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Soil Vapor Extraction System Pilot Study Plan

For:
North America/Pulse Plastics Site
1051 Whitlock Avenue
Bronx, NY
BCP No. C203144

Prepared for:

Whitlock Point LLC and
Whitlock Point II LLC
December 2025/Revised September 2026

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CERTIFCATION STATEMENT

I, Fuad Dahan, certify that I am currently a NYS registered professional engineer and that this Report, Soil Vapor Extraction System Pilot Study Plan, was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and DER Green Remediation (DER-31).



_____P.E.

9/22/2026
_____Date

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LIST OF ACRONYMS

Acronym	Definition
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CVOC	Chlorinated Volatile Organic Compound
GAC	Granular Activated Carbon
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCE	Tetrachloroethene
PHC	Petroleum Hydrocarbon
RAWP	Remedial Action Work Plan
ROI	Radius of Influence
SESI	SESI Consulting Engineers, DPC
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
TCE	Trichloroethene
USCOs	Unrestricted Soil Cleanup Objectives
VFD	Variable Frequency Drive

1.0 OBJECTIVES OF PILOT TESTS

The objectives of the pilot tests are to:

- Determine performance parameters (flow rate, vacuum, and ROI) under varying blower operating frequencies.
- Determine the blower operating frequencies, and corresponding performance parameters, required to generate a continuous vacuum field that can adequately cover the entire length of the western boundary, excluding the proposed building footprint.
- Document performance parameters at each wellhead.

2.0 INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) entered into a BCP Agreement with Whitlock Point LLC (the "Volunteer"), for the 0.626-acre property known as North America/Pulse Plastics Site (BCP# C203144) ("Site"), which at that time was located on 1156 East 165th Street, Bronx, New York (Block 2756, Lot 90) and a portion of 1125 Whitlock Avenue (p/o Block 2756 lot 85). On June 22, 2023, a Brownfield Cleanup Agreement (BCA) Amendment was executed by the NYSDEC to reflect the following changes: On November 1, 2022, Lot 85 and Lot 90 merged into one (1) lot. On the same day, the merged lot was then apportioned into a new Lot 85 and new Lot 90. Therefore, this BCP site now corresponds with the tax map metes and bounds for a newly apportioned Bronx Tax Block 2756, Lot 90, with an address of 1051 Whitlock Avenue. On June 15, 2023, HP Whitlock II Housing Development Fund Company, Inc. became the nominal fee title owner of the BCP Site and Whitlock Point II LLC became the beneficial owner of the Site. Therefore, Whitlock Point II LLC was added to the BCA as an additional Volunteer with Whitlock Point LLC remaining a Volunteer.

Previous soil vapor testing at the Site during remedial investigation phase detected the presence of petroleum hydrocarbon (PHC) volatile organic compounds (VOCs - benzene, ethylbenzene, xylenes, heptane, hexane, and toluene) and chlorinated VOCs (CVOCs - tetrachloroethene [PCE], trichloroethene [TCE] and methylene chloride). The Volunteer elected to install a soil vapor extraction (SVE) system along the western boundary of the Site as a preventive measure to address the potential off-Site migration of VOCs.

A chronology of events regarding the SVES is provided below:

- SVE piping was initially installed in August 2025 without prior pilot testing;
- An RDWP was originally submitted for NYSDEC review and approval on August 29, 2025;
- The Applicant team and NYSDEC coordinated on an acceptable submittal from August to December 2025, including a call held on October 15, 2025 between the Applicant team and NYSDEC;
- The Applicant team submitted a revised RDWP on December 22, 2025;
- NYSDEC issued a conditional acceptance letter on December 23, 2026, however, the work plan was not revised to meet the requirements of the conditional acceptance letter and was, therefore, not approved by the NYSDEC;

- The Remedial Engineer installed fifteen vacuum monitoring points outside of a DEC-approved work plan in December 2025;
- An SVE Design Document was submitted in January 2026 and was summarily rejected by the NYSDEC because an acceptable SVE Pilot TEST RDWP had not been submitted to the NYSDEC;
- On January 8, 2026, NYSDEC issued an email requiring all remedial work to stop;
- NYSDEC sent a Notice of Termination and Opportunity to Cure (OTC) letter to the Applicant team on January 16, 2026, which required the submission of an acceptable SVE Pilot Test RDWP submittal;
- The Applicant team submitted a revised SVE Pilot Test RDWP submittal on January 23, 2026, however, NYSDEC sent a letter on March 31, 2026 stating the revised SVE Pilot Test RDWP submittal did not meet the requirements of the January 16, 2026 OTC letter and the submittal was not acceptable;
- The Applicant team filed for dispute resolution on April 3, 2026, and a dispute resolution meeting was held on April 24, 2026;
- A revised SVE Pilot Test RDWP was submitted on May 6, 2026, however it did not comply with the sequence of submittals and implementation discussed during the April 24, 2026 dispute resolution meeting;
- NYSDEC sent a Response to May 2, 2026 Dispute Resolution Letter outlining the submittals required for regulatory compliance, as discussed during the April 24, 2026 dispute resolution meeting, including a sequence of submittals and implementation, which indicated that this revised SVE Pilot Test RDWP could not be submitted until a Corrective Measures Work Plan (“CMWP”) and then a revised Site Management Plan (“SMP”) were submitted and approved for the adjacent Sonero Metro City Auto Site C203148 (“Sonero Site”);
- The Sonero Site Revised SMP was conditionally approved on July 15, 2026 and final approved on July 14, 2026, and comments were received on the CWMP on July 28, 2026.
- The Sonero Site CWMP was revised and approved by DEC on August 11, 2026 enabling this SVE Pilot Test RDWP to be submitted.

This document provides a detailed plan for implementation of the SVE pilot study and was prepared in accordance with the December 2024 Decision Document, the December 2024 RAWP, the January 16, 2026 OTC letter, the April 24, 2026 dispute resolution meeting, and the May 12, 2026 Response to May 2, 2026 Dispute Resolution Lette, and in accordance with Title 6 New York Codes, Rules, and Regulations Part 375, the NYSDEC Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10, May 3, 2010), and all other applicable regulatory and procedural requirements.

The horizontal SVE wells will be installed within a coarse crushed stone fill material. In this revised design, the horizontal SVE wells will be repositioned closer to the western boundary compared to the previously submitted layouts. The horizontal SVE wells will be located approximately 5 feet from the western property boundary (approximately 3 feet from the property fence line). This placement minimizes the setback from the boundary while maintaining sufficient

space for SVE installation and for soil vapor points (SVPs) between the fence line and the horizontal SVE wells. A 20-mil HDPE liner will be installed over the crushed stone fill. The construction of the Site building has been completed above the grade. The liner will extend to the western Site boundary (against the fencing) and abut the existing concrete cellar walls to the north and east. The edges and any penetrations will be sealed (see later sections for details). This configuration represents the final Site conditions and is intended to eliminate the potential for short-circuiting. The proposed extent of the liner is illustrated in **Figure V-1**.

Approximately 200 cubic yards of on-Site soil from cells B3, C2, C3, and C4 will be reused above the liner to achieve final grade. The soil was excavated from approximately 20 to 25 feet bgs, screened to remove weathered rock, and consists primarily of brown silt and clay with sand and trace gravel. Because Site remediation achieved USCOs or bedrock, thissoil may be reused without restriction under DER-10 Table 5.4(e)4. Compliance with USCOs will be documented through discrete and composite sampling in accordance with DER-10 Table 5.4(e)10, which is detailed in **Section 4.8**.

Upon completion of the hardscape, another pilot test will be proposed for NYSDEC approval. The future site management plan will detail perimeter SVE contingencies/modifications for future site conditions (i.e., impervious cover), including an approved SVE modification design document appended to the SMP, per NYSDEC's November 25, 2025 comment letter.

3.0 SUMMARY OF SVE CONCEPTUAL DESIGN

The conceptual design of the proposed SVE system is based on the evaluation of key parameters such as intrinsic permeability, soil type, depth to groundwater, moisture content and vapor pressure of VOCs were examined. Details were provided in the Appendix G – SVE System Conceptual Remedial Design Document of the December 2024 RAWP (2024 SVES Conceptual Design).

The proposed SVE system, which is modified from the 2024 SVES Conceptual Design, will consist of a series of three (3) approximately 40-ft horizontal 4-inch diameter slotted PVC pipes (0.010 in slot) connected via a 4" schedule 40 PVC trunk line to an SVE blower **(Figure V-1)**. The slotted pipes will be placed at approximately 4 feet below the final grade in the coarse gravel fill material that is highly permeable. Groundwater in this area of the Site was observed to be in bedrock only and was not encountered during remedial excavation. Based on the absence of overburden groundwater, water is not expected to impede the SVE system. The ground surface above the SVE system will be covered with hardscape surfaces. For the purposes of system design, three critical factors were identified: vapor extraction flowrate, wellhead vacuum and radius of influence (ROI).

