Vapor Mitigation System Evaluation

325-327 Park Avenue
Mechanicville, New York

July 20, 2018

Prepared by:

Alpine Environmental Services, Inc.
438 New Karner Road
Albany, New York 12205

Project:
18-22535-R

Introduction

Alpine Environmental Services, Inc. (Alpine) performed a vapor mitigation system effectiveness evaluation for a vapor mitigation system operating in two attached residential apartment units. The building is located at 325 and 327 Park Avenue, Mechanicville, New York, the Subject Property (SP). The Subject Property consists of a single building, divided into 2 residential apartment units, constructed slab-on-grade. The SP is identified in Figure 1 (attached).

The SP building was reportedly a former dry cleaning facility which was converted to an office building in approximately 2007. At that time, Alpine was contracted to install a sub slab depressurization (SSD) vapor mitigation system into the building to reduce the potential for occupant exposure to chlorinated volatile organic compounds (cVOCs) from the ground.

The use for the building was recently changed into two residential dwellings, which required the movement of several of the vapor mitigation system extraction points. This change prompted the New York Department of Environmental Conservation (DEC) to require an evaluation of the effectiveness of the vapor mitigation system operating at the SP.

Scope of Work

To evaluate the effectiveness of the vapor mitigation system, following the modifications by Starrbuilt Custom Homes LLC, Alpine performed two types of tests. The first was Sub Slab Vacuum Testing. This involved drilling several 1/2" holes through the concrete floor at representative locations. The vacuum created under the floor slab with respect to the room, was measured with a micro manometer and deemed acceptable if meeting the minimum acceptable vacuum of -1 Pascal or -0.004 inches of water column ("WC).

The second type of test was Indoor Air Quality Testing. Air quality testing was performed in accordance with the New York State Department of Health, Guidance for Evaluating Soil Vapor Intrusion in the State of New York (DOH VI Guide).

The indoor air sampling included two types of samples:

1. Indoor Air Quality Samples
2. Outside the Building Reference Sample or Ambient Sample.

Sample locations included:

1. The living room of each the apartments at 325 and 327 Park Avenue.
2. One sample outside the building, adjacent to the door of 325 Park Avenue as an ambient reference.

The potential influence of chemicals stored and/or used within the building on the test results must also be considered. This includes chemicals used for cleaning and maintenance at the SP building. A review of the chemicals stored and used at the building was performed to identify chemicals that have the potential to influence the test results. Chemical storage at the time of testing was typical residential cleaning chemicals. No leaks were observed from in the containers.

An additional consideration is that both apartment units were recently renovated and many of the interior finishings are new. New construction finishes (ie paints, glues, fiberboard, etc.) often release VOCs into the air, the emanation rate of which generally reduces over time, but may affect the wide range of compounds tested for in a TO-15 test. Therefore, non chlorinated VOCs were not considered in this evaluation, due to the likely interference by new building products.

Chlorinated VOCs commonly associated with dry cleaning and the degradation products of those chemicals include:

-tetrachloroethylene (PCE)
-trichloroethylene (TCE)
-111, trichloroethane (TCA)
-cis-1,2 dichloroethene (cis-1,2-DCE)
-1,1 dichloroethene (1,1-DCE)
-vinyl chloride
-carbon tetrachloride

The preceding list of compounds, the target compounds, is included in the evaluation matrices in the DOH VI Guide and were evaluated for this site from vapor intrusion potential.

Samples were collected in 6 liter stainless steel summa canisters over a time integral of approximately twenty hours using timed flow controllers. Samples were analyzed via EPA Method TO-15 by Alpha Analytical, a NYS DOH ELAP Certified laboratory for EPA Method TO-15 for Volatile Organic Compounds (VOCs). Samples were collected on June 20, 2018 at approximately 11AM until June 21, 2018 at approximately 11AM.

The laboratory data underwent third party data validation by Data Validation Services of North Creek, New York. Data validation made one minor correction to a non target compound in two samples.

Limitations

- The New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in New York State indicates sampling should be performed during the heating season, approximately November 15 to March 15. Due to time

constraints, it was necessary to perform the sampling outside of the heating season.

- No Phase II ESA, evaluation, or investigation can eliminate all uncertainty. Furthermore, any sample, taken for chemical testing may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process, and even when exercised in accordance with objective scientific principles, uncertainty is inevitable. Additional assessment beyond that which was reasonably undertaken may reduce the uncertainty.
- Conclusions are based on professional judgment and should not be concluded to be scientific certainties.

Results of Testing

Laboratory results indicate two of the target cVOCs were detected in both of the indoor air samples and in the outside ambient reference sample. The laboratory results are attached in Appendix A and are summarized in TABLE 1 below.

One of the target compounds, carbon tetrachloride, was detected at a similar concentration in all three samples, between 0.396 and 0.403 ug/m^3, suggesting a localized background level.

The second target compound detected in all three samples was tetrachloroethylene, at levels well below the Decision Matrix Action level.

TABLE 1: Summary of Sample Results

		325 Park Ave, LR	327 Park Ave, LR	Outside Ambient	NYS DOH Matrix Action Level
Sample ID:		**L1823528-02**	**L1823528-01**	**L1823528-03**	
tetrachloroethylene (PCE)	ug/m^3	0.325	1.51	0.136	10
trichloroethylene (TCE)	ug/m^3	ND	ND	ND	1
trichloroethane (TCA)	ug/m^3	ND	ND	ND	10
cis-1,2 dichloroethene (cis-1,2-DCE)	ug/m^3	ND	ND	ND	1
1,1 dichloroethene (1,1-DCE)	ug/m^3	ND	ND	ND	1
vinyl chloride	ug/m^3	ND	ND	ND	0.2
carbon tetrachloride	ug/m^3	0.396	0.396	0.403	1

Notes: All results are shown in micro grams per meter cubed (ug/m^3)

ND - None Detect

c - Carcinogenic risk concentration

Bold indicates level exceeds the DOH VI Guide in Indoor Air Matrix Action level.

