Matthew M. Carroll, PE
&
TENEN ENVIRONMENTAL

121 West 27th Street, 702
New York, NY 10001
(646) 606-2332

March 28, 2023; revised May 4, 2023

Jared Donaldson, Assistant Engineer
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7015

Re: Soil Vapor Extraction (SVE) Remedial Design Document
3200 Atlantic Avenue – Brooklyn, NY
Block 4154, Lot 28
BCP Site # C224289

Dear Jared:

In accordance with the approved May 2020 Remedial Action Work Plan (RAWP) prepared by Matthew M. Carroll, PE and Tenen Environmental, LLC (Tenen), the remedy includes the completion of a pilot test to design a soil vapor extraction (SVE) system as well as the installation and operation under a Design Document. Implementation of SVE applying a vacuum to induce removal of volatile organic compounds (VOCs) from unsaturated soils. A pilot test was completed to determine the radius of influence (ROI) within the existing soils in order to treat petroleum-related VOCs in soil.

Background

As documented in Tenen's Remedial Investigation (RI) Report (RIR), petroleum-related VOCs were detected in the soil above their respective Part 375 Protection of Groundwater soil cleanup objectives (SCOs) in the northwest portion (petroleum source area) of the Site.

The highest concentrations of total VOCs and benzene, toluene, ethylbenzene and xylenes (collectively known as BTEX) were detected in on-site soil boring MW-6-S1, located adjacent to the underground storage tanks (USTs) located at the Site. During the RI, BTEX was detected at a maximum total concentration of 1,544 micrograms per kilogram (mg/kg) in boring MW-6-S1 in the 15 to 20 feet below grade (ft-bg) interval.

SVE Pilot Test

The objective of the pilot test was to gain information sufficient to specify the full scale treatment system elements. The pilot test provided site-specific data that assisted in determining the ROI, well placement and system design.

The pilot test was completed in August 2022 by Tenen and included three stages at four wells screened from 15 to 25 ft-bg. Test results are incorporated into the SVE Pilot Test Report by EnviroTrac Engineering PE PC of Yaphank, NY and included in Attachment 1. Pilot test locations are shown on Figure 1 of the Pilot Test Report. Laboratory deliverables for effluent samples collected during the pilot test are included in Attachment 2.

The results of the pilot test indicated a full-scale SVE system "can serve as an effective means of remediation for the remaining area of contamination." The pilot test indicated that an effective ROI of 35 feet would be attainable with a minimum vacuum of ten inches of water column (in-wc) at 55 cubic feet per minute (cfm).

SVE Design

The system will consist of four SVE wells located within the remaining impacted soil interval (all soils above 15 ft-bg and in most areas to 17 ft-bg have been excavated; the USTs were also disposed off-site). The wells are generally located at the same locations as those in the pilot test. The SVE wells will be constructed of 10-slot, two-inch diameter PVE. Three vacuum monitoring points (VMPs) will be installed. The SVE wells and VMPs are shown on Figures 3 and 4 of the Pilot Test Report.

The wells will be connected via two-inch diameter sub-grade PVC piping and above-grade galvanized steel piping to a three-inch diameter galvanized manifold header with ball valves to balance the vacuum and flow between the extraction points. The manifolded flow will go through a moisture separator, an air filter and a two-horsepower regenerative blower and then treated through two 55-gallon vapor phase carbon absorbers connected in series. The exhaust will be above the roof of the new building. The system layout is shown in Figure 5 of the Pilot Test Report.

The SVE system was installed following excavation of the cellar level (including the soil source area) and will be operated during building construction. The location of the equipment (blower, controls, carbon drums) will be on the first floor in an enclosure; however, the exhaust height will be variable. If operation of the system is to continue post building construction, the final location of the equipment will be included in the Site Management Plan (SMP).

Treatment Zone

The treatment zone based on the Remedial Investigation (RI) findings is approximately 4,000 square feet, as shown on Figure 1. The actual area to be treated will be approximately 10,000 square feet, as also shown on Figure 1. The treatment interval will be approximately 3 to 11 feet below cellar slab grade (or approximately 18 to 25 ft-bg). The well construction and treatment depth are shown on Figure 10.

SVE System Components

The SVE components and layouts are shown on Figures 7 through 10. lThe SVE system includes a 5 hp regenerative blower (Ametek-Rotron model EN757F72XL-7AT16). The blower will include a dual connection inline filter (Ametek-Rotron model 515254) to prevent abrasion of the vanes during operation. The specification sheets for the blower are included in the Pilot Test Report. The SVE system will operate at approximately 220 cfm and 40 in-wc (to account for system losses).

The effluent from the blower will be treated through two vapor phase granular activated charcoal (GAC) units in series before discharging to the atmosphere. Each carbon vessel contains 170-175 pounds of virgin vapor phase carbon (TIGG Corporation, Econosorb-V or similar). The drums will connected in series and include a sampling port located between the two units.

Treated effluent will be discharged though a two-inch diameter PVC pipe which will extend approximately three feet above the highest building level and at least ten feet from any air intake.

System Start-up

Following installation of the SVE system, the following actions will be completed during system start-up:

- check all exposed/visible piping for evidence of damage, cracks or leaks;
- turn system on and off to ensure the controls are functioning properly;
- record the vacuum reading at blower;
- record vacuum readings at the VMPs; and,
- collect photoioniziation detector (PID) readings before, between and after the carbon vessels.

The system testing described above will be conducted whenever the SVE system is restarted including after any significant changes are made to the system.

A visual inspection of the complete system will be conducted during each monitoring event. SVE system components to be monitored include, but are not limited to, the following:

- vacuum blower;
- observable system piping;
- vacuum gauges at blower;
- control switches; and
- PID readings before, between and after the carbon vessels.

The SVE system components are not adjustable and the regenerative blower shall not be serviced or repaired at the Site. The manifold contains ball valves that can be adjusted to balance the flow in the subsurface.

Remedial Performance Monitoring

Vapor samples will be collected on a quarterly basis to evaluate the performance of the system during the first six months of operation. PID readings and vapor samples will be collected from the system influent (before the carbon canisters), between the carbon canisters and from the system effluent (after the carbon canisters). Air samples will be submitted to a NYSDOH ELAP-certified laboratory for analysis of VOCs by USEPA Method TO-15.

Initial vapor concentrations will be high as accumulated vapors are removed with accelerated carbon depletion rates. Carbon usage will diminish over the first month as the accumulated vapors are removed soils. Carbon drums will be set up in series and PID readings and vapor samples collected between the drums will be utilized to determine when breakthrough occurs at the first drum. When this occurs, the drum will be changed out and shipped back to the supplier for regeneration. If nuisance odors are observed from the discharge at any time, operation of the system will be temporarily halted until the situation is remedied by changing out the carbon or through other necessary repairs / actions (loose valve / fitting, broken pipe, etc.).

Reporting

Laboratory reports will include ASP Category B data deliverables for use in the preparation of data usability summary reports (DUSRs). All results will be provided in accordance with the NYSDEC Environmental Information Management System (EIMS) electronic data deliverable (EDD) format.

A letter report will be prepared after each quarterly air sampling event and will include, at a minimum:

- date of event;
- personnel conducting sampling;
- description of the activities performed;
- description of samples collected;
- copies of all field forms;
- sampling results in comparison to appropriate standards/criteria;
- a figure illustrating the sample type and sampling locations;
- copies of all laboratory data deliverables;
- any observations, conclusions, or recommendations; and
- a determination as to whether conditions have changed since the last reporting event.

All performance monitoring and/or final post-remedial sampling analysis will be included in the Final Engineering Report (FER) and, if necessary, in post-Certificate of Completion (COC) Period Review Reports (PRRs).

Conclusions

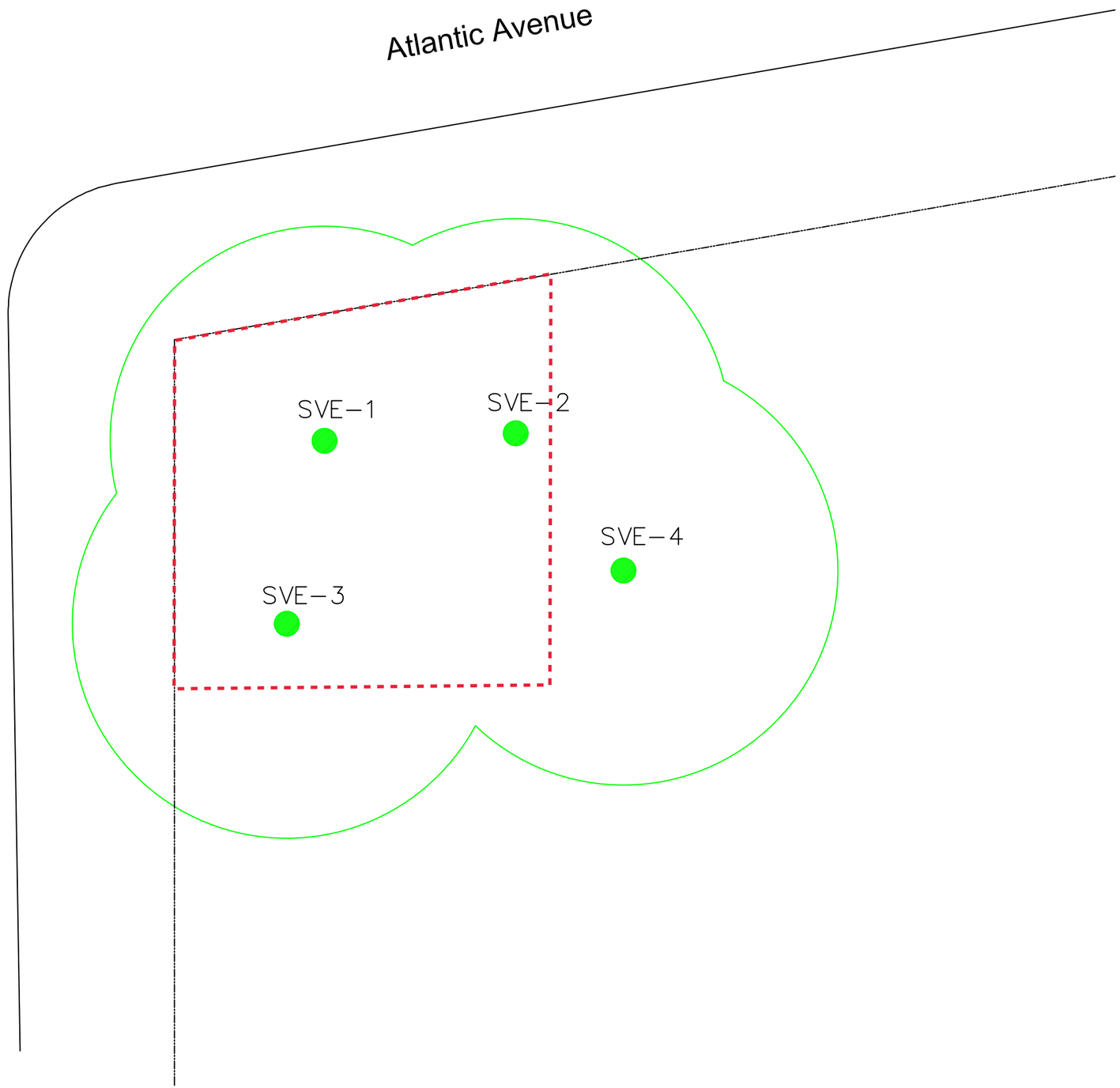
SVE is a viable alternative for remediation of petroleum-related VOCs in soil. The SVE system will treat remaining contaminated soil below 15 ft-bg and above the groundwater interface. The pilot test demonstrated that an effective ROI of 35 feet can be achieved. The selected SVE components will be installed and operated to treat the remaining petroleum-related VOCs in soil.

Please contact us if you require any additional information.

Sincerely,
Tenen Environmental, LLC

Matthew Carroll, P.E.
Principal / Environmental Engineer

Attachment 1: SVE Pilot Test Report
Attachment 2: Laboratory Deliverables



LEGEND:

- SVE WELL
- PROPOSED SVE RADIUS OF INFLUENCE = 35 FT

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ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

0 20
SCALE IN FEET

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PROPOSED SVE RADIUS OF INFLUENCE MAP

FIGURE #
1

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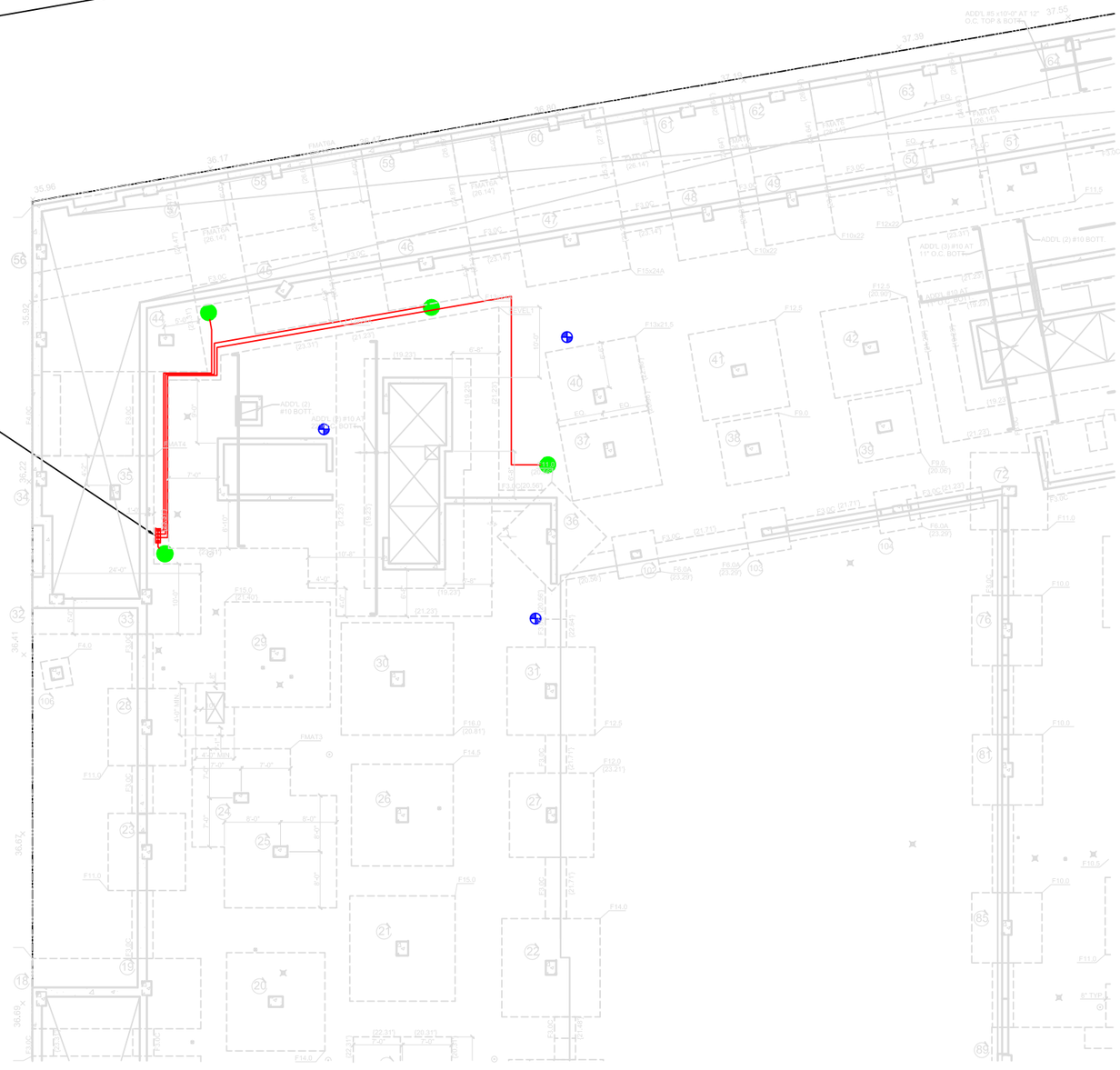
091629
LICENSED PROFESSIONAL ENGINEER

Atlantic Avenue

Logan Street

SVE PIPE STUB-UPS
ALL 4 PIPES TO BE EXTENDED
TO FIRST FLOOR



LEGEND:

- PROPOSED SVE WELL
- PROPOSED MONITORING POINT
- BELOW GRADE 2"ø SCH 40 PVC EXTRACTION PIPING

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PROPOSED SVE SYSTEM LAYOUT
WITH PARTIAL FOUNDATION PLAN

FIGURE #
2

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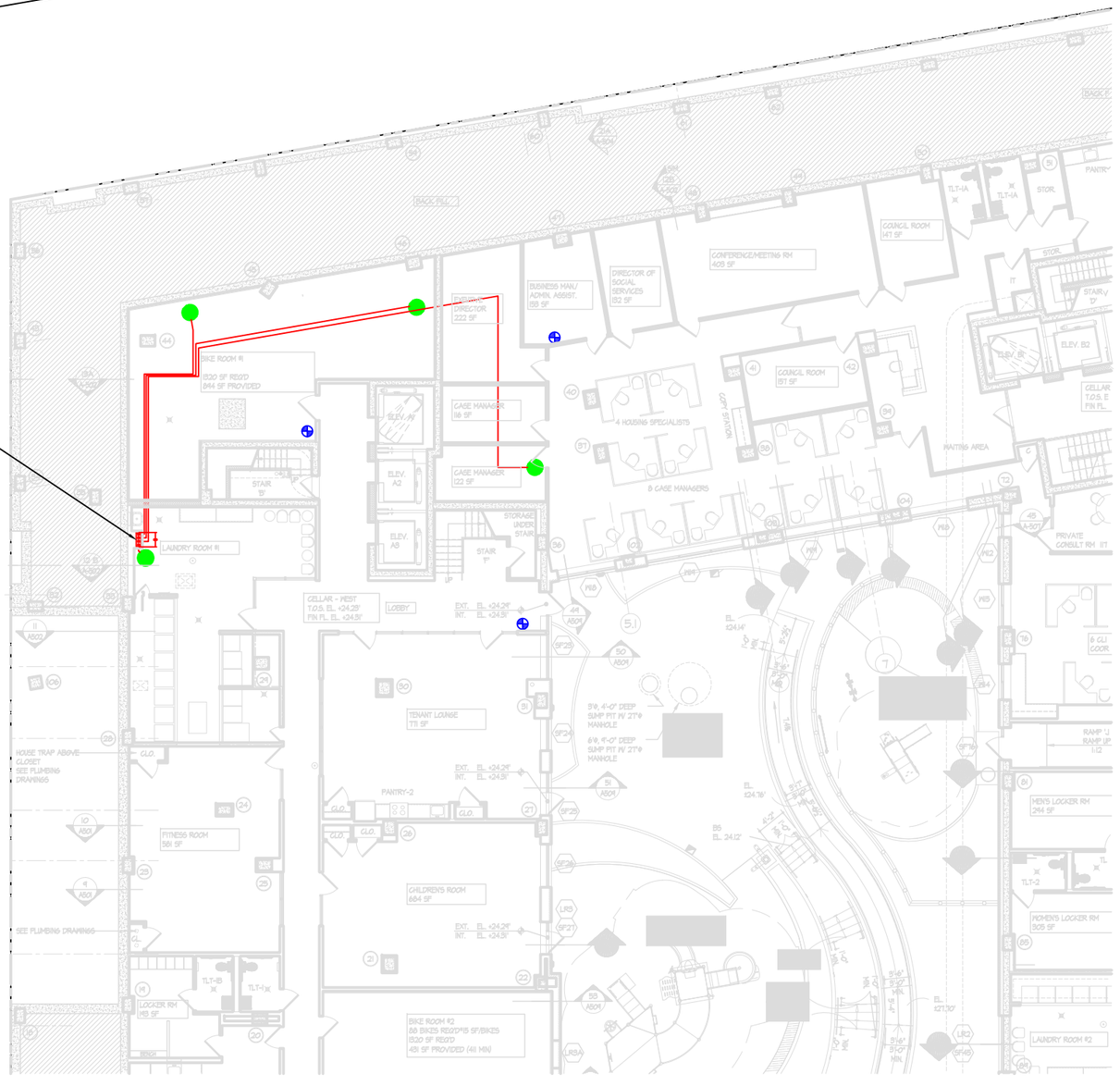
LICENSED PROFESSIONAL ENGINEER
091629