Vapor extraction flow, the volumetric flowrate of soil gas that may be extracted from each horizontal extraction well, will be high in material with average intrinsic permeability of 10^{-5} cm^2 for gravel (Darcy value of 1013). Wellhead vacuum pressure is the required pressure at an extraction well necessary to produce the design vapor extraction flowrate. The design flowrate

and vacuum will be established through this pilot study based on the blower output settings required to generate a continuous vacuum field (minimum of 0.02 inch of water column [in. WC]) that covers the entire length of the western boundary, excluding the portion that overlaps with the on-Site building. Along this section of the western boundary, the proposed building will be constructed as a slab-on-rock foundation extending to the property line. No soil remains in this area. The lines extending from the SVE system main trunk line manifold to the SVE wellheads are 4" PVC. Total linear feet of the system will be approximately 120 ft. A pilot test will be conducted to determine the wellhead vacuum pressures for various flowrates, as described below. The last critical design factor is the ROI, the radial effect the perforated pipe may have. The ROI shall be wide enough to achieve a minimum vacuum of 0.02" WC sustained at the western property boundary.

The horizontal SVE wells will be installed within a coarse crushed stone fill material. The existing vapor monitoring points (VMPs), installed outside of a DEC-approved work plan will be removed. To evaluate the radius of influence (ROI) and collect soil vapor samples, four (4) SVPs will be installed between the horizontal SVE wells and the property fence line, as close to the fence line as practicable. Less vacuum influence is expected at the ends of the horizontal slotted pipes and at points furthest from the blower; therefore, the SVPs will be installed at the ends of horizontal SVE piping for conservative vacuum readings. VMP decommissioning and new SVP installation details are provided in **Section 4.1**.

The construction of the Site building has been completed above the grade. The 20-mil HDPE liner will extend to the western Site boundary (against the fencing) and abut the existing concrete cellar walls to the north and east. The edges of the liner will fold up against the concrete walls and be sealed with tape. (See vapor barrier termination details in **Figure D-1**.) All penetrations - including SVPs and SVE riser pipes - will be sealed using a membrane patch wrapped around each penetration, along with liquid boot. (See vapor barrier penetration details in **Figure D-1**). This configuration will eliminate any potential of short-circuit effect. The addition of the liner and fill on top to cover the SVE area is to create a continuous vacuum field along the western property by sealing the open areas around the SVE.

Soil is proposed to be reused on site and placed over the liner to achieve the proposed final grade. Note that soil excavation at the Site has been completed, with excavation performed to depths meeting USCOs or to bedrock. The proposed soil reuse and sampling details are discussed in **Section 4.8**.

To provide the necessary vacuum for the system, a regenerative blower was selected due to its cost-effectiveness, low-maintenance needs, compact size, acceptable noise levels, reliable continuous-duty performance, and ability to provide the required vacuum and airflow. Based on the vacuum performance curve provided in the blower specification sheet (**Appendix A**), at the desired flow rate range of 100 to 200 CFM, the blower can generate a corresponding vacuum of approximately 140 to 115 inches of water column (in. WC) at 60 Hz . The final design vacuum will be determined during the pilot test, based on the vacuum required to generate a continuous vacuum filed that can adequately cover the entire length of the western boundary, excluding the

proposed building footprint. This is accomplished when each of the four (4) proposed SVP achieves sustainable vacuum of a minimum 0.02 in. WC. Please note that this blower will be dedicated exclusively to the North America/Pulse Plastics Site. A separate blower was installed to serve the adjacent BCP site, C203148 – Sonero Metro City Auto Site .

The SVE system will consist of a main 4" schedule 40 PVC trunk line which will be manifolded into three (3) SVE wellheads. Each wellhead will connect to an approximately 40-foot-long, below-grade slotted horizontal SVE well via 4-inch solid Schedule 40 PVC piping. (**Figure V-1**). In the revised design, the horizontal SVE wells will be repositioned closer to the western boundary compared to the previously submitted layouts. Each vertical extraction point connects horizontally to the main PVC trunk line and is equipped with a gate valve and sampling port (**Figure D-1**). The gate valves can be monitored and controlled to balance the flow and vacuum pressure through the entire system. The sound-proofed regenerative blower for the SVE system is housed in an 8.5' x 20' shed enclosure on the adjacent BCP site, C203148 – Sonero Metro City Auto Site. A pilot SVE test will be conducted to determine the wellhead vacuum pressure required to establish and maintain effective vacuum communication. Performance will be evaluated by measuring vacuum at remote on-Site monitoring points, with a target minimum of 0.02 in. WC.

Components of this SVE system include a demister (knock out) tank (55 gal), purge water pump, blower unit with filter, two (2) vapor-phase carbon vessels (55-gal vessels with ~220 lbs of GAC 4x 85) and a full process control system with high water level alarms and temperature shut off sensors. The carbon vessel will utilize vapor-phase carbon as the pre-discharge filter media. No waste is expected to be generated during implementation of the pilot test (i.e., spent vapor-phase granular activated carbon [GAC]). PID readings, as well as air samples for laboratory analysis, will be collected from the influent and effluent to monitor influent vapor stream concentrations, exhaust air concentrations from the GAC treatment, and changes in influent vapor stream concentrations over time during stepped and constant rate test conditions. The target design vacuum at each SVE well will be determined from the pilot test, based on the vacuum required to generate a continuous vacuum field that can adequately cover the entire length of the western boundary, excluding the proposed building footprint. This is accomplished when each of the four (4) SVPs achieves a sustainable vacuum of a minimum 0.02 in. WC.

To establish baseline conditions, soil vapor samples will be collected from the proposed SVPs before the blower is turned on.

4.0 PILOT TESTS PLAN

4.1 SVE PILOT SYSTEM CONSTRUCTION

The construction of the SVE pilot system will consist of the following steps. The general sequence of installation will be as follows:

- Soil reuse sampling as discussed in **Section 4.8**.

- All existing VMPs previously installed outside the scope of a DEC-approved work plan will be removed. Grouting will not be necessary because the area will be disturbed during installation of the SVE components.
- Excavation will first be performed to expose the previously installed liner. Excavated soil will be stockpiled adjacent to the excavation for subsequent reuse as backfill, and the liner will be set aside for reuse if inspection confirms it is intact. Otherwise, new liner will be installed in the later steps.
- Excavation will then continue to expose the existing wellheads and manifold connections. These components will be disconnected from the existing horizontal SVE wells and set aside for reuse if inspection confirms they are intact and suitable. Otherwise, new wellheads and manifold connections will be installed in the later steps.
- The existing horizontal SVE wells will be excavated and repositioned if they are determined to be intact and suitable for reuse. Otherwise, new horizontal wells will be installed.
- To accommodate the placement of horizontal wells (SVE-1 through SVE-3) and Soil Vapor Points (SVP-1 through SVP-4), an approximately 120-foot-long, 3-foot-wide trench will be excavated parallel to the western property fence line, extending from the southern Site boundary to the edge of the building wall to the north. The trench will extend approximately 3 feet from the fence line toward the Site interior, with its eastern edge located approximately 5 feet from the western property boundary. The trench will extend vertically to the top of bedrock, approximately 4 feet below the proposed final grade. This alignment minimizes the setback from the boundary while maintaining sufficient space for horizontal wells and SVPs.
- Horizontal wells SVE-1 through SVE-3 will then be placed within the trench at the eastern edge. Each well will consist of approximately 40 feet of 4-inch perforated PVC pipe wrapped in geotextile fabric. Each horizontal well will be connected at its midpoint to a solid PVC riser as extraction point.
- Four (4) SVPs will be placed within the trench, approximately 1 foot from the property fence line, at the locations shown on **Figure V1**. Less vacuum influence is expected at the ends of the horizontal slotted pipes and at points furthest from the blower; therefore, SVPs will be installed at the ends of horizontal SVE piping for conservative vacuum measurements. Each SVP will consist of a 1-foot-long stainless-steel soil vapor implant connected via a ¼-inch Swagelok compression fitting to a continuous 3-foot-long, ¼-inch-diameter stainless-steel riser. A quick-connect monitoring port will be installed on the riser and sealed with VOC-free silicone, as shown on **Figure D1**.
- The SVE area was previously backfilled with crushed stone as a base layer. The same approved crushed stone will be used to backfill the trench, completely cover the implants of the SVPs, and level the Site. The crushed-stone layer will be approximately 2-3 feet thick across the SVE area after backfilling. The DEC-approved import form and sieve test results for the crushed stone are provided in **Appendix B**.
- A 20-mil HDPE will be placed over the crushed stone fill. The liner will extend to the western Site boundary and abut the existing building walls to the east and north. **(Figure D-1).** The edges of the liner will fold up against the walls and be sealed with tape (See

vapor barrier termination details in **Figure D-1**). All penetrations - including SVPs and SVE riser pipes - will be sealed using a membrane patch wrapped around each penetration, along with liquid boot or equivalent sealant. (See vapor barrier penetration details in **Figure D-1**).

