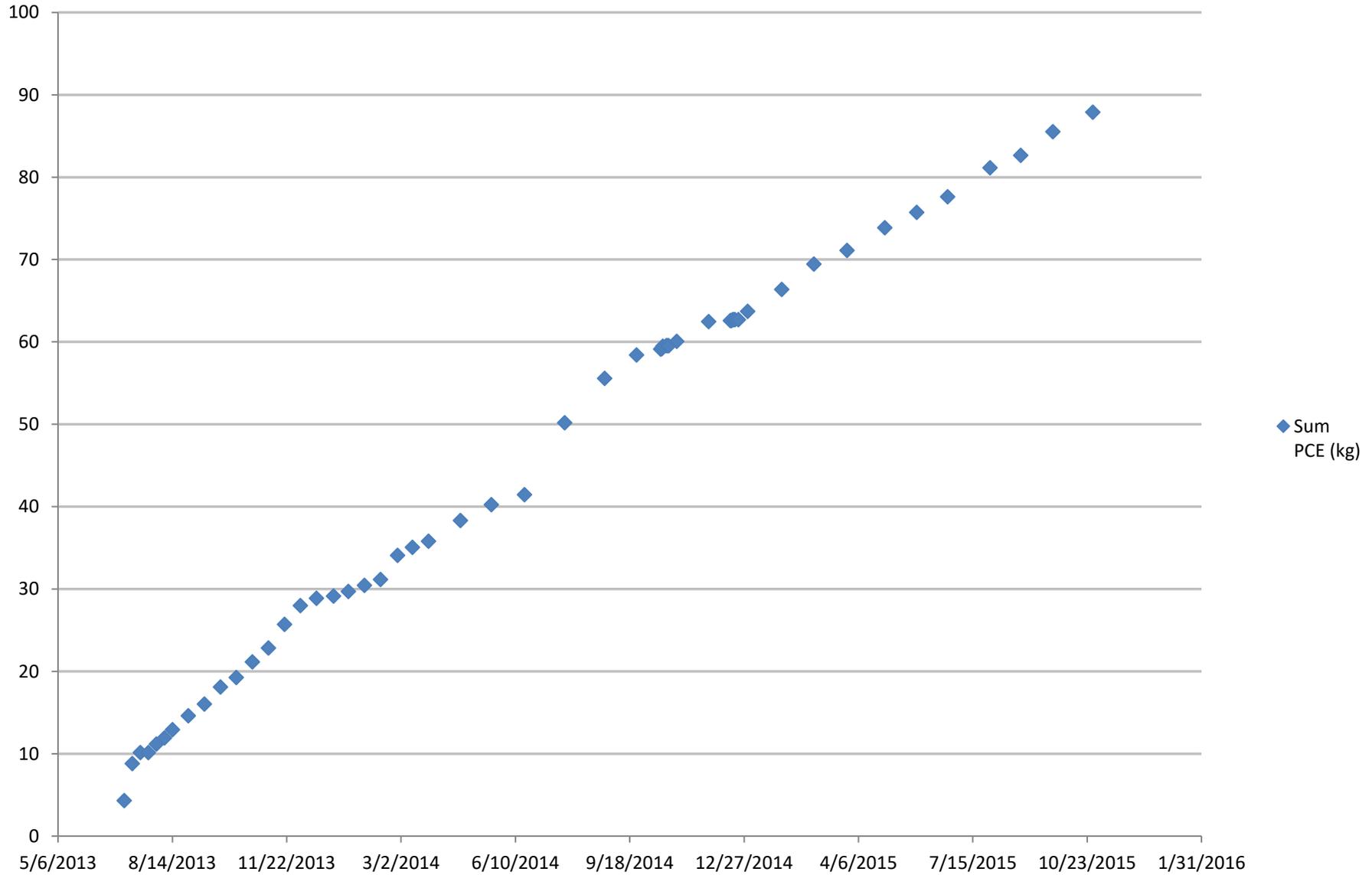
LEGEND

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

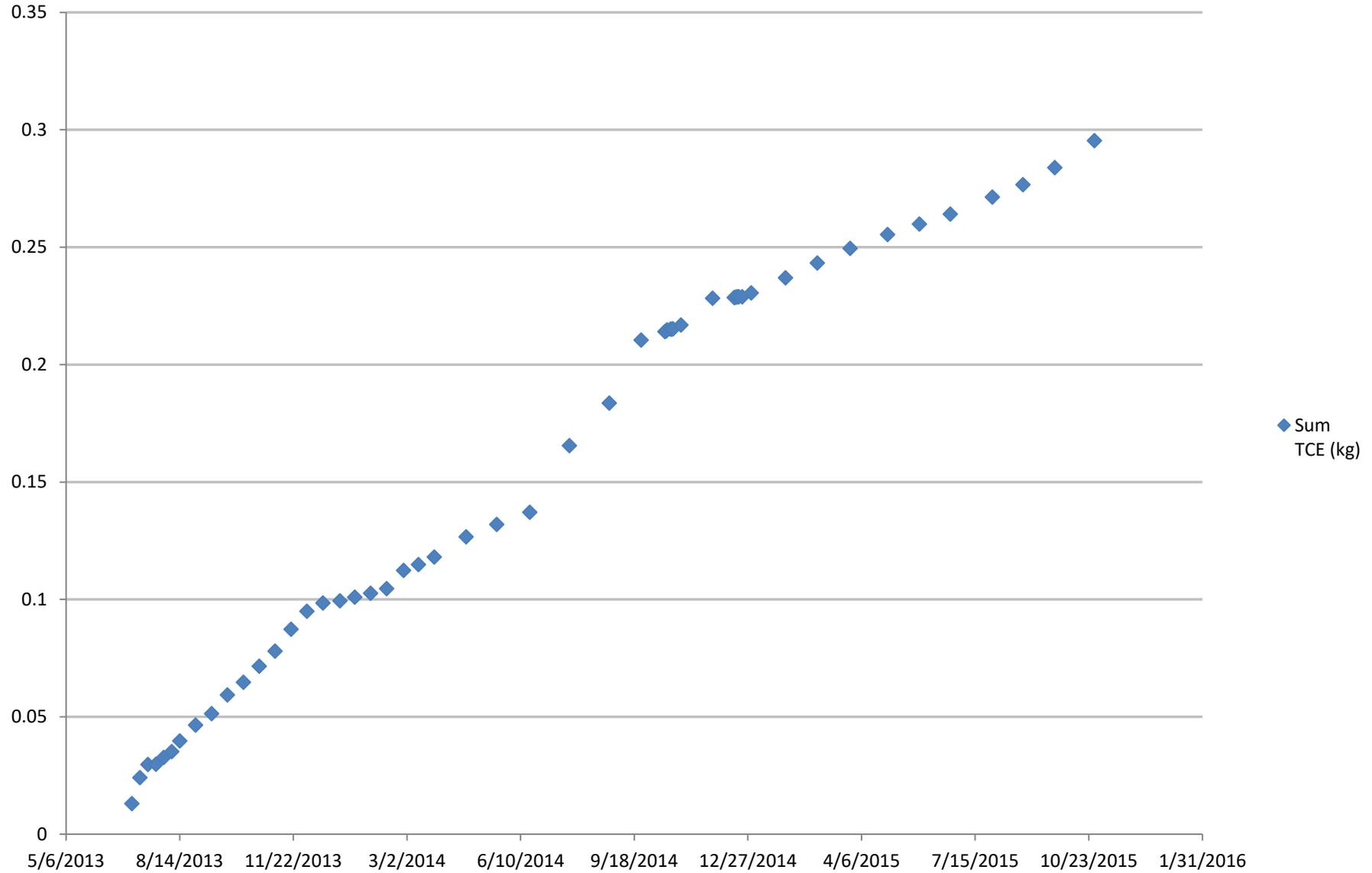


Bridge St.

