

**BAYVILLE VILLAGE CLEANERS**  
**SITE NUMBER: V00220**  
**290 BAYVILLE AVENUE**  
**BAYVILLE, NASSAU COUNTY, NEW YORK 11709**

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**Periodic Review Report**

**Prepared for:**

Thomas Ryan, Volunteer

Voluntary Cleanup Agreement: W1-0848-9903

**Prepared by:**

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April 15, 2024

**Revised September 26, 2025**

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Attachment I: NYSDEC Letters Dated September 11, 2023; February 26, 2025; August 28, 2025

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## CERTIFICATION STATEMENT

I, James Gladysz, P.E., certify that I am currently a registered professional engineer in the State of New York and that this Periodic Review Report (PRR) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10).

*For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:*

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;*
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- Nothing has occurred that would constitute a violation or failure to comply with any Site management plan for this control;*
- Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- Use of the Site is compliant with the Declaration of Covenants and Restrictions;*



## 1.0 PURPOSE

Cashin Technical Services, Inc. (CTS) on behalf of our client Mr. Thomas Ryan has prepared this Periodic Review Report (PRR) in accordance with the approved Site Management Plan (SMP) dated June 22, 2018. Sampling and monitoring activities were performed on January 11, 2024 at the former Bayville Village Cleaners located at 290 Bayville Avenue, New York (Voluntary Cleanup Agreement # W1-0848-9903, Site # V00220).

It should be noted that since approximately December 1, 2020, the dry cleaner business/tenant (Bayville Village Cleaners) has no longer been in operation at the subject Site. All associated dry-cleaning equipment and chemicals have been removed from the subject building.

Currently, the subject building is occupied by Tri-County Installations Plumbing & Heating, Inc. (commercial use). The subject building is used as an office space, plumbing parts/supply warehouse, and plumbing workshop. There are no significant quantities of hazardous materials stored, used, or generated on the property. However, several cleaners and solvents in retail containers are used by the plumbing business and were observed in the building interior. All of the existing engineering controls are still in operation at the Site and no modifications or disruption of the SSD system occurred during tenant transfers. The existing institutional controls still comply with 6 NYCRR 375-1.8(g)(2)(iii) for commercial uses.

It should also be noted that groundwater sampling is no longer performed during the PRR sampling event as analytical data results from on historical groundwater data (2017, 2019, & 2021) showed no Volatile Organic Compounds (VOC's) above the NYSDEC Part 703 groundwater standards. Furthermore, no VOCs were detected in any of the on-site monitoring wells during the May 27, 2021 sampling event. In an email dated August 3, 2022, The Department approved the elimination of groundwater sampling from the scope of work.

The scope of work performed at the Site included the following as required by the approved Site Management Plan (SMP): 1) Interior vacuum test points and VOC gas measurements; 2) Indoor and outdoor ambient air sampling; and 3) Exterior subsurface soil vapor gas sampling.

To prepare for this sampling event, the SSD System was turned off for a minimum of 30 days prior to sampling, as requested by the DEC in the letter dated September 11, 2023. Tri-County Installations turned off the SSD system on December 11, 2023. Because the system was turned off for the duration of this sampling event, no SSD system air samples were collected. The system was turned back on at approximately 5pm on the day of sampling, after collecting the air samples. After allowing the system to resume running, interior vacuum test point measurements were collected.

Extracted soil vapors were monitored to evaluate the effectiveness of the SSD System and to check for carbon vessel breakthrough. Monitoring included screening the influent and effluent air sampling ports with a photoionization detector (PID) and collecting influent and effluent samples using 6-liter Summa® canisters with eight-hour regulators.

CTS performed previous PRR sampling on September 20, 2022, and additional sampling/monitoring on May 27, 2021, October 22, 2019, December 27, 2017 and May 18, 2018 as part of the Final SMP. Those results are included in this PRR for the inception of trends in contaminant levels.

This PRR includes discussions, charts, maps, and associated appendices detailing the following:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual Site inspections;
- Completed Site management forms;
- Data summary result tables along with the applicable standards;

- Copies of all laboratory data sheets; and
- Overall Site evaluation.

## 2.0 IDENTIFICATION, ASSESSMENT AND CERTIFICATION OF ALL ECS/ICS

### 2.1 Engineering Controls (ECs):

1. Vapor Mitigation System: The SSD System was installed with the following components:
  - a. A RadonAway fan (Model RP265c) was installed to induce negative pressure to the sub-slab region beneath the one-story building.
  - b. The extraction point for PCE vapors was installed in the center of the building, beneath the building slab, to capture all vapors.
  - c. Interconnecting piping consisting of three and four-inch diameter schedule 40 PVC was utilized to install the SSD System. Four-inch PVC piping was installed from the sub-slab extraction point, extending to above the suspended ceiling, and then connected to the fan utilizing flexible couplings. The four-inch piping was then extended from the fan to the southern exterior wall. The piping then penetrates the wall whereby a reducer fitting extends three-inch PVC piping into a 55-gallon drum containing granular activated carbon (GAC). The GAC Vessel is located outside the building along the south side. The purpose of the GAC Vessel is to treat the effluent gas prior to discharge to the atmosphere through a three-inch exterior mounted stack pipe. Sampling/monitoring ports were installed on the extraction piping (influent side) and after the GAC vessel (effluent side) for monitoring vacuum, flow and contaminant concentrations.
2. Other Engineering Controls: Sealing of the concrete floor - The concrete floor was evaluated to eliminate any other sub-slab transport pathway (i.e. cracks in the building floor). All possible routes were sealed off to prevent the entrance of soil gas and to enhance the sub-slab negative pressure field of the SSD System.
3. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the declaration of covenants and restrictions (DCR), which includes plans for: (1) Institutional and Engineering Controls, (2)

monitoring, (3) operation and maintenance and (4) reporting;

4. Periodic certification of the institutional and engineering controls listed above.

## 2.2 Institutional Controls (ICs)

1. Declaration of Covenants and Restrictions - Current and Future Use of the Site: Permitted future uses (commercial and industrial) must comply with 6 NYCRR 375-1.8(g)(2)(iii) for commercial uses; and 6 NYCRR 375-1.8(g)(2)(iv) for industrial uses A copy of the Declaration of Covenants and Restrictions (DCR) and its recording page was recorded with the Nassau County Clerk's office on March 17, 2017;The property may be used for: commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
2. All ECs must be operated and maintained as specified in this SMP;
3. All ECs must be inspected at a frequency and in a manner defined in the SMP;
4. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Nassau County Department of Health to render it safe for use as drinking water or for commercial purposes, and the user must first notify and obtain written approval to do so from the Department;
5. Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
6. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP;
7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
9. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
10. Access to the Site must be provided to agents, employees or other representatives

of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Declaration of Covenants and Restrictions;

11. The potential for vapor intrusion must be evaluated for any buildings developed on the Site, specifically within the IC boundaries; and any potential impacts that are identified must be monitored or mitigated. The IC boundaries for this Site encompasses the entire subject lot as depicted on the survey map provided in Figure 7; and
12. Vegetable gardens and farming on the Site are prohibited.

### 2.3 Site Evaluation

During the annual sampling PRR event, CTS inspected the discharge pipe of the SSD System and it was clear of obstruction. The general system piping was also observed to be in good working condition and the RadonAway fan ran properly when turned back on after collecting the air samples. CTS disconnected the negative pressure tube and the alarm sounded as appropriate. Negative pressure was recorded indicating that the active fan is operating properly. The subject Site building inventory questionnaire was completed and all chemical products inventoried with website links for associated Safety Data Sheets (SDS) sheets provided.

## 3.0 SAMPLING SCOPE OF WORK AND RESULTS

### 3.1 Interior Vacuum Test Point and VOC Gas Measurements

CTS measured four interior vacuum test points for negative pressure below the building slab utilizing a Magnehelic Differential Pressure gauge. The SSD System extraction port was also measured for negative pressure to monitor the effectiveness of the active radon fan (RadonAway RPc Series Fan Model RP265c) which draws 334 cubic feet per minute (CFM) of air through the SSD System. To prepare for this sampling event, the SSD System was turned off for a minimum of 30 days prior to sampling, as requested by the DEC in the letter dated September 11, 2023. Tri-County Installations turned off the SSD system on December 11, 2023. The system was turned back on at approximately 5pm on the day of sampling, after collecting the air samples. After allowing the system to resume running, interior vacuum test point measurements were collected. The active radon fan continues to operate 24 hours a day, 7 days a week, 365 days a year. CTS also measured Volatile Organic Compound (VOC) gases along the following SSD System ports: extraction port, influent port and effluent port utilizing a photoionization detector (PID). Field measurements are listed below in Table 1.

**Table 1 - Interior Vacuum Test Points and VOC Gas Measurements**

<b>Magnehelic Differential Pressure (inches of water column)</b>					
<b>Interior Vacuum Test Points</b>	<b>May 18, 2018</b>	<b>October 22, 2019</b>	<b>May 27, 2021</b>	<b>September 20, 2022</b>	<b>January 11, 2024</b>
TP-1	-13.85	-4.71	-7.48	-5.54	-0.01
TP-2	-11.08	-12.75	-10.81	-27.71	-0.01
TP-3	-11.08	-6.10	-6.37	-8.31	-0.01
TP-4	-5.54	-5.54	-6.65	-36.02	-0.01
Extraction Port	-831.23	-767.50	-822.92	-623.42	-614.18

<b>PID Readings (parts per million)</b>					
<b>SSD System Ports</b>	<b>May 18, 2018</b>	<b>October 22, 2019</b>	<b>May 27, 2021</b>	<b>September 20, 2022</b>	<b>January 11, 2024 (SSDS Off)</b>
Extraction Port	3.2	7.5	1.7	10.0	0.5
Influent Port	0.0	7.3	1.4	0.3	0.2
Effluent Port	0.0	0.0	0.0	0.5	0.0
Indoor Ambient Air	1.8	12.4	0.0	1.9	0.0

### 3.2 Sub-Slab Depressurization (SSD) System Air Sampling

To prepare for this sampling event, the SSD System was turned off for a minimum of 30 days prior to sampling, as requested by the DEC in the letter dated September 11, 2023. Tri-County Installations turned off the SSD system on December 11, 2023. Because the system was turned off for the duration of this sampling event, no SSD system air samples were collected. Below are the results from the air samples CTS collected from the influent port and effluent port associated with the SSD System during previous sampling events. Samples were collected in 6-liter Suma canisters with eight-hour regulators and analyzed for VOCs (EPA Method TO-15).

**Table 2 – Influent Port and Effluent Port Vapor Gas Sample Results**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 12/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>
Influent Port	Acetone	225	8.3	188	50.5
	Benzene	1.3	U	40.7	U (<2.90)
	Carbon Tetrachloride	U	U	U	U (<9.06)
	Chloroform	U	0.78	5.42	U (<7.48)
	Cyclohexane	14.5	U	U	U (<5.78)
	Dichlorodifluoromethane	U	2.8	U	U (<5.70)
	Ethanol	18.3	4	330	54.5
	Ethyl acetate	20.6	U	U	U (<6.62)
	Ethylbenzene	82.8	U	34.1	U (<3.56)
	Isopropanol	U	U	33.2	161
	Methylene Chloride	7.6	U	U	129
	Methyl Ethyl Ketone (2-Butanone)	4.8	10.4	25.8	U (<4.88)
	n-Heptane	22.8	U	27.9	U (<4.40)
	n-Hexane	10.9	U	28.7	118
	Styrene	4.1	U	U	U (<6.38)
	Tetrachloroethene (PCE)	181	331	96.0	U (<7.06)
Toluene	7.2	1.2	246	U (<2.38)	

	trans-1,2-Dichloroethene	U	U	U	8.25
	Trichloroethene (TCE)	24.4	24.8	U	U (<5.20)
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)
	1,1,1-Trichloroethane (111-TCA)	U	U	6.93	U (<5.52)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)
	Vinyl Chloride	U	U	U	U (<3.72)
	m&p-Xylene	389	U	259	U (<13.7)
	o-Xylene	124	U	33.4	U (<3.34)

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 12/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>
Effluent Port	Acetone	9.7	51.7	116	U (<25.3)
	Benzene	1.3	0.58	58.0	U (<2.90)
	Carbon Tetrachloride	U	U	U	U (<9.06)
	Chloroform	U	1.3	6.54	U (<7.48)
	Cyclohexane	3.3	U	U	U (<5.78)
	Dichlorodifluoromethane	U	3.1	U	U (<5.70)
	Ethanol	23.5	6.3	448	32.3
	Ethylbenzene	U	U	43.3	U <3.56
	Isopropanol	U	U	47.5	6.88
	Methylene Chloride	U	U	U	8.68
	n-Heptane	U	U	36.7	U (<4.40)
	n-Hexane	2.5	U	43.3	U (<5.26)
	Tetrachloroethene (PCE)	41.5	4.1	9.16	U (<7.06)
	Toluene	U	6.5	373	U (<2.38)
	Trichloroethene (TCE)	8.4	U	U	U (<5.20)
cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)	

1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)
1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)
1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)
Trans-1,2-Dichloroethene	U	9.9	U	U (<5.36)
1,1,1-Trichloroethane (111-TCA)	U	U	5.35	U (<5.52)
1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)
Trichlorofluoromethane	U	1.8	U	U (<5.04)
Vinyl Chloride	U	U	U	U (<3.72)
m&p-Xylene	389	3.3	343	U (<13.7)
o-Xylene	124	U	45.1	U (<3.34)

NOTES:

1. All results are expressed in micrograms per cubic meter of air (ug/m<sup>3</sup>).
2. U= Less than analytical detection limit.

### 3.3 Indoor and Outdoor Ambient Air Sampling

CTS collected one (1) indoor ambient air sample from inside the subject building and one (1) outdoor ambient air sample on the subject Site. The indoor canister was placed on a stool in the rear warehouse space, and the outdoor canister was placed in the western asphalt paved parking lot area. Samples were collected in 6-liter Suma canisters with eight-hour regulators and analyzed for VOCs (EPA Method TO-15). The results of ambient air testing are presented in Table 3 below.

**Table 3 – Indoor and Outdoor Ambient Air Sampling Results**

Sample ID	VOC Compounds	12/27/ 2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/ 2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/ 2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/ 2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/ 2024 Results ug/m <sup>3</sup>	NYSDOH Air Guideline Values ug/m <sup>3</sup>
<b>Indoor Ambient Air</b>	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<2.76)	11.4	N/A
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.46)	U (<2.31)	N/A
	1,1-Dichloroethane (11-	U	U	U	U	U	N/A

	DCA)				(<4.05)	(<3.15)	
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<0.16)	U (<0.16)	N/A
	1,2,4-Trimethylbenzene	U	1.9	U	8.7	U (<2.6)	N/A
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<4.05)	U (<3.31)	N/A
	1,2-Dichlorotetrafluorethane	U	U	U	U	5.17	N/A
	Acetone	22.3	13.2	39.5	31	16.7	N/A
	Acrolein	U	U	U	U	37.8	N/A
	Benzene	0.56	U	U	10.4	<1.57	N/A
	Carbon Disulfide	U	2.2	U	U (<70.0)	U (<30.2)	N/A
	Carbon Tetrachloride	U	U	U	U (<0.16)	U (<0.16)	N/A
	Chloroethane	U	U	U	U	99.5	N/A
	Chloromethane	0.7	0.83	U	U (<5.16)	2	N/A
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<0.16)	U (<0.16)	N/A
	Dichlorodifluoromethane	U	2.4	U	U (<4.95)	3.07	N/A
	Ethanol	16.9	19	49.1	99.3	17.2	N/A
	Ethyl Acetate	U	U	U	U	2.9	N/A
	Ethylbenzene	U	U	U	8.81	U (<1.48)	N/A
	4-Ethyltoluene	U	U	U	7.62	U (<2.66)	N/A
	Isopropanol	U	U	7.03	14.9	29.1	N/A
	m,p-Xylenes	U	U	U	72	6.85	N/A
	Methyl Ethyl Ketone (2-Butanone)	U	U	15.3	7.58	3.3	N/A
	Methylene Chloride	U	10.7	9.10	U (<2.52)	2.67	60
	n-Heptane	U	U	U	8.85	U (<2.72)	N/A
	n-Hexane	U	U	U	11.2	U (<2.07)	N/A
	o-Xylene	U	U	U	10.7	U (<1.67)	N/A
	Propylene	U	U	1.84	U (<1.25)	1.76	N/A

	Styrene	3.6	U	U	U (<4.26)	U (<2.2)	N/A
	Tetrachloroethene (PCE) 4	U	<b>263</b>	U	U (<2.53)	6.17	30
	Tetrahydrofuran	U	U	28.8	12.8	4.98	N/A
	Toluene	1.6	2	U	62.7	3.09	N/A
	Trichloroethene (TCE) 4	<b>61.9</b>	<b>46.6</b>	U	U (<0.16)	U (<0.16)	2
	Vinyl Chloride	U	U	U	U (<0.16)	U (<0.16)	N/A

Sample ID	VOC Compounds	12/27/ 2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/ 2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/ 2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/ 2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/ 2024 Results ug/m <sup>3</sup>	NYSDOH Air Guideline Values ug/m <sup>3</sup>
<b>Outdoor Ambient Air</b>	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<2.76)	U (<2.76)	N/A
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.46)	U (<2.31)	
	1,1-Dichloroethane (11- DCA)	U	U	U	U (<4.05)	U (<3.15)	
	1,1-Dichloroethene (11- DCE)	U	U	U	U (<0.16)	U (<0.16)	
	1,2-Dichloroethane (12- DCA)	U	U	U	U (<4.05)	U (<3.31)	
	1,2- Dichlorotetrafluorethane	U	U	U	U	5.1	
	Acetone	4.7	8.6	28.1	U (<25.0)	9.67	
	Acrolein	U	U	U	U	49	
	Benzene	0.59	0.48	U	U (<3.19)	U (<1.57)	
	Carbon Tetrachloride	U	U	U	U (<0.16)	U (<0.16)	
	Chloromethane	0.64	0.61	U	U (<5.16)	2.33	
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<0.16)	U (<0.16)	
	Dichlorodifluoromethane	1.7	2.4	U	U (<4.95)	3.02	
	Ethanol	3	3.4	45.8	36	8.42	
Isopropanol	U	U	116	6.51	3.12		

Methyl Ethyl Ketone (2-Butanone)	U	U	U	U	3.69	
Methylene Chloride	U	U	22.0	U (<2.52)	U (<2.52)	
Naphthalene	U	U	U	U	55.3	
n-Hexane	U	U	68.2	U (<2.63)	U (<2.07)	
Propylene	U	U	U	U	1.91	
Toluene	U	1.5	U	U (<3.77)	U (<1.42)	
Tetrachloroethene (PCE) 4	U	<b>69.7</b>	U	U (<2.53)	U (<2.53)	
Trichloroethene (TCE) <sup>4</sup>	U	U	U	U (<0.16)	U (<0.16)	
Vinyl Chloride	U	U	U	U (<0.16)	U (<0.16)	

According to the laboratory analytical results for the January 11, 2024 sampling event, the VOC compound 1,1,1-Trichloroethane (111-TCA) was found in a concentration of 11.4 ug/m<sup>3</sup> in the Indoor Ambient Air. This exceeded the NYSDOH air guideline value of 10 ug/m<sup>3</sup>. 1,1,1-Trichloroethane (111-TCA) is found in metal degreasing and aerosol spray products, both of which are stored in retail-size containers in the plumbing workshop room where the indoor ambient air sample was collected. 1,1,1-Trichloroethane (111-TCA) has not been detected in any sub-slab soil vapor samples during this and prior sampling events, nor has it previously been detected in the Indoor Ambient Air or Outdoor Ambient Air samples. There were also flags on this result in the laboratory report for the following:

- 4.K: Continuing Calibration Verification (CCV) quality control levels failed high, values are considered to be estimated and
- 4.M: LCS (laboratory control sample) recovery was above QC acceptance limit.

According to the laboratory (Long Island Analytical), these qualifiers indicate that the instrument was biased high for that compound when that sequence was run. It is possible that only the quality control samples were affected, but also possible that the reported result may have been skewed higher than the actual concentration in the sample.

### 3.4 Subsurface Soil Vapor Gas Sampling

CTS collected three soil vapor gas samples from exterior sub-surface permanent soil vapor gas sampling points (PP-3, PP-4, and PPB-5). Three permanent sample points were covered over by asphalt (PP-2) or gravel (PPB-1 and PPB-6), and temporary sampling points were erected in locations close to where the corresponding permanent sampling points would have been. Samples were collected in 6-liter Suma canisters with eight-hour regulators and analyzed for VOCs (EPA Method TO-15). The results of subsurface soil vapor gas sampling are presented in Table 4 below.