Atlantic Avenue

Logan Street

SVE PIPE STUB-UPS
ALL 4 PIPES TO BE EXTENDED
TO MANIFOLD ON FIRST FLOOR



LEGEND:

- PROPOSED SVE WELL
- PROPOSED MONITORING POINT
- BELOW GRADE 2"ø SCH 40 PVC EXTRACTION PIPING

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PROPOSED SVE SYSTEM LAYOUT
WITH PARTIAL CELLAR FLOOR PLAN

FIGURE # 3

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091629
LICENSED PROFESSIONAL ENGINEER

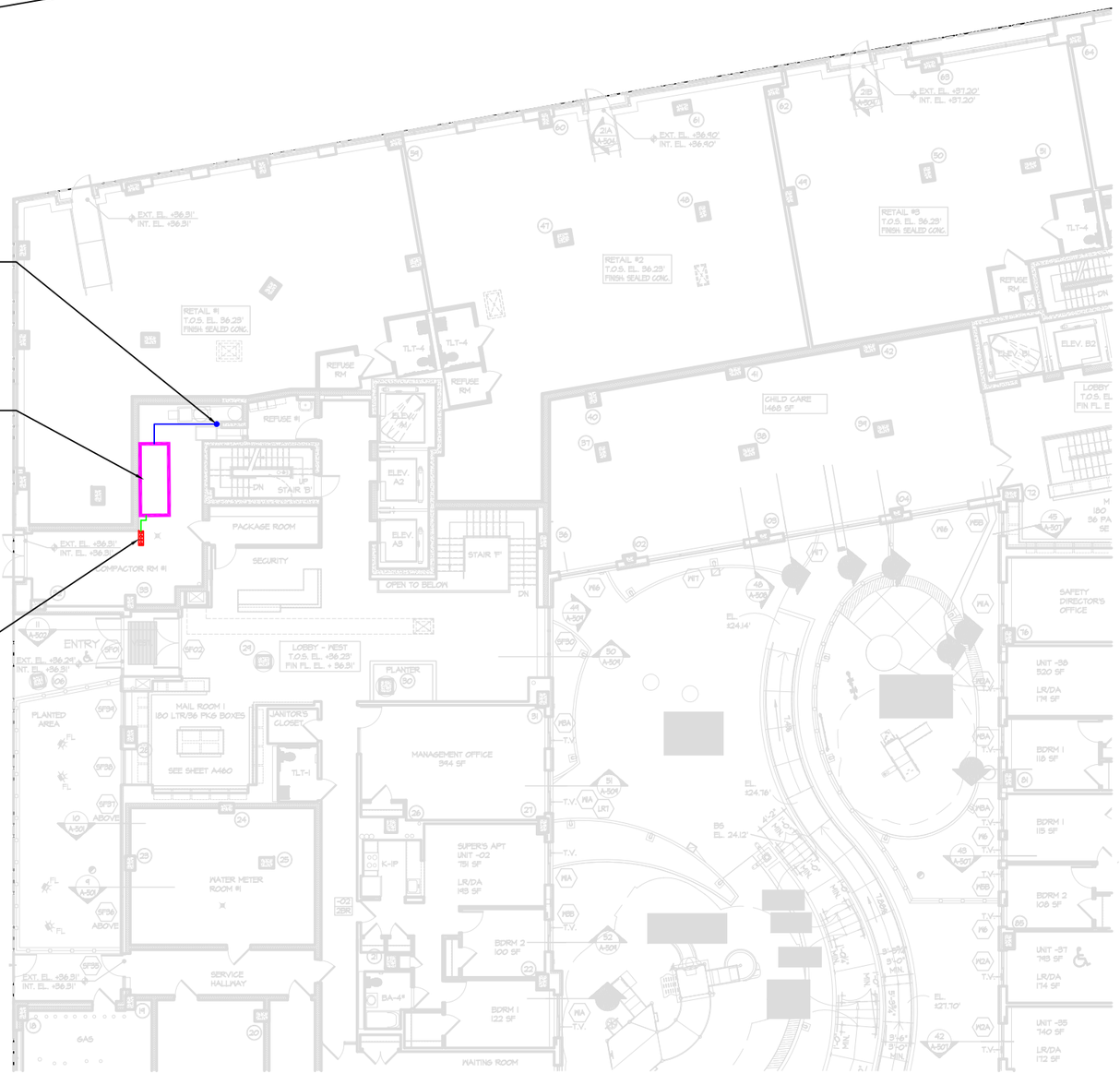
Atlantic Avenue

Logan Street

4Ø SCH 40 GAL STEEL SVE DISCHARGE PIPE TO 2ND FLOOR

SVE EQUIPMENT ENCLOSURE LOCATION

2" GAL STEEL SVE PIPES FROM CELLAR



LEGEND:

- EFFLUENT 4"ø GAL STEEL PIPING TO DISCHARGE POINT
- INFLUENT 4"ø GAL STEEL PIPING FROM MANIFOLD IN CELLAR

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PROPOSED SVE SYSTEM LAYOUT WITH PARTIAL FLOOR PLAN OF 1ST FLOOR

FIGURE # 4

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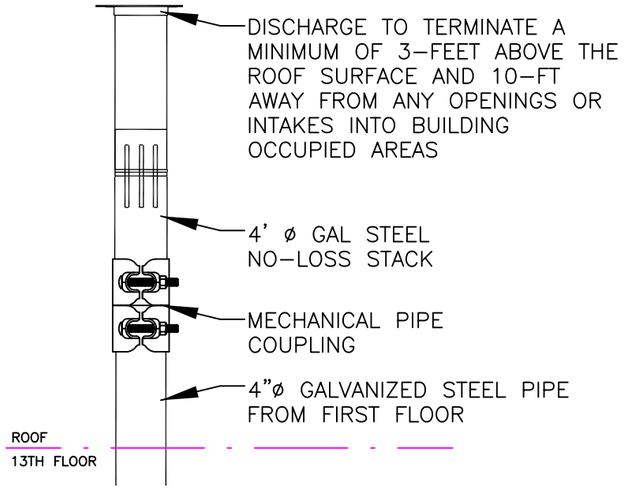
4"Ø GAL STEEL
SVE DISCHARGE
PIPE TO ROOF

EnviroTrac ENVIRONMENTAL SERVICES 5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980 PHONE: (631)924-3001 FAX: (631)924-5001	0 10 SCALE IN FEET REVISION DATE: 3/28/2023 REVISED BY: JW	3200 ATLANTIC AVENUE BROOKLYN, NEW YORK	PROPOSED SVE DISCHARGE VERTICAL PIPING PLAN FOR FLOORS 2-13	FIGURE # 5

DISCHARGE STACK DETAIL



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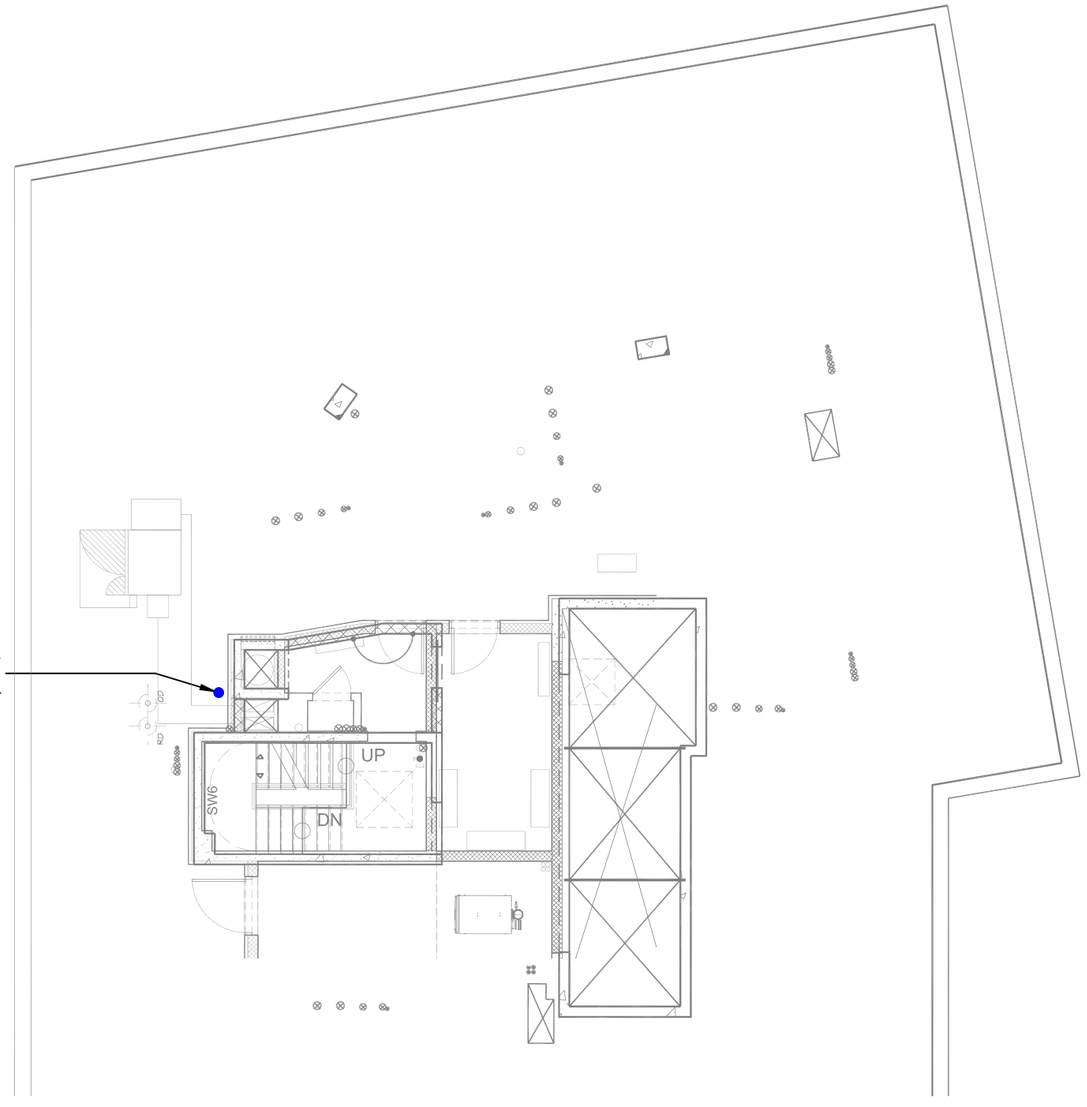
LICENSED PROFESSIONAL ENGINEER

ROOF PLAN

DISCHARGE STACK
4"Ø GAL STEEL



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PROPOSED SVE DISCHARGE STACK DETAILS

FIGURE #
6

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LICENSED PROFESSIONAL ENGINEER

SENSAPHONE SENTINEL REMOTE MONITOR

MAIN CONTROL PANEL

TO 4"ø GAL STEEL DISCHARGE STACK

FRESH AIR INTAKE FILTER F-2

EXHAUST FAN EX-1

THERMOSTAT

4" GAL STEEL

INLINE AIR FILTER F-1

4" GAL STEEL

MOISTURE SEPARATOR T-1

LSHH 1

LAH

LSH

LSL

HOA HS P-1

MSF P-1

ON

1"ø SS

VENT TO OUTSIDE

VAL

VT

HS B-1 HOA

MSF B-1

HRS

STORAGE DRUM T-2

LAH

LSHH 2

VRV

4"ø GALVANIZED STEEL PIPING

SILENCER

SP-1

SP-2

SP-3

VGAC-1

VGAC-2

TRANSFER PUMP P-1

REGENERATIVE BLOWER B-1

EXTENT OF SVE SYSTEM ENCLOSURE TO BE LOCATED ON THE FIRST FLOOR CLASS 1, DIV 2 HAZARDOUS LOCATION

SVE MANIFOLD TO BE LOCATED IN CELLAR

4"ø GAL STEEL

2" GAL STEEL

SP

2" SCH 40 PVC

SUBSURFACE PIPING TO EXTRACTION WELLS

SVE-1 SVE-2 SVE-3 SVE-4

SYSTEM LEGEND:

- VACUUM GAUGE
- TEMPERATURE GAUGE
- PRESSURE GAUGE
- ROTAMETER FLOWMETER
- LS — LEVEL SWITCH
- VT — VACUUM TRANSMITTER
- BUTTERFLY VALVE
- BALL VALVE
- SP — SAMPLE PORT
- VRV — VACUUM RELIEF VALVE
- CHECK VALVE
- UNION
- HS — HAND SWITCH PANEL MOUNTED
- HRS — RUN TIME METER
- CONTROL PANEL INDICATOR LIGHT
- CONTROL PANEL INTERLOCK
- ELECTRIC LINE
- AIR FLOW DIRECTION
- CONDENSATE WATER FLOW DIRECTION
- ENCLOSURE LIMITS

HMI INDICATOR INDEX:

- LAH — LEVEL ALARM HIGH
- VAL — VACUUM ALARM LOW
- MSF B-1 — MOTOR STARTER FAULT
- ON — MOTOR RUN INDICATOR

INTERLOCK SCHEDULE:

1. HIGH LEVEL IN T-1 – SHUT DOWN B-1, SEND ALARM NOTIFICATION..
2. LOW OR HIGH BLOWER VACUUM – SHUT DOWN B-1, SEND ALARM NOTIFICATION.
3. LEVEL AT LSH – TURN ON P-1.
4. LEVEL BELOW LSL – TURN OFF P-1.
5. HIGH LEVEL IN T-2 – SEND WARNING NOTIFICATION, DISABLE P-1.

NOTES:

BLOWER B-1: ROTRON MODEL NO: EN757F72XL-7AT16 (5.0 HP, 3 PH, XP)
PUMP P-1: GOULDS MODEL NO: GTO73TE (0.75 HP, 3 PH, TEFC)

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SVE SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

FIGURE # 7

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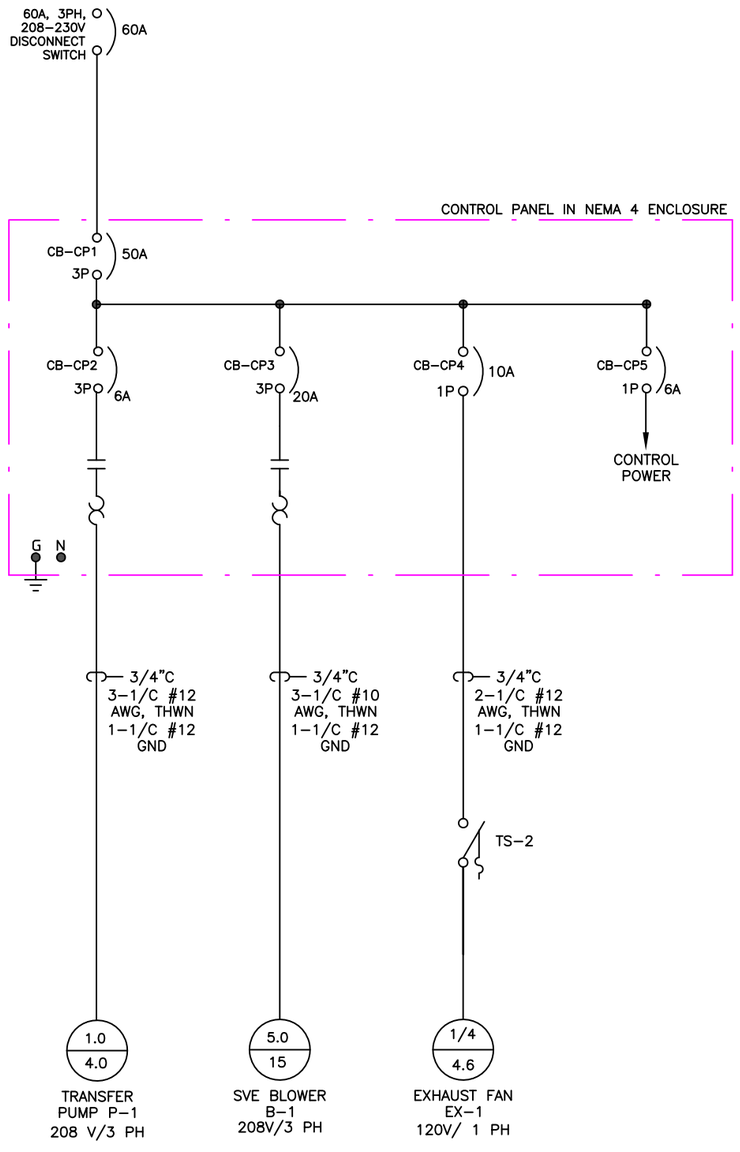

LEGEND:

- 3P, 30A — THERMAL MAGNETIC CIRCUIT BREAKER (RATINGS AS SHOWN)
- FULL VOLTAGE NON-REVERSING MOTOR STARTER
- OVERLOAD RELAY
- HP / FLA — MOTOR LOAD
- CB-X, 1P, 20A — CURCUIT BREAKER (RATINGS AS SHOWN)
- THERMOSTAT
- DS-1, 1P, 15A — DISCONNNECT SWITCH