- Above the liner, horizontal solid PVC connector pipes will be installed from the SVE risers to the horizontal header pipe, along with a sample port and a gate valve prior to manifolding each SVE well to the main header pipe.
- A header pipe will be installed connecting all SVE wells to the SVE system shed.
- The SVE area will then be backfilled, leveled, and compacted with soil proposed for reuse and placed over the liner to achieve final grade following DEC review and approval of an associated soil reuse request form. The soil will be sampled to document compliance with USCOs, as specified in **Section 4.8**.
- Stormwater drainage pipes, which are not part of the SVES, may be installed above the liner in the fill layer.
- Flush mount covers will be installed for the SVPs.
- A helium tracer test will be performed at each SVP to confirm that the tubing, fittings, and seals are airtight. Any leaking connections or seals will be repaired, and the helium test will be repeated until the soil vapor point passes the test.
- The SVE system blower (Atlantic Blowers model AB-900, 11.5 HP) with a variable frequency drive (VFD), condensation (knockout) tank, and two (2) vapor-phase GAC drums will be installed in the system shed.
- All system components within the shed will be connected via PVC pipe, and influent (before the air stream enters the blower) and effluent (after the GAC) sample ports will be installed within the shed.

The AB-900 blower specs are listed as follows:

Table 1: AB-900 Blower Specifications

Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-900	A22	60Hz	8.60	11.50	399	177	141	80	2.50"	220-275/380-480	37.0Δ/21.3Y	194
			50Hz	7.50	10.00	333	123	98	75		200-240/345-415	30.8Δ/17.8Y	

**Sound db measured at 3 ft.

The specification sheet is attached as **Appendix A**.

The as-built drawings will be included in the final design document.

A community air monitoring program (CAMP) will be implemented at the Site during any soil disturbance or ground-intrusive activity (e.g., drilling), in accordance with Appendix B - CAMP included in the December 2024 Remedial Action Work Plan (RAWP). The objective of the CAMP is to provide protection for the surrounding community from potential airborne contaminant releases as a result of intrusive activities. Two (2) CAMP monitoring stations will be deployed.

Each monitoring station will be equipped with instruments to continuously measure and record levels of VOCs and particulates. In addition to the fixed monitoring stations, VOCs will be monitored within the work zone using a handheld PID. Any exceedances of CAMP action levels will be recorded and addressed in accordance with CAMP requirements, and the NYSDEC and NYSDOH will be notified to determine what, if any, additional monitoring or mitigative measures should be employed.

In the event of a dust or odor complaint, and in the event of any exceedance related to the CAMP, the NYSDEC and NYSDOH project managers will be notified within 24 hours. Any CAMP exceedance will be reported to the NYSDEC and NYSDOH on the same business day and as soon as possible. Notification of the exceedance will be sent via email along with the reason for the exceedance, the measure(s) taken to address the exceedance, and how the exceedance was resolved.

4.2 SVE PILOT TESTS OVERVIEW

The SVE pilot tests consist of the following elements:

Two (2) two-hour constant-rate tests will be conducted: one under baseline conditions and one under operating conditions. Baseline conditions are defined as the blower operating at 60 Hz with all three (3) SVE wellhead gate valves fully open. Operating conditions are defined as the adjusted blower frequency and gate valve positions necessary to achieve and sustain a minimum vacuum of 0.02 in. WC at all four (4) SVPs.

The testing components include:

- Baseline soil vapor sampling at the vacuum monitoring points
- Measurements and sampling at the main pipe.
- Measurements at each well head.
- ROI determination.

4.3 BASELINE SOIL VAPOR SAMPLING

After completion of the SVE system construction and prior to pilot testing, four (4) baseline soil vapor samples will be collected from the four (4) SVPs to be installed at the western property boundary.

The soil vapor samples will be collected into laboratory-supplied six (6)-liter, stainless-steel, summa canisters with sampling period set to be 24 hours. The summa canisters will be equipped with a laboratory-supplied regulator that will be used to measure canister vacuum and ensure the rate of sample collection does not exceed 0.2 L/min. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

In addition to the soil vapor samples, one (1) outdoor air sample will be collected with a 6-liter summa canister set to a flow rate of 4.17 mL/min (<200 mL/min) for a collection period of 24 hours. The outdoor air sample will be placed in an up-gradient location based on the prevailing wind direction during soil vapor sampling collection.

The soil vapor and outdoor air samples will be sent to a NYSDOH ELAP-certified laboratory for analysis of VOCs in accordance with EPA Method TO-15. Category B deliverables are required for all samples. All data will be sent to a third party (Laboratory Data Consultants) for validation in accordance with NYSDEC BCP requirements.

4.4 BLOWER SETTINGS FOR THE PILOT TESTING

The existing AB-900 blower will now be dedicated exclusively to the North America/Pulse Plastics Site.

Two (2) two-hour constant-rate tests will be conducted: a baseline test at a blower output frequency of 60 Hz, followed by an operating-condition test at an output frequency to be determined during testing. The blower output frequency will be controlled using the variable-frequency drive (VFD).

4.5 MAIN PIPE MEASUREMENTS AND SAMPLING

For each test, the following measurements/samples will be collected at the main SVE pipe at the Site.

Table 2: Summary of Main Pipe Measurements and Sampling

Test Type	Frequency	Measurements/Samples	Location
2-hr Constant Rate Test (Baseline Condition)	Measurements every 15 min; Sample at 2 hr	Flow Rate, Vacuum, and TO-15	Main Pipe - Pre-Blower
	At 2 hr	TO-15	Main Pipe - Post-GAC
2-hr Constant Rate Test (Operating Condition)	Measurements every 15 min; Sample at 2 hr	Flow Rate, Vacuum, and TO-15	Main Pipe - Pre-Blower
	At 2 hr	TO-15	Main Pipe - Post-GAC

Vacuum readings will be collected using a handheld manometer (Dwyer Model digital manometer).

Flow rate readings will be collected using a handheld anemometer (TSI 9565).

PID readings will not to be collected because the expected air flow at the main pipe would overwhelm the internal pump of the PID meter.

Pretreatment and post treatment grab air samples will be collected via 1.4L-Suma Canisters and analyzed for TO-15.

All samples will be sent under a chain of custody to an ELAP-certified lab for analysis. Category B deliverables are required for all samples. All data will be sent to a third party (Laboratory Data Consultants) for validation in accordance with NYSDEC BCP requirements.

4.6 WELL HEAD MEASUREMENTS AND SAMPLING

For each test, the following measurements will be collected at each well head at the Site.

For the baseline test, all gate valves will be fully open. For the test under operating conditions, the gate valve positions will be adjusted, as necessary, to establish and sustain a minimum vacuum of 0.02 in. WC at all SVPs.

Table 3: Summary of Wellhead Measurements

Test Type	Frequency	Measurements/Samples	Location
2-hr Constant Rate Test (Baseline Condition)	Every 15 min	Flow Rate, Vacuum, PID	Each Wellhead
2-hr Constant Rate Test (Operating Condition)	Every 15 min	Flow Rate, Vacuum, PID	Each Wellhead

Measurements will be collected using the same methodologies described in the previous section. PID readings will be collected using a handheld PID meter (Mini RAE3000).

4.7 ROI TESTING

During each test, vacuum readings will be collected at all four (4) SVPs.

The target sustainable vacuum at each vacuum monitoring point is a minimum of 0.02 in. WC. Achievement of this criterion will be used to demonstrate the SVES is capable of operating properly to achieve site-specific remedial action objectives. If the target vacuum is not met, the system will be adjusted by balancing the wells and/or upgrading the blower, as necessary, to achieve the required vacuum levels.

Table 4: Summary of ROI Measurements

Test Type	Frequency	Measurements/Samples	Location
2-hr Constant Rate Test (Baseline Condition)	Every 15 min	Vacuum	SVP-1, SVP-2, SVP-3, and SVP-4
2-hr Constant Rate Test (Operating Condition)	Every 15 min	Vacuum	SVP-1, SVP-2, SVP-3, and SVP-4

4.8 SOIL REUSE AND SAMPLING PLAN

Soil is proposed to be reused on site and placed over the liner to achieve the proposed final grade. Note that soil excavation at the Site has been completed, with excavation performed to depths meeting Unrestricted Soil Cleanup Objectives (USCOs) or to bedrock. Soil proposed for reuse was sourced from cells B3, C2, C3 and C4, at depths of approximately 20 to 25 feet bgs, which was located below the remedial excavation depth, below the depths of the remedial investigation, and proximal to hot spots; therefore, soil reuse sampling is required. Based on field observations, the soil consisted of brown silt and clay with medium to fine sand and trace amounts of gravel. Weathered rock fragments will be screened out prior to backfilling. Approximately 200 CY of soil is proposed for reuse to backfill the SVE area.

To document that the soil proposed for reuse meets USCOs, in accordance with DER-10 Table 5.4(e)10, four (4) discrete samples will be collected for analysis of VOCs and one (1) 5-point composite sample will be collected for analysis of semi-volatile organic compounds (SVOCs), inorganics, PCBs/pesticides and per and polyfluoroalkyl substances (PFAS, EPA Method 1633A).

Soil reuse request form and associated analytical results will be submitted to NYSDEC for review and approval. All documentation regarding soil reuse will be included in the associated Final Engineering Report (FER).

Soil reuse source and destiny locations, as well as proposed sample locations, are included in **Appendix C**.

4.9 REPORTING

In accordance with 6 NYCRR 375-1.6(3) daily work reports will be submitted to the NYSDEC and the NYSDOH PMs during all field activities conducted under this plan by the end of each day following the reporting period and will include:

- An update of progress made during each day;
- Locations of work being performed;
- Photographs of work completed each day;
- A summary of work planned for the following day;
- The names and titles of staff performing on-site activities;
- A timeline of daily work activities, including start and end times;

- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP findings, including exceedances;
- A summary of any data collected in association with site activities;
- An explanation of notable Site conditions; and,
- Any deviations from the approved work plan.