Conclusion

Following a change in use of a former dry cleaning building to residential apartments, an evaluation of the effectiveness of the active sub slab depressurization vapor mitigation system was performed. This evaluation included sub slab vacuum testing and indoor air quality testing. Results of the sub slab vacuum testing were found to be acceptable to demonstrate full slab depressurization. Results of indoor air tests identified two target compounds, carbon tetrachloride, and tetrachloroethylene, in the indoor and outdoor air, all were below the action level in the New York State Department of Health, Guidance for Evaluating Soil Vapor Intrusion in the State of New York decision matrix for the respective target compounds.

ALPINE ENVIRONMENTAL SERVICES, INC.

Mark Schnitzer, P.E.
Environmental Engineer

References

New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in NY State (2006; 2017 Matrix Revision)

enc:
Figure(s): Figure 1: Subject Building Location
Appendix A: Vacuum Test Diagram and Results
Appendix B: Laboratory Results (Alpha Analytical)
Appendix C: Data Validation

FIGURES

Figure 1: Site Location

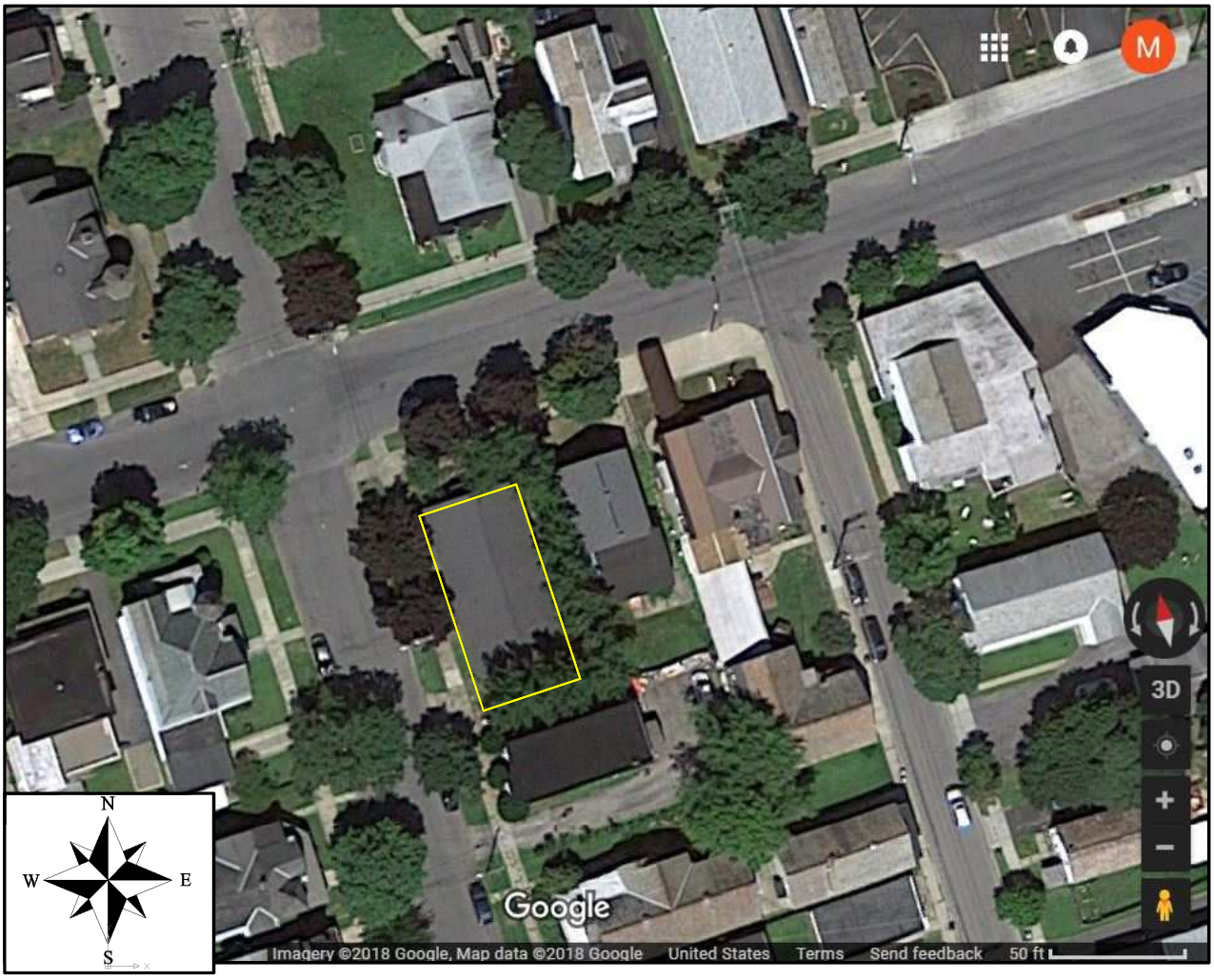


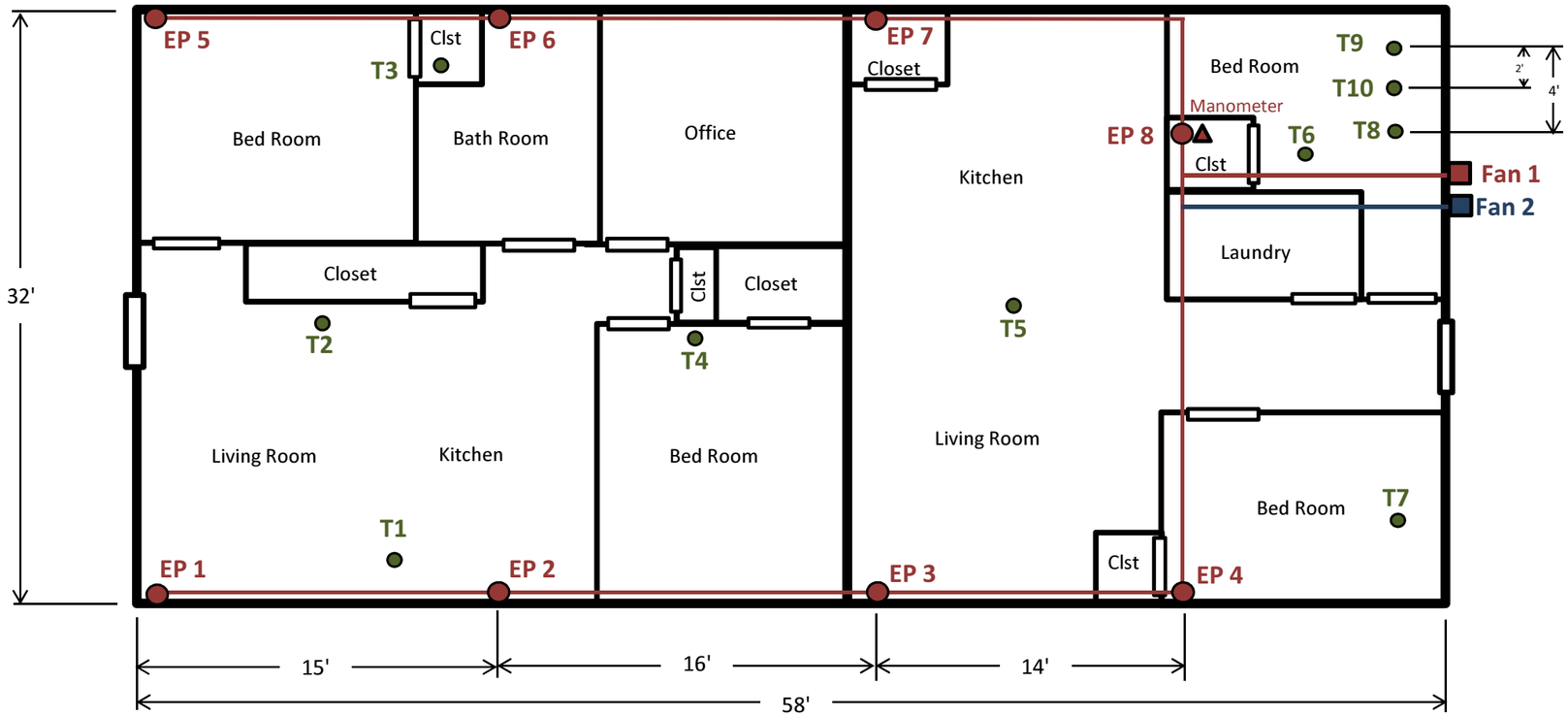
FIGURE – 1 Subject Building: 325-327 Park Avenue, Mechanicville, New York

Subject Property: 325-327 Park Avenue, Mechanicville, NY
Date July 2018

Alpine Inc.
ENVIRONMENTAL SERVICES

Appendix A:

Sub Slab Vacuum Testing Results



Testing Location	Inches WC	
	May 30, 2007	April 30, 2018
T1	-0.012	-0.014
T2	-0.017	-0.018
T3	-0.008	-0.016
T4	-0.027	-0.015
T5	-0.039	-0.031
T6	SAI	SAI
T7	NT	-0.016
T8	NT	-0.014
T9	-0.015	0.000
T10	NT	-0.015

NT- Not Tested
SAI- Suspected Anomoly Interference, additional nearby test holes added, test disregarded

Fan	Model	Pressure
1	GP501	-1.4
2	Building owner installed	

Alpine Inc. ENVIRONMENTAL SERVICES

DATE: May 30, 2018

Starr Built LLC
325-327 Park Ave.
Mechanicville, New York

DESCRIPTION	DATE:
Final	May 30, 2018

PROJECT NO. **18-22535-R**

SHEET NO.

V - 1

SHEET TITLE	VAPOR MITIGATION SYSTEM VACUUM TEST RESULTS		
DRAWN BY	PAS	CHECKED BY	MS

Appendix B:
Laboratory Results

ANALYTICAL REPORT

Lab Number:	L1823528
Client:	Alpine Environmental 438 New Karner Road Albany, NY 12205
ATTN:	Mark Schnitzer
Phone:	(518) 250-4047
Project Name:	STARRBUILT
Project Number:	18-22535-R
Report Date:	06/28/18

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

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

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1823528-01	01_327 PARK LR	AIR	325 PARK AVE., MECHANICVILLE, NY	06/21/18 10:54	06/21/18
