Vapor Intrusion/Indoor Air Evaluation

Location:

Remington Rand Building
184 & 185 Sweeny Street
North Tonawanda, New York
NYSDEC BCP Site #C932142

Prepared for:

Gold Wynn Residential, LLC
4858 South 78th East Place
Tulsa, Oklahoma

LaBella Project No. 2191060

May 31, 2019

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1.0 INTRODUCTION

LaBella Associates, D.P.C. (LaBella) completed a Vapor Intrusion/Indoor Air Evaluation at the Remington Lofts located at 184 & 185 Sweeny Street, City of North Tonawanda, Niagara County, New York, herein after referred to as the "Site." The Site is a New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site (BCP Site #C932142). A Site Location Map is included as Figure 1. LaBella is submitting this Vapor Intrusion/Indoor Air Evaluation Report on behalf of Gold Wynn Residential, LLC.

Subsequent to the remedial work conducted at the Site in accordance with the Brownfield Cleanup Agreement (BCA) Index #B9-0780-08-06, contamination remains in the subsurface at the Site. As such, an Environmental Easement has been placed on the Site, restricting future Site development to restricted residential use and establishing Institutional Controls (ICs) and Engineering Controls (ECs) for the Site. Long-term management of the ICs/ECs is to be performed under the Site Management Plan (SMP) approved by the NYSDEC. The purpose of this Vapor Intrusion/Indoor Air Evaluation was to further evaluate vapor intrusion and indoor air quality concerns identified in the NYSDEC's letter dated January 11, 2019.

2.0 PROJECT UNDERSTANDING

The NYSDEC issued a letter dated September 21, 2018 related to the Periodic Review Report for the Site for the period of June 29, 2015 to June 30, 2018. Based on the results, the NYSDEC identified consecutive increases in concentrations of volatile organic compounds (VOCs) in the sub-slab vapor sample (Vent Port) collected on June 28, 2018 and a subsequent Vent Port sample collected on August 27, 2018. Due to the presence of increasing concentrations of VOCs in the Vent Port samples, the NYSDEC requested indoor air sampling to evaluate indoor air conditions. As per the NYSDEC's request, a total of three indoor air samples were collected from within the Site Building including the Former Salon commercial space (IA-01), the Garage (IA-02), and the Lobby area (IA-03) of the Site Building on November 21, 2018. Based on the indoor air sampling results, trichloroethene (TCE) was detected in the indoor air sample collected from the Former Salon commercial space (IA-01) at a concentration of 19 micrograms per cubic meter ($\mu g/m^3$) exceeding both the Building Assessment and Survey Evaluation (BASE) database 90th percentile value of 4.2 $\mu g/m^3$ and the May 2017 New York State Department of Health (NYSDOH) Indoor Air Matrix A value of 1 $\mu g/m^3$ and above. No other analytes were detected at concentrations exceeding BASE or NYSDOH Indoor Air Matrix values in the indoor air samples collected during the November 21, 2018 indoor air sampling event. The November 21, 2018 indoor air sampling locations are depicted on Figure 3. The indoor air sampling results were provided to the NYSDEC and NYSDOH for review.

Subsequent evaluation of the indoor air sampling results by the NYSDEC, the NYSDEC issued a letter dated January 11, 2019 requesting preparation of a work plan to further evaluate vapor intrusion and indoor air quality within the Site Building. The following tasks were requested within the January 11, 2019 NYSDEC letter.

- Site reconnaissance with a photo-ionization detector (PID) or similar meter
- Evaluation of the crack in the floor of the lobby
- Evaluation of potential sources of contaminants (e.g., cracked drain lines, chemicals stored on-site, etc.)
- Evaluation of the sub-slab depressurization system roof vent and its location with respect to the Site Building's HVAC system
- Occupancy number and map
- Resampling of indoor air with remedial measures operating (i.e. sub-slab system in operation)

LaBella generated a Vapor Intrusion/Indoor Air Evaluation Workplan dated April 8, 2019 as per the requirements outlined in the NYSDEC January 11, 2019 letter which was accepted by the NYSDEC.

3.0 VAPOR INTRUSION AND INDOOR AIR EVALUATION

The vapor intrusion and indoor air evaluation included completion of the tasks summarized in the Sections below. The scope of work was completed in general conformance with the approved Vapor Intrusion/Indoor Air Evaluation Workplan dated April 8, 2019. It should be noted that the Sub-Slab Depressurization System (SSDS) fan was reportedly activated and has been operating since soon after the January 11, 2019 NYSDEC letter was received and such was confirmed operational at the time of LaBella's site work summarized below. In addition, HVAC systems were operational within the areas assessed at the time of LaBella's site work.

3.1 Indoor Air Contaminant Source Evaluation & Photo-Ionization Detector Site Reconnaissance

On April 15, 2019 LaBella completed general Site reconnaissance of the Site with emphasis on evaluating the conditions within the first floor interior of the Site Building, measurement of total VOCs in ambient indoor air, ambient outdoor air at an upwind location of the Site Building, and proximate areas of interest summarized below (i.e. floor and sink drains, sumps, etc.) with a PID, and completion of a chemical storage inventory. PID measurement locations and corresponding total VOC concentrations are summarized within Table 1 and depicted on Figure 4. It should be noted that no basements or crawl spaces were identified beneath or associated with the Site Building.

Ambient Indoor and Outdoor Air

Ambient indoor air measurements were collected within the Lobby, Former Salon, Former Core Fitness, the Restaurant, and the Garage. Generally, ambient indoor air PID measurements detected total VOC concentrations between 0.2 and 0.3 parts per million (ppm), with the highest ambient indoor air PID measurement of 0.3 ppm detected within the Former Salon and the Garage. One ambient outdoor air PID measurement of 0.5 ppm was collected southwest of the Site Building at an upwind location.

Drains

LaBella walked the interior of the first floor of the Site Building to inventory readily accessible sink, floor, trench, and shower drains. Generally, PID measurements collected from drains located within the Former Core Fitness, the Restaurant, and the Garage measured total VOC concentrations between 0.0 and 0.3 ppm; however, PID measurements collected from the drains located within the Former Salon detected higher PID measurements when compared to drains evaluated outside the Former Salon, with Former Salon drain total VOC concentrations between 1.1 and 1.4 ppm.

Lobby Foundation/Floor Crack

One floor crack and several less significant fine cracks are located within the Lobby of the Site Building. During LaBella site reconnaissance, no other significant floor cracks were observed within the Site Building. A photo of the floor crack is included within the Figures and Photographs Appendix of this report. LaBella collected direct PID measurements from two locations along the floor crack. Total VOC concentrations of 0.3 and 0.5 ppm were detected.

Chemical Storage Inventory

LaBella completed a NYSDOH Indoor Air Quality Questionnaire and Building Inventory in accordance with NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, with emphasis on documenting the current inventory of chemical storage within the Site Building. The Completed NYSDOH Indoor Air Quality Questionnaire Building Inventory is included in Appendix 1. Photos of the chemicals observed are included within the Figures and Photographs Appendix of this report.

Based on the results of the chemical inventory completed, chemical storage at the Site is primarily limited to small volume consumer cleaning products (bleach, detergents, oven cleaner, drain cleaner, etc.), maintenance related products (WD-40, silicon sealant, paint, etc.), and consumer insecticides (Wasp & Hornet Killer, Stink Bug Killer). The chemicals observed during LaBella's site reconnaissance were primarily concentrated within the Former Salon, Restaurant, and Garage areas of the Site Building. No chemicals were observed within the Former Core Fitness tenant space.

3.2 Sub-Slab Depressurization Roof Vent Evaluation

Concurrent with activities summarized within Section 3.1, LaBella evaluated the location of the sub-slab depressurization roof vent and heating, ventilation, and air conditioning (HVAC) air inlets. The location of the SSDS and SSDS roof vent are depicted on the Interim Remedial Measures construction drawing, IRM-103 included in Appendix 2. Photographs of the SSDS and SSDS roof vent are included in the Figures and Photographs Appendix. Although several apparent HVAC mechanical systems, pipes, and vents are located in the immediate vicinity of the SSDS roof vent, building maintenance personnel reported that the systems observed proximate the SSDS roof vent are not related to HVAC air intake and are associated with sanitary waste ventilation and bathroom fan exhaust. As such, it does not appear that any air intakes are located within 10 feet of the SSDS roof vent. Additionally, the SSDS roof vent is located above the eave of the roof, greater than 10 feet above the ground, more than 10 feet away from any opening, and more than 10 feet from any adjacent building.

3.3 Tenant Map & Occupancy

Based on interviews conducted and Site observation, a map depicting the nature of the occupancy (i.e. residential, commercial, etc.), the current occupancy status (i.e. vacant, occupied), and the number of occupants within the first floor spaces of the Site Building was generated. For the purposes of this assessment, an occupant is defined as a resident, or a worker spending and average of eight hours a day or more within the Site Building. Figure 5 depicts the occupancy in the first floor spaces of the Site Building. The Former Salon and Former Core Fitness commercial spaces were observed to be

unoccupied as of the date of LaBella's site reconnaissance. The Garage consists of the north portion of the first floor of the Site Building and has no occupants. An office is located in the west portion of the Site Building north of the Former Salon and is reportedly occupied by one to two building management personnel. The Restaurant located in the southeast corner of the Site Building is reportedly occupied by 20 to 30 workers during weekdays and 30 to 40 workers on Saturdays and Sundays. The Restaurant has capacity for 160 guests.