CAMP will be conducted during ground intrusive activities and soil handling activities. NYSDEC and the NYSDOH will be notified of CAMP results that exceed action levels, including duration and actions taken in response to any such exceedance. Notifications will be provided to the NYSDEC and the NYSDOH as soon as possible, within a minimum 24 hours from the exceedance event.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC or NYSDOH of emergencies (accidents, spills, etc.), requests for changes to the CMWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Any and all Site notifications, including emergency conditions and changes to the CMWP, will be addressed directly to the NYSDEC PM and the NYSDOH PM via personal communication.

Daily reports will include a description of daily activities keyed to a map for the Site that identifies work areas. These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and any complaints received from the public. All complaints received will immediately be reported to the NYSDEC PM and the NYSDOH PM.

The NYSDEC assigned project number will appear on all reports.

Upon completion of the SVE pilot testing, a SVE Design Document will be submitted to NYSDEC and NYSDOH for review and approval. This document will include:

- A summary of the pilot tests conducted
- Pilot test results, findings and conclusions
- Documentation of any deviations from this Pilot Test Plan
- A proposed final SVE system design based on pilot test findings
- Procedures for SVE startup testing following system installation
- Operation, maintenance, and monitoring requirements for the SVE system

Both the DEC-approved RDWP and approved SVE Design Document will be included in the Final Engineering Report (FER).

4.10 GOVERNING DOCUMENTS

The following documents will govern the SVE installation and pilot study activities proposed in this design document:

- CAMP included in the December 2024 RAWP.
- HASP included in the December 2024 RAWP.
- QAPP included in the December 2024 RAWP.

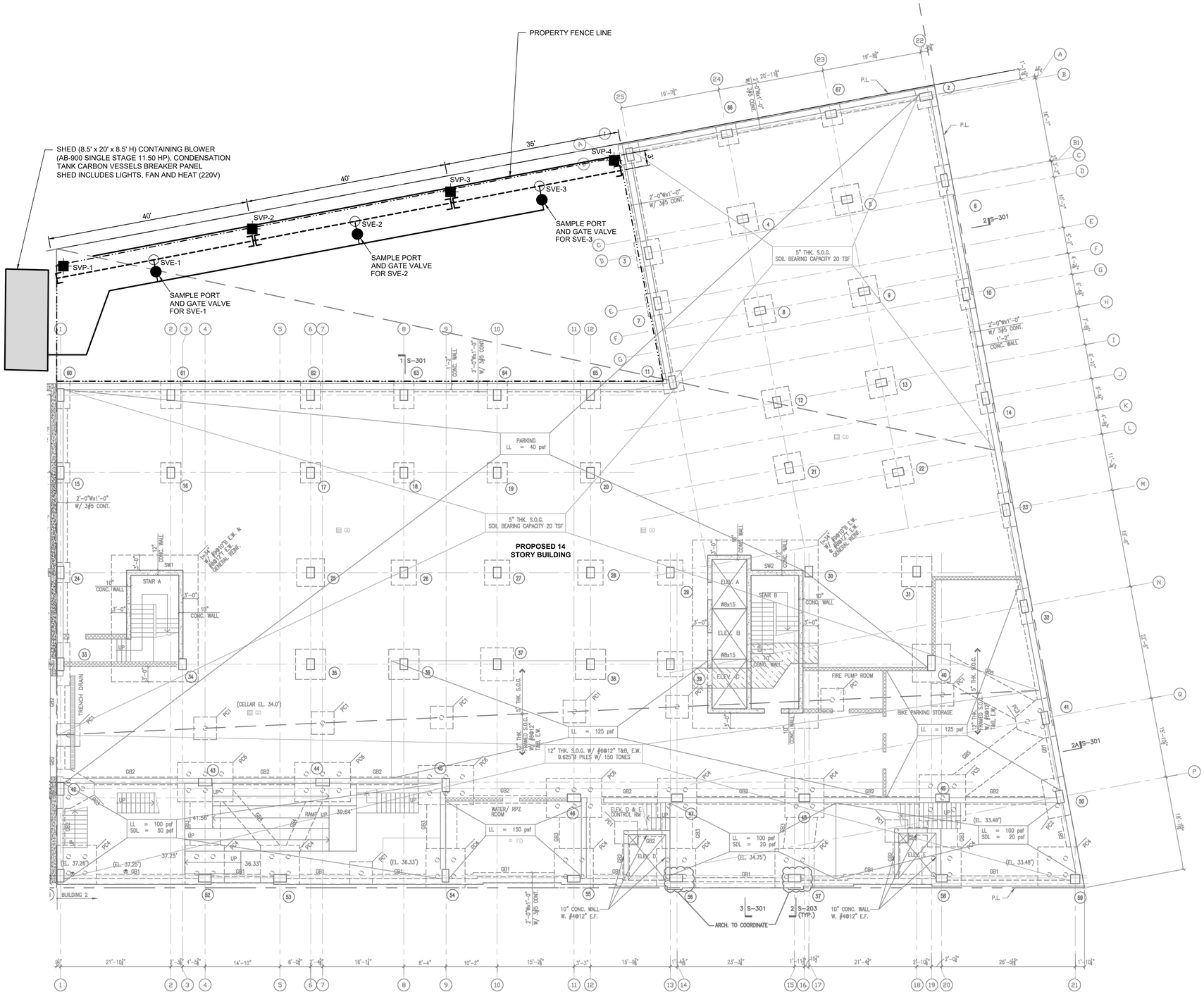
4.11 IMPLEMENTATION SCHEDULE

The following implementation schedule is anticipated:

Table 5: Implementation Schedule

Activity	Schedule
Sampling of the soil to be reused	9/17/2026
Installation of SVE Components	9/21/2026 – 9/23/2026
Installation of Vacuum Monitoring Points	9/21/2026 – 9/23/2026
Gravel Backfill	9/21/2026 – 9/23/2026
Liner Installation and Sealing	9/21/2026 – 9/23/2026
Soil Backfill on Liner	9/21/2026 – 9/23/2026
Baseline Soil Vapor Sampling	9/24/2026
SVE Pilot Study	9/25/2026
SVE Design Document Submission	9/30/2026

Figures



LEGEND:

- SVE-1 ○ - SOIL VAPOR EXTRACTION (SVE) POINT LOCATION
- ● - SAMPLE PORT AND GATE VALVE FOR SVE POINT
- SVP-1 ■ - SOIL VAPOR POINT (SVP) LOCATION
- ——— - 4" DIA. SCH 40 SOLID PVC
- — — — - 4" DIA. SCH 40 PVC SCREEN 0.010" WITH GEOTEXTILE FABRIC AROUND
- ⊏ - CAPS FOR 4" PVC
- ▭ - EXTENT OF VAPOR BARRIER

NOTES:

1. THE HORIZONTAL SVE PIPES COVER THE ENTIRE WESTERN SITE BOUNDARY, EXCEPT FOR THE PORTION THAT OVERLAPS WITH THE PROPOSED BUILDING FOOTPRINT. ALONG THIS SECTION OF THE WESTERN BOUNDARY, THE PROPOSED BUILDING WILL BE CONSTRUCTED AS A SLAB-ON-ROCK FOUNDATION EXTENDING TO THE PROPERTY LINE. ONCE THE BUILDING IS CONSTRUCTED, NO SOIL WILL REMAIN IN THIS AREA.

REFERENCE:

1. EXISTING CONDITIONS & BOUNDARY ARE TAKEN FROM "FOUNDATION & CELLAR PLAN" PREPARED BY NEWMAN DESIGN, DATED 10/20/23, REV. 1/28/24.

NYS Education Law
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Scale: 1"= 10'

KEY MAP

rev	date	description

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GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

DRAFT

project:
SOIL VAPOR EXTRACTION SYSTEM
NORTH AMERICA/PULSE PLASTICS
1001 WHITLOCK AVENUE
BRONX, BRONX COUNTY, NEW YORK

title:
SOIL VAPOR EXTRACTION SYSTEM

dwg by: APG
chk by: SL
scale: AS NOTED
date: 1/6/2026

job no. 11913
drawing no. V-1
1 of 2

N:\CAD\11913\CAD\VAPOR\11913.DWG, VAPOR PLAN2.DWG 09/10/25 02:15:12PM, jsmoots, LAYOUT1=1 (1913)

GENERAL NOTES

1. THE SOIL VAPOR EXTRACTION (SVE) SYSTEM INCLUDED THE INSTALLATION 3 SVE POINTS THAT CONSIST OF EACH A 3-4' VERTICAL SOLID RISER CONNECTED TO A PERFORATED HORIZONTAL EXTRACTION PIPE THAT EXTENDS PARALLEL THE WESTERN PROPERTY.