L1823528-02	02_325 PARK LR	AIR	325 PARK AVE., MECHANICVILLE, NY	06/21/18 10:58	06/21/18
L1823528-03	03 OUTSIDE REF.	AIR	325 PARK AVE., MECHANICVILLE, NY	06/21/18 11:00	06/21/18

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

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

Please contact Client Services at 800-624-9220 with any questions.

Project Name: STARRBUILT **Lab Number:** L1823528
Project Number: 18-22535-R **Report Date:** 06/28/18

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 19, 2018. The canister certification results are provided as an addendum.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 06/28/18

AIR

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-01
Client ID: 01_327 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:54
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/27/18 21:01
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.411	0.200	--	2.03	0.989	--		1
Chloromethane	0.768	0.200	--	1.59	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	446	5.00	--	840	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	121	1.00	--	287	2.38	--		1
Trichlorofluoromethane	0.220	0.200	--	1.24	1.12	--		1
iso-Propyl Alcohol	61.2	0.500	--	150	1.23	--		1
tert-Butyl Alcohol	3.34	0.500	--	10.1	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	15.2	0.500	--	44.8	1.47	--		1
Ethyl Acetate	9.06	0.500	--	32.6	1.80	--		1
Chloroform	2.48	0.200	--	12.1	0.977	--		1
Tetrahydrofuran	1.60	0.500	--	4.72	1.47	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-01
Client ID: 01_327 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:54
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	0.211	0.200	--	0.854	0.809	--		1
n-Hexane	0.501	0.200	--	1.77	0.705	--		1
Benzene	0.237	0.200	--	0.757	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.532	0.200	--	2.18	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	1.00	0.500	--	4.10	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	4.46	0.200	--	16.8	0.754	--		1
2-Hexanone	0.321	0.200	--	1.32	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	2.19	0.200	--	9.51	0.869	--		1
p/m-Xylene	6.58	0.400	--	28.6	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	2.81	0.200	--	12.0	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	2.95	0.200	--	12.8	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-01
Client ID: 01_327 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:54
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.701	0.200	--	3.45	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	82		60-140
Bromochloromethane	85		60-140
chlorobenzene-d5	82		60-140

