TENEN ENVIRONMENTAL

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December 15, 2014

Astoria Holding Corp.
c/o Sive, Paget & Riesel, P.C.
460 Park Avenue, 10th Floor
New York, NY 10022

Attn: Mr. Michael Bogin

Re: Soil Vapor / Indoor Air Investigation
Former Coconuts / Proposed City MD Space at 2097 Ralph Avenue
Georgetown Shopping Center – 2181 Ralph Avenue – Brooklyn, NY

Dear Mr. Bogin:

This letter report summarizes the findings and recommendations pertaining to the Soil Vapor/Indoor Air Investigation performed by Tenen Environmental (Tenen) at 2097 Ralph Avenue on October 31, 2014. The report includes a discussion of previous remedial investigations, a description of the sampling methodology, and a summary the analytical results and conclusions.

The 2097 Ralph Avenue unit (the Site) is a rectangular shaped area of approximately 2,420 square feet located in the southwestern portion of the Georgetown Shopping Center. The shopping center is located at 2181 Ralph Avenue, Brooklyn, New York. The Site is occupied by a one-story building with entrances facing Avenue L to the south and the parking lot associated with the shopping center to the north. The unit is currently vacant; however, it was recently used commercially as a Coconuts entertainment store. It is our understanding that the unit is proposed for use as a City MD urgent care clinic. A Site location map is included as Figure 1.

The purpose of this investigation was to determine if the soil vapor and/or indoor air at this space have been impacted by the known release of tetrachloroethene (PCE) from a former dry cleaner at the nearby 2103 Ralph Avenue unit.

Previous Remedial Investigations
Several remedial investigations have been completed at the Georgetown Shopping Center, focusing on the historic use of the unit at 2103 Ralph Avenue as a dry cleaner. The findings of past environmental investigations indicate the presence of chlorinated solvents, petroleum constituents, polycyclic aromatic hydrocarbons and metals at the Site. This section summarizes the results of prior investigations and provides a summary of the specific contaminants detected above the applicable regulatory levels and the highest levels detected.

Several environmental investigations conducted at the Site in 2013 and 2014 are summarized in the following reports:

- Phase I Environmental Site Assessment, Georgetown Shopping Center, 2087 to 2183 Ralph Avenue, Brooklyn, NY 11234, Redacted, July 15, 2013.
- Subsurface Investigation Report, Georgetown Shopping Center, 2181 to 2195, 2183B Ralph Avenue, Brooklyn, NY, Roux Associates, Inc., May 29, 2014.
- Supplemental Subsurface Investigation Report, Georgetown Shopping Center, 2181 to 2195, 2183B Ralph Avenue, Brooklyn, NY 11234, Impact Environmental Closures, Inc., August 11, 2014.

The findings of the above investigations are summarized below. Sample locations for all prior investigations are shown on Figure 2.

Phase I Environmental Site Assessment – July 2013

A Phase I ESA conducted in July 2013 identified the historic use of the 2103 Ralph Avenue unit as a dry cleaner as a Recognized Environmental Condition (REC). This was based upon information provided during the Site reconnaissance and records included in the regulatory database report and city directories. Reportedly, the duration of the dry cleaning activities was approximately 27 years. The former occupant, Georgette French Cleaners, was identified as a large quantity generator in 1985 and a small quantity generator in 1999.

The Phase I ESA report included a recommendation to complete a subsurface investigation to investigate potential impacts associated with the historic use of 2103 Ralph Avenue as a dry cleaner.

Roux Associates, Inc. (Roux) Subsurface Investigation – August 2013

In August 2013, Roux Associates, Inc. (Roux) implemented a soil and groundwater investigation and soil vapor assessment around the 2103 Ralph Avenue unit (the former dry cleaner unit). The soil and groundwater investigation included installation of three borings via Geoprobe®. Borings were installed at the parking lot in front of the former dry cleaner space (RSB-2), in the landscaped area between the former dry cleaner space and the sidewalk along Avenue L (rear of the space) (RSB-3) and in the parking lot adjacent to Ralph Avenue in the vicinity of an existing dry cleaner across the street from the Site (RSB-1). Each boring was field-screened for organic vapors using a photoionization detector (PID); no PID readings above typical background concentrations or other impacts were noted. One soil sample was collected at each boring location from the two-foot interval directly above the groundwater table.

Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals. One groundwater sample was also collected at each location and analyzed for VOCs.

Soil Analytical Results. The results of the soil analysis were compared to the New York State Department of Environmental Conservation (NYSDEC) Part 375/CP-51 Unrestricted Use and Commercial Use Soil Cleanup Objectives (SCOs). PCE was detected at RSB-3 (8-10) at a concentration of 2.8 milligrams per kilogram (mg/kg), above the Unrestricted Use SCO of 1.3 mg/kg, but below the 150 mg/kg Commercial Use SCO. Several SVOCs [(benzo(a)anthracene; benzo(a)pyrene, benzo(b)flouranthene, chrysene and indeno(1,2,3-cd)pyrene] were detected above the Unrestricted Use SCOs and benzo(a)pyrene was identified slightly above the Commercial Use SCO. Barium, copper, lead, mercury, nickel and zinc were detected in RSB-2 and/or RSB-3 at levels above the Unrestricted Use SCOs, with barium also exceeding the Commercial Use SCO at one location (RSB-2).

Groundwater Analytical Results. Groundwater results were compared to the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. Class GA Groundwater Standards (Class GA Standards). No VOCs were detected above their respective standards. PCE was detected at a concentration of 4.7 micrograms per liter (ug/L), slightly below the Class GA standard of 5 ug/L, at RSB-3, in the area adjacent to the rear of the former dry cleaner space.

Soil Vapor Analytical Results. Roux also collected one subsurface soil vapor sample at approximately 2-3 feet below grade in the landscaped area adjacent to the rear of the former dry cleaner space (in the vicinity of boring RSB-3). An ambient air sample was also collected. Soil vapor and ambient air results were compared to the Soil Vapor/Indoor Air Matrices found in NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH Guidance). PCE was detected at a concentration of 12,000 micrograms

per cubic meter (ug/m3) and TCE was detected at a concentration of 83 ug/m3; both concentrations require further action based on the NYSDOH matrices. The PCE concentration, while not collected from a sub-slab location, indicates that mitigation would be required in the 2103 Ralph Avenue unit, which is defined by NYSDOH as follows:

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

Impact Environmental Closures, Inc. (Impact) – June-July 2014 Supplemental Subsurface Investigation

The objective of the 2014 Supplemental Subsurface Investigation (SSI) was to further evaluate the nature and extent of the soil and soil vapor impacts near the former dry cleaner identified in the 2013 investigation. The investigation included the following:

- An electromagnetic induction (EMI) survey to identified buried utilities and clear boring locations;
- Installation of seven interior soil borings (SB-PV 1 through SB-PV-5, SB-GK1 and SB-GK2) within the tenant spaces occupied by Pearl Vision (2103 Ralph Avenue, the historic dry cleaner unit) and GK Jeans (2099 Ralph Avenue, directly west of the former dry cleaner unit);
- Advancement of four exterior borings (MW-1, MW-2, MW-4 and MW-5);
- Collection of grab samples from varying intervals from eleven soil borings for a total of 16 soil samples and analysis for VOCs;
- Installation and sampling of 1) two soil vapor points within the tenant spaces and collection of both indoor air and outdoor ambient air samples and 2) six soil vapor points at the southwest portion of the Site along Avenue L and offsite at the corner of East 68th Street and Avenue L. All soil vapor and ambient air samples were analyzed for VOCs using EPA Method TO-15; and,
- Installation and sampling of three temporary well points (GW-1 through GW-3) in the sidewalk immediately behind the Pearl Vision space, and five permanent monitoring wells (MW-1 through MW-5) on the southern part of the Site. All groundwater samples were analyzed for VOCs.

Soil Analytical Results. PCE was detected at concentrations ranging from 0.00088 mg/kg to 0.052 mg/kg, below the Unrestricted Use SCO, in ten of the 16 samples. Elevated levels of petroleum constituents, including benzene at 0.54 mg/kg, total xylenes (0.34 mg/kg) and naphthalene (13 mg/kg) were identified in sample MW-5 (19-20) and naphthalene at a concentration of 26 mg/kg was detected in sample MW-2 (13-14). The report ascribes the petroleum impacts to historic fill material. Other potential sources include a former gasoline filling station located upgradient of the Site and associated with the existing TD Bank building with open NYSDEC Spill case #0907859. .

Groundwater Analytical Results. PCE was detected in permanent monitoring well sample MW-2 at 6.0 ug/L, above the Class GA standard of 5 ug/L; other chlorinated compounds detected in this sample include TCE (0.5 ug/L) and 1,2-dichloroethene (0.72 ug/L), both below their respective Class GA standards. PCE was detected at levels below the Class GA standard in six samples MW-3, MW-4 and MW-5, and in groundwater grab samples GW-1 (10-14), GW-2, 20-24) and GW-3 (46-50). Sample GW-1 (10-14) also contained cis-1,2-dichloroethene and vinyl chloride at levels of 1.5 ug/L and 1.1 ug/L, both below the Class GA standard. Petroleum-related impacts (benzene and naphthalene) were identified in sample MW-5, corresponding to the elevated soil concentrations of those compounds at that location.

Soil Vapor/Indoor Air and Ambient Air Results. All soil vapor and indoor and ambient air sample results were compared with the NYSDOH Air Guidance Values (AGVs) where applicable and with the Soil Vapor/Indoor Air Matrices found in NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (NYSDOH Guidance).

PCE was detected at all four interior sub-slab soil vapor sample locations (SSV-PV1, SSV-PV2, SSV-GK1 and SSV-GK2) at concentrations ranging from 271 ug/m3 to 2,010 ug/m3. PCE was also detected in the two indoor air samples at levels of 54.4 and 123 ug/m3, above the NYSDOH AGV of 30 ug/m3. TCE was also detected in the indoor air samples at concentrations of 1.81 ug/m3 and 13.3 ug/m3; the highest concentration is above the AGV of 5 ug/m3. Analysis of the shallow on- and offsite soil vapor samples (SG-1 through SG-6) indicated concentrations of PCE ranging from 102 to 12,100 ug/m3. TCE was also present in four samples (SG-1, SG-2, SG-4 and SG-5) at levels between 2.47 ug/m3 and 110 ug/m3. Cis-1,2-dichloroethene was present in sample SG-2 at 2.53 ug/m3.

The detected concentrations indicate that mitigation is required based on the NYSDOH matrices.

Tenen October 2014 Soil Vapor/Indoor Air Investigation
Tenen completed a soil vapor and indoor air investigation at the former Coconuts / proposed City MD unit located at 2097 Ralph Avenue.

Unit Description. The floor of the 2097 Ralph Avenue unit is constructed differently than the other units that were previously tested. Both 2103 Ralph Avenue (Pearl Vision, historic dry cleaner) and 2099 Ralph Avenue (GK Jeans) reportedly have concrete slab-on-grade construction. Based on observations by Tenen, the western adjoining Banco Popular (2095 Ralph Avenue) also appears to have a slab-on-grade construction, but at a lower grade than 2103 and 2099 Ralph Avenue. The previous slab-on-grade at the 2097 Ralph Avenue unit previously collapsed and is not finished with a wooden floor over a crawl space, supported by metal I-beams. A non-continuous plastic vapor barrier was observed partially overlying the collapsed concrete slab.

Sampling Methodology. The methodology used to collect the soil vapor and indoor air samples is summarized below. The sampling event was completed using the same methods as the Impact investigation. The samples were collected in general accordance with the NYSDOH Guidance.

Soil Vapor. One soil vapor point (CMD-1) was installed below the small slab-on-grade section in the rear (south) of the unit. One sample (SSV-CMD-1) was collected from the soil vapor point.

The soil vapor point was installed on October 30, 2014, and allowed to equilibrate for 24 hours prior to sampling. A four-inch long screen was installed in a sand pack two inches below the slab and completed with Teflon tubing to above the slab. The soil vapor point was sealed with wetted bentonite.

Photoionization detector (PID) readings were recorded during the pre-sampling screening; the reading at CMD-1 was 0.0 parts per million (ppm). A bentonite-sealed shroud was used to evaluate the competency of the soil vapor point using a helium tracer.

Samples were collected over an eight-hour period using a 6-liter Summa. This resulted in an average flow rate of 0.0125 liters per minute (lpm), which is below the NYSDOH-recommended 0.2 lpm maximum flow rate.

Indoor Air. Two indoor air samples (IA-CMD-1 and IA-CMD-2) were collected. The sample intake was set in the typical breathing zone (between three and five feet above grade).

Samples were collected over an eight-hour period using a 6-liter Summa.

A summary of sample designations, media sampled and locations is shown below. Sampling locations are shown on Figure 2.

Sample Names, Types and Locations

Sample Name	Sample Type	Description of Location
SSV-CMD-1	Soil Vapor	Sub-slab, near rear (south) exit
IA-CMD-1	Indoor Air	Southwestern section of unit
IA-CMD-2	Indoor Air	Northeastern section of unit

Analytical Results. The samples were sent under chain-of-custody documentation to Alpha Analytical, Inc. (Alpha). Alpha is certified by the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) as LABIDs 11148 and 11627.