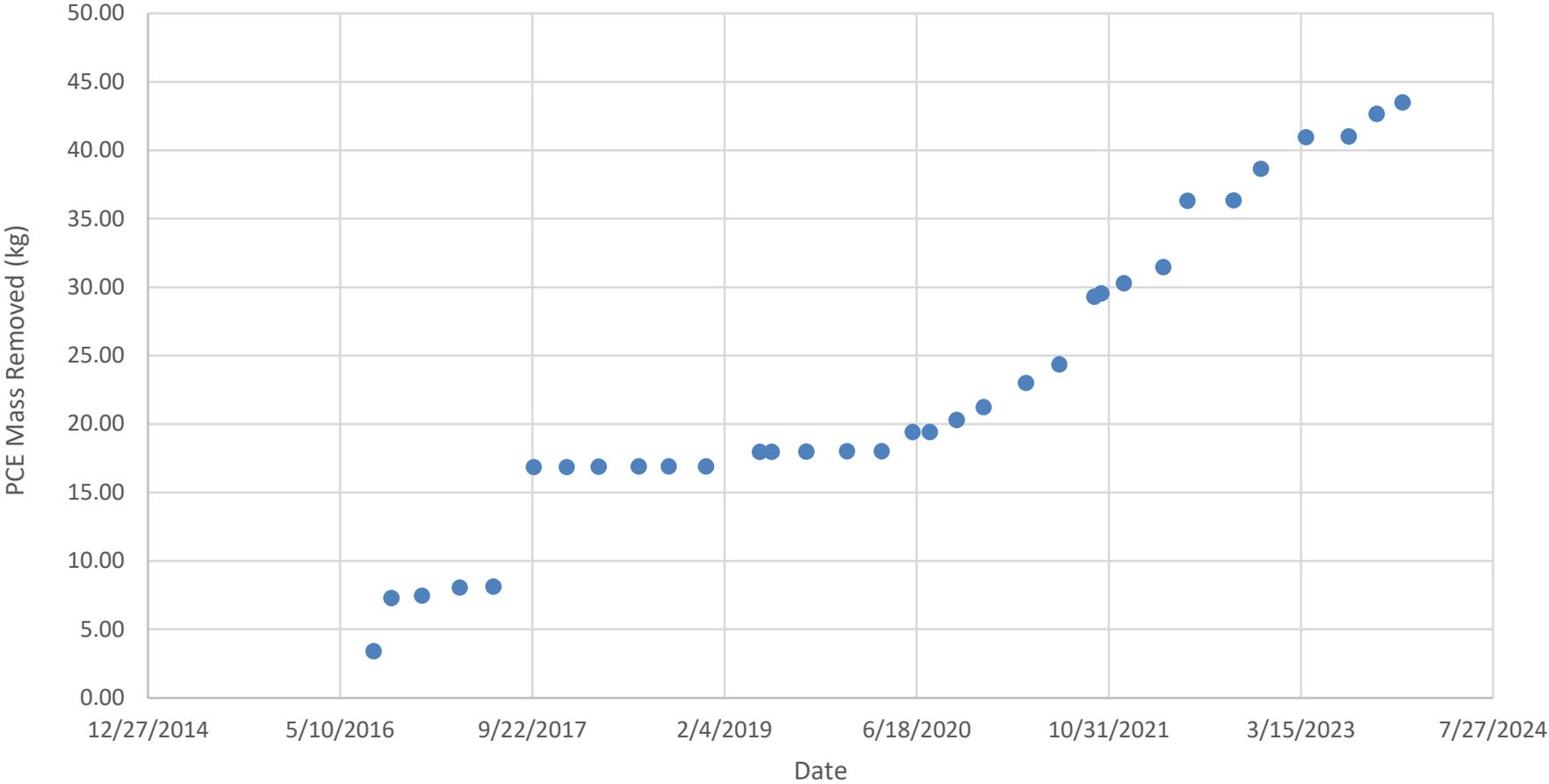
**Figure 4. 2013 SVE System
Contaminant Mass Removal - PCE**



