



October 1, 2021

Douglas Cabana  
Administrator  
Township of Boonton  
155 Powerville Road  
Boonton Twp, NJ 07005

**Re: Airborne Contaminants and Noise Exposure Assessment**

Dear Mr. Cabana

Emilcott is pleased to provide the attached report documenting the findings of our measurement of VOCs, BVOC, Ozone and Noise Exposure Assessment at the Perimeter of TerrAscend facility located at 130 Old Denville Rd in Boonton Township on June 23<sup>rd</sup> and August 6<sup>th</sup>, 2021.

Thank you for the opportunity to provide support to Boonton Township. Please contact me, if you have any questions or concerns.

Sincerely,  
**EMILCOTT**

A handwritten signature in black ink, appearing to read "Diana Londono Montemurro".

Diana Londono Montemurro  
Sr. EHS Consultant – LEED Green Associate



**AIR QUALITY AND NOISE ASSESSMENT  
AT  
TERRASCEND PLANT, 130 OLD DENVILLE RD  
BOONTON TW., NJ 10010**

**WORK CONDUCTED:**  
**JUNE 23, 2021**  
**AUGUST 6, 2021**

**REPORT ISSUED:**  
**OCTOBER 1, 2021**

**REPORT PREPARED BY:**

**EMILCOTT**  
25B Vreeland Road  
Florham Park, NJ 07932  
(973) 538-1110

Written By:

A handwritten signature in black ink, appearing to read "Diana J.M." or "Diana J. M."

Sr. EHS Consultant – LEED Green Associate  
Diana Londono Montemurro

Reviewed By:

A handwritten signature in black ink, appearing to read "Deborah Barsotti".

Deborah Barsotti, Ph.D., DABT  
Technical Director

New York, NY

Florham Park, NJ

Charlotte, NC

## Table of Contents

1.0	EXECUTIVE SUMMARY .....	2
2.0	PROJECT OBJECTIVE .....	2
3.0	MONITORING METHOD .....	2
4.0	WEATHER CONDITIONS .....	3
5.0	RESULTS AND DISCUSSION .....	3
5.1	VOCs and BVOC (Terpenes).....	3
5.2	Ozone .....	4
5.3	Area Sound Levels .....	4
6.0	OBSERVATIONS .....	5
7.0	CONCLUSIONS.....	6

**Appendix A: Lab Data**

**Appendix B: Station Location Map**

## 1.0 EXECUTIVE SUMMARY

To assist Boonton Twp. in an effort to identify possible airborne contaminants impacting downwind sensitive receptors, Emilcott conducted air quality and sound level monitoring at the perimeter of the TerrAscend facility located at 130 Old Denville Road in Boonton Township, NJ on June 23<sup>rd</sup> and August 6<sup>th</sup>, 2021. This includes a residence that has reported noise and odor complaints.

Results of this assessment indicate the following:

- Detected volatile organic chemical (VOC) were well below the Toxicity Values for Inhalation Exposure established by the New Jersey Department of Environmental Protection (NJDEP). **See Table 2.**
- Ozone levels were below the New Jersey Ambient Air Quality of 0.12 ppm for Ozone. **See Charts 1 through 5.**
- Terpene – thought to be associated with typical cannabis odors - were not detected above the odor threshold in the Tentatively Identified Compound (TIC) search for air monitoring samples subjected to VOC analyses.
- Noise levels recorded during the time of the assessment and during 24-hour monitoring did not demonstrate sustained exceedances of the recommended NJDEP regulations of 65 and 50 dBA for day and night time regulations, respectively **See Table 3.**

Based on the results mentioned above, no recommendations are made at this time.

## 2.0 PROJECT OBJECTIVE

The objective of this assessment was to evaluate airborne contaminants including Volatile Organic Compounds (VOCs), Biogenic Volatile Organic Compounds (BVOCs) – Terpenes in particular, Ozone, and noise levels during an 8-hour assessment at the perimeter of TerrAscend facility in Boonton.

## 3.0 MONITORING METHOD

VOCs concentration levels via method TO-15 were measured using Summa® passivated stainless steel canisters. After the air sample is collected, the canister valve is closed, an identification tag is attached to the canister, and the canister is transported to Alpha Analytical Lab. for analysis.

BVOCs (Terpenes) concentration levels were also measured using the Summa® passivated stainless steel canisters and analyzed by Alpha Analytical.

### 3 Boonton Tw. Air Quality and Noise Assessment

Ozone concentration levels were measured using an Aeroqual 500 Ozone monitor located 10 feet away from the fence along TerrAscend facility perimeter, for one (1) hour at each of the five (5) stations.

The area sound level assessment was conducted with a 3M SoundPro DL ANSI Type II Sound Level Meter (SLM). The SLM was factory calibrated within 12 months of the survey and has an accuracy of  $\pm 2$ dB. Field calibrations were performed before and after the noise survey with a 114 dBA 3M AC-300 calibrator and were within  $\pm 0.5$  dBA of 114 dBA.

## 4.0 WEATHER CONDITIONS

Weather during sampling events was chosen based on forecasted wind directions and clear days with no precipitation. Winds during both sampling events were out of the Northwest blowing possible odors and chemicals from the facility towards sampling locations near residential receptors.

## 5.0 RESULTS AND DISCUSSION

### 5.1 VOCs and BVOC (Terpenes)

Samples were collected at the following locations:

*Table 1. Sample Locations*

June 23, 2021

Station 1	Station 2	Station 3	Station 4	Station 5
Township well field	Pond Hill Road	Corner of Old Denville Road and Pond Hill Road	Old Denville Road	Old Denville Road

August 6, 2021

Station 1	Station 2	Station 3	Station 4	Station 5
Township well field	130 Old Denville Rd Driveway	Old Denville Rd	Old Denville Road	Pond Hill Rd

All VOCs concentration levels were well below the Toxicity Values for Inhalation Exposure established by the Department of Environmental Protection. Sample results indicated that there were no tentatively identified compound or terpenes present in any of the samples for either sampling event.

In general, the results of the second round of monitoring for terpene cannabis odor markers, ozone and other regulated VOCs were consistent with the first round. While some VOCs were

detected in the ambient air, the concentrations did not exceed the NJDEP air quality criteria and/or were consistent with upwind (ambient concentrations). These results do NOT indicate that the cannabis facility is a sustained source of hazardous air pollutants.

No cannabis odor related terpenes were detected in the air samples above odor thresholds.

### **5.2 Ozone**

Ozone concentration levels were continuously measured for one hour (1) at each of the five (5) stations located along the perimeter of TerrAscend facility.

During the first sampling event, the maximum ozone detection occurred downwind location 3 and was approximately 0.01 ppm or 10 ppb. While there are a number of National Ambient Air Quality criteria for ozone ranging from 0.1 (98th percentile of 1 hour daily maximum) to 0.070 (annual fourth-highest daily maximum 8-hour concentration averaged over 3 years). So based on this round of ozone monitoring, increased ground level ozone over background/ambient levels does not appear to be of concern.

The second sampling event indicated that the ozone monitoring results near the property boundary and close to the residences while detected did detect ozone concentrations of concern ( ND to 0.107 ppm). While ozone concentrations exceeded the upwind at location 2 as well as the ozone 8-hour National Ambient Air Quality Standard (NAAQS) of 0.070 ppm for approximately 10 minutes, the ozone levels did not appear to be sustained beyond 10 minutes. Other than location 2 (downwind), the other ozone concentrations were consistent with upwind and in general did not exceed 0.070 ppm for any sustained period indicating the lack of a constant/ongoing ground level ozone source. Exceedances were recorded for 3 minutes or less.

### **5.3 Noise**

Noise monitoring did not demonstrate any constant exceedances of day (65 db) or night (50 db) time regulations during either sampling event. Sporadic burst of noise at various locations were consistent with traffic and lawnmowers were noted. Long term 24-hour monitoring at the station located at the Well Field did not identify any operations at the facility above NJ regulated levels.

Direct-reading sound levels are presented in **Table 2** below.

***Area Sound Levels, June 23, 2021***

Station	Area/Location	Time	Sound Level (dBA)
1	Township well field	8:02 am	52-53
5	Pond Hill Road	9:07 am	46-48
4	Corner of Old Denville Road and Pond Hill Road	10:12 am	47-49
3	Old Denville Road	13:35 pm	45-47

## 5 Boonton Tw. Air Quality and Noise Assessment

Station	Area/Location	Time	Sound Level (dBA)
2	Old Denville Road	12:30 pm	46-48

### ***Area Sound Levels, August 6, 2021***

Station	Area/Location	Time	Sound Level (dBA)
1	Township well field	9 am	52-55
2	Pond Hill Road	10 am	52-64
3	Corner of Old Denville Road and Pond Hill Road	11 am	57-66
4	Old Denville Road	12 pm	49-60
5	Old Denville Road	1:10 pm	48-70

## **6.0 OBSERVATIONS**

In this survey, selected points of data collection were assigned along the perimeter of the TerrAscend facility. No sustained noise levels above the NJDEP day and night time regulations were found to be attributable to the facility. Some cannabis odors were present during each sampling event, but terpenes were not detected above the published odor thresholds in samples collected.

As can be seen, the maximum ozone detection occurred downwind location 2 and was approximately 0.107 ppm or 107 ppb. This is higher than that recorded in the first monitoring round at this location and the exceedance was monitored for approximately 10 minutes. While for the other location's ozone concentrations greater than 0.070 ppm were found they were not sustained lasting less than 3 minutes. While there are a number of National Ambient Air Quality criteria for ozone ranging from 0.1 (98th percentile of 1 hour daily maximum) to 0.070 (annual fourth-highest daily maximum 8-hour concentration averaged over 3 years). Based on the two rounds of ozone monitoring, increased ground level ozone over background/ambient levels does not appear to be of concern.