3.4 Air Sampling

Air Sampling Procedures

Summa canisters equipped with laboratory calibrated regulators were utilized to collect three indoor air samples and one outdoor air sample over an eight-hour period. Sampling procedures were completed in general accordance with NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Indoor air sample locations included one sample in the Lobby (ID1), the Former Salon (ID2), and the Restaurant (ID3) and were generally consistent with the indoor air sampling locations proposed within LaBella's Vapor Intrusion/Indoor Air Evaluation Work Plan dated April 8, 2019. Exterior wind direction at the time of the Site work was determined to be out of the southwest. As such, one outdoor air sample (OD1) was collected from southwest of Site Building at an upwind location. Samples were submitted to Alpha Analytical for analysis for VOCs by United States Environmental Protection Agency (USEPA) method TO-15.

Air Sampling Results

Based on the laboratory results, several VOCs were detected in each indoor and outdoor air sample collected and submitted for analysis. All of the detected VOC concentrations in the indoor air samples were detected below BASE database 90th percentile values and May 2017 NYSDOH Indoor Air Matrices. Several VOCs were detected at elevated concentrations in the June and August 2018 sub-slab samples, and in the November 2018 indoor air samples. Comparing the latest indoor air samples to the previous sub-slab and indoor air samples, previously elevated parameters were generally not detected or detected at significantly decreased concentrations. Most notably, the indoor air sample collected from the Former Salon (ID2) did not identify the presence of TCE at a concentration above the laboratory method detection limit, which is a decrease in the actionable TCE concentration of 4.2 µg/m^3 identified in the indoor air sample (IA-01) collected from the Former Salon on November 21, 2018. Isopropyl alcohol was detected in ID3 at a concentration of 5.21 µg/m^3, similar to the November 2018 indoor air sample concentrations. It should be noted a sub-slab sample (RR-SA-01) was collected in the same proximate area as ID3 on May 15, 2009, and isopropyl alcohol was not detected.

Laboratory results associated with the limited vapor intrusion assessment and previous assessments are summarized in Table 2 and the laboratory analytical report is included in Appendix 3.

4.0 CONCLUSIONS

Based on the results of this assessment, LaBella concludes the following.

- Ambient indoor PID measurements detected total VOC concentrations between 0.2 and 0.3 ppm below the ambient outdoor air measurement of 0.5 ppm.
- Sink, floor, trench, and shower drains within the Former Core Fitness, the Restaurant, and the Garage exhibited total VOC concentrations between 0.0 and 0.3 ppm, below the ambient outdoor air measurement of 0.5 ppm. Based on the PID readings recorded, it appears unlikely that VOC emissions from the drains within the Former Core Fitness, the Restaurant, and the Garage are significantly impacting indoor air quality within their respective spaces.
- Total VOC PID measurements collected from drains within the Former Salon were between 1.1 and 1.4 ppm and above the ambient outdoor air measurement of 0.5 ppm. Although the source of the total VOC PID measurements cannot be confirmed (i.e. chemical constituents, sewer gas, etc.) it appears unlikely that VOC emissions from the drains within the Former Salon are significantly impacting indoor air quality.
- The floor cracks located within the Lobby of the Site Building were assessed and total VOC concentrations were detected at 0.3 and 0.5 ppm, below or at the ambient outdoor air concentration of 0.5 ppm. The floor cracks in the Lobby of the Site Building do not appear to be a significant VOC pathway at this time.
- The chemical storage inventory completed as part of the NYSDOH Indoor Air Quality Questionnaire and Building Inventory identified various small volume consumer products, maintenance related products, and consumer insecticides within the Site Building. Based on the ambient indoor air measurements and the indoor air sampling, the chemicals within the Site Building do not appear to be impacting indoor air quality in their current condition.
- Based on the interviews conducted and Site observation, the SSDS roof vent appears to be located greater than 10 feet away from any air intakes.
- Based on the results of the resampling of indoor air in the Site Building subsequent activation of the SSDS, all VOC concentrations in the indoor air samples were detected below the BASE database 90th percentile values and May 2017 NYSDOH Indoor Air Matrices.
- Previously elevated parameters during the June and August 2018 sub-slab sampling, and in the November 2018 indoor air sampling were generally not detected or detected at significantly decreased concentrations. Most notably, indoor air sample collected from the Former Salon (ID2) did not identify the presence of TCE at a concentration above the laboratory method detection limit, which is a decrease in the actionable TCE concentration of 4.2 µg/m^3 identified in the indoor air sample (IA-01) collected from the Former Salon on November 21, 2018.
- Indoor air sample results subsequent the activation of the SSDS do not indicate an indoor air quality concern at this time. The SSDS appears to be mitigating any potential vapor intrusion concern for the Site Building at this time.

5.0 RECOMMENDATIONS

Based on the findings of this indoor air and vapor intrusion evaluation, no further investigation appears warranted at this time. The SSDS should remain active to mitigate any potential vapor intrusion concerns with the Site Building.

We appreciate the opportunity to serve your professional environmental engineering needs. If you have any questions please do not hesitate to contact me at (716) 768-3184.

Respectfully submitted,

LABELLA ASSOCIATES, D.P.C.

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Project Manager
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Project Manager
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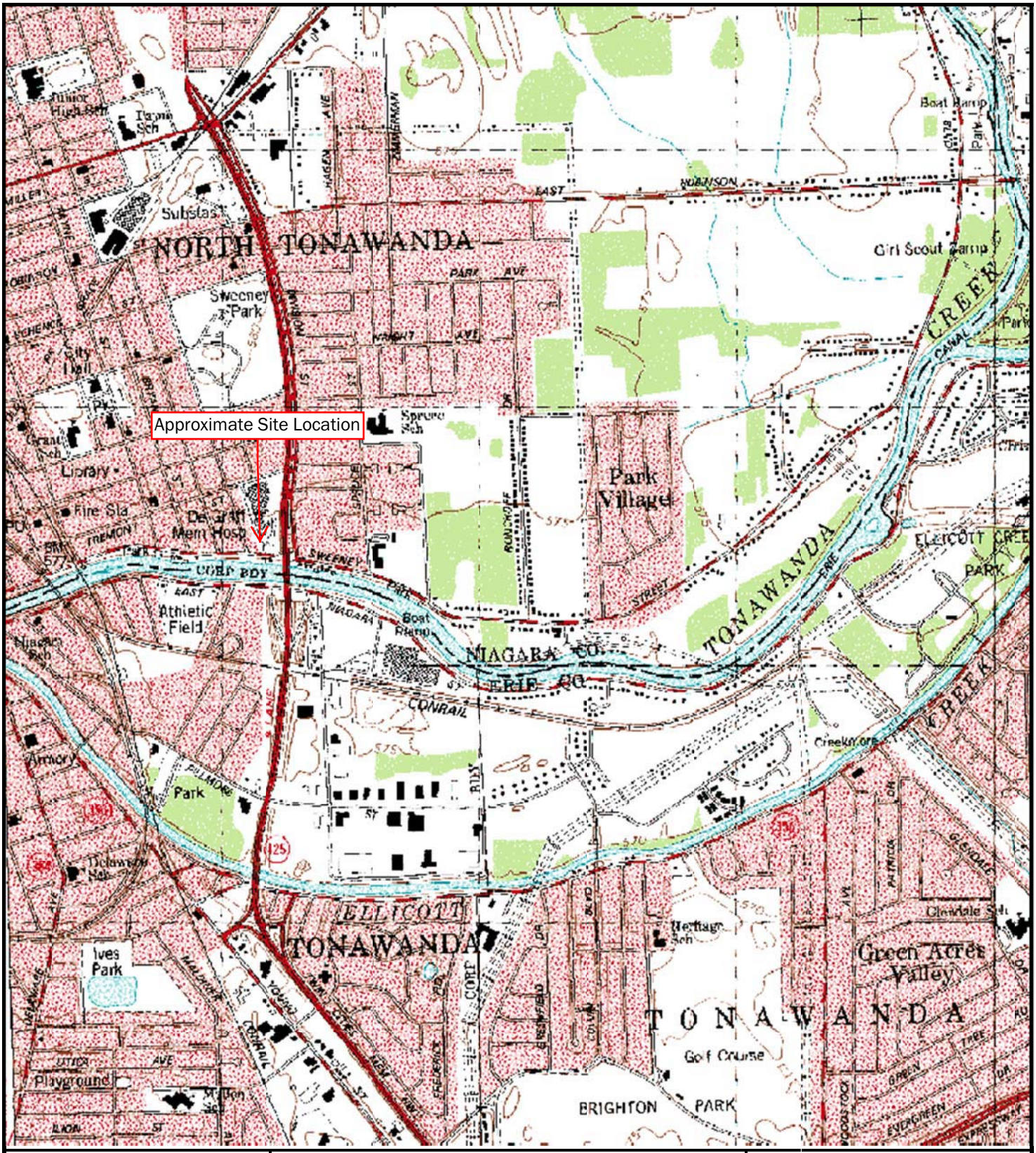
FIGURES AND PHOTOGRAPHS