   A. EXTRACTION PIPE – A SEGMENTED APPROXIMATELY 115-FOOT LONG, 4-INCH, HORIZONTAL PERFORATED PIPE SHALL BE INSTALLED AT A DEPTH RANGING FROM 3-4 FEET BELOW GRADE. THE SCREEN SHALL BE 0.010 INCHES. CAPS SHALL BE INSTALLED AT EACH END OF THE 40-FEET PERFORATED SEGMENT OF EACH VERTICAL SVE POINT. WITH THE SOLID PVC RISER CONNECTED AT THE MIDPOINT OF EACH SEGMENT. THERE SHALL BE A TOTAL OF 3 SEGMENTS (ONE SEGMENT FOR EACH SVE POINT). EACH SEGMENT OF THE EXTRACTION PIPE SHALL BE COVERED IN A GEOTEXTILE FABRIC AND BE INSTALLED IN A MINIMUM OF 6-INCHES OF GRAVEL/STONE FILL TO EXTRACT ANY VOCS AND PREVENT ANY POSSIBLE OFF-SITE MIGRATION

   B. MANIFOLD HEADER PIPE – 2" SOLID PVC THAT IS DIRECTLY CONNECTED TO THE BLOWER IN THE SHED AND CONNECTS TO EACH SVE POINT.

   C. CONNECTION POINTS – A TOTAL OF THREE (3) CONNECTION POINTS SHALL BE INSTALLED TO CONNECT THE EXTRACTION PIPE TO THE HEADER PIPE. EACH CONNECTION POINT INCLUDES A SAMPLE COLLECTION PORT. A GATE VALVE HAS BEEN INSTALLED ON EACH CONNECTION POINT TO BALANCE THE FLOW IN EACH CONNECTION POINT.

   D. SHED – THE SHED WILL HOUSE THE CONDENSATION TANK, BLOWER, GRANULATED ACTIVATED CARBON TOWER AND BREAKER PANEL.

   E. CONDENSATION TANK – THE EXTRACTED SOIL VAPOR WILL FIRST PASS THROUGH A CONDENSATION (KNOCKOUT) TANK.

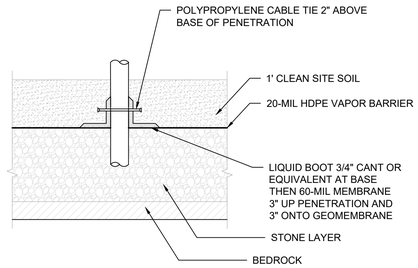
   F. BLOWER – ATLANTIC BLOWER MODEL AB-900 INDUCED VACUUM ACROSS THE SYSTEM.

   G. VAPOR-PHASE GRANULATED ACTIVATED CARBON (GAC) TANKS – THE VAPOR WILL PASS THROUGH TWO (2) GAC TANKS TO ADSORB ANY VOC.

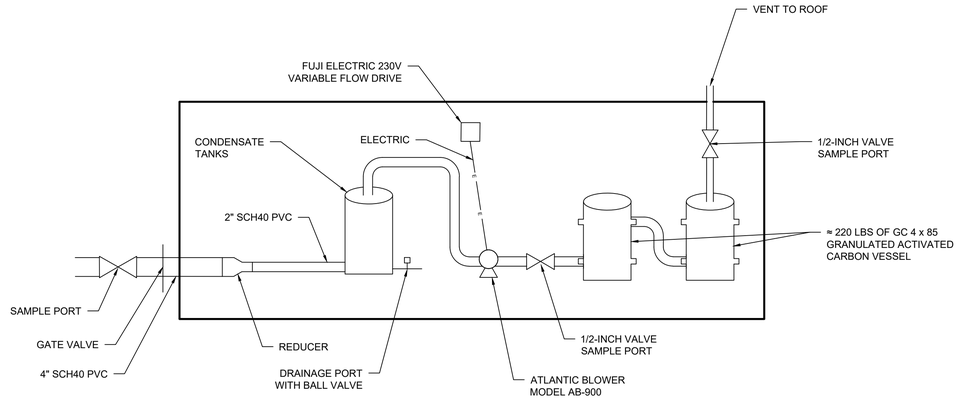
   H. RISER EXHAUST – THE VAPOR WILL EXIT THE RISER EXHAUST AT THE ROOF LINE OF THE SHED.

   I. VFD IS ATTACHED TO INTERIOR WALL OF SYSTEM SHED.

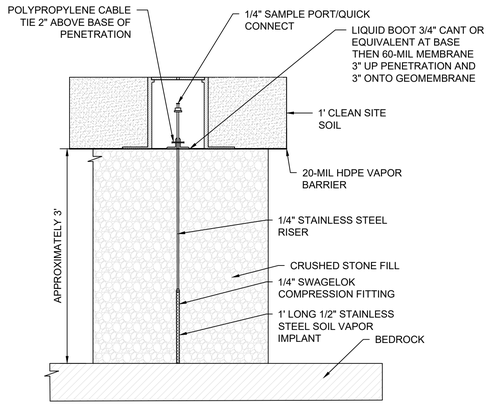
   J. FOUR (4) SOIL VAPOR POINTS (SVPS) SHALL BE INSTALLED ALONG THE WESTERN PROPERTY BOUNDARY. EACH SVP WILL CONSIST OF A 1-FOOT-LONG STAINLESS-STEEL SOIL VAPOR IMPLANT CONNECTED VIA A ¼-INCH SWAGELOK COMPRESSION FITTING TO A CONTINUOUS 3-FOOT-LONG, ¼-INCH DIAMETER STAINLESS-STEEL RISER. A QUICK-CONNECT MONITORING PORT WILL BE INSTALLED ON THE RISER AND SEALED WITH VOC-FREE SILICONE.



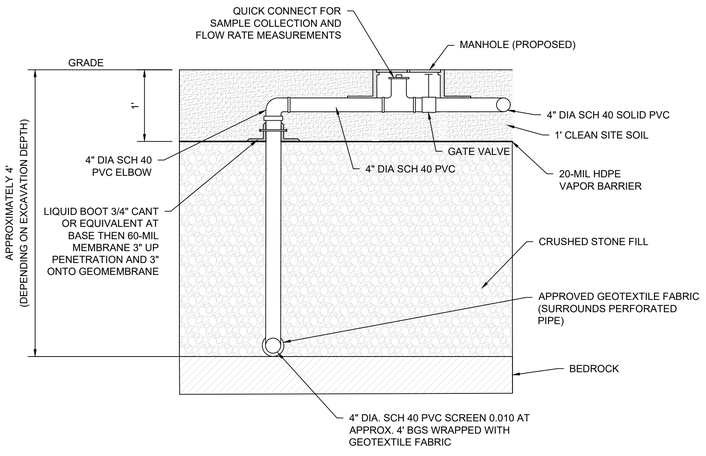
TYPICAL VAPOR BARRIER PENETRATION DETAIL
NTS



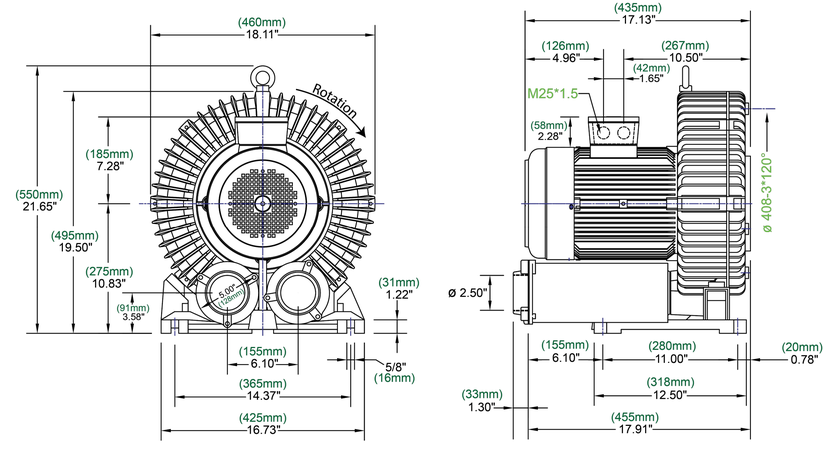
SKETCH OF SYSTEM IN SHED
NTS



SOIL VAPOR POINT DETAIL
NTS



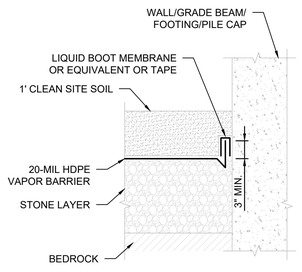
SOIL VAPOR EXTRACTION POINT
NTS



Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-900	A22	60Hz	8.60	11.50	399	177	141	80	2.50"	220-275/380-480	37.0Δ/21.3Y	194
			50Hz	7.50	10.00	333	123	98	75		200-240/345-415	30.8Δ/17.8Y	

**Sound db measured at 3 ft.

ATLANTIC BLOWER DETAILS
NTS



TYPICAL VAPOR BARRIER TERMINATION DETAIL
NTS

NYS Education Law
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KEY MAP

rev	date	description

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GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