As for noise levels – the highest readings were recorded at locations 3 and 5 and not closest to the facility. The NJ promulgated noise regulations to control noise from stationary commercial and industrial sources in 1974, pursuant to the Noise Control Act of 1971, N.J.S.A. 13:1G-1 et seq. Within the noise regulations, there are established sound level standards of 50 decibels

during nighttime (10:00 p.m. to 7:00 a.m.) and 65 decibels during daytime. As can be seen, none of the readings from the 5 locations exceeded the day or night regulatory limits.

## 7.0 CONCLUSIONS

Results of this assessment indicate the following:

- VOC concentration levels were well below the Toxicity Values for Inhalation Exposure established by the New Jersey Department of Environmental Protection.
- Ozone levels were below the New Jersey Ambient Air Quality of 0.12 ppm of Ozone.
- BVOCs (Terpenes) levels were not detected in the Tentatively Identified Compound (TIC) search for these samples above the published odor threshold.
- Noise levels recorded during the time of the assessment and at the long term (24-hour) monitoring station were not sustained above the day and night time NJ Guidelines or was it apparent that the noise source was the facility

Based on the results mentioned above, no recommendations are made at this time.

**Appendix A: VOCs and BVOC Results**

### Air Sample Results: 130 Old Denville Road

6/23/2021

Analyte	NJDEP Toxicity Values for Inhalation Exposure August 2018		USEPA Regional Screening Level November 2020		UW-062321 Wellfield Location 1		DW1-062321 Old Denville Rd (S) Location 2		DW2-06232 Old Denville Rd (SE) Location 3		DW3-062321 Old Denville Rd. (E) Location 4		DW4-062321 Pond Hill Road Location 5	
	Reference Concentration (RfC) µg/m³	Short-Term RfC µg/m³	Carcinogenic SL TR=1E-06 µg/m³	Noncarcinogenic SL THI=1 µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³
Acetone	3.10E+04	6.20E+04	-	3.24E+04	5	2	4	2	3	2	4	2	4	2
Benzene	3.00E+00	2.70E+01	3.60E-01	3.10E+01	ND	0.6	ND	0.6	ND	0.6	ND	0.6	ND	0.6
Chloromethane	9.00E+01	-	-	9.40E+01	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4
Ethanol	-	-	-	-	ND	9	ND	9	ND	9	ND	9	ND	9
Tetrachloroethane	-	-	-	-	ND	1	ND	1	ND	1	ND	1	ND	1
Toluene	5.00E+03	3.70E+04	-	5.20E+03	ND	0.8	ND	0.8	ND	0.8	ND	0.8	ND	0.8
1,1,1-Trichloroethane	1.00E+03	9.00E+03	-	5.20E+03	ND	1	ND	1	ND	1	ND	1	ND	1
1,2,4-Trimethylbenzene	7.00E+00	-	-	6.30E+01	ND	1	ND	1	ND	1	ND	1	ND	1
o-Xylene	1.00E+02	2.20E+04	-	1.00E+02	ND	1	ND	0.9	ND	0.9	ND	0.9	ND	0.9

8/6/2021

Analyte	NJDEP Toxicity Values for Inhalation Exposure August 2018		USEPA Regional Screening Level November 2020		UW1-080621 Wellfield Location 1		DW2-080621 Old Denville Rd (S) Location 2		DW3-080621 Old Denville Rd (SE) Location 3		DW4-080621 Old Denville Rd. (E) Location 4		DW5-080621 Pond Hill Road Location 5	
	Reference Concentration (RfC) µg/m³	Short-Term RfC µg/m³	Carcinogenic SL TR=1E-06 µg/m³	Noncarcinogenic SL THI=1 µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³	Results µg/m³	RL µg/m³
Dichlorodifluoromethane					2	1	2	1	2	1	2	1	2	1
Chloromethane					0.8	0.4	0.8	0.4	0.8	0.4	0.8	0.4	0.8	0.4
Acetone					8	2	9	2	8	2	8	2	8	2
Trichlorofluoromethane					1	1	1	1	1	1	1	1	1	1
Isopropanol					5	1	ND	1	ND	1	ND	1	ND	1
n-Hexane					2	0.7	ND	0.7	5	0.7	ND	0.7	1	0.7
Hexamethyl-Cyclotrisiloxane					4		1		3		ND		2.4	
Methylene chloride					ND	2	ND	2	4	2	ND		ND	
Tetrahydrofuran					ND	1	ND	1	2	1	ND		2	1
Heptane					ND	0.8	ND	0.8	1	0.8	1	0.8	2	0.8
Toluene					ND	0.8	ND	0.8	0.9	0.8	0.8	0.8	0.8	0.8
2,3,4-trimethyl-Pentane					ND		ND		1.2		1.5		3	
Octane					ND		ND		ND		ND		4.6	
2,3-dimethyl-Hexane					ND		ND		ND		ND		1.2	
Trimethyl-Silanol					ND		ND		ND		ND		1.3	
3-methyl-Heptane					ND		ND		ND		ND		1.9	

Notes:



## ANALYTICAL REPORT

Lab Number:	L2134405
Client:	EMILCOTT 25B Vreeland Road Suite 101 Florham Park, NJ 07932
ATTN:	Dave Tomsey
Phone:	(973) 538-1110
Project Name:	Not Specified
Project Number:	BOON01412T
Report Date:	06/30/21

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

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

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

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2134405-01	UW-062321	AIR	X	06/23/21 15:27	06/24/21
L2134405-02	DW1-062321	AIR	X	06/23/21 15:21	06/24/21
L2134405-03	DW2-062321	AIR	X	06/23/21 15:15	06/24/21
L2134405-04	DW3-062321	AIR	X	06/23/21 15:11	06/24/21
L2134405-05	DW4-062321	AIR	X	06/23/21 15:05	06/24/21

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

**NJ DEP Data of Known Quality Protocols**  
**Conformance/Non-Conformance**  
**Summary Questionnaire**

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP Data of Known Quality performance standards?	YES
1a	Were the method specified handling, preservation, and holding time requirements met?	YES
1b	EPH Method: Was the EPH Method conducted without significant modifications (see Section 11.3 of respective DKQ methods)?	N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	YES
3	Were all samples received at an appropriate temperature ( $4 \pm 2^\circ \text{ C}$ )?	N/A
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	YES
5a	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	NO
5b	Were these reporting limits met?	N/A
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	YES
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?	NO

**Note:** For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1a or #1b is "No", the data package does not meet the requirements for "Data of Known Quality".



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

### 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.

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**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

### Case Narrative (continued)

#### NJDEP Volatile Organics in Air

Canisters were released from the laboratory on June 22, 2021. The canister certification results are provided as an addendum.

Any Manual integrations that were performed on the sample(s), as well as on the associated quality control samples, are noted on the individual quantitation reports. A listing of all manual integrations performed and the integration code definitions are provided in the manual integration documentation section of the data package.

Please note: Dilution analysis due to exceedance of the calibration range is not required for Ethanol or Isopropyl Alcohol.

GC column and trap information utilized for the analysis of this sample delivery group is detailed below:

Column Type: Restek RTX-1

Column Length: 60 Meters

Internal diameter: 0.52 mm

Film thickness: 1.00 um

Trap 1: Entech Cold Trap - no packing material

Trap 2: Entech Tenax - 20 cm packing material

Gaseous calibration standards were utilized for system calibration and quality control standards associated with this sample delivery group. These standards were purchased from Linde (formerly Spectra Gases).

Laboratory standard procedure for QC (i.e. method blanks, LCS) and sample analysis is to withdraw a 250 mL aliquot from the canister as the "1X" analysis. For some calibration levels and samples, subsequent dilutions will be performed as needed by decreasing aliquot volumes via the instrumentation, or by performing a dilution using a second canister. Make-up air is not routinely added to canisters prior to sample analysis.

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

**Case Narrative (continued)**

DKQP Related Narratives

L2134405-01 through -05: The Total Ion Chromatograph was scanned for the ions associated with Myrcene. This compound was not detected in the sample.

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* Christopher J. Anderson

Title: Technical Director/Representative

Date: 06/30/21

**AIR**



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-01  
 Client ID: UW-062321  
 Sample Location: X

Date Collected: 06/23/21 15:27  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 06/25/21 19:05  
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.47	0.20	--	2	1	--		1
Chloromethane	0.47	0.20	--	1	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	2.1	1.0	--	5	2	--		1
Trichlorofluoromethane	0.20	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-01 Date Collected: 06/23/21 15:27  
 Client ID: UW-062321 Date Received: 06/24/21  
 Sample Location: X Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.20	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-01  
 Client ID: UW-062321  
 Sample Location: X

Date Collected: 06/23/21 15:27  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.50	--	ND	4	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

Results	Qualifier	Units	RDL	Dilution Factor
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Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	90		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	85		60-140



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-02  
 Client ID: DW1-062321  
 Sample Location: X

Date Collected: 06/23/21 15:21  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 06/25/21 19:44  
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.45	0.20	--	2	1	--		1
Chloromethane	0.47	0.20	--	1	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	1.8	1.0	--	4	2	--		1
Trichlorofluoromethane	ND	0.20	--	ND	1	--		1
Isopropanol	ND	0.50	--	1	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-02  
 Client ID: DW1-062321  
 Sample Location: X

Date Collected: 06/23/21 15:21  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.20	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-02  
 Client ID: DW1-062321  
 Sample Location: X

Date Collected: 06/23/21 15:21  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.50	--	ND	4	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

Results	Qualifier	Units	RDL	Dilution Factor
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Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	91		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	86		60-140



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-03  
 Client ID: DW2-062321  
 Sample Location: X

Date Collected: 06/23/21 15:15  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 06/25/21 20:23  
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.48	0.20	--	2	1	--		1
Chloromethane	0.49	0.20	--	1	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	1.4	1.0	--	3	2	--		1
Trichlorofluoromethane	0.20	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	1	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-03  
 Client ID: DW2-062321  
 Sample Location: X