N

NOT TO SCALE

FIGURE 1

SITE LOCATION MAP

184 & 185 Sweeny Street
North Tonawanda, New York 14120

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FIGURE 2

SITE BASE MAP

184 & 185 Sweeny Street
North Tonawanda, New York 14120

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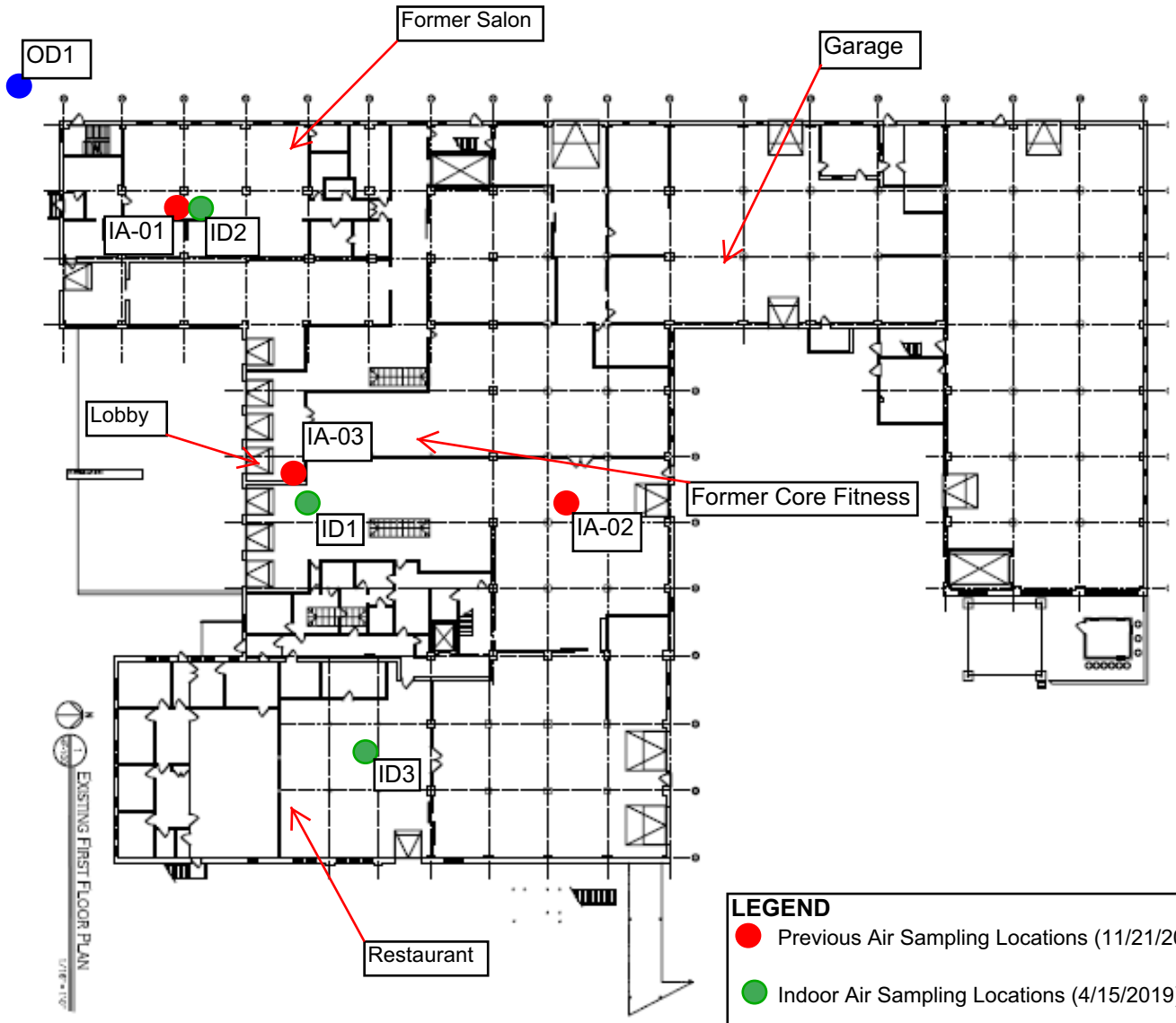

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FIGURE 3

INDOOR AIR SAMPLING LOCATIONS

184 Sweeney Street
North Tonawanda, New York 14210

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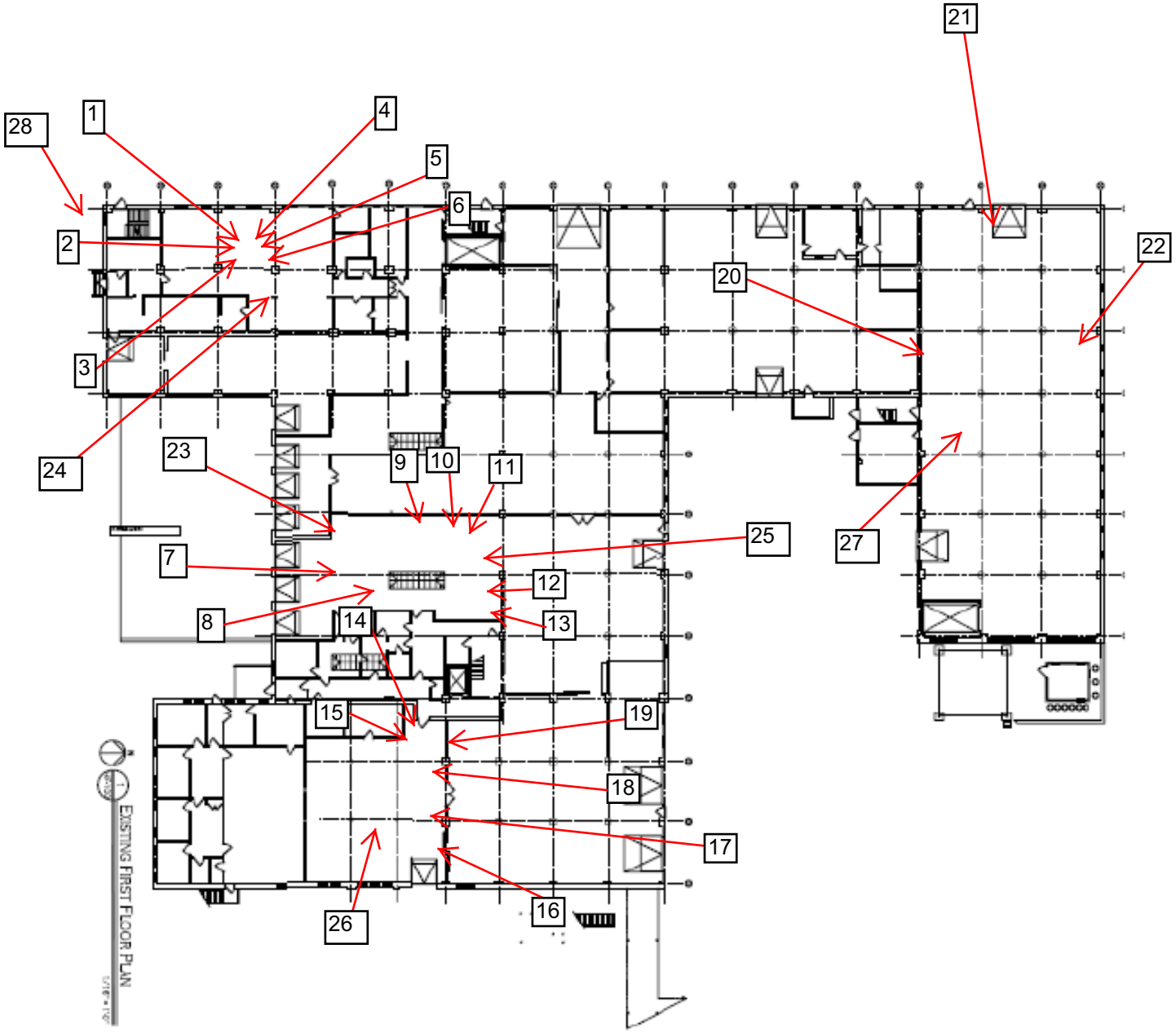

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FIGURE 4

PID MEASUREMENT MAP

184 & 185 Sweeny Street
North Tonawanda, New York 14120

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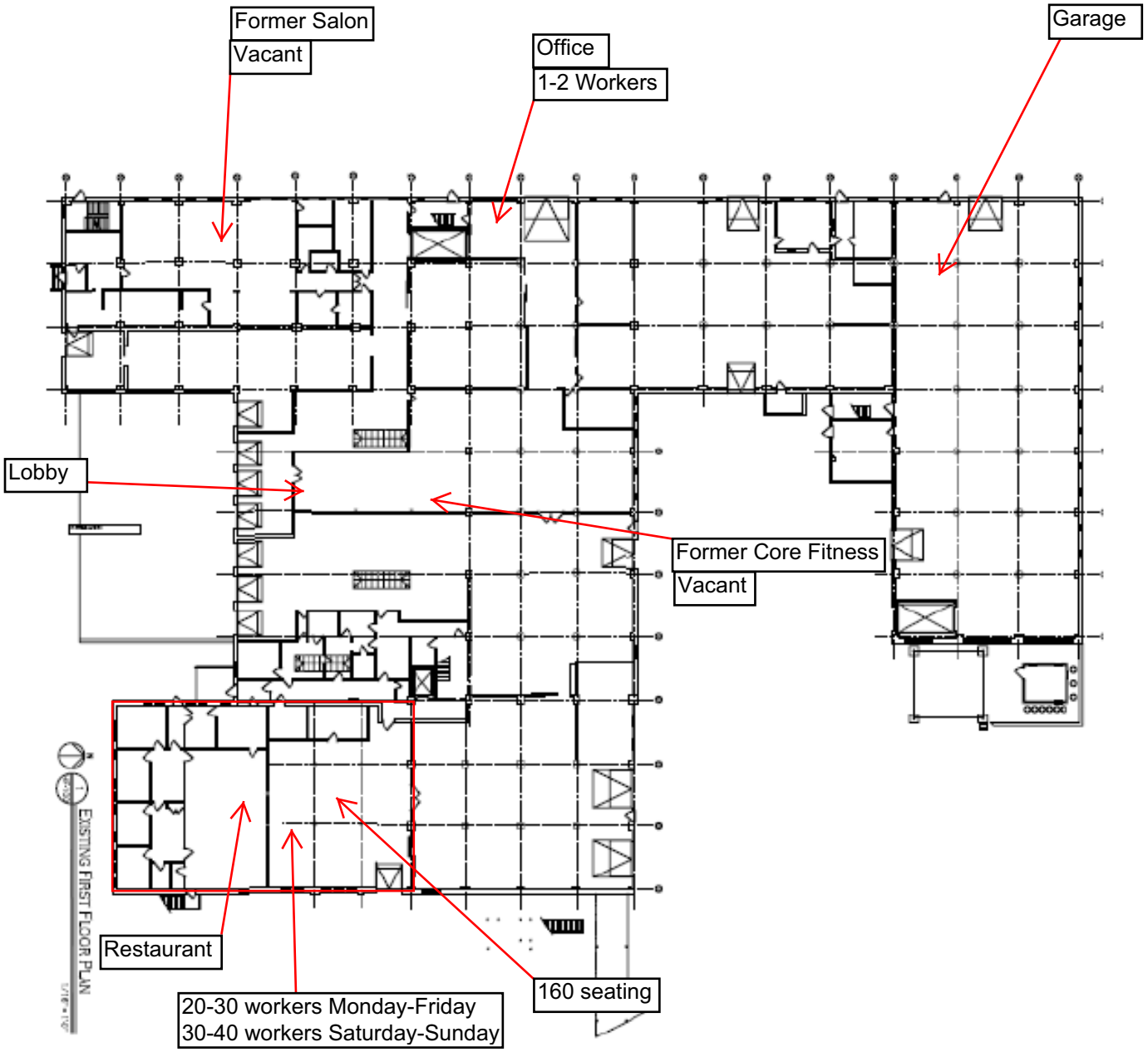