**Table 4 – Subsurface Soil Vapor Gas Sampling Results**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/2024 Results ug/m <sup>3</sup>
PPB-1	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<5.52)	U (<2.76)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)	U (<2.82)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)	U (<3.30)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)	U (<2.36)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)	U (<3.50)
	Acetone	8.2	12.8	429	160	U (<12.6)
	Acrolein	-	-	34	76.3	34.3
	Benzene	0.78	U	6.77	U (<2.90)	U (<1.45)
	Carbon Tetrachloride	U	U	U	U (<9.06)	U (<4.53)
	Chloroform	10.8	3.7	3.95	22.3	U (<3.74)
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)	U (<3.03)
	Dichlorodifluoromethane	1.3	3.6	U	U (<5.70)	U (<2.85)
	Ethanol	U	U	470	224	21.1
	Ethylbenzene	U	U	3.47	U (<3.56)	U (<1.78)
	Isopropanol	U	U	54.2	78.7	3.66
	m,p-Xylenes	U	U	97.6	22.2	U (<6.83)
	Methyl Ethyl Ketone (2-Butanone)	U	U	62.4	33.7	U (<2.44)
	Methylene Chloride	U	U	15.4	76.7	3.68
	Naphthalene	U	U	U	U	11.6
	n-Heptane	U	U	7.87	U (<4.40)	U (<2.20)
	n-Hexane	U	U	12.2	18.9	U (<2.63)
	o-Xylene	U	U	4.21	U (<3.34)	U (<1.67)
	Propylene	U	U	50.3	58	2.36
	Tetrachloroethene (PCE)	290	434	32.0	U (<7.06)	U (<3.53)
	Tetrahydrofuran	U	U	8.11	U (<5.60)	U (<2.80)
	Toluene	U	1.2	23.2	7.99	4.37
	Trichloroethene (TCE)	2	5.5	10.8	U (<5.20)	U (<2.60)
Vinyl Chloride	U	U	U	U (<3.72)	U (<1.86)	

**Table 4 – Subsurface Soil Vapor Gas Sampling Results (Continued)**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/2024 Results ug/m <sup>3</sup>
PP-2	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<5.52)	U (<2.76)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)	U (<2.82)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)	U (<3.30)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)	U (<2.36)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)	U (<3.50)
	Acetone	4.8	26.4	U	79.3	U (<12.6)
	Acrolein	-	-	U	78.6	42.6
	Benzene	U	1.5	U	5.56	U (<1.45)
	Carbon Tetrachloride	U	U	U	U (<9.06)	U (<4.53)
	Chloroform	U	U	U	9.57	U (<3.74)
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)	U (<3.03)
	Dichlorodifluoromethane	1.4	2.2	U	U (<5.70)	U (<2.85)
	Ethanol	4	8.9	133	188	23.2
	Isopropanol	U	U	U	40.9	U (<2.06)
	m,p-Xylenes	U	U	U	23.2	U (<6.83)
	Methyl Butyl Ketone (2-Hexanone)	U	7.8	U	U (<6.76)	U (<3.38)
	Methyl Ethyl Ketone (2-Butanone)	U	114	U	25.8	U (<2.44)
	Methylene Chloride	U	5.3	U	32.8	U (<2.52)
	n-Hexane	U	U	U	8.32	U (<2.63)
	Propylene	U	10.7	U	30.6	1.93
	Tetrachloroethene (PCE)	U	172	U	16.3	U (<3.53)
Toluene	U	U	U	8.97	U (<1.19)	
Trichloroethene (TCE)	U	U	U	U (<5.20)	U (<2.60)	
Vinyl Chloride	U	U	U	U (<3.72)	U (<1.86)	

**Table 4 – Subsurface Soil Vapor Gas Sampling Results (Continued)**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/2024 Results ug/m <sup>3</sup>
PP-3	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<5.52)	U (<2.76)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)	U (<2.82)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)	U (<3.30)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)	U (<2.36)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)	U (<3.50)
	Acetone	41.5	90.0	133	1630	U (<12.6)
	Acrolein	-	-	48.9	32.3	73.6
	Benzene	U	1.9	35.7	U (<2.90)	U (<1.45)
	Carbon Tetrachloride	U	U	U	U (<9.06)	U (<4.53)
	Chloroform	U	1.5	12.3	11.4	U (<3.74)
	Chloromethane	U	U	U	U	3.26
	cis-1,2-Dichloroethene (c12-DCE)	U	8.1	7.61	7.61	U (<3.03)
	Ethanol	3	5.1	406	92.3	16.6
	Ethylbenzene	U	U	28.3	U (<3.56)	U (<1.78)
	Isopropanol	U	U	39.3	14.3	3.12
	m,p-Xylenes	U	U	212	25.3	U (<6.83)
	Methyl Ethyl Ketone (2-Butanone)	4.2	14.4	19.5	46.3	U (<2.44)
	Methylene Chloride	U	35.9	U	U (<5.04)	2.57
	n-Heptane	U	U	28.9	U (<4.40)	U (<2.20)
	n-Hexane	U	4.3	23.0	U (<5.26)	U (<2.63)
	o-Xylene	U	U	29.4	U (<3.34)	U (<1.67)
	Propylene	U	1.4	23.2	19.5	2.41
	Tetrachloroethene (PCE)	87.9	463	168	1240	99.3
Toluene	U	U	218	6.26	1.92	
Trichloroethene (TCE)	U	9	U	16.2	U (<2.60)	
Vinyl Chloride	U	U	U	U (<3.72)	U (<1.86)	

**Table 4 – Subsurface Soil Vapor Gas Sampling Results (Continued)**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/2024 Results ug/m <sup>3</sup>
PP-4	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<5.52)	U (<2.76)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)	U (<2.82)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)	U (<3.30)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)	U (<2.36)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)	U (<3.50)
	Acetone	9.5	8.8	203	974	29.1
	Acrolein	-	-	77.5	19.4	38.1
	Benzene	0.52	U	50.0	U (<2.90)	U (<1.45)
	Carbon Tetrachloride	U	U	U	U (<9.06)	U (<4.53)
	Chloroform	U	2.8	9.67	U (<7.48)	U (<3.74)
	Chloromethane	U	U	U	U	2.5
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)	U (<3.03)
	Dichlorodifluoromethane	U	2.1	U	U (<5.70)	U (<2.85)
	Ethanol	4.3	4.7	700	50	14.8
	Ethylbenzene	U	U	27.7	U (<3.56)	U (<1.78)
	Isopropanol	U	U	66.7	10.3	3.37
	m,p-Xylenes	U	U	214	21.5	U (<6.83)
	Methyl Ethyl Ketone (2-Butanone)	U	U	46.8	29	U (<2.44)
	Methylene Chloride	U	U	50.7	5.56	2.61
	n-Heptane	U	U	39.3	U (<4.40)	U (<2.20)
	n-Hexane	U	U	54.9	U (<5.26)	U (<2.63)
	o-Xylene	U	U	29.5	U (<3.34)	U (<1.67)
	Propylene	U	U	46.4	10.6	1.89
Tetrachloroethene (PCE)	87.4	399	28.8	450	41.8	
Toluene	1.3	U	248	U (<2.38)	1.7	
Trichloroethene (TCE)	U	2	U	U (<5.20)	U (<2.60)	
Vinyl Chloride	U	U	U	U (<3.72)	U (<1.86)	

**Table 4 – Subsurface Soil Vapor Gas Sampling Results (Continued)**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/2024 Results ug/m <sup>3</sup>
PPB-5	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<5.52)	U (<2.76)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)	U (<2.82)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)	U (<3.30)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)	U (<2.36)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)	U (<3.50)
	Acetone	U	9.9	291	1200	24.2
	Acrolein	-	-	U	19.6	25
	Benzene	U	0.74	47.3	U (<2.90)	U (<1.45)
	Carbon Tetrachloride	U	U	U	U (<9.06)	U (<4.53)
	Chloroform	U	2.3	14.5	U (<7.48)	U (<3.74)
	Chloromethane	0.92	U	U	U (<4.20)	U (<2.10)
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)	U (<3.03)
	Dichlorodifluoromethane	1.4	2	U	U (<5.70)	U (<2.85)
	Ethanol	U	4.8	682	54.4	7.5
	Ethylbenzene	U	U	19.8	U (<3.56)	U (<1.78)
	Isopropanol	U	U	70.7	9.44	U (<2.06)
	m,p-Xylenes	U	U	140	25.3	U (<6.83)
	Methyl Ethyl Ketone (2-Butanone)	U	42.3	87.5	36.9	U (<2.44)
	Methyl Methacrylate	U	U	U	U	15.7
	Methylene Chloride	10.3	5.4	64.9	U (<5.04)	2.57
	n-Heptane	U	U	32.9	U (<4.40)	U (<2.20)
	n-Hexane	U	U	55.2	U (<5.26)	U (<2.63)
	o-Xylene	U	U	19.2	U (<3.34)	U (<1.67)
	Propylene	U	U	41.2	11.2	2.25
	Tetrachloroethene (PCE)	U	132	U	U (<7.06)	5.09
	Toluene	U	U	226	7.99	3.28
	Trichloroethene (TCE)	U	U	U	U (<5.20)	U (<2.60)
Vinyl Chloride	U	U	U	U (<3.72)	U (<1.86)	

**Table 4 – Subsurface Soil Vapor Gas Sampling Results (Continued)**

Sample ID	VOC Compounds	12/27/2017 Results ug/m <sup>3</sup>	1 <sup>st</sup> PRR 10/22/2019 Results ug/m <sup>3</sup>	2 <sup>nd</sup> PRR 5/27/2021 Results ug/m <sup>3</sup>	3 <sup>rd</sup> PRR 9/20/2022 Results ug/m <sup>3</sup>	4 <sup>th</sup> PRR 1/11/2024 Results ug/m <sup>3</sup>
PPB-6	1,1,1-Trichloroethane (111-TCA)	U	U	U	U (<5.52)	U (<2.76)
	1,1,2-Trichloroethane (112-TCA)	U	U	U	U (<5.64)	U (<2.82)
	1,1-Dichloroethane (11-DCA)	U	U	U	U (<6.60)	U (<3.30)
	1,1-Dichloroethene (11-DCE)	U	U	U	U (<4.72)	U (<2.36)
	1,2-Dichloroethane (12-DCA)	U	U	U	U (<7.00)	U (<3.50)
	1,3-Butadiene	U	U	U	U	13.1
	Acetone	10.2	15.4	308	97.6	U (<12.6)
	Acrolein	-	-	U	45.2	59.4
	Benzene	0.72	1.8	24.7	U (<2.90)	U (<1.45)
	Carbon Disulfide	U	13.6	U	U (<136)	U (<68)
	Carbon Tetrachloride	U	U	U	U (<9.06)	U (<4.53)
	Chloromethane	U	0.7	U	U (<4.20)	2.75
	cis-1,2-Dichloroethene (c12-DCE)	U	U	U	U (<6.06)	U (<3.03)
	Dichlorodifluoromethane	U	2.4	U	U (<5.70)	U (<2.85)
	Ethanol	4.4	U	349	111	24.2
	Ethylbenzene	U	U	25.8	U (<3.56)	U (<1.78)
	Isopropanol	U	U	22.2	26.2	3.52
	m,p-Xylenes	U	U	207	23.4	U (<6.83)
	Methyl Ethyl Ketone (2-Butanone)	30.8	24.1	935	21.5	U (<2.44)
	Methylene Chloride	U	U	U	19	4.38
	n-Heptane	5.5	U	19.7	U (<4.40)	U (<2.20)
	n-Hexane	1.2	1.3	17.0	U (<5.26)	U (<2.63)
	o-Xylene	U	U	30.5	U (<3.34)	U (<1.67)
	Propylene	U	6.2	179	24.5	6.21
	Tetrachloroethene (PCE)	U	22.7	U	U (<7.06)	U (<3.53)
	Toluene	2.4	1.7	152	28	4.33
	Trichloroethene (TCE)	U	U	U	U (<5.20)	U (<2.60)
Vinyl Acetate	1	U	U	U (<7.14)	U (<3.57)	
Vinyl Chloride	U	U	U	U (<3.72)	U (<1.86)	

PP-3 has had a fluctuating detected concentration of Tetrachloroethene (PCE). The concentration detected in this round of sampling was 99.3 ug/m<sup>3</sup>. The past concentrations of PCE in PP-3 have been 1,240 ug/m<sup>3</sup> on September 20, 2022, 168 ug/m<sup>3</sup> on May 27, 2021, 463 ug/m<sup>3</sup> on October 22, 2019, and 87.9 ug/m<sup>3</sup> on December 27, 2017. The 2022 incidence of an increased of PCE detection, occurring approximately two years after the removal of the dry cleaner business and all associated dry-cleaning equipment and chemicals, may be attributed to an exposure from a source not associated with the former dry cleaner business. Sampling point PP-3 is located in the middle of a concrete loading ramp, on which trucks/vans often park to load and unload supplies for the plumbing business. PCE can be found in brake and automotive cleaner and degreaser. The recent significantly lower concentration of 99.3 ug/m<sup>3</sup> suggests that the source of PCE is not an ongoing occurrence.

Locations of all sampling points associated with the SSD System are shown on Figure 1 – SSDS Site Sampling Sketch and all of the interior monitoring and exterior sampling points are shown on Figure 2 – Site Sampling Sketch. Laboratory analytical results for vapor gas sampling are included in Appendix A. A water table elevation contour map is shown on Figure 3.

All samples were analyzed by Long Island Analytical Laboratories, Inc. (New York State ELAP Certification # 11693) located in Holbrook, New York 11741. Certifications and quality control data are included in the raw analytical data report enclosed in Appendix A. Laboratory analytical results reported by Long Island Analytical Laboratories, Inc. conform to the most current, applicable National Environmental Laboratory Accreditation Program (NELAC) standards and the laboratory's Quality Assurance Manual. The Long Island Analytical Laboratories, Inc. results include a Limit of Quantitation (LOQ), which is equal to the Minimum Reporting Limit (MRL).

## 4.0 INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY, AND SUB-SLAB DEPRESSURIZATION SITE MANAGEMENT FORM

CTS on behalf of Mr. Thomas Ryan completed the NYSDOH “Indoor Air Quality Questionnaire and Building Inventory Form” for the subject Site during sampling activities. This form includes a product inventory form which lists each of the products/chemicals used and stored at the plumbing, heating and air conditioning warehouse/office space. The completed form is included in Appendix B. As part of the annual sampling, CTS inspected the SSD System and all of its components to ensure they are operating properly. The completed Sub-slab Depressurization Site Management Form is included in Appendix C. The NYSDEC Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form is provided in Appendix D.

## 5.0 STEPS FOR TERMINATION/DISCONTINUATION & DECOMMISSIONING OF SSDS

In accordance with the approved SMP 3.3.1.1 Criteria for Completion of Remediation/Termination of Remedial Systems & Section 6.4 of NYSDEC DER-10, CTS will submit a SSDS shutdown sampling work plan for review and approval by the Department.

A) Steps for Discontinuation/Termination & Decommissioning of SSDS include the proposal of adequate (two) sub-slab soil vapor (SSSV) sampling points inside the building facility and co-located indoor air (IA) sampling. The two proposed sampling points were added to and can be viewed in “Figure 1”.

B) The first round of sampling during heating season (November 15<sup>th</sup> to March 31<sup>st</sup>) will be conducted after 60 days of SSDS shutdown. The SSDS will be turned on after sampling is completed.

C) During the SSDS shutdown, the roof-mounted vent pipe will be plugged/capped to close the slab elevation, preventing the passive venting of sub-slab vapor via the vent pipe.

D) The department will be notified when SSDS shutdown occurs.

E) The second round of the sampling event will be conducted in accordance with the approved work plan, and after sampling is completed, the system will be turned on.

F) An SVI sampling report will be submitted comparing SVI results with the NYSDOH matrices for review by the Department.

G) Based on the results of the two consecutive SVI sampling events, the department will determine if the system can be turned off temporarily. After the two consecutive events for “No Further Action”, the SSDS will be shut off for 10 months and a rebound sampling event shall be conducted to confirm the system can remain turned off permanently.

H) If the sampling results indicate significant rebound, the SSDS should be

restarted.

I) All equipment and sub-slab monitoring points will remain in place until permanent termination/discontinuation of SSDS is approved by the Department.

J) Progress reports and PRR will continue during this SSDS discontinuation determination process.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

The New York State Department of Health (NYSDOH) Soil Vapor/Indoor Air Decision Matrices include the following volatile chemicals: carbon tetrachloride, 1,1-dichloroethene (11-DCE), cis-1,2-dichloroethene (c12-DCE), trichloroethene (TCE), methylene chloride, tetrachloroethene (PCE), 1,1,1-trichloroethane (111-TCA), vinyl chloride, benzene, ethylbenzene, naphthalene, cyclohexane, isooctane (2,2,4-trimethylpentane), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene, m-xylene, p-xylene, heptane, hexane, and toluene. These matrices outline steps to take based on the sub-slab vapor concentration of these compounds compared to the indoor air concentration. Based on the concentrations detected in the indoor air and the sub-slab vapors, no further action is recommended for all compounds except 1,1,1-trichloroethane (111-TCA).

The VOC 1,1,1-trichloroethane (111-TCA) was detected slightly above NYSDOH guidelines in the Indoor Ambient Air, possibly due to the presence of aerosols and degreasers used and stored in the plumbing business currently occupying the space or due to laboratory error. 111-TCA has not previously been detected in the Indoor Ambient Air or the subsurface soil vapor samples. No other VOC listed above was detected in the ambient air inside or outside of the subject building above NYSDOH guidelines. The non-detect presence of these compounds appears to be attributed with the removal of the dry cleaner business and its associated dry-cleaning chemicals that took effect in December of 2020.

All of the existing engineering controls are still in operation at the Site. The sub-slab depressurization (SSD) system was observed to be operating properly. The general system piping was observed to be in good working condition, and the discharge pipe of the SSD System was clear of obstruction. The RadonAway fan runs continuously to induce negative pressure to the building's sub-slab. The results of the air samples collected from the influent port and effluent port associated with the SSD System show that any VOCs detected in the influent port are significantly reduced after passing through the SSD System to the effluent port. The granular activated carbon vessel is effectively treating the effluent gas prior to discharge to the atmosphere.

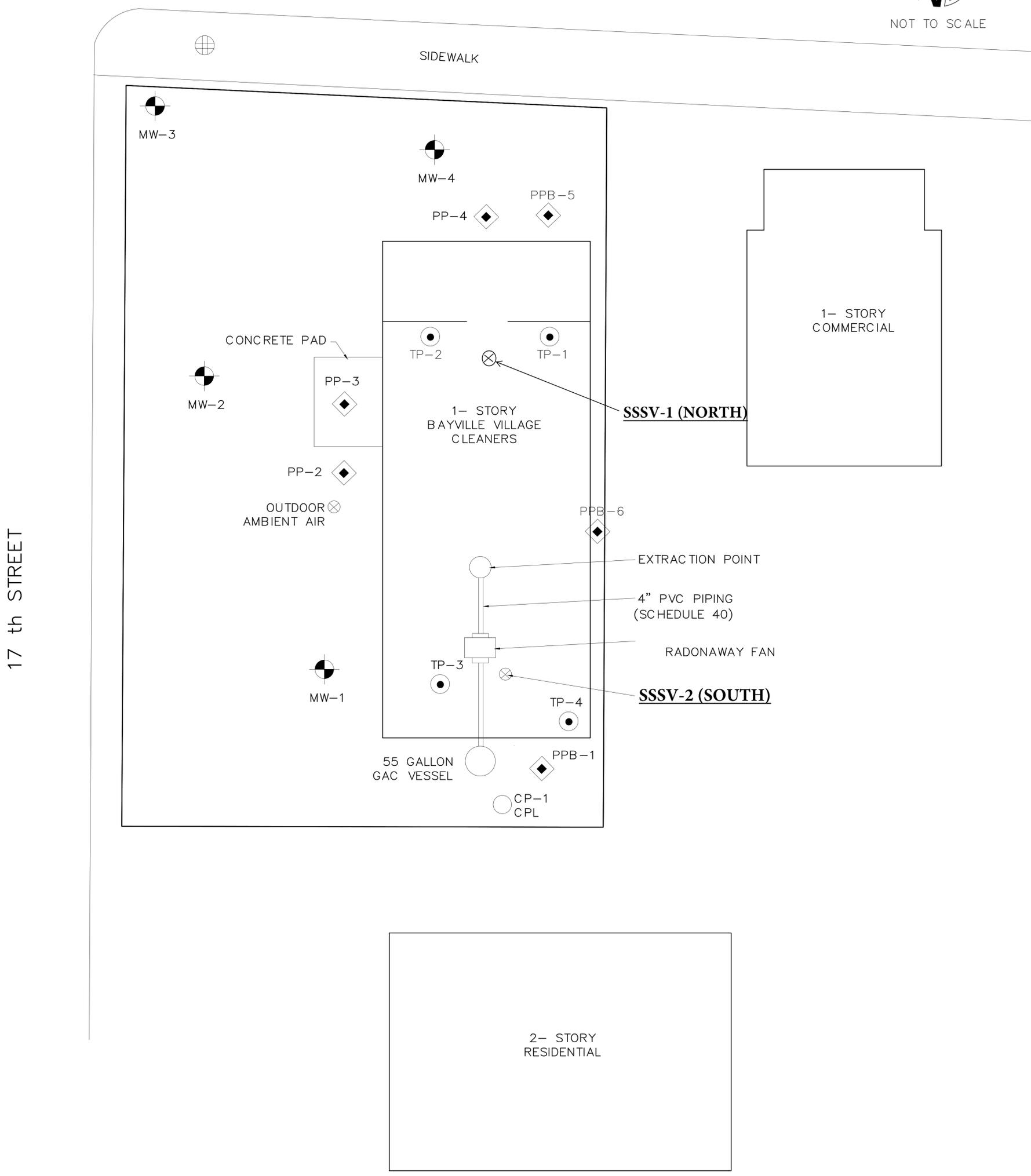
The detection of volatile organic compounds in the soil vapor samples reflects a range of variability inherent in this type of sampling and analysis. The overall trend of the detection of these compounds shows a decreasing presence. The original source of these compounds on the Site was attributed to the dry cleaner business and its associated dry-cleaning chemicals, which was removed in December of 2020. The subject building is used as an office space, plumbing parts/supply warehouse, and plumbing workshop; there are no significant quantities of hazardous materials stored, used, or generated at the property, nor have there been any at the Site since December 2020.

In accordance with Environmental Conservation Law (ECL 27-2405) and in association with the property purchase by Tri-County Installations Plumbing & Heating, Inc., Mr. Thomas Ryan, Volunteer, has provided copies of historical reports and documents associated with the VCA for the subject property including a copy of the 2022 PRR and “Tenant Notification of Indoor Air Contamination Associated with Soil Vapor Intrusion” factsheet(s) for test results exceeding NYSDOH guidelines. When approved by the Department, a copy of this PRR will be maintained at the subject building for reference purposes by building tenants and occupants, in addition to the coinciding “Tenant Notification of Indoor Air Contamination Associated with Soil Vapor Intrusion” factsheet(s) for test results exceeding NYSDOH guidelines.