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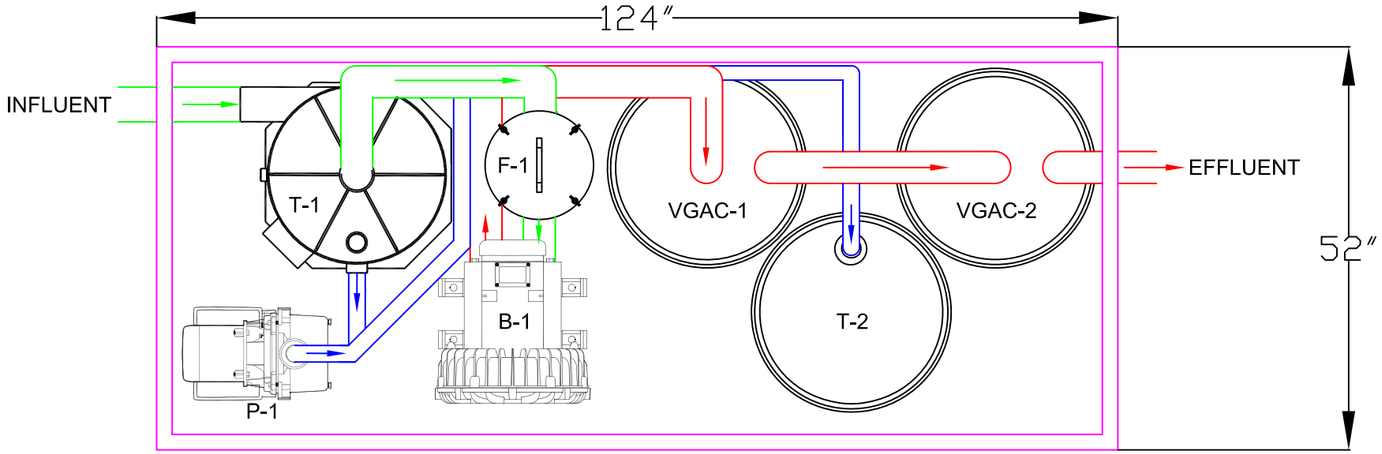
SVE SYSTEM SINGLE LINE POWER DIAGRAM

FIGURE # 8

SYSTEM ENCLOSURE PLAN VIEW



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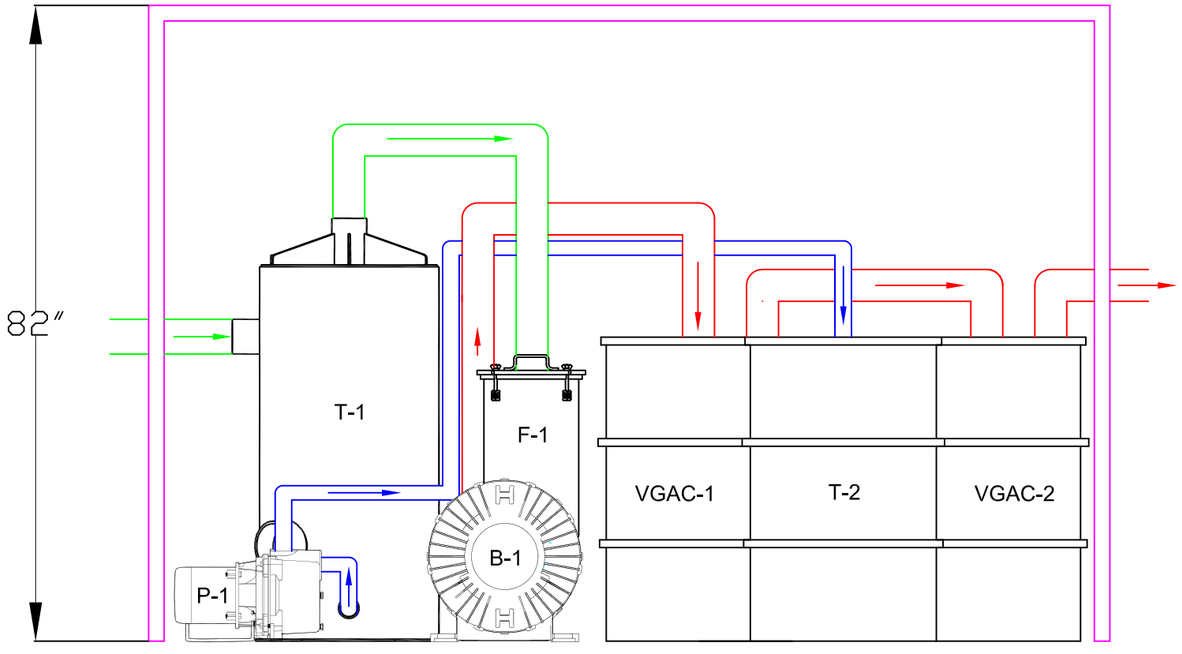
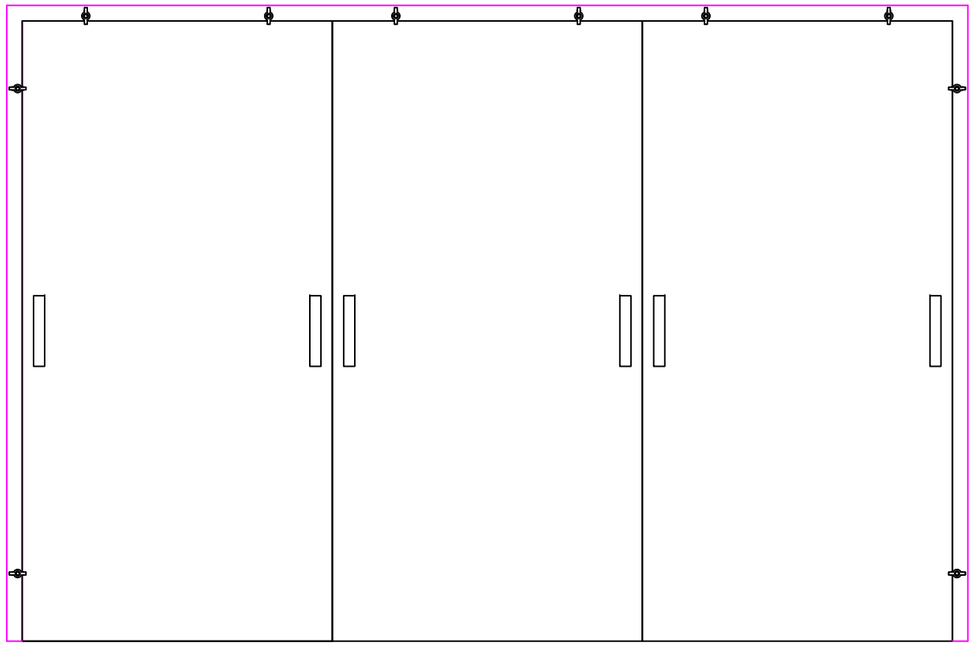
SYSTEM ENCLOSURE ELEVATION VIEW (OPEN)



SYSTEM ENCLOSURE ELEVATION VIEW (CLOSED)



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SVE SYSTEM EQUIPMENT LAYOUT

FIGURE # 9

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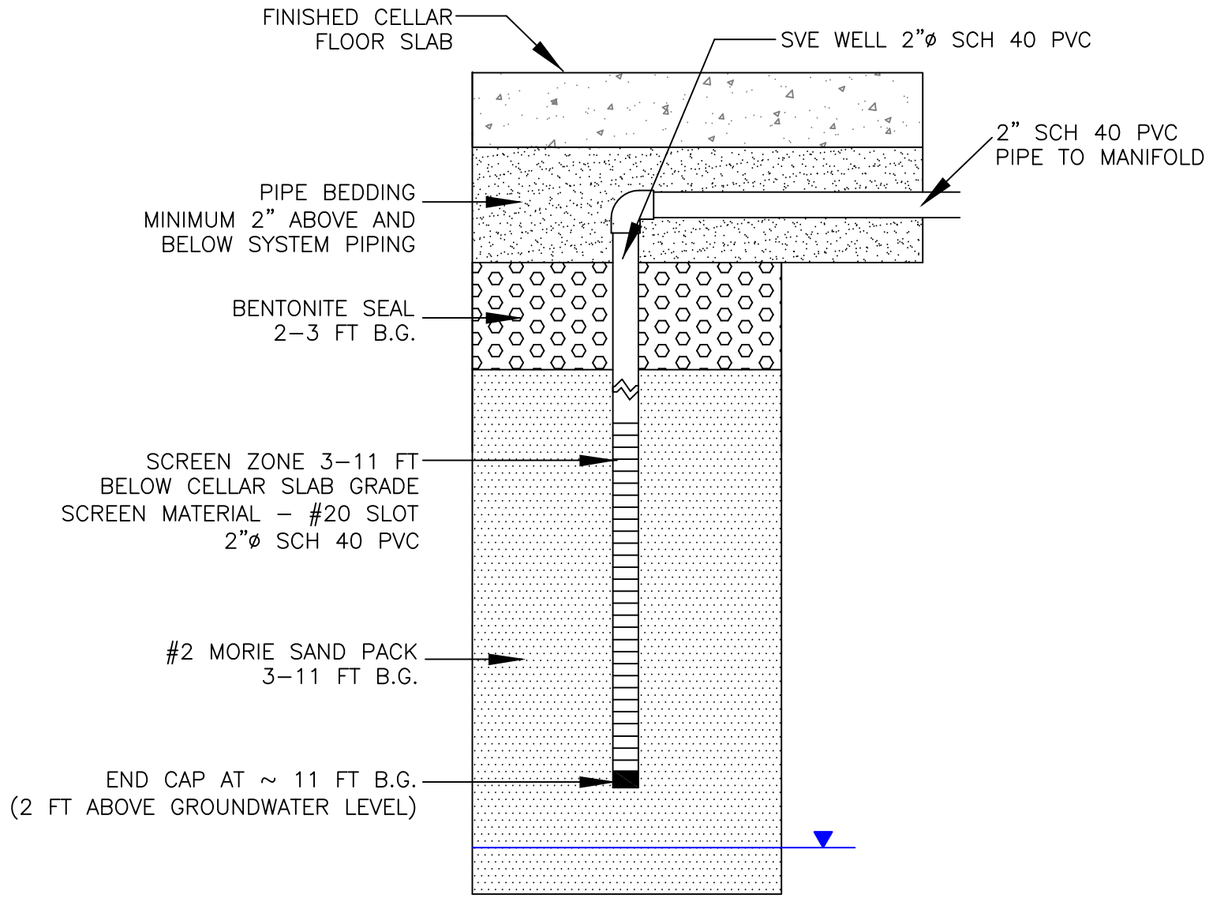
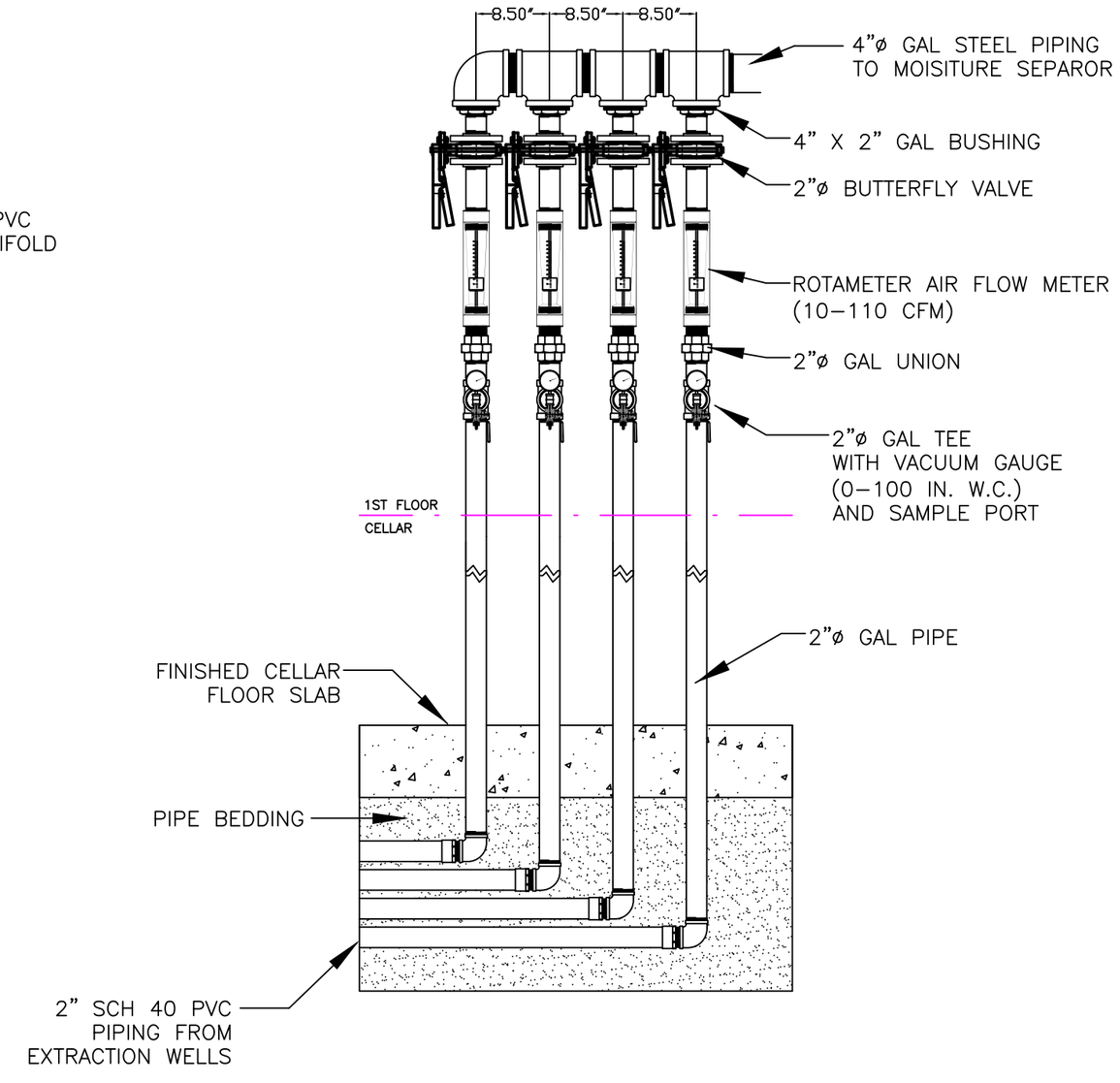
LICENSED PROFESSIONAL ENGINEER

SOIL VAPOR EXTRACTION WELL



SOIL VAPOR EXTRACTION MANIFOLD



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SVE SYSTEM CONSTRUCTION DETAILS

FIGURE # 10

Attachment 1: SVE Pilot Test Report

Soil Vapor Extraction (SVE) Pilot Test Report

Site:

3200 Atlantic Avenue
Brooklyn, New York

Prepared for:

Tenen Environmental
121 West 27th Street, Suite 702
New York, New York 10001

Prepared by:

EnviroTrac Engineering PE PC
5 Old Dock Road
Yaphank, NY 11980

March 2023

Soil Vapor Extraction (SVE) Pilot Test Report
3200 Atlantic Avenue, Brooklyn, New York.

PURPOSE

This report is intended to summarize the results of the SVE pilot study that was conducted by Tenen Environmental on August 22, 2022. The purpose of the test was to determine the feasibility of implementing a full scale SVE system as a viable means of remediating the remaining areas of contamination. The results of this study were used to determine the required operating parameters and layout for the final remediation system.

PILOT TEST SPECIFICATIONS

1. **Soil Vapor Extraction Equipment**

- Extraction Blower – Ametek Rotron Inc. Model #DR505AW58M, Regenerative Vacuum Blower (2-HP, 115/230V, 1 Phase).
    - Max Flow: 150 SCFM
    - Max Vac: 70 "H_2O

2. **Test Wells**

Four (4) soil vapor extraction wells (SVE-1, SVE-2, SVE-3, and SVE-4) were tested. Each well was screened from 15-25' below grade. To monitor the subsurface vacuum response, several vacuum monitoring points were installed extending radially outward from the test points. The location of each test well can be seen in **Figure 1**.

SVE/SVE TESTING METHODOLOGY

Each extraction well was tested at varying operational conditions. During each test, the vacuum blower was configured to operate at three different steps of increasing flow and vacuum. During each step, operating parameters such as applied flow, vacuum, and subsurface vacuum responses were recorded. Due to the limits of the monitoring instruments used some of the applied vacuum readings were estimated based on the blower performance curve and the performance of the other test wells. For remedial design purposes the applied vacuum and extraction flow rate for each step were entered as the following:

<u>SVE-1</u>

- Step 1 – 3.5 "H_2O Wellhead Vacuum, 36 cfm Extraction Flow Rate.
- Step 2 – 14 "H_2O Wellhead Vacuum, 90 cfm Extraction Flow Rate.
- Step 3 – 20 "H_2O Wellhead Vacuum, 127 cfm Extraction Flow Rate.

<u>SVE-2</u>

- Step 1 – 3.1 "H_2O Wellhead Vacuum, 32 cfm Extraction Flow Rate.
- Step 2 – 15.1 "H_2O Wellhead Vacuum, 102 cfm Extraction Flow Rate.
- Step 3 – 22.1 "H_2O Wellhead Vacuum, 153 cfm Extraction Flow Rate.

EnviroTrac

SVE-3

- Step 1 – 2.7 "H_2O Wellhead Vacuum, 29 cfm Extraction Flow Rate.
- Step 2 – 15.4 "H_2O Wellhead Vacuum, 91 cfm Extraction Flow Rate.
- Step 3 – 20.4 "H_2O Wellhead Vacuum, 123 cfm Extraction Flow Rate.

SVE-4

- Step 1 – 3.5 "H_2O Wellhead Vacuum, 27 cfm Extraction Flow Rate.
- Step 2 – 9.9 "H_2O Wellhead Vacuum, 69 cfm Extraction Flow Rate.
- Step 3 – 11.7 "H_2O Wellhead Vacuum, 131 cfm Extraction Flow Rate.

During each step vacuum influence was recorded from all monitoring points utilizing a handheld digital manometer. Due to monitoring point MP-4 never showing a vacuum response, the data recorded from it was not used in the system design calculations.

PILOT TESTING RESULTS

The field data collected during the SVE pilot test is included as an attachment to this report. Flow and vacuum readings were recorded during each step of the SVE test, while vacuum influence was measured at each observation point. A copy of the pilot test data analysis, along with the associated data plots, are also included as attachments to this report.

To determine the performance requirements at the proposed SVE extraction wells, the pilot test data was used to generate a semi-logarithmic plot of the sub-slab vacuum response vs. the distance from the extraction well. From this plot the effective Radius of Influence (ROI) of each pilot test step is determined by finding the radial distance where the vacuum response equals 0.10" H_2O vacuum response.

In order to have vacuum influence coverage over the complete area of concern an ROI of 35 ft was chosen for each extraction well. To produce an ROI of 35 ft each well had the following minimum performance requirements:

- SVE-1 wellhead vacuum of 7.0 "H_2O, extraction flow rate of 54 cfm.
- SVE-2 wellhead vacuum of 7.8 "H_2O, extraction flow rate of 60 cfm.
- SVE-3 wellhead vacuum of 9.9 "H_2O, extraction flow rate of 66 cfm.
- SVE-4 wellhead vacuum of 5.0 "H_2O, extraction flow rate of 39 cfm.

CONCLUSIONS

Based on the results tabulated, the pilot testing performed demonstrates that a full-scale SVE system can serve as an effective means of remediation for the remaining area of contamination. If a target ROI of 35 feet is selected for each proposed extraction point, it was determined that a minimum vacuum of 10 "H_2O and average extraction air flow rate of 55 CFM would need to be applied at each point. **Figure 2** shows the proposed radius of influence coverage.