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FIGURE 5

OCCUPANCY MAP

184 & 185 Sweeny Street
North Tonawanda, New York 14120

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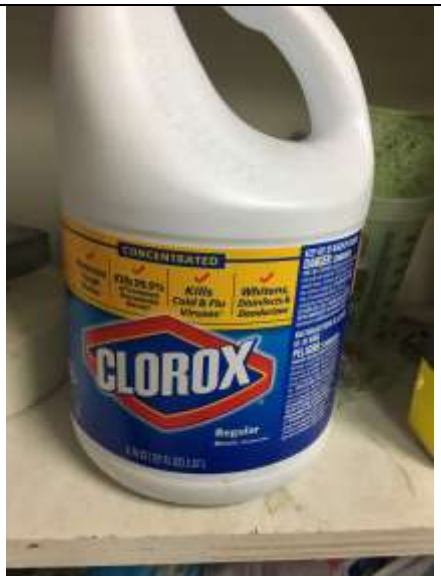
Former Salon

Former Salon

Former Salon

Former Salon

Former Salon



Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

Former Salon

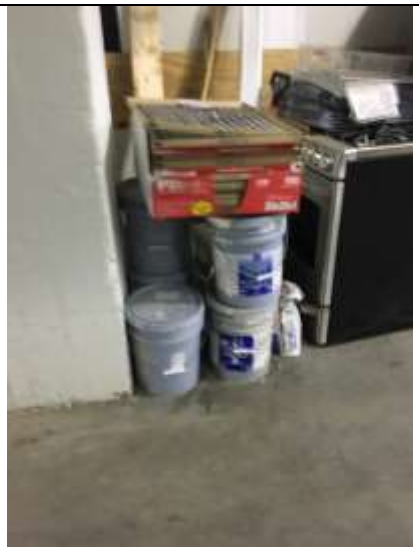
Former Salon

Former Salon

Restaurant

Restaurant

Garage



Garage

Floor crack in lobby

Photo of SSDS

Photo of SSDS

SSDS Roof Vent

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TABLES

Table 1
Remington Lofts
184-185 Sweeny Street
North Tonawanda, New York
Summary of PID readings

Number on Figure 4	Location	Type	Reading (parts per million)
1	Former Salon	Sink drain	1.3
2	Former Salon	Sink drain	1.2
3	Former Salon	Sink drain	1.4
4	Former Salon	Sink drain	1.3
5	Former Salon	Sink drain	1.2
6	Former Salon	Sink drain	1.1
7	Lobby	Floor crack	0.5
8	Lobby	Floor crack	0.3
9	Former Core Fitness	Sink drain	0.3
10	Former Core Fitness	Sink drain	0.2
11	Former Core Fitness	Sink drain	0.2
12	Former Core Fitness	Sink drain	0.3
13	Former Core Fitness	Shower drains	0.3
14	Restaurant	Sink drain	0
15	Restaurant	Floor drain	0.2
16	Restaurant	Sink drain	0.2
17	Restaurant	Sink drain	0.2
18	Restaurant	Floor drain	0.2
19	Restaurant	Sink drain	0.1
20	Garage	Trench drain	0.3
21	Garage	Trench drain	0.2
22	Garage	Trench drain	0.3
23	Lobby	Ambient Air	0.2
24	Former Salon	Ambient Air	0.3
25	Former Core Fitness	Ambient Air	0.2
26	Restaurant	Ambient Air	0.2
27	Garage	Ambient Air	0.3
28	Southwest corner of Site	Ambient Air (upwind)	0.5

Table 2
Remington Lofts
184-185 Sweeny Street
Summary of Analytical Reuslts

Sample Number	RR-AA-01	RR-AA-02	RR-AA-03	RR-AA-04	RR-AA-05	RR-AMP-01	RR-SA-01	RR-SA-02	RR-SA-03	RR-SA-04	RR-SA-05	RR-SA-06	RR-SA-07	RR-PVC-01	JC573-1	SS-01	S2-01	1A-01	1A-02	1A-03	ID1	ID2	ID3	OD1	BASE Indoor
Sample Date	5/12/2009	5/12/2009	5/12/2009	5/12/2009	5/12/2009	9/13/2012	5/12/2009	5/12/2009	5/12/2009	5/12/2009	5/12/2009	5/12/2009	5/12/2009	9/13/2012	7/31/2015	6/28/2018	8/27/2018	11/21/2018	11/21/2018	11/21/2018	4/15/2019	4/15/2019	4/15/2019	4/15/2019	
Sample Location	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor	SubSlab	SubSlab	SubSlab	SubSlab	SubSlab	SubSlab	SubSlab	Vent Port	Vent Port	Vent Port	Vent Port	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor	
Compounds	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	
VOCs EPA T0-15																									
Ethylbenzene	ND	ND	0.38	0.44	ND	4.2	1.5	11	4.4	3.7	4.7	7.2	6	0.61	3	6.4	2.6	0.69	3.3	3.3	ND	0.886	ND	ND	5.7
Trichlorofluoromethane	1.4	I.4	2.2	1.9	2.1	ND	83	2.2	2	2,0	8.9	5.8	2.7	ND	1.7	ND	ND	ND	ND	ND	1.16	1.18	ND	ND	18.1
n-Hexane	ND	0.82	ND	1.1	ND	ND	1.3	14	7.9	2.3	5.7	26	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.21	ND	10.2
tert-Butyl alcohol	ND	ND	ND	ND	ND	ND	L2	4.1	3.8	5	5.6	62	9.7	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Methylene chloride	9.3	1.2	2.2	12	2.1	1.2	13	3.4	6.3	2.1	11	3.4	1.5	0.22	1.9	1.8	ND	0.63	ND	0.42	ND	ND	ND	1.93	10
Benzene	0.57	1.4	1.2	1.1	0.67	1.9	33	84 E	2.9	1.4	3.7	5.8	1.5	0.49	9.3	8.9	6	1.3	5.7	5.6	1.28	2.31	0.856	ND	9.4
Styrene	ND	ND	9.3	ND	ND	2	ND	1.7	0.57	1.6	470 E	5	1	0.27	2	1.1	1.4	ND	0.47	ND	ND	ND	ND	ND	1.9
Tetrachloroethylene	ND	ND	ND	ND	ND	0.27	8	6.3	9	5.7	5.7	13	ND	ND	7.5	1.4	30	ND	ND	ND	ND	ND	0.231	0.353	15.9
Toluene	1.6	2.6	2.6	2.5	1.4	42	1	55	62	6	5.5	23	7.9	3	50.9	96	110	25	15	14	2.47	4.67	1.36	1.19	43
1,1,1-Trichloroethane	ND	ND	ND	0.54	ND	ND	1.5	8.2	670 E	92	2.8	1.5	5.8	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.6
Trichloroethene	ND	0.32	ND	0.74	ND	0.5	2.1	ND	4.0	3.8	0.64	0,37	ND	0.09	3.3	65	63	19	1.7	0.54	0.199	ND	ND	0.15	4.2
1,2,4-Trimethylbenzene	ND	ND	0.56	0.53	ND	1	1.4	15	2.5	2.1	3.1	4.9	2.5	0.37	4.6	9.8	7.3	0.93	4.5	4.5	ND	ND	ND	ND	9.5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.41	0.58	9.2	0.97	0.95	1.4	3	0.94	0.15	1.5	3.3	2.2	ND	1.3	1.2	ND	ND	ND	ND	3.7
o-Xylene	ND	ND	0.55	0.58	ND	1.9	1.9	2.4	8.5	5.7	5	8.7	9.6	0.32	4.3	6.9	2.7	0.91	4	4	ND	1.08	ND	ND	7.9
1,1,2-Trichlorotritluoroethanc	ND	ND	0.69	ND	ND	ND	0.67	0,63	ND	0.63	0.75	0.63	0.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
2,2,4-Trimethylpentane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	5.9	2.8	0.79	6.2	6	ND	1.59	ND	ND	NL
m-Xylene & p-Xylene	0.92	0.62	1.5	1.4	0.71	6.4	8.2	48	18	17	18	35	27	1.4	11	13	8.5	2.1	12	12	ND	2.73	ND	ND	22.2
Bromodichloromethane	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	15	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
2-Butanone (MEK)	1.6	1	1.2	2	3.7	80	4.3	16	8.2	8.7	7.4	12	13	4.6	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	12
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	46	22	2.7	1.7	1.6	ND	ND	ND	ND	12
Methyl Isobutyl Ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	1.5	7.7	ND	0.61	0.53	ND	ND	ND	ND	NL
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	ND	ND	4.7	ND	2.2	ND	ND	ND	2.9	L2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.0
Carbon tetrachloride	0.66 J	0.67 J	0.85 J	0.82 J	0.84 J	0.15	0.75 J	0.62 J	0.84 J	0.7 J	1.5 J	0.73 J	1.4 J	0.73	ND	ND	ND	0.57	0.5	0.57	0.415	0.409	0.421	0.453	<1.3
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Chloroform	ND	ND	ND	ND	ND	0.22	3.2	0.5	2.1	2.8	120	9.5	0.42	ND	ND	3	0.59	ND	ND	ND	ND	ND	ND	ND	1.1
Chloromethane	0.82	0.89	1.3	13	1.5	0.61	ND	0.78	3.8	ND	ND	0.48	ND	0.15	0.5	0.83	0.39	0.74	0.76	0.74	1.23	1.2	1.16	1.15	3.7
Cyclohe Mine	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	17	19	12	5	15	34	ND	4.5	3	6.1	18	3.6	2.2	ND	ND	ND	ND	NL
Dichlorodifluoromethane	2.2	23	2.6	2.6	2.8	ND	4	2.9	2.6	1.3	3.1	2.8	2.3	ND	ND	ND	ND	ND	ND	ND	1.48	1.91	1.32	ND	16.5
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.96	ND	NO	1.5	57	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.7
1,2-Dichloroethane	ND	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	0.19	ND	ND	0.49	ND	ND	ND	ND	ND	ND	ND	<0.9
4-ethyltoluene	ND	ND	ND	ND	ND	0.98	ND	ND	ND	ND	ND	ND	ND	0.22	1.2	ND	1.7	ND	1.2	1.3	ND	ND	ND	ND	NL
Acetone	ND	ND	ND	ND	ND	360	ND	ND	ND	ND	ND	ND	ND	46	30.2	68	68	21	25	25	2.49	5.49	6.15	ND	98.9
Carbon disulfide	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	1.1	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.2
Ethyl acetate	ND	ND	ND	ND	ND	4.6	ND	ND	ND	ND	ND	ND	ND	0.72	ND	18	9.4	2	1.1	0.97	ND	ND	ND	7.14*	5.4
Freon 11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	1.2	1.5	1.5	1.3	ND	ND	ND	ND	NL
Freon 12	ND	ND	ND	ND	ND	0.59	ND	ND	ND	ND	ND	ND	ND	0.14	ND	2.6	2	2.4	2.5	2.5	ND	ND	ND	ND	NL
Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	1.7	5.4	5.5	0.82	3.4	3.4	ND	ND	ND	ND	NL
Isopropyl alcohol	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	1.8	4.9	52	73	6.1	5.4	4.6	ND	ND	5.21	ND	NL
Methyl tert-butyl ether	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	0.25	ND	ND	0.68	ND	ND	ND	ND	ND	ND	ND	11.5
Tetrahydrofuran	ND	ND	ND	ND	ND	2.6	ND	ND	ND	ND	ND	ND	ND	0.22	1.2	ND	ND	ND	ND	ND	ND	ND	ND	8.49	NL
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	53.5	ND	ND	ND	ND	ND	52.9	49.2	174	27.5	210
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.2	61	12	4	4.3	4.1	ND	ND	ND	ND	NL
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.17	ND	ND	ND	<1.9
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	NL