Project Name: STARRBUILT
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Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:54
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 21:01
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.063	0.020	--	0.396	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.222	0.020	--	1.51	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	84		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	79		60-140

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-02
Client ID: 02_325 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:58
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/27/18 21:36
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.485	0.200	--	2.40	0.989	--		1
Chloromethane	0.736	0.200	--	1.52	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	45.1	5.00	--	85.0	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	108	1.00	--	257	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	14.8	0.500	--	36.4	1.23	--		1
tert-Butyl Alcohol	4.79	0.500	--	14.5	1.52	--		1
Methylene chloride	0.546	0.500	--	1.90	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	14.6	0.500	--	43.1	1.47	--		1
Ethyl Acetate	4.80	0.500	--	17.3	1.80	--		1
Chloroform	0.317	0.200	--	1.55	0.977	--		1
Tetrahydrofuran	2.00	0.500	--	5.90	1.47	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-02
Client ID: 02_325 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:58
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.237	0.200	--	0.835	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	0.293	0.200	--	1.01	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.514	0.200	--	2.11	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	1.16	0.500	--	4.75	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	3.40	0.200	--	12.8	0.754	--		1
2-Hexanone	0.477	0.200	--	1.95	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	1.59	0.200	--	6.91	0.869	--		1
p/m-Xylene	5.74	0.400	--	24.9	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	2.26	0.200	--	9.62	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	2.68	0.200	--	11.6	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-02
Client ID: 02_325 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:58
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.524	0.200	--	2.58	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	82		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	81		60-140

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-02
Client ID: 02_325 PARK LR
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 10:58
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 21:36
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.063	0.020	--	0.396	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.048	0.020	--	0.325	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	84		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	78		60-140

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-03
Client ID: 03 OUTSIDE REF.
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 11:00
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/27/18 20:26
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.443	0.200	--	2.19	0.989	--		1
Chloromethane	0.555	0.200	--	1.15	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	3.70	1.00	--	8.79	2.38	--		1
Trichlorofluoromethane	0.215	0.200	--	1.21	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
tert-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
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-03
Client ID: 03 OUTSIDE REF.
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 11:00
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.413	0.200	--	1.56	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-03
Client ID: 03 OUTSIDE REF.
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 11:00
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	81		60-140
Bromochloromethane	85		60-140
chlorobenzene-d5	78		60-140

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

SAMPLE RESULTS

Lab ID: L1823528-03
Client ID: 03 OUTSIDE REF.
Sample Location: 325 PARK AVE., MECHANICVILLE, NY

Date Collected: 06/21/18 11:00
Date Received: 06/21/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 20:26
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.064	0.020	--	0.403	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.020	0.020	--	0.136	0.136	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	83		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	76		60-140

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/27/18 17:45

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1130414-4								
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
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
Ethyl Alcohol	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
iso-Propyl Alcohol	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
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/27/18 17:45

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1130414-4								
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
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
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
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Tertiary-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/27/18 17:45

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1130414-4								
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

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/27/18 17:45

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1130414-4								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-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 (C10)	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 (C12)	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/27/18 17:45

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1130414-4								
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: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 18:20

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1130418-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
tert-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
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 18:20

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1130418-4								
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
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
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	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
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 18:20

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1130418-4								
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
1,2,3-Trichloropropane	ND	0.020	--	ND	0.121	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		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
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

Project Name: STARRBUILT
Project Number: 18-22535-R
Lab Number: L1823528
Report Date: 06/28/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 06/27/18 18:20