Date Collected: 06/23/21 15:15  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.20	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-03  
 Client ID: DW2-062321  
 Sample Location: X

Date Collected: 06/23/21 15:15  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.50	--	ND	4	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

Results	Qualifier	Units	RDL	Dilution Factor
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Tentatively Identified Compounds

No Tentatively Identified Compounds

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



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-04  
 Client ID: DW3-062321  
 Sample Location: X

Date Collected: 06/23/21 15:11  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 06/25/21 21:03  
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.50	0.20	--	2	1	--		1
Chloromethane	0.52	0.20	--	1	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	1.6	1.0	--	4	2	--		1
Trichlorofluoromethane	ND	0.20	--	ND	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	0.87	0.50	--	3	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-04  
 Client ID: DW3-062321  
 Sample Location: X

Date Collected: 06/23/21 15:11  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	0.24	0.20	--	0.8	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.20	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-04  
 Client ID: DW3-062321  
 Sample Location: X

Date Collected: 06/23/21 15:11  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.50	--	ND	4	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

**Tentatively Identified Compounds**

	Results	Qualifier	Units	RDL	Dilution Factor
Cyclotrisiloxane, Hexamethyl-	2.4	NJ	ppbV		1
Methyl Alcohol	1.4	NJ	ppbV		1
Silanol, Trimethyl-	4.0	NJ	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	88		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	85		60-140



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-05  
 Client ID: DW4-062321  
 Sample Location: X

Date Collected: 06/23/21 15:05  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Anaytical Method: 48,TO-15  
 Analytical Date: 06/25/21 21:43  
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.51	0.20	--	3	1	--		1
Chloromethane	0.50	0.20	--	1	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	1.6	1.0	--	4	2	--		1
Trichlorofluoromethane	0.20	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-05  
 Client ID: DW4-062321  
 Sample Location: X

Date Collected: 06/23/21 15:05  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.20	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2134405

**Project Number:** BOON01412T**Report Date:**

06/30/21

**SAMPLE RESULTS**

Lab ID: L2134405-05  
 Client ID: DW4-062321  
 Sample Location: X

Date Collected: 06/23/21 15:05  
 Date Received: 06/24/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.50	--	ND	4	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

Results	Qualifier	Units	RDL	Dilution Factor
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Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	88		60-140
Bromochloromethane	89		60-140
chlorobenzene-d5	85		60-140



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15  
Analytical Date: 06/25/21 17:46

Parameter	ppbV			ug/m3			Dilution Factor
	Results	RL	MDL	Results	RL	MDL	
<b>NJ Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1517169-4</b>							
Dichlorodifluoromethane	ND	0.20	--	ND	1.	--	1
Chloromethane	ND	0.20	--	ND	0.4	--	1
Freon-114	ND	0.20	--	ND	1.	--	1
Vinyl chloride	ND	0.20	--	ND	0.5	--	1
1,3-Butadiene	ND	0.20	--	ND	0.4	--	1
Bromomethane	ND	0.20	--	ND	0.8	--	1
Chloroethane	ND	0.20	--	ND	0.5	--	1
Ethanol	ND	5.0	--	ND	9	--	1
Vinyl bromide	ND	0.20	--	ND	0.9	--	1
Acetone	ND	1.0	--	ND	2	--	1
Trichlorofluoromethane	ND	0.20	--	ND	1.	--	1
Isopropanol	ND	0.50	--	ND	1	--	1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--	1
Tertiary butyl Alcohol	ND	0.50	--	ND	2.	--	1
Methylene chloride	ND	0.50	--	ND	2.	--	1
3-Chloropropene	ND	0.20	--	ND	0.6	--	1
Carbon disulfide	ND	0.20	--	ND	0.6	--	1
Freon-113	ND	0.20	--	ND	2.	--	1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--	1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--	1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--	1
2-Butanone	ND	0.50	--	ND	1.	--	1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--	1
Chloroform	ND	0.20	--	ND	1.	--	1
Tetrahydrofuran	ND	0.50	--	ND	1.	--	1



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15  
Analytical Date: 06/25/21 17:46

Parameter	ppbV			ug/m3			Dilution Factor
	Results	RL	MDL	Results	RL	MDL	
<b>NJ Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1517169-4</b>							
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1.	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1.	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1.	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1.	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2.	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2.	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1.	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2.	--	1
1,2-Dibromoethane	ND	0.20	--	ND	2.	--	1
Tetrachloroethene	ND	0.20	--	ND	1.	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2.	--	1
Bromoform	ND	0.20	--	ND	2.	--	1



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15  
Analytical Date: 06/25/21 17:46

Parameter	ppbV			ug/m3			Dilution Factor
	Results	RL	MDL	Results	RL	MDL	
<b>NJ Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1517169-4</b>							
Styrene	ND	0.20	--	ND	0.9	--	1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1.	--	1
o-Xylene	ND	0.20	--	ND	0.9	--	1
2-Chlorotoluene	ND	0.20	--	ND	1.	--	1
4-Ethyltoluene	ND	0.20	--	ND	1.	--	1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1.	--	1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1.	--	1
1,3-Dichlorobenzene	ND	0.20	--	ND	1.	--	1
1,4-Dichlorobenzene	ND	0.20	--	ND	1.	--	1
1,2-Dichlorobenzene	ND	0.20	--	ND	1.	--	1
1,2,4-Trichlorobenzene	ND	0.50	--	ND	4.	--	1
Hexachlorobutadiene	ND	0.20	--	ND	2.	--	1

	Results	Qualifier	Units	RDL	Dilution Factor
<b>Tentatively Identified Compounds</b>					
No Tentatively Identified Compounds					



# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1517169-3								
Dichlorodifluoromethane	88		-		40-160	-		
Chloromethane	87		-		70-130	-		
Freon-114	88		-		70-130	-		
Vinyl chloride	88		-		70-130	-		
1,3-Butadiene	89		-		70-130	-		
Bromomethane	88		-		70-130	-		
Chloroethane	92		-		70-130	-		
Ethanol	80		-		40-160	-		
Vinyl bromide	90		-		70-130	-		
Acetone	76		-		40-160	-		
Trichlorofluoromethane	90		-		70-130	-		
Isopropanol	72		-		40-160	-		
1,1-Dichloroethene	94		-		70-130	-		
Tertiary butyl Alcohol	79		-		70-130	-		
Methylene chloride	98		-		70-130	-		
3-Chloropropene	100		-		70-130	-		
Carbon disulfide	89		-		70-130	-		
Freon-113	98		-		70-130	-		
trans-1,2-Dichloroethene	92		-		70-130	-		
1,1-Dichloroethane	95		-		70-130	-		
Methyl tert butyl ether	95		-		70-130	-		
2-Butanone	94		-		70-130	-		
cis-1,2-Dichloroethene	99		-		70-130	-		

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1517169-3								
Chloroform	98		-		70-130	-		
Tetrahydrofuran	92		-		70-130	-		
1,2-Dichloroethane	92		-		70-130	-		
n-Hexane	97		-		70-130	-		
1,1,1-Trichloroethane	100		-		70-130	-		
Benzene	98		-		70-130	-		
Carbon tetrachloride	100		-		70-130	-		
Cyclohexane	99		-		70-130	-		
1,2-Dichloropropane	97		-		70-130	-		
Bromodichloromethane	99		-		70-130	-		
1,4-Dioxane	92		-		40-160	-		
Trichloroethene	95		-		70-130	-		
2,2,4-Trimethylpentane	100		-		70-130	-		
Methyl Methacrylate	72		-		40-160	-		
Heptane	100		-		70-130	-		
cis-1,3-Dichloropropene	99		-		70-130	-		
4-Methyl-2-pentanone	100		-		70-130	-		
trans-1,3-Dichloropropene	86		-		70-130	-		
1,1,2-Trichloroethane	94		-		70-130	-		
Toluene	95		-		70-130	-		
Dibromochloromethane	100		-		70-130	-		
1,2-Dibromoethane	99		-		70-130	-		
Tetrachloroethene	97		-		70-130	-		

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1517169-3								
Chlorobenzene	98		-		70-130	-		
Ethylbenzene	97		-		70-130	-		
p/m-Xylene	100		-		70-130	-		
Bromoform	110		-		70-130	-		
Styrene	96		-		70-130	-		
1,1,2,2-Tetrachloroethane	100		-		70-130	-		
o-Xylene	98		-		70-130	-		
2-Chlorotoluene	81		-		70-130	-		
4-Ethyltoluene	93		-		70-130	-		
1,3,5-Trimethylbenzene	93		-		70-130	-		
1,2,4-Trimethylbenzene	99		-		70-130	-		
1,3-Dichlorobenzene	99		-		70-130	-		
1,4-Dichlorobenzene	96		-		70-130	-		
1,2-Dichlorobenzene	94		-		70-130	-		
1,2,4-Trichlorobenzene	98		-		40-160	-		
Hexachlorobutadiene	99		-		40-160	-		

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1517169-5 QC Sample: L2133181-02 Client ID: DUP Sample						
Dichlorodifluoromethane	ND	ND	ppbV	NC		25
Chloromethane	ND	ND	ppbV	NC		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	11	11	ppbV	0		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	38	38	ppbV	0		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	19	19	ppbV	0		25
Trichlorofluoromethane	ND	ND	ppbV	NC		25
iso-Propyl Alcohol	3.2	3.1	ppbV	3		25
1,1-Dichloroethene	1.4	1.4	ppbV	0		25
tert-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
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	2.4	2.2	ppbV	9		25
1,1-Dichloroethane	1.1	1.1	ppbV	0		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1517169-5 QC Sample: L2133181-02 Client ID: DUP Sample						
2-Butanone	16	16	ppbV	0		25
cis-1,2-Dichloroethene	160	160	ppbV	0		25
Chloroform	1.3	1.4	ppbV	7		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	3.2	3.0	ppbV	6		25
Benzene	ND	ND	ppbV	NC		25
Carbon tetrachloride	ND	ND	ppbV	NC		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
Trichloroethene	200	190	ppbV	5		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Methyl Methacrylate	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
Xylene (Total)	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