The soil vapor and indoor air samples were analyzed for TO-15 VOCs. The results of the sample analysis are presented below. A summary of the detected compounds in soil vapor and indoor air samples is included in Table 1. Laboratory deliverables are included in Attachment 1.

Soil Vapor and Indoor Air
Soil vapor and indoor air results were compared to the NYSDOH Air Guidance Values (AGVs) and the Soil Vapor/Indoor Air Matrices.

Several compounds were detected in the soil vapor samples collected at the Site. The Matrix outcome for all compounds was No Further Action, with the exception of PCE and carbon tetrachloride.

PCE was detected in soil vapor at 36.7 ug/m3 and indoor air at concentrations of 61.2 and 80.7 ug/m3. The indoor air concentrations are above the AGV of 30 ug/m3. The resulting matrix action is: Take reasonable and practical actions to identify source(s) and reduce exposures. It is not typical for indoor air concentrations to be double the soil vapor concentrations; this is likely due to the construction of the floor in this unit, which does not allow for soil vapor impacts to increase over time and limited the location of the soil vapor point.

Carbon tetrachloride was not detected in soil vapor but was detected in indoor air at concentrations of 0.409 and 0.428 ug/m3. The resulting matrix action is: Take reasonable and practical actions to identify source(s) and reduce exposures. Carbon tetrachloride was not detected in the soil vapor and the indoor air impacts are likely not related to a subsurface release.

The NYSDOH Guidance includes the following additional information about this action:

> The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures.

Findings and Conclusions

The results of the investigations completed at the Georgetown shopping center indicate the following:

- Chlorinated compounds, in particular PCE and TCE, are present in soil, groundwater, soil vapor and indoor air and are related to the dry cleaner formerly present at 2103 Ralph Avenue.
- Based on the previous soil vapor and indoor air sampling results, as compared to the NYSDOH matrices, mitigation of chlorinated solvents is required in the Pearl Vision (2103 Ralph Avenue) and GK Jeans (2099 Ralph Avenue) units.
- The soil vapor and indoor air sampling results from the former Coconuts / proposed City MD space (2097 Ralph Avenue) indicate that PCE is present above the AGV and that the source should be identified and exposures reduced.
- Impacts to soil and groundwater from the historic dry cleaner do not appear to be widespread.
- Petroleum- and historic fill-related impacts have also been detected.
- Additional delineation of soil vapor and indoor air impacts should be completed at the Georgetown Shopping Center, including at the Banco Popular (2095 Ralph Avenue) and the Joyce Leslie (2109 Ralph Avenue) units.

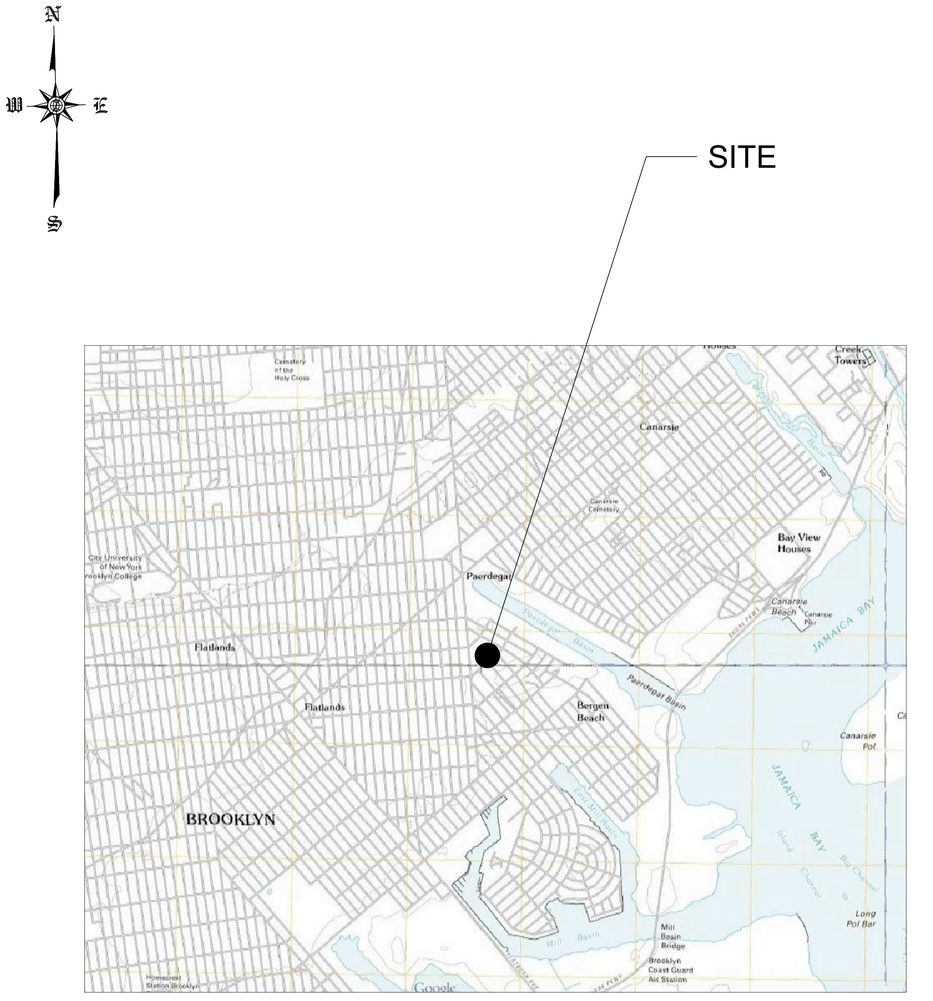
Please contact us if you need any additional information.

Sincerely,
Tenen Environmental, LLC

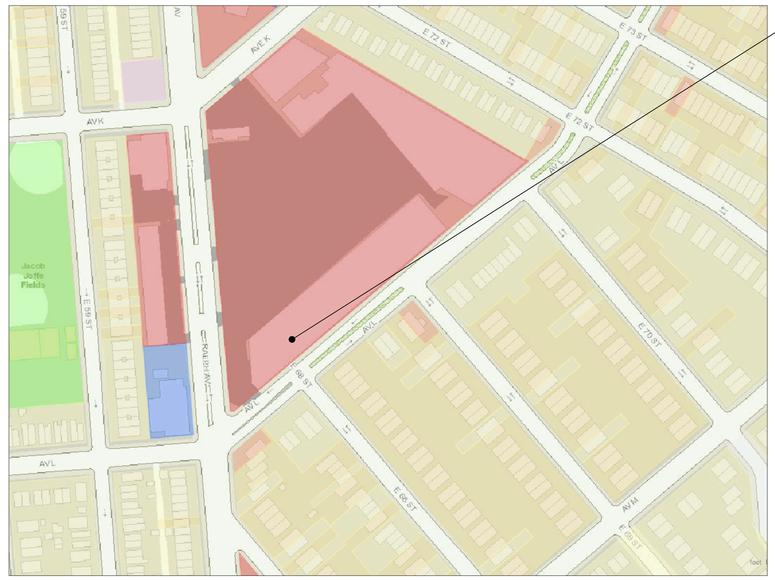
Matthew Carroll, P.E.
Principal / Environmental Engineer