Recommended Design Parameters (each extraction point):

- Target Radius of Influence (ROI): 35 feet
- Applied Vacuum: 10.0 "H_2O
- Average Extraction Flow Rate: 55 CFM

Recommended Design Parameters (Total System Performance, 4 Wells):

- Target Radius of Influence (ROI): 35 feet (per well)
- Fan Vacuum: 40 "H_2O (inc. SF for system losses)
- Fan Total Flow Rate: 220 CFM
- Proposed Extraction Blower: Ametek Rotron Model #EN757F72XL

SVE SYSTEM SPECIIFCATIONS

To provide adequate coverage of the remaining area of contamination it is proposed to install a full-scale remediation system consisting of four (4) 2-inch diameter SVE wells. Each well will be piped to a common manifold using 2-inch diameter SCH 40 PVC pipe below grade and 2" galvanized steel pipe above grade. The manifold header shall be constructed of 3-inch diameter SCH 40 galvanized steel pipe. Each leg of the manifold shall contain a butterfly valve, vacuum gauge, and air flow meter. The common header pipe shall be piped to the system equipment room that will house the moisture separator, air filter, extraction blower, carbon vessels, transfer pump, and condensate storage drum. The effluent pipe shall exhaust to the atmosphere at a location that is at least 2-feet above the roofline and 10-ft from any opening to the building occupied spaces.

To monitor the system performance three (3) vacuum monitoring points (VMPs) should be installed in the locations indicated in **Figures 3 & 4. Figure 5** is the system process flow diagram. A specification sheet for the proposed extraction blower is attached.

FIGURES

- Figure 1: Soil Vapor Extraction Pilot Test Layout
- Figure 2: Proposed SVE Radius of Influence Map
- Figure 3: Proposed SVE System Layout with Foundation Plan
- Figure 3: Proposed SVE System Layout with Cellar Floor Plan
- Figure 4: SVE System Process Flow Diagram

ATTACHMENTS

1. SVE Pilot Test Data
2. SVE Pilot Test Data Analysis
3. Proposed SVE Blower Specification Sheet

FIGURES

LEGEND:

- SVE TEST EXTRACTION WELL
- SVE TEST MONITORING POINT

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

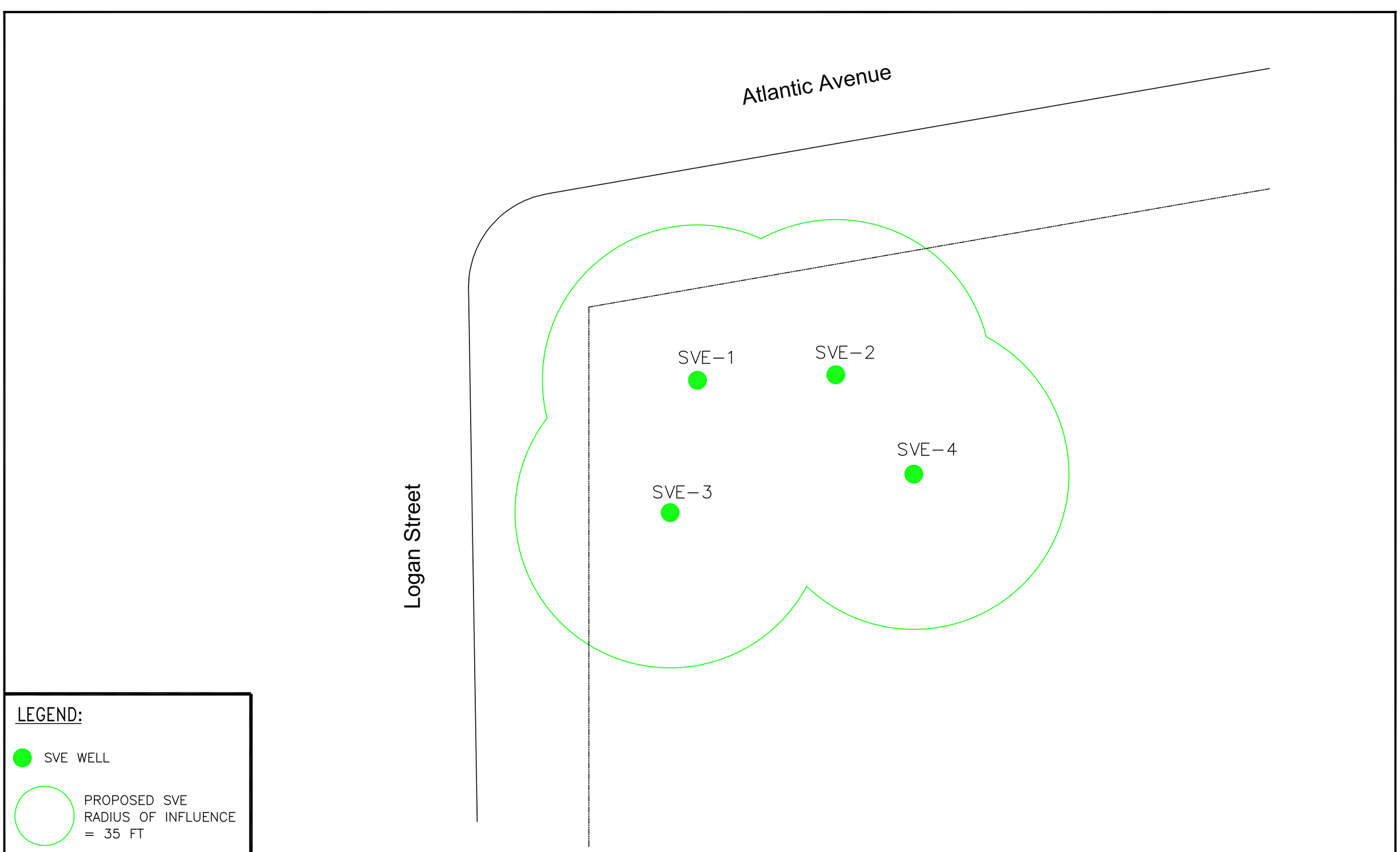
0 20
SCALE IN FEET

REVISION DATE: 3/14/2023 REVISED BY: JW

3200 ATLANTIC AVENUE
BROOKLYN, NEW YORK

SOIL VAPOR EXTRACTION PILOT TEST LAYOUT

FIGURE # 1



LEGEND:

SVE WELL

PROPOSED SVE RADIUS OF INFLUENCE = 35 FT

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3200 ATLANTIC AVENUE
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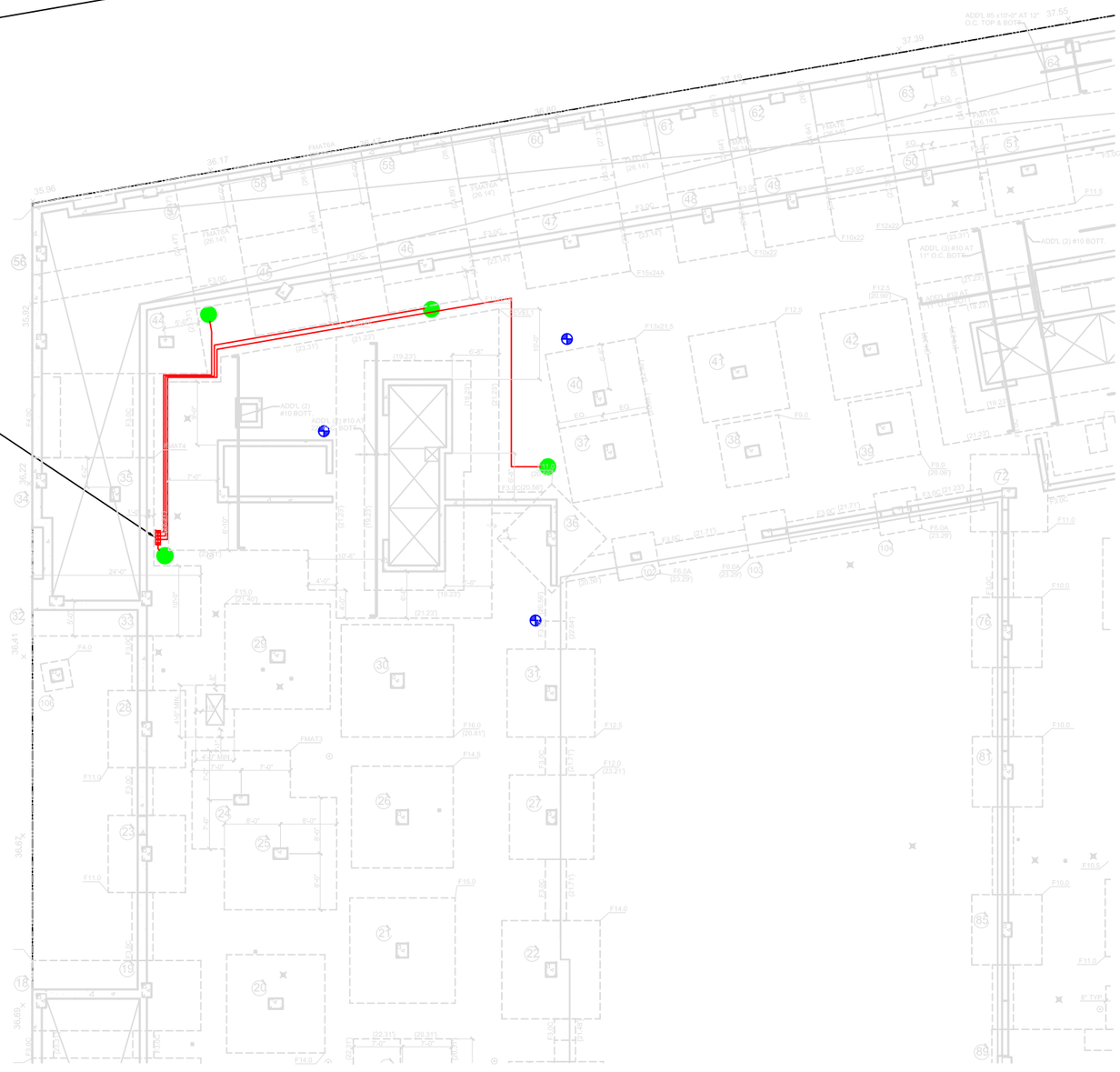
PROPOSED SVE RADIUS OF INFLUENCE MAP

FIGURE # 2

Atlantic Avenue

Logan Street

SVE PIPE STUB-UPS
ALL 4 PIPES TO BE EXTENDED
TO FIRST FLOOR



LEGEND:

- PROPOSED SVE WELL
- PROPOSED MONITORING POINT
- BELOW GRADE 2"ø SCH 40 PVC EXTRACTION PIPING

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0 20
SCALE IN FEET

REVISION DATE: 3/28/2023

REVISED BY: JW

3200 ATLANTIC AVENUE
BROOKLYN, NEW YORK

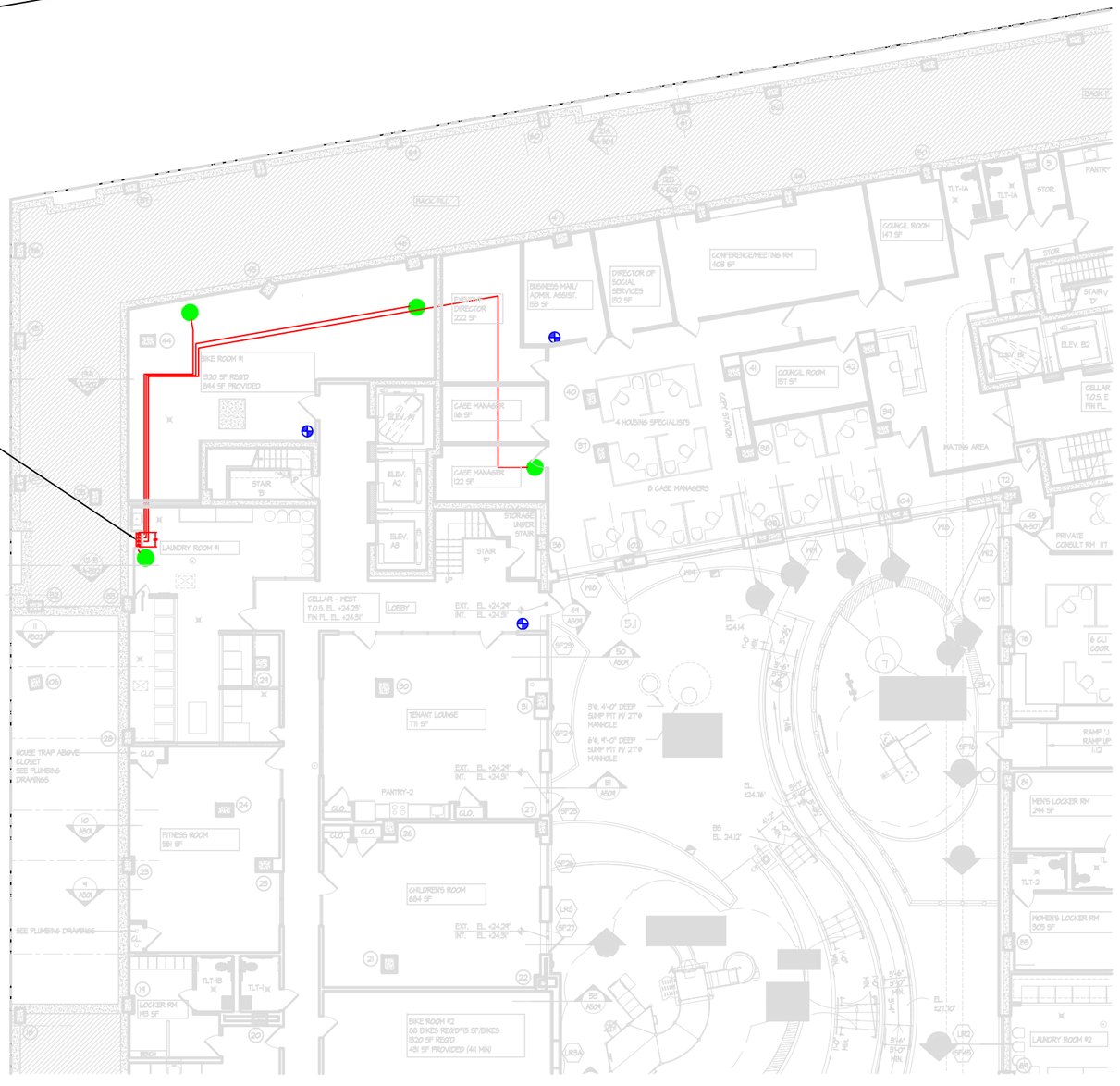
PROPOSED SVE SYSTEM LAYOUT
WITH PARTIAL FOUNDATION PLAN

FIGURE #
3

Atlantic Avenue

Logan Street

SVE PIPE STUB-UPS
ALL 4 PIPES TO BE EXTENDED
TO MANIFOLD ON FIRST FLOOR



LEGEND:

- PROPOSED SVE WELL
- PROPOSED MONITORING POINT
- BELOW GRADE 2"ø SCH 40 PVC EXTRACTION PIPING

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ENVIRONMENTAL SERVICES
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0 20
SCALE IN FEET

REVISION DATE: 3/28/2023

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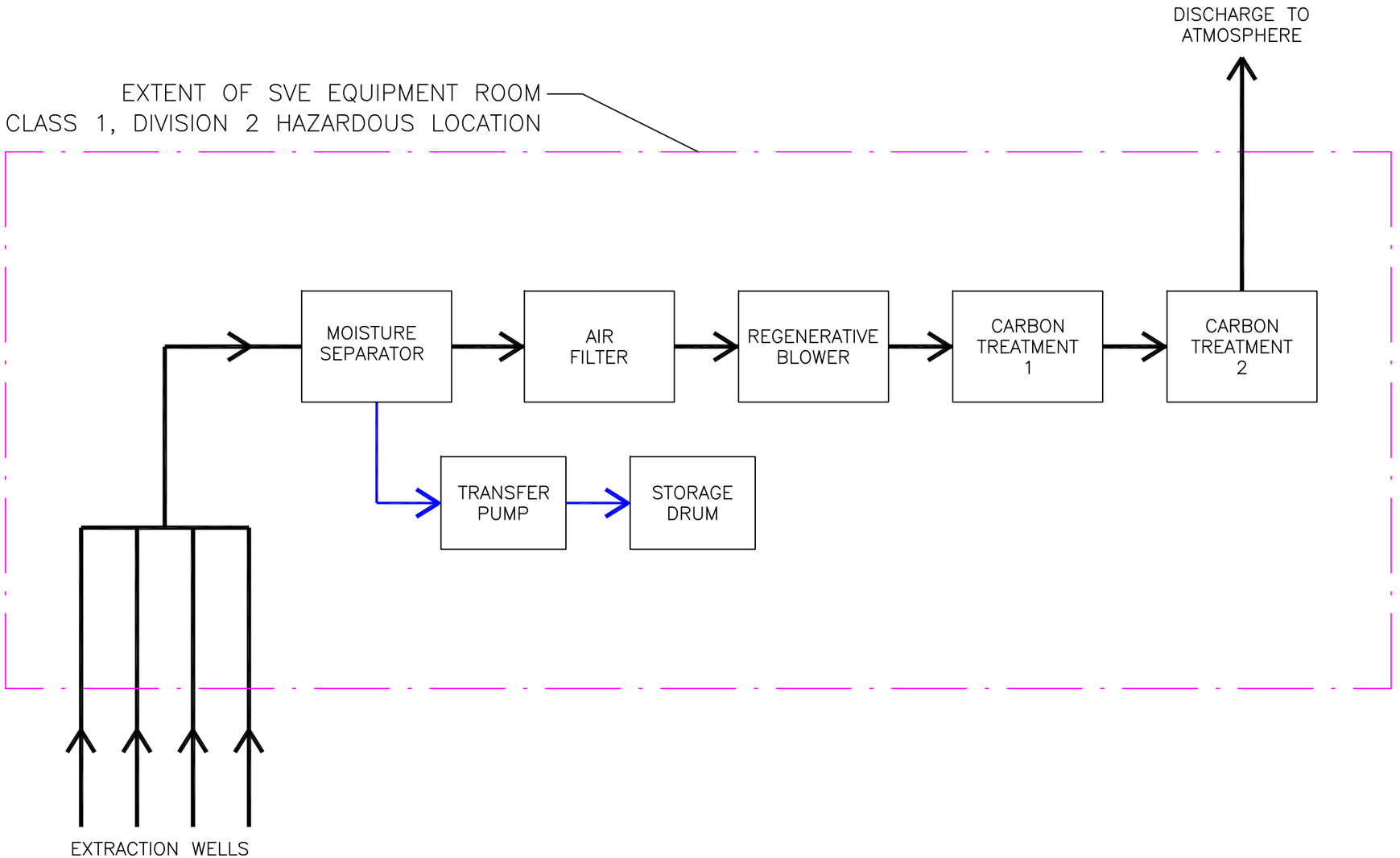
PROPOSED SVE SYSTEM LAYOUT
WITH PARTIAL CELLAR FLOOR PLAN

FIGURE #
4



LEGEND:

AIR FLOW DIRECTION

CONDENSATE WATER FLOW DIRECTION

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ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
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REVISED BY: JW

3200 ATLANTIC AVENUE
BROOKLYN, NEW YORK

SVE SYSTEM PROCESS FLOW DIAGRAM

FIGURE # 5

ATTACHMENTS

Atlantic Chestnut - Lot 1
250 Euclid Avenue, Brooklyn, NY
L1-SVE-08 Pilot Test Worksheet

Pilot Test Data - SVE-1

Site: 3200 Atlantic Avenue
Brooklyn, New York
Personnel: M. Carroll, V. Chang, Z. Madeira
Date: 8/22/2022