N/A - Not Applicable ND - Non-detect NA- Not analyzed NL- Not listed
E - Estimated result due to exceeding calibration range
BASE Indoor = Table C2. Environmental Protection Agency (EPA): Building assessment and survey evaluation (BASE) database, SUMMA canister method for indoor air 90th percentile
Concentrations in grey exceed BASE Indoor
* it should be noted although this concentration exceeds BASE Indoor it is an outdoor air sample and does not exceed BASE outdoor

APPENDIX 1

New York State Department of Health
Indoor Air Quality Questionnaire and
Building Inventory Form

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 Shannon Dalton Date/Time Prepared 4/15/19/900

Preparer's Affiliation Consultant Phone No. 716-710-3073

Purpose of Investigation Vapor intrusion testing

1. OCCUPANT:

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	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? _____

If the property is commercial, type?

Business Type(s) Restaurant - vacant Salon + fitness center

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

Other characteristics:

Number of floors 4 Building age_____

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

doorways, windows, cracks in floors

Airflow near source

doorways, windows, cracks in floors

Outdoor air infiltration

doorways, windows

Infiltration into air ducts

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

a. Above grade construction:	wood frame	concrete	stone	(brick)
b. Basement type:	full	crawlspace	slab	other None
c. Basement floor:	concrete	dirt	stone	other N/A
d. Basement floor:	uncovered	covered	covered with N/A	
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:	wet	damp	dry	moldy N/A
i. The basement is:	finished	unfinished	partially finished N/A	
j. Sump present?	Y / N N/A			
k. Water in sump?	Y / N / (not applicable)			

Basement/Lowest level depth below grade: _____(feet)

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

cracks in floor, drains in garage + restaurant

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)

primary –

(Hot air circulation)	Heat pump	Hot water baseboard	
(Space Heaters)	Steam radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors (Main Floor) Other_____

Air conditioning: (Central Air) 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.

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)**
Basement	N/A
1st Floor	commercial + garage
2nd Floor	apartments
3rd Floor	apartments
4th Floor	apartments

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) - not heated

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) (Y) / N / NA Please specify car]

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? in restaurant - Floor cleane

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: cleaner smell in restaurant

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: _____

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: _____

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

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

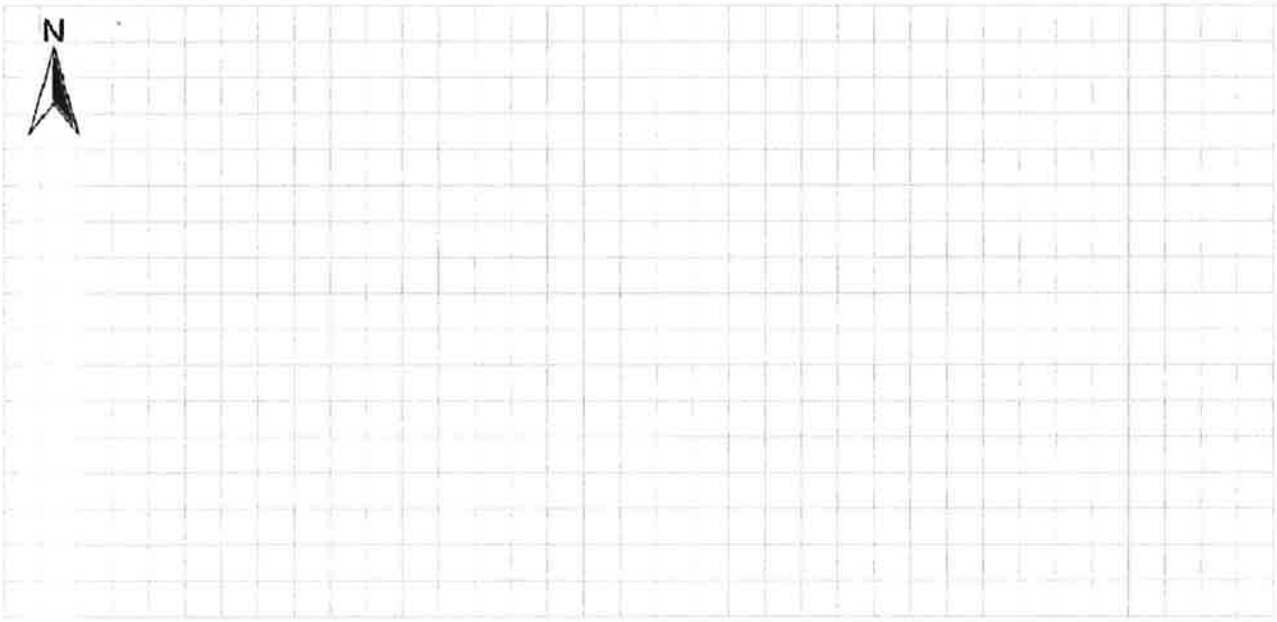
d. Relocation package provided and explained to residents? Y / N