Figure 1	Site Location
Figure 2	Sample Locations
Table 1	Analytical Results
Attachment 1	Laboratory Deliverables

Figures



Re: USGS BROOKLYN - NY QUADRANGLE, 2013
http://www.usgs.gov



Re: DEPARTMENT OF FINANCE, DIGITAL TAX MAP, 2014
http://gis.nyc.gov/taxmap/map.htm

Re: DEPARTMENT OF CITY PLANNING ZOLA, 2014
http://gis.nyc.gov/doitt/nyscitymap/template?applicationsName=ZOLA

CLIENT
GEORGETOWN SHOPPING CENTER
2181 Ralph Avenue
Brooklyn N.Y. 11234

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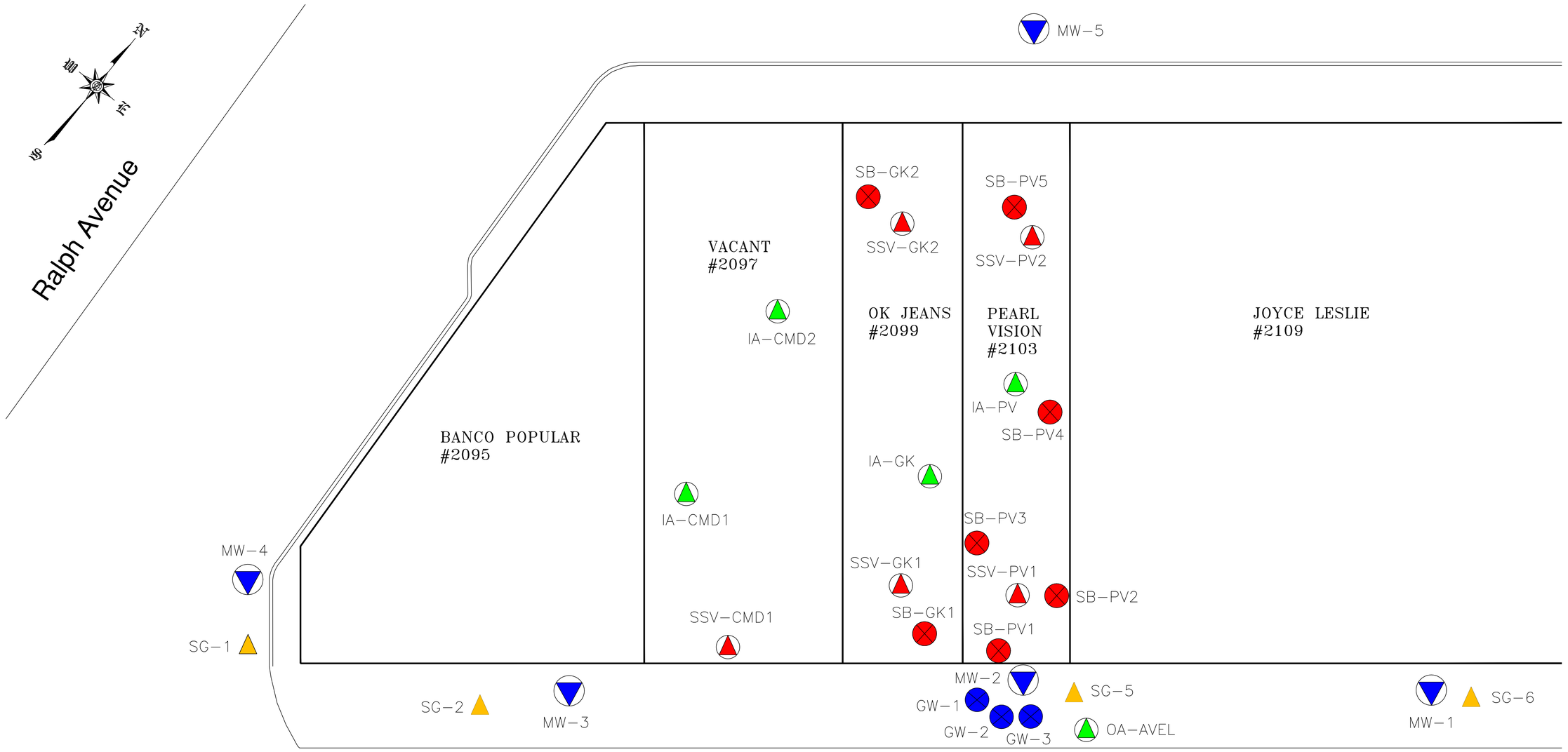
DRAWN BY	CHECKED BY	DATE	SCALE:
NS	MC	OCTOBER 2014	AS NOTED

DRAWING TITLE: Site Location

DRAWING NO. Figure 1



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DRAWN BY	CHECKED BY	DATE	SCALE:
NS	MC	OCTOBER 2014	1" = 20'

DRAWING TITLE.
Sample Locations

DRAWING NO.
Figure 2

Table

Table 1: Volatile Organic Compounds (VOCs) in Soil Vapor and Indoor Air
2181 Ralph Avenue--Brooklyn, NY