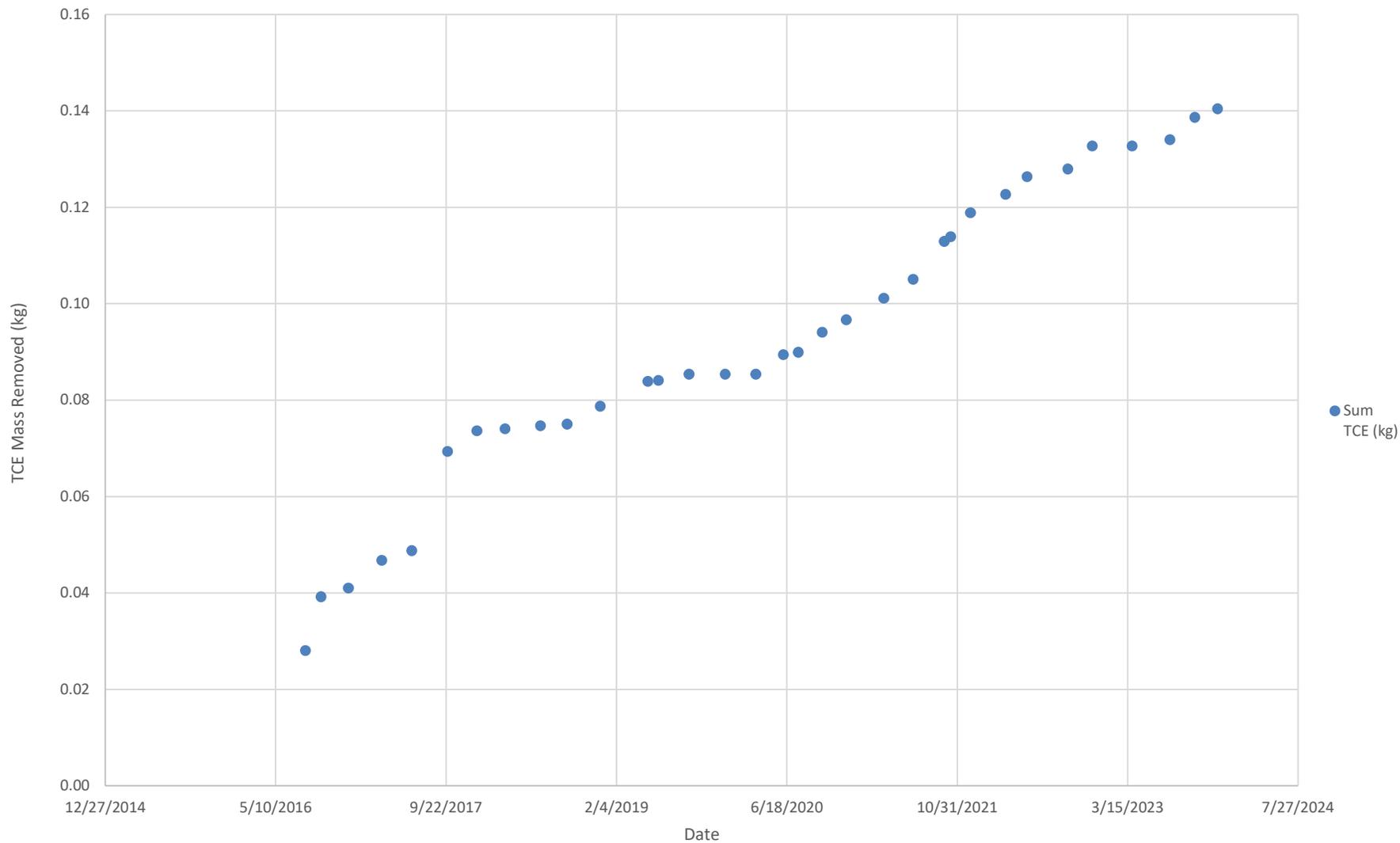
**Figure 5. 2013 SVE System
Contaminant Mass Removal - TCE**