DRAFT

project:
SOIL VAPOR EXTRACTION SYSTEM
NORTH AMERICA/PULSE PLASTICS
1001 WHITLOCK AVENUE
BRONX, BRONX COUNTY, NEW YORK

title:
SOIL VAPOR EXTRACTION SYSTEM AS-BUILT DETAILS

dwg by: APG
chk by: SL
scale: AS NOTED
date: 1/6/2026

job no. 11913
drawing no.
D-1
2 of 2

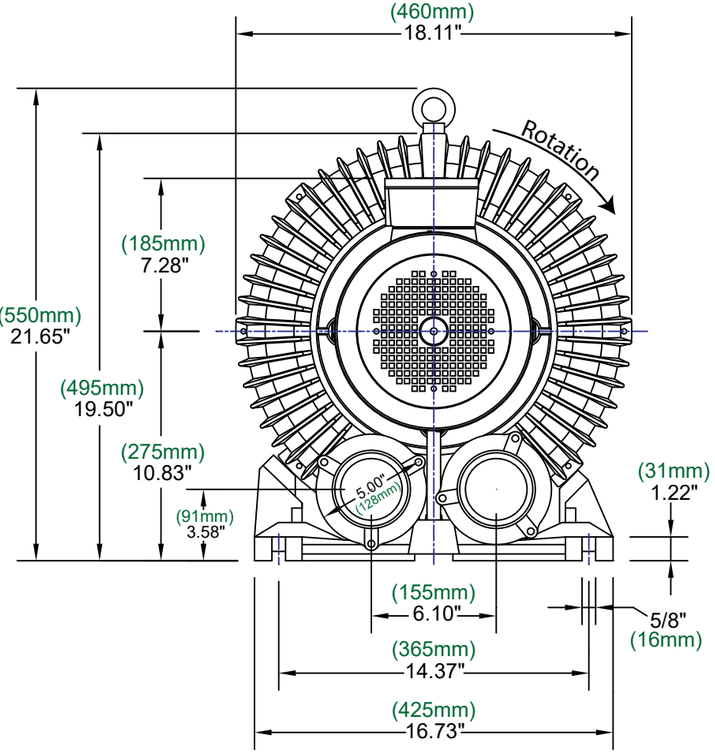
Appendix A:

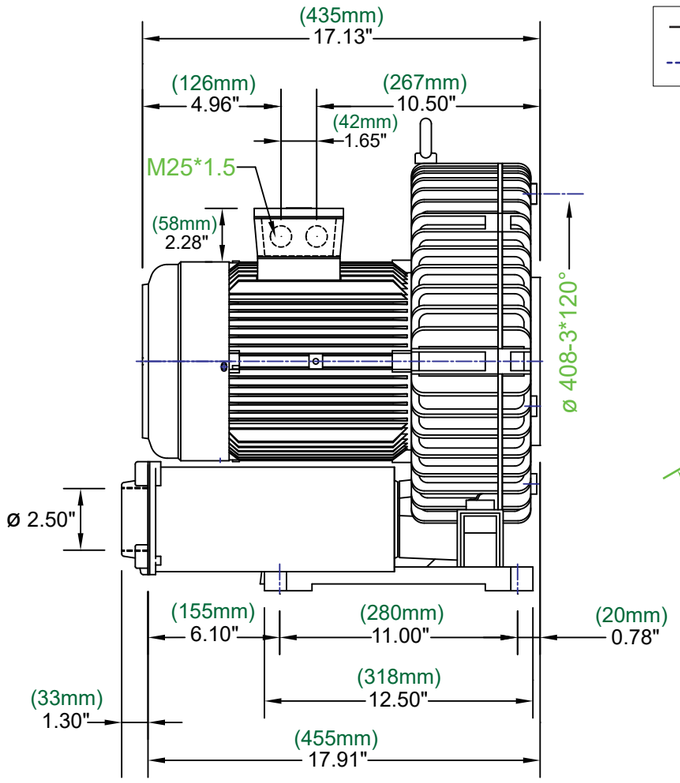
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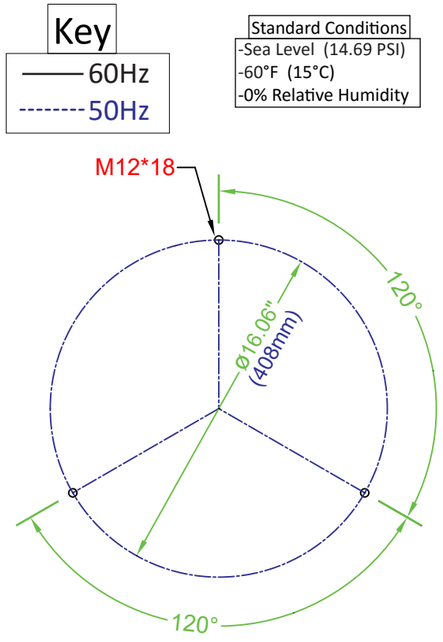
Phase	Model Number	Curve Number	Frequency (Hz)	KW	HP	Max Flow (SCFM)	Max Pressure ("H_2O)	Maximum Vacuum	Sound Level (db)	Inlet Diameter	Voltage	Current (A)	Weight (lbs)
3	AB-900	A22	60Hz	8.60	11.50	399	177	141	80	2.50"	220-275/380-480	37.0Δ/21.3Y	194
			50Hz	7.50	10.00	333	123	98	75		200-240/345-415	30.8Δ/17.8Y	

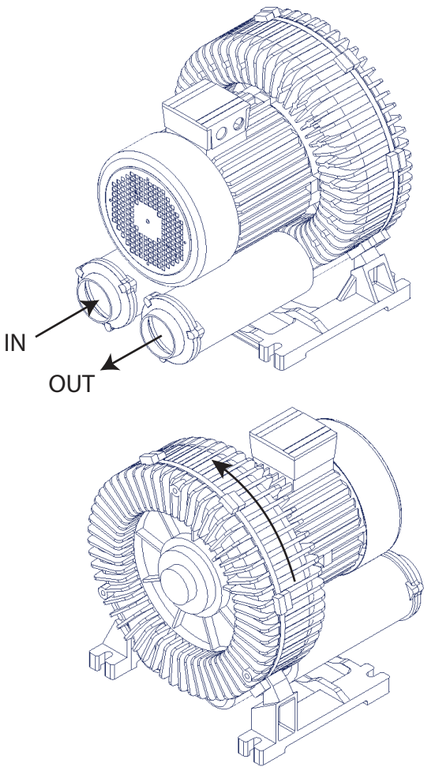
**Sound db measured at 3 ft.