LOCATION	NYSDOH Matrix	NYSDOH Air Guidance Value	NYSDOH 2003 Fuel Oil Indoor Air Value	EPA 2001 Indoor Air Value	HEI 2005 Indoor Air Value	IA-CMD-1	IA-CMD-2	SSV-CMD-1
SAMPLING DATE						10/31/2014	10/31/2014	10/31/2014
Volatile Organics (VOCs)						Result	Result	Result
Units: ug/m3								
Dichlorodifluoromethane	--	--	10	16.5	--	1.85	1.96	1.96
Chloromethane	--	--	4.2	1.1	--	0.896	0.915	0.541
Freon-114	--	--	0.4	<6.8	--	ND	ND	ND
Vinyl chloride	1	--	0.4	<1.9	--	ND	ND	ND
1,3-Butadiene	--	--	--	<3.0	--	ND	ND	ND
Bromomethane	--	--	0.5	<1.7	--	ND	ND	ND
Chloroethane	--	--	0.4	<1.1	--	ND	ND	ND
Ethanol	--	--	34	210.0	--	53.3	128	161
Vinyl bromide	--	--	--	--	--	ND	ND	ND
Acetone	--	--	115	98.9	45.8	8.05	14.3	23.4
Trichlorofluoromethane	--	--	12	18.1	--	1.13	ND	ND
Isopropanol	--	--	--	250	--	42	64.9	74.2
1,1-Dichloroethene	2	--	0.4	<1.4	--	ND	ND	ND
Tertiary butyl Alcohol	--	--	--	--	--	ND	ND	ND
Methylene chloride	--	60	16	10.0	7.5	ND	ND	ND
3-Chloropropene	--	--	--	--	--	ND	ND	ND
Carbon disulfide	--	--	--	4.2	--	ND	ND	ND
Freon-113	--	--	2.5	1.6	--	ND	ND	ND
trans-1,2-Dichloroethene	--	--	--	--	--	ND	ND	ND
1,1-Dichloroethane	--	--	0.4	<0.7	--	ND	ND	ND
Methyl tert butyl ether	--	--	14	11.5	36	ND	ND	ND
2-Butanone	--	--	16.0	12.0	--	0.846	1.59	1.59
cis-1,2-Dichloroethene	2	--	0.4	<1.9	--	ND	ND	ND
Ethyl Acetate	--	--	--	5.4	--	ND	ND	ND
Chloroform	--	--	1.2	1.1	6.34	ND	ND	1.12
Tetrahydrofuran	--	--	0.8	--	--	ND	ND	ND
1,2-Dichloroethane	--	--	0.4	<0.9	--	ND	ND	ND
n-Hexane	--	--	14	10.2	--	ND	ND	0.751
1,1,1-Trichloroethane	2	--	0.6	20.6	--	ND	ND	ND
Benzene	--	--	13	9.4	10	0.811	0.668	0.773
Carbon tetrachloride	1	--	1.3	<1.3	1.1	0.428	0.409	ND
Cyclohexane	--	--	6.3	--	--	ND	ND	ND
1,2-Dichloropropane	--	--	0.4	<1.6	--	ND	ND	ND
Bromodichloromethane	--	--	5	--	--	ND	ND	ND
1,4-Dioxane	--	--	--	--	--	ND	ND	ND
Trichloroethene	1	5	0.5	4.2	1.36	0.134	0.193	ND
2,2,4-Trimethylpentane	--	--	5.0	--	--	ND	ND	ND
Heptane	--	--	18	--	--	ND	ND	ND
cis-1,3-Dichloropropene	--	--	0.4	<2.3	--	ND	ND	ND
4-Methyl-2-pentanone	--	--	--	6.0	--	ND	ND	ND
trans-1,3-Dichloropropene	--	--	--	<1.3	--	ND	ND	ND
1,1,2-Trichloroethane	--	--	0.3	<1.5	--	ND	ND	ND
Toluene	--	--	5.1	43.0	39.8	3.57	4.56	6.33
2-Hexanone	--	--	--	--	--	ND	ND	ND
Dibromochloromethane	--	--	--	--	--	ND	ND	ND
1,2-Dibromoethane	--	--	0.4	<1.5	--	ND	ND	ND
Tetrachloroethene	2	30	100	15.9	6.01	36.7	61.2	80.7
Chlorobenzene	--	--	0.4	<0.9	--	ND	ND	ND
Ethylbenzene	--	--	6.4	5.7	7.62	1.31	1.95	2.36
p/m-Xylene	--	--	1.0	22.2	22.2	3.79	5.65	6.78
Bromoform	--	--	--	--	--	ND	ND	ND
Styrene	--	--	1.4	1.9	5.13	ND	ND	ND
1,1,2,2-Tetrachloroethane	--	--	0.4	--	--	ND	ND	ND
o-Xylene	--	--	7.1	7.9	7.24	1.1	1.64	1.8
4-Ethyltoluene	--	--	--	3.6	--	ND	ND	ND
1,3,5-Trimethylbenzene	--	--	3.9	3.7	--	ND	ND	ND
1,2,4-Trimethylbenzene	--	--	1.9	9.5	--	ND	ND	ND
Benzyl chloride	--	--	--	--	--	ND	ND	ND
1,3-Dichlorobenzene	--	--	0.5	<2.4	--	ND	ND	ND
1,4-Dichlorobenzene	--	--	1.2	5.5	344	ND	ND	ND
1,2-Dichlorobenzene	--	--	0.5	<1.2	--	ND	ND	ND
1,2,4-Trichlorobenzene	--	--	0.5	<6.8	--	ND	ND	ND
Hexachlorobutadiene	--	--	0.5	<6.8	--	ND	ND	ND

NYSDOH AGV = New York State Department of Health Air Guidance Values
NYSDOH Matrix = number reference for Soil Vapor/Indoor Air decision matrix from the NYSDOH Soil Vapor Guidance, October 2006
NYSDOH AGV and Matrix values from NYSDOH Soil Vapor Guidance, October 2006, except for the revised NYSDOH AGV for PCE from Fact Sheet: Tetrachloroethene (PERC) in Indoor & Outdoor Air, September 2013
NYSDOH 2003 Fuel Oil Indoor Air = New York State Department of Health indoor air guidance value, Upper Fence background level
EPA 2001 Indoor Air = Environmental Protection Agency indoor air guidance value, 90th percentile background level
HEI 2005 = Health Effects Institute air guidance value, 95th percentile background level
Cells highlighted in yellow indicate concentrations above the NYSDOH AGV, but below the highest of the background levels
ND = not detected at or above the RL
Results and RL values are in micrograms per cubic meter (ug/m^3)
Matrix actions are described in the report narrative and the NYSDOH Soil Vapor Guidance, October 2006
-- = No Standard

Attachment 1
Laboratory Deliverables

ANALYTICAL REPORT

Lab Number:	L1426211
Client:	Tenen Environmental, LLC 121 West 27th Street Suite 1004 New York City, NY
ATTN:	Matt Carroll
Phone:	(646) 606-2332
Project Name:	2097 RALPH AVENUE
Project Number:	2131R
Report Date:	11/07/14

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1426211-01	IA-CMD-1	AIR	BROOKLYN, NY	10/31/14 17:15	10/31/14
L1426211-02	IA-CMD-2	AIR	BROOKLYN, NY	10/31/14 17:02	10/31/14
L1426211-03	SSV-CMD-1	SOIL_VAPOR	BROOKLYN, NY	10/31/14 17:17	10/31/14
L1426211-04	CAN 1641	SOIL_VAPOR	BROOKLYN, NY		10/31/14

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

Project Name:	2097 RALPH AVENUE	**Lab Number:**	L1426211
Project Number:	2131R	**Report Date:**	11/07/14

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on October 28, 2014. The canister certification results are provided as an addendum.