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1517169-5 QC Sample: L2133181-02 Client ID: DUP Sample						
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	0.92	0.86	ppbV	7		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	84	81	ppbV	4		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
1,2-Dichloroethene (total)	170	160	ppbV	6		25
Styrene	ND	ND	ppbV	NC		25
1,3-Dichloropropene, Total	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
o-Chlorotoluene	ND	ND	ppbV	NC		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
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25

**Project Name:** Not Specified  
**Project Number:** BOON01412T

## Lab Duplicate Analysis

### Batch Quality Control

**Lab Number:** L2134405  
**Report Date:** 06/30/21

<b>Parameter</b>	<b>Native Sample</b>	<b>Duplicate Sample</b>	<b>Units</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1517169-5 QC Sample: L2133181-02 Client ID: DUP Sample						
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name:

Lab Number: L2134405

Project Number: BOON01412T

Report Date: 06/30/21

**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 Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2134405-01	UW-062321	01580	Flow 4	06/22/21	355898		-	-	-	Pass	10.0	9.9	1
L2134405-01	UW-062321	1697	6.0L Can	06/22/21	355898	L2128501-09	Pass	-28.7	-7.1	-	-	-	-
L2134405-02	DW1-062321	01585	Flow 4	06/22/21	355898		-	-	-	Pass	10.0	10.5	5
L2134405-02	DW1-062321	3140	6.0L Can	06/22/21	355898	L2131475-02	Pass	-29.3	-5.9	-	-	-	-
L2134405-03	DW2-062321	0088	Flow 4	06/22/21	355898		-	-	-	Pass	10.0	9.7	3
L2134405-03	DW2-062321	1837	6.0L Can	06/22/21	355898	L2131475-02	Pass	-29.3	-3.3	-	-	-	-
L2134405-04	DW3-062321	01461	Flow 4	06/22/21	355898		-	-	-	Pass	10.0	9.5	5
L2134405-04	DW3-062321	2952	6.0L Can	06/22/21	355898	L2131475-02	Pass	-28.7	-7.0	-	-	-	-
L2134405-05	DW4-062321	0909	Flow 4	06/22/21	355898		-	-	-	Pass	10.0	10.0	0
L2134405-05	DW4-062321	3157	6.0L Can	06/22/21	355898	L2128501-09	Pass	-29.3	-6.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2128501-09 Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54 Date Received: 05/28/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 05/30/21 19:16  
 Analyst: TS

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

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2128501-09 Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54 Date Received: 05/28/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

**Air Canister Certification Results**

Lab ID: L2128501-09      Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54      Date Received: 05/28/21  
 Sample Location:      Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

**Air Canister Certification Results**

Lab ID: L2128501-09 Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54 Date Received: 05/28/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2128501-09      Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54      Date Received: 05/28/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Results	Qualifier	Units	RDL	Dilution Factor
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Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	91		60-140

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID:	L2128501-09	Date Collected:	05/28/21 07:00
Client ID:	CAN 1692 SHELF 54	Date Received:	05/28/21
Sample Location:		Field Prep:	Not Specified

Sample Depth:

Matrix:	Air
Anaytical Method:	48,TO-15-SIM
Analytical Date:	05/30/21 19:16
Analyst:	TS

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
Dichlorodifluoromethane	ND	0.200	--	0.989	--		1
Chloromethane	ND	0.200	--	0.413	--		1
Freon-114	ND	0.050	--	0.349	--		1
Vinyl chloride	ND	0.020	--	0.051	--		1
1,3-Butadiene	ND	0.020	--	0.044	--		1
Bromomethane	ND	0.020	--	0.078	--		1
Chloroethane	ND	0.100	--	0.264	--		1
Acrolein	ND	0.050	--	0.115	--		1
Acetone	ND	1.00	--	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	0.281	--		1
Acrylonitrile	ND	0.500	--	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	0.079	--		1
Methylene chloride	ND	0.500	--	1.74	--		1
Freon-113	ND	0.050	--	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	0.721	--		1
2-Butanone	ND	0.500	--	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
Chloroform	ND	0.020	--	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	0.109	--		1
Benzene	ND	0.100	--	0.319	--		1
Carbon tetrachloride	ND	0.020	--	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2128501-09 Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54 Date Received: 05/28/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--	1
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-Trimethylbenzene	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



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2128501

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2128501-09 Date Collected: 05/28/21 07:00  
 Client ID: CAN 1692 SHELF 54 Date Received: 05/28/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
sec-Butylbenzene	ND	0.200	--	ND	1.10	--	1
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	93		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2131475-02 Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31 Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 06/11/21 18:17  
 Analyst: AW

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

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

**Air Canister Certification Results**

Lab ID: L2131475-02 Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31 Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
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
Xylenes, total	ND	0.600	--	ND	0.869	--		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

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

**Air Canister Certification Results**

Lab ID: L2131475-02 Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31 Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

**Air Canister Certification Results**

Lab ID: L2131475-02 Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31 Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2131475-02      Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31      Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Results	Qualifier	Units	RDL	Dilution Factor
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Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	90		60-140

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID:	L2131475-02	Date Collected:	06/10/21 16:00
Client ID:	CAN 2126 SHELF 31	Date Received:	06/11/21
Sample Location:		Field Prep:	Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 06/11/21 18:17  
 Analyst: AW

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
Dichlorodifluoromethane	ND	0.200	--	0.989	--		1
Chloromethane	ND	0.200	--	0.413	--		1
Freon-114	ND	0.050	--	0.349	--		1
Vinyl chloride	ND	0.020	--	0.051	--		1
1,3-Butadiene	ND	0.020	--	0.044	--		1
Bromomethane	ND	0.020	--	0.078	--		1
Chloroethane	ND	0.100	--	0.264	--		1
Acrolein	ND	0.050	--	0.115	--		1
Acetone	ND	1.00	--	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	0.281	--		1
Acrylonitrile	ND	0.500	--	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	0.079	--		1
Methylene chloride	ND	0.500	--	1.74	--		1
Freon-113	ND	0.050	--	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	0.721	--		1
2-Butanone	ND	0.500	--	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
Chloroform	ND	0.020	--	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	0.109	--		1
Benzene	ND	0.100	--	0.319	--		1
Carbon tetrachloride	ND	0.020	--	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

**Air Canister Certification Results**

Lab ID: L2131475-02 Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31 Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	Results	RL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--	1
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-Trimethylbenzene	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



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2131475

Project Number: CANISTER QC BAT

Report Date: 06/30/21

## Air Canister Certification Results

Lab ID: L2131475-02 Date Collected: 06/10/21 16:00  
 Client ID: CAN 2126 SHELF 31 Date Received: 06/11/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
sec-Butylbenzene	ND	0.200	--	ND	1.10	--	1
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	90		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	90		60-140

**Project Name:** Not Specified  
**Project Number:** BOON01412T

Serial\_No:06302115:56  
**Lab Number:** L2134405  
**Report Date:** 06/30/21

### **Sample Receipt and Container Information**

Were project specific reporting limits specified? NO

#### **Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
NA	Absent

#### **Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2134405-01A	Canister - 6 Liter	NA	NA			Y	Absent		NJ-TO15(30)
L2134405-02A	Canister - 6 Liter	NA	NA			Y	Absent		NJ-TO15(30)
L2134405-03A	Canister - 6 Liter	NA	NA			Y	Absent		NJ-TO15(30)
L2134405-04A	Canister - 6 Liter	NA	NA			Y	Absent		NJ-TO15(30)
L2134405-05A	Canister - 6 Liter	NA	NA			Y	Absent		NJ-TO15(30)

\*Values in parentheses indicate holding time in days

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

## GLOSSARY

### **Acronyms**

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

**Report Format:** Data Usability Report



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

#### Footnotes

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

#### Terms

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

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

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

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

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

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

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

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

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

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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

**Report Format:** Data Usability Report



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

**Data Qualifiers**

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*



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2134405  
**Report Date:** 06/30/21

## 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 its 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

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

**Westborough Facility**

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine. SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**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

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**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**, **SM4500CI-D**, **SM2320B**, **SM2540C**, **SM4500H-B**, **SM4500NO2-B**

EPA 332: Perchlorate; **EPA 524.2**: THMs and VOCs; **EPA 504.1**: EDB, DBCP.

**Microbiology**: **SM9215B**; **SM9223-P/A**, **SM9223B-Colilert-QT**, **SM9222D**.

**Non-Potable Water**

**SM4500H,B**, **EPA 120.1**, **SM2510B**, **SM2540C**, **SM2320B**, **SM4500CL-E**, **SM4500F-BC**, **SM4500NH3-BH**: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, **EPA 351.1**, **SM4500NO3-F**, **EPA 353.2**: Nitrate-N, **SM4500P-E**, **SM4500P-B**, **E**, **SM4500SO4-E**, **SM5220D**, **EPA 410.4**, **SM5210B**, **SM5310C**, **SM4500CL-D**, **EPA 1664**, **EPA 420.1**, **SM4500-CN-CE**, **SM2540D**, **EPA 300**: Chloride, Sulfate, Nitrate.