Weather: Overcast/Light Rain
Temperature: 72-22 °F
Barometric Pressure: 29.95 inHg
Wind Speed/Direction: West @ 4-9 mph

Step Test: 1 (100% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-1	3.457	36.13	
Vapor Monitoring Point ID	**Induced Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.495	8.8	S
MP-2	0.396	11.6	NE
MP-3	0.104	32.9	E
MP-4	0.000	21.7	SE
MP-5	0.085	29.9	SE

Step Test: 2 (50% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-1	13.979	90.21	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	1.489	8.8	S
MP-2	1.135	11.6	NE
MP-3	0.308	32.9	E
MP-4	0.000	21.7	SE
MP-5	0.279	29.9	SE

Step Test: 3 (0% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-1	> 15 (Out of Range)	127.47	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	2.174	8.8	S
MP-2	1.632	11.6	NE
MP-3	0.442	32.9	E
MP-4	0.000	21.7	SE
MP-5	0.382	29.9	SE

Atlantic Chestnut - Lot 1
250 Euclid Avenue, Brooklyn, NY
L1-SVE-08 Pilot Test Worksheet

Pilot Test Data - SVE-2

Site: 3200 Atlantic Avenue
Brooklyn, New York
Personnel: M. Carroll, V. Chang, Z. Madeira
Date: 8/22/2022
Weather: Overcast/Light Rain
Temperature: 72-22 °F
Barometric Pressure: 29.95 inHg
Wind Speed/Direction: West @ 4-9 mph

Step Test: 1 (100% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-2	3.066	21.78	
Vapor Monitoring Point ID	**Induced Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.110	25.5	SW
MP-2	0.222	10.4	W
MP-3	0.157	13.7	SE
MP-4	0.000	25.3	SSW
MP-5	0.086	24.3	SSE

Step Test: 2 (50% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-2	> 15 (Out of Range)	102.18	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.507	25.3	SW
MP-2	0.936	10.4	W
MP-3	0.710	13.7	SE
MP-4	0.000	25.3	SSW
MP-5	0.385	24.3	SSE

Step Test: 3 (0% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-2	> 15 (Out of Range)	152.97	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.781	25.3	SW
MP-2	1.404	10.4	W
MP-3	1.088	13.7	SE
MP-4	0.000	25.3	SSW
MP-5	0.611	24.3	SSE

Atlantic Chestnut - Lot 1
250 Euclid Avenue, Brooklyn, NY
L1-SVE-08 Pilot Test Worksheet

Pilot Test Data - SVE-3

Site: 3200 Atlantic Avenue
Brooklyn, New York
Personnel: M. Carroll, V. Chang, Z. Madeira
Date: 8/22/2022
Weather: Overcast/Light Rain
Temperature: 72-22 °F
Barometric Pressure: 29.95 inHg
Wind Speed/Direction: West @ 4-9 mph

Step Test: 1 (100% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-3	-	29	
Vapor Monitoring Point ID	**Induced Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.325	8.2	N
MP-2	0.136	22.7	NNE
MP-3	0.071	34.7	NE
MP-4	0.000	11.4	E
MP-5	0.099	22.1	E

Step Test: 2 (50% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-3	-	91	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	1.413	8.2	N
MP-2	0.472	22.7	NNE
MP-3	0.281	34.7	NE
MP-4	0.000	11.4	E
MP-5	0.331	22.1	E

Step Test: 3 (0% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-3	-	123	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	2.182	8.2	N
MP-2	0.728	22.7	NNE
MP-3	0.430	34.7	NE
MP-4	0.000	11.4	E
MP-5	0.515	22.1	E

Atlantic Chestnut - Lot 1
250 Euclid Avenue, Brooklyn, NY
L1-SVE-08 Pilot Test Worksheet

Pilot Test Data - SVE-4

Site: 3200 Atlantic Avenue
Brooklyn, New York
Personnel: M. Carroll, V. Chang, Z. Madeira
Date: 8/22/2022
Weather: Overcast/Light Rain
Temperature: 72-22 °F
Barometric Pressure: 29.95 inHg
Wind Speed/Direction: West @ 4-9 mph

Step Test: 1 (100% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-4	3.505	27	
Vapor Monitoring Point ID	**Induced Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.077	36.4	NW
MP-2	0.084	32.8	WNW
MP-3	0.281	16.9	N
MP-4	0.000	22.5	W
MP-5	0.474	11.4	W

Step Test: 2 (50% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-4	9.87	69	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.293	36.4	NW
MP-2	0.255	32.8	WNW
MP-3	0.859	16.9	N
MP-4	0.000	22.5	W
MP-5	1.323	11.4	W

Step Test: 3 (0% Dilution)

SVE Well ID	Applied Vacuum (in. H_2O)	Air Flow (SCFM)	
SVE-4	11.702	131	
Vapor Monitoring Point ID	**Net Vacuum (in. H_2O)**	**Distance (ft)**	**Direction**
MP-1	0.490	36.4	NW
MP-2	0.410	32.8	WNW
MP-3	1.453	16.9	N
MP-4	0.000	22.5	W
MP-5	2.272	11.4	W

Summary of Soil Vapor Extraction Pilot Test Data
3200 Atlantic Avenue
Brooklyn, New York

Test Date:	8/22/2022
Performed By:	Tenen Environmental
Extraction Well:	SVE-1
Wellhead Vacuum ("H2O):	2.3 to 8.0
Vapor Discharge Flow (scfm):	18 to 29

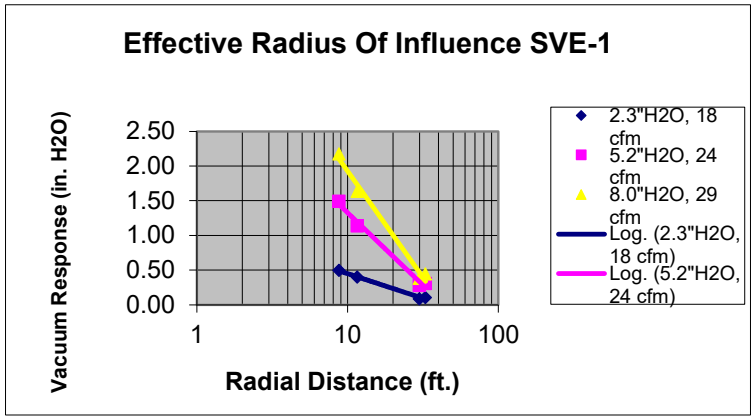
SVE Design Data

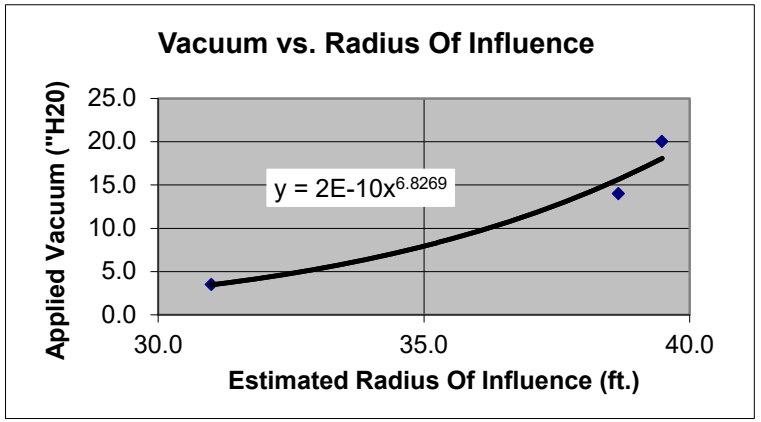
Radial Distance (ft.)	Vacuum Response 1 3.5" H2O Applied Vacuum, 36 scfm ("H2O)	Vacuum Response 2 14" H2O Applied Vacuum, 90 scfm ("H2O)	Vacuum Response 3 20" H2O Applied Vacuum, 127 scfm ("H2O)
8.8	0.50	1.49	2.17
11.6	0.40	1.14	1.63
29.9	0.09	0.28	0.38
32.9	0.10	0.31	0.44

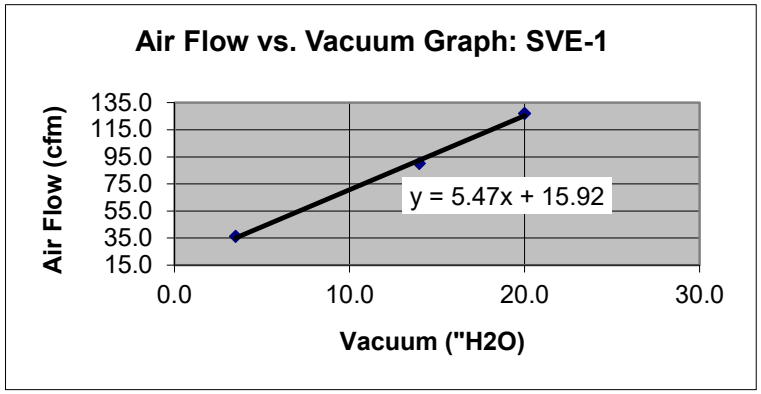
Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
31.0	3.5	36.0
38.7	14.0	90.0
39.5	20.0	127.0

Desired Radius of Influence = 35 ft
@ ROI = 35 ft, Applied Vacuum = 7.0"H2O
@ 7.0"H2O Vacuum, Flow Rate = 54.0 cfm

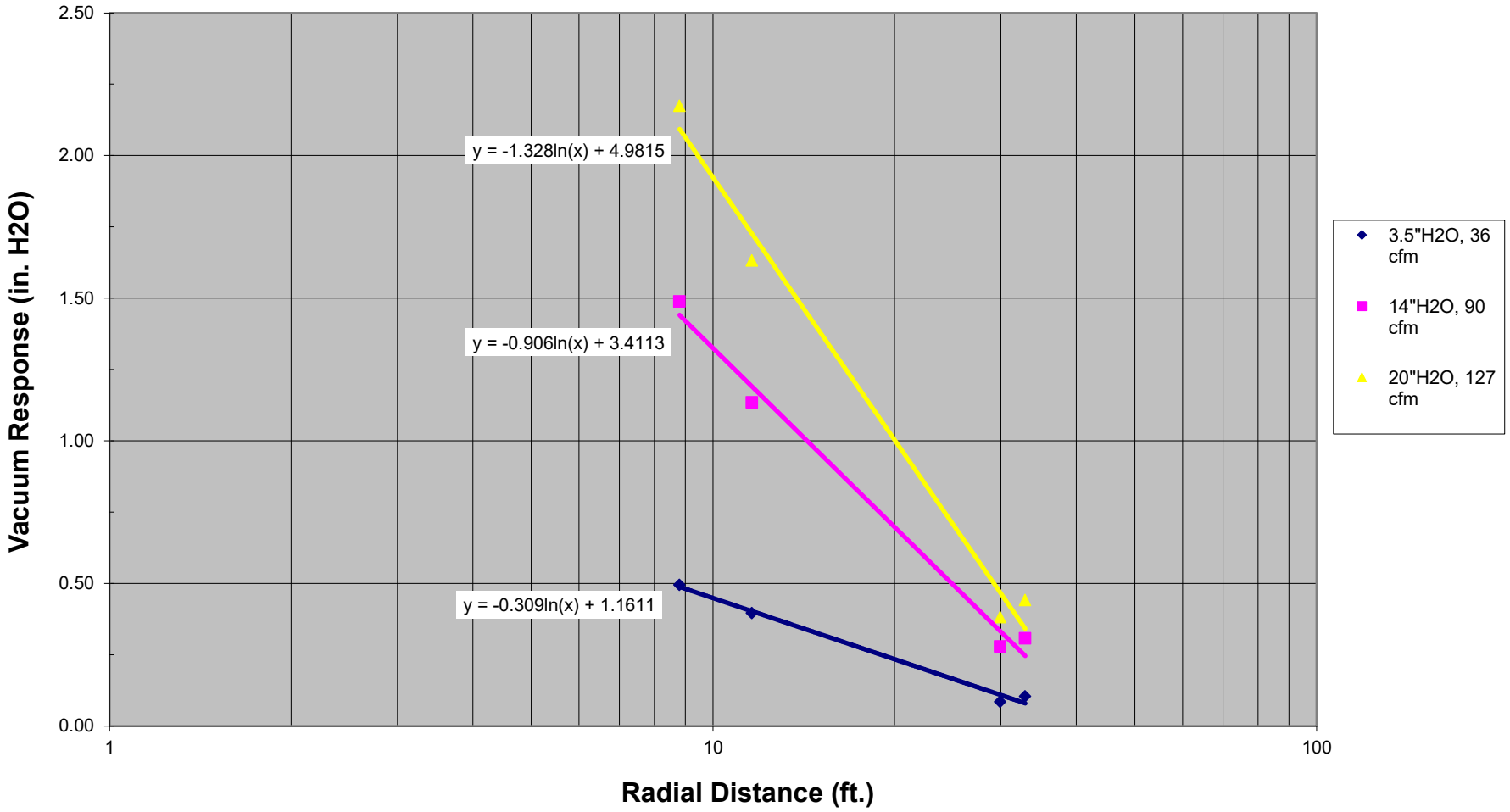
Note: For SVE ROI is the radial distance where the vacuum response equals 0.10" H2O.







Effective Radius Of Influence SVE-1



Summary of Soil Vapor Extraction Pilot Test Data
3200 Atlantic Avenue
Brooklyn, New York

Test Date:	8/22/2022
Performed By:	Tenen Environmental
Extraction Well:	SVE-2
Wellhead Vacuum ("H2O):	3.1 to 22.1
Vapor Discharge Flow (scfm):	32 to 153

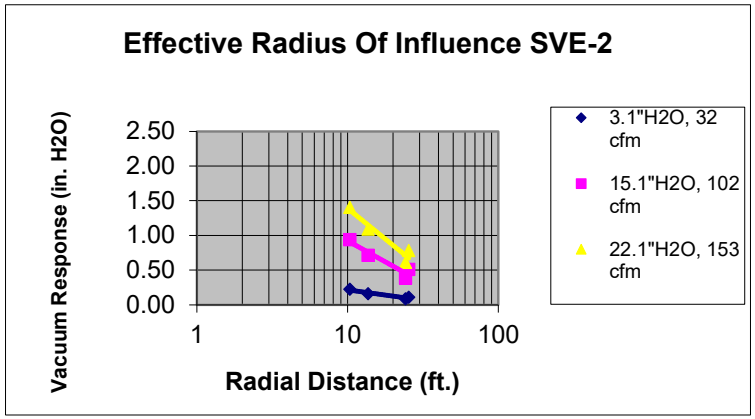
SVE Design Data

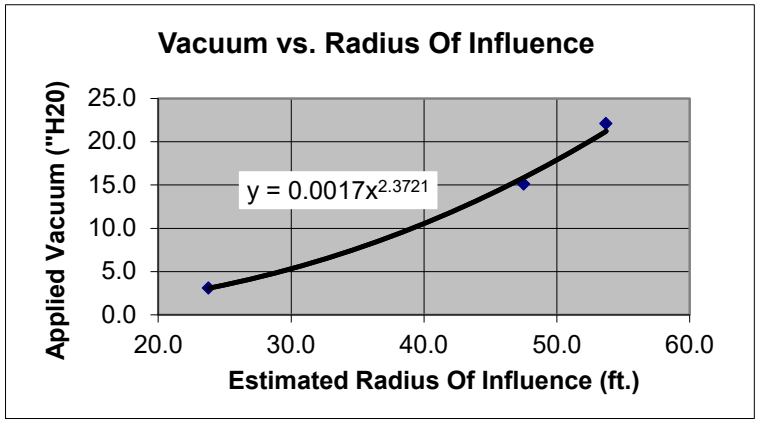
Radial Distance (ft.)	Vacuum Response 1 3.1" H2O Applied Vacuum, 32 scfm ("H2O)	Vacuum Response 2 15.1" H2O Applied Vacuum, 102 scfm ("H2O)	Vacuum Response 3 22.1" H2O Applied Vacuum, 153 scfm ("H2O)
10.4	0.22	0.94	1.40
13.7	0.16	0.71	1.09
24.3	0.09	0.39	0.61
25.5	0.11	0.51	0.78

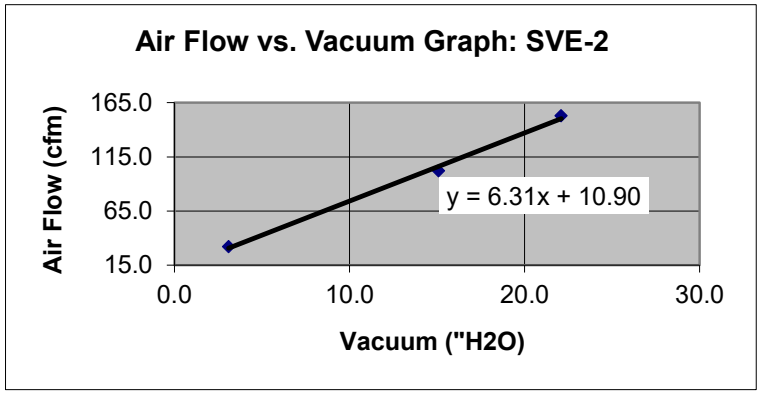
Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
23.8	3.1	32.0
47.5	15.1	102.0
53.7	22.1	153.0

Desired Radius of Influence = 35 ft
@ ROI = 35 ft, Applied Vacuum = 7.8"H2O
@ 7.8"H2O Vacuum, Flow Rate = 60.2 cfm

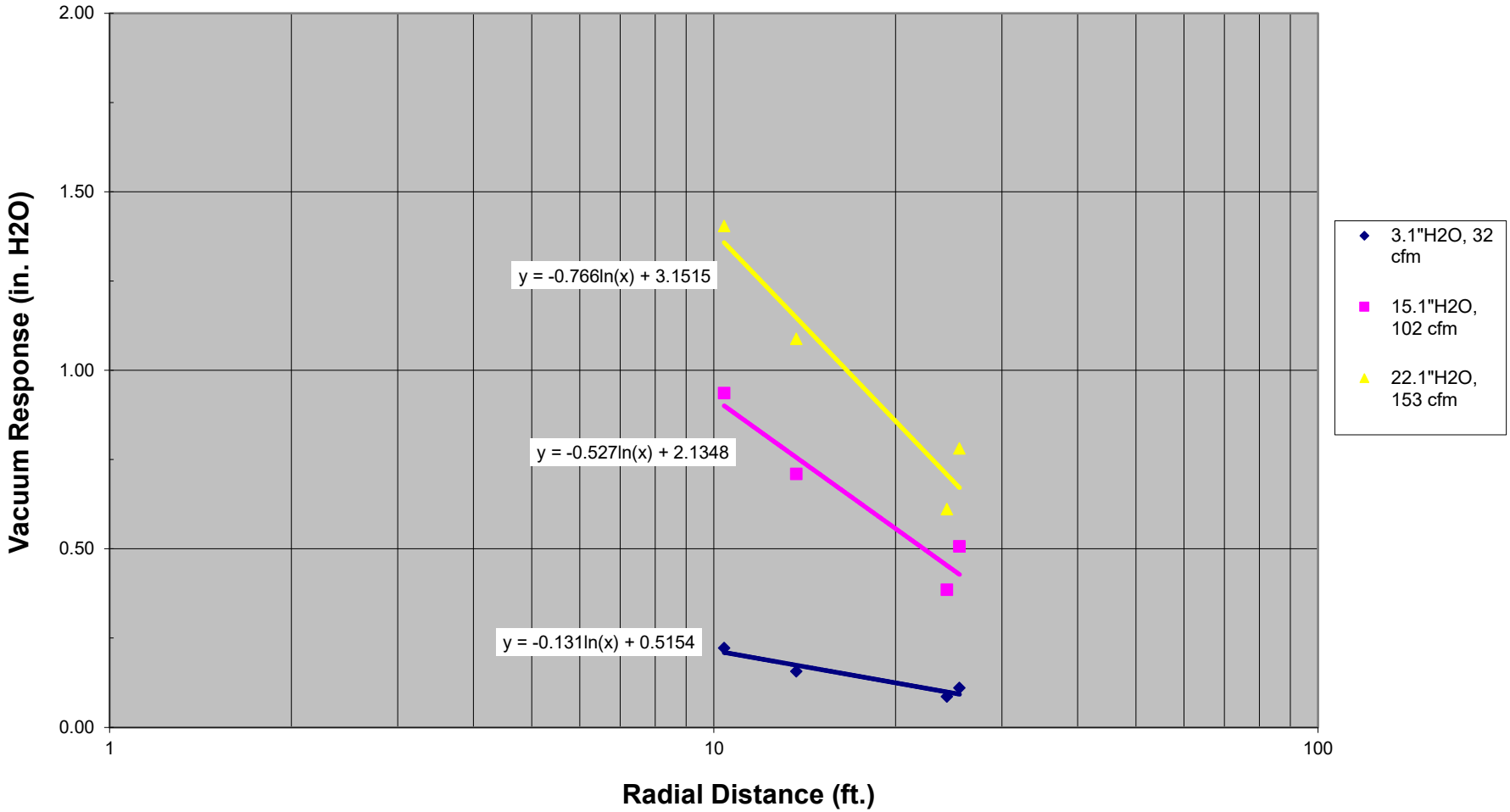
Note: For SVE ROI is the radial distance where the vacuum response equals 0.10" H2O.