BAYVILLE AVENUE



NOT TO SCALE



**KEY**

- VACUUM TEST POINT
- MONITORING WELL
- PERMANANT SOIL GAS SAMPLING POINT
- STORM DRAIN
- CESSPOOL
- SSSV / INDOOR AIR SAMPLING POINTS

**FIGURE 1**  
**SITE SAMPLING**  
**SKETCH**

*Bayville Village Cleaners*  
*290 Bayville Avenue*  
*Bayville, New York*

NOT TO SCALE

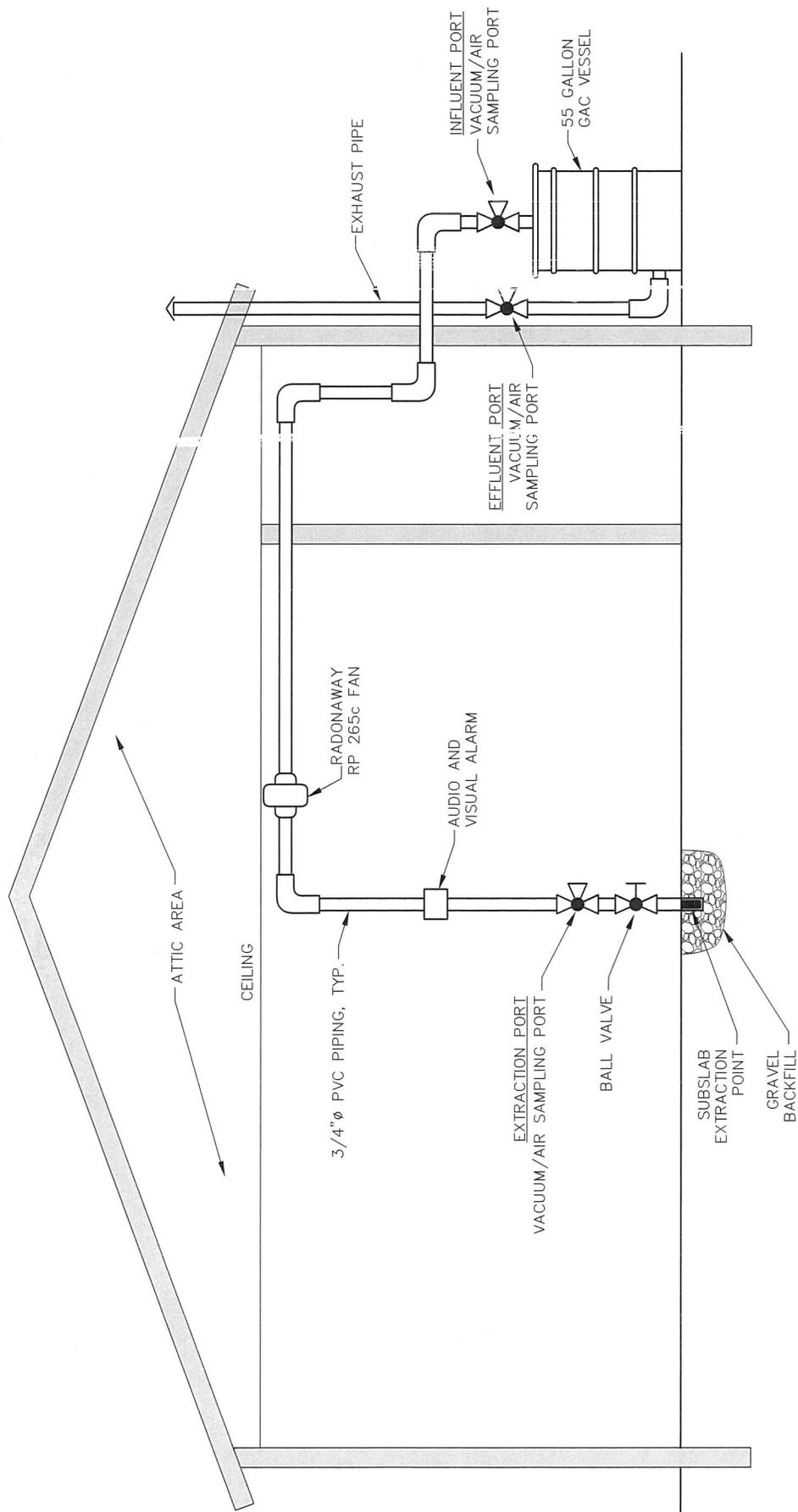


FIGURE 2

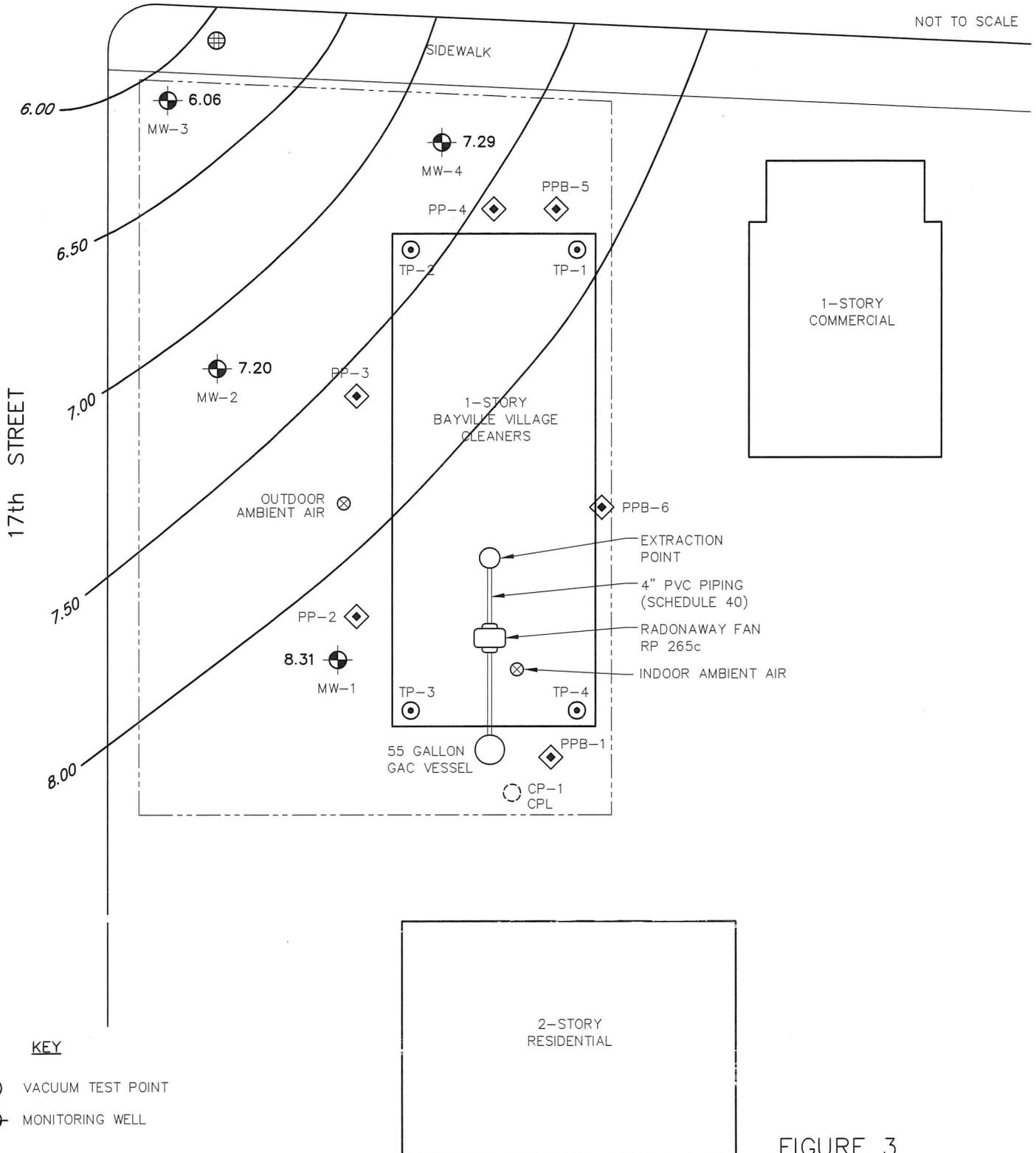
SSDS SITE SAMPLING SKETCH

*Bayville Village Cleaners*  
 290 Bayville Avenue  
 Bayville, New York

BAYVILLE AVENUE



NOT TO SCALE



**KEY**

- VACUUM TEST POINT
- MONITORING WELL
- PERMANENT SOIL GAS SAMPLING POINT
- STORM DRAIN
- CESSPOOL
- AMBIENT AIR SAMPLING POINT

**Cashin Associates, P.C.**  
ENGINEERING PLANNING CONSTRUCTION MANAGEMENT

**FIGURE 3**

WATER TABLE ELEVATION  
CONTOUR MAP  
*Bayville Village Cleaners*  
*290 Bayville Avenue*  
*Bayville, New York*

# **APPENDIX A**

## **Vapor Gas Sampling Results**



**LONG  
ISLAND  
ANALYTICAL  
LABORATORIES INC.**

**"TOMORROWS ANALYTICAL SOLUTIONS TODAY"**

## Laboratory Report

NYSDOH ELAP# 11693  
USEPA# NY01273  
CTDOH# PH-0284  
AIHA# 164456  
NJDEP# NY012  
PADEP# 68-2943

LIAL# 4011218

January 22, 2024

Cashin Associates  
Rachel Lambert  
1200 Veterans Highway  
Hauppauge, NY 11787

**Re: 280 Bayville Ave Bayville Village Cleaners**

Dear Rachel Lambert,

Enclosed please find the laboratory Analysis Report(s) for sample(s) received on January 12, 2024. Long Island Analytical laboratories analyzed the samples on January 15, 2024 for the following:

SAMPLE ID	ANALYSIS
Outdoor Ambient	TO-15
PP-4	TO-15 Sub slab
PPB-5	TO-15 Sub slab
Indoor Ambient	TO-15
PP-3	TO-15 Sub slab
PP-2	TO-15 Sub slab
PPB-1	TO-15 Sub slab
PPB-6	TO-15 Sub slab

Samples received at 2.0 °C

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted. Report shall not be reproduced except in full without the written approval of the laboratory. Results related only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

**Long Island Analytical Laboratories, Inc.**

**Michael Veraldi - Laboratory Director**

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:26	Sample ID: Outdoor Ambient
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-01
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	4.K, 4.M
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<5.08	ug/m <sup>3</sup>	
1,1,2-Trichloroethane	79-00-5	5.46	<2.31	ug/m <sup>3</sup>	
1,1-Dichloroethane	75-34-3	4.05	<3.15	ug/m <sup>3</sup>	
1,1-Dichloroethene	75-35-4	3.96	<0.160	ug/m <sup>3</sup>	4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<4.10	ug/m <sup>3</sup>	
1,2,4-Trimethylbenzene	95-63-6	4.92	<2.60	ug/m <sup>3</sup>	
1,2-Dibromoethane	106-93-4	7.68	<2.74	ug/m <sup>3</sup>	
1,2-Dichlorobenzene	95-50-1	6.01	<2.18	ug/m <sup>3</sup>	
1,2-Dichloroethane	107-06-2	4.05	<3.31	ug/m <sup>3</sup>	4.K, 4.M
1,2-Dichloropropane	78-87-5	4.62	<2.35	ug/m <sup>3</sup>	
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	5.10	ug/m <sup>3</sup>	
1,3,5-Trimethylbenzene	108-67-8	4.92	<2.49	ug/m <sup>3</sup>	
1,3-Butadiene	106-99-0	2.21	<2.01	ug/m <sup>3</sup>	4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<1.81	ug/m <sup>3</sup>	
1,4-Dichlorobenzene	106-46-7	6.01	<2.21	ug/m <sup>3</sup>	
1,4-Dioxane	123-91-1	4.00	<1.87	ug/m <sup>3</sup>	
4-Ethyltoluene	622-96-8	4.92	<2.66	ug/m <sup>3</sup>	2.B
4-Methyl-2-Pentanone	108-10-1	4.10	<1.76	ug/m <sup>3</sup>	
Acetone	67-64-1	25.0	9.67	ug/m <sup>3</sup>	
Acrolein	107-02-8	5.00	49.0	ug/m <sup>3</sup>	4.J, 4.P
Benzene	71-43-2	3.19	<1.57	ug/m <sup>3</sup>	
Benzyl Chloride	100-44-7	5.18	<1.79	ug/m <sup>3</sup>	4.J, 4.P
Bromodichloromethane	75-27-4	6.70	<3.77	ug/m <sup>3</sup>	
Bromoform	75-25-2	10.3	<5.38	ug/m <sup>3</sup>	
Bromomethane	74-83-9	3.88	<2.15	ug/m <sup>3</sup>	
Carbon disulfide	75-15-0	70.0	<30.2	ug/m <sup>3</sup>	
Carbon Tetrachloride	56-23-5	6.29	<0.160	ug/m <sup>3</sup>	
Chlorobenzene	108-90-7	4.60	<1.16	ug/m <sup>3</sup>	

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:26	Sample ID: Outdoor Ambient
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-01
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<1.96	ug/m <sup>3</sup>	
Chloroform	67-66-3	4.88	<2.05	ug/m <sup>3</sup>	
Chloromethane	74-87-3	5.16	2.33	ug/m <sup>3</sup>	
cis-1,2-Dichloroethene	156-59-2	3.96	<0.160	ug/m <sup>3</sup>	
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.68	ug/m <sup>3</sup>	4.K, 4.M
Cyclohexane	110-82-7	3.44	<2.23	ug/m <sup>3</sup>	
Dibromochloromethane	124-48-1	8.52	<3.51	ug/m <sup>3</sup>	
Dichlorodifluoromethane	75-71-8	4.95	3.02	ug/m <sup>3</sup>	4.K, 4.M
Ethanol	64-17-5	5.00	8.42	ug/m <sup>3</sup>	2.B
Ethyl Acetate	141-78-6	5.00	<2.41	ug/m <sup>3</sup>	2.B, 4.K
Ethylbenzene	100-41-4	4.34	<1.48	ug/m <sup>3</sup>	
Hexachlorobutadiene	87-68-3	10.7	<6.21	ug/m <sup>3</sup>	
Isopropanol	67-63-0	3.00	3.12	ug/m <sup>3</sup>	
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.33	ug/m <sup>3</sup>	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<2.30	ug/m <sup>3</sup>	2.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	3.69	ug/m <sup>3</sup>	
Methyl Methacrylate	80-62-6	5.00	<2.62	ug/m <sup>3</sup>	4.K
Methylene Chloride	75-09-2	3.47	<2.52	ug/m <sup>3</sup>	4.K
Methyl-tert-Butyl Ether	1634-04-4	3.61	<1.65	ug/m <sup>3</sup>	
Naphthalene	91-20-3	5.24	55.3	ug/m <sup>3</sup>	4.J, 4.P
n-Heptane	142-82-5	4.10	<2.72	ug/m <sup>3</sup>	
n-Hexane	110-54-3	3.52	<2.07	ug/m <sup>3</sup>	
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	
Propylene	115-07-1	3.11	1.91	ug/m <sup>3</sup>	2.B
Styrene	100-42-5	4.26	<2.20	ug/m <sup>3</sup>	
Tetrachloroethene	127-18-4	6.78	<2.53	ug/m <sup>3</sup>	
Tetrahydrofuran	109-99-9	7.37	<2.24	ug/m <sup>3</sup>	2.B
Toluene	108-88-3	3.77	<1.42	ug/m <sup>3</sup>	
trans-1,2-Dichloroethene	156-60-5	3.96	<2.45	ug/m <sup>3</sup>	

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:26	Sample ID: Outdoor Ambient
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-01
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.30	ug/m <sup>3</sup>	4.K, 4.M
Trichloroethene	79-01-6	5.37	<0.160	ug/m <sup>3</sup>	4.J, 4.N
Trichlorofluoromethane	75-69-4	5.62	<3.10	ug/m <sup>3</sup>	4.K, 4.M
Vinyl Acetate	108-05-4	5.00	<1.89	ug/m <sup>3</sup>	4.K, 4.M
Vinyl chloride	75-01-4	2.56	<0.160	ug/m <sup>3</sup>	4.K, 4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	92	70-130	
4-Bromofluorobenzene	460-00-4	92	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:13	Sample ID: PP-4
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-02
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	3.B, 4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<3.99	ug/m <sup>3</sup>	3.B
1,1,2-Trichloroethane	79-00-5	5.46	<2.82	ug/m <sup>3</sup>	3.B
1,1-Dichloroethane	75-34-3	4.05	<3.30	ug/m <sup>3</sup>	3.B
1,1-Dichloroethene	75-35-4	3.96	<2.36	ug/m <sup>3</sup>	3.B, 4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<6.60	ug/m <sup>3</sup>	3.B
1,2,4-Trimethylbenzene	95-63-6	4.92	<4.86	ug/m <sup>3</sup>	3.B
1,2-Dibromoethane	106-93-4	7.68	<3.43	ug/m <sup>3</sup>	3.B
1,2-Dichlorobenzene	95-50-1	6.01	<4.55	ug/m <sup>3</sup>	3.B
1,2-Dichloroethane	107-06-2	4.05	<3.50	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,2-Dichloropropane	78-87-5	4.62	<2.72	ug/m <sup>3</sup>	3.B
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	<4.23	ug/m <sup>3</sup>	3.B
1,3,5-Trimethylbenzene	108-67-8	4.92	<4.64	ug/m <sup>3</sup>	3.B
1,3-Butadiene	106-99-0	2.21	<1.94	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<2.57	ug/m <sup>3</sup>	3.B
1,4-Dichlorobenzene	106-46-7	6.01	<2.58	ug/m <sup>3</sup>	3.B
1,4-Dioxane	123-91-1	4.00	<3.65	ug/m <sup>3</sup>	3.B
4-Ethyltoluene	622-96-8	4.92	<3.45	ug/m <sup>3</sup>	2.B, 3.B
4-Methyl-2-Pentanone	108-10-1	4.10	<3.02	ug/m <sup>3</sup>	3.B
Acetone	67-64-1	25.0	29.1	ug/m <sup>3</sup>	3.E
Acrolein	107-02-8	5.00	38.1	ug/m <sup>3</sup>	3.E, 4.J, 4.P
Benzene	71-43-2	3.19	<1.45	ug/m <sup>3</sup>	3.B
Benzyl Chloride	100-44-7	5.18	<3.14	ug/m <sup>3</sup>	3.B, 4.J, 4.P
Bromodichloromethane	75-27-4	6.70	<4.46	ug/m <sup>3</sup>	3.B
Bromoform	75-25-2	10.3	<5.40	ug/m <sup>3</sup>	3.B
Bromomethane	74-83-9	3.88	<3.13	ug/m <sup>3</sup>	3.B
Carbon disulfide	75-15-0	70.0	<68.0	ug/m <sup>3</sup>	3.B
Carbon Tetrachloride	56-23-5	6.29	<4.53	ug/m <sup>3</sup>	3.B
Chlorobenzene	108-90-7	4.60	<1.35	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:13	Sample ID: PP-4
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-02
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<2.70	ug/m <sup>3</sup>	3.B
Chloroform	67-66-3	4.88	<3.74	ug/m <sup>3</sup>	3.B
Chloromethane	74-87-3	5.16	2.50	ug/m <sup>3</sup>	3.B
cis-1,2-Dichloroethene	156-59-2	3.96	<3.03	ug/m <sup>3</sup>	3.B
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.77	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Cyclohexane	110-82-7	3.44	<2.89	ug/m <sup>3</sup>	3.B
Dibromochloromethane	124-48-1	8.52	<3.78	ug/m <sup>3</sup>	3.B
Dichlorodifluoromethane	75-71-8	4.95	<2.85	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Ethanol	64-17-5	5.00	14.8	ug/m <sup>3</sup>	2.B, 3.E
Ethyl Acetate	141-78-6	5.00	<5.00	ug/m <sup>3</sup>	2.B, 3.B, 4.K
Ethylbenzene	100-41-4	4.34	<1.78	ug/m <sup>3</sup>	3.B
Hexachlorobutadiene	87-68-3	10.7	<9.35	ug/m <sup>3</sup>	3.B
Isopropanol	67-63-0	3.00	3.37	ug/m <sup>3</sup>	3.E
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.83	ug/m <sup>3</sup>	3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<3.38	ug/m <sup>3</sup>	2.B, 3.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	<2.44	ug/m <sup>3</sup>	3.B
Methyl Methacrylate	80-62-6	5.00	<4.42	ug/m <sup>3</sup>	4.K, 3.B
Methylene Chloride	75-09-2	3.47	2.61	ug/m <sup>3</sup>	4.K, 3.B
Methyl-tert-Butyl Ether	1634-04-4	3.61	<2.25	ug/m <sup>3</sup>	3.B
Naphthalene	91-20-3	5.24	<4.07	ug/m <sup>3</sup>	4.J, 4.P, 3.B
n-Heptane	142-82-5	4.10	<2.20	ug/m <sup>3</sup>	3.B
n-Hexane	110-54-3	3.52	<2.63	ug/m <sup>3</sup>	3.B
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	3.B
Propylene	115-07-1	3.11	1.89	ug/m <sup>3</sup>	2.B, 3.B
Styrene	100-42-5	4.26	<3.19	ug/m <sup>3</sup>	3.B
Tetrachloroethene	127-18-4	6.78	41.8	ug/m <sup>3</sup>	3.E
Tetrahydrofuran	109-99-9	7.37	<2.80	ug/m <sup>3</sup>	2.B, 3.B
Toluene	108-88-3	3.77	1.70	ug/m <sup>3</sup>	3.B
trans-1,2-Dichloroethene	156-60-5	3.96	<2.68	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:13	Sample ID: PP-4
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-02
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.32	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Trichloroethene	79-01-6	5.37	<2.60	ug/m <sup>3</sup>	4.J, 4.P, 3.B
Trichlorofluoromethane	75-69-4	5.62	<2.52	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Vinyl Acetate	108-05-4	5.00	<3.57	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Vinyl chloride	75-01-4	2.56	<1.86	ug/m <sup>3</sup>	4.K, 4.M, 3.B

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	92	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:05	Sample ID: PPB-5
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-03
Matrix: Air	ELAP: #11693