**EPA 624.1**: Volatile Halocarbons & Aromatics,

**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

**Microbiology**: **SM9223B-Colilert-QT**; **Enterolert-QT**, **SM9221E**, **EPA 1600**, **EPA 1603**, **SM9222D**.

**Mansfield Facility:**

**Drinking Water**

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

**Non-Potable Water**

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, 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**

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



# Alpha Analytical

320 Forbes Blvd  
Mansfield, MA 02048-1806  
Tel: 508-822-9300  
Fax: 508-822-3288

# AIR Chain-of-Custody - NJ

Date Rec'd in Lab: 6/25/21ALPHA Job# L234405**Client Contact Information****Project Information**

Company: Emilcott Assoc  
Address: 25 B Vreeland Rd, Ste 101  
City/State/Zip: Florham Park NJ 07932  
Phone: 973 538 1110  
FAX:  
Email: dtomsey@emilcott.com

Project Name:

Project No: BONN 0141LTSite/Location: XProject Manager: Peb Bersotti**Analysis Turn-Around Time**

Standard (Specify)

Rush (Specify)

**NJ DEP Information**

Bureau:

Division:

Contract No:

**Report Information - Data Deliverables:** FAX: ADEx Criteria Checker: \_\_\_\_\_ EMail (standard pdf report)**Billing Information** Same as Client Info PO #:of   COCs

Analysis

Matrix

TO-154 responses

EPA 3C

Indoor/Ambient Air

Soil Gals

ALPHA LAB ID (Lab Use Only)	Sample Identification	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field (Hg) (Start)	Canister Pressure in Field (Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Outgoing Canister Pressure (Hg) (Note 1)	Incoming Canister Pressure (Hg) (Note 2)	Flow Reg. ID	Can ID	Can Size (L)	Flow Controller Readout (ml/min) (Note 1)	Batch Cert ID (Note 1)
34405-01	UW - 062321	6/23	7:25	15:21	-29.91	-6.39					01560	1697	6L		
-02	DW1 - 062321	6/23	7:19	15:21	-30.15	-5.65					01565	3140	6L		
-03	DW2 - 062321	6/23	7:15	15:15	-29.63	-4.34					0088	1631	6L		
-04	DW3 - 062321	6/23	7:12	15:11	-33.23	-6.69					01461	2952	6L		
-05	DW4 - 062321	6/23	7:05	15:05	-27.82	-5.55					0909	3151	6L		

Custody Seals: <u>1694</u>	Temperature (Fahrenheit)				Individual Preparing Canister/Containers and Laboratory Canister Certification			
Outgoing Seal No: (refer to crate seal)	Ambient	Maximum	Minimum		Name: <u>Nicole Leproche</u>			
Incoming Seal No: (if applicable)	Start				Signature: <u>[Signature]</u>			
	Stop							
Pressure (inches of Hg)					Footnotes:			
	Ambient	Maximum	Minimum		(1) Refer to equipment tags for these readings. (2) Readings provided in data deliverable package.			
	Start							
	Stop							

Special Instructions/QC Requirements &amp; Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until all ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.
Samples Relinquished by:	Date/Time:	Received by:	Date/Time:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	



## ANALYTICAL REPORT

Lab Number:	L2142399
Client:	EMILCOTT 25B Vreeland Road Suite 101 Florham Park, NJ 07932
ATTN:	Dave Tomsey
Phone:	(973) 538-1110
Project Name:	Not Specified
Project Number:	BOON01412T
Report Date:	08/13/21

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

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

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

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2142399-01	DW1-080621	AIR	X	08/06/21 14:40	08/06/21
L2142399-02	DW2-080621	AIR	X	08/06/21 15:10	08/06/21
L2142399-03	DW3-080621	AIR	X	08/06/21 15:03	08/06/21
L2142399-04	DW4-080621	AIR	X	08/06/21 14:58	08/06/21
L2142399-05	DW5-080621	AIR	X	08/06/21 14:50	08/06/21

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

**NJ DEP Data of Known Quality Protocols**  
**Conformance/Non-Conformance**  
**Summary Questionnaire**

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP Data of Known Quality performance standards?	YES
1a	Were the method specified handling, preservation, and holding time requirements met?	YES
1b	EPH Method: Was the EPH Method conducted without significant modifications (see Section 11.3 of respective DKQ methods)?	N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	YES
3	Were all samples received at an appropriate temperature ( $4 \pm 2^\circ \text{ C}$ )?	N/A
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	YES
5a	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	NO
5b	Were these reporting limits met?	N/A
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	YES
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?	NO

**Note:** For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1a or #1b is "No", the data package does not meet the requirements for "Data of Known Quality".



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

### 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.

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**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

### Case Narrative (continued)

#### NJDEP Volatile Organics in Air

Canisters were released from the laboratory on July 20, 2021. The canister certification results are provided as an addendum.

Any Manual integrations that were performed on the sample(s), as well as on the associated quality control samples, are noted on the individual quantitation reports. A listing of all manual integrations performed and the integration code definitions are provided in the manual integration documentation section of the data package.

Please note: Dilution analysis due to exceedance of the calibration range is not required for Ethanol or Isopropyl Alcohol.

GC column and trap information utilized for the analysis of this sample delivery group is detailed below:

Column Type: Restek RTX-1

Column Length: 60 Meters

Internal diameter: 0.52 mm

Film thickness: 1.00 um

Trap 1: Entech Cold Trap - no packing material

Trap 2: Entech Tenax - 20 cm packing material

Gaseous calibration standards were utilized for system calibration and quality control standards associated with this sample delivery group. These standards were purchased from Linde (formerly Spectra Gases).

Laboratory standard procedure for QC (i.e. method blanks, LCS) and sample analysis is to withdraw a 250 mL aliquot from the canister as the "1X" analysis. For some calibration levels and samples, subsequent dilutions will be performed as needed by decreasing aliquot volumes via the instrumentation, or by performing a dilution using a second canister. Make-up air is not routinely added to canisters prior to sample analysis.

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

### Case Narrative (continued)

L2142399: Terpenes were not detected in the TIC search for these samples.

#### Sample Receipt

The flow controller ID number for the sample designated DW1-080621 (L2142399-01) is listed on the CoC as 1971 but should be 01979

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* Christopher J. Anderson

Title: Technical Director/Representative

Date: 08/13/21

**AIR**



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-01  
 Client ID: DW1-080621  
 Sample Location: X

Date Collected: 08/06/21 14:40  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 08/12/21 19:58  
 Analyst: RY

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Dichlorodifluoromethane	0.45	0.20	--	2	1	--	1
Chloromethane	0.41	0.20	--	0.8	0.4	--	1
Freon-114	ND	0.20	--	ND	1	--	1
Vinyl chloride	ND	0.20	--	ND	0.5	--	1
1,3-Butadiene	ND	0.20	--	ND	0.4	--	1
Bromomethane	ND	0.20	--	ND	0.8	--	1
Chloroethane	ND	0.20	--	ND	0.5	--	1
Ethanol	ND	5.0	--	ND	9	--	1
Vinyl bromide	ND	0.20	--	ND	0.9	--	1
Acetone	3.2	1.0	--	8	2	--	1
Trichlorofluoromethane	0.22	0.20	--	1	1	--	1
Isopropanol	2.0	0.50	--	5	1	--	1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--	1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--	1
Methylene chloride	ND	0.50	--	ND	2	--	1
3-Chloropropene	ND	0.20	--	ND	0.6	--	1
Carbon disulfide	ND	0.20	--	ND	0.6	--	1
Freon-113	ND	0.20	--	ND	2	--	1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--	1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--	1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--	1
2-Butanone	ND	0.50	--	ND	1	--	1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--	1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-01  
 Client ID: DW1-080621  
 Sample Location: X

Date Collected: 08/06/21 14:40  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	0.48	0.20	--	2	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.200	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-01  
 Client ID: DW1-080621  
 Sample Location: X

Date Collected: 08/06/21 14:40  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
<b>Tentatively Identified Compounds</b>					
Cyclotrisiloxane, Hexamethyl-	4.0	NJ	ppbV		1
Methyl Alcohol	2.0	NJ	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	100		60-140



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-02  
 Client ID: DW2-080621  
 Sample Location: X

Date Collected: 08/06/21 15:10  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 08/12/21 21:20  
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.44	0.20	--	2	1	--		1
Chloromethane	0.40	0.20	--	0.8	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	3.6	1.0	--	9	2	--		1
Trichlorofluoromethane	0.22	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-02  
 Client ID: DW2-080621  
 Sample Location: X

Date Collected: 08/06/21 15:10  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.200	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-02  
 Client ID: DW2-080621  
 Sample Location: X

Date Collected: 08/06/21 15:10  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

**Tentatively Identified Compounds**

	Results	Qualifier	Units	RDL	Dilution Factor
Cyclotrisiloxane, Hexamethyl-	1.0	NJ	ppbV		1
Unknown	1.6	J	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	100		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	97		60-140



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-03  
 Client ID: DW3-080621  
 Sample Location: X

Date Collected: 08/06/21 15:03  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 08/12/21 22:00  
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.44	0.20	--	2	1	--		1
Chloromethane	0.41	0.20	--	0.8	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	3.3	1.0	--	8	2	--		1
Trichlorofluoromethane	0.22	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	1.1	0.50	--	4	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-03  
 Client ID: DW3-080621  
 Sample Location: X

Date Collected: 08/06/21 15:03  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Chloroform	ND	0.20	--	ND	1	--		1
Tetrahydrofuran	0.52	0.50	--	2	1	--		1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--		1
n-Hexane	1.3	0.20	--	5	0.7	--		1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--		1
Benzene	ND	0.20	--	ND	0.6	--		1
Carbon tetrachloride	ND	0.20	--	ND	1	--		1
Cyclohexane	ND	0.20	--	ND	0.7	--		1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--		1
Bromodichloromethane	ND	0.20	--	ND	1	--		1
1,4-Dioxane	ND	0.20	--	ND	0.7	--		1
Trichloroethene	ND	0.20	--	ND	1	--		1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--		1
Methyl Methacrylate	ND	0.50	--	ND	2	--		1
Heptane	0.26	0.20	--	1	0.8	--		1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--		1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--		1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--		1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--		1
Toluene	0.24	0.20	--	0.9	0.8	--		1
Dibromochloromethane	ND	0.20	--	ND	2	--		1
1,2-Dibromoethane	ND	0.200	--	ND	2	--		1
Tetrachloroethene	ND	0.20	--	ND	1	--		1
Chlorobenzene	ND	0.20	--	ND	0.9	--		1
Ethylbenzene	ND	0.20	--	ND	0.9	--		1
p/m-Xylene	ND	0.40	--	ND	2	--		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-03  
 Client ID: DW3-080621  
 Sample Location: X