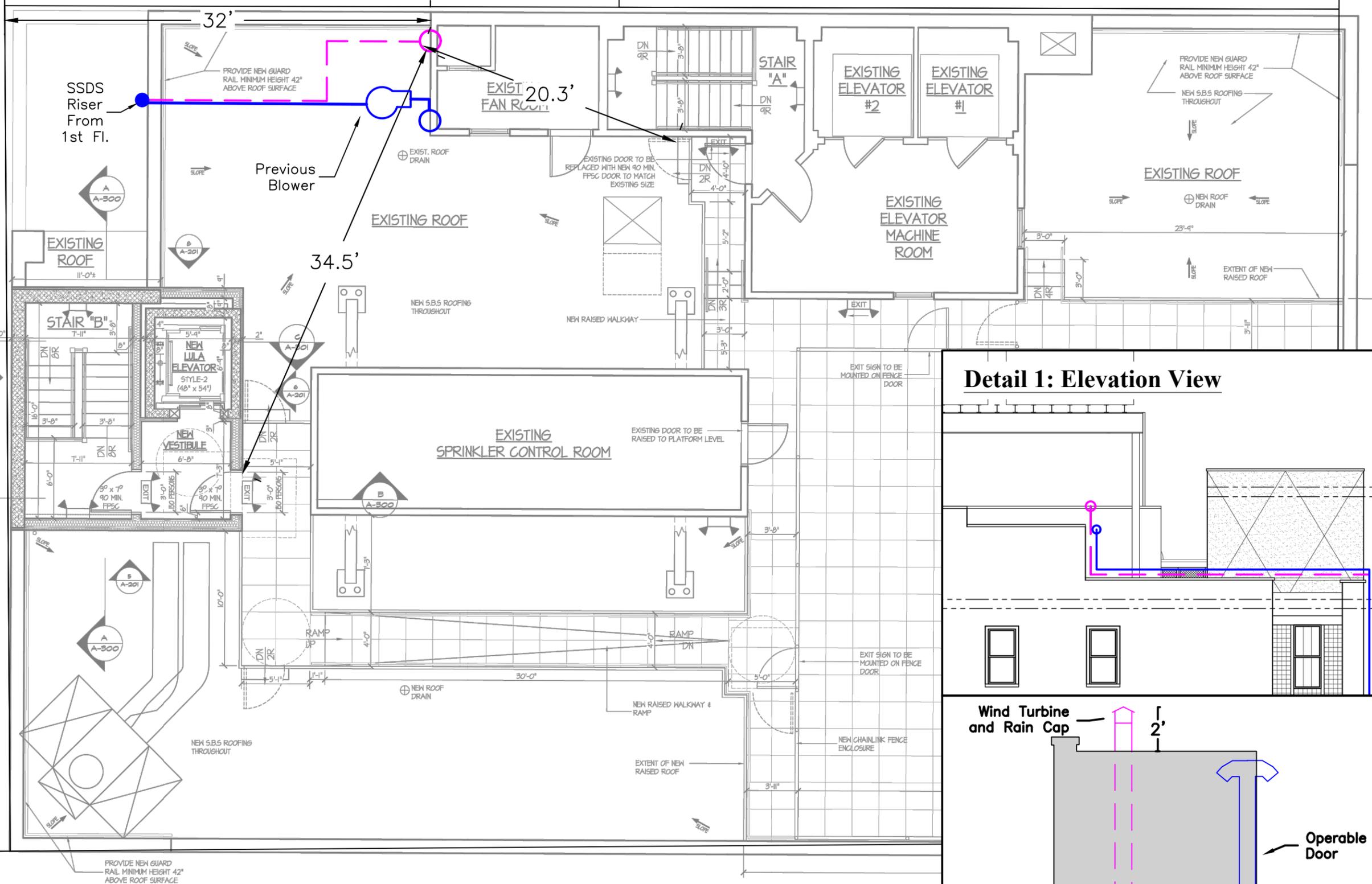
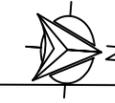
**Figure 6. 2016 SVE System
Contaminant Mass Removal - PCE**