## Volatiles Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	3.B, 4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<3.99	ug/m <sup>3</sup>	3.B
1,1,2-Trichloroethane	79-00-5	5.46	<2.82	ug/m <sup>3</sup>	3.B
1,1-Dichloroethane	75-34-3	4.05	<3.30	ug/m <sup>3</sup>	3.B
1,1-Dichloroethene	75-35-4	3.96	<2.36	ug/m <sup>3</sup>	3.B, 4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<6.60	ug/m <sup>3</sup>	3.B
1,2,4-Trimethylbenzene	95-63-6	4.92	<4.86	ug/m <sup>3</sup>	3.B
1,2-Dibromoethane	106-93-4	7.68	<3.43	ug/m <sup>3</sup>	3.B
1,2-Dichlorobenzene	95-50-1	6.01	<4.55	ug/m <sup>3</sup>	3.B
1,2-Dichloroethane	107-06-2	4.05	<3.50	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,2-Dichloropropane	78-87-5	4.62	<2.72	ug/m <sup>3</sup>	3.B
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	<4.23	ug/m <sup>3</sup>	3.B
1,3,5-Trimethylbenzene	108-67-8	4.92	<4.64	ug/m <sup>3</sup>	3.B
1,3-Butadiene	106-99-0	2.21	<1.94	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<2.57	ug/m <sup>3</sup>	3.B
1,4-Dichlorobenzene	106-46-7	6.01	<2.58	ug/m <sup>3</sup>	3.B
1,4-Dioxane	123-91-1	4.00	<3.65	ug/m <sup>3</sup>	3.B
4-Ethyltoluene	622-96-8	4.92	<3.45	ug/m <sup>3</sup>	2.B, 3.B
4-Methyl-2-Pentanone	108-10-1	4.10	<3.02	ug/m <sup>3</sup>	3.B
Acetone	67-64-1	25.0	24.2	ug/m <sup>3</sup>	3.E
Acrolein	107-02-8	5.00	25.0	ug/m <sup>3</sup>	3.E, 4.J, 4.P
Benzene	71-43-2	3.19	<1.45	ug/m <sup>3</sup>	3.B
Benzyl Chloride	100-44-7	5.18	<3.14	ug/m <sup>3</sup>	3.B, 4.J, 4.P
Bromodichloromethane	75-27-4	6.70	<4.46	ug/m <sup>3</sup>	3.B
Bromoform	75-25-2	10.3	<5.40	ug/m <sup>3</sup>	3.B
Bromomethane	74-83-9	3.88	<3.13	ug/m <sup>3</sup>	3.B
Carbon disulfide	75-15-0	70.0	<68.0	ug/m <sup>3</sup>	3.B
Carbon Tetrachloride	56-23-5	6.29	<4.53	ug/m <sup>3</sup>	3.B
Chlorobenzene	108-90-7	4.60	<1.35	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:05	Sample ID: PPB-5
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-03
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<2.70	ug/m <sup>3</sup>	3.B
Chloroform	67-66-3	4.88	<3.74	ug/m <sup>3</sup>	3.B
Chloromethane	74-87-3	5.16	<2.10	ug/m <sup>3</sup>	3.B
cis-1,2-Dichloroethene	156-59-2	3.96	<3.03	ug/m <sup>3</sup>	3.B
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.77	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Cyclohexane	110-82-7	3.44	<2.89	ug/m <sup>3</sup>	3.B
Dibromochloromethane	124-48-1	8.52	<3.78	ug/m <sup>3</sup>	3.B
Dichlorodifluoromethane	75-71-8	4.95	<2.85	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Ethanol	64-17-5	5.00	7.50	ug/m <sup>3</sup>	2.B, 3.E
Ethyl Acetate	141-78-6	5.00	<5.00	ug/m <sup>3</sup>	4.K, 2.B, 3.B
Ethylbenzene	100-41-4	4.34	<1.78	ug/m <sup>3</sup>	3.B
Hexachlorobutadiene	87-68-3	10.7	<9.35	ug/m <sup>3</sup>	3.B
Isopropanol	67-63-0	3.00	<2.06	ug/m <sup>3</sup>	3.B
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.83	ug/m <sup>3</sup>	3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<3.38	ug/m <sup>3</sup>	2.B, 3.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	<2.44	ug/m <sup>3</sup>	3.B
Methyl Methacrylate	80-62-6	5.00	15.7	ug/m <sup>3</sup>	4.K, 3.E
Methylene Chloride	75-09-2	3.47	2.57	ug/m <sup>3</sup>	4.K, 3.B
Methyl-tert-Butyl Ether	1634-04-4	3.61	<2.25	ug/m <sup>3</sup>	3.B
Naphthalene	91-20-3	5.24	<4.07	ug/m <sup>3</sup>	4.J, 4.P, 3.B
n-Heptane	142-82-5	4.10	<2.20	ug/m <sup>3</sup>	3.B
n-Hexane	110-54-3	3.52	<2.63	ug/m <sup>3</sup>	3.B
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	3.B
Propylene	115-07-1	3.11	2.25	ug/m <sup>3</sup>	2.B, 3.B
Styrene	100-42-5	4.26	<3.19	ug/m <sup>3</sup>	3.B
Tetrachloroethene	127-18-4	6.78	5.09	ug/m <sup>3</sup>	3.B
Tetrahydrofuran	109-99-9	7.37	<2.80	ug/m <sup>3</sup>	2.B, 3.B
Toluene	108-88-3	3.77	3.28	ug/m <sup>3</sup>	3.B
trans-1,2-Dichloroethene	156-60-5	3.96	<2.68	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:05	Sample ID: PPB-5
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-03
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.32	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Trichloroethene	79-01-6	5.37	<2.60	ug/m <sup>3</sup>	4.J, 4.P, 3.B
Trichlorofluoromethane	75-69-4	5.62	<2.52	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Vinyl Acetate	108-05-4	5.00	<3.57	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Vinyl chloride	75-01-4	2.56	<1.86	ug/m <sup>3</sup>	4.K, 4.M, 3.B

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	96	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:15	Sample ID: Indoor Ambient
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-04
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	11.4	ug/m <sup>3</sup>	4.K, 4.M
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<5.08	ug/m <sup>3</sup>	
1,1,2-Trichloroethane	79-00-5	5.46	<2.31	ug/m <sup>3</sup>	
1,1-Dichloroethane	75-34-3	4.05	<3.15	ug/m <sup>3</sup>	
1,1-Dichloroethene	75-35-4	3.96	<0.160	ug/m <sup>3</sup>	4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<4.10	ug/m <sup>3</sup>	
1,2,4-Trimethylbenzene	95-63-6	4.92	<2.60	ug/m <sup>3</sup>	
1,2-Dibromoethane	106-93-4	7.68	<2.74	ug/m <sup>3</sup>	
1,2-Dichlorobenzene	95-50-1	6.01	<2.18	ug/m <sup>3</sup>	
1,2-Dichloroethane	107-06-2	4.05	<3.31	ug/m <sup>3</sup>	4.K, 4.M
1,2-Dichloropropane	78-87-5	4.62	<2.35	ug/m <sup>3</sup>	
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	5.17	ug/m <sup>3</sup>	
1,3,5-Trimethylbenzene	108-67-8	4.92	<2.49	ug/m <sup>3</sup>	
1,3-Butadiene	106-99-0	2.21	<2.01	ug/m <sup>3</sup>	4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<1.81	ug/m <sup>3</sup>	
1,4-Dichlorobenzene	106-46-7	6.01	<2.21	ug/m <sup>3</sup>	
1,4-Dioxane	123-91-1	4.00	<1.87	ug/m <sup>3</sup>	
4-Ethyltoluene	622-96-8	4.92	<2.66	ug/m <sup>3</sup>	2.B
4-Methyl-2-Pentanone	108-10-1	4.10	<1.76	ug/m <sup>3</sup>	
Acetone	67-64-1	25.0	16.7	ug/m <sup>3</sup>	
Acrolein	107-02-8	5.00	37.8	ug/m <sup>3</sup>	4.J, 4.P
Benzene	71-43-2	3.19	<1.57	ug/m <sup>3</sup>	
Benzyl Chloride	100-44-7	5.18	<1.79	ug/m <sup>3</sup>	4.J, 4.P
Bromodichloromethane	75-27-4	6.70	<3.77	ug/m <sup>3</sup>	
Bromoform	75-25-2	10.3	<5.38	ug/m <sup>3</sup>	
Bromomethane	74-83-9	3.88	<2.15	ug/m <sup>3</sup>	
Carbon disulfide	75-15-0	70.0	<30.2	ug/m <sup>3</sup>	
Carbon Tetrachloride	56-23-5	6.29	<0.160	ug/m <sup>3</sup>	
Chlorobenzene	108-90-7	4.60	<1.16	ug/m <sup>3</sup>	

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:15	Sample ID: Indoor Ambient
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-04
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	99.5	ug/m <sup>3</sup>	
Chloroform	67-66-3	4.88	<2.05	ug/m <sup>3</sup>	
Chloromethane	74-87-3	5.16	2.00	ug/m <sup>3</sup>	
cis-1,2-Dichloroethene	156-59-2	3.96	<0.160	ug/m <sup>3</sup>	
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.68	ug/m <sup>3</sup>	4.K, 4.M
Cyclohexane	110-82-7	3.44	<2.23	ug/m <sup>3</sup>	
Dibromochloromethane	124-48-1	8.52	<3.51	ug/m <sup>3</sup>	
Dichlorodifluoromethane	75-71-8	4.95	3.07	ug/m <sup>3</sup>	4.K, 4.M
Ethanol	64-17-5	5.00	17.2	ug/m <sup>3</sup>	2.B
Ethyl Acetate	141-78-6	5.00	2.90	ug/m <sup>3</sup>	2.B, 4.K
Ethylbenzene	100-41-4	4.34	<1.48	ug/m <sup>3</sup>	
Hexachlorobutadiene	87-68-3	10.7	<6.21	ug/m <sup>3</sup>	
Isopropanol	67-63-0	3.00	29.1	ug/m <sup>3</sup>	
m,p-Xylenes	108-38-3/106-42-3	10.0	6.85	ug/m <sup>3</sup>	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<2.30	ug/m <sup>3</sup>	2.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	3.30	ug/m <sup>3</sup>	
Methyl Methacrylate	80-62-6	5.00	<2.62	ug/m <sup>3</sup>	4.K
Methylene Chloride	75-09-2	3.47	2.67	ug/m <sup>3</sup>	4.K
Methyl-tert-Butyl Ether	1634-04-4	3.61	<1.65	ug/m <sup>3</sup>	
Naphthalene	91-20-3	5.24	<2.97	ug/m <sup>3</sup>	4.J, 4.P
n-Heptane	142-82-5	4.10	<2.72	ug/m <sup>3</sup>	
n-Hexane	110-54-3	3.52	<2.07	ug/m <sup>3</sup>	
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	
Propylene	115-07-1	3.11	1.76	ug/m <sup>3</sup>	2.B
Styrene	100-42-5	4.26	<2.20	ug/m <sup>3</sup>	
Tetrachloroethene	127-18-4	6.78	6.17	ug/m <sup>3</sup>	
Tetrahydrofuran	109-99-9	7.37	4.98	ug/m <sup>3</sup>	2.B
Toluene	108-88-3	3.77	3.09	ug/m <sup>3</sup>	
trans-1,2-Dichloroethene	156-60-5	3.96	<2.45	ug/m <sup>3</sup>	

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:15	Sample ID: Indoor Ambient
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-04
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.30	ug/m <sup>3</sup>	4.K, 4.M
Trichloroethene	79-01-6	5.37	<0.160	ug/m <sup>3</sup>	4.J, 4.N
Trichlorofluoromethane	75-69-4	5.62	<3.10	ug/m <sup>3</sup>	4.K, 4.M
Vinyl Acetate	108-05-4	5.00	<1.89	ug/m <sup>3</sup>	4.K, 4.M
Vinyl chloride	75-01-4	2.56	<0.160	ug/m <sup>3</sup>	4.K, 4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	91	70-130	
4-Bromofluorobenzene	460-00-4	91	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:17	Sample ID: PP-3
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-05
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	4.M, 3.B, 4.K
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	3.B, 4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<3.99	ug/m <sup>3</sup>	3.B
1,1,2-Trichloroethane	79-00-5	5.46	<2.82	ug/m <sup>3</sup>	3.B
1,1-Dichloroethane	75-34-3	4.05	<3.30	ug/m <sup>3</sup>	3.B
1,1-Dichloroethene	75-35-4	3.96	<2.36	ug/m <sup>3</sup>	3.B, 4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<6.60	ug/m <sup>3</sup>	3.B
1,2,4-Trimethylbenzene	95-63-6	4.92	<4.86	ug/m <sup>3</sup>	3.B
1,2-Dibromoethane	106-93-4	7.68	<3.43	ug/m <sup>3</sup>	3.B
1,2-Dichlorobenzene	95-50-1	6.01	<4.55	ug/m <sup>3</sup>	3.B
1,2-Dichloroethane	107-06-2	4.05	<3.50	ug/m <sup>3</sup>	3.B, 4.M, 4.K
1,2-Dichloropropane	78-87-5	4.62	<2.72	ug/m <sup>3</sup>	3.B
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	<4.23	ug/m <sup>3</sup>	3.B
1,3,5-Trimethylbenzene	108-67-8	4.92	<4.64	ug/m <sup>3</sup>	3.B
1,3-Butadiene	106-99-0	2.21	<1.94	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<2.57	ug/m <sup>3</sup>	3.B
1,4-Dichlorobenzene	106-46-7	6.01	<2.58	ug/m <sup>3</sup>	3.B
1,4-Dioxane	123-91-1	4.00	<3.65	ug/m <sup>3</sup>	3.B
4-Ethyltoluene	622-96-8	4.92	<3.45	ug/m <sup>3</sup>	2.B, 3.B
4-Methyl-2-Pentanone	108-10-1	4.10	<3.02	ug/m <sup>3</sup>	3.B
Acetone	67-64-1	25.0	<12.6	ug/m <sup>3</sup>	3.B
Acrolein	107-02-8	5.00	73.6	ug/m <sup>3</sup>	4.J, 4.P, 3.E
Benzene	71-43-2	3.19	<1.45	ug/m <sup>3</sup>	3.B
Benzyl Chloride	100-44-7	5.18	<3.14	ug/m <sup>3</sup>	4.J, 4.P, 3.B
Bromodichloromethane	75-27-4	6.70	<4.46	ug/m <sup>3</sup>	3.B
Bromoform	75-25-2	10.3	<5.40	ug/m <sup>3</sup>	3.B
Bromomethane	74-83-9	3.88	<3.13	ug/m <sup>3</sup>	3.B
Carbon disulfide	75-15-0	70.0	<68.0	ug/m <sup>3</sup>	3.B
Carbon Tetrachloride	56-23-5	6.29	<4.53	ug/m <sup>3</sup>	3.B
Chlorobenzene	108-90-7	4.60	<1.35	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:17	Sample ID: PP-3
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-05
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<2.70	ug/m <sup>3</sup>	3.B
Chloroform	67-66-3	4.88	<3.74	ug/m <sup>3</sup>	3.B
Chloromethane	74-87-3	5.16	3.26	ug/m <sup>3</sup>	3.B
cis-1,2-Dichloroethene	156-59-2	3.96	<3.03	ug/m <sup>3</sup>	3.B
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.77	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Cyclohexane	110-82-7	3.44	<2.89	ug/m <sup>3</sup>	3.B
Dibromochloromethane	124-48-1	8.52	<3.78	ug/m <sup>3</sup>	3.B
Dichlorodifluoromethane	75-71-8	4.95	<2.85	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Ethanol	64-17-5	5.00	16.6	ug/m <sup>3</sup>	2.B, 3.E
Ethyl Acetate	141-78-6	5.00	<5.00	ug/m <sup>3</sup>	2.B, 3.B, 4.K
Ethylbenzene	100-41-4	4.34	<1.78	ug/m <sup>3</sup>	3.B
Hexachlorobutadiene	87-68-3	10.7	<9.35	ug/m <sup>3</sup>	3.B
Isopropanol	67-63-0	3.00	3.12	ug/m <sup>3</sup>	3.E
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.83	ug/m <sup>3</sup>	3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<3.38	ug/m <sup>3</sup>	2.B, 3.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	<2.44	ug/m <sup>3</sup>	3.B
Methyl Methacrylate	80-62-6	5.00	<4.42	ug/m <sup>3</sup>	3.B, 4.K
Methylene Chloride	75-09-2	3.47	2.57	ug/m <sup>3</sup>	3.B, 4.K
Methyl-tert-Butyl Ether	1634-04-4	3.61	<2.25	ug/m <sup>3</sup>	3.B
Naphthalene	91-20-3	5.24	<4.07	ug/m <sup>3</sup>	4.P, 3.B, 4.J
n-Heptane	142-82-5	4.10	<2.20	ug/m <sup>3</sup>	3.B
n-Hexane	110-54-3	3.52	<2.63	ug/m <sup>3</sup>	3.B
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	3.B
Propylene	115-07-1	3.11	2.41	ug/m <sup>3</sup>	2.B, 3.B
Styrene	100-42-5	4.26	<3.19	ug/m <sup>3</sup>	3.B
Tetrachloroethene	127-18-4	6.78	99.3	ug/m <sup>3</sup>	3.E
Tetrahydrofuran	109-99-9	7.37	<2.80	ug/m <sup>3</sup>	2.B, 3.B
Toluene	108-88-3	3.77	1.92	ug/m <sup>3</sup>	3.B
trans-1,2-Dichloroethene	156-60-5	3.96	<2.68	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:17	Sample ID: PP-3
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-05
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.32	ug/m <sup>3</sup>	4.M, 3.B, 4.K
Trichloroethene	79-01-6	5.37	<2.60	ug/m <sup>3</sup>	4.J, 4.P, 3.B
Trichlorofluoromethane	75-69-4	5.62	<2.52	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Vinyl Acetate	108-05-4	5.00	<3.57	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Vinyl chloride	75-01-4	2.56	<1.86	ug/m <sup>3</sup>	4.K, 4.M, 3.B