Samples L1426211-01 through -03 and WG737873-5 Duplicate 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: 11/07/14

AIR

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-01
Client ID: IA-CMD-1
Sample Location: BROOKLYN, NY
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 11/05/14 20:52
Analyst: MB

Date Collected: 10/31/14 17:15
Date Received: 10/31/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.374	0.200	--	1.85	0.989	--		1
Chloromethane	0.434	0.200	--	0.896	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	28.3	2.50	--	53.3	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	3.39	1.00	--	8.05	2.38	--		1
Trichlorofluoromethane	0.201	0.200	--	1.13	1.12	--		1
Isopropanol	17.1	0.500	--	42.0	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	0.287	0.200	--	0.846	0.590	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-01
Client ID: IA-CMD-1
Sample Location: BROOKLYN, NY
Date Collected: 10/31/14 17:15
Date Received: 10/31/14
Field Prep: Not Specified

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								
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.254	0.200	--	0.811	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	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.948	0.200	--	3.57	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	0.302	0.200	--	1.31	0.869	--		1
p/m-Xylene	0.872	0.400	--	3.79	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	0.253	0.200	--	1.10	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

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-01
Client ID: IA-CMD-1
Sample Location: BROOKLYN, NY
Date Collected: 10/31/14 17:15
Date Received: 10/31/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
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	88		60-140
chlorobenzene-d5	86		60-140

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-01
Client ID: IA-CMD-1
Sample Location: BROOKLYN, NY
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 11/05/14 20:52
Analyst: MB

Date Collected: 10/31/14 17:15
Date Received: 10/31/14
Field Prep: Not Specified

	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	0.068	0.020	--	0.428	0.126	--		1
Trichloroethene	0.025	0.020	--	0.134	0.107	--		1
Tetrachloroethene	5.41	0.020	--	36.7	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: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-02
Client ID: IA-CMD-2
Sample Location: BROOKLYN, NY
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 11/05/14 21:56
Analyst: MB

Date Collected: 10/31/14 17:02
Date Received: 10/31/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.396	0.200	--	1.96	0.989	--		1
Chloromethane	0.443	0.200	--	0.915	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	67.9	2.50	--	128	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.04	1.00	--	14.3	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	26.4	0.500	--	64.9	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	0.540	0.200	--	1.59	0.590	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-02
Client ID: IA-CMD-2
Sample Location: BROOKLYN, NY
Date Collected: 10/31/14 17:02
Date Received: 10/31/14
Field Prep: Not Specified

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								
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.209	0.200	--	0.668	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	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.21	0.200	--	4.56	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	0.450	0.200	--	1.95	0.869	--		1
p/m-Xylene	1.30	0.400	--	5.65	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	0.377	0.200	--	1.64	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

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-02
Client ID: IA-CMD-2
Sample Location: BROOKLYN, NY
Date Collected: 10/31/14 17:02
Date Received: 10/31/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
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	89		60-140
chlorobenzene-d5	87		60-140

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-02
Client ID: IA-CMD-2
Sample Location: BROOKLYN, NY
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 11/05/14 21:56
Analyst: MB

Date Collected: 10/31/14 17:02
Date Received: 10/31/14
Field Prep: Not Specified

	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	0.036	0.020	--	0.193	0.107	--		1
Tetrachloroethene	9.03	0.020	--	61.2	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	91		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	88		60-140

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-03
Client ID: SSV-CMD-1
Sample Location: BROOKLYN, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 11/05/14 22:28
Analyst: MB

Date Collected: 10/31/14 17:17
Date Received: 10/31/14
Field Prep: Not Specified

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								
Dichlorodifluoromethane	0.397	0.200	--	1.96	0.989	--		1
Chloromethane	0.262	0.200	--	0.541	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	85.7	2.50	--	161	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	9.87	1.00	--	23.4	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	30.2	0.500	--	74.2	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.539	0.200	--	1.59	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-03
Client ID: SSV-CMD-1
Sample Location: BROOKLYN, NY
Date Collected: 10/31/14 17:17
Date Received: 10/31/14
Field Prep: Not Specified

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								
Chloroform	0.229	0.200	--	1.12	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.213	0.200	--	0.751	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.242	0.200	--	0.773	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	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.68	0.200	--	6.33	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	11.9	0.200	--	80.7	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.544	0.200	--	2.36	0.869	--		1
p/m-Xylene	1.56	0.400	--	6.78	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

SAMPLE RESULTS

Lab ID: L1426211-03
Client ID: SSV-CMD-1
Sample Location: BROOKLYN, NY
Date Collected: 10/31/14 17:17
Date Received: 10/31/14
Field Prep: Not Specified

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								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.415	0.200	--	1.80	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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	87		60-140

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 11/05/14 16:02

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): 01-03 Batch: WG737873-4								
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	2.50	--	ND	4.71	--		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	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 11/05/14 16:02

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): 01-03 Batch: WG737873-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		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	0.200	--	ND	0.820	--		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: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 11/05/14 16:02

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): 01-03 Batch: WG737873-4								
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

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 11/05/14 16:34

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): 01-02 Batch: WG737874-4								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		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	1.00	--	ND	3.47	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		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	0.020	--	ND	0.072	--		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: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 11/05/14 16:34

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): 01-02 Batch: WG737874-4								
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	0.020	--	ND	0.092	--		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	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: 2097 RALPH AVENUE
Project Number: 2131R
Lab Number: L1426211
Report Date: 11/07/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 11/05/14 16:34

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): 01-02 Batch: WG737874-4								
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.500	--	ND	2.74	--		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