5

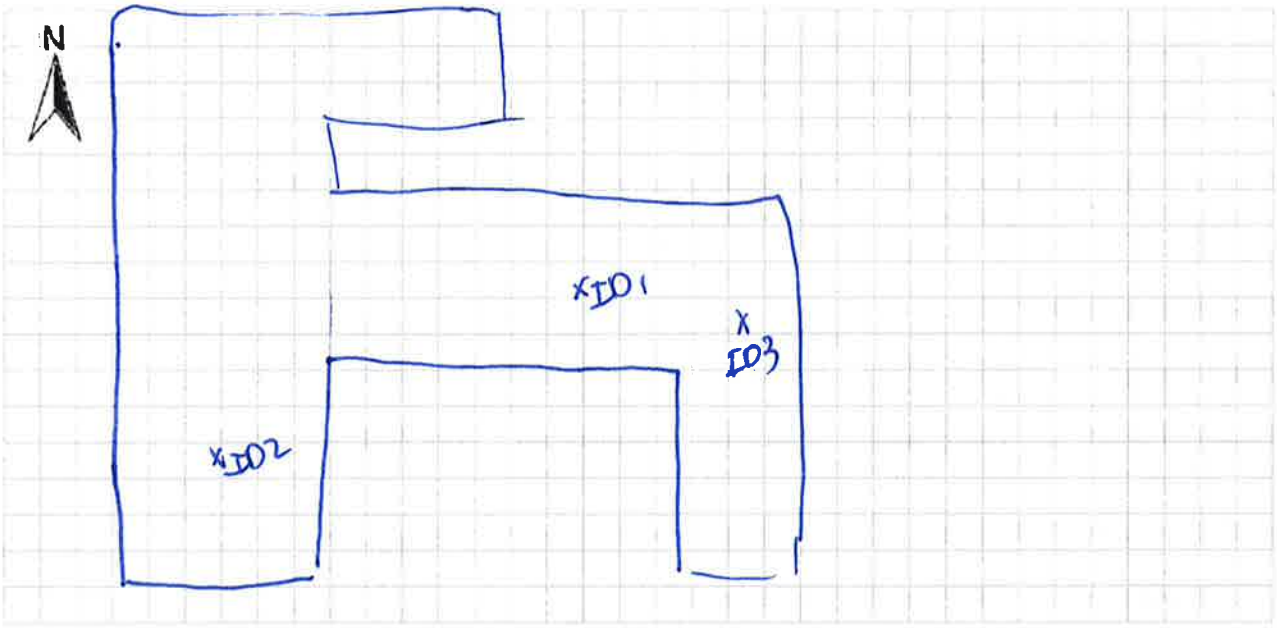
11. FLOOR PLANS

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: N/A



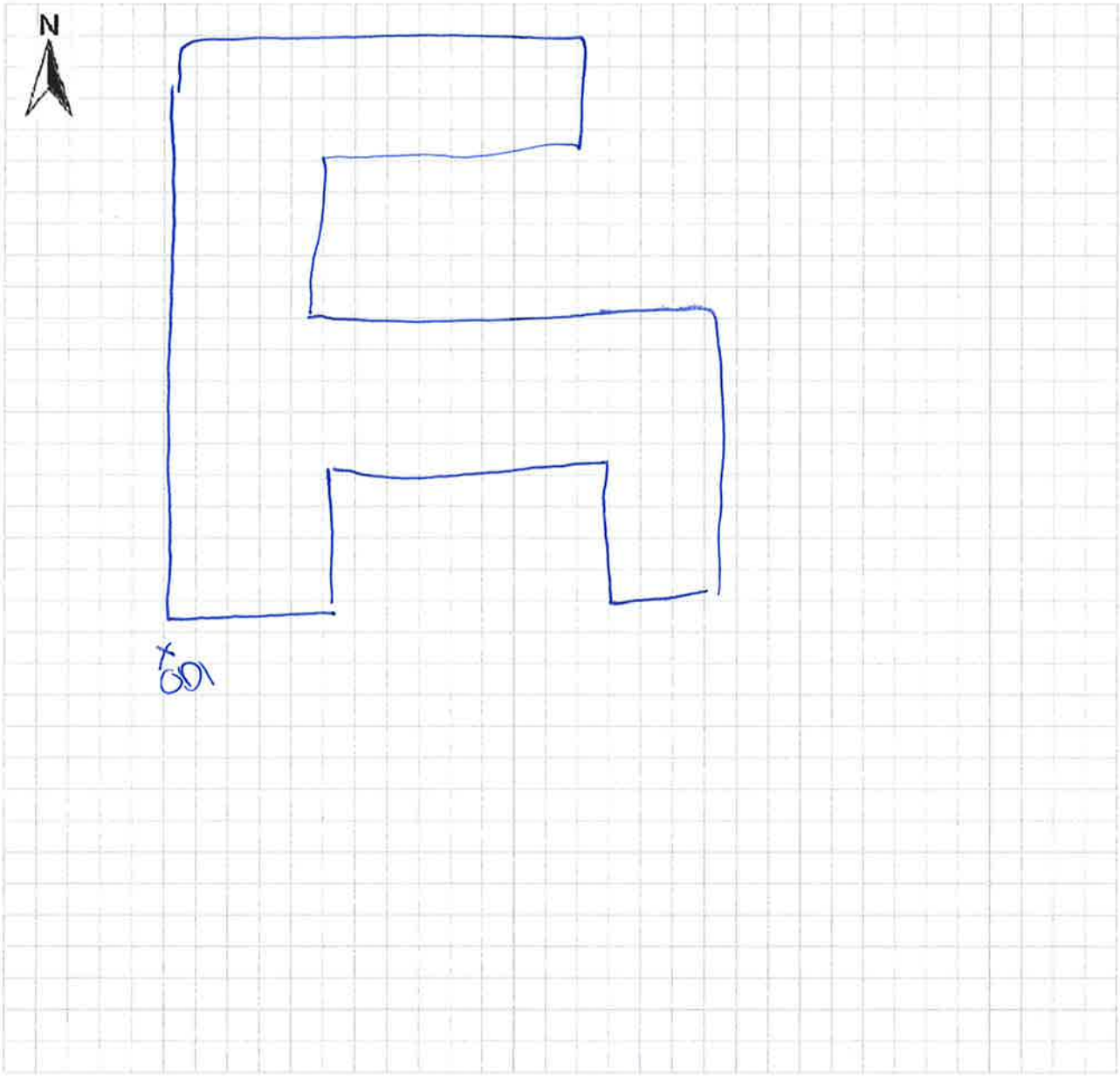
First Floor:



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.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

See attached

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

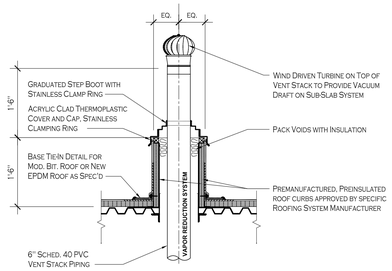
* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Location	Chemical Name	Size
Salon	Zep Shower Tub & Tile Cleaner	1 gallon
	Sherwin Williams Pro Industrial Urethane Alkyd Enamel	116 oz
	Ajax with bleach	21 oz
	Goo Gone	28 oz
	WD-40	14.4 oz
	Clorox	121 oz
	Comet with bleach	25 oz
	Method squirt and mop hard floor cleaner	25 oz
	Spectracide wasp & hornet killer	20 oz
	Flex seal liquid rubber sealant	14 oz
	Window and door sealant	12 oz
	Zep 10 minute hair clog remover	16 oz
	Stink bug killer	1 gallon
	Cascade Complete	20 oz
	Wegmans diswasher detergent	20 oz
	Dreft	56 oz
	Behr Paint and Primer	116 oz
	Kilz ordorless primer	116 oz
	Promar 200	615 oz
	USG dust control	1 gallon
	Premium waterproof silicone	10 oz
	Power Grab ultimate	10 oz
	Downy	1 gallon

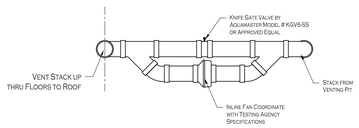
Restaurant	Steel cleaner polish	16 oz
	Mechanical dish detergent	1 gallon
	Premium rinse additive	1 gallon
	AP-7 All purpose cleaner	1 gallon
	LSR Delimer	1 gallon
	Cleaner/Degreaser water-wash exhaust hood systmes	1 gallon
	Lo temp sanitizer	1 gallon
	Pure bright bleach	1 gallon
	409 cleaner degreaser disinfectant	16 oz
	Ultra NP detergent	1 gallon
	NABC disinfectant bathroom cleaner	32 oz
	Mr. Clean floor cleaner	1 gallon
	Clear ammonia	1 gallon
	Concentrated room deodorant	7 oz
	Stream tablets	1 gallon
	Quarry Tile cleaner	1 gallon
	Wipe away pot and pan detergent	1 gallon
	Quaternary sanitizer	1 gallon
Garage	Wipe away pot and pan detergent	1 gallon
	AP-7 All purpose cleaner	1 gallon
	Pure bright bleach	1 gallon
	Grill cleaner	1 gallon
	NABC disinfectant bathroom cleaner	32 oz
	Mr. Clean floor cleaner	1 gallon
	Promar 200	615 oz

APPENDIX 2

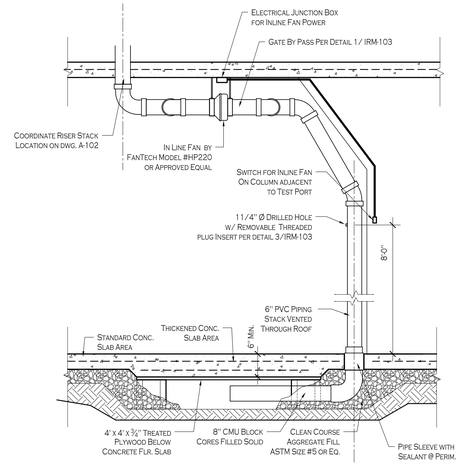
Interim Remedial Measures Construction Drawing, IRM-103



1 VENT STACK ROOF PENETRATION
IRM-103 — 3/4"=1'-0"

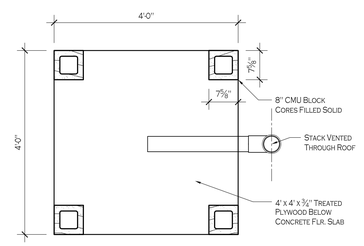


2 INLINE FAN BYPASS PLAN
IRM-103 — 1"=1'-0"

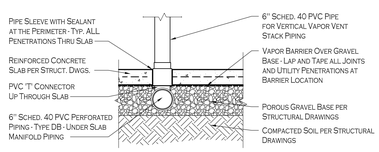


3 VAPOR VENTING PIT / RISER SECTION
IRM-103 — 3/4"=1'-0"

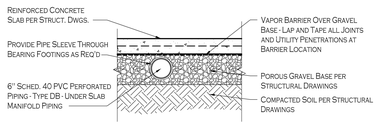
4 TEST PORTAL DETAIL
IRM-103 — 3"=1'-0"