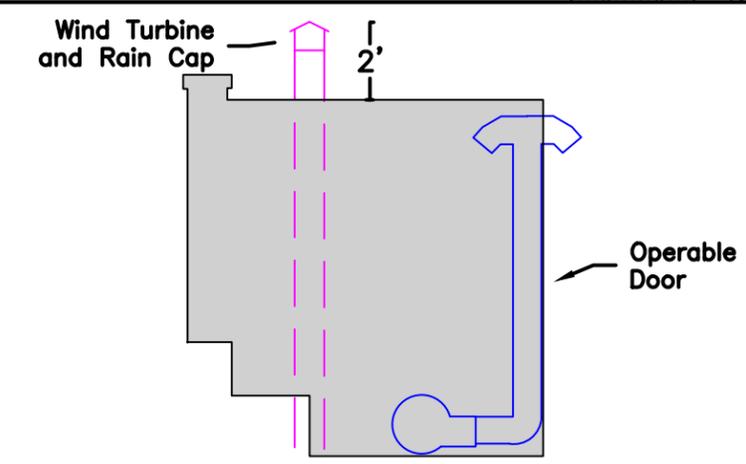
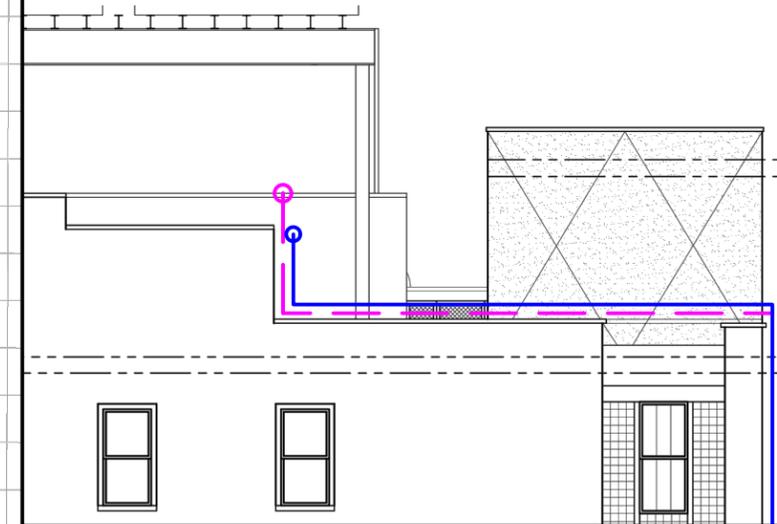
**Figure 7. 2016 SVE System
Contaminant Mass Removal - TCE**



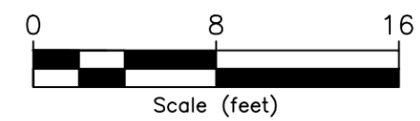
388 Bridge St Building



Detail 1: Elevation View



Detail 2: Stack Detail



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

80 Willoughby Street
Brooklyn, NY

Figure 8

SSDS Roof Layout and Alterations

January 2024

Project Number
10149-002

LEGEND

- Previous SSDS
- - - Current SSDS
- Previous Vent Stack
- Current Vent Stack
- ⊕ Previous Blower

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;