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG737873-3								
Chlorodifluoromethane	81		-		70-130	-		
Propylene	102		-		70-130	-		
Propane	75		-		70-130	-		
Dichlorodifluoromethane	78		-		70-130	-		
Chloromethane	86		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	86		-		70-130	-		
Methanol	82		-		70-130	-		
Vinyl chloride	85		-		70-130	-		
1,3-Butadiene	89		-		70-130	-		
Butane	77		-		70-130	-		
Bromomethane	83		-		70-130	-		
Chloroethane	84		-		70-130	-		
Ethyl Alcohol	87		-		70-130	-		
Dichlorofluoromethane	76		-		70-130	-		
Vinyl bromide	83		-		70-130	-		
Acrolein	84		-		70-130	-		
Acetone	87		-		70-130	-		
Acetonitrile	89		-		70-130	-		
Trichlorofluoromethane	84		-		70-130	-		
iso-Propyl Alcohol	94		-		70-130	-		
Acrylonitrile	84		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG737873-3								
Pentane	82		-		70-130	-		
Ethyl ether	81		-		70-130	-		
1,1-Dichloroethene	86		-		70-130	-		
tert-Butyl Alcohol	87		-		70-130	-		
Methylene chloride	89		-		70-130	-		
3-Chloropropene	94		-		70-130	-		
Carbon disulfide	85		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	86		-		70-130	-		
trans-1,2-Dichloroethene	80		-		70-130	-		
1,1-Dichloroethane	95		-		70-130	-		
Methyl tert butyl ether	88		-		70-130	-		
Vinyl acetate	77		-		70-130	-		
2-Butanone	96		-		70-130	-		
cis-1,2-Dichloroethene	103		-		70-130	-		
Ethyl Acetate	97		-		70-130	-		
Chloroform	92		-		70-130	-		
Tetrahydrofuran	92		-		70-130	-		
2,2-Dichloropropane	81		-		70-130	-		
1,2-Dichloroethane	89		-		70-130	-		
n-Hexane	93		-		70-130	-		
Isopropyl Ether	87		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG737873-3								
Ethyl-Tert-Butyl-Ether	87		-		70-130	-		
1,1,1-Trichloroethane	92		-		70-130	-		
1,1-Dichloropropene	92		-		70-130	-		
Benzene	93		-		70-130	-		
Carbon tetrachloride	92		-		70-130	-		
Cyclohexane	94		-		70-130	-		
Tertiary-Amyl Methyl Ether	87		-		70-130	-		
Dibromomethane	85		-		70-130	-		
1,2-Dichloropropane	97		-		70-130	-		
Bromodichloromethane	95		-		70-130	-		
1,4-Dioxane	99		-		70-130	-		
Trichloroethene	100		-		70-130	-		
2,2,4-Trimethylpentane	94		-		70-130	-		
Methyl methacrylate	105		-		70-130	-		
Heptane	96		-		70-130	-		
cis-1,3-Dichloropropene	101		-		70-130	-		
4-Methyl-2-pentanone	96		-		70-130	-		
trans-1,3-Dichloropropene	87		-		70-130	-		
1,1,2-Trichloroethane	98		-		70-130	-		
Toluene	99		-		70-130	-		
1,3-Dichloropropane	90		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG737873-3								
2-Hexanone	101		-		70-130	-		
Dibromochloromethane	98		-		70-130	-		
1,2-Dibromoethane	102		-		70-130	-		
Butyl Acetate	80		-		70-130	-		
Octane	92		-		70-130	-		
Tetrachloroethene	101		-		70-130	-		
1,1,1,2-Tetrachloroethane	92		-		70-130	-		
Chlorobenzene	102		-		70-130	-		
Ethylbenzene	104		-		70-130	-		
p/m-Xylene	102		-		70-130	-		
Bromoform	103		-		70-130	-		
Styrene	104		-		70-130	-		
1,1,2,2-Tetrachloroethane	99		-		70-130	-		
o-Xylene	102		-		70-130	-		
Nonane (C9)	100		-		70-130	-		
Isopropylbenzene	102		-		70-130	-		
Bromobenzene	106		-		70-130	-		
o-Chlorotoluene	99		-		70-130	-		
n-Propylbenzene	99		-		70-130	-		
p-Chlorotoluene	100		-		70-130	-		
4-Ethyltoluene	101		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG737873-3								
1,3,5-Trimethylbenzene	107		-		70-130	-		
tert-Butylbenzene	100		-		70-130	-		
1,2,4-Trimethylbenzene	110		-		70-130	-		
Decane (C10)	100		-		70-130	-		
Benzyl chloride	110		-		70-130	-		
1,3-Dichlorobenzene	110		-		70-130	-		
1,4-Dichlorobenzene	110		-		70-130	-		
sec-Butylbenzene	101		-		70-130	-		
p-Isopropyltoluene	94		-		70-130	-		
1,2-Dichlorobenzene	113		-		70-130	-		
n-Butylbenzene	104		-		70-130	-		
1,2-Dibromo-3-chloropropane	83		-		70-130	-		
Undecane	107		-		70-130	-		
Dodecane (C12)	126		-		70-130	-		
1,2,4-Trichlorobenzene	128		-		70-130	-		
Naphthalene	122		-		70-130	-		
1,2,3-Trichlorobenzene	124		-		70-130	-		
Hexachlorobutadiene	121		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG737874-3								
Dichlorodifluoromethane	110		-		70-130	-		25
Chloromethane	82		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	87		-		70-130	-		25
Vinyl chloride	87		-		70-130	-		25
1,3-Butadiene	92		-		70-130	-		25
Bromomethane	84		-		70-130	-		25
Chloroethane	86		-		70-130	-		25
Acetone	90		-		70-130	-		25
Trichlorofluoromethane	85		-		70-130	-		25
Acrylonitrile	83		-		70-130	-		25
1,1-Dichloroethene	87		-		70-130	-		25
Methylene chloride	88		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	84		-		70-130	-		25
Halothane	80		-		70-130	-		25
trans-1,2-Dichloroethene	81		-		70-130	-		25
1,1-Dichloroethane	93		-		70-130	-		25
Methyl tert butyl ether	94		-		70-130	-		25
2-Butanone	96		-		70-130	-		25
cis-1,2-Dichloroethene	103		-		70-130	-		25
Chloroform	93		-		70-130	-		25
1,2-Dichloroethane	88		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG737874-3								
1,1,1-Trichloroethane	92		-		70-130	-		25
Benzene	91		-		70-130	-		25
Carbon tetrachloride	91		-		70-130	-		25
1,2-Dichloropropane	96		-		70-130	-		25
Bromodichloromethane	93		-		70-130	-		25
1,4-Dioxane	98		-		70-130	-		25
Trichloroethene	95		-		70-130	-		25
cis-1,3-Dichloropropene	100		-		70-130	-		25
4-Methyl-2-pentanone	97		-		70-130	-		25
trans-1,3-Dichloropropene	86		-		70-130	-		25
1,1,2-Trichloroethane	98		-		70-130	-		25
Toluene	98		-		70-130	-		25
Dibromochloromethane	98		-		70-130	-		25
1,2-Dibromoethane	98		-		70-130	-		25
Tetrachloroethene	97		-		70-130	-		25
1,1,1,2-Tetrachloroethane	90		-		70-130	-		25
Chlorobenzene	99		-		70-130	-		25
Ethylbenzene	101		-		70-130	-		25
p/m-Xylene	101		-		70-130	-		25
Bromoform	100		-		70-130	-		25
Styrene	102		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2097 RALPH AVENUE