Effective Radius Of Influence SVE-2



Summary of Soil Vapor Extraction Pilot Test Data
3200 Atlantic Avenue
Brooklyn, New York

Test Date:	8/22/2022
Performed By:	Tenen Environmental
Extraction Well:	SVE-3
Wellhead Vacuum ("H2O):	2.7 to 20.4
Vapor Discharge Flow (scfm):	29 to 123

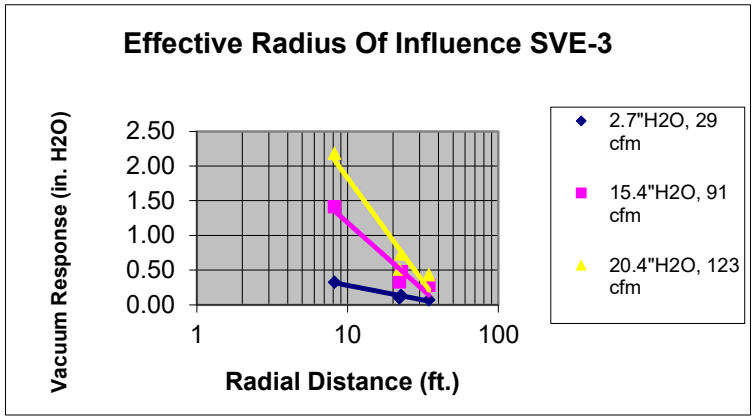
SVE Design Data

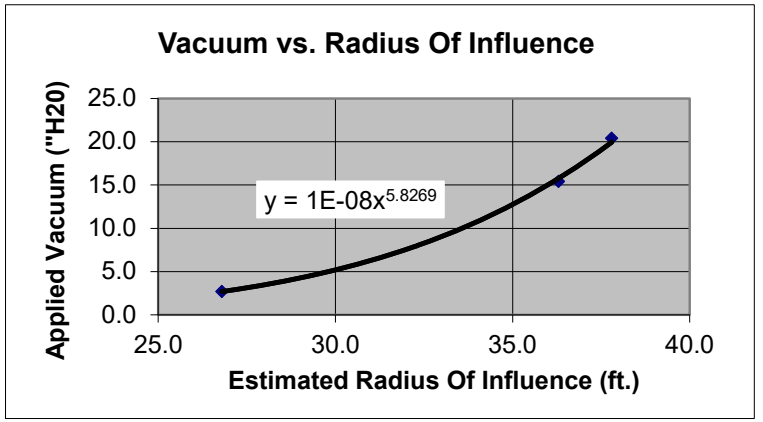
Radial Distance (ft.)	Vacuum Response 1 2.7" H2O Applied Vacuum, 29 scfm ("H2O)	Vacuum Response 2 15.4" H2O Applied Vacuum, 91 scfm ("H2O)	Vacuum Response 3 20.4" H2O Applied Vacuum, 123 scfm ("H2O)
8.2	0.33	1.41	2.18
22.1	0.10	0.33	0.52
22.7	0.14	0.47	0.73
34.7	0.07	0.28	0.43

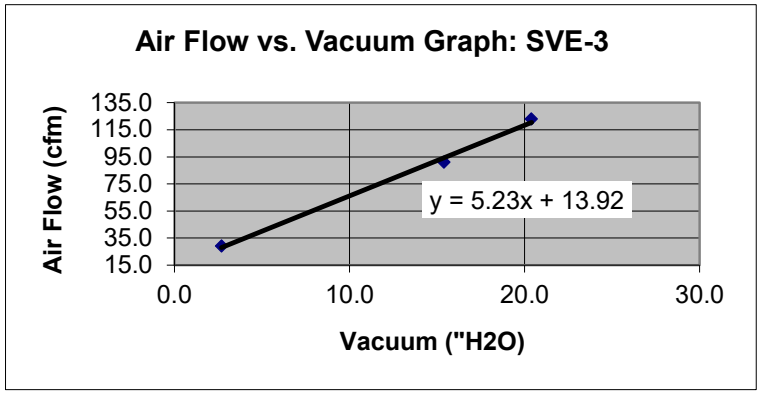
Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
26.8	2.7	29.0
36.3	15.4	91.0
37.8	20.4	123.0

Desired Radius of Influence = 35 ft
@ ROI = 35 ft, Applied Vacuum = 9.9"H2O
@ 9.9"H2O Vacuum, Flow Rate = 65.9 cfm

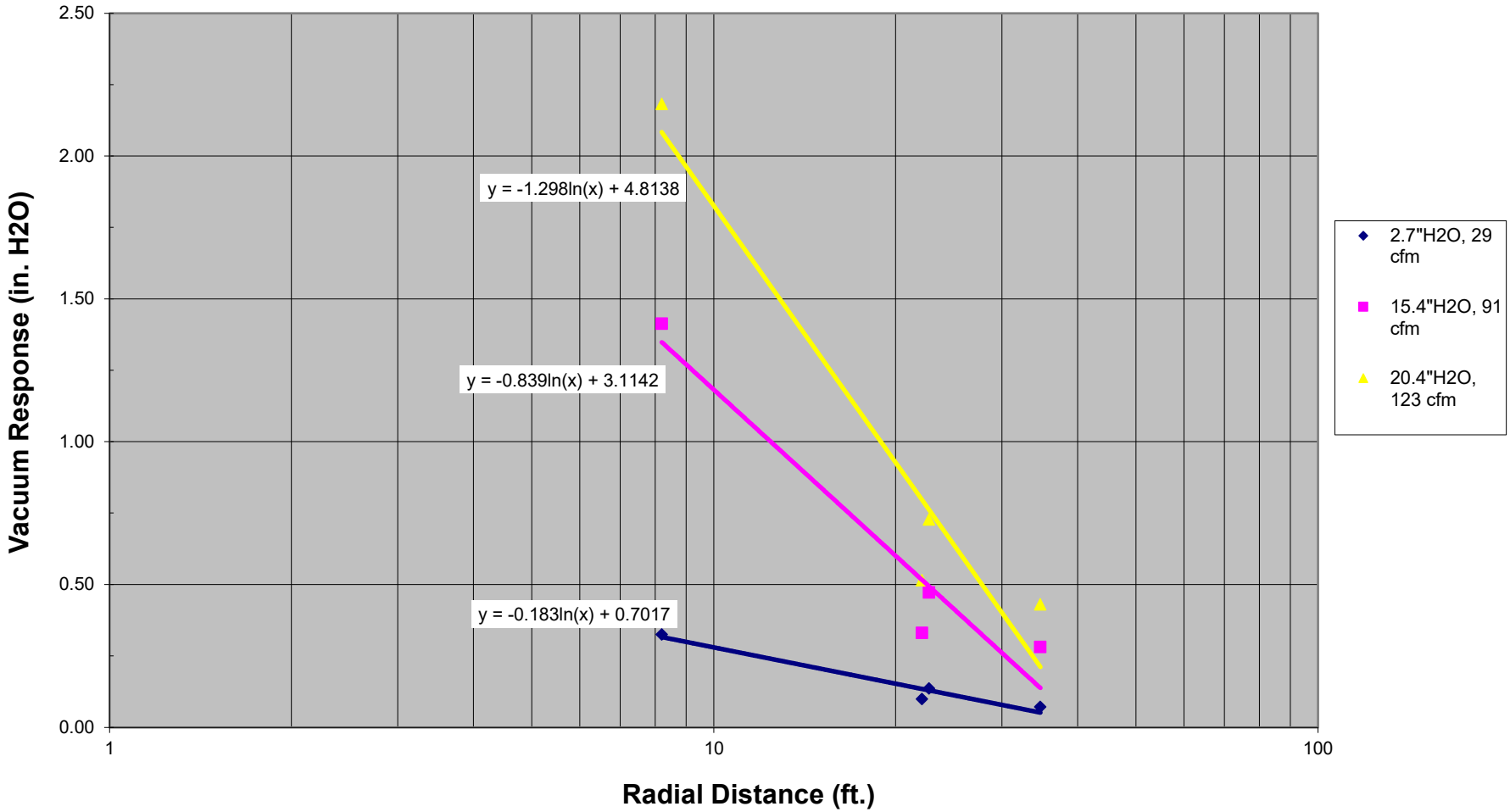
Note: For SVE ROI is the radial distance where the vacuum response equals 0.10" H2O.







Effective Radius Of Influence SVE-3



Summary of Soil Vapor Extraction Pilot Test Data
3200 Atlantic Avenue
Brooklyn, New York

Test Date:	8/22/2022
Performed By:	Tenen Environmental
Extraction Well:	SVE-4
Wellhead Vacuum ("H2O):	3.5 to 11.7
Vapor Discharge Flow (scfm):	27 to 131

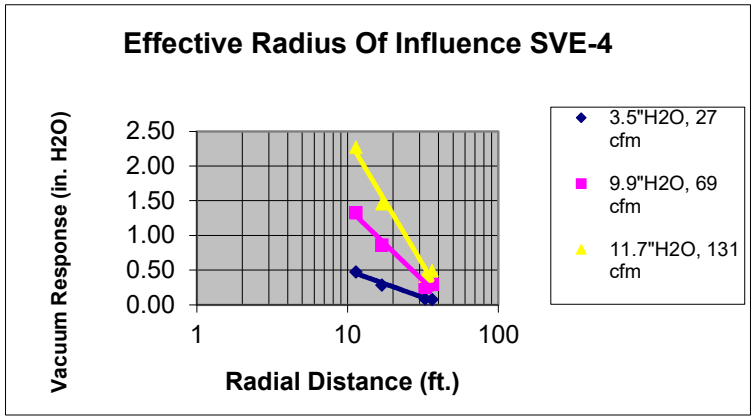
SVE Design Data

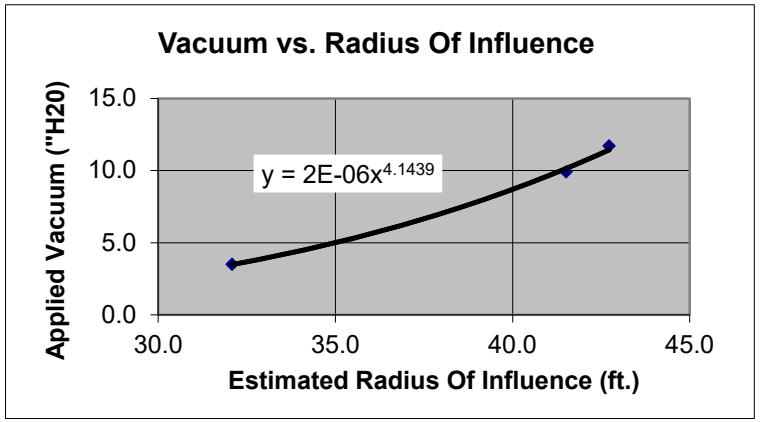
Radial Distance (ft.)	Vacuum Response 1 3.5" H2O Applied Vacuum, 27 scfm ("H2O)	Vacuum Response 2 9.9" H2O Applied Vacuum, 69 scfm ("H2O)	Vacuum Response 3 11.7" H2O Applied Vacuum, 131 scfm ("H2O)
11.4	0.47	1.32	2.27
16.9	0.28	0.86	1.45
32.8	0.08	0.26	0.41
36.4	0.08	0.29	0.49

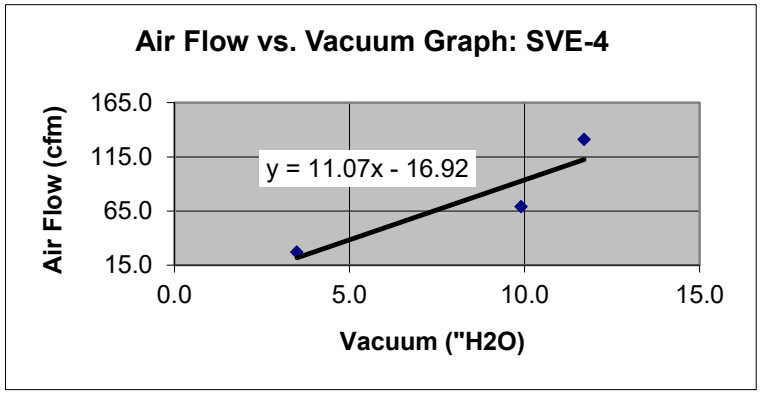
Est. ROI (ft.)	Vacuum ("H2O)	Flow (scfm)
32.1	3.5	27.0
41.5	9.9	69.0
42.7	11.7	131.0

Desired Radius of Influence = 35 ft
@ ROI = 35 ft, Applied Vacuum = 5.0"H2O
@ 5.0"H2O Vacuum, Flow Rate = 38.5 cfm

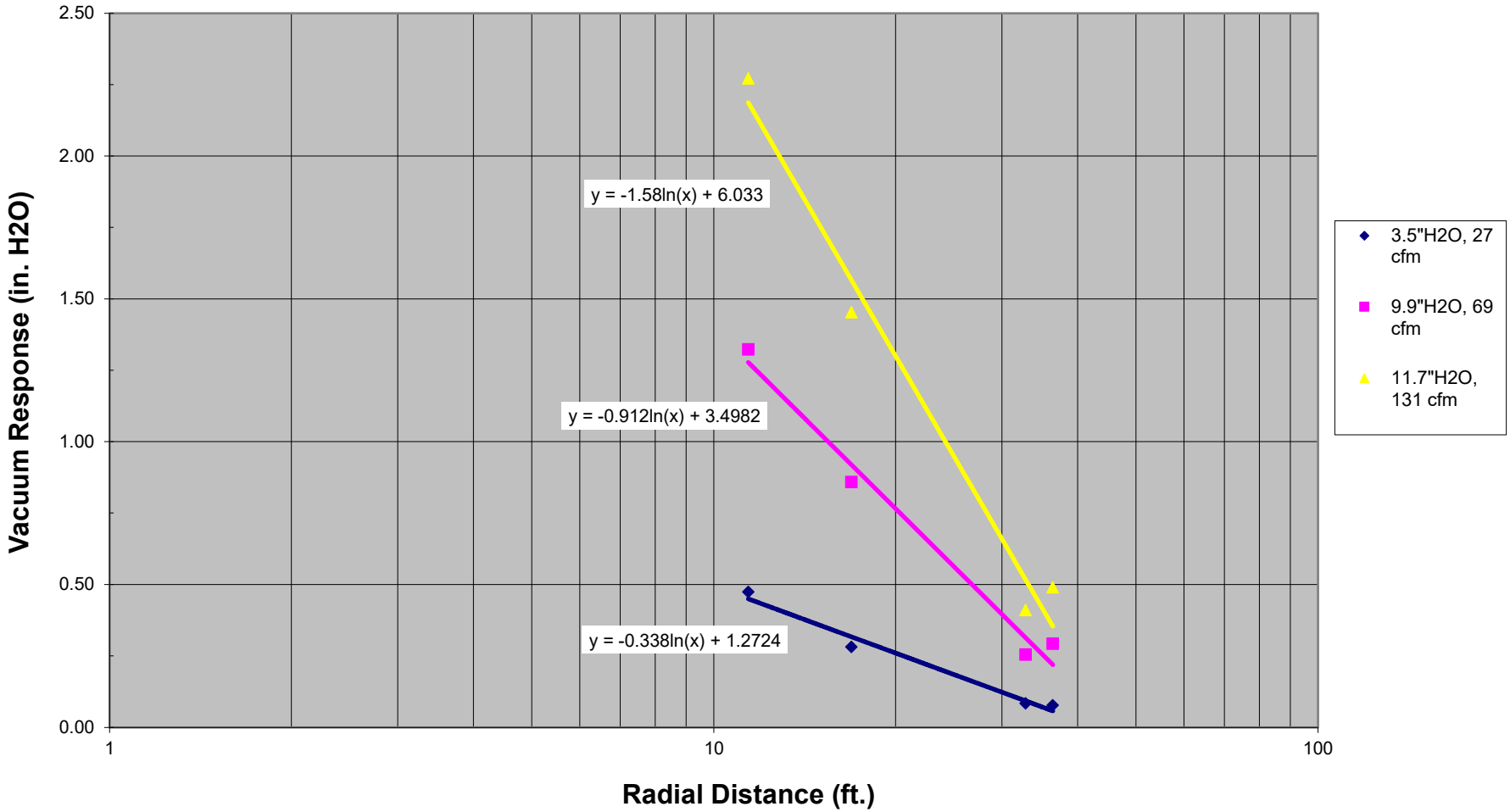
Note: For SVE ROI is the radial distance where the vacuum response equals 0.10" H2O.