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	92	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:24	Sample ID: PP-2
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-06
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	3.B, 4.M, 4.K
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	3.B, 4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<3.99	ug/m <sup>3</sup>	3.B
1,1,2-Trichloroethane	79-00-5	5.46	<2.82	ug/m <sup>3</sup>	3.B
1,1-Dichloroethane	75-34-3	4.05	<3.30	ug/m <sup>3</sup>	3.B
1,1-Dichloroethene	75-35-4	3.96	<2.36	ug/m <sup>3</sup>	3.B, 4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<6.60	ug/m <sup>3</sup>	3.B
1,2,4-Trimethylbenzene	95-63-6	4.92	<4.86	ug/m <sup>3</sup>	3.B
1,2-Dibromoethane	106-93-4	7.68	<3.43	ug/m <sup>3</sup>	3.B
1,2-Dichlorobenzene	95-50-1	6.01	<4.55	ug/m <sup>3</sup>	3.B
1,2-Dichloroethane	107-06-2	4.05	<3.50	ug/m <sup>3</sup>	3.B, 4.M, 4.K
1,2-Dichloropropane	78-87-5	4.62	<2.72	ug/m <sup>3</sup>	3.B
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	<4.23	ug/m <sup>3</sup>	3.B
1,3,5-Trimethylbenzene	108-67-8	4.92	<4.64	ug/m <sup>3</sup>	3.B
1,3-Butadiene	106-99-0	2.21	<1.94	ug/m <sup>3</sup>	4.M, 3.B, 4.K
1,3-Dichlorobenzene	541-73-1	6.01	<2.57	ug/m <sup>3</sup>	3.B
1,4-Dichlorobenzene	106-46-7	6.01	<2.58	ug/m <sup>3</sup>	3.B
1,4-Dioxane	123-91-1	4.00	<3.65	ug/m <sup>3</sup>	3.B
4-Ethyltoluene	622-96-8	4.92	<3.45	ug/m <sup>3</sup>	2.B, 3.B
4-Methyl-2-Pentanone	108-10-1	4.10	<3.02	ug/m <sup>3</sup>	3.B
Acetone	67-64-1	25.0	<12.6	ug/m <sup>3</sup>	3.B
Acrolein	107-02-8	5.00	42.6	ug/m <sup>3</sup>	3.E, 4.J, 4.P
Benzene	71-43-2	3.19	<1.45	ug/m <sup>3</sup>	3.B
Benzyl Chloride	100-44-7	5.18	<3.14	ug/m <sup>3</sup>	3.B, 4.J, 4.P
Bromodichloromethane	75-27-4	6.70	<4.46	ug/m <sup>3</sup>	3.B
Bromoform	75-25-2	10.3	<5.40	ug/m <sup>3</sup>	3.B
Bromomethane	74-83-9	3.88	<3.13	ug/m <sup>3</sup>	3.B
Carbon disulfide	75-15-0	70.0	<68.0	ug/m <sup>3</sup>	3.B
Carbon Tetrachloride	56-23-5	6.29	<4.53	ug/m <sup>3</sup>	3.B
Chlorobenzene	108-90-7	4.60	<1.35	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:24	Sample ID: PP-2
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-06
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<2.70	ug/m <sup>3</sup>	3.B
Chloroform	67-66-3	4.88	<3.74	ug/m <sup>3</sup>	3.B
Chloromethane	74-87-3	5.16	<2.10	ug/m <sup>3</sup>	3.B
cis-1,2-Dichloroethene	156-59-2	3.96	<3.03	ug/m <sup>3</sup>	3.B
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.77	ug/m <sup>3</sup>	3.B, 4.M, 4.K
Cyclohexane	110-82-7	3.44	<2.89	ug/m <sup>3</sup>	3.B
Dibromochloromethane	124-48-1	8.52	<3.78	ug/m <sup>3</sup>	3.B
Dichlorodifluoromethane	75-71-8	4.95	<2.85	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Ethanol	64-17-5	5.00	23.2	ug/m <sup>3</sup>	2.B, 3.E
Ethyl Acetate	141-78-6	5.00	<5.00	ug/m <sup>3</sup>	2.B, 3.B, 4.K
Ethylbenzene	100-41-4	4.34	<1.78	ug/m <sup>3</sup>	3.B
Hexachlorobutadiene	87-68-3	10.7	<9.35	ug/m <sup>3</sup>	3.B
Isopropanol	67-63-0	3.00	<2.06	ug/m <sup>3</sup>	3.B
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.83	ug/m <sup>3</sup>	3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<3.38	ug/m <sup>3</sup>	2.B, 3.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	<2.44	ug/m <sup>3</sup>	3.B
Methyl Methacrylate	80-62-6	5.00	<4.42	ug/m <sup>3</sup>	3.B, 4.K
Methylene Chloride	75-09-2	3.47	<2.52	ug/m <sup>3</sup>	3.B, 4.K
Methyl-tert-Butyl Ether	1634-04-4	3.61	<2.25	ug/m <sup>3</sup>	3.B
Naphthalene	91-20-3	5.24	<4.07	ug/m <sup>3</sup>	3.B, 4.J, 4.P
n-Heptane	142-82-5	4.10	<2.20	ug/m <sup>3</sup>	3.B
n-Hexane	110-54-3	3.52	<2.63	ug/m <sup>3</sup>	3.B
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	3.B
Propylene	115-07-1	3.11	1.93	ug/m <sup>3</sup>	2.B, 3.B
Styrene	100-42-5	4.26	<3.19	ug/m <sup>3</sup>	3.B
Tetrachloroethene	127-18-4	6.78	<3.53	ug/m <sup>3</sup>	3.B
Tetrahydrofuran	109-99-9	7.37	<2.80	ug/m <sup>3</sup>	2.B, 3.B
Toluene	108-88-3	3.77	<1.19	ug/m <sup>3</sup>	3.B
trans-1,2-Dichloroethene	156-60-5	3.96	<2.68	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:24	Sample ID: PP-2
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-06
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.32	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Trichloroethene	79-01-6	5.37	<2.60	ug/m <sup>3</sup>	4.J, 3.B, 4.P
Trichlorofluoromethane	75-69-4	5.62	<2.52	ug/m <sup>3</sup>	4.K, 3.B, 4.M
Vinyl Acetate	108-05-4	5.00	<3.57	ug/m <sup>3</sup>	4.K, 3.B, 4.M
Vinyl chloride	75-01-4	2.56	<1.86	ug/m <sup>3</sup>	3.B, 4.K, 4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	94	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:21	Sample ID: PPB-1
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-07
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	3.B, 4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<3.99	ug/m <sup>3</sup>	3.B
1,1,2-Trichloroethane	79-00-5	5.46	<2.82	ug/m <sup>3</sup>	3.B
1,1-Dichloroethane	75-34-3	4.05	<3.30	ug/m <sup>3</sup>	3.B
1,1-Dichloroethene	75-35-4	3.96	<2.36	ug/m <sup>3</sup>	3.B, 4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<6.60	ug/m <sup>3</sup>	3.B
1,2,4-Trimethylbenzene	95-63-6	4.92	<4.86	ug/m <sup>3</sup>	3.B
1,2-Dibromoethane	106-93-4	7.68	<3.43	ug/m <sup>3</sup>	3.B
1,2-Dichlorobenzene	95-50-1	6.01	<4.55	ug/m <sup>3</sup>	3.B
1,2-Dichloroethane	107-06-2	4.05	<3.50	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,2-Dichloropropane	78-87-5	4.62	<2.72	ug/m <sup>3</sup>	3.B
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	<4.23	ug/m <sup>3</sup>	3.B
1,3,5-Trimethylbenzene	108-67-8	4.92	<4.64	ug/m <sup>3</sup>	3.B
1,3-Butadiene	106-99-0	2.21	<1.94	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<2.57	ug/m <sup>3</sup>	3.B
1,4-Dichlorobenzene	106-46-7	6.01	<2.58	ug/m <sup>3</sup>	3.B
1,4-Dioxane	123-91-1	4.00	<3.65	ug/m <sup>3</sup>	3.B
4-Ethyltoluene	622-96-8	4.92	<3.45	ug/m <sup>3</sup>	2.B, 3.B
4-Methyl-2-Pentanone	108-10-1	4.10	<3.02	ug/m <sup>3</sup>	3.B
Acetone	67-64-1	25.0	<12.6	ug/m <sup>3</sup>	3.E
Acrolein	107-02-8	5.00	34.3	ug/m <sup>3</sup>	3.E, 4.J, 4.P
Benzene	71-43-2	3.19	<1.45	ug/m <sup>3</sup>	3.B
Benzyl Chloride	100-44-7	5.18	<3.14	ug/m <sup>3</sup>	4.J, 3.B, 4.P
Bromodichloromethane	75-27-4	6.70	<4.46	ug/m <sup>3</sup>	3.B
Bromoform	75-25-2	10.3	<5.40	ug/m <sup>3</sup>	3.B
Bromomethane	74-83-9	3.88	<3.13	ug/m <sup>3</sup>	3.B
Carbon disulfide	75-15-0	70.0	<68.0	ug/m <sup>3</sup>	3.B
Carbon Tetrachloride	56-23-5	6.29	<4.53	ug/m <sup>3</sup>	3.B
Chlorobenzene	108-90-7	4.60	<1.35	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:21	Sample ID: PPB-1
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-07
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<2.70	ug/m <sup>3</sup>	3.B
Chloroform	67-66-3	4.88	<3.74	ug/m <sup>3</sup>	3.B
Chloromethane	74-87-3	5.16	<2.10	ug/m <sup>3</sup>	3.B
cis-1,2-Dichloroethene	156-59-2	3.96	<3.03	ug/m <sup>3</sup>	3.B
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.77	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Cyclohexane	110-82-7	3.44	<2.89	ug/m <sup>3</sup>	3.B
Dibromochloromethane	124-48-1	8.52	<3.78	ug/m <sup>3</sup>	3.B
Dichlorodifluoromethane	75-71-8	4.95	<2.85	ug/m <sup>3</sup>	4.K, 4.M, 3.B
Ethanol	64-17-5	5.00	21.1	ug/m <sup>3</sup>	2.B, 3.E
Ethyl Acetate	141-78-6	5.00	<5.00	ug/m <sup>3</sup>	2.B, 4.K, 3.B
Ethylbenzene	100-41-4	4.34	<1.78	ug/m <sup>3</sup>	3.B
Hexachlorobutadiene	87-68-3	10.7	<9.35	ug/m <sup>3</sup>	3.B
Isopropanol	67-63-0	3.00	3.66	ug/m <sup>3</sup>	3.E
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.83	ug/m <sup>3</sup>	3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<3.38	ug/m <sup>3</sup>	2.B, 3.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	<2.44	ug/m <sup>3</sup>	3.B
Methyl Methacrylate	80-62-6	5.00	<4.42	ug/m <sup>3</sup>	3.B, 4.K
Methylene Chloride	75-09-2	3.47	3.68	ug/m <sup>3</sup>	3.E, 4.K
Methyl-tert-Butyl Ether	1634-04-4	3.61	<2.25	ug/m <sup>3</sup>	3.B
Naphthalene	91-20-3	5.24	11.6	ug/m <sup>3</sup>	3.E, 4.J, 4.P
n-Heptane	142-82-5	4.10	<2.20	ug/m <sup>3</sup>	3.B
n-Hexane	110-54-3	3.52	<2.63	ug/m <sup>3</sup>	3.B
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	3.B
Propylene	115-07-1	3.11	2.36	ug/m <sup>3</sup>	2.B, 3.B
Styrene	100-42-5	4.26	<3.19	ug/m <sup>3</sup>	3.B
Tetrachloroethene	127-18-4	6.78	<3.53	ug/m <sup>3</sup>	3.B
Tetrahydrofuran	109-99-9	7.37	<2.80	ug/m <sup>3</sup>	2.B, 3.B
Toluene	108-88-3	3.77	4.37	ug/m <sup>3</sup>	3.E
trans-1,2-Dichloroethene	156-60-5	3.96	<2.68	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:21	Sample ID: PPB-1
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-07
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.32	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Trichloroethene	79-01-6	5.37	<2.60	ug/m <sup>3</sup>	3.B, 4.J, 4.P
Trichlorofluoromethane	75-69-4	5.62	<2.52	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Vinyl Acetate	108-05-4	5.00	<3.57	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Vinyl chloride	75-01-4	2.56	<1.86	ug/m <sup>3</sup>	3.B, 4.K, 4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	96	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:23	Sample ID: PPB-6
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-08
Matrix: Air	ELAP: #11693

**Volatiles Analysis**

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.46	<2.76	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,1,2,2-Tetrachloroethane	79-34-5	6.86	<3.52	ug/m <sup>3</sup>	3.B, 4.K
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.66	<3.99	ug/m <sup>3</sup>	3.B
1,1,2-Trichloroethane	79-00-5	5.46	<2.82	ug/m <sup>3</sup>	3.B
1,1-Dichloroethane	75-34-3	4.05	<3.30	ug/m <sup>3</sup>	3.B
1,1-Dichloroethene	75-35-4	3.96	<2.36	ug/m <sup>3</sup>	3.B, 4.K
1,2,4-Trichlorobenzene	120-82-1	7.42	<6.60	ug/m <sup>3</sup>	3.B
1,2,4-Trimethylbenzene	95-63-6	4.92	<4.86	ug/m <sup>3</sup>	3.B
1,2-Dibromoethane	106-93-4	7.68	<3.43	ug/m <sup>3</sup>	3.B
1,2-Dichlorobenzene	95-50-1	6.01	<4.55	ug/m <sup>3</sup>	3.B
1,2-Dichloroethane	107-06-2	4.05	<3.50	ug/m <sup>3</sup>	3.B, 4.K, 4.M
1,2-Dichloropropane	78-87-5	4.62	<2.72	ug/m <sup>3</sup>	3.B
1,2-Dichlorotetrafluoroethane	76-14-2	6.99	<4.23	ug/m <sup>3</sup>	3.B
1,3,5-Trimethylbenzene	108-67-8	4.92	<4.64	ug/m <sup>3</sup>	3.B
1,3-Butadiene	106-99-0	2.21	13.1	ug/m <sup>3</sup>	3.E, 4.K, 4.M
1,3-Dichlorobenzene	541-73-1	6.01	<2.57	ug/m <sup>3</sup>	3.B
1,4-Dichlorobenzene	106-46-7	6.01	<2.58	ug/m <sup>3</sup>	3.B
1,4-Dioxane	123-91-1	4.00	<3.65	ug/m <sup>3</sup>	3.B
4-Ethyltoluene	622-96-8	4.92	<3.45	ug/m <sup>3</sup>	2.B, 3.B
4-Methyl-2-Pentanone	108-10-1	4.10	<3.02	ug/m <sup>3</sup>	3.B
Acetone	67-64-1	25.0	<12.6	ug/m <sup>3</sup>	3.E
Acrolein	107-02-8	5.00	59.4	ug/m <sup>3</sup>	3.E, 4.J, 4.P
Benzene	71-43-2	3.19	<1.45	ug/m <sup>3</sup>	3.B
Benzyl Chloride	100-44-7	5.18	<3.14	ug/m <sup>3</sup>	3.B, 4.J, 4.P
Bromodichloromethane	75-27-4	6.70	<4.46	ug/m <sup>3</sup>	3.B
Bromoform	75-25-2	10.3	<5.40	ug/m <sup>3</sup>	3.B
Bromomethane	74-83-9	3.88	<3.13	ug/m <sup>3</sup>	3.B
Carbon disulfide	75-15-0	70.0	<68.0	ug/m <sup>3</sup>	3.B
Carbon Tetrachloride	56-23-5	6.29	<4.53	ug/m <sup>3</sup>	3.B
Chlorobenzene	108-90-7	4.60	<1.35	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:23	Sample ID: PPB-6
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-08
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Chloroethane	75-00-3	6.60	<2.70	ug/m <sup>3</sup>	3.B
Chloroform	67-66-3	4.88	<3.74	ug/m <sup>3</sup>	3.B
Chloromethane	74-87-3	5.16	2.75	ug/m <sup>3</sup>	3.B
cis-1,2-Dichloroethene	156-59-2	3.96	<3.03	ug/m <sup>3</sup>	3.B
cis-1,3-Dichloropropene	10061-01-5	4.54	<2.77	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Cyclohexane	110-82-7	3.44	<2.89	ug/m <sup>3</sup>	3.B
Dibromochloromethane	124-48-1	8.52	<3.78	ug/m <sup>3</sup>	3.B
Dichlorodifluoromethane	75-71-8	4.95	<2.85	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Ethanol	64-17-5	5.00	24.2	ug/m <sup>3</sup>	2.B, 3.E
Ethyl Acetate	141-78-6	5.00	<5.00	ug/m <sup>3</sup>	3.B, 2.B, 4.K
Ethylbenzene	100-41-4	4.34	<1.78	ug/m <sup>3</sup>	3.B
Hexachlorobutadiene	87-68-3	10.7	<9.35	ug/m <sup>3</sup>	3.B
Isopropanol	67-63-0	3.00	3.52	ug/m <sup>3</sup>	3.E
m,p-Xylenes	108-38-3/106-42-3	10.0	<6.83	ug/m <sup>3</sup>	3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	4.10	<3.38	ug/m <sup>3</sup>	3.B, 2.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.95	<2.44	ug/m <sup>3</sup>	3.B
Methyl Methacrylate	80-62-6	5.00	<4.42	ug/m <sup>3</sup>	3.B, 4.K
Methylene Chloride	75-09-2	3.47	4.38	ug/m <sup>3</sup>	3.E, 4.K
Methyl-tert-Butyl Ether	1634-04-4	3.61	<2.25	ug/m <sup>3</sup>	3.B
Naphthalene	91-20-3	5.24	<4.07	ug/m <sup>3</sup>	3.B, 4.J, 4.P
n-Heptane	142-82-5	4.10	<2.20	ug/m <sup>3</sup>	3.B
n-Hexane	110-54-3	3.52	<2.63	ug/m <sup>3</sup>	3.B
o-Xylene	95-47-6	4.34	<1.67	ug/m <sup>3</sup>	3.B
Propylene	115-07-1	3.11	6.21	ug/m <sup>3</sup>	2.B, 3.E
Styrene	100-42-5	4.26	<3.19	ug/m <sup>3</sup>	3.B
Tetrachloroethene	127-18-4	6.78	<3.53	ug/m <sup>3</sup>	3.B
Tetrahydrofuran	109-99-9	7.37	<2.80	ug/m <sup>3</sup>	2.B, 3.B
Toluene	108-88-3	3.77	4.33	ug/m <sup>3</sup>	3.E
trans-1,2-Dichloroethene	156-60-5	3.96	<2.68	ug/m <sup>3</sup>	3.B

Client: Cashin Associates	Client ID: 280 Bayville Ave Bayville Village Cleaners
Date (Time) Collected: 01/11/2024 16:23	Sample ID: PPB-6
Date (Time) Received: 01/12/2024 11:45	Laboratory ID: 4011218-08
Matrix: Air	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
trans-1,3-Dichloropropene	10061-02-6	4.54	<2.32	ug/m <sup>3</sup>	3.B, 4.M, 4.K
Trichloroethene	79-01-6	5.37	<2.60	ug/m <sup>3</sup>	3.B, 4.J, 4.P
Trichlorofluoromethane	75-69-4	5.62	<2.52	ug/m <sup>3</sup>	3.B, 4.K, 4.M
Vinyl Acetate	108-05-4	5.00	<3.57	ug/m <sup>3</sup>	3.B, 4.M, 4.K
Vinyl chloride	75-01-4	2.56	<1.86	ug/m <sup>3</sup>	3.B, 4.M, 4.K

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
4-Bromofluorobenzene	460-00-4	95	70-130	

Date Prepared: 01/15/2024

Preparation Method: TO-15

Date Analyzed: 01/15/2024

Analytical Method: TO-15

**Data Qualifiers Key Reference:**

- 2.B Parameter not certifiable by NELAP.
- 3.B Reporting limit raised due to target compound interference.
- 3.E Compound reported at a dilution factor.
- 4.J Continuing Calibration Verification (CCV) quality control levels failed low, values are considered to be estimated.
- 4.K Continuing Calibration Verification (CCV) quality control levels failed high, values are considered to be estimated.
- 4.M LCS recovery was above QC acceptance limit.
- 4.N LCS recovery was below QC acceptance limit.
- 4.P Internal Standard out of range due to matrix interference.
- MDL Minimum Detection Limit
- LOQ Limit of Quantitation
- H Holding Time Exceeded



## **APPENDIX B**

# **Indoor Air Quality Questionnaire And Building Inventory for the Subject Site**

**NEW YORK STATE DEPARTMENT OF HEALTH  
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY  
CENTER FOR ENVIRONMENTAL HEALTH**

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Rachel Lambert Date/Time Prepared 1/11/24 12:00 pm

Preparer's Affiliation Cashin Technical Services, Inc. Phone No. 631-348-7600

Purpose of Investigation Periodic Review Report 2024 VCA: WI-0848-9903 Site # V00220

**1. OCCUPANT:**

**Interviewed:** Y / N

Last Name: Riso First Name: Frank

Address: 290 Bayville Avenue, Bayville, NY 11709

County: Nassau

Home Phone: \_\_\_\_\_ Office Phone: 516-628-8421

Number of Occupants/persons at this location \_\_\_\_\_ Age of Occupants \_\_\_\_\_

**2. OWNER OR LANDLORD:** (Check if same as occupant \_\_\_ )

**Interviewed:** Y / N

Last Name: Riso First Name: Richard

Address: 290 Bayville Avenue, Bayville, NY 11709

County: Nassau

Home Phone: \_\_\_\_\_ Office Phone: 516-628-8421

**3. BUILDING CHARACTERISTICS**

**Type of Building:** (Circle appropriate response)

Residential  
Industrial

School  
Church

Commercial / Multi-use  
Other: \_\_\_\_\_

If the property is residential, type? (Circle appropriate response)

- |              |                 |                   |
|--------------|-----------------|-------------------|
| Ranch        | 2-Family        | 3-Family          |
| Raised Ranch | Split Level     | Colonial          |
| Cape Cod     | Contemporary    | Mobile Home       |
| Duplex       | Apartment House | Townhouses/Condos |
| Modular      | Log Home        | Other: _____      |

If multiple units, how many? N/A

If the property is commercial, type?

Business Type(s) Plumbing, Heating, & Air Conditioning

Does it include residences (i.e., multi-use)? Y /  N If yes, how many? \_\_\_\_\_

Other characteristics:

Number of floors 1

Building age 63 years

Is the building insulated?  Y / N

How air tight?  Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

N/A  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Airflow near source

N/A  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Outdoor air infiltration

N/A  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Infiltration into air ducts

N/A  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**5. BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

- a. Above grade construction: wood frame  concrete stone brick
- b. Basement type: N/A full crawlspace slab other \_\_\_\_\_
- c. Basement floor: N/A concrete dirt stone other \_\_\_\_\_
- d. Basement floor: N/A uncovered covered covered with \_\_\_\_\_
- e. Concrete floor:  unsealed sealed sealed with \_\_\_\_\_
- f. Foundation walls: poured  block stone other \_\_\_\_\_
- g. Foundation walls:  unsealed sealed sealed with \_\_\_\_\_
- h. The basement is: N/A wet damp dry moldy
- i. The basement is: N/A finished unfinished partially finished
- j. Sump present? Y /  N
- k. Water in sump? Y / N /  not applicable

Basement/Lowest level depth below grade: \_\_\_\_\_(feet) N/A

**Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)**

During investigation of SSDS, all possible entry points (i.e., cracks) were sealed off to prevent the entrance of \_\_\_\_\_  
soil gas vapors and to enhance sub-slab negative pressure field of the active SSDS. \_\_\_\_\_

**6. HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

- |   |                  |                                 |
|---|------------------|---------------------------------|
| <input checked="" type="checkbox"/> Hot air circulation | Heat pump        | Hot water baseboard             |
| Space Heaters   | Stream radiation | Radiant floor                   |
| Electric baseboard                                      | Wood stove       | Outdoor wood boiler Other _____ |

The primary type of fuel used is:

- |   |          |          |
|---|----------|----------|
| <input checked="" type="checkbox"/> Natural Gas | Fuel Oil | Kerosene |
| Electric  | Propane  | Solar    |
| Wood  | Coal     |          |

Domestic hot water tank fueled by: Natural Gas

Boiler/furnace located in: Basement Outdoors  Main Floor Other \_\_\_\_\_

Air conditioning:  Central Air Rooftop Window units Open Windows None

Are there air distribution ducts present? Y  N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

N/A

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Table with 2 columns: Level, General Use of Each Floor. Rows include Basement, 1st Floor, 2nd Floor, 3rd Floor, and 4th Floor.

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

- a. Is there an attached garage? Y /  N
b. Does the garage have a separate heating unit? Y / N /  NA
c. Are petroleum-powered machines or vehicles stored in the garage... Y / N /  NA Please specify
d. Has the building ever had a fire? Y /  N When?
e. Is a kerosene or unvented gas space heater present? Y /  N Where?
f. Is there a workshop or hobby/craft area? Y /  N Where & Type?
g. Is there smoking in the building? Y /  N How frequently?
h. Have cleaning products been used recently? Y /  N When & Type?
i. Have cosmetic products been used recently? Y /  N When & Type?