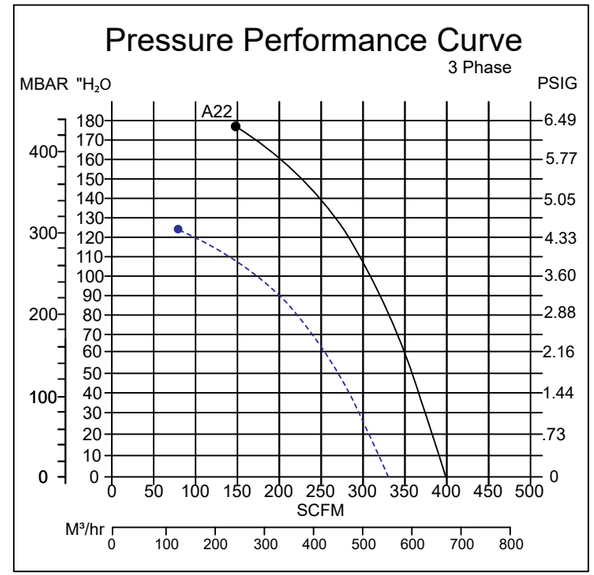
MODEL NO. : AB-900 SINGLE STAGE

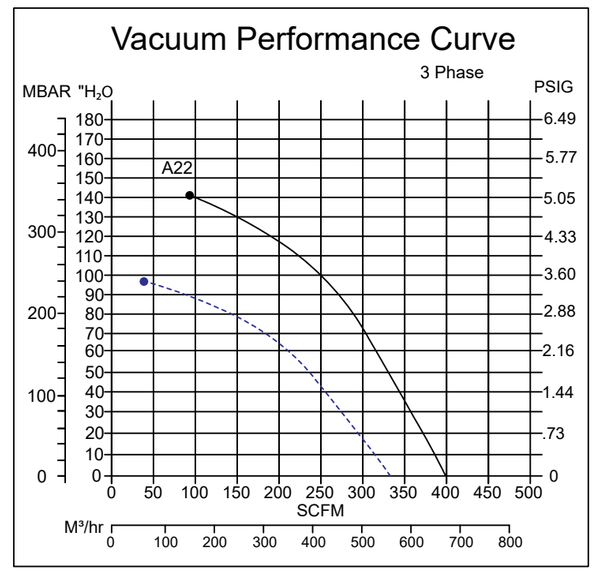


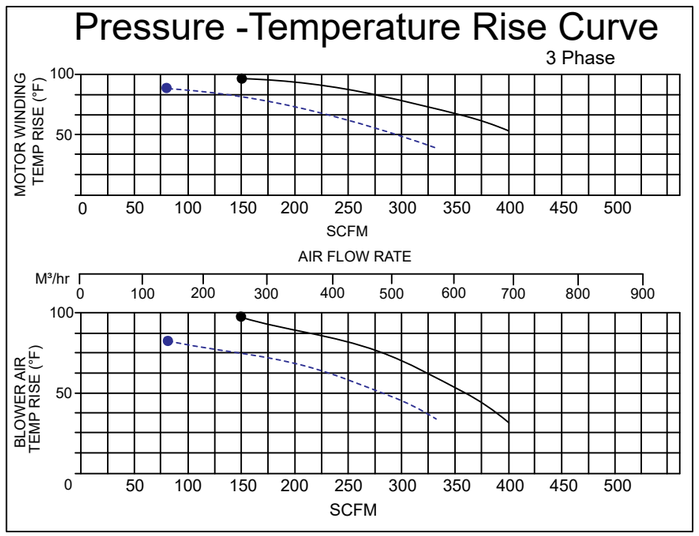


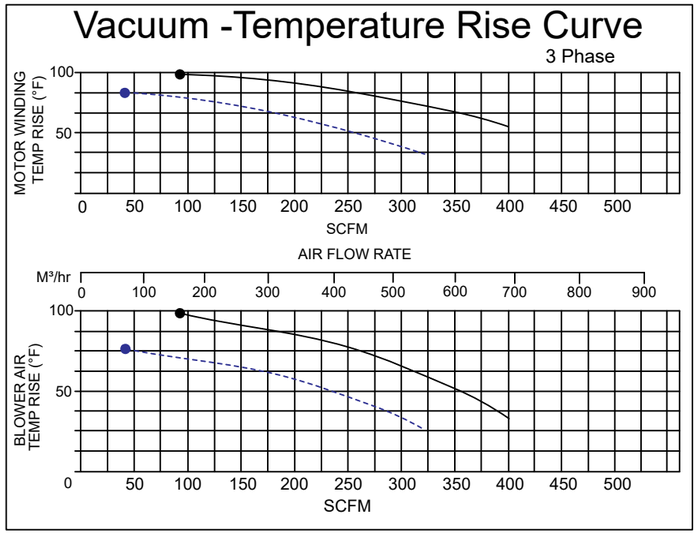












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Appendix B:

BACKFILL MATERIALS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

Site Name: North American / Pulse Plastics Site

Site Number: C203144

The allowable site use is: Unrestricted

Have Ecological Resources been identified? no

Is this soil originating from the site? no

How many cubic yards of soil will be imported/reused? 800-1000

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? yes

Does it contain less than 10%, by weight, material that passes a size 100 sieve? yes

Is this virgin material from a permitted mine or quarry? yes

Is this material recycled concrete or brick from a DEC registered processing facility? no

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

None Required

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Not applicable

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Robert Patton, Quality Control manager

Name and address of fill source:

Thalle Industries, Inc Fishkill Quarry

Location where fill was obtained:

same as above

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Property has been and remains a stone quarry

Provide a list of supporting documentation included with this request:

sieve analysis report

The information provided on this form is accurate and complete.

Steven Gustems Digitally signed by Steven Gustems Date: 2025.07.28 13:50:44 -04'00'

Signature

July 28, 2025

Date

Steven Gustems

Print Name

SESI Consulting Engineers

Firm

January 24, 2025

To Whom It May Concern:

Thalle Industries Inc. Fishkill Quarry is a New York State DOT approved material source. The Source Number is 8-54R. This source is 100% virgin Granite that is quarried and processed to finished sizes.

The following analysis is provided for NYSDOT Item 703, size no.3.

Sieve Size	% Pass	Spec
2 ½" (63mm)	100	100
2" (50mm)	95	90-100
1 ½" (37.5mm)	54	35-70
1" (25mm)	8	0-15
½" (12.5mm)	1	

This product is 100% crushed stone material, from the crushing operation.

Please contact me with any questions regarding this material.

Yours truly,

Robert Patton
Quality Control

Sheng Long, LSRP

From: Nierenberg, Daniel R (DEC) <daniel.nierenberg@dec.ny.gov>
Sent: Tuesday, July 29, 2025 11:58 AM
To: Steven Gustems, PG
Cc: Sharon Cashel; Fuad Dahan, PE, LSRP; sarah.quandt
Subject: RE: C203144 - North American/Pulse Plastics - Import Request

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Good afternoon, Steve,

The Department has reviewed the fill import request dated July 28, 2025 to import 1,000 yd^3 of fill material from Thalle Industries, Inc. Fishkill Quarry. Based on the information provided, the import request is acceptable. It is understood that the requested import material is "NYSDOT Item 703, size no. 3 stone" (predominantly 1" to 1.5") made from virgin stone from a permitted mine or quarry containing less than 10% fines passing through sieve #100.

Thank you,
Dan

Daniel R. Nierenberg, P.G.
he/him/his
Remedial Bureau B, Section C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7016
Desk: (518) 402-9554/Cell: (518) 860-5496 | daniel.nierenberg@dec.ny.gov
https://link.edgepilot.com/s/cf94914b/7o4ctuWGhU61IhKVC4Grrg?u=http://www.dec.ny.gov/ |

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---

From: Steven Gustems, PG <ssg@sesi.org>
Sent: Tuesday, July 29, 2025 8:12 AM
To: Nierenberg, Daniel R (DEC) <daniel.nierenberg@dec.ny.gov>
Cc: Sharon Cashel <sharon.cashel@sesi.org>; fd@sesi.org; Quandt, Sarah M (DEC) <Sarah.Quandt@dec.ny.gov>
Subject: RE: C203144 - North American/Pulse Plastics - Import Request

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Dan, see attached.

Thanks,

-Steve

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CONSULTING ENGINEERS
GEOTECHNICAL
ENVIRONMENTAL
SITE CIVIL

Steven Gustems, PG
Sr. Project Manager
ssg@sesi.org
862-702-5728
973-518-8547
959 Route 46E Floor 3, Suite 300,
Parsippany, NJ 07054

sesi.org

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From: Nierenberg, Daniel R (DEC) <daniel.nierenberg@dec.ny.gov>
Sent: Monday, July 28, 2025 3:52 PM
To: Steven Gustems, PG <ssg@sesi.org>
Cc: Sharon Cashel <sharon.cashel@sesi.org>; Fuad Dahan, PE, LSRP <fd@sesi.org>; sarah.quandt <sarah.quandt@dec.ny.gov>
Subject: RE: C203144 - North American/Pulse Plastics - Import Request

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Hi Steve,

Can you provide a copy of the facility's current permit to operate or registration certificate? Otherwise, the fill import appears to be in good shape.

Thank you.
Dan

Daniel R. Nierenberg, P.G.
he/him/his
Remedial Bureau B, Section C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7016
Desk: (518) 402-9554/Cell: (518) 860-5496 | daniel.nierenberg@dec.ny.gov
https://link.edgepilot.com/s/8a92921b/agjh2RbtjEKmxLf9TnNl0w?u=http://www.dec.ny.gov/ | | |

NEW YORK STATE | Department of Environmental Conservation

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From: Steven Gustems, PG <ssg@sesi.org>
Sent: Monday, July 28, 2025 1:52 PM
To: Nierenberg, Daniel R (DEC) <daniel.nierenberg@dec.ny.gov>
Cc: Sharon Cashel <sharon.cashel@sesi.org>; fd@sesi.org; Quandt, Sarah M (DEC) <Sarah.Quandt@dec.ny.gov>
Subject: RE: C203144 - North American/Pulse Plastics - Import Request

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Dan, corrected form attached. Pleased let me know if this is approved.

Thanks,

-Steve

SESI CONSULTING ENGINEERS
GEOTECHNICAL ENVIRONMENTAL SITE CIVIL

Steven Gustems, PG
Sr. Project Manager
ssg@sesi.org
862-702-5728
973-518-8547
959 Route 46E Floor 3, Suite 300,
Parsippany, NJ 07054

sesi.org

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Sent: Monday, July 28, 2025 1:42 PM
To: Steven Gustems, PG <ssg@sesi.org>
Cc: Sharon Cashel <sharon.cashel@sesi.org>; Fuad Dahan, PE, LSRP <fd@sesi.org>; sarah.quandt <sarah.quandt@dec.ny.gov>
Subject: RE: C203144 - North American/Pulse Plastics - Import Request

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Hi Steve,

Can you confirm that the provided sieve analysis summary letter is for the correct quarry location? The fill import request form refers to the Tilcon Quarry Clinton Point Quarry, but the sieve analysis is for Thalle Industries Fishkill Quarry.

Thank you.
Dan

Daniel R. Nierenberg, P.G.
he/him/his
Remedial Bureau B, Section C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7016
Desk: (518) 402-9554/Cell: (518) 860-5496 | daniel.nierenberg@dec.ny.gov
https://link.edgepilot.com/s/a4b5ac8c/y_lepZv8V0mmu0EW0zdVUA?u=http://www.dec.ny.gov/ |



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---

From: Steven Gustems, PG <ssg@sesi.org>
Sent: Monday, July 28, 2025 9:48 AM
To: Nierenberg, Daniel R (DEC) <daniel.nierenberg@dec.ny.gov>
Cc: Sharon Cashel <sharon.cashel@sesi.org>
Subject: RE: C203144 - North American/Pulse Plastics - Import Request

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Dan, the volunteer is requesting to import some virgin stone material from Tilcon. This is the same material was approved for the Sonaro metro site.

Please let me know if this is approved.