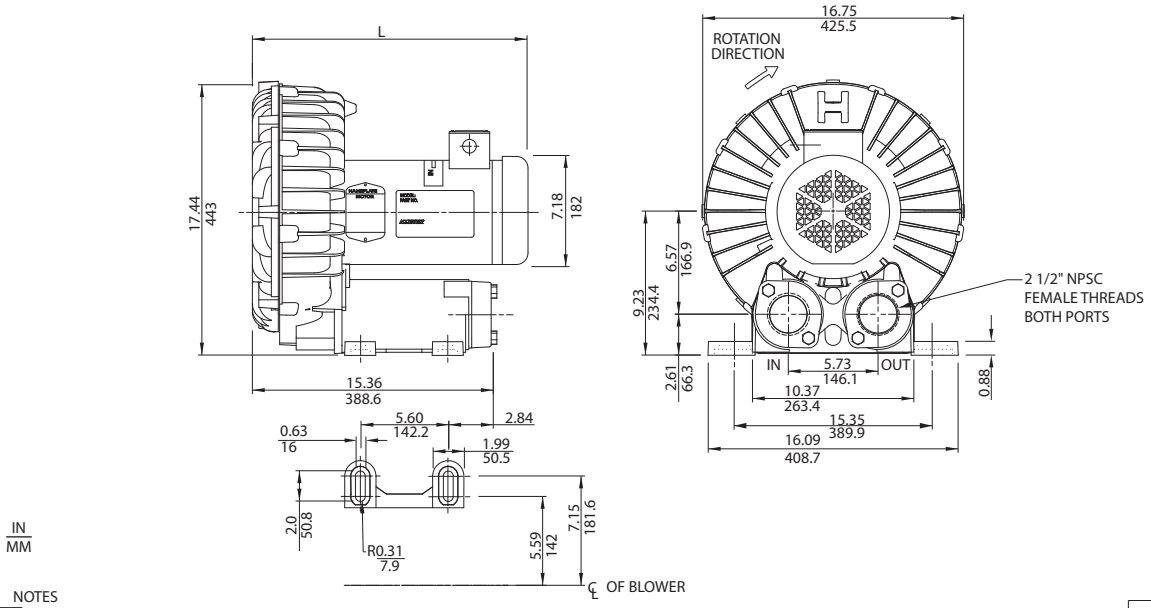
Effective Radius Of Influence SVE-4



EN 757 & CP 757

ROTRON®

3.0 / 5.0 HP Sealed Regenerative w/Explosion-Proof Motor



NOTES
1. TERMINAL BOX CONNECTOR HOLE .75 NPT.
2. DRAWING NOT TO SCALE, CONTACT FACTORY FOR SCALE CAD DRAWING.
3. CONTACT FACTORY FOR BLOWER MODEL LENGTHS NOT SHOWN.

MODEL	L (IN/MM)
EN757M72XL	19.72/500.9
EN757F72XL	21.00/533.4

		Part/Model Number				
		EN757M72XL	EN757M86XL	EN757F72XL	CP757FW72XLR	CP757FU72XLR
Specification	Units	081176	081177	081174	081180	081181
Motor Enclosure - Shaft	-	XP-CS	XP-CS	XP-CS	CHEM XP-SS	CHEM XP-SS
Mtl. Horsepower	-	3.0	3.0	5.0	5.0	3.0
Voltage	AC	208-230/460	575	208-230/460	208-230/460	208-230/460
Phase - Frequency	-	Three-60 Hz	Three-60 Hz	Three - 60 Hz	Three-60 Hz	Three - 60 Hz
Insulation Class	-	B	B	B	B	B
NEMA Rated Motor Amps	Amps (A)	7.2/3.6	3.0	14/7	14/7	7.2/3.6
Service Factor	-	1.0	1.0	1.0	1.0	1.0
Maximum Blower Amps	Amps (A)	10/5	4.0	15/7.5	15/7.5	10/5
Locked Rotor Amps	Amps (A)	54/47	22	152/76	152/76	54/27
Starter Size	-	0/0	0	1/1	1/1	0/0
Shipping Weight	Lbs	158	158	158	158	158
	Kg	71.7	71.7	71.7	71.7	71.7

Voltage - ROTRON motors are designed to handle a broad range of world voltages and power supply variations. Our dual voltage 3 phase motors are factory tested and certified to operate on both: **208-230/415-460 VAC-3 ph-60 Hz** and **190-208/380-415 VAC-3 ph-50 Hz**. Our dual voltage 1 phase motors are factory tested and certified to operate on both: **104-115/208-230 VAC-1 ph-60 Hz** and **100-110/200-220 VAC-1 ph-50 Hz**. All voltages above can handle a ±10% voltage fluctuation. Special wound motors can be ordered for voltages outside our certified range.

Operating Temperatures - Maximum operating temperature: Motor winding temperature (winding rise plus ambient) should not exceed 140°C for Class F rated motors or 120°C for Class B rated motors. Blower outlet air temperature should not exceed 140°C (air temperature rise plus inlet temperature). Performance curve maximum pressure and suction points are based on a 40°C inlet and ambient temperature. Consult factory for inlet or ambient temperatures above 40°C.

Maximum Blower Amps - Corresponds to the performance point at which the motor or blower temperature rise with a 40°C inlet and/or ambient temperature reaches the maximum operating temperature.

XP Motor Class - Group - See Explosive Atmosphere Classification Chart in Section I

This document is for informational purposes only and should not be considered as a binding description of the products or their performance in all applications. The performance data on this page depicts typical performance under controlled laboratory conditions. AMETEK is not responsible for blowers driven beyond factory specified speed, temperature, pressure, flow or without proper alignment. Actual performance will vary depending on the operating environment and application. AMETEK products are not designed for and should not be used in medical life support applications. AMETEK reserves the right to revise its products without notification. The above characteristics represent standard products. For product designed to meet specific applications, contact AMETEK Technical & Industrial Products Sales department.

AMETEK DYNAMIC FLUID SOLUTIONS
75 North Street, Saugerties, NY 12477
USA: +1 215-256-6601 - Europe: +49 7703 930909 - Asia: +86 21 5763 1258
Customer Service Fax: +1 215.256.1338
www.ametekdfs.com

AMETEK®
PRECISION MOTION CONTROL
DYNAMIC FLUID SOLUTIONS

Environmental / Chemical Processing Blowers

EN 757 & CP 757

ROTRON®

3.0 / 5.0 HP Sealed Regenerative w/Explosion-Proof Motor

FEATURES

- Manufactured in the USA - ISO 9001 and NAFTA compliant
- Maximum flow: 310 SCFM
- Maximum pressure: 80 IWG
- Maximum vacuum: 75 IWG
- Standard motor: 5.0 HP, explosion-proof
- Cast aluminum blower housing, impeller , cover & manifold; cast iron flanges (threaded); teflon® lip seal
- UL & CSA approved motor with permanently sealed ball bearings for explosive gas atmospheres Class I Group D minimum
- Sealed blower assembly
- Quiet operation within OSHA standards

MOTOR OPTIONS

- International voltage & frequency (Hz)
- Chemical duty, high efficiency, inverter duty or industry-specific designs
- Various horsepowers for application-specific needs

BLOWER OPTIONS

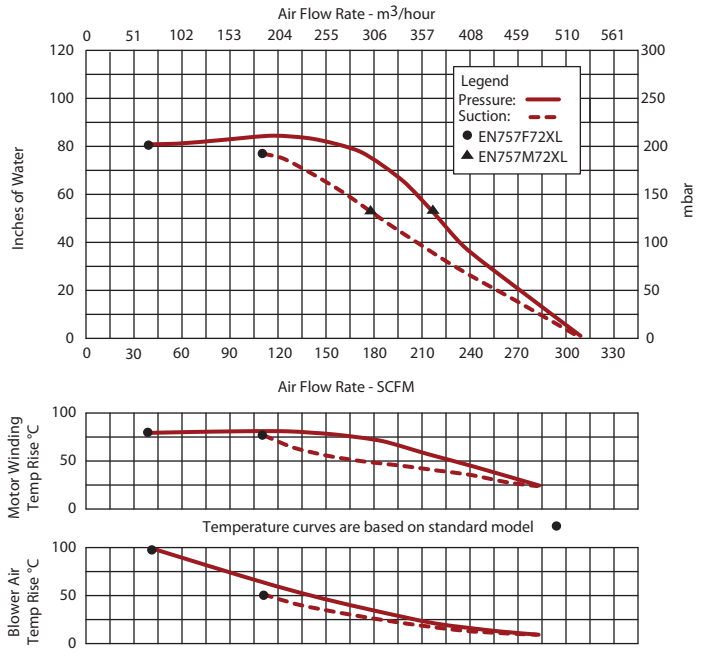
- Corrosion resistant surface treatments & sealing options
- Remote drive (motorless) models
- Slip-on or face flanges for application-specific needs

ACCESSORIES

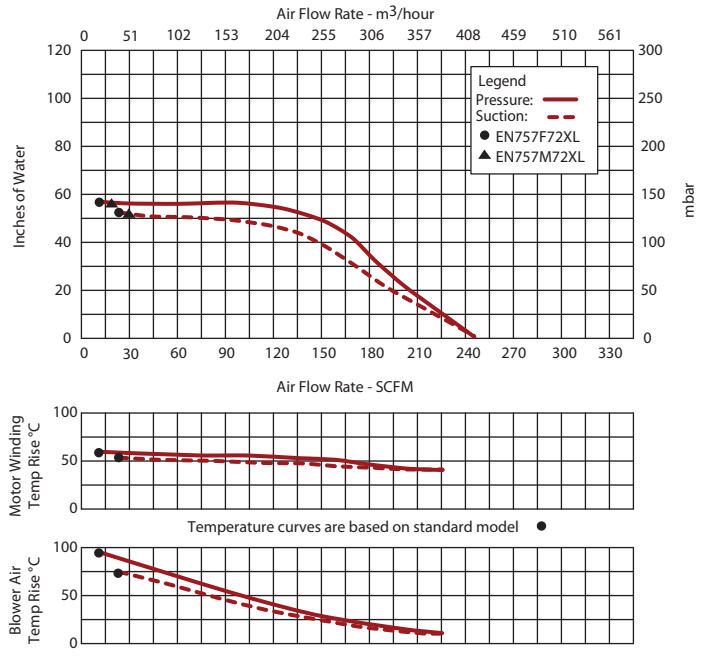
- Flowmeters reading in SCFM
- Filters & moisture separators
- Pressure gauges, vacuum gauges, & relief valves
- Switches - air flow, pressure, vacuum, or temperature
- External mufflers for additional silencing
- Air knives (used on blow-off applications)
- Variable frequency drive package

Blower Performance at Standard Conditions

60 Hz



50 Hz



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AMETEK®
PRECISION MOTION CONTROL
DYNAMIC FLUID SOLUTIONS

Attachment 2: Laboratory Deliverables

ANALYTICAL REPORT

Lab Number:	L2245378
Client:	Tenen Environmental, LLC 121 West 27th Street Suite 702 New York City, NY 10001
ATTN:	Matthew Carroll
Phone:	(646) 606-2332
Project Name:	3200 ATLANTIC AVE
Project Number:	Not Specified
Report Date:	08/31/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2245378-01	SVE-1	SOIL_VAPOR	BKLYN, NY	08/22/22 12:30	08/22/22
L2245378-02	SVE-2	SOIL_VAPOR	BKLYN, NY	08/22/22 13:30	08/22/22
L2245378-03	SVE-3	SOIL_VAPOR	BKLYN, NY	08/22/22 14:30	08/22/22
L2245378-04	SVE-4	SOIL_VAPOR	BKLYN, NY	08/22/22 15:30	08/22/22

Project Name:	3200 ATLANTIC AVE	**Lab Number:**	L2245378
Project Number:	Not Specified	**Report Date:**	08/31/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	3200 ATLANTIC AVE	**Lab Number:**	L2245378
Project Number:	Not Specified	**Report Date:**	08/31/22

Case Narrative (continued)

Volatile Organics in Air

L2245378-01D through 04D: Samples were transferred from a Tedlar bag into a fused silica lined canister upon receipt in order to extend the holding time for analysis.

L2245378-01D,02D,03D,04D2: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L2245378-04D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 08/31/22

AIR

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-01 D
Client ID: SVE-1
Sample Location: BKLYN, NY

Date Collected: 08/22/22 12:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/30/22 00:53
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	4550	--	ND	22500	--		22730
Chloromethane	ND	4550	--	ND	9400	--		22730
Freon-114	ND	4550	--	ND	31800	--		22730
Vinyl chloride	ND	4550	--	ND	11600	--		22730
1,3-Butadiene	ND	4550	--	ND	10100	--		22730
Bromomethane	ND	4550	--	ND	17700	--		22730
Chloroethane	ND	4550	--	ND	12000	--		22730
Ethanol	ND	114000	--	ND	215000	--		22730
Vinyl bromide	ND	4550	--	ND	19900	--		22730
Acetone	ND	22700	--	ND	53900	--		22730
Trichlorofluoromethane	ND	4550	--	ND	25600	--		22730
Isopropanol	ND	11400	--	ND	28000	--		22730
1,1-Dichloroethene	ND	4550	--	ND	18000	--		22730
Tertiary butyl Alcohol	ND	11400	--	ND	34600	--		22730
Methylene chloride	ND	11400	--	ND	39600	--		22730
3-Chloropropene	ND	4550	--	ND	14200	--		22730
Carbon disulfide	ND	4550	--	ND	14200	--		22730
Freon-113	ND	4550	--	ND	34900	--		22730
trans-1,2-Dichloroethene	ND	4550	--	ND	18000	--		22730
1,1-Dichloroethane	ND	4550	--	ND	18400	--		22730
Methyl tert butyl ether	ND	4550	--	ND	16400	--		22730
2-Butanone	ND	11400	--	ND	33600	--		22730
cis-1,2-Dichloroethene	ND	4550	--	ND	18000	--		22730

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-01 D
Client ID: SVE-1
Sample Location: BKLYN, NY

Date Collected: 08/22/22 12:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	11400	--	ND	41100	--		22730
Chloroform	ND	4550	--	ND	22200	--		22730
Tetrahydrofuran	ND	11400	--	ND	33600	--		22730
1,2-Dichloroethane	ND	4550	--	ND	18400	--		22730
n-Hexane	764000	4550	--	2690000	16000	--		22730
1,1,1-Trichloroethane	ND	4550	--	ND	24800	--		22730
Benzene	182000	4550	--	581000	14500	--		22730
Carbon tetrachloride	ND	4550	--	ND	28600	--		22730
Cyclohexane	384000	4550	--	1320000	15700	--		22730
1,2-Dichloropropane	ND	4550	--	ND	21000	--		22730
Bromodichloromethane	ND	4550	--	ND	30500	--		22730
1,4-Dioxane	ND	4550	--	ND	16400	--		22730
Trichloroethene	ND	4550	--	ND	24500	--		22730
2,2,4-Trimethylpentane	876000	4550	--	4090000	21300	--		22730
Heptane	398000	4550	--	1630000	18600	--		22730
cis-1,3-Dichloropropene	ND	4550	--	ND	20700	--		22730
4-Methyl-2-pentanone	ND	11400	--	ND	46700	--		22730
trans-1,3-Dichloropropene	ND	4550	--	ND	20700	--		22730
1,1,2-Trichloroethane	ND	4550	--	ND	24800	--		22730
Toluene	95000	4550	--	358000	17100	--		22730
2-Hexanone	ND	4550	--	ND	18600	--		22730
Dibromochloromethane	ND	4550	--	ND	38800	--		22730
1,2-Dibromoethane	ND	4550	--	ND	35000	--		22730
Tetrachloroethene	ND	4550	--	ND	30900	--		22730
Chlorobenzene	ND	4550	--	ND	21000	--		22730
Ethylbenzene	60200	4550	--	261000	19800	--		22730

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-01 D
Client ID: SVE-1
Sample Location: BKLYN, NY

Date Collected: 08/22/22 12:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	171000	9090	--	743000	39500	--		22730
Bromoform	ND	4550	--	ND	47000	--		22730
Styrene	ND	4550	--	ND	19400	--		22730
1,1,2,2-Tetrachloroethane	ND	4550	--	ND	31200	--		22730
o-Xylene	37100	4550	--	161000	19800	--		22730
4-Ethyltoluene	ND	4550	--	ND	22400	--		22730
1,3,5-Trimethylbenzene	5500	4550	--	27000	22400	--		22730
1,2,4-Trimethylbenzene	13800	4550	--	67800	22400	--		22730
Benzyl chloride	ND	4550	--	ND	23600	--		22730
1,3-Dichlorobenzene	ND	4550	--	ND	27400	--		22730
1,4-Dichlorobenzene	ND	4550	--	ND	27400	--		22730
1,2-Dichlorobenzene	ND	4550	--	ND	27400	--		22730
1,2,4-Trichlorobenzene	ND	4550	--	ND	33800	--		22730
Hexachlorobutadiene	ND	4550	--	ND	48500	--		22730

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	101		60-140
Bromochloromethane	102		60-140
chlorobenzene-d5	106		60-140

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-02 D
Client ID: SVE-2
Sample Location: BKLYN, NY

Date Collected: 08/22/22 13:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/30/22 08:50
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	5000	--	ND	24700	--		25000
Chloromethane	ND	5000	--	ND	10300	--		25000
Freon-114	ND	5000	--	ND	34900	--		25000
Vinyl chloride	ND	5000	--	ND	12800	--		25000
1,3-Butadiene	ND	5000	--	ND	11100	--		25000
Bromomethane	ND	5000	--	ND	19400	--		25000
Chloroethane	ND	5000	--	ND	13200	--		25000
Ethanol	ND	125000	--	ND	236000	--		25000
Vinyl bromide	ND	5000	--	ND	21900	--		25000
Acetone	ND	25000	--	ND	59400	--		25000
Trichlorofluoromethane	ND	5000	--	ND	28100	--		25000
Isopropanol	ND	12500	--	ND	30700	--		25000
1,1-Dichloroethene	ND	5000	--	ND	19800	--		25000
Tertiary butyl Alcohol	ND	12500	--	ND	37900	--		25000
Methylene chloride	ND	12500	--	ND	43400	--		25000
3-Chloropropene	ND	5000	--	ND	15700	--		25000
Carbon disulfide	ND	5000	--	ND	15600	--		25000
Freon-113	ND	5000	--	ND	38300	--		25000
trans-1,2-Dichloroethene	ND	5000	--	ND	19800	--		25000
1,1-Dichloroethane	ND	5000	--	ND	20200	--		25000
Methyl tert butyl ether	ND	5000	--	ND	18000	--		25000
2-Butanone	ND	12500	--	ND	36900	--		25000
cis-1,2-Dichloroethene	ND	5000	--	ND	19800	--		25000

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-02 D
Client ID: SVE-2
Sample Location: BKLYN, NY

Date Collected: 08/22/22 13:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	12500	--	ND	45000	--		25000
Chloroform	ND	5000	--	ND	24400	--		25000
Tetrahydrofuran	ND	12500	--	ND	36900	--		25000
1,2-Dichloroethane	ND	5000	--	ND	20200	--		25000
n-Hexane	1140000	5000	--	4020000	17600	--		25000
1,1,1-Trichloroethane	ND	5000	--	ND	27300	--		25000
Benzene	232000	5000	--	741000	16000	--		25000
Carbon tetrachloride	ND	5000	--	ND	31500	--		25000
Cyclohexane	522000	5000	--	1800000	17200	--		25000
1,2-Dichloropropane	ND	5000	--	ND	23100	--		25000
Bromodichloromethane	ND	5000	--	ND	33500	--		25000
1,4-Dioxane	ND	5000	--	ND	18000	--		25000
Trichloroethene	ND	5000	--	ND	26900	--		25000
2,2,4-Trimethylpentane	1240000	5000	--	5790000	23400	--		25000
Heptane	638000	5000	--	2610000	20500	--		25000
cis-1,3-Dichloropropene	ND	5000	--	ND	22700	--		25000
4-Methyl-2-pentanone	ND	12500	--	ND	51200	--		25000
trans-1,3-Dichloropropene	ND	5000	--	ND	22700	--		25000
1,1,2-Trichloroethane	ND	5000	--	ND	27300	--		25000
Toluene	9220	5000	--	34700	18800	--		25000
2-Hexanone	ND	5000	--	ND	20500	--		25000
Dibromochloromethane	ND	5000	--	ND	42600	--		25000
1,2-Dibromoethane	ND	5000	--	ND	38400	--		25000
Tetrachloroethene	ND	5000	--	ND	33900	--		25000
Chlorobenzene	ND	5000	--	ND	23000	--		25000
Ethylbenzene	77200	5000	--	335000	21700	--		25000