Project Number: 2131R

Lab Number: L1426211

Report Date: 11/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG737874-3								
1,1,2,2-Tetrachloroethane	102		-		70-130	-		25
o-Xylene	103		-		70-130	-		25
Isopropylbenzene	98		-		70-130	-		25
4-Ethyltoluene	100		-		70-130	-		25
1,3,5-Trimethylbenzene	105		-		70-130	-		25
1,2,4-Trimethylbenzene	108		-		70-130	-		25
1,3-Dichlorobenzene	108		-		70-130	-		25
1,4-Dichlorobenzene	108		-		70-130	-		25
sec-Butylbenzene	99		-		70-130	-		25
p-Isopropyltoluene	94		-		70-130	-		25
1,2-Dichlorobenzene	110		-		70-130	-		25
n-Butylbenzene	106		-		70-130	-		25
1,2,4-Trichlorobenzene	127		-		70-130	-		25
Naphthalene	124		-		70-130	-		25
1,2,3-Trichlorobenzene	122		-		70-130	-		25
Hexachlorobutadiene	119		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG737873-5 QC Sample: L1426211-01 Client ID: IA-CMD-1						
Dichlorodifluoromethane	0.374	0.405	ppbV	8		25
Chloromethane	0.434	0.437	ppbV	1		25
Freon-114	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	28.3	27.4	ppbV	3		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	3.39	3.47	ppbV	2		25
Trichlorofluoromethane	0.201	ND	ppbV	NC		25
Isopropanol	17.1	16.7	ppbV	2		25
Tertiary butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG737873-5 QC Sample: L1426211-01 Client ID: IA-CMD-1					
2-Butanone	0.287	0.285	ppbV	1	25
Ethyl Acetate	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	ND	ND	ppbV	NC	25
Benzene	0.254	0.248	ppbV	2	25
Cyclohexane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	0.948	0.933	ppbV	2	25
2-Hexanone	ND	ND	ppbV	NC	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG737873-5 QC Sample: L1426211-01 Client ID: IA-CMD-1					
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	0.302	0.295	ppbV	2	25
p/m-Xylene	0.872	0.863	ppbV	1	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	0.253	0.240	ppbV	5	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
Benzyl chloride	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG737874-5 QC Sample: L1426211-01 Client ID: IA-CMD-1					
Vinyl chloride	ND	ND	ppbV	NC	25
1,1-Dichloroethene	ND	ND	ppbV	NC	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Carbon tetrachloride	0.068	0.067	ppbV	1	25
Trichloroethene	0.025	0.024	ppbV	4	25
Tetrachloroethene	5.41	5.33	ppbV	1	25

Project Name: 2097 RALPH AVENUE

Lab Number: L1426211

Project Number: 2131R

Report Date: 11/07/14

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
L1426211-01	IA-CMD-1	0158	#20 AMB	10/28/14	110499		-	-	-	Pass	10.0	10.2	2
L1426211-01	IA-CMD-1	687	6.0L Can	10/28/14	110499	L1424417-02	Pass	-29.3	-5.2	-	-	-	-
L1426211-02	IA-CMD-2	0242	#20 SV	10/28/14	110499		-	-	-	Pass	10.0	10.9	9
L1426211-02	IA-CMD-2	596	6.0L Can	10/28/14	110499	L1424417-02	Pass	-29.3	-4.1	-	-	-	-
L1426211-03	SSV-CMD-1	0103	#20 SV	10/28/14	110499		-	-	-	Pass	10.0	10.5	5
L1426211-03	SSV-CMD-1	1853	6.0L Can	10/28/14	110499	L1424417-02	Pass	-29.5	-4.7	-	-	-	-
L1426211-04	CAN 1641	0628	#16 SV	10/28/14	110499		-	-	-	Pass	10.0	12.2	20
L1426211-04	CAN 1641	1641	6.0L Can	10/28/14	110499	L1424417-02	Pass	-29.6	-29.1	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 10/17/14 17:02
Analyst: RY

Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

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								
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	2.50	--	ND	4.71	--		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	0.200	--	ND	0.434	--		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
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
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	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		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	0.200	--	ND	0.590	--		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
1,1,1-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
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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
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	0.200	--	ND	0.820	--		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
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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

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

	Results	**Qualifier**	**Units**	**RDL**	**Dilution Factor**
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

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								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	88		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 10/17/14 17:02
Analyst: RY

Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

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								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		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	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		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	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		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	0.020	--	ND	0.072	--		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: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**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	0.020	--	ND	0.092	--		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	0.500	--	ND	2.46	--		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
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1424417
Report Date: 11/07/14

Air Canister Certification Results

Lab ID: L1424417-02
Client ID: CAN 1515 SHELF 36
Sample Location:
Date Collected: 10/14/14 15:00
Date Received: 10/15/14
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		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	88		60-140
bromochloromethane	91		60-140
chlorobenzene-d5	90		60-140

Project Name: 2097 RALPH AVENUE
Project Number: 2131R

Lab Number: L1426211
Report Date: 11/07/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**
Cooler
N/A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1426211-01A	Canister - 6 Liter	N/A	NA		Y	Absent	TO15-LL(30),TO15-SIM(30)
L1426211-02A	Canister - 6 Liter	N/A	NA		Y	Absent	TO15-LL(30),TO15-SIM(30)
L1426211-03A	Canister - 6 Liter	N/A	NA		Y	Absent	TO15-LL(30)
L1426211-04A	Canister - 6 Liter	N/A	NA		Y	Absent	CANCELLED()

*Values in parentheses indicate holding time in days

Project Name:	2097 RALPH AVENUE	**Lab Number:**	L1426211
Project Number:	2131R	**Report Date:**	11/07/14

GLOSSARY

Acronyms

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).

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.

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.

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.

NI - Not Ignitable.

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.

Footnotes

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

Terms

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.

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.

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.

Report Format: Data Usability Report

Project Name:	2097 RALPH AVENUE	**Lab Number:**	L1426211
Project Number:	2131R	**Report Date:**	11/07/14

Data Qualifiers

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.

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

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.

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

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

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

Last revised April 15, 2014

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

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
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.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: 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.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: 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: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

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:

ALPHA Job #: L1426211

Client Information

Client: Tenen Environmental
Address:
Phone:
Fax:
Email: mcarroll@tenen-env.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 2097 Ralph Avenue
Project Location: Brooklyn, NY
Project #: 2131R
Project Manager: Matthew Carroll
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	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
26211-01	IA-CMD-1	10/31/14	0915	1715	-30.29	-6.06	AA	ML	6L	0883 1853	0158 0103		X						
-02	IA-CMD-2	↓	0916	1712	-30.28	-4.84	AA	↓	↓	596	0242		↓						
-03	SSV-CMD-1	↓	0917	1717	-30.30	-5.90	SV	↓	↓	1853	0103		↓						PID: 0.0 ppm

*SAMPLE MATRIX CODES

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

Container Type: 6S

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:
	10/31/14 1720	AAL	10/31/14 1720
	10/31/14 1945	Tom Tobin	10-31-14 1945
Tom Tobin	10-31-14 0110		11/1/14 0110

Form No: 101-02 (19-Jun-09)