- j. Has painting/staining been done in the last 6 months? Y /  N Where & When? \_\_\_\_\_
- k. Is there new carpet, drapes or other textiles? Y /  N Where & When? \_\_\_\_\_
- l. Have air fresheners been used recently? Y /  N When & Type? \_\_\_\_\_
- m. Is there a kitchen exhaust fan? Y /  N If yes, where vented? \_\_\_\_\_
- n. Is there a bathroom exhaust fan? Y /  N If yes, where vented? \_\_\_\_\_
- o. Is there a clothes dryer? Y /  N If yes, is it vented outside? Y / N
- p. Has there been a pesticide application? Y /  N When & Type? \_\_\_\_\_

Are there odors in the building? Y /  N  
 If yes, please describe: \_\_\_\_\_

Do any of the building occupants use solvents at work? Y / N  
 (e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? \_\_\_\_\_

If yes, are their clothes washed at work? Y /  N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

- Yes, use dry-cleaning regularly (weekly)  No
- Yes, use dry-cleaning infrequently (monthly or less) Unknown
- Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: \_\_\_\_\_  
 Is the system active or passive? Active/Passive

**9. WATER AND SEWAGE**

Water Supply:  Public Water Drilled Well Driven Well Dug Well Other: \_\_\_\_\_

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: Cesspool

**10. RELOCATION INFORMATION (for oil spill residential emergency)**

a. Provide reasons why relocation is recommended: N/A

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel N/A

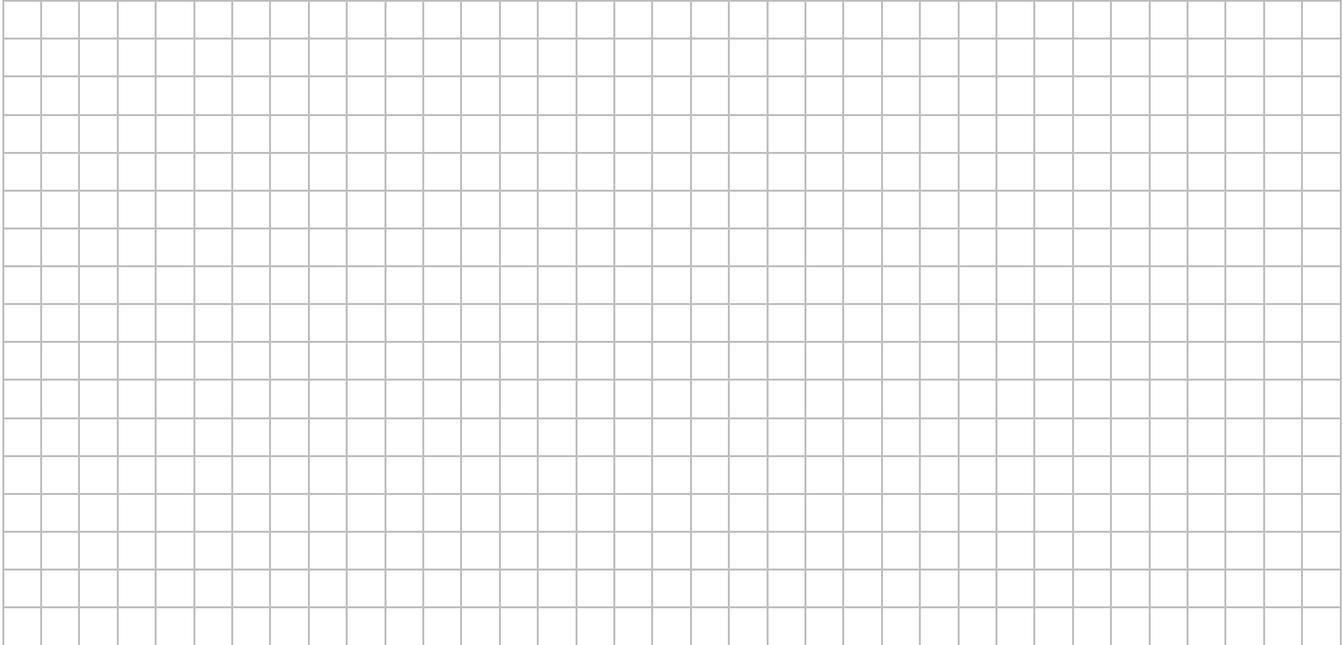
c. Responsibility for costs associated with reimbursement explained? Y / N N/A

d. Relocation package provided and explained to residents? Y / N N/A

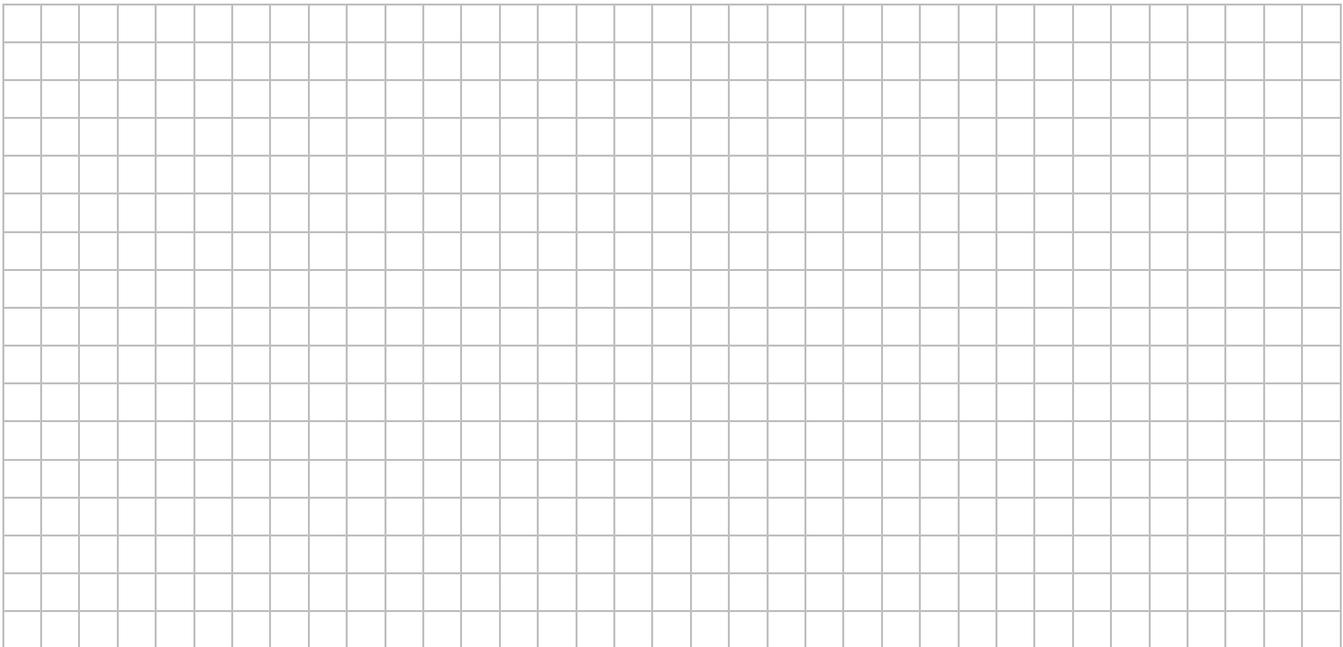
**11. FLOOR PLANS**

**Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.**

**Basement:**



**First Floor:**

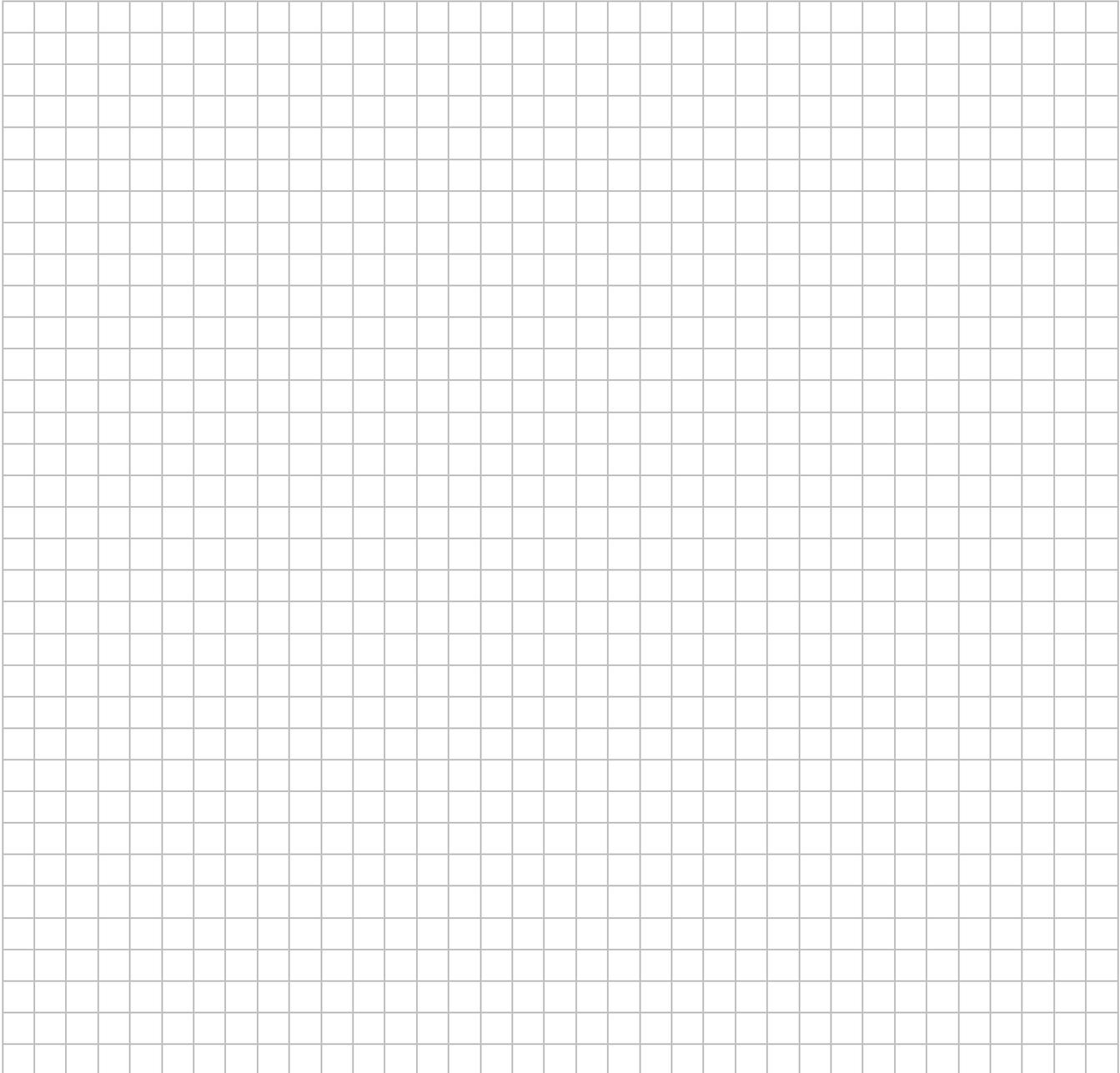


**12. OUTDOOR PLOT**

**Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.**

**Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.**

See Attached Figure 1





13. PRODUCT INVENTORY FORM

	Location	Product Description	Size (units)	Quantity (New)	Quantity (Used)	Chemical Ingredient SDS Links
1	Bathroom & Bathroom 2	Clorox Clean-Up Cleaner + Bleach	32 oz		2	<a href="https://www.thecloroxcompany.com/wp-content/uploads/2020/12/US001274-cloroxclean-upcleanerbleach1_2.pdf">https://www.thecloroxcompany.com/wp-content/uploads/2020/12/US001274-cloroxclean-upcleanerbleach1_2.pdf</a>
2	Bathroom 2	Comet with Bleach	21 oz		1	<a href="https://sds.chemtel.net/webclients/chenebrothers/508065sds.PDF">https://sds.chemtel.net/webclients/chenebrothers/508065sds.PDF</a>
3	Bathroom 2	Great Scents Air Freshener Rose Garden	9 oz		1	<a href="https://www.homefragrancerange.com/wp-content/uploads/2017/03/SDS_DAF_ROSE_GARDEN.pdf">https://www.homefragrancerange.com/wp-content/uploads/2017/03/SDS_DAF_ROSE_GARDEN.pdf</a>
4	Bathroom 2	Mrs. Meyers Clean Day	32 fl oz		1	<a href="http://sds.staples.com/msds/2399434.pdf">http://sds.staples.com/msds/2399434.pdf</a>
5	Bathroom 2	Pledge Furniture Spray Lemon Clean	13.8 oz		1	<a href="https://swish.ca/amfile/file/download/file/698/product/5751/">https://swish.ca/amfile/file/download/file/698/product/5751/</a>
6	Bathroom 2	Softsoap Handsoap	128 oz		1	<a href="https://www.msdsdigital.com/softsoap-antibacterial-liquid-hand-soap-msds-4">https://www.msdsdigital.com/softsoap-antibacterial-liquid-hand-soap-msds-4</a>
7	Warehouse	3M Calcite	45 lbs		1	<a href="https://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSuUn_zu8100xMxmUn8meOy70k17zHvu9xtD7SSSSSS--">https://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSuUn_zu8100xMxmUn8meOy70k17zHvu9xtD7SSSSSS--</a>
8	Warehouse	Ace Premium Primer Gray	12 oz		1	<a href="https://archpdfs.lps.org/Chemicals/Spray-paint_EnamelPrimerGray_ACE.PDF">https://archpdfs.lps.org/Chemicals/Spray-paint_EnamelPrimerGray_ACE.PDF</a>
9	Warehouse	Armor All Auto Glass Cleaner	22 fl oz		1	<a href="https://www.dultmeier.com/pdfs/SDS/IM17234-Armorall-Glass-Cleaner-4oz-Bottle.pdf">https://www.dultmeier.com/pdfs/SDS/IM17234-Armorall-Glass-Cleaner-4oz-Bottle.pdf</a>
10	Warehouse	Armor All Multi-Purpose Cleaner	16 fl oz		1	<a href="https://media.napaonline.com/is/content/GenuinePartsCompany/1615219pdf">https://media.napaonline.com/is/content/GenuinePartsCompany/1615219pdf</a>
11	Warehouse	AutoZone Conventional Green Antifreeze & Coolant	1 gal		2	<a href="https://contentinfo.autozone.com/znetcs/msds/en/US/540721">https://contentinfo.autozone.com/znetcs/msds/en/US/540721</a>
12	Warehouse	Bar's Leaks Radiator Stop Leak	5.5 fl oz		1	<a href="https://barsleaks.com/wp-content/uploads/2019/07/1194-1196-SDS.pdf">https://barsleaks.com/wp-content/uploads/2019/07/1194-1196-SDS.pdf</a>
13	Warehouse	Behr Wet-Lock Sealer No. 985 Hi-Gloss	1 gal		1	<a href="https://images.thdstatic.com/catalog/pdfimages/08/08451236-2bfc-4737-96ee-573f5f0a1a76.pdf">https://images.thdstatic.com/catalog/pdfimages/08/08451236-2bfc-4737-96ee-573f5f0a1a76.pdf</a>
14	Warehouse	Benjamin Moore Regal Select Premium Interior Paint and Primer Base 1 549 1x	1 gal		1	<a href="https://media.benjaminmoore.com/WebServices/prod/assets/stage/datasheets/MSDS_0549/5491X_SDS_EN_02-05-2019.pdf">https://media.benjaminmoore.com/WebServices/prod/assets/stage/datasheets/MSDS_0549/5491X_SDS_EN_02-05-2019.pdf</a>
15	Warehouse	Benjamin Moore Ultra Spec 500 Interior Flat N536 01	1 gal		3	<a href="https://media.benjaminmoore.com/WebServices/prod/assets/production/datasheets/MSDS_0536/N53601_SDS_EN_01-07-2021.pdf">https://media.benjaminmoore.com/WebServices/prod/assets/production/datasheets/MSDS_0536/N53601_SDS_EN_01-07-2021.pdf</a>
16	Warehouse	Benjamin Moore Ultra Spec Ext Advanced Waterborne Formula Exterior Flat Base 3 N447 3X	118 fl oz		1	<a href="https://media.benjaminmoore.com/WebServices/prod/assets/production/datasheets/MSDS_0447/N4473X_SDS_EN.pdf">https://media.benjaminmoore.com/WebServices/prod/assets/production/datasheets/MSDS_0447/N4473X_SDS_EN.pdf</a>
17	Warehouse	Blue Sky Diesel Exhaust Fluid	2.5 gal	3		<a href="https://blueskydefna.com/wp-content/uploads/2015/05/Final-SDS-Diesel-Exhaust-Fluid-20151.pdf">https://blueskydefna.com/wp-content/uploads/2015/05/Final-SDS-Diesel-Exhaust-Fluid-20151.pdf</a>
18	Warehouse	Cam2 2-Cycle Engine Oil	3.2 fl oz & 8 fl oz		2	<a href="https://cam2.com/wp-content/uploads/2021/07/80565-324_sds.pdf">https://cam2.com/wp-content/uploads/2021/07/80565-324_sds.pdf</a>
19	Warehouse	Campbell Hausfeld Air Compressor Oil	16 oz		1	<a href="http://www.homedepot.com/catalog/pdfimages/e9/e9535505-a1ab-4cae-91e6-688f6c662ccb.pdf">http://www.homedepot.com/catalog/pdfimages/e9/e9535505-a1ab-4cae-91e6-688f6c662ccb.pdf</a>
20	Warehouse	Carquest Motor Oil Sae 5W-30	1 qt		1	<a href="http://buffalobuildingsurvey.com/msds/carquest%205w-30%20oil.pdf">http://buffalobuildingsurvey.com/msds/carquest%205w-30%20oil.pdf</a>
21	Warehouse	Castrol GTX SAE 10W-30 Motor Oil	1 qt		1	<a href="https://msdspdscastrol.com/ussds/amersdfs.nsf/Files/B7B55E77E7548F358025865A00580A5E/\$File/2695570.pdf">https://msdspdscastrol.com/ussds/amersdfs.nsf/Files/B7B55E77E7548F358025865A00580A5E/\$File/2695570.pdf</a>
22	Warehouse	Champion RV and Marine Anti Freeze	1 gal		1	<a href="http://www.championbrands.com/MSDS/Champion%20MSDS%20RV-50%20Blend.pdf">http://www.championbrands.com/MSDS/Champion%20MSDS%20RV-50%20Blend.pdf</a>
23	Warehouse	Citgo 10W-30 Supergard Motor Oil	1 qt		1	<a href="http://www.docs.citgo.com/msds_pi/620813001.pdf">http://www.docs.citgo.com/msds_pi/620813001.pdf</a>
24	Warehouse	Comstar Leak Bubbles Blue Stock No 90-208	32 oz		1	<a href="https://www.comstarproducts.com/pub/media/wysiwyg/pdfs/SDS%20ComStar%20Leak%20Bubbles%20Blue%2090-208,%201%20qt%20with%20spray.pdf">https://www.comstarproducts.com/pub/media/wysiwyg/pdfs/SDS%20ComStar%20Leak%20Bubbles%20Blue%2090-208,%201%20qt%20with%20spray.pdf</a>
25	Warehouse	ComStar Super Heat	8 oz		7	<a href="https://petroleumservicecompany.com/content/pdfs/COMSTAR_SUPER_HEAT_SDS.pdf">https://petroleumservicecompany.com/content/pdfs/COMSTAR_SUPER_HEAT_SDS.pdf</a>
26	Warehouse	DAP Gray Concrete Siliconized Filler & Sealant	10.1 fl oz		1	<a href="https://www.buildsite.com/pdf/dap/DAP-Concrete-Mortar-Siliconized-Filler-Sealant-SDS-1875489.pdf">https://www.buildsite.com/pdf/dap/DAP-Concrete-Mortar-Siliconized-Filler-Sealant-SDS-1875489.pdf</a>
27	Warehouse	DAP Plaster of Paris	4 lb	6		<a href="https://www.buildsite.com/pdf/dap/DAP-Plaster-of-Paris-Dry-Mix-SDS-1875539.pdf">https://www.buildsite.com/pdf/dap/DAP-Plaster-of-Paris-Dry-Mix-SDS-1875539.pdf</a>
28	Warehouse	Diamond Crystal Fast Acting Jiffy Melt	12 lb		1	<a href="https://www.cargill.com/doc/1432076379061/salt-1047-jiffy-melt-sell-sheet.pdf">https://www.cargill.com/doc/1432076379061/salt-1047-jiffy-melt-sell-sheet.pdf</a>
29	Warehouse	Fernox Makes Water Work Central Heating Protector F1	1 pt		1	<a href="https://fernox.com/wp-content/uploads/sites/14/2017/12/23992_MB-1_4Ltrs_SDS_EU_en.pdf">https://fernox.com/wp-content/uploads/sites/14/2017/12/23992_MB-1_4Ltrs_SDS_EU_en.pdf</a>
30	Warehouse	FW 1 Wash and Wax High Performance Cleaning Wax	17.5 oz		1	<a href="https://www.fastwax.com/wp-content/uploads/2017/12/RGS_FW1_MSDS.pdf">https://www.fastwax.com/wp-content/uploads/2017/12/RGS_FW1_MSDS.pdf</a>
31	Warehouse	Global Sub Zero Depressant	16 fl oz		1	<a href="https://www.globalp.com/wp-content/uploads/2019/10/SDS_SubZero_1h1AFS_IFS0209_USA_Eng.pdf">https://www.globalp.com/wp-content/uploads/2019/10/SDS_SubZero_1h1AFS_IFS0209_USA_Eng.pdf</a>
32	Warehouse	Green Meadow Lawn Mower and Chain Saw 2-cycle Lubricant	8 fl oz		1	
33	Warehouse	Gumout Jet Spray Carb/Choke & Parts Cleaner	16 oz	1		<a href="https://petroleumservicecompany.com/content/pdfs/Gumout-Jet-Spray-Carb-and-Choke-Cleaner_SDS.pdf">https://petroleumservicecompany.com/content/pdfs/Gumout-Jet-Spray-Carb-and-Choke-Cleaner_SDS.pdf</a>
34	Warehouse	Hercules Clear Plastic Pipe Cement	32 fl oz	14		<a href="https://www.oatey.com/products/hercules-medium-body-set-clear-pvc-cement-157765147">https://www.oatey.com/products/hercules-medium-body-set-clear-pvc-cement-157765147</a>
35	Warehouse	Hercules Clear PVC Primer	32 fl oz	10		<a href="https://www.oatey.com/products/hercules-clear-pvc-primer-1621591729">https://www.oatey.com/products/hercules-clear-pvc-primer-1621591729</a>