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1130418-4								
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130414-3								
Chlorodifluoromethane	88		-		70-130	-		
Propylene	99		-		70-130	-		
Propane	78		-		70-130	-		
Dichlorodifluoromethane	98		-		70-130	-		
Chloromethane	92		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	99		-		70-130	-		
Methanol	82		-		70-130	-		
Vinyl chloride	94		-		70-130	-		
1,3-Butadiene	104		-		70-130	-		
Butane	83		-		70-130	-		
Bromomethane	97		-		70-130	-		
Chloroethane	94		-		70-130	-		
Ethyl Alcohol	86		-		70-130	-		
Dichlorofluoromethane	88		-		70-130	-		
Vinyl bromide	101		-		70-130	-		
Acrolein	94		-		70-130	-		
Acetone	79		-		70-130	-		
Acetonitrile	88		-		70-130	-		
Trichlorofluoromethane	98		-		70-130	-		
iso-Propyl Alcohol	74		-		70-130	-		
Acrylonitrile	93		-		70-130	-		
Pentane	86		-		70-130	-		
Ethyl ether	86		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130414-3								
1,1-Dichloroethene	96		-		70-130	-		
tert-Butyl Alcohol	84		-		70-130	-		
Methylene chloride	97		-		70-130	-		
3-Chloropropene	100		-		70-130	-		
Carbon disulfide	97		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	100		-		70-130	-		
trans-1,2-Dichloroethene	96		-		70-130	-		
1,1-Dichloroethane	96		-		70-130	-		
Methyl tert butyl ether	102		-		70-130	-		
Vinyl acetate	96		-		70-130	-		
2-Butanone	93		-		70-130	-		
cis-1,2-Dichloroethene	97		-		70-130	-		
Ethyl Acetate	106		-		70-130	-		
Chloroform	99		-		70-130	-		
Tetrahydrofuran	92		-		70-130	-		
2,2-Dichloropropane	90		-		70-130	-		
1,2-Dichloroethane	93		-		70-130	-		
n-Hexane	91		-		70-130	-		
Isopropyl Ether	88		-		70-130	-		
Ethyl-Tert-Butyl-Ether	83		-		70-130	-		
1,1,1-Trichloroethane	89		-		70-130	-		
1,1-Dichloropropene	91		-		70-130	-		
Benzene	88		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130414-3								
Carbon tetrachloride	89		-		70-130	-		
Cyclohexane	92		-		70-130	-		
Tertiary-Amyl Methyl Ether	85		-		70-130	-		
Dibromomethane	84		-		70-130	-		
1,2-Dichloropropane	91		-		70-130	-		
Bromodichloromethane	93		-		70-130	-		
1,4-Dioxane	97		-		70-130	-		
Trichloroethene	96		-		70-130	-		
2,2,4-Trimethylpentane	93		-		70-130	-		
Methyl Methacrylate	**68**	Q	-		70-130	-		
Heptane	89		-		70-130	-		
cis-1,3-Dichloropropene	98		-		70-130	-		
4-Methyl-2-pentanone	90		-		70-130	-		
trans-1,3-Dichloropropene	82		-		70-130	-		
1,1,2-Trichloroethane	94		-		70-130	-		
Toluene	101		-		70-130	-		
1,3-Dichloropropane	98		-		70-130	-		
2-Hexanone	100		-		70-130	-		
Dibromochloromethane	110		-		70-130	-		
1,2-Dibromoethane	104		-		70-130	-		
Butyl Acetate	98		-		70-130	-		
Octane	96		-		70-130	-		
Tetrachloroethene	108		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130414-3								
1,1,1,2-Tetrachloroethane	97		-		70-130	-		
Chlorobenzene	105		-		70-130	-		
Ethylbenzene	102		-		70-130	-		
p/m-Xylene	102		-		70-130	-		
Bromoform	110		-		70-130	-		
Styrene	104		-		70-130	-		
1,1,2,2-Tetrachloroethane	108		-		70-130	-		
o-Xylene	104		-		70-130	-		
1,2,3-Trichloropropane	96		-		70-130	-		
Nonane (C9)	92		-		70-130	-		
Isopropylbenzene	102		-		70-130	-		
Bromobenzene	96		-		70-130	-		
o-Chlorotoluene	101		-		70-130	-		
n-Propylbenzene	102		-		70-130	-		
p-Chlorotoluene	96		-		70-130	-		
4-Ethyltoluene	108		-		70-130	-		
1,3,5-Trimethylbenzene	97		-		70-130	-		
tert-Butylbenzene	103		-		70-130	-		
1,2,4-Trimethylbenzene	108		-		70-130	-		
Decane (C10)	97		-		70-130	-		
Benzyl chloride	107		-		70-130	-		
1,3-Dichlorobenzene	108		-		70-130	-		
1,4-Dichlorobenzene	109		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130414-3								
sec-Butylbenzene	103		-		70-130	-		
p-Isopropyltoluene	95		-		70-130	-		
1,2-Dichlorobenzene	110		-		70-130	-		
n-Butylbenzene	109		-		70-130	-		
1,2-Dibromo-3-chloropropane	95		-		70-130	-		
Undecane	106		-		70-130	-		
Dodecane (C12)	110		-		70-130	-		
1,2,4-Trichlorobenzene	115		-		70-130	-		
Naphthalene	102		-		70-130	-		
1,2,3-Trichlorobenzene	109		-		70-130	-		
Hexachlorobutadiene	112		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130418-3								
Propylene	105		-		70-130	-		25
Dichlorodifluoromethane	98		-		70-130	-		25
Chloromethane	90		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	95		-		70-130	-		25
Vinyl chloride	92		-		70-130	-		25
1,3-Butadiene	99		-		70-130	-		25
Bromomethane	94		-		70-130	-		25
Chloroethane	90		-		70-130	-		25
Ethyl Alcohol	89		-		70-130	-		25
Vinyl bromide	97		-		70-130	-		25
Acetone	80		-		70-130	-		25
Trichlorofluoromethane	94		-		70-130	-		25
iso-Propyl Alcohol	79		-		70-130	-		25
Acrylonitrile	92		-		70-130	-		25
1,1-Dichloroethene	94		-		70-130	-		25
tert-Butyl Alcohol[1]	88		-		70-130	-		25
Methylene chloride	95		-		70-130	-		25
3-Chloropropene	100		-		70-130	-		25
Carbon disulfide	94		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	98		-		70-130	-		25
trans-1,2-Dichloroethene	95		-		70-130	-		25
1,1-Dichloroethane	94		-		70-130	-		25
Methyl tert butyl ether	101		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130418-3								
Vinyl acetate	100		-		70-130	-		25
2-Butanone	96		-		70-130	-		25
cis-1,2-Dichloroethene	95		-		70-130	-		25
Ethyl Acetate	104		-		70-130	-		25
Chloroform	97		-		70-130	-		25
Tetrahydrofuran	86		-		70-130	-		25
1,2-Dichloroethane	91		-		70-130	-		25
n-Hexane	92		-		70-130	-		25
1,1,1-Trichloroethane	87		-		70-130	-		25
Benzene	86		-		70-130	-		25
Carbon tetrachloride	86		-		70-130	-		25
Cyclohexane	91		-		70-130	-		25
Dibromomethane[1]	75		-		70-130	-		25
1,2-Dichloropropane	86		-		70-130	-		25
Bromodichloromethane	91		-		70-130	-		25
1,4-Dioxane	101		-		70-130	-		25
Trichloroethene	91		-		70-130	-		25
2,2,4-Trimethylpentane	92		-		70-130	-		25
cis-1,3-Dichloropropene	94		-		70-130	-		25
4-Methyl-2-pentanone	92		-		70-130	-		25
trans-1,3-Dichloropropene	80		-		70-130	-		25
1,1,2-Trichloroethane	94		-		70-130	-		25
Toluene	94		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130418-3								
2-Hexanone	96		-		70-130	-		25
Dibromochloromethane	102		-		70-130	-		25
1,2-Dibromoethane	97		-		70-130	-		25
Tetrachloroethene	98		-		70-130	-		25
1,1,1,2-Tetrachloroethane	89		-		70-130	-		25
Chlorobenzene	98		-		70-130	-		25
Ethylbenzene	96		-		70-130	-		25
p/m-Xylene	96		-		70-130	-		25
Bromoform	104		-		70-130	-		25
Styrene	100		-		70-130	-		25
1,1,2,2-Tetrachloroethane	98		-		70-130	-		25
o-Xylene	97		-		70-130	-		25
1,2,3-Trichloropropane[1]	90		-		70-130	-		25
Isopropylbenzene	96		-		70-130	-		25
Bromobenzene[1]	92		-		70-130	-		25
4-Ethyltoluene	109		-		70-130	-		25
1,3,5-Trimethylbenzene	101		-		70-130	-		25
1,2,4-Trimethylbenzene	107		-		70-130	-		25
Benzyl chloride	101		-		70-130	-		25
1,3-Dichlorobenzene	110		-		70-130	-		25
1,4-Dichlorobenzene	109		-		70-130	-		25
sec-Butylbenzene	96		-		70-130	-		25
p-Isopropyltoluene	89		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1130418-3								
1,2-Dichlorobenzene	109		-		70-130	-		25
n-Butylbenzene	101		-		70-130	-		25
1,2,4-Trichlorobenzene	115		-		70-130	-		25
Naphthalene	107		-		70-130	-		25
1,2,3-Trichlorobenzene	109		-		70-130	-		25
Hexachlorobutadiene	109		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1130414-5 QC Sample: L1823528-02 Client ID: 02_325 PARK LR						
Dichlorodifluoromethane	0.485	0.491	ppbV	1		25
Chloromethane	0.736	0.665	ppbV	10		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
Ethyl Alcohol	45.1	46.7	ppbV	3		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	108	96.7	ppbV	11		25
Trichlorofluoromethane	ND	0.226	ppbV	NC		25
iso-Propyl Alcohol	14.8	15.5	ppbV	5		25
tert-Butyl Alcohol	4.79	5.02	ppbV	5		25
Methylene chloride	0.546	0.542	ppbV	1		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	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
2-Butanone	14.6	14.6	ppbV	0		25
Ethyl Acetate	4.80	5.08	ppbV	6		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1130414-5 QC Sample: L1823528-02 Client ID: 02_325 PARK LR						
Chloroform	0.317	0.309	ppbV	3		25
Tetrahydrofuran	2.00	1.93	ppbV	4		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	0.237	0.264	ppbV	11		25
Benzene	ND	0.205	ppbV	NC		25
Cyclohexane	0.293	0.317	ppbV	8		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	0.514	0.580	ppbV	12		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	1.16	1.14	ppbV	2		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	3.40	3.43	ppbV	1		25
2-Hexanone	0.477	0.475	ppbV	0		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	1.59	1.66	ppbV	4		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1130414-5 QC Sample: L1823528-02 Client ID: 02_325 PARK LR						
p/m-Xylene	5.74	5.85	ppbV	2		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	2.26	2.37	ppbV	5		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	2.68	2.75	ppbV	3		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	0.524	0.534	ppbV	2		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1130418-5 QC Sample: L1823528-02 Client ID: 02_325 PARK LR						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Carbon tetrachloride	0.063	0.064	ppbV	2		25
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	0.048	0.047	ppbV	2		25