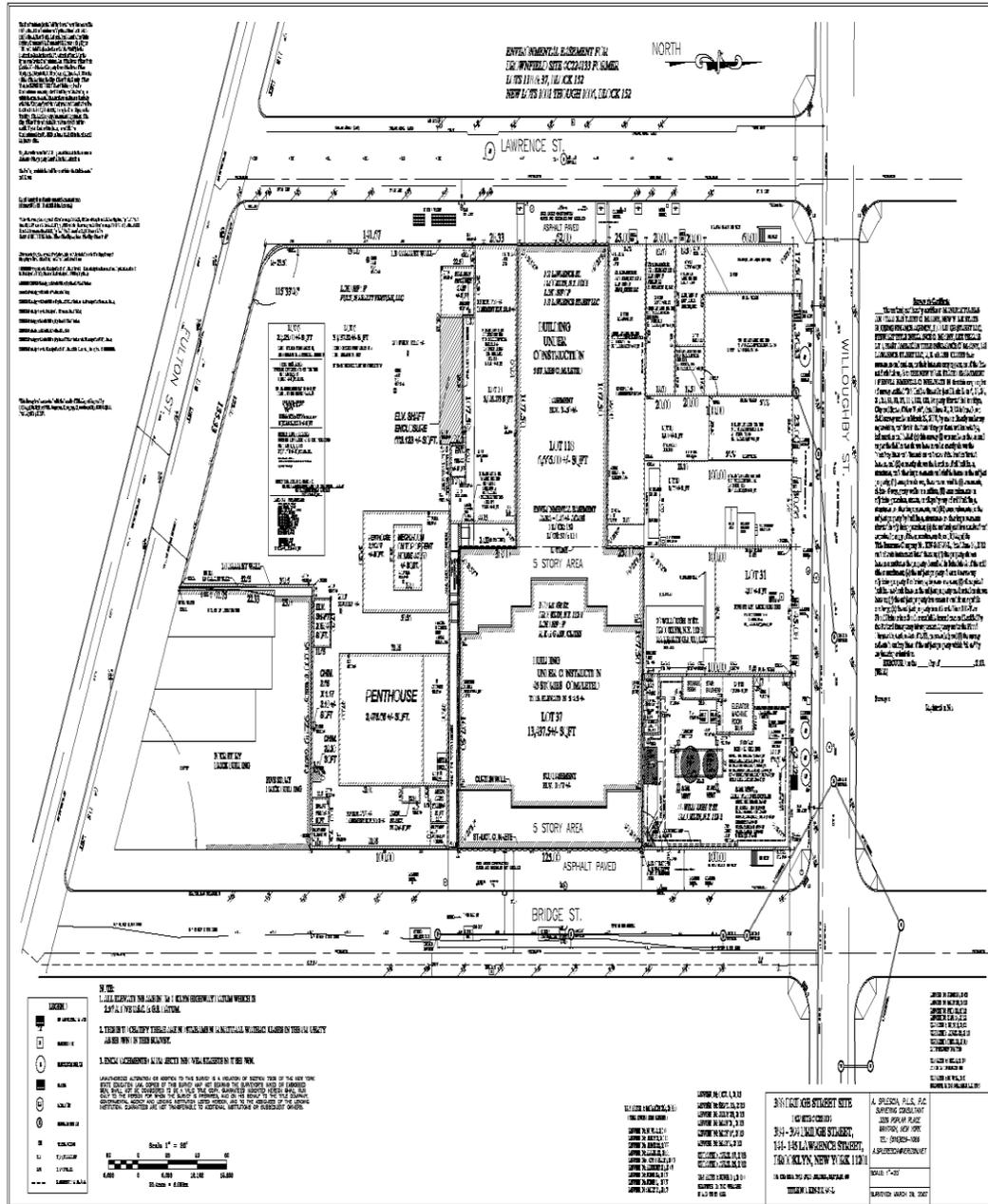
THENCE Easterly parallel with Willoughby Street 107 feet 6 inches;

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.	C224134		
Site Name 388 Bridge Street			
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, 2023 to January 03, 2024			
		YES	NO
1.	Is the information above correct?	<input 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 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 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 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 type="checkbox"/>
		Box 2	
		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Residential, Restricted-Residential, Commercial, and Industrial	<input type="checkbox"/>	<input type="checkbox"/>
7.	Are all ICs in place and functioning as designed?	<input type="checkbox"/>	<input type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address these issues.			
_____ Signature of 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?

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)

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

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
1-152-1001	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		
1-152-1002	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		
1-152-1003	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		
1-152-1004	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		
1-152-1005	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

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 Engineering Control 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. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The 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 _____ at _____,
print name print business address

am certifying as _____ (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

Date

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 _____ at _____,
print name print business address

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

Arnold F. Fleming



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

Stamp (Required for PE)

Date

Appendix C

Quarterly Inspection Sheets

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

Date 3/28/2023 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 45

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	-14.06	
		Air speed	fpm		
		Flow	cfm		
		Temp.	°F		
Post- Moist. Separator / Pre- Blower	VI 101	Vacuum	inwc	-15	
	VI 102	Pressure	inwc	-32	
Pre- Blower / Before Heat Exchanger	F-102	Dilution Valve	---	75% closed	
	PI 101	Pressure	inwc	18	
After heat exchanger / Pre- Carbon Treatment	TI 101	Temp.	°F	100	
	PI 103	Pressure	inwc	6	
Between Carbon Units	TI 102	Temp.	°F	83	
	PI 104	Pressure	inwc	4.0	
Post- Carbon Treatment	PI 105	Pressure	inwc	3.0	

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	-3.745	Sub-cellar garage	
SVE Well #3	---	Sub-cellar garage	
SVE Well #4	---	Sub-cellar garage	
SVE Well #5	---	Sub-cellar garage	
SVE Well #6	---	Cellar workshop	
SSDS MP #1	---	Not installed	Abandoned
SSDS MP #2	---	Not installed	
SSDS MP #3	0.32	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	-0.021	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	inaccessible (painted over)
R2	---	Boiler Room	inaccessible (painted over)
R3	-0.003	Boiler Room	
R4	-0.035	Boiler Room	
R5	-0.004	Workshop	inaccessible (painted over)
R6	---	Back Storage Room	
R7	-0.006	Storage Room hallway	port blocked with debris
R8	---	Storage Room entrance	inaccessible
R9	---	Woodshop classrom	inaccessible
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	inaccessible
R13	-0.011	Kitchen storage	