	Location	Product Description	Size (units)	Quantity (New)	Quantity (Used)	Chemical Ingredient SDS Links
36	Warehouse	Hercules Haymaker Tankless Water Heater Descaler	32 fl oz		1	<a href="https://s3.amazonaws.com/s3_supplyhouse.com/product_files/Oatey-35231-MSDS.pdf">https://s3.amazonaws.com/s3_supplyhouse.com/product_files/Oatey-35231-MSDS.pdf</a>
37	Warehouse	Hercules Mega Bubble Leak Detector	1 gal		1	<a href="https://images.thdstatic.com/catalog/pdfimages/ab/ab3af6a1-b89b-441d-8299-ea128ff38fb6.pdf">https://images.thdstatic.com/catalog/pdfimages/ab/ab3af6a1-b89b-441d-8299-ea128ff38fb6.pdf</a>
38	Warehouse	Hercules Megaloc Multipurpose Threadsealant 15808	1 pt		1	<a href="https://img0.fastenal.com/productimages/supplemental/product_docs/SDS8675763.pdf">https://img0.fastenal.com/productimages/supplemental/product_docs/SDS8675763.pdf</a>
39	Warehouse	Hercules Pipe Joint Compound 15433	6 lbs		1	<a href="https://d2yn8sruhmqt4.cloudfront.net/userfiles/documents/inriver/original/39114_oatey_15420_sds.pdf">https://d2yn8sruhmqt4.cloudfront.net/userfiles/documents/inriver/original/39114_oatey_15420_sds.pdf</a>
40	Warehouse	Hercules Premium Grade/All-Weather Roof and Flashing Sealant	1 gal		3	<a href="https://www.herculesindustries.com/sites/default/files/pdgs/spec_docs/SDS%20MTS100.pdf">https://www.herculesindustries.com/sites/default/files/pdgs/spec_docs/SDS%20MTS100.pdf</a>
41	Warehouse	Johnsen's Synthetic Dot-3 Brake Fluid	12 fl oz		1	<a href="https://www.shophighlinewarren.com/images/ProductSDSDocuments/JOHN2212.pdf">https://www.shophighlinewarren.com/images/ProductSDSDocuments/JOHN2212.pdf</a>
42	Warehouse	Karnak 19 Flashing Cement	5 gal		1	<a href="https://global-uploads.webflow.com/5fdb6a6c2e47643f50c6794c/62c87e03d3c97467f199e91_19_SDS_062722.pdf">https://global-uploads.webflow.com/5fdb6a6c2e47643f50c6794c/62c87e03d3c97467f199e91_19_SDS_062722.pdf</a>
43	Warehouse	Klean-Strip Pure Gum Spirits Turpentine	32 fl oz		1	<a href="https://www2.pcad.edu/Facilities/health_safety/SDS/Painting/Solvents/W.M.%20Barr/klean%20strip%20pure%20gum%20turpentine.pdf">https://www2.pcad.edu/Facilities/health_safety/SDS/Painting/Solvents/W.M.%20Barr/klean%20strip%20pure%20gum%20turpentine.pdf</a>
44	Warehouse	Leslie's Pool Salt	40 lbs	2	1	<a href="https://otis.osmanager4.com/Leslies/rtk/SDS">https://otis.osmanager4.com/Leslies/rtk/SDS</a>
45	Warehouse	Loctite PL Premium Construction Adhesive	10 fl oz		1	<a href="https://dm.henkel-dam.com/is/content/henkel/sds-us-loctite-pl-premium-4oz-squeeze-tube">https://dm.henkel-dam.com/is/content/henkel/sds-us-loctite-pl-premium-4oz-squeeze-tube</a>
46	Warehouse	MaryKate On & Off Hull & Bottom Cleaner	32 fl oz		1	<a href="https://www.fastenal.com/productimages/supplemental/product_docs/CRC%20INDUSTRIES,%20INC_254392.pdf">https://www.fastenal.com/productimages/supplemental/product_docs/CRC%20INDUSTRIES,%20INC_254392.pdf</a>
47	Warehouse	Mercedes-Benz Anticorrosion/Antifreeze Agent	1 gal		1	<a href="https://msdsdigital.com/mercedes%C2%AE-benz-g-48-antifreeze-coolant-msds-0">https://msdsdigital.com/mercedes%C2%AE-benz-g-48-antifreeze-coolant-msds-0</a>
48	Warehouse	Mercury Precision Lubricants Outboard Oil 4-Stroke SAE 10W-30	1 L		1	<a href="https://www.whatsinproducts.com/files/brands_pdf/13033002%20MSDS%204-Stroke%20Outboard%20Oil%20(10W-30)%20085-1170.pdf">https://www.whatsinproducts.com/files/brands_pdf/13033002%20MSDS%204-Stroke%20Outboard%20Oil%20(10W-30)%20085-1170.pdf</a>
49	Warehouse	Mobil 1 10W-30 Fully Synthetic Motor Oil	1 qt		1	<a href="https://images.homedepot-static.com/catalog/pdfimages/c1/c1527ca5-f9f3-4aa1-b2ca-a255804938ff.pdf">https://images.homedepot-static.com/catalog/pdfimages/c1/c1527ca5-f9f3-4aa1-b2ca-a255804938ff.pdf</a>
50	Warehouse	Mobil 1 Extended Performance High Mileage Advanced Full Synthetic Motor Oil	5 qts		1	<a href="https://www.mobil.com/en/lubricants/for-personal-vehicles/our-products/products/mobil-1-extended-performance-high-mileage-5w-30#lightbox-sdsdatasheet">https://www.mobil.com/en/lubricants/for-personal-vehicles/our-products/products/mobil-1-extended-performance-high-mileage-5w-30#lightbox-sdsdatasheet</a>
51	Warehouse	Napa Anti-Freeze Coolant Alugard	1 gal		1	<a href="https://media.napaonline.com/is/content/GenuinePartsCompany/889651pdf">https://media.napaonline.com/is/content/GenuinePartsCompany/889651pdf</a>
52	Warehouse	Oil Dri Premium Absorbent	36 lb		1	<a href="https://www.oildri.net/Downloads/MSDS_1003000Aug11.pdf">https://www.oildri.net/Downloads/MSDS_1003000Aug11.pdf</a>
53	Warehouse	Peak Antifreeze & Coolant	1 gal		2	<a href="https://media.lifeandhome.com/media/downloads/30375/SDSpdf.pdf">https://media.lifeandhome.com/media/downloads/30375/SDSpdf.pdf</a>
54	Warehouse	Pennzoil SAE 10W-40 Motor Oil with PureBase	1 qt		2	<a href="https://evosupplygroupecatalog.sfo3.digitaloceanspaces.com/files/FCsLrW6TycZcZGAa3Srl3Td9OgzgHwXy9CRYx6BQ.pdf">https://evosupplygroupecatalog.sfo3.digitaloceanspaces.com/files/FCsLrW6TycZcZGAa3Srl3Td9OgzgHwXy9CRYx6BQ.pdf</a>
55	Warehouse	Pride 500 50/50 Pre-mix Atifreeze & Coolant	1 gal		3	<a href="http://sumo-east.ru/Data/MSDS_10-10-02_PRIDE_500_50-50.pdf">http://sumo-east.ru/Data/MSDS_10-10-02_PRIDE_500_50-50.pdf</a>
56	Warehouse	PX Super "99" Isopropyl Alcohol Fuel System Conditioner & Antifreeze All Season Formula	10 fl oz	16		<a href="https://www.splashwash.com/application/files/3515/4223/0551/SPLASH_SUPER_PX-99_Isopropyl_Alcohol_LQ_SDS.pdf">https://www.splashwash.com/application/files/3515/4223/0551/SPLASH_SUPER_PX-99_Isopropyl_Alcohol_LQ_SDS.pdf</a>
57	Warehouse	Pyroil Carb and Throttle Body Cleaner	13 oz		1	<a href="https://cycloaustralia.com.au/wp-content/uploads/SDS_PYC16.pdf">https://cycloaustralia.com.au/wp-content/uploads/SDS_PYC16.pdf</a>
58	Warehouse	Quicksilver Power Trim & Steering Fluid	8 fl oz		1	<a href="http://www.marineroutboards.com.au/media/328885/quicksilver%20premium%20power%20trim%20and%20steering%20fluid%20(au)en.pdf">http://www.marineroutboards.com.au/media/328885/quicksilver%20premium%20power%20trim%20and%20steering%20fluid%20(au)en.pdf</a>
59	Warehouse	Quikrete Fast-Setting Concrete Mix	50 lb		1	<a href="https://www.quikrete.com/PDFs/SDS-C6-Fast-Setting-Products.pdf">https://www.quikrete.com/PDFs/SDS-C6-Fast-Setting-Products.pdf</a>
60	Warehouse	Quikrete Hydraulic Water-Stop Cement	10 lbs		1	<a href="https://www.buildsite.com/pdf/quikrete/QUIKRETE-Hydraulic-Water-Stop-Cement-1126-SDS-1837828.pdf">https://www.buildsite.com/pdf/quikrete/QUIKRETE-Hydraulic-Water-Stop-Cement-1126-SDS-1837828.pdf</a>
61	Warehouse	Quikrete Mortar Mix No 1102	60 lb		1	<a href="https://www.quikrete.com/PDFs/SDS-C4-Masonry-Mortars.pdf">https://www.quikrete.com/PDFs/SDS-C4-Masonry-Mortars.pdf</a>
62	Warehouse	Rapid Set Mortar Mix	25 lbs		1	<a href="https://images.homedepot-static.com/catalog/pdfimages/bb/bbb21dd2-0b4a-46be-a218-87424c7ec866.pdf">https://images.homedepot-static.com/catalog/pdfimages/bb/bbb21dd2-0b4a-46be-a218-87424c7ec866.pdf</a>
63	Warehouse	Revivex Instant Waterproofing	5 oz		1	<a href="https://www.nrs.com/assets/downloads/msds/revivex_durable_water_repellant_(ghs).pdf">https://www.nrs.com/assets/downloads/msds/revivex_durable_water_repellant_(ghs).pdf</a>
64	Warehouse	Roofers Choice 16 Wet N Dry Roof Cement	0.90 gal		1	<a href="https://assets.unilogcorp.com/187/ITEM/DOC/Henry_100031248_SDS.pdf">https://assets.unilogcorp.com/187/ITEM/DOC/Henry_100031248_SDS.pdf</a>
65	Warehouse	Round Up Extended Control Weed and Grass Killer Plus Weed Preventer II	1.1 gal		1	<a href="https://www.whatsinproducts.com/brands/show_msds/1/19500">https://www.whatsinproducts.com/brands/show_msds/1/19500</a>
66	Warehouse	Round Up Ready to Use Weed and Grass Killer III	1.33 gal		1	<a href="https://msdsdigital.com/roundup%C2%AE-ready-use-weed-grass-killer-iii-msds">https://msdsdigital.com/roundup%C2%AE-ready-use-weed-grass-killer-iii-msds</a>
67	Warehouse	Rustoleum Clean Metal Primer White 7780	32 fl oz		1	<a href="https://www.rustoleum.com/MSDS/ENGLISH/7780502.pdf">https://www.rustoleum.com/MSDS/ENGLISH/7780502.pdf</a>
68	Warehouse	Rustoleum Protective Enamel Oil-Based	32 fl oz		1	<a href="https://images.thdstatic.com/catalog/pdfimages/41/41cef8bf-ab3e-4c44-b9f3-540803438354.pdf">https://images.thdstatic.com/catalog/pdfimages/41/41cef8bf-ab3e-4c44-b9f3-540803438354.pdf</a>
69	Warehouse	Rustoleum Ultra Cover Premium Latex Paint Gloss Black	32 fl oz		1	<a href="https://www.rustoleum.com/MSDS/ENGLISH/1979502.pdf">https://www.rustoleum.com/MSDS/ENGLISH/1979502.pdf</a>
70	Warehouse	Shell Zone Pre-diluted 50/50 Antifreeze/Coolant	1 gal		1	<a href="https://shop.sclubricants.com/pub/media/sds/shell/ShellZone-Multi-Vehicle-ELC-50-50-MSDS.pdf">https://shop.sclubricants.com/pub/media/sds/shell/ShellZone-Multi-Vehicle-ELC-50-50-MSDS.pdf</a>

	Location	Product Description	Size (units)	Quantity (New)	Quantity (Used)	Chemical Ingredient SDS Links
71	Warehouse	Silco Sil-Bond RTV 6500	10.3 fl oz		1	<a href="https://static1.squarespace.com/static/61edd9811a204a0fdbe9d14d/t/62697067c711d7246fa50de2/1651077223531/SIL-BOND-RTV-6500-US-EN-3-sds+%281%29.pdf">https://static1.squarespace.com/static/61edd9811a204a0fdbe9d14d/t/62697067c711d7246fa50de2/1651077223531/SIL-BOND-RTV-6500-US-EN-3-sds+%281%29.pdf</a>
72	Warehouse	Still Clean	1 lb		8	<a href="https://proproducts.com/wp-content/uploads/Pro-Still-Clean-Distiller-Cleaner-Descaler-English-GHS-11-07-2019.pdf">https://proproducts.com/wp-content/uploads/Pro-Still-Clean-Distiller-Cleaner-Descaler-English-GHS-11-07-2019.pdf</a>
73	Warehouse	Still Pro Distiller Cleaner	1 lb		8	<a href="https://images.thdstatic.com/catalog/pdfimages/0d/0da16ba8-caea-47a2-b8f9-42bff138237e.pdf">https://images.thdstatic.com/catalog/pdfimages/0d/0da16ba8-caea-47a2-b8f9-42bff138237e.pdf</a>
74	Warehouse	Still Sweet	1 lb		7	<a href="http://www.barnstead-water.com/images/MSDS%20Still%20sweet.pdf">http://www.barnstead-water.com/images/MSDS%20Still%20sweet.pdf</a>
75	Warehouse	Thrift Odorless Drain Cleaner	1 lb	10		<a href="http://thriftmarketing.com/pdf/Thrift_Drain_Opener_SP64_SDS_06-17-15.pdf">http://thriftmarketing.com/pdf/Thrift_Drain_Opener_SP64_SDS_06-17-15.pdf</a>
76	Warehouse	Unifrax LDS Moldable Fiberfrax	11 fl oz		1	<a href="https://www.unifrax.com/wp-content/uploads/2018/08/M0139.pdf">https://www.unifrax.com/wp-content/uploads/2018/08/M0139.pdf</a>
77	Warehouse	USG Sheetrock All Purpose Joint Compound	4.5 gal		1	<a href="https://www.usg.com/content/dam/USG_Marketing_Communications/united_states/sds/usg-sheetrock-all-purpose-joint-compound-ready-mixed-sds-en-61000010001.pdf">https://www.usg.com/content/dam/USG_Marketing_Communications/united_states/sds/usg-sheetrock-all-purpose-joint-compound-ready-mixed-sds-en-61000010001.pdf</a>
78	Warehouse	USG Sheetrock Easy Sand 45 Joint Compound	18 lb	1		<a href="https://www.usg.com/content/dam/USG_Marketing_Communications/united_states/sds/usg-sheetrock-easy-sand-lightweight-setting-type-joint-compounds-sds-en-61000030002.pdf">https://www.usg.com/content/dam/USG_Marketing_Communications/united_states/sds/usg-sheetrock-easy-sand-lightweight-setting-type-joint-compounds-sds-en-61000030002.pdf</a>
79	Warehouse	USG Sheetrock Easy Sand 90 Joint Compound	18 lbs	3	1	<a href="http://www.usg.com/content/dam/USG_Marketing_Communications/united_states/sds/usg-sheetrock-easy-sand-lightweight-setting-type-joint-compounds-sds-en-61000030002.pdf">http://www.usg.com/content/dam/USG_Marketing_Communications/united_states/sds/usg-sheetrock-easy-sand-lightweight-setting-type-joint-compounds-sds-en-61000030002.pdf</a>
80	Warehouse	Utility Wonder Products No-Freez' Non-Toxic Heat Transfer Fluid	5 gal	3		<a href="https://www.utilitychemicals.com/pdf_files/18-450%20SDS.pdf">https://www.utilitychemicals.com/pdf_files/18-450%20SDS.pdf</a>
81	Warehouse	Valvoline Heavy Duty Brake Parts Cleaner	15 oz		1	<a href="https://media.napaonline.com/is/content/GenuinePartsCompany/205170995pdf">https://media.napaonline.com/is/content/GenuinePartsCompany/205170995pdf</a>
82	Warehouse	Valvoline Heavy Duty Carb and Throttle Body Cleaner	13 oz		1	<a href="https://media.napaonline.com/is/content/GenuinePartsCompany/205170994pdf">https://media.napaonline.com/is/content/GenuinePartsCompany/205170994pdf</a>
83	Warehouse	WD 40 EZ Reach	14.4 oz		1	<a href="https://files.wd40.com/pdf/sds/mup/canada/english/wd-40_ez_reach_multi_use_product_aerosol_can_ghs_sds.pdf">https://files.wd40.com/pdf/sds/mup/canada/english/wd-40_ez_reach_multi_use_product_aerosol_can_ghs_sds.pdf</a>
84	Warehouse	Weber Bob Ross Odorless Thinner	.5 gal		1	<a href="https://media.jacksonsart.com/pdf/msds_bobross_thinner.pdf">https://media.jacksonsart.com/pdf/msds_bobross_thinner.pdf</a>
85	Warehouse	Zep Concentrated Industrial Purple Degreaser and Cleaner	1 gal		1	<a href="https://zsds3.zepinc.com/ehswww/zep/result/direct_link.jsp?P_LANGU=E&amp;P_SYS=2&amp;P_SS N=11337&amp;C001=MSDS&amp;C002=US&amp;C003=E&amp;C013=R42310&amp;C123=SDS*">https://zsds3.zepinc.com/ehswww/zep/result/direct_link.jsp?P_LANGU=E&amp;P_SYS=2&amp;P_SS N=11337&amp;C001=MSDS&amp;C002=US&amp;C003=E&amp;C013=R42310&amp;C123=SDS*</a>
86	Washroom	Dawn Ultra Platinum Powerwash Dish Spray Fresh Scent	16 oz	2	1	<a href="https://resources.cleanitsupply.com/MSDS/PGC31836_SDS.PDF">https://resources.cleanitsupply.com/MSDS/PGC31836_SDS.PDF</a>
87	Washroom	Evolved By Nature Hand Soap	128 oz		1	<a href="https://resources.cleanitsupply.com/MSDS/EBN-SDS-SOAP-001.PDF">https://resources.cleanitsupply.com/MSDS/EBN-SDS-SOAP-001.PDF</a>
88	Washroom	Mrs. Meyers Clean Day Glass Cleaner	24 fl oz		1	<a href="http://www.homedepot.com/catalog/pdfimages/c3/c3e50086-89fd-475d-947c-049f7a533d93.pdf">http://www.homedepot.com/catalog/pdfimages/c3/c3e50086-89fd-475d-947c-049f7a533d93.pdf</a>
89	Washroom	Pine-Sol Original Multi-Surface Cleaner	144 fl oz		1	<a href="https://www.thecloroxcompany.com/wp-content/uploads/2022/10/USA-SDS-Clorox-Pine-Sol-Multi-Surface-Cleaner-All-Scents_2-2.pdf">https://www.thecloroxcompany.com/wp-content/uploads/2022/10/USA-SDS-Clorox-Pine-Sol-Multi-Surface-Cleaner-All-Scents_2-2.pdf</a>
90	Washroom	Raid Ant & Roach Killer Unscented	18 oz		1	<a href="https://www.kandelanson.com/msds/Raid%20Ant%20and%20Roach%20Killer.pdf">https://www.kandelanson.com/msds/Raid%20Ant%20and%20Roach%20Killer.pdf</a>
91	Washroom	Soothing Collyrium for Fresh Eyes Eye Wash	4 fl oz		1	<a href="https://www.conney.com/websphere/msds/25911.PDF">https://www.conney.com/websphere/msds/25911.PDF</a>
92	Washroom	Super Clean Tough Task Cleaner Degreaser	1 qt		1	<a href="https://www.superclean.com/wp-content/uploads/2016/10/2016-SuperClean-Degreaser-SDS-v2.0.pdf">https://www.superclean.com/wp-content/uploads/2016/10/2016-SuperClean-Degreaser-SDS-v2.0.pdf</a>
93	Washroom	Swiffer WetJet Fresh Scent	42.2 fl oz	1	1	<a href="http://sds.staples.com/msds/676640.pdf">http://sds.staples.com/msds/676640.pdf</a>
94	Washroom	Windex Original	67.6 fl oz		1	<a href="https://beta.lakeland.edu/AboutUs/MSDS/PDFs/3258/Windex%20Original%20Glass%20Cleaner%20(SC%20Johnson)%201-23-18.pdf">https://beta.lakeland.edu/AboutUs/MSDS/PDFs/3258/Windex%20Original%20Glass%20Cleaner%20(SC%20Johnson)%201-23-18.pdf</a>
95	Washroom	Zep Commercial Stainless Steel Polish	14 oz		1	<a href="https://zsds3.zepinc.com/ehswww/zep/result/direct_link.jsp?P_LANGU=E&amp;P_SYS=2&amp;P_SS N=11337&amp;C001=MSDS&amp;C002=US&amp;C003=E&amp;C013=1048844&amp;C123=SDS*">https://zsds3.zepinc.com/ehswww/zep/result/direct_link.jsp?P_LANGU=E&amp;P_SYS=2&amp;P_SS N=11337&amp;C001=MSDS&amp;C002=US&amp;C003=E&amp;C013=1048844&amp;C123=SDS*</a>



**Photograph #1** - View of product in bathroom listed in Product Inventory Form.



**Photograph #2** - View of product in bathroom listed in Product Inventory Form.



**Photograph #3** – View of product in bathroom listed in Product Inventory Form.



**Photograph #4** - View of products in bathroom listed in Product Inventory Form.



**Photograph #5** – View of products in washroom listed in Product Inventory Form.



**Photograph #6** – View of products in washroom listed in Product Inventory Form.



**Photograph #7** – View of products in washroom listed in Product Inventory Form.



**Photograph #8** – View of products in washroom listed in Product Inventory Form.



**Photograph #9** – View of products in washroom listed in Product Inventory Form.



**Photograph #10** – View of plumbing warehouse products listed in Product Inventory Form.



**Photograph #11** – View of plumbing warehouse products listed in Product Inventory Form.



**Photograph #12** – View of plumbing warehouse products listed in Product Inventory Form.



**Photograph #13** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #14** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #15** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #16** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #17** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #18** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #19** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #20** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #21** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #22** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #23** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #24** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #25** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #26** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #27** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #28** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #29** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #30** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #31** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #32** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #33** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #34** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #35** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #36** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #37** – View of plumbing warehouse product listed in Product Inventory Form.



**Photograph #38** – View of plumbing warehouse product listed in Product Inventory Form.

# **APPENDIX C**

## **Sub-Slab Depressurization Site Management Form**

SUB-SLAB DEPRESSURIZATION SITE MANAGEMENT FORM

	2021	Date	Yes	No	If No - Action Taken	Print Name of Inspector	Signature of Inspector
Discharge Pipe Clear of Obstruction		5/27/21	✓				
General System Piping Inspection			✓				
RadonAway Fan Running Properly			✓				
RadonAway Alarm Operating Properly			✓				
Negative Pressure Monitoring			✓				
VOC PID Monitoring			✓				
Ambient Air Sampling			✓				
Influent Air Sampling			✓				
Effluent Air Sampling			✓				
Exterior Soil Vapor Gas Sampling			✓				
Groundwater Sampling			✓				
Replacement of Filter Media			✓	✓	Not yet replaced		
Building Inventory Questionnaire			✓				
	2022						
Discharge Pipe Clear of Obstruction		9/20/22	✓				
General System Piping Inspection			✓				
RadonAway Fan Running Properly			✓				
RadonAway Alarm Operating Properly			✓				
Negative Pressure Monitoring			✓				
VOC PID Monitoring			✓				
Ambient Air Sampling			✓				
Influent Air Sampling			✓				
Effluent Air Sampling			✓				
Exterior Soil Vapor Gas Sampling			✓				
Groundwater Sampling			N/A				
Replacement of Filter Media		Replaced 12/08/21	✓				
Building Inventory Questionnaire			✓				
	2024						
Discharge Pipe Clear of Obstruction		1/11/24	✓				
General System Piping Inspection			✓				
RadonAway Fan Running Properly			✓				
RadonAway Alarm Operating Properly			✓				
Negative Pressure Monitoring			✓				
VOC PID Monitoring			✓				
Ambient Air Sampling			✓				
Influent Air Sampling			✓				
Effluent Air Sampling			✓				
Exterior Soil Vapor Gas Sampling			✓				
Groundwater Sampling			N/A				
Replacement of Filter Media		Replaced 12/08/21	✓				
Building Inventory Questionnaire			✓				

CHIEF

WILLIAM

Rachel Lambert

Rachel Lambert

## **APPENDIX D**

### **NYSDEC Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form**



Enclosure 2  
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
 Site Management Periodic Review Report Notice  
 Institutional and Engineering Controls Certification Form



	Site Details	Box 1
Site No.            V00220		
Site Name Bay III Realty, LLC		
Site Address: 290 Bayville Ave      Zip Code: 11709		
City/Town: Bayville		
County: Nassau		
Site Acreage: 0.250		
Reporting Period: <i>September 20, 2022 - January 11, 2024</i>		
		YES    NO
1. Is the information above correct?		<input checked="" type="checkbox"/> <input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/> <input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?		<input type="checkbox"/> <input checked="" type="checkbox"/>
		<b>Box 2</b>
		YES    NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial		<input checked="" type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?		<input checked="" type="checkbox"/> <input type="checkbox"/>
<p><b>IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.</b></p> <p><b>A Corrective Measures Work Plan must be submitted along with this form to address these issues.</b></p>		
<hr/> Signature of Owner, Remedial Party or Designated Representative		<hr/> Date

## Description of Institutional Controls

ParcelOwnerInstitutional Control

Richard Riso

Soil Management Plan  
O&M PlanRichard Riso is the property owner  
as of August 3, 2020.