Thanks,

-Steve

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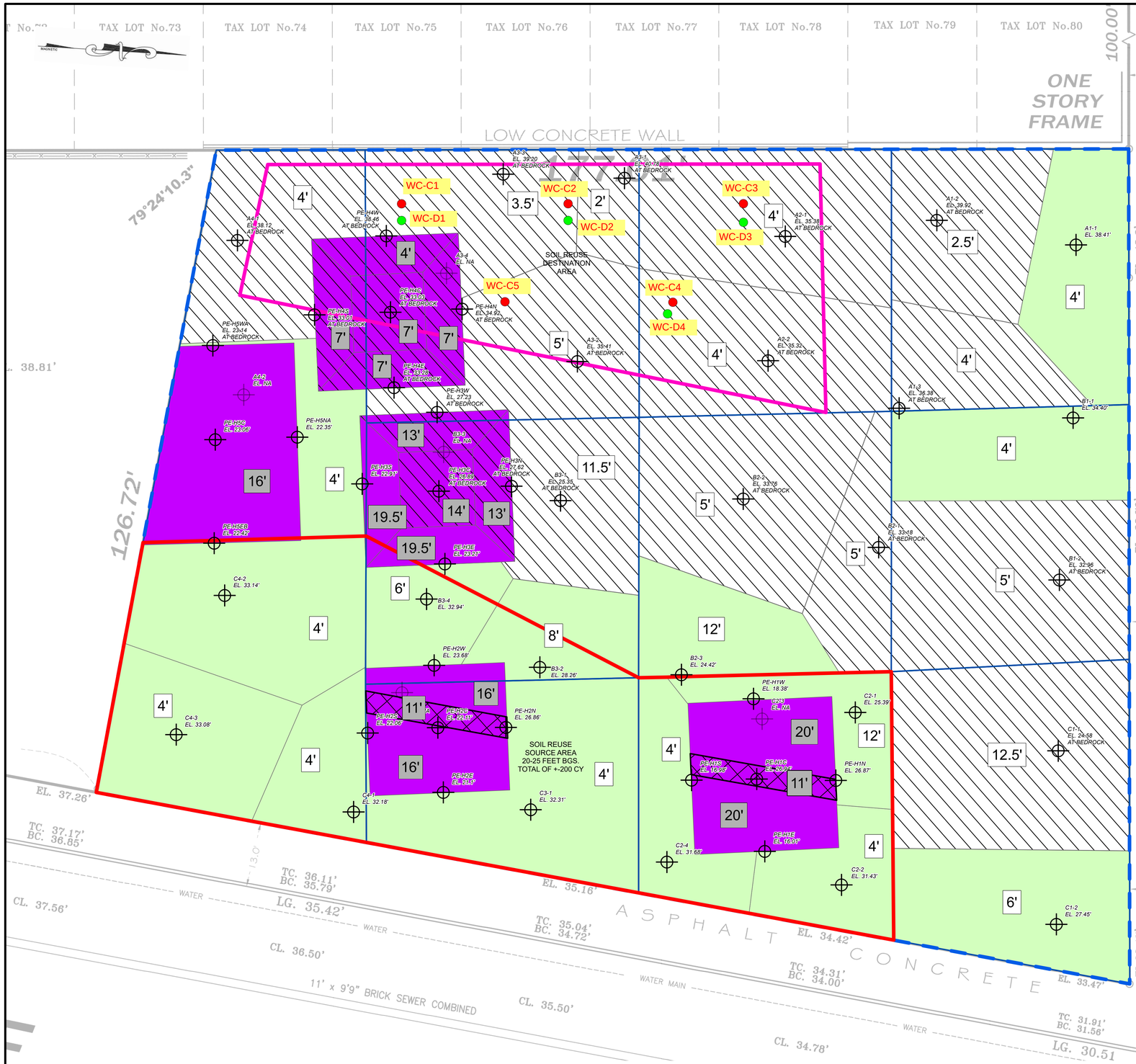
Steven Gustems, PG
Sr. Project Manager
ssg@sesi.org
862-702-5728
973-518-8547
959 Route 46E Floor 3, Suite 300,
Parsippany, NJ 07054

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Appendix C:

Soil Reuse and Sampling Plan



Remedial Excavation Area ID	Area (sf)	Remedial Excavation Depth (ft)	Remedial Excavation Volume (CY	Remedial Excavation Tonage
A1-1	838.51	4	124.22	186.34
A1-2	893.53	2.5	82.73	124.10
A1-3	580.55	4	86.01	129.01
A2-1	1317.59	4	195.20	292.80
A2-2	1197.74	4	177.44	266.17
A3-1	256.30	2	18.98	28.48
A3-2 (Excluding Hotspot)	1068.00	5	197.78	296.67
A3-3 (Excluding Hotspot)	859.43	3.5	111.41	167.11
A3-4 (Overlapped with Hotspot)	NA	NA	NA	NA
A4-1 (Excluding Hotspot)	1415.15	4	209.65	314.48
A4-2 (Overlapped with Hotspot)	NA	NA	NA	NA
B1-1	827.85	4	122.65	183.97
B1-2	1477.03	5	273.52	410.29
B2-1	557.94	5	103.32	154.98
B2-2	1313.42	5	243.23	364.84
B2-3	600.13	12	266.72	400.09
B3-1 (Excluding Hotspot)	806.35	11.5	343.45	515.17
B3-2 (Excluding Hotspot)	522.20	8	154.73	232.09
B3-3 (Overlapped with Hotspot)	NA	NA	NA	NA
B3-4 (Excluding Hotspot)	473.76	6	105.28	157.92
C1-1	1645.20	12.5	761.67	1142.50
C1-2	1000.18	6	222.26	333.39
C2-1 (Excluding Hotspot)	441.22	12	196.10	294.15
C2-2 (Excluding Hotspot)	495.94	4	73.47	110.21
C2-3 (Overlapped with Hotspot)	NA	NA	NA	NA
C2-4 (Excluding Hotspot)	551.06	4	81.64	122.46
C3-1 (Excluding Hotspot)	1334.81	4	197.75	296.62
C3-2 (Overlapped with Hotspot)	NA	NA	NA	NA
C4-1	476.65	4	70.62	105.92
C4-2 (Excluding Hotspot)	1199.60	4	177.72	266.58
C4-3	900.26	4	133.37	200.06
H1 (Excluding Conduit)	708.06	20	524.49	786.74
H1 (Terminated at Conduit)	114.08	11	46.48	69.71
H2 (Excluding Conduit)	557.70	16	330.49	495.73
H2 (Terminated at Conduit)	114.40	11	46.61	69.91
H3N	161.26	13	77.64	116.46
H3E	159.01	19.5	114.84	172.26
H3W	160.85	13	77.45	116.17
H3S	158.08	19.5	114.17	171.25
H3C	211.49	14	109.66	164.49
H4N	159.84	7	41.44	62.16
H4E	154.97	7	40.18	60.27
H4W	157.27	4	23.30	34.95
H4S	160.74	7	41.67	62.51
H4C	209.73	7	54.38	81.56
H5	1013.54	16	600.62	900.92
Subtotal - Non-Hotspot	23050.39		4730.91	7096.37
Subtotal - Hotspot	4201.01		2243.40	3365.10
Grand Total			**6974.31**	**10461.47**

NOTE:
THIS PLAN IS FOR LOCATING SAMPLE LOCATIONS ONLY. OTHER SITE WORK SHOWN HERE NOT INTENDED FOR CONSTRUCTION

REFERENCE:
EXISTING CONDITIONS AND BOUNDARY TAKEN FROM SURVEY FOR BLOCK 2756, LOT 85 AND 90, PREPARED BY BIG APPLE LAND SURVEY, DATED AUG 25, 2019.

LEGEND:
- PROPOSED COMPOSITE SOIL REUSE SAMPLE LOCATIONS
- PROPOSED DISCRETE VOC SOIL REUSE SAMPLE LOCATIONS
- A1-1 / C2-3: ENDPOINT NO. AND LOCATION; NA - OVERLAPPED WITH HOTSPOT EXCAVATION
- BROWNFIELD CLEANUP PROGRAM BOUNDARY
- WASTE CHARACTERIZATION GRIDS
- SUBGRID
- UTILITY CONDUIT
- REMEDIAL EXCAVATION TERMINATED AT BEDROCK
- REMEDIAL EXCAVATION BELOW USCOs
- REMEDIAL HOTSPOT EXCAVATION BELOW USCOs
- REMEDIAL EXCAVATION TERMINATED AT BEDROCK
- 4' ESTIMATED DEPTH OF REMEDIAL EXCAVATION
- 18' ESTIMATED DEPTH OF HOTSPOT REMEDIAL EXCAVATION

SCALE: 1" = 10'
0 5 10 20 30 40 FEET

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Y:\GIS\Project_Numbers\11913\FINAL_MAPS, 9/11/2026 1:33 PM, Kim Vanderklein, LAYOUT: FIG-2

by	description	rev	date

dwg by: KBV
chk by: SL
scale: AS NOTED
date: 9/11/2026

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GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

project:
FINAL ENGINEERING REPORT
NORTH AMERICA / PULSE PLASTICS1156 EAST 165TH STREET
AND COAL YARD SITE (NO. C241283)
BRONX, NY 11419

title:
SOIL REUSE AND SAMPLING PLAN

job no.: 11913
drawing no:

FIG-2