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial Vacuum	Final Vacuum
SVE INLET	FC1097	A2218	9:25	10:48	29.5	5.0
SVE MIDSTREAM	FC1216	A2291	9:30	10:39	30.0	5.0
SVE OUTLET	FC566	A2339	9:35	11:26	17.0	5.0

Notes

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

Date 7/17/2023 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	-15	
		Air speed	fpm		
		Flow	cfm		
		Temp.	°F		
Post- Moist. Separator / Pre- Blower	VI 101	Vacuum	inwc	-14	
	VI 102	Pressure	inwc	-30	
Pre- Blower / Before Heat Exchanger	F-102	Dilution Valve	---	75% closed	
	PI 101	Pressure	inwc	18	
After heat exchanger / Pre- Carbon Treatment	TI 101	Temp.	°F	124	
	PI 103	Pressure	inwc	6	
Between Carbon Units	TI 102	Temp.	°F	114	
	PI 104	Pressure	inwc	4.0	
Post- Carbon Treatment	PI 105	Pressure	inwc	6.0	

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	No Data
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	0.32	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	-0.017	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	inaccessible (painted over)
R2	---	Boiler Room	inaccessible (painted over)
R3	---	Boiler Room	No Data
R4	---	Boiler Room	No Data
R5	---	Workshop	inaccessible (painted over)
R6	---	Back Storage Room	No Data
R7	---	Storage Room hallway	port blocked with debris
R8	---	Storage Room entrance	inaccessible
R9	---	Woodshop classrom	inaccessible
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	inaccessible
R13	---	Kitchen storage	No Data

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial Vacuum	Final Vacuum
SVE INLET	FC1202	A1880	9:53	11:37	29.5	4.0
SVE MIDSTREAM	FC1121	A1463	9:55	11:57	30.0	6.5
SVE OUTLET	FC1294	A1446	9:59	11:59	30.0	5.5

Notes

Access to Former SJHS not permitted at the time of the inspection.

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

Date 9/28/2023 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 59

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	-15	
		Air speed	fpm		
		Flow	cfm		
		Temp.	°F		
Post- Moist. Separator / Pre- Blower	VI 101	Vacuum	inwc	-15	
	VI 102	Pressure	inwc	33	
Pre- Blower / Before Heat Exchanger	F-102	Dilution Valve	---	75% closed	
	PI 101	Pressure	inwc	18	
After heat exchanger / Pre- Carbon Treatment	TI 101	Temp.	°F	110	
	PI 103	Pressure	inwc	6	
Between Carbon Units	TI 102	Temp.	°F	96	
	PI 104	Pressure	inwc	4.0	
Post- Carbon Treatment	PI 105	Pressure	inwc	3.0	

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	No Data
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	0.31	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	-0.043	Cellar garage	

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	inaccessible (painted over)
R2	---	Boiler Room	inaccessible (painted over)
R3	---	Boiler Room	No Data
R4	---	Boiler Room	No Data
R5	---	Workshop	inaccessible (painted over)
R6	---	Back Storage Room	No Data
R7	---	Storage Room hallway	port blocked with debris
R8	---	Storage Room entrance	inaccessible
R9	---	Woodshop classrom	inaccessible
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	inaccessible
R13	---	Kitchen storage	No Data

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial Vacuum	Final Vacuum
SVE INLET	FC983	A2261	10:05	11:31	29.0	4.0
SVE MIDSTREAM	FC9805	A1368	10:10	12:05	30.0	5.0
SVE OUTLET	FC1064	A2304	10:15	11:56	29.5	4.5

Notes

Access to Former SJHS not permitted at the time of the inspection.

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

Date 12/4/2023 Op. Freq. (Hz) 50 Amb. Air Temp. (°F) 49

Process Area	Indicator ID	Parameter	Unit	Reading/ Status	Time
System Inlet	SP 100	Pressure (man.)	inwc	-15	
		Air speed	fpm		
		Flow	cfm		
		Temp.	°F		
Post- Moist. Separator / Pre- Blower	VI 101	Vacuum	inwc	16	
	VI 102	Pressure	inwc	32	
Pre- Blower / Before Heat Exchanger	F-102	Dilution Valve	---	75% closed	
	PI 101	Pressure	inwc	18	
After heat exchanger / Pre- Carbon Treatment	TI 101	Temp.	°F	102	
	PI 103	Pressure	inwc	6	
Between Carbon Units	TI 102	Temp.	°F	90	
	PI 104	Pressure	inwc	4.0	
Post- Carbon Treatment	PI 105	Pressure	inwc	4.0	