- Declaration of Covenants and Restrictions - Current and Future Use of the Site: Permitted future uses (commercial and industrial) must comply with 6 NYCRR 375-1.8(g)(2)(iii) for commercial uses; and 6 NYCRR 375-1.8(g)(2)(iv) for industrial uses. A copy of the Declaration of Covenants and Restrictions (DCR) and its recording page was recorded with the Nassau County Clerk's office on March 17, 2017; The property may be used for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Nassau County Department of Health to render it safe for use as drinking water or for commercial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
- Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Declaration of Covenants and Restrictions;
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site, specifically within the IC boundaries; and any potential impacts that are identified must be monitored or mitigated. The IC boundaries for this Site encompasses the entire subject lot as depicted on the site map provided; and
- Vegetable gardens and farming on the Site are prohibited.

## Description of Engineering Controls

Parcel

Engineering Control

Vapor Mitigation  
Cover System  
Groundwater Containment  
Monitoring Wells

1. Vapor Mitigation System: The SSD System was installed with the following components:
  - a. A RadonAway fan (Model RP265c) was installed to induce negative pressure to the sub-slab region beneath the one-story building.
  - b. The extraction point for PCE vapors was installed in the center of the building, beneath the building slab, to capture all vapors.
  - c. Interconnecting piping consisting of three and four-inch diameter schedule 40 PVC was utilized to install the SSD System. Four-inch PVC piping was installed from the sub-slab extraction point, extending to above the suspended ceiling, and then connected to the fan utilizing flexible couplings. The four-inch piping was then extended from the fan to the southern exterior wall. The piping then penetrates the wall whereby a reducer fitting extends three-inch PVC piping into a 55-gallon drum containing granular activated carbon (GAC). The GAC Vessel is located outside the building along the south side. The purpose of the GAC Vessel is to treat the effluent gas prior to discharge to the atmosphere through a three-inch exterior mounted stack pipe. Sampling/monitoring ports were installed on the extraction piping (influent side) and after the GAC vessel (effluent side) for monitoring vacuum, flow and contaminant concentrations.
2. Other Engineering Controls: Sealing of the concrete floor - The concrete floor was evaluated to eliminate any other sub-slab transport pathway (i.e. cracks in the building floor). All possible routes were sealed off to prevent the entrance of soil gas and to enhance the sub-slab negative pressure field of the SSD System.
3. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the declaration of covenants and restrictions (DCR), which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
4. Periodic certification of the institutional and engineering controls listed above.

**Periodic Review Report (PRR) Certification Statements**

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date

IC CERTIFICATIONS  
SITE NO. V00220

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

James Gladysz                      1200 Veterans Memorial Highway, Hauppauge, NY 11788

print name

print business address

am certifying as Remedial Party (Owner or Remedial Party)

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

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

Date

9-22-2025





Richard Riso  
TriCounty Installations, Plumbing, and Heating, Inc.  
Bay III Realty, LLC.

September 22, 2025

I, Richard Riso, authorize James Gladysz, P.E., to certify on my behalf that the institutional and engineering controls put into place are unchanged from the previous certification, comply with the SMP and have not been impaired.

Signed , owner and occupant of the subject property and above-listed businesses.

Richard Riso  
TriCounty Installations, Plumbing, and Heating, Inc.  
Bay III Realty, LLC.

September 22, 2025

I, Richard Riso, confirm that I am the principal owner of TriCounty Installations, Plumbing, and Heating, Inc., and Bay III Realty, LLC. I am the present owner and occupant of the subject property.

In signing this letter, I acknowledge that I am aware of the clean-up agreement established between NYSDEC and Mr. Ryan, and of the required remediation that is being carried out.

The NYSDEC Advance Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership, submitted 10/01/2024, states that Thomas Ryan maintains DEC Site No. V00220 and is still responsible for cleanup, although I now own the property. I maintain that Thomas Ryan is the remedial party for this property, as stated in the above-listed document.

As is listed in the Indemnification and Escrow Agreement Regarding Environmental Matters at 290 Bayville Avenue, Bayville, New York, I can confirm that, although Thomas Ryan was the past owner of the property, he is compliant with the requirements of the NYSDEC regarding the remediation of the property in accordance with the Voluntary Cleanup Agreement W1-0848-9903. Additionally, I understand that Thomas Ryan has agreed that so long as the DEC continues to require remediation related to the current and past conditions, he will comply with the DEC and fund such maintenance, as stated in the above-listed document.

As stated in the Purchase Rider to Contract of Sale Covering Premises as 290 Bayville Avenue, Bayville, New York 11709, I can confirm that Thomas Ryan acknowledges and agrees that the I, Richard Riso, will be held harmless with respect to certain environmental cleanup and remediation efforts underway at the premises. Such Agreement and indemnification include, but not be limited to Thomas Ryan, retaining not less than \$30,000.00 in escrow for anticipated future reporting and remediation efforts, and continuing to perform annual testing and reporting as may be required by the NYS Department of Environmental Conservation.

Signed , owner and occupant of the above-mentioned property.

**ATTACHMENT I**  
**NYSDEC Letters Dated**  
**September 11, 2023**  
**February 26, 2025**  
**August 28, 2025**

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 1

SUNY @ Stony Brook, 50 Circle Road, Stony Brook, NY 11790

P: (631) 444-0240 | F: (631) 444-0248

[www.dec.ny.gov](http://www.dec.ny.gov)

## VIA EMAIL ONLY

September 11, 2023

Bayville Village Cleaners  
Thomas Ryan  
19 Todd Drive  
Glen Head, NY 11545  
Email: [tomykins@hotmail.com](mailto:tomykins@hotmail.com)

Re: Site Management (SM) Periodic Review Report (PRR) Submittal-  
Extension

Bayville Village Cleaners, Bayville  
Nassau County, Site No.: V00220

Dear Thomas Ryan:

The Department has reviewed your request for the extension of PRR submission date via email dated 6/27/2023.

The Department hereby accepts your request to extend the PRR submission date until January 15, 2024, while noting the following items for the next proposed sampling event for the subsequent PRR:

1. The sub-slab depressurization system (SSDS) will be shut down for a minimum period of 30 days.
2. All sampling will be conducted during the 2023 - 2024 Heating Season (Usually November thru March).
3. An indoor air sample and outdoor ambient air sample are to be collected and analyzed by EPA Method TO-15; Select Ion Monitoring, in order to achieve laboratory detection limits of 0.20 ug/m<sup>3</sup> or less for the following five compounds: TCE; *cis* 1,2-dichloroethene; 1,1- dichloroethene; carbon tetrachloride and vinyl chloride.
4. Six soil vapor samples are to be collected from the exterior of the building. Specifically: PPB-1; PP-2; PP-3; PP-4; PPB-5 and PPB-6.
5. All laboratory sample data will be reported in micrograms per cubic meter.



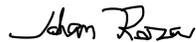
Department of  
Environmental  
Conservation

6. Sample collection should be in general accordance with procedures found in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, 2006, revised 2017.
7. A Product Inventory and Building Questionnaire should be completed as an element of the sampling event.

If you have any question or concern, please contact me at 631-444-0242 or [jahan.reza@dec.ny.gov](mailto:jahan.reza@dec.ny.gov).

Thank you.

Sincerely,



Jahan Reza  
Project Manager

cc:

R. Mustico, NYSDEC  
Girish Desai, NYSDEC  
J. Sheehan, NYSDEC  
R. Lambert, CASHIN



**SENT VIA EMAIL ONLY**

February 26, 2025

Frank Cashin, P.E.  
Cashin Associates, P.C.  
1200 Veterans Memorial Highway  
Hauppauge, NY 11788

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter  
Bayville Village Cleaners, Bayville  
Nassau County, Site No.: V00220

Dear Frank Cashin:

The New York State Departments of Environmental Conservation (Department) and Health (NYSDOH) have reviewed Cashin Associate's revised Periodic Review Report (PRR) and IC/EC Certification dated October 25, 2024 submitted on behalf of Tom Ryan, Bayville Village Cleaners, Inc., and offer the following comments:

1. Section 3.5; Soil Vapor/Indoor Air Matrices Tables: The NYSDOH's comparison matrices is applicable for sub-slab soil vapor (SSSV) vs co-located indoor air (IA) data, not for soil vapor (SV). Your table 5 compared outdoor SV vs IA, which is not correct. Section 3.5 is not required, and therefore, delete the section 3.5 from the report.
2. Steps for Discontinuation/Termination & Decommissioning of SSDS: The NYSDOH's comparison matrices is applicable for sub-slab soil vapor (SSSV) data inside the building facility and co-located indoor air (IA) data. In this regard, propose adequate SSSV sampling points inside the building facility and co-located indoor air (IA) sampling. The sampling should be conducted during the heating season, and a figure for the sampling locations shall be provided.

As per our discussions during a call on February 26, 2025, the following steps shall be followed for termination/discontinuation of SSDS:

- a) In accordance with the approved SMP 3.3.1.1 Criteria for Completion of Remediation/Termination of Remedial Systems & Section 6.4 of NYSDEC DER-10, please submit a SSDS shutdown sampling work plan for review and approval by the Department.

- b) The first round of sampling during coming heating season (November 15<sup>th</sup> to March 31<sup>st</sup> ) to be conducted after 60 days of SSDS shutdown. Turn on the SSDS after sampling is completed.
- c) During the SSDS shutdown, plug/cap off the roof mounted vent pipe as close to the slab elevation to prevent the passive venting of sub-slab vapor via the vent pipe.
- d) Notify the Department when SSDS shutdown occurs.
- e) Conduct the second round of sampling event in accordance with the approved work plan and after sampling completed, system should be turned on.
- f) Submit SVI sampling report that compares SVI results with the NYSDOH matrices for review to the Department.
- g) Based on the results of the two consecutive SVI sampling events, a determination will be made by the Department if the system can be turned off temporarily. After the two consecutive events for “No Further Action”, the SSDS will be shut off for 10 months and a rebound sampling event shall be conducted to confirm the system can be remain turned off permanently.
- h) If the sampling results indicate significant rebound, the SSDS should be restarted.
- i) All equipment and sub-slab monitoring points must remain in place until permanent termination/discontinuation of SSDS is approved by the Department.
- j) Progress report and PRR will continue during this SSDS discontinuation determination process.

Please revise the PRR addressing above comments and resubmit for review and approval by the Department.

If you have any questions, or need additional forms, please contact me at 631-444-0242 or e-mail: [jahan.reza@dec.ny.gov](mailto:jahan.reza@dec.ny.gov).

Sincerely,



Jahan Reza  
Project Manager

cc: R. Mustico, NYSDEC  
G. Desai, NYSDEC  
S. Selmer, NYSDOH  
R. Ockerby, NYSDOH  
R. Lambert, Cashin Associates  
T. Ryan, Bayville Village Cleaners



SENT VIA EMAIL ONLY

August 28, 2025

Bayville Village Cleaners, Inc.  
Attention: Tom Ryan  
290 Bayville Ave.  
Bayville, NY 11709

Francis Cashin, P.E.  
Cashin Associates, P.C.  
1200 Veterans Memorial Highway  
Hauppauge, NY 11788

Re: Site Management Periodic Review Report Response Letter  
Bayville Village Cleaners, Bayville  
Nassau County, Site No.: V00220

Dear Messrs. Ryan and Cashin:

This letter is in furtherance of the New York State Department of Environmental Conservation's (NYSDEC) February 26, 2025, letter providing comments on the revised Periodic Review Report (PRR) and Institutional Control/Engineering Control (IC/EC) Certification dated October 25, 2024, in relation to the above-referenced Site (the "revised PRR"). Cashin Associates', P.C. submitted the revised PRR on behalf of Bayville Village Cleaners, Inc. NYSDEC's February 26, 2025, letter is enclosed for your easy reference.

NYSDEC's February 26, 2025, letter and this letter constitute NYSDEC's comments on the revised PRR. As you were previously advised, NYSDEC and New York State Department of Health (the "NYSDOH") have reviewed the revised PRR.

Relevant Facts

- The Declaration of Covenants and Restrictions for the Bayville Village Cleaners Site (the "Site") dated March 16, 2017 (DCR) is a "Covenant that shall run with the land and shall be binding upon all future owners of the Property" (Ninth paragraph).
- Pursuant to the Seventh Paragraph of the DCR "the Owner of the Property shall provide a written certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department or Relevant Agency, which will certify that the institutional and engineering controls put in place are unchanged from the previous certification, comply with the SMP and have not been impaired".

- The NYSDEC-approved Site Management Plan dated June 22, 2018 (SMP) provides in Appendix III (Responsibilities of Owner and Remedial Party) that “Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the Site.”
- Appendix III of the SMP regarding the Site Owner’s Responsibilities provides in part that: In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in a Declaration of Covenants and Restrictions remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP’s request, in order to allow the RP to include the certification in the Site’s Periodic Review Report (PRR) certification to the NYSDEC.”
- The Voluntary Cleanup Agreement (VCA) in relation to the Site (Index No. W1-0848-9903) dated November 23, 1999 as modified by VCA Index No. WI-0848-13-04, dated June 20, 2013<sup>1</sup> and letter amendment dated August 24, 2016<sup>2</sup> is a legal Agreement between NYSDEC and Bayville Village Cleaners, Inc. Although in the NYSDEC-approved SMP (Appendix III), the Remedial Party is identified as “Thomas Ryan, Volunteer”, the Volunteer identified on the VCA as further amended is Bayville Village Cleaners, Inc. NYSDEC records indicate that Mr. Thomas Ryan is the Chief Executive Officer of Bayville Village Cleaners, Inc. and a duly authorized representative of Bayville Village Cleaners, Inc.
- New York Environmental Conservation Law (ECL) Section 27-2405(2) reads in part: “Any owner of real property or any owner’s agent to whom indoor air contamination test results have been provided by an issuer shall, in cases where test results exceed department of health indoor air guidelines or the occupational safety and health administration guidelines for indoor air quality, provide a fact sheet and timely notice of any public meetings required to be held to discuss such results to all tenants and occupants and upon request such test results and any closure letter, within fifteen days of receipt of such results.”
- ECL Section 27-2405(3) reads in part: “For real property for which an engineering control is in place to mitigate indoor air contamination, or if the real property is subject to ongoing monitoring pursuant to an ongoing remedial program, the owner or owner’s agent of real property to whom indoor air contamination test results have been provided by an issuer shall provide, or cause to be provided, fact sheets, and upon request any test results, or closure letter received by such owner or owner’s agent to any prospective tenant prior to the signing of a binding lease or rental agreement.”

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<sup>1</sup>Modified to “enable "closure on the Bayville Vil1agc Cleaners as my VCA contract did not provide for the proper work necessary for closure".

<sup>2</sup> To modify the “contemplated use” described in the VCA

NYSDEC provides the following additional comments on the revised PRR:

**1. APPENDIX D. NYSDEC Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form: Enclosure 2.:**

Box 6 (IC Certifications Site No. V00220): The certification by the remedial party’s representative Francis Cashin III is not acceptable unless Francis Cashin III is certifying on behalf of Bay III Realty LLC, the current owner of the Property. NYSDEC requires written confirmation from the current Property owner, that Francis Cashin III, is authorized to certify on behalf of the current Property owner “that the institutional and engineering controls put in place are unchanged from the previous certification, comply with the SMP and have not been impaired.” The Relevant Facts above are restated.

**2. On Page 29 of the revised PRR Section 5.0 (Conclusions and Recommendations)- final paragraph it is stated that:**

- (i) “In accordance with Environmental Conservation Law (ECL 27-2405), Mr. Thomas Ryan (former owner of the VCA # W1-0848-9903, Site # V00220) has provided copies of all historical reports and documents associated with the VCA for the subject property including a copy of this 2024 PRR for “Tenant Notification of Indoor Air Contamination Associated with Soil Vapor Intrusion. When approved by the Department, a copy of this PRR will be maintained at the subject building for reference purposes by building tenants and occupants.”

Although in the NYSDEC-approved SMP (Appendix III), the Remedial Party is identified as “Thomas Ryan, Volunteer”, the Volunteer identified on the VCA as further amended is Bayville Village Cleaners, Inc. Reference to Mr. Thomas Ryan as the “former owner of the VCA # W1-0848-9903, Site # V00220” is incorrect. While NYSDEC acknowledges that Mr. Thomas Ryan has provided property historical information to NYSDEC, NYSDEC is unable to verify that “all historical reports and documents associated with the VCA for the subject property” have been provided to NYSDEC. The above-mentioned information on page 29 of the revised PRR is incorrect and should be corrected. The Relevant Facts above are restated.

- (ii) The PRR is not a substitute for the “Tenant Notification of Indoor Air Contamination Associated with Soil Vapor Intrusion” required pursuant to the Environmental Conservation Law section 27-2405. Inappropriate language stating that the PRR will be used for “Tenant Notification of Indoor Air Contamination Associated with Soil Vapor Intrusion” should be removed. Relevant Facts above are restated.

A second revised PRR that addresses all of the above NYSDEC comments and NYSDEC’s February 26, 2025 comments must be submitted for NYSDEC review and approval within 30 days from the date of this letter.

If you have any questions, please contact me at 631-444-0242 or e-mail:  
jahan.reza@dec.ny.gov.

Sincerely,



Jahan Reza  
Project Manager

cc:

R. Mustico, NYSDEC  
G. Desai, NYSDEC  
A. Tamuno, NYSDEC  
S. Selmer, NYSDOH  
R. Ockerby, NYSDOH  
R. Lambert, Cashin Associates

**ATTACHMENT II**  
**NYSDOH Soil Vapor/Indoor Air**  
**Decision Matrices A-F**

# Soil Vapor/Indoor Air Matrix A

May 2017

**Analytes Assigned:**

Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*-1,2-DCE), 1,1-Dichloroethene (1,1-DCE), Carbon Tetrachloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )		
	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m<sup>3</sup> = micrograms per cubic meter

**No further action:** No additional actions are recommended to address human exposures.

**Identify Source(s) and Resample or Mitigate:** We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

**Monitor:** We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**Mitigate:** We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**These general recommendations are made with consideration being given to the additional notes on page 2.**

## ADDITIONAL NOTES FOR MATRIX A

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This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

# Soil Vapor/Indoor Air Matrix B

May 2017

**Analytes Assigned:**

Tetrachloroethene (PCE), 1,1,1-Trichloroethane (1,1,1-TCA), Methylene Chloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )		
	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m<sup>3</sup> = micrograms per cubic meter

**No further action:** No additional actions are recommended to address human exposures.

**Identify Source(s) and Resample or Mitigate:** We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

**Monitor:** We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**Mitigate:** We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**These general recommendations are made with consideration being given to the additional notes on page 2.**

## ADDITIONAL NOTES FOR MATRIX B

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This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

# Soil Vapor/Indoor Air Matrix C

May 2017

**Analytes Assigned:**

Vinyl Chloride

		INDOOR AIR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )	< 0.2	0.2 and above	
< 6	1. No further action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE	
6 to < 60	4. MONITOR	6. MITIGATE	
60 and above	7. MITIGATE	9. MITIGATE	

mcg/m<sup>3</sup> = micrograms per cubic meter

**No further action:** No additional actions are recommended to address human exposures.

**Identify Source(s) and Resample or Mitigate:** We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

**Monitor:** We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**Mitigate:** We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**These general recommendations are made with consideration being given to the additional notes on page 2.**

## ADDITIONAL NOTES FOR MATRIX C

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This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

# Soil Vapor/Indoor Air Matrix D

February 2024

**Analytes Assigned:**

Benzene, ethylbenzene, naphthalene, cyclohexane, isooctane (2,2,4-trimethylpentane), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )		
	< 2	2 to < 10	10 and above
< 60	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) or RESAMPLE or MITIGATE
60 to < 600	4. No further action	5. MONITOR	6. MITIGATE
600 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m<sup>3</sup> = micrograms per cubic meter

**No further action:** No additional actions are recommended to address human exposures.

**Identify Source(s) or Resample or Mitigate:** We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

**Monitor:** We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation, and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**Mitigate:** We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building -specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**These general recommendations are made with consideration being given to the additional notes on page 2.**

## ADDITIONAL NOTES FOR MATRIX D

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This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion to occur is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

# Soil Vapor/Indoor Air Matrix E

February 2024

**Analytes Assigned:**

*m*-xylene, *p*-xylene, heptane, hexane

<b>SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m<sup>3</sup>)</b>	<b>INDOOR AIR CONCENTRATION of COMPOUND (mcg/m<sup>3</sup>)</b>		
	< 6	6 to < 20	20 and above
< 200	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) or RESAMPLE or MITIGATE
200 to < 2,000	4. No further action	5. MONITOR	6. MITIGATE
2,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

**mcg/m<sup>3</sup> = micrograms per cubic meter**

**No further action:** No additional actions are recommended to address human exposures.

**Identify Source(s) or Resample or Mitigate:** We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

**Monitor:** We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation, and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**Mitigate:** We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building -specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

**These general recommendations are made with consideration being given to the additional notes on page 2.**

## ADDITIONAL NOTES FOR MATRIX E

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This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

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# Soil Vapor/Indoor Air Matrix F

February 2024

**Analytes Assigned:**

Toluene

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m <sup>3</sup> )		
	< 10	10 to < 50	50 and above
< 300	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) or RESAMPLE or MITIGATE
300 to < 3,000	4. No further action	5. MONITOR	6. MITIGATE
3,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m<sup>3</sup> = micrograms per cubic meter

**No further action:** No additional actions are recommended to address human exposures.

**Identify Source(s) or Resample or Mitigate:** We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

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## ADDITIONAL NOTES FOR MATRIX F

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