6 VAPOR VENTING PIT PLAN
IRM-103 — 3/4"=1'-0"



5 TYP. PIPE/CONDUIT PENETRATION
IRM-103 — 3/4"=1'-0"



7 TYP. UNDERSLAB MANIFOLD PIPING
IRM-103 — 3/4"=1'-0"

IRM GENERAL NOTES

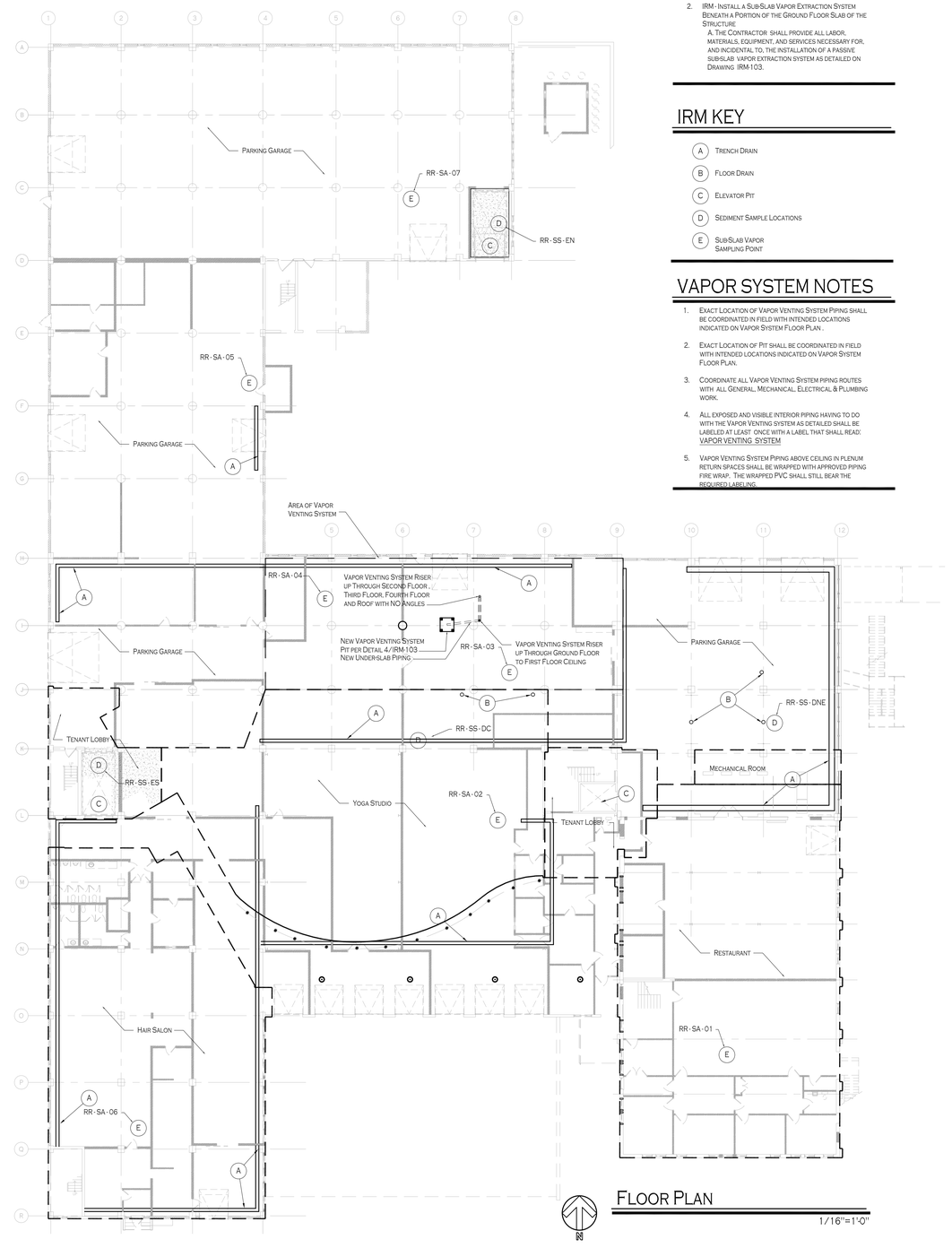
1. IRM - REMOVE SEDIMENTS AND CLEAN BUILDING FLOOR DRAINS AND ELEVATOR SHAFT PITS.
   A. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR AND INCIDENTAL TO, THE CLEANING OF INTERIOR BUILDING FLOOR DRAINS/TRENCHES AND ELEVATOR SHAFT PITS AS DETAILED ON DRAWING IRM-100. THIS INCLUDES, BUT IS NOT LIMITED TO, REMOVING AND PROPERLY DISPOSING OF POTENTIALLY CONTAMINATED SEDIMENTS AND/OR SOILS AND THE ABANDONMENT OF EXISTING INLET OR OUTLET PIPES IN A ACCORDANCE WITH NYSDEC REQUIREMENTS. THIS INCLUDES PLUGGING INLET OR OUTLET PIPES WITH CEMENT GROUT.
2. IRM - INSTALL A SUB-SLAB VAPOR EXTRACTION SYSTEM BENEATH A PORTION OF THE GROUND FLOOR SLAB OF THE STRUCTURE
   A. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR, AND INCIDENTAL TO, THE INSTALLATION OF A PASSIVE SUB-SLAB VAPOR EXTRACTION SYSTEM AS DETAILED ON DRAWING IRM-103.

IRM KEY

- (A) TRENCH DRAIN
- (B) FLOOR DRAIN
- (C) ELEVATOR PIT
- (D) SEDIMENT SAMPLE LOCATIONS
- (E) SUB-SLAB VAPOR SAMPLING POINT

VAPOR SYSTEM NOTES

1. EXACT LOCATION OF VAPOR VENTING SYSTEM PIPING SHALL BE COORDINATED IN FIELD WITH INTENDED LOCATIONS INDICATED ON VAPOR SYSTEM FLOOR PLAN .
2. EXACT LOCATION OF PIT SHALL BE COORDINATED IN FIELD WITH INTENDED LOCATIONS INDICATED ON VAPOR SYSTEM FLOOR PLAN.
3. COORDINATE ALL VAPOR VENTING SYSTEM PIPING ROUTES WITH ALL GENERAL, MECHANICAL, ELECTRICAL & PLUMBING WORK.
4. ALL EXPOSED AND VISIBLE INTERIOR PIPING HAVING TO DO WITH THE VAPOR VENTING SYSTEM AS DETAILED SHALL BE LABELED AT LEAST ONCE WITH A LABEL THAT SHALL READ: VAPOR VENTING SYSTEM
5. VAPOR VENTING SYSTEM PIPING ABOVE CEILING IN PLENUM RETURN SPACES SHALL BE WRAPPED WITH APPROVED PIPING FIRE WRAP. THE WRAPPED PVC SHALL STILL BEAR THE REQUIRED LABELING.



FLOOR PLAN
1/16"=1'-0"

Carmina Wood Morris PC
487 Main Street Suite 600
Buffalo, New York, 14203
P 716.842.3165
F 716.842.0263

REVISIONS:

No.	Description	Date
1	Addendum #1	02.01.2010

PROJECT NAME:
Renovation & New Construction
Remington Lofts on the Canal
184 Sweeney Street
North Tonawanda
New York, 14210

Issued for Construction:
Municiplity Submission:
Drawn by: P. Lang
Scale: As Noted

DRAWING NAME:
Vapor System / Drain Cleaning Plan & Details

DRAWING NO.
IRM-103

Project no.: 07.092

APPENDIX 3

Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L1915609
Client:	LaBella Associates, P.C. 300 Pearl Street Suite 252 Buffalo, NY 14202
ATTN:	Adam Zebrowski
Phone:	(716) 551-6281
Project Name:	184 & 185 SWEENY ST.
Project Number:	2191060
Report Date:	04/22/19

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

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

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060

Lab Number: L1915609
Report Date: 04/22/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1915609-01	ID1	AIR	184 & 185 SWEENY ST.	04/15/19 15:40	04/16/19
L1915609-02	ID2	AIR	184 & 185 SWEENY ST.	04/15/19 15:45	04/16/19
L1915609-03	OD1	AIR	184 & 185 SWEENY ST.	04/15/19 15:50	04/16/19
L1915609-04	ID3	AIR	184 & 185 SWEENY ST.	04/15/19 16:45	04/16/19

Project Name:	184 & 185 SWEENY ST.	**Lab Number:**	L1915609
Project Number:	2191060	**Report Date:**	04/22/19

Case Narrative

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

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

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

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

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

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

Project Name:	184 & 185 SWEENY ST.	**Lab Number:**	L1915609
Project Number:	2191060	**Report Date:**	04/22/19

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on April 12, 2019. The canister certification results are provided as an addendum.

L1915609-01 and -02: Results for Acetone should be considered estimated due to co-elution with a non-target peak.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 04/22/19