Monitoring Point	Pressure (in. wc.)	Location	Comments
SVE Well #1	---	Sub-cellar garage	Converted to monitoring well
SVE Well #2	---	Sub-cellar garage	No Data
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	0.31	Cellar hallway	
SSDS MP #4	---	Not installed	
SSDS MP #5	---	Not installed	
SSDS MP #6	---	Cellar garage	inaccessible

Monitoring Point	Pressure (in. wc.)	Port Location	Comments
R1	---	Behind Boiler Room	inaccessible (painted over)
R2	---	Boiler Room	inaccessible (painted over)
R3	---	Boiler Room	No Data
R4	---	Boiler Room	No Data
R5	---	Workshop	inaccessible (painted over)
R6	---	Back Storage Room	No Data
R7	---	Storage Room hallway	port blocked with debris
R8	---	Storage Room entrance	inaccessible
R9	---	Woodshop classrom	inaccessible
R10	---	East Storage room	inaccessible
R11	---	East Storage room	inaccessible
R12	---	Stairwell	inaccessible
R13	---	Kitchen storage	No Data

Sample ID	Flow Controller No.	Canister No.	Initial Time	Final Time	Initial Vacuum	Final Vacuum
SVE inlet	FC1230	A2398	12:05	13:09	28.0	5.0
SVE midstream	FC1052	A2194	12:06	13:59	29.0	4.0
SVE outlet	FC697	A2307	12:06	14:03	28.5	5.0

Notes

Inspection of Former SJHS not permitted at this time. Tentatively scheduled for 12/28/23.

Appendix D

Site Photographs

Appendix D - Photograph Log
388 Bridge Street



Photo 1: Cellar slab



Photo 2: Cellar storage area 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 manifold



Photo 6: SVE system

Appendix D - Photograph Log
388 Bridge Street



Photo 7: SVE exhaust



Photo 8: 80 Willoughby modified SSDS (active to passive)

Appendix D - Photograph Log
388 Bridge Street

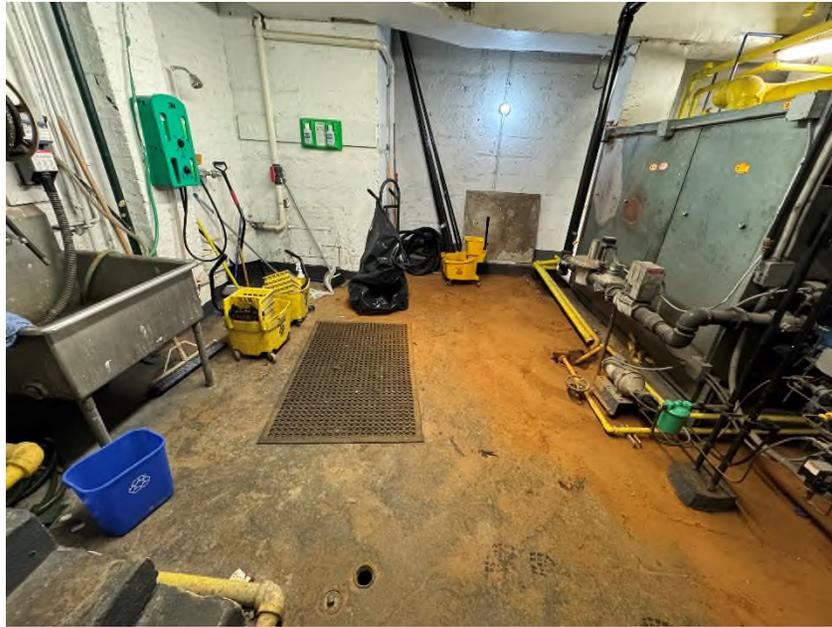


Photo 9: 80 Willoughby basement slab boiler room



Photo 10: 80 Willoughby basement slab in cafeteria area

Appendix D - Photograph Log
388 Bridge Street



Photo 11: 80 Willoughby basement slab in kitchen area.



Photo 12: 80 Willoughby basement slab in work shop area

Appendix E

NYSDEC Approvals

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B

625 Broadway, 12th Floor, Albany, NY 12233-7016

P: (518) 402-9767 | F: (518) 402-9773

www.dec.ny.gov

October 21, 2021

Matthew Carroll, PE
Tenen Environmental
121 West 27th Street, Suite 702
New York, NY 10001

80 Willoughby Street, Brooklyn
FKA St. Joseph High School
Adjacent to 388 Bridge Street (C224134)
SSDS assessment

Dear Mr. Carroll:

Based on the data presented in the April 16, 2021 Soil Vapor Investigation letter report, an assessment of the need for continued operation of the sub-slab depressurization system (SSDS), operation of the SSDS may be discontinued.

Thank You,

Michael MacCabe

Michael MacCabe, P.E.
Senior Environmental Engineer