Date Collected: 08/06/21 15:03  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
<b>Tentatively Identified Compounds</b>					
unknown alkane	1.0	J	ppbV		1
unknown alkane	1.6	J	ppbV		1
Cyclotrisiloxane, Hexamethyl-	3.0	NJ	ppbV		1
Pentane, 2,3,4-trimethyl-	1.2	NJ	ppbV		1
Methyl Alcohol	4.1	NJ	ppbV		1
Unknown	1.4	J	ppbV		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-03  
 Client ID: DW3-080621  
 Sample Location: X

Date Collected: 08/06/21 15:03  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

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

Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Units	RDL	Dilution Factor
1,4-Difluorobenzene	100			60-140	
Bromochloromethane	96			60-140	
chlorobenzene-d5	98			60-140	

**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-04  
 Client ID: DW4-080621  
 Sample Location: X

Date Collected: 08/06/21 14:58  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 08/12/21 22:40  
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.48	0.20	--	2	1	--		1
Chloromethane	0.41	0.20	--	0.8	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	3.4	1.0	--	8	2	--		1
Trichlorofluoromethane	0.22	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-04  
 Client ID: DW4-080621  
 Sample Location: X

Date Collected: 08/06/21 14:58  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>							
Chloroform	ND	0.20	--	ND	1	--	1
Tetrahydrofuran	ND	0.50	--	ND	1	--	1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2	--	1
Heptane	0.28	0.20	--	1	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--	1
Toluene	0.20	0.20	--	0.8	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2	--	1
1,2-Dibromoethane	ND	0.200	--	ND	2	--	1
Tetrachloroethene	ND	0.20	--	ND	1	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2	--	1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-04  
 Client ID: DW4-080621  
 Sample Location: X

Date Collected: 08/06/21 14:58  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

**Tentatively Identified Compounds**

	Results	Qualifier	Units	RDL	Dilution Factor
Methyl Alcohol	2.2	NJ	ppbV		1
Unknown	1.3	J	ppbV		1
unknown alkane	1.3	J	ppbV		1
Pentane, 2,3,4-trimethyl-	1.5	NJ	ppbV		1
unknown alkane	1.8	J	ppbV		1

**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-04  
 Client ID: DW4-080621  
 Sample Location: X

Date Collected: 08/06/21 14:58  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

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

Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Units	RDL	Dilution Factor
1,4-Difluorobenzene	101			60-140	
Bromochloromethane	96			60-140	
chlorobenzene-d5	99			60-140	

**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-05  
 Client ID: DW5-080621  
 Sample Location: X

Date Collected: 08/06/21 14:50  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 08/12/21 23:21  
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.44	0.20	--	2	1	--		1
Chloromethane	0.40	0.20	--	0.8	0.4	--		1
Freon-114	ND	0.20	--	ND	1	--		1
Vinyl chloride	ND	0.20	--	ND	0.5	--		1
1,3-Butadiene	ND	0.20	--	ND	0.4	--		1
Bromomethane	ND	0.20	--	ND	0.8	--		1
Chloroethane	ND	0.20	--	ND	0.5	--		1
Ethanol	ND	5.0	--	ND	9	--		1
Vinyl bromide	ND	0.20	--	ND	0.9	--		1
Acetone	3.4	1.0	--	8	2	--		1
Trichlorofluoromethane	0.22	0.20	--	1	1	--		1
Isopropanol	ND	0.50	--	ND	1	--		1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--		1
Tertiary butyl Alcohol	ND	0.50	--	ND	2	--		1
Methylene chloride	ND	0.50	--	ND	2	--		1
3-Chloropropene	ND	0.20	--	ND	0.6	--		1
Carbon disulfide	ND	0.20	--	ND	0.6	--		1
Freon-113	ND	0.20	--	ND	2	--		1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--		1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--		1
2-Butanone	ND	0.50	--	ND	1	--		1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-05  
 Client ID: DW5-080621  
 Sample Location: X

Date Collected: 08/06/21 14:50  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Chloroform	ND	0.20	--	ND	1	--		1
Tetrahydrofuran	0.52	0.50	--	2	1	--		1
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--		1
n-Hexane	0.32	0.20	--	1	0.7	--		1
1,1,1-Trichloroethane	ND	0.20	--	ND	1	--		1
Benzene	ND	0.20	--	ND	0.6	--		1
Carbon tetrachloride	ND	0.20	--	ND	1	--		1
Cyclohexane	ND	0.20	--	ND	0.7	--		1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--		1
Bromodichloromethane	ND	0.20	--	ND	1	--		1
1,4-Dioxane	ND	0.20	--	ND	0.7	--		1
Trichloroethene	ND	0.20	--	ND	1	--		1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--		1
Methyl Methacrylate	ND	0.50	--	ND	2	--		1
Heptane	0.38	0.20	--	2	0.8	--		1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--		1
4-Methyl-2-pentanone	ND	0.50	--	ND	2	--		1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--		1
1,1,2-Trichloroethane	ND	0.20	--	ND	1	--		1
Toluene	0.22	0.20	--	0.8	0.8	--		1
Dibromochloromethane	ND	0.20	--	ND	2	--		1
1,2-Dibromoethane	ND	0.200	--	ND	2	--		1
Tetrachloroethene	ND	0.20	--	ND	1	--		1
Chlorobenzene	ND	0.20	--	ND	0.9	--		1
Ethylbenzene	ND	0.20	--	ND	0.9	--		1
p/m-Xylene	ND	0.40	--	ND	2	--		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-05  
 Client ID: DW5-080621  
 Sample Location: X

Date Collected: 08/06/21 14:50  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>NJ Volatile Organics in Air - Mansfield Lab</b>								
Bromoform	ND	0.20	--	ND	2	--		1
Styrene	ND	0.20	--	ND	0.9	--		1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1	--		1
o-Xylene	ND	0.20	--	ND	0.9	--		1
2-Chlorotoluene	ND	0.20	--	ND	1	--		1
4-Ethyltoluene	ND	0.20	--	ND	1	--		1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1	--		1
1,3-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,4-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2-Dichlorobenzene	ND	0.20	--	ND	1	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1	--		1
Hexachlorobutadiene	ND	0.20	--	ND	2	--		1

**Tentatively Identified Compounds**

	Results	Qualifier	Units	RDL	Dilution Factor
Octane	4.6	NJ	ppbV		1
Hexane, 2,3-dimethyl-	1.2	NJ	ppbV		1
unknown alkane	2.2	J	ppbV		1
Unknown	1.4	J	ppbV		1
unknown alkane	3.7	J	ppbV		1
Pentane, 2,3,4-trimethyl-	3.0	NJ	ppbV		1
unknown alkane	2.4	J	ppbV		1
Silanol, Trimethyl-	1.3	NJ	ppbV		1
Methyl Alcohol	1.7	NJ	ppbV		1
Heptane, 3-methyl-	1.9	NJ	ppbV		1



**Project Name:****Lab Number:**

L2142399

**Project Number:** BOON01412T**Report Date:**

08/13/21

**SAMPLE RESULTS**

Lab ID: L2142399-05  
 Client ID: DW5-080621  
 Sample Location: X

Date Collected: 08/06/21 14:50  
 Date Received: 08/06/21  
 Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Cyclotrisiloxane, Hexamethyl-	2.4	NJ	ppbV		1
unknown alkane	2.3	J	ppbV		1

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

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15  
Analytical Date: 08/12/21 15:16

Parameter	ppbV			ug/m3			Dilution Factor
	Results	RL	MDL	Results	RL	MDL	
<b>NJ Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1534475-4</b>							
Dichlorodifluoromethane	ND	0.20	--	ND	1.	--	1
Chloromethane	ND	0.20	--	ND	0.4	--	1
Freon-114	ND	0.20	--	ND	1.	--	1
Vinyl chloride	ND	0.20	--	ND	0.5	--	1
1,3-Butadiene	ND	0.20	--	ND	0.4	--	1
Bromomethane	ND	0.20	--	ND	0.8	--	1
Chloroethane	ND	0.20	--	ND	0.5	--	1
Ethanol	ND	5.0	--	ND	9	--	1
Vinyl bromide	ND	0.20	--	ND	0.9	--	1
Acetone	ND	1.0	--	ND	2	--	1
Trichlorofluoromethane	ND	0.20	--	ND	1.	--	1
Isopropanol	ND	0.50	--	ND	1.	--	1
1,1-Dichloroethene	ND	0.20	--	ND	0.8	--	1
Tertiary butyl Alcohol	ND	0.50	--	ND	2.	--	1
Methylene chloride	ND	0.50	--	ND	2.	--	1
3-Chloropropene	ND	0.20	--	ND	0.6	--	1
Carbon disulfide	ND	0.20	--	ND	0.6	--	1
Freon-113	ND	0.20	--	ND	2.	--	1
trans-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--	1
1,1-Dichloroethane	ND	0.20	--	ND	0.8	--	1
Methyl tert butyl ether	ND	0.20	--	ND	0.7	--	1
2-Butanone	ND	0.50	--	ND	1.	--	1
cis-1,2-Dichloroethene	ND	0.20	--	ND	0.8	--	1
Chloroform	ND	0.20	--	ND	1.	--	1
Tetrahydrofuran	ND	0.50	--	ND	1.	--	1



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15  
Analytical Date: 08/12/21 15:16