Project Name: STARRBUILT

Project Number: 18-22535-R

Lab Number: L1823528

Report Date: 06/28/18

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1823528-01	01_327 PARK LR	0545	Flow 5	06/19/18	268267		-	-	-	Pass	3.3	3.5	6
L1823528-01	01_327 PARK LR	1687	6.0L Can	06/19/18	268267	L1822145-01	Pass	-29.5	-6.9	-	-	-	-
L1823528-02	02_325 PARK LR	0114	Flow 5	06/19/18	268267		-	-	-	Pass	3.3	3.1	6
L1823528-02	02_325 PARK LR	1522	6.0L Can	06/19/18	268267	L1822145-02	Pass	-29.5	-10.7	-	-	-	-
L1823528-03	03 OUTSIDE REF.	0129	Flow 5	06/19/18	268267		-	-	-	Pass	3.3	3.2	3
L1823528-03	03 OUTSIDE REF.	1563	6.0L Can	06/19/18	268267	L1821057-02	Pass	-29.5	-9.8	-	-	-	-

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

Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/07/18 09:33
Analyst: RY

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
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
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

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

Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	85		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	83		60-140

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

Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/07/18 09:33
Analyst: RY

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1821057
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1821057-02
Client ID: CAN 1563 SHELF 47
Sample Location:

Date Collected: 06/06/18 16:00
Date Received: 06/07/18
Field Prep: Not Specified

Sample Depth:

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

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

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

Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/13/18 20:21
Analyst: MB

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
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
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

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

Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	90		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1822145

Project Number: CANISTER QC BAT **Report Date:** 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/13/18 20:21
Analyst: MB

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-01
Client ID: CAN 1687 SHELF 51
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

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

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

Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/13/18 20:59
Analyst: MB

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

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

Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
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
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	91		60-140

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

Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/13/18 20:59
Analyst: MB

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1822145
Report Date: 06/28/18

Air Canister Certification Results

Lab ID: L1822145-02
Client ID: CAN 1522 SHELF 52
Sample Location:

Date Collected: 06/13/18 09:00
Date Received: 06/13/18
Field Prep: Not Specified

Sample Depth:

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	92		60-140

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
N/A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1823528-01A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L1823528-02A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L1823528-03A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	STARRBUILT	**Lab Number:**	L1823528
Project Number:	18-22535-R	**Report Date:**	06/28/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

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

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

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

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

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report

Project Name:	STARRBUILT	**Lab Number:**	L1823528
Project Number:	18-22535-R	**Report Date:**	06/28/18

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, 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 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

Mansfield Facility:

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

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

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

AIR ANALYSIS

CHAIN OF CUSTODY PAGE 1 OF 1

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

Date Rec'd in Lab: 6/22/18

ALPHA Job #: L823528

Client Information

Client: ALPINE ENVIRON SERVICES
Address: 438 NEW KARNER RD
ALBANY NY 12205
Phone: 518-391-2354
Fax:
Email: MARKS@ALPINEENV.COM
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: STARBUCT
Project Location: 325 PARK AVE MECHANICVILLE, NY
Project #: 18-22535-R
Project Manager: M. SCHNITZER
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☒ Additional Deliverables: ASP CAT B
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH (Subset Non-petroleum HCs ☐)	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
518 -01	01-327 PARK LR.	6/21/2018	11:40	10:54	-30.2	-7.26	AA	JD	6L	1687	0535						START 6/20/2018
-02	02-325 PARK LR	6/21/2018	11:47	10:58	-29.54	-10.31	AA	JD	6L	1522	0114						START 6/20/2018
-03	03 OUTSIDE REF.	6/21/2018	11:55	11:00	-29.72	-9.45	AA	JD	6L	1563	929						START 6/20/2018

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

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time:
	6-21-18 1137		
AAR	6-21-18 1140	AAR	6-21-18 1137
	06/22/18 0640		6/22/18 00:55
			6/22/18 06:10

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

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

Appendix C:
Data Validation

Data Validation Services

120 Cobble Creek Road P.O. Box 208
North Creek, NY 12853

Phone 518-251-4429
harry@frontiernet.net

July 19, 2018

Mark Schnitzer
Alpine Environmental Services, Inc
438 New Karner Rd
Albany, NY 12205

RE: Validation of Starrbuilt Site
Data Usability Summary Report (DUSR)
Alpha SDG No. L1823528

Dear Mr. Schnitzer:

Review has been completed for the data package generated by Alpha Analytical that pertains to air samples collected June 21, 2018 at the Starrbuilt site. Three 6 L summa canisters were analyzed for volatile analytes by USEPA method TO-15.

Data validation was performed using guidance from the 2006 USEPA Region II validation SOP HW-31, with consideration for the specific requirements of the analytical methodology. The following items were reviewed:

* Data Completeness
* Case Narrative
* Custody Documentation
* Holding Times
* Internal Standard Recoveries
* Method and Canister Blanks
* Laboratory Control Samples (LCSs)
* Laboratory Duplicate
* Instrumental Tunes
* Initial and Continuing Calibration Standards
* Method Compliance
* Sample Result Verification

The data review includes evaluation of the specific items noted in The NYS DER-10 Appendix B section 2.0 (c). The items listed above that show deficiencies are discussed within the text of this narrative. The laboratory QC forms illustrating the excursions can be found within the laboratory data package.

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedure, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with project requirements.

In summary, sample processing was primarily conducted in compliance with, and adherence to, protocol requirements. Samples results are usable either as reported or with minor qualification.

Data completeness, accuracy, precision, representativeness, comparability, and sensitivity are acceptable.

The client and laboratory identifications are attached to this text. Also included is a laboratory results table with recommended validation qualifiers and edits applied.

Volatiles by EPA TO-15

The detection of the n-hexane in 01_327 PARK LR has been edited to reflect non-detection due to poor mass spectral quality.

Holding times, internal standard responses, and instrument tunes meet requirements. Blanks show no contamination.

Initial calibration standard responses were within validation guidelines, with all response factors (RRFs) above 0.05 and linearity within the 30%RSD limit. The continuing calibration responses are below 30%D or are elevated for analytes not detected in the project samples.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

VALIDATION DATA QUALIFIER DEFINITIONS

U	The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
J-	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
J+	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
UJ	The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NJ	The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
EMPC	The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

Client and Laboratory Sample Identifications

Project Name: STARRBUILT
Project Number: 18-22535-R

Lab Number: L1823528
Report Date: 06/28/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1823528-01	01_327 PARK LR	AIR	325 PARK AVE., MECHANICVILLE, NY	06/21/18 10:54	06/21/18
L1823528-02	02_325 PARK LR	AIR	325 PARK AVE., MECHANICVILLE, NY	06/21/18 10:58	06/21/18
L1823528-03	03 OUTSIDE REF.	AIR	325 PARK AVE., MECHANICVILLE, NY	06/21/18 11:00	06/21/18

Results For L1823528

Account:ALPINE-NY - Alpine Environmental
Project: 18-22535-R
Samples Received by Alpha on 21-JUN-18

LOCATION		01_327 PARK LR		02_325 PARK LR		03 OUTSIDE REF.	
SAMPLING DATE		21-Jun-18		21-Jun-18		21-Jun-18	
Lab Sample ID		L1823528-01	Units	L1823528-	Units	L1823528-	Units
SAMPLE QUALIFIER							
PARAMETER	PRODUCT						
Dichlorodifluoromethane	TO15-LL	2.03	ug/m3	2.4	ug/m3	2.19	ug/m3
Dichlorodifluoromethane	TO15-LL	0.411	ppbV	0.485	ppbV	0.443	ppbV
Chloromethane	TO15-LL	1.59	ug/m3	1.52	ug/m3	1.15	ug/m3
Chloromethane	TO15-LL	0.768	ppbV	0.736	ppbV	0.555	ppbV
1,2-Dichloro-1,1,2,2-tetrafluo	TO15-LL	<1.40	ug/m3	<1.40	ug/m3	<1.40	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluo	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
1,3-Butadiene	TO15-LL	<0.442	ug/m3	<0.442	ug/m3	<0.442	ug/m3
1,3-Butadiene	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Bromomethane	TO15-LL	<0.777	ug/m3	<0.777	ug/m3	<0.777	ug/m3
Bromomethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Chloroethane	TO15-LL	<0.528	ug/m3	<0.528	ug/m3	<0.528	ug/m3
Chloroethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Ethyl Alcohol	TO15-LL	840	ug/m3	85	ug/m3	<9.42	ug/m3
Ethyl Alcohol	TO15-LL	446	ppbV	45.1	ppbV	<5.00	ppbV
Vinyl bromide	TO15-LL	<0.874	ug/m3	<0.874	ug/m3	<0.874	ug/m3
Vinyl bromide	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Acetone	TO15-LL	287	ug/m3	257	ug/m3	8.79	ug/m3
Acetone	TO15-LL	121	ppbV	108	ppbV	3.7	ppbV
Trichlorofluoromethane	TO15-LL	1.24	ug/m3	<1.12	ug/m3	1.21	ug/m3
Trichlorofluoromethane	TO15-LL	0.22	ppbV	<0.200	ppbV	0.215	ppbV
iso-Propyl Alcohol	TO15-LL	150	ug/m3	36.4	ug/m3	<1.23	ug/m3
iso-Propyl Alcohol	TO15-LL	61.2	ppbV	14.8	ppbV	<0.500	ppbV
tert-Butyl Alcohol	TO15-LL	10.1	ug/m3	14.5	ug/m3	<1.52	ug/m3
tert-Butyl Alcohol	TO15-LL	3.34	ppbV	4.79	ppbV	<0.500	ppbV
Methylene chloride	TO15-LL	<1.74	ug/m3	1.9	ug/m3	<1.74	ug/m3
Methylene chloride	TO15-LL	<0.500	ppbV	0.546	ppbV	<0.500	ppbV
3-Chloropropene	TO15-LL	<0.626	ug/m3	<0.626	ug/m3	<0.626	ug/m3
3-Chloropropene	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Carbon disulfide	TO15-LL	<0.623	ug/m3	<0.623	ug/m3	<0.623	ug/m3
Carbon disulfide	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
1,1,2-Trichloro-1,2,2-Trifluorc	TO15-LL	<1.53	ug/m3	<1.53	ug/m3	<1.53	ug/m3
1,1,2-Trichloro-1,2,2-Trifluorc	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
trans-1,2-Dichloroethene	TO15-LL	<0.793	ug/m3	<0.793	ug/m3	<0.793	ug/m3
trans-1,2-Dichloroethene	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
1,1-Dichloroethane	TO15-LL	<0.809	ug/m3	<0.809	ug/m3	<0.809	ug/m3