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-02 D
Client ID: SVE-2
Sample Location: BKLYN, NY

Date Collected: 08/22/22 13:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	104000	10000	--	452000	43400	--		25000
Bromoform	ND	5000	--	ND	51700	--		25000
Styrene	ND	5000	--	ND	21300	--		25000
1,1,2,2-Tetrachloroethane	ND	5000	--	ND	34300	--		25000
o-Xylene	8020	5000	--	34800	21700	--		25000
4-Ethyltoluene	ND	5000	--	ND	24600	--		25000
1,3,5-Trimethylbenzene	ND	5000	--	ND	24600	--		25000
1,2,4-Trimethylbenzene	9780	5000	--	48100	24600	--		25000
Benzyl chloride	ND	5000	--	ND	25900	--		25000
1,3-Dichlorobenzene	ND	5000	--	ND	30100	--		25000
1,4-Dichlorobenzene	ND	5000	--	ND	30100	--		25000
1,2-Dichlorobenzene	ND	5000	--	ND	30100	--		25000
1,2,4-Trichlorobenzene	ND	5000	--	ND	37100	--		25000
Hexachlorobutadiene	ND	5000	--	ND	53300	--		25000

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	101		60-140

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-03 D
Client ID: SVE-3
Sample Location: BKLYN, NY

Date Collected: 08/22/22 14:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/30/22 01:57
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2500	--	ND	12400	--		12500
Chloromethane	ND	2500	--	ND	5160	--		12500
Freon-114	ND	2500	--	ND	17500	--		12500
Vinyl chloride	ND	2500	--	ND	6390	--		12500
1,3-Butadiene	ND	2500	--	ND	5530	--		12500
Bromomethane	ND	2500	--	ND	9710	--		12500
Chloroethane	ND	2500	--	ND	6600	--		12500
Ethanol	ND	62500	--	ND	118000	--		12500
Vinyl bromide	ND	2500	--	ND	10900	--		12500
Acetone	ND	12500	--	ND	29700	--		12500
Trichlorofluoromethane	ND	2500	--	ND	14000	--		12500
Isopropanol	ND	6250	--	ND	15400	--		12500
1,1-Dichloroethene	ND	2500	--	ND	9910	--		12500
Tertiary butyl Alcohol	ND	6250	--	ND	18900	--		12500
Methylene chloride	ND	6250	--	ND	21700	--		12500
3-Chloropropene	ND	2500	--	ND	7830	--		12500
Carbon disulfide	ND	2500	--	ND	7790	--		12500
Freon-113	ND	2500	--	ND	19200	--		12500
trans-1,2-Dichloroethene	ND	2500	--	ND	9910	--		12500
1,1-Dichloroethane	ND	2500	--	ND	10100	--		12500
Methyl tert butyl ether	ND	2500	--	ND	9010	--		12500
2-Butanone	ND	6250	--	ND	18400	--		12500
cis-1,2-Dichloroethene	ND	2500	--	ND	9910	--		12500

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-03 D
Client ID: SVE-3
Sample Location: BKLYN, NY

Date Collected: 08/22/22 14:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	6250	--	ND	22500	--		12500
Chloroform	ND	2500	--	ND	12200	--		12500
Tetrahydrofuran	ND	6250	--	ND	18400	--		12500
1,2-Dichloroethane	ND	2500	--	ND	10100	--		12500
n-Hexane	1100000	2500	--	3880000	8810	--		12500
1,1,1-Trichloroethane	ND	2500	--	ND	13600	--		12500
Benzene	194000	2500	--	620000	7990	--		12500
Carbon tetrachloride	ND	2500	--	ND	15700	--		12500
Cyclohexane	454000	2500	--	1560000	8610	--		12500
1,2-Dichloropropane	ND	2500	--	ND	11600	--		12500
Bromodichloromethane	ND	2500	--	ND	16700	--		12500
1,4-Dioxane	ND	2500	--	ND	9010	--		12500
Trichloroethene	ND	2500	--	ND	13400	--		12500
2,2,4-Trimethylpentane	982000	2500	--	4590000	11700	--		12500
Heptane	475000	2500	--	1950000	10200	--		12500
cis-1,3-Dichloropropene	ND	2500	--	ND	11300	--		12500
4-Methyl-2-pentanone	ND	6250	--	ND	25600	--		12500
trans-1,3-Dichloropropene	ND	2500	--	ND	11300	--		12500
1,1,2-Trichloroethane	ND	2500	--	ND	13600	--		12500
Toluene	33700	2500	--	127000	9420	--		12500
2-Hexanone	ND	2500	--	ND	10200	--		12500
Dibromochloromethane	ND	2500	--	ND	21300	--		12500
1,2-Dibromoethane	ND	2500	--	ND	19200	--		12500
Tetrachloroethene	ND	2500	--	ND	17000	--		12500
Chlorobenzene	ND	2500	--	ND	11500	--		12500
Ethylbenzene	57000	2500	--	248000	10900	--		12500

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-03 D
Client ID: SVE-3
Sample Location: BKLYN, NY

Date Collected: 08/22/22 14:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	64500	5000	--	280000	21700	--		12500
Bromoform	ND	2500	--	ND	25800	--		12500
Styrene	ND	2500	--	ND	10600	--		12500
1,1,2,2-Tetrachloroethane	ND	2500	--	ND	17200	--		12500
o-Xylene	10600	2500	--	46000	10900	--		12500
4-Ethyltoluene	ND	2500	--	ND	12300	--		12500
1,3,5-Trimethylbenzene	ND	2500	--	ND	12300	--		12500
1,2,4-Trimethylbenzene	5400	2500	--	26500	12300	--		12500
Benzyl chloride	ND	2500	--	ND	12900	--		12500
1,3-Dichlorobenzene	ND	2500	--	ND	15000	--		12500
1,4-Dichlorobenzene	ND	2500	--	ND	15000	--		12500
1,2-Dichlorobenzene	ND	2500	--	ND	15000	--		12500
1,2,4-Trichlorobenzene	ND	2500	--	ND	18600	--		12500
Hexachlorobutadiene	ND	2500	--	ND	26700	--		12500

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	103		60-140

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-04 D
Client ID: SVE-4
Sample Location: BKLYN, NY

Date Collected: 08/22/22 15:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/30/22 02:28
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	625.	--	ND	3090	--		3125
Chloromethane	8720	625	--	18000	1290	--		3125
Freon-114	ND	625.	--	ND	4370	--		3125
Vinyl chloride	ND	625.	--	ND	1600	--		3125
1,3-Butadiene	ND	625.	--	ND	1380	--		3125
Bromomethane	ND	625	--	ND	2430	--		3125
Chloroethane	ND	625.	--	ND	1650	--		3125
Ethanol	ND	15600	--	ND	29400	--		3125
Vinyl bromide	ND	625.	--	ND	2730	--		3125
Acetone	ND	3120	--	ND	7410	--		3125
Trichlorofluoromethane	ND	625.	--	ND	3510	--		3125
Isopropanol	ND	1560	--	ND	3830	--		3125
1,1-Dichloroethene	ND	625.	--	ND	2480	--		3125
Tertiary butyl Alcohol	ND	1560	--	ND	4730	--		3125
Methylene chloride	ND	1560	--	ND	5420	--		3125
3-Chloropropene	ND	625.	--	ND	1960	--		3125
Carbon disulfide	ND	625.	--	ND	1950	--		3125
Freon-113	ND	625.	--	ND	4790	--		3125
trans-1,2-Dichloroethene	ND	625.	--	ND	2480	--		3125
1,1-Dichloroethane	ND	625.	--	ND	2530	--		3125
Methyl tert butyl ether	ND	625.	--	ND	2250	--		3125
2-Butanone	ND	1560	--	ND	4600	--		3125
cis-1,2-Dichloroethene	ND	625.	--	ND	2480	--		3125

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-04 D
Client ID: SVE-4
Sample Location: BKLYN, NY

Date Collected: 08/22/22 15:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	1560	--	ND	5620	--		3125
Chloroform	ND	625.	--	ND	3050	--		3125
Tetrahydrofuran	ND	1560	--	ND	4600	--		3125
1,2-Dichloroethane	ND	625.	--	ND	2530	--		3125
n-Hexane	1190000	625	--	4190000	2200	--	E	3125
1,1,1-Trichloroethane	ND	625.	--	ND	3410	--		3125
Benzene	386000	625	--	1230000	2000	--	E	3125
Carbon tetrachloride	ND	625.	--	ND	3930	--		3125
Cyclohexane	663000	625	--	2280000	2150	--	E	3125
1,2-Dichloropropane	ND	625.	--	ND	2890	--		3125
Bromodichloromethane	ND	625.	--	ND	4190	--		3125
1,4-Dioxane	ND	625.	--	ND	2250	--		3125
Trichloroethene	ND	625.	--	ND	3360	--		3125
2,2,4-Trimethylpentane	921000	625	--	4300000	2920	--	E	3125
Heptane	688000	625	--	2820000	2560	--	E	3125
cis-1,3-Dichloropropene	ND	625.	--	ND	2840	--		3125
4-Methyl-2-pentanone	ND	1560	--	ND	6390	--		3125
trans-1,3-Dichloropropene	ND	625.	--	ND	2840	--		3125
1,1,2-Trichloroethane	ND	625.	--	ND	3410	--		3125
Toluene	570000	625	--	2150000	2360	--	E	3125
2-Hexanone	ND	625.	--	ND	2560	--		3125
Dibromochloromethane	ND	625.	--	ND	5320	--		3125
1,2-Dibromoethane	ND	625.	--	ND	4800	--		3125
Tetrachloroethene	ND	625.	--	ND	4240	--		3125
Chlorobenzene	ND	625.	--	ND	2880	--		3125
Ethylbenzene	74200	625	--	322000	2710	--		3125

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-04 D
Client ID: SVE-4
Sample Location: BKLYN, NY

Date Collected: 08/22/22 15:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	177000	1250	--	769000	5430	--		3125
Bromoform	ND	625.	--	ND	6460	--		3125
Styrene	ND	625	--	ND	2660	--		3125
1,1,2,2-Tetrachloroethane	ND	625.	--	ND	4290	--		3125
o-Xylene	49900	625	--	217000	2710	--		3125
4-Ethyltoluene	2410	625	--	11800	3070	--		3125
1,3,5-Trimethylbenzene	2560	625	--	12600	3070	--		3125
1,2,4-Trimethylbenzene	6100	625	--	30000	3070	--		3125
Benzyl chloride	ND	625.	--	ND	3240	--		3125
1,3-Dichlorobenzene	ND	625.	--	ND	3760	--		3125
1,4-Dichlorobenzene	ND	625.	--	ND	3760	--		3125
1,2-Dichlorobenzene	ND	625.	--	ND	3760	--		3125
1,2,4-Trichlorobenzene	ND	625.	--	ND	4640	--		3125
Hexachlorobutadiene	ND	625.	--	ND	6670	--		3125

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	103		60-140

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

SAMPLE RESULTS

Lab ID: L2245378-04 D2
Client ID: SVE-4
Sample Location: BKLYN, NY

Date Collected: 08/22/22 15:30
Date Received: 08/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/30/22 09:22
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
n-Hexane	1580000	3570	--	5570000	12600	--		17860
Benzene	362000	3570	--	1160000	11400	--		17860
Cyclohexane	681000	3570	--	2340000	12300	--		17860
2,2,4-Trimethylpentane	1350000	3570	--	6310000	16700	--		17860
Heptane	758000	3570	--	3110000	14600	--		17860
Toluene	832000	3570	--	3140000	13500	--		17860

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	97		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified
Lab Number: L2245378
Report Date: 08/31/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/29/22 14:46

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1681034-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified
Lab Number: L2245378
Report Date: 08/31/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/29/22 14:46

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1681034-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified
Lab Number: L2245378
Report Date: 08/31/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/29/22 14:46

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1681034-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3200 ATLANTIC AVE

Project Number: Not Specified

Lab Number: L2245378

Report Date: 08/31/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1681034-3								
Dichlorodifluoromethane	103		-		70-130	-		
Chloromethane	105		-		70-130	-		
Freon-114	109		-		70-130	-		
Vinyl chloride	107		-		70-130	-		
1,3-Butadiene	107		-		70-130	-		
Bromomethane	104		-		70-130	-		
Chloroethane	107		-		70-130	-		
Ethanol	87		-		40-160	-		
Vinyl bromide	92		-		70-130	-		
Acetone	114		-		40-160	-		
Trichlorofluoromethane	113		-		70-130	-		
Isopropanol	98		-		40-160	-		
1,1-Dichloroethene	107		-		70-130	-		
Tertiary butyl Alcohol	98		-		70-130	-		
Methylene chloride	103		-		70-130	-		
3-Chloropropene	104		-		70-130	-		
Carbon disulfide	90		-		70-130	-		
Freon-113	103		-		70-130	-		
trans-1,2-Dichloroethene	96		-		70-130	-		
1,1-Dichloroethane	104		-		70-130	-		
Methyl tert butyl ether	102		-		70-130	-		
2-Butanone	97		-		70-130	-		
cis-1,2-Dichloroethene	107		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1681034-3								
Ethyl Acetate	96		-		70-130	-		
Chloroform	107		-		70-130	-		
Tetrahydrofuran	95		-		70-130	-		
1,2-Dichloroethane	111		-		70-130	-		
n-Hexane	100		-		70-130	-		
1,1,1-Trichloroethane	115		-		70-130	-		
Benzene	101		-		70-130	-		
Carbon tetrachloride	119		-		70-130	-		
Cyclohexane	101		-		70-130	-		
1,2-Dichloropropane	104		-		70-130	-		
Bromodichloromethane	107		-		70-130	-		
1,4-Dioxane	93		-		70-130	-		
Trichloroethene	104		-		70-130	-		
2,2,4-Trimethylpentane	102		-		70-130	-		
Heptane	103		-		70-130	-		
cis-1,3-Dichloropropene	112		-		70-130	-		
4-Methyl-2-pentanone	103		-		70-130	-		
trans-1,3-Dichloropropene	98		-		70-130	-		
1,1,2-Trichloroethane	105		-		70-130	-		
Toluene	94		-		70-130	-		
2-Hexanone	90		-		70-130	-		
Dibromochloromethane	99		-		70-130	-		
1,2-Dibromoethane	93		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3200 ATLANTIC AVE

Project Number: Not Specified

Lab Number: L2245378

Report Date: 08/31/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1681034-3								
Tetrachloroethene	95		-		70-130	-		
Chlorobenzene	96		-		70-130	-		
Ethylbenzene	97		-		70-130	-		
p/m-Xylene	100		-		70-130	-		
Bromoform	99		-		70-130	-		
Styrene	96		-		70-130	-		
1,1,2,2-Tetrachloroethane	96		-		70-130	-		
o-Xylene	101		-		70-130	-		
4-Ethyltoluene	89		-		70-130	-		
1,3,5-Trimethylbenzene	98		-		70-130	-		
1,2,4-Trimethylbenzene	99		-		70-130	-		
Benzyl chloride	90		-		70-130	-		
1,3-Dichlorobenzene	94		-		70-130	-		
1,4-Dichlorobenzene	93		-		70-130	-		
1,2-Dichlorobenzene	93		-		70-130	-		
1,2,4-Trichlorobenzene	79		-		70-130	-		
Hexachlorobutadiene	89		-		70-130	-		

Project Name: 3200 ATLANTIC AVE
Project Number: Not Specified

Lab Number: L2245378
Report Date: 08/31/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2245378-01A	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-01X	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-02A	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-02X	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-03A	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-03X	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-04A	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)
L2245378-04X	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA			Y	Absent		TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name:	3200 ATLANTIC AVE	**Lab Number:**	L2245378
Project Number:	Not Specified	**Report Date:**	08/31/22

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	3200 ATLANTIC AVE	**Lab Number:**	L2245378
Project Number:	Not Specified	**Report Date:**	08/31/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	3200 ATLANTIC AVE	**Lab Number:**	L2245378
Project Number:	Not Specified	**Report Date:**	08/31/22

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 1 of 1

Date Rec'd in Lab: 8/23/22

ALPHA Job #: L2245373

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
- Client: TENEN ENVIRONMENTAL
- Address: 121 W 27TH ST, SUITE 702
- Phone: 646-606-2332
- Fax:
- Email: MCARROLL@TENEN-ENV.COM

Project Information
- Project Name: 3200 ATLANTIC AVE
- Project Location: BKLYN, NY
- Project #: —
- (Use Project name as Project #) X
- Project Manager: MATTHEW CARROLL
- ALPHA Quote #:

Turn-Around Time
- Standard ☐ Due Date:
- Rush (only if pre approved) ☐ Time:

These samples have been previously analyzed by Alpha: ☐

Report Information - Data Deliverables
- ☐ FAX
- ☒ ADEX

Criteria Checker:
Other Formats:
- ☒ EMAIL
- ☒ Add'l Deliverables

STD REPORT + ~~EDDs~~ (VC)

Report to: (if different than Manager)
M. CARROLL & V. CHANG

Billing Information
- ☒ Same as Client Info
- PO # —

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements / Comments/Detection Limits
FLOW RATE INACCURATE → NEEDED PUMP TO OVERCOME VACUUM

STD TAT

For PCBs Selection is REQUIRED
- ☐ Congeners
- ☐ Homologs
- ☐ Aroclors (low Vol only)

Analysis

NOTE: For metals, please specify elements of interest and media type.
- ☐ PM-10 Filter
- ☐ TSP Filter
- ☐ MCE

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume(L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol)	Hg via NIOSH 6009 Mod.	Metals	PM-10 Filter	TSP Filter	TO-15 (O)	Sample Comments (i.e. PID)
45373-01	SVE-1	8/22/2022	12:30	12:30	3.4ml/m	5L	SV	VC	O/TEDLAR								X	
02	SVE-2	↓	13:30	13:30	↓	↓	↓	↓	↓								X	
03	SVE-3	↓	14:30	14:30	↓	↓	↓	↓	↓								X	
04	SVE-4	↓	15:30	15:30	↓	↓	↓	↓	↓								X	

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

(1) Required for PUF cartridges, PM-10 and TSP filters

Media Type	P	P	P	T	F	F	F	O

Media Code
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
	8/22/2022 1615		
Paul Mazzella QE AAC	8/22/22 1815	Paul Mazzella QE AAC	8/22/22 20:15
QE AAC	8/23/22 0517		8/23/22 0317

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 101-20 (rev 23-MARCH 2020)