Parameter	ppbV			ug/m3			Dilution Factor
	Results	RL	MDL	Results	RL	MDL	
<b>NJ Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1534475-4</b>							
1,2-Dichloroethane	ND	0.20	--	ND	0.8	--	1
n-Hexane	ND	0.20	--	ND	0.7	--	1
1,1,1-Trichloroethane	ND	0.20	--	ND	1.	--	1
Benzene	ND	0.20	--	ND	0.6	--	1
Carbon tetrachloride	ND	0.20	--	ND	1.	--	1
Cyclohexane	ND	0.20	--	ND	0.7	--	1
1,2-Dichloropropane	ND	0.20	--	ND	0.9	--	1
Bromodichloromethane	ND	0.20	--	ND	1.	--	1
1,4-Dioxane	ND	0.20	--	ND	0.7	--	1
Trichloroethene	ND	0.20	--	ND	1.	--	1
2,2,4-Trimethylpentane	ND	0.20	--	ND	0.9	--	1
Methyl Methacrylate	ND	0.50	--	ND	2.	--	1
Heptane	ND	0.20	--	ND	0.8	--	1
cis-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
4-Methyl-2-pentanone	ND	0.50	--	ND	2.	--	1
trans-1,3-Dichloropropene	ND	0.20	--	ND	0.9	--	1
1,1,2-Trichloroethane	ND	0.20	--	ND	1.	--	1
Toluene	ND	0.20	--	ND	0.8	--	1
Dibromochloromethane	ND	0.20	--	ND	2.	--	1
1,2-Dibromoethane	ND	0.200	--	ND	2.	--	1
Tetrachloroethene	ND	0.20	--	ND	1.	--	1
Chlorobenzene	ND	0.20	--	ND	0.9	--	1
Ethylbenzene	ND	0.20	--	ND	0.9	--	1
p/m-Xylene	ND	0.40	--	ND	2.	--	1
Bromoform	ND	0.20	--	ND	2.	--	1



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15  
Analytical Date: 08/12/21 15:16

Parameter	ppbV			ug/m3			Dilution Factor
	Results	RL	MDL	Results	RL	MDL	
<b>NJ Volatile Organics in Air - Mansfield Lab for sample(s): 01-05 Batch: WG1534475-4</b>							
Styrene	ND	0.20	--	ND	0.9	--	1
1,1,2,2-Tetrachloroethane	ND	0.20	--	ND	1.	--	1
o-Xylene	ND	0.20	--	ND	0.9	--	1
2-Chlorotoluene	ND	0.20	--	ND	1.	--	1
4-Ethyltoluene	ND	0.20	--	ND	1.	--	1
1,3,5-Trimethylbenzene	ND	0.20	--	ND	1.	--	1
1,2,4-Trimethylbenzene	ND	0.20	--	ND	1.	--	1
1,3-Dichlorobenzene	ND	0.20	--	ND	1.	--	1
1,4-Dichlorobenzene	ND	0.20	--	ND	1.	--	1
1,2-Dichlorobenzene	ND	0.20	--	ND	1.	--	1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1	--	1
Hexachlorobutadiene	ND	0.20	--	ND	2.	--	1

	Results	Qualifier	Units	RDL	Dilution Factor
<b>Tentatively Identified Compounds</b>					
No Tentatively Identified Compounds					



# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1534475-3								
Dichlorodifluoromethane	86		-		40-160	-		
Chloromethane	83		-		70-130	-		
Freon-114	87		-		70-130	-		
Vinyl chloride	92		-		70-130	-		
1,3-Butadiene	93		-		70-130	-		
Bromomethane	110		-		70-130	-		
Chloroethane	98		-		70-130	-		
Ethanol	80		-		40-160	-		
Vinyl bromide	97		-		70-130	-		
Acetone	82		-		40-160	-		
Trichlorofluoromethane	110		-		70-130	-		
Isopropanol	84		-		40-160	-		
1,1-Dichloroethene	99		-		70-130	-		
Tertiary butyl Alcohol	84		-		70-130	-		
Methylene chloride	97		-		70-130	-		
3-Chloropropene	100		-		70-130	-		
Carbon disulfide	84		-		70-130	-		
Freon-113	96		-		70-130	-		
trans-1,2-Dichloroethene	100		-		70-130	-		
1,1-Dichloroethane	100		-		70-130	-		
Methyl tert butyl ether	100		-		70-130	-		
2-Butanone	110		-		70-130	-		
cis-1,2-Dichloroethene	110		-		70-130	-		

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1534475-3								
Chloroform	110		-		70-130	-		
Tetrahydrofuran	110		-		70-130	-		
1,2-Dichloroethane	120		-		70-130	-		
n-Hexane	100		-		70-130	-		
1,1,1-Trichloroethane	110		-		70-130	-		
Benzene	93		-		70-130	-		
Carbon tetrachloride	110		-		70-130	-		
Cyclohexane	100		-		70-130	-		
1,2-Dichloropropane	100		-		70-130	-		
Bromodichloromethane	110		-		70-130	-		
1,4-Dioxane	110		-		40-160	-		
Trichloroethene	110		-		70-130	-		
2,2,4-Trimethylpentane	100		-		70-130	-		
Methyl Methacrylate	77		-		40-160	-		
Heptane	110		-		70-130	-		
cis-1,3-Dichloropropene	99		-		70-130	-		
4-Methyl-2-pentanone	110		-		70-130	-		
trans-1,3-Dichloropropene	88		-		70-130	-		
1,1,2-Trichloroethane	100		-		70-130	-		
Toluene	95		-		70-130	-		
Dibromochloromethane	100		-		70-130	-		
1,2-Dibromoethane	86		-		70-130	-		
Tetrachloroethene	89		-		70-130	-		

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 Batch: WG1534475-3								
Chlorobenzene	90		-		70-130	-		
Ethylbenzene	94		-		70-130	-		
p/m-Xylene	95		-		70-130	-		
Bromoform	88		-		70-130	-		
Styrene	83		-		70-130	-		
1,1,2,2-Tetrachloroethane	98		-		70-130	-		
o-Xylene	96		-		70-130	-		
2-Chlorotoluene	78		-		70-130	-		
4-Ethyltoluene	86		-		70-130	-		
1,3,5-Trimethylbenzene	84		-		70-130	-		
1,2,4-Trimethylbenzene	87		-		70-130	-		
1,3-Dichlorobenzene	83		-		70-130	-		
1,4-Dichlorobenzene	85		-		70-130	-		
1,2-Dichlorobenzene	85		-		70-130	-		
1,2,4-Trichlorobenzene	85		-		40-160	-		
Hexachlorobutadiene	83		-		40-160	-		

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1534475-5 QC Sample: L2142399-01 Client ID: DW1-080621						
Dichlorodifluoromethane	0.45	0.45	ppbV	0		25
Chloromethane	0.41	0.40	ppbV	2		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	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	ND	ND	ppbV	NC		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	3.2	3.1	ppbV	3		25
Trichlorofluoromethane	0.22	0.22	ppbV	0		25
Isopropanol	2.0	2.0	ppbV	0		25
1,1-Dichloroethene	ND	ND	ppbV	NC		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:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1534475-5 QC Sample: L2142399-01 Client ID: DW1-080621						
2-Butanone	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	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	0.48	0.46	ppbV	4		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	ND	ND	ppbV	NC		25
Carbon tetrachloride	ND	ND	ppbV	NC		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
Trichloroethene	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Methyl Methacrylate	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

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
NJ Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1534475-5 QC Sample: L2142399-01 Client ID: DW1-080621						
Toluene	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		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	ND	ND	ppbV	NC		25
2-Chlorotoluene	ND	ND	ppbV	NC		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
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

Project Name:

Serial\_No:08132113:15

Project Number: BOON01412T

Lab Number: L2142399

Report Date: 08/13/21

**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 Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2142399-01	DW1-080621	01511	Flow 4	07/20/21	358659		-	-	-	Pass	10.0	9.8	2
L2142399-01	DW1-080621	1979	6.0L Can	07/20/21	358659	L2138213-04	Pass	-29.3	-8.8	-	-	-	-
L2142399-02	DW2-080621	01809	Flow 3	07/20/21	358659		-	-	-	Pass	10.0	9.4	6
L2142399-02	DW2-080621	2287	6.0L Can	07/20/21	358659	L2138213-04	Pass	-29.3	-4.7	-	-	-	-
L2142399-03	DW3-080621	01608	Flow 4	07/20/21	358659		-	-	-	Pass	10.0	9.3	7
L2142399-03	DW3-080621	1969	6.0L Can	07/20/21	358659	L2138213-04	Pass	-28.2	-8.4	-	-	-	-
L2142399-04	DW4-080621	01796	Flow 4	07/20/21	358659		-	-	-	Pass	10.0	9.9	1
L2142399-04	DW4-080621	3393	6.0L Can	07/20/21	358659	L2138213-04	Pass	-29.3	-7.8	-	-	-	-
L2142399-05	DW5-080621	0634	Flow 4	07/20/21	358659		-	-	-	Pass	10.0	9.8	2
L2142399-05	DW5-080621	998	6.0L Can	07/20/21	358659	L2138213-05	Pass	-29.1	-9.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID:	L2138213-04	Date Collected:	07/15/21 16:00
Client ID:	CAN 767 SHELF 47	Date Received:	07/16/21
Sample Location:		Field Prep:	Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/16/21 19:14  
 Analyst: TS

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



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-04 Date Collected: 07/15/21 16:00  
 Client ID: CAN 767 SHELF 47 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
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
Xylenes, total	ND	0.600	--	ND	0.869	--		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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

**Air Canister Certification Results**

Lab ID: L2138213-04 Date Collected: 07/15/21 16:00  
 Client ID: CAN 767 SHELF 47 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-04 Date Collected: 07/15/21 16:00  
 Client ID: CAN 767 SHELF 47 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-04 Date Collected: 07/15/21 16:00  
 Client ID: CAN 767 SHELF 47 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	
--	---------	-----------	-------	-----	--

Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	94		60-140

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID:	L2138213-04	Date Collected:	07/15/21 16:00
Client ID:	CAN 767 SHELF 47	Date Received:	07/16/21
Sample Location:		Field Prep:	Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/16/21 19:14  
 Analyst: TS

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
Dichlorodifluoromethane	ND	0.200	--	0.989	--		1
Chloromethane	ND	0.200	--	0.413	--		1
Freon-114	ND	0.050	--	0.349	--		1
Vinyl chloride	ND	0.020	--	0.051	--		1
1,3-Butadiene	ND	0.020	--	0.044	--		1
Bromomethane	ND	0.020	--	0.078	--		1
Chloroethane	ND	0.100	--	0.264	--		1
Acrolein	ND	0.050	--	0.115	--		1
Acetone	ND	1.00	--	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	0.281	--		1
Acrylonitrile	ND	0.500	--	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	0.079	--		1
Methylene chloride	ND	0.500	--	1.74	--		1
Freon-113	ND	0.050	--	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	0.721	--		1
2-Butanone	ND	0.500	--	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
Chloroform	ND	0.020	--	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	0.109	--		1
Benzene	ND	0.100	--	0.319	--		1
Carbon tetrachloride	ND	0.020	--	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-04 Date Collected: 07/15/21 16:00  
 Client ID: CAN 767 SHELF 47 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--	1
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-Trimethylbenzene	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



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-04 Date Collected: 07/15/21 16:00  
 Client ID: CAN 767 SHELF 47 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
sec-Butylbenzene	ND	0.200	--	ND	1.10	--	1
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	90		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 07/16/21 19:54  
 Analyst: TS

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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
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
Xylenes, total	ND	0.600	--	ND	0.869	--		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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	
--	---------	-----------	-------	-----	--

Tentatively Identified Compounds

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	94		60-140

Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID:	L2138213-05	Date Collected:	07/15/21 16:00
Client ID:	CAN 1864 SHELF 48	Date Received:	07/16/21
Sample Location:		Field Prep:	Not Specified

Sample Depth:

Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/16/21 19:54  
 Analyst: TS

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
Dichlorodifluoromethane	ND	0.200	--	0.989	--		1
Chloromethane	ND	0.200	--	0.413	--		1
Freon-114	ND	0.050	--	0.349	--		1
Vinyl chloride	ND	0.020	--	0.051	--		1
1,3-Butadiene	ND	0.020	--	0.044	--		1
Bromomethane	ND	0.020	--	0.078	--		1
Chloroethane	ND	0.100	--	0.264	--		1
Acrolein	ND	0.050	--	0.115	--		1
Acetone	ND	1.00	--	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	0.281	--		1
Acrylonitrile	ND	0.500	--	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	0.079	--		1
Methylene chloride	ND	0.500	--	1.74	--		1
Freon-113	ND	0.050	--	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	0.721	--		1
2-Butanone	ND	0.500	--	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	0.079	--		1
Chloroform	ND	0.020	--	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	0.109	--		1
Benzene	ND	0.100	--	0.319	--		1
Carbon tetrachloride	ND	0.020	--	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--	1
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-Trimethylbenzene	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



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L2138213

Project Number: CANISTER QC BAT

Report Date: 08/13/21

## Air Canister Certification Results

Lab ID: L2138213-05 Date Collected: 07/15/21 16:00  
 Client ID: CAN 1864 SHELF 48 Date Received: 07/16/21  
 Sample Location: Field Prep: Not Specified

Sample Depth:

Parameter	Results	ppbV		ug/m3		Qualifier	Dilution Factor
		RL	MDL	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>							
sec-Butylbenzene	ND	0.200	--	ND	1.10	--	1
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	90		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	91		60-140

**Project Name:** Not Specified  
**Project Number:** BOON01412T

Serial\_No:08132113:15  
**Lab Number:** L2142399  
**Report Date:** 08/13/21

### **Sample Receipt and Container Information**

Were project specific reporting limits specified? NO

#### **Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
N/A	Present/Intact

#### **Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2142399-01A	Canister - 6 Liter	N/A	NA			Y	Absent		NJ-TO15(30)
L2142399-02A	Canister - 6 Liter	N/A	NA			Y	Absent		NJ-TO15(30)
L2142399-03A	Canister - 6 Liter	N/A	NA			Y	Absent		NJ-TO15(30)
L2142399-04A	Canister - 6 Liter	N/A	NA			Y	Absent		NJ-TO15(30)
L2142399-05A	Canister - 6 Liter	N/A	NA			Y	Absent		NJ-TO15(30)

\*Values in parentheses indicate holding time in days

**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

## GLOSSARY

### **Acronyms**

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

**Report Format:** Data Usability Report



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

#### Footnotes

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

#### Terms

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

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

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

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

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

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

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

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

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

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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

**Report Format:** Data Usability Report



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

**Data Qualifiers**

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*



**Project Name:** Not Specified  
**Project Number:** BOON01412T

**Lab Number:** L2142399  
**Report Date:** 08/13/21

## 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 its 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

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

**Westborough Facility**

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine. SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**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

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**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**, **SM4500CI-D**, **SM2320B**, **SM2540C**, **SM4500H-B**, **SM4500NO2-B**

EPA 332: Perchlorate; **EPA 524.2**: THMs and VOCs; **EPA 504.1**: EDB, DBCP.

**Microbiology**: **SM9215B**; **SM9223-P/A**, **SM9223B-Colilert-QT**, **SM9222D**.

**Non-Potable Water**

**SM4500H,B**, **EPA 120.1**, **SM2510B**, **SM2540C**, **SM2320B**, **SM4500CL-E**, **SM4500F-BC**, **SM4500NH3-BH**: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1**, **SM4500NO3-F**, **EPA 353.2**: Nitrate-N, **SM4500P-E**, **SM4500P-B**, **E**, **SM4500SO4-E**, **SM5220D**, **EPA 410.4**, **SM5210B**, **SM5310C**, **SM4500CL-D**, **EPA 1664**, **EPA 420.1**, **SM4500-CN-CE**, **SM2540D**, **EPA 300**: Chloride, Sulfate, Nitrate.

**EPA 624.1**: Volatile Halocarbons & Aromatics,

**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

**Microbiology**: **SM9223B-Colilert-QT**; **Enterolert-QT**, **SM9221E**, **EPA 1600**, **EPA 1603**, **SM9222D**.

**Mansfield Facility:**

**Drinking Water**

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

**Non-Potable Water**

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, 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**

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



# Alpha Analytical

320 Forbes Blvd  
Mansfield, MA 02048-1806  
Tel: 508-822-9300  
Fax: 508-822-3288

# AIR Chain-of-Custody - NJ

Date Rec'd in Lab

8/6/21

ALPHA Job# L2142399

Client Contact Information		Project Information		NJ DEP Information										of COCs					
Company: <i>Emilcoff</i>	Project Name:	Bureau:	Division:	Contract No:								Analysis	Matrix						
Address: <i>25 BVreeland Rd Ste 101</i>	Project No: <i>BOON 04121T</i>	Site/Location:		<b>Report Information - Data Deliverables:</b>															
City/State/Zip: <i>Florham Park NJ 07932</i>	Project Manager: <i>DEB BADSOTTI</i>			<input type="checkbox"/> FAX:															
Phone: <i>973 538 1110</i>				<input type="checkbox"/> ADEx	<input type="checkbox"/> Criteria Checker: _____														
FAX: _____				<input type="checkbox"/> Email (standard pdf report)															
Email: <i>dlondono@emilcoff.com</i>				<b>Analysis Turn-Around Time</b>															
Site Contact: _____	Standard (Specify): <i>Same as Client Info</i>			<b>Billing Information</b>															
Site Contact Phone: _____	Rush (Specify): <i>Same as Client Info</i>			<input checked="" type="checkbox"/> Same as Client Info PO #: _____															
ALPHA LAB ID (Lab Use Only)	Sample Identification	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Held (Hg) (Start)	Canister Pressure in Field (Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Outgoing Canister Pressure (Hg) (Note 1)	Incoming Canister Pressure (Hg) (Note 2)	Flow Reg. ID	Can ID	Can Size (L)	Flow Controller Readout (In/Min) (Note 1)	Batch Cert ID (Note 1)	TO-15	EPA 3C	Indoor / Ambient Air	Soil Gas
42399-01	DW1-080621	8/6	7:10	14:40	-29.53						01511	1971	6			X			
02	DW2-DW4 - 080621	8/6	7:25	15:10	-29.98						01809	2287	6			X			
03	DW3-DW5 - 080621	8/6	7:18	15:03	-28.7						01608	1969	6			X			
04	DW4 - 080621	8/6	7:46	14:58	-28.04						01796	3393	6			X			
05	DW5 - 080621	8/6	7:13	14:50	-29.60						0634	998	6			X			
Custody Seals:		Temperature (Fahrenheit)										Individual Preparing Canister/Containers and Laboratory Canister Certification							
Outgoing Seal No: <i>1790</i> (refer to mate seal)		Ambient	Maximum	Minimum									Name: <i>Nick LaPrestre</i>						
Incoming Seal No: _____ (Applicable)		Start											Signature: <i>[Signature]</i>						
		Stop																	
		Pressure (inches of Hg)										Footnotes: (1) Refer to equipment tags for these readings. (2) Readings provided in data deliverable package.							
		Ambient	Maximum	Minimum															
		Start																	
		Stop																	
Special Instructions/QC Requirements & Comments:																			

Canisters Shipped by:

Date/Time:

Canisters Received by:

Date/Time:

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

Samples Relinquished by:

Date/Time:

Received by:

Date/Time:

Relinquished by:

Date/Time: *08/06/21 16:004:00:00*Received by: *DL (AL)*Date/Time: *8/6/21 1645*

Relinquished by:

Date/Time: *8/6/21 1830*

Received by:

Date/Time:

**Appendix B: Station Location Map**

Sample Location Map  
Old Denville Rd.  
Boonton Twp.