AIR

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-01
Client ID: ID1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:40
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/20/19 00:03
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.299	0.200	--	1.48	0.989	--		1
Chloromethane	0.596	0.200	--	1.23	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	28.1	5.00	--	52.9	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	1.05	1.00	--	2.49	2.38	--		1
Trichlorofluoromethane	0.206	0.200	--	1.16	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-01
Client ID: ID1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:40
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.400	0.200	--	1.28	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.655	0.200	--	2.47	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-01
Client ID: ID1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:40
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	90		60-140
Bromochloromethane	90		60-140
chlorobenzene-d5	87		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-01
Client ID: ID1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:40
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/19 00:03
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	0.043	0.020	--	0.170	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.066	0.020	--	0.415	0.126	--		1
Trichloroethene	0.037	0.020	--	0.199	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	91		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	90		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-02
Client ID: ID2
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/20/19 00:36
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.386	0.200	--	1.91	0.989	--		1
Chloromethane	0.581	0.200	--	1.20	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	26.1	5.00	--	49.2	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.31	1.00	--	5.49	2.38	--		1
Trichlorofluoromethane	0.210	0.200	--	1.18	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-02
Client ID: ID2
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.343	0.200	--	1.21	0.705	--		1
Benzene	0.724	0.200	--	2.31	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	0.341	0.200	--	1.59	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.24	0.200	--	4.67	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.204	0.200	--	0.886	0.869	--		1
p/m-Xylene	0.628	0.400	--	2.73	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.249	0.200	--	1.08	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-02
Client ID: ID2
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	90		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	87		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-02
Client ID: ID2
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/19 00:36
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.065	0.020	--	0.409	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	91		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-03
Client ID: OD1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:50
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/19/19 18:06
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.291	0.200	--	1.44	0.989	--		1
Chloromethane	0.557	0.200	--	1.15	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	14.6	5.00	--	27.5	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.69	1.00	--	6.39	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	1.03	0.500	--	2.53	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	0.555	0.500	--	1.93	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	1.98	0.500	--	7.14	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	2.88	0.500	--	8.49	1.47	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-03
Client ID: OD1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:50
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.315	0.200	--	1.19	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-03
Client ID: OD1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:50
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	91		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-03
Client ID: OD1
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 15:50
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/19/19 18:06
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.072	0.020	--	0.453	0.126	--		1
Trichloroethene	0.028	0.020	--	0.150	0.107	--		1
Tetrachloroethene	0.052	0.020	--	0.353	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	95		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	94		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-04
Client ID: ID3
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 16:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/20/19 01:08
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.267	0.200	--	1.32	0.989	--		1
Chloromethane	0.562	0.200	--	1.16	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	92.6	5.00	--	174	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.59	1.00	--	6.15	2.38	--		1
Trichlorofluoromethane	0.203	0.200	--	1.14	1.12	--		1
Isopropanol	2.12	0.500	--	5.21	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-04
Client ID: ID3
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 16:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.268	0.200	--	0.856	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.360	0.200	--	1.36	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-04
Client ID: ID3
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 16:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	89		60-140
chlorobenzene-d5	86		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915609-04
Client ID: ID3
Sample Location: 184 & 185 SWEENY ST.

Date Collected: 04/15/19 16:45
Date Received: 04/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/19 01:08
Analyst: EW

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.067	0.020	--	0.421	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.034	0.020	--	0.231	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	90		60-140
bromochloromethane	91		60-140
chlorobenzene-d5	88		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/19/19 15:11

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1228351-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/19/19 15:11

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1228351-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/19/19 15:11

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1228351-4								
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060
Lab Number: L1915609
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 04/19/19 15:44

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-04 Batch: WG1228357-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 184 & 185 SWEENY ST.

Project Number: 2191060

Lab Number: L1915609

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1228351-3								
Propylene	126		-		70-130	-		
Dichlorodifluoromethane	94		-		70-130	-		
Chloromethane	101		-		70-130	-		
Freon-114	100		-		70-130	-		
Vinyl chloride	101		-		70-130	-		
1,3-Butadiene	112		-		70-130	-		
Bromomethane	92		-		70-130	-		
Chloroethane	106		-		70-130	-		
Ethanol	85		-		40-160	-		
Vinyl bromide	94		-		70-130	-		
Acetone	83		-		40-160	-		
Trichlorofluoromethane	98		-		70-130	-		
Isopropanol	91		-		40-160	-		
1,1-Dichloroethene	100		-		70-130	-		
Tertiary butyl Alcohol	97		-		70-130	-		
Methylene chloride	94		-		70-130	-		
3-Chloropropene	104		-		70-130	-		
Carbon disulfide	90		-		70-130	-		
Freon-113	94		-		70-130	-		
trans-1,2-Dichloroethene	100		-		70-130	-		
1,1-Dichloroethane	102		-		70-130	-		
Methyl tert butyl ether	106		-		70-130	-		
Vinyl acetate	105		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 184 & 185 SWEENY ST.

Project Number: 2191060

Lab Number: L1915609

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1228351-3								
2-Butanone	104		-		70-130	-		
cis-1,2-Dichloroethene	113		-		70-130	-		
Ethyl Acetate	107		-		70-130	-		
Chloroform	100		-		70-130	-		
Tetrahydrofuran	113		-		70-130	-		
1,2-Dichloroethane	102		-		70-130	-		
n-Hexane	106		-		70-130	-		
1,1,1-Trichloroethane	100		-		70-130	-		
Benzene	103		-		70-130	-		
Carbon tetrachloride	99		-		70-130	-		
Cyclohexane	110		-		70-130	-		
1,2-Dichloropropane	106		-		70-130	-		
Bromodichloromethane	102		-		70-130	-		
1,4-Dioxane	108		-		70-130	-		
Trichloroethene	99		-		70-130	-		
2,2,4-Trimethylpentane	109		-		70-130	-		
Heptane	106		-		70-130	-		
cis-1,3-Dichloropropene	112		-		70-130	-		
4-Methyl-2-pentanone	111		-		70-130	-		
trans-1,3-Dichloropropene	94		-		70-130	-		
1,1,2-Trichloroethane	104		-		70-130	-		
Toluene	99		-		70-130	-		
2-Hexanone	106		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060

Lab Number: L1915609
Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1228351-3								
Dibromochloromethane	94		-		70-130	-		
1,2-Dibromoethane	97		-		70-130	-		
Tetrachloroethene	94		-		70-130	-		
Chlorobenzene	99		-		70-130	-		
Ethylbenzene	100		-		70-130	-		
p/m-Xylene	100		-		70-130	-		
Bromoform	92		-		70-130	-		
Styrene	102		-		70-130	-		
1,1,2,2-Tetrachloroethane	101		-		70-130	-		
o-Xylene	103		-		70-130	-		
4-Ethyltoluene	100		-		70-130	-		
1,3,5-Trimethylbenzene	101		-		70-130	-		
1,2,4-Trimethylbenzene	105		-		70-130	-		
Benzyl chloride	101		-		70-130	-		
1,3-Dichlorobenzene	98		-		70-130	-		
1,4-Dichlorobenzene	98		-		70-130	-		
1,2-Dichlorobenzene	98		-		70-130	-		
1,2,4-Trichlorobenzene	108		-		70-130	-		
Hexachlorobutadiene	102		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060

Lab Number: L1915609
Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG1228357-3								
Vinyl chloride	102		-		70-130	-		25
1,1-Dichloroethene	99		-		70-130	-		25
cis-1,2-Dichloroethene	104		-		70-130	-		25
1,1,1-Trichloroethane	101		-		70-130	-		25
Carbon tetrachloride	98		-		70-130	-		25
Trichloroethene	100		-		70-130	-		25
Tetrachloroethene	95		-		70-130	-		25

Project Name: 184 & 185 SWEENY ST.

Lab Number: L1915609

Project Number: 2191060

Report Date: 04/22/19

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1915609-01	ID1	01122	Flow 5	04/12/19	289587		-	-	-	Pass	4.5	4.8	6
L1915609-01	ID1	103	2.7L Can	04/12/19	289587	L1914116-01	Pass	-29.6	-5.4	-	-	-	-
L1915609-02	ID2	01176	Flow 5	04/12/19	289587		-	-	-	Pass	4.5	6.0	29
L1915609-02	ID2	329	2.7L Can	04/12/19	289587	L1913721-01	Pass	-29.6	-1.7	-	-	-	-
L1915609-03	OD1	0095	Flow 5	04/12/19	289587		-	-	-	Pass	4.5	5.1	13
L1915609-03	OD1	2009	2.7L Can	04/12/19	289587	L1914116-01	Pass	-29.6	-2.4	-	-	-	-
L1915609-04	ID3	01063	Flow 5	04/12/19	289587		-	-	-	Pass	4.5	4.8	6
L1915609-04	ID3	2041	2.7L Can	04/12/19	289587	L1914116-01	Pass	-29.5	-6.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/06/19 19:18
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/06/19 19:18
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1913721
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1913721-01
Client ID: CAN 329 SHELF 2
Sample Location:

Date Collected: 04/04/19 16:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/09/19 19:29
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	91		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/09/19 19:29
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1914116
Report Date: 04/22/19

Air Canister Certification Results

Lab ID: L1914116-01
Client ID: CAN 403 SHELF 1
Sample Location:

Date Collected: 04/08/19 16:00
Date Received: 04/09/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	93		60-140

Project Name: 184 & 185 SWEENY ST.
Project Number: 2191060

Lab Number: L1915609
Report Date: 04/22/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
N/A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1915609-01A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L1915609-02A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L1915609-03A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L1915609-04A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	184 & 185 SWEENY ST.	**Lab Number:**	L1915609
Project Number:	2191060	**Report Date:**	04/22/19

GLOSSARY

Acronyms

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

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

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

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

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

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

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

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

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

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

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

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

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

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

Footnotes

Report Format: Data Usability Report

Project Name:	184 & 185 SWEENY ST.	**Lab Number:**	L1915609
Project Number:	2191060	**Report Date:**	04/22/19

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

Terms

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

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/17/19

ALPHA Job #: L1915609

Client Information

Client: LaBella Associates
Address: 300 Pearl St
Buffalo NY
Phone: 716-710-3043
Fax:
Email: Sgalton@labellapc.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 184 & 185 Sweeney St
Project Location: 184&185 Sweeny St
Project #: 2191060
Project Manager: Andrew Benkleman
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH (Solvent Non-petroleum HCs ☐)	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
15609.01	FD1	4/15/19	740	1540	-28.71	-5.01	AA	SD	2.7L	103	01122	✓					
.02	ID2	4/15/19	745	1545	-28.61	-0.73	~~AA~~ AA	SD	2.7L	329	01176	X					
.03	CD1	4/15/19	750	1550	-28.25	-2.96	AA	SD	2.7L	2059 ~~2041~~	00945 ~~01663~~	X					
.04	ID3	4/15/19	845	1645	-26.82	-5.24	AA	SD	2.7L	2041	01663	X					

*SAMPLE MATRIX CODES

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

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
AAL	4/16/19 1:10PM	AAL	4/16/19 13:10
AAL	4/16/19 13:45		04/16/19 1745
	04/17/19 0825		4/17/19 0825

Form No: 101-02 Rev: (25-Sep-15)