1,1-Dichloroethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Methyl tert butyl ether	TO15-LL	<0.721	ug/m3	<0.721	ug/m3	<0.721	ug/m3
Methyl tert butyl ether	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
2-Butanone	TO15-LL	44.8	ug/m3	43.1	ug/m3	<1.47	ug/m3
2-Butanone	TO15-LL	15.2	ppbV	14.6	ppbV	<0.500	ppbV
Ethyl Acetate	TO15-LL	32.6	ug/m3	17.3	ug/m3	<1.80	ug/m3
Ethyl Acetate	TO15-LL	9.06	ppbV	4.8	ppbV	<0.500	ppbV
Chloroform	TO15-LL	12.1	ug/m3	1.55	ug/m3	<0.977	ug/m3
Chloroform	TO15-LL	2.48	ppbV	0.317	ppbV	<0.200	ppbV
Tetrahydrofuran	TO15-LL	4.72	ug/m3	5.9	ug/m3	<1.47	ug/m3
Tetrahydrofuran	TO15-LL	1.6	ppbV	2	ppbV	<0.500	ppbV
1,2-Dichloroethane	TO15-LL	0.854	ug/m3	<0.809	ug/m3	<0.809	ug/m3
1,2-Dichloroethane	TO15-LL	0.211	ppbV	<0.200	ppbV	<0.200	ppbV
n-Hexane	TO15-LL	<1.77 U	ug/m3	0.835	ug/m3	<0.705	ug/m3
n-Hexane	TO15-LL	<0.501 U	ppbV	0.237	ppbV	<0.200	ppbV
Benzene	TO15-LL	0.757	ug/m3	<0.639	ug/m3	<0.639	ug/m3
Benzene	TO15-LL	0.237	ppbV	<0.200	ppbV	<0.200	ppbV
Cyclohexane	TO15-LL	<0.688	ug/m3	1.01	ug/m3	<0.688	ug/m3
Cyclohexane	TO15-LL	<0.200	ppbV	0.293	ppbV	<0.200	ppbV
1,2-Dichloropropane	TO15-LL	<0.924	ug/m3	<0.924	ug/m3	<0.924	ug/m3
1,2-Dichloropropane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Bromodichloromethane	TO15-LL	<1.34	ug/m3	<1.34	ug/m3	<1.34	ug/m3
Bromodichloromethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
1,4-Dioxane	TO15-LL	<0.721	ug/m3	<0.721	ug/m3	<0.721	ug/m3
1,4-Dioxane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
2,2,4-Trimethylpentane	TO15-LL	<0.934	ug/m3	<0.934	ug/m3	<0.934	ug/m3
2,2,4-Trimethylpentane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Heptane	TO15-LL	2.18	ug/m3	2.11	ug/m3	<0.820	ug/m3
Heptane	TO15-LL	0.532	ppbV	0.514	ppbV	<0.200	ppbV
cis-1,3-Dichloropropene	TO15-LL	<0.908	ug/m3	<0.908	ug/m3	<0.908	ug/m3
cis-1,3-Dichloropropene	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
4-Methyl-2-pentanone	TO15-LL	4.1	ug/m3	4.75	ug/m3	<2.05	ug/m3
4-Methyl-2-pentanone	TO15-LL	1	ppbV	1.16	ppbV	<0.500	ppbV
trans-1,3-Dichloropropene	TO15-LL	<0.908	ug/m3	<0.908	ug/m3	<0.908	ug/m3
trans-1,3-Dichloropropene	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
1,1,2-Trichloroethane	TO15-LL	<1.09	ug/m3	<1.09	ug/m3	<1.09	ug/m3
1,1,2-Trichloroethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Toluene	TO15-LL	16.8	ug/m3	12.8	ug/m3	1.56	ug/m3
Toluene	TO15-LL	4.46	ppbV	3.4	ppbV	0.413	ppbV
2-Hexanone	TO15-LL	1.32	ug/m3	1.95	ug/m3	<0.820	ug/m3
2-Hexanone	TO15-LL	0.321	ppbV	0.477	ppbV	<0.200	ppbV
Dibromochloromethane	TO15-LL	<1.70	ug/m3	<1.70	ug/m3	<1.70	ug/m3
Dibromochloromethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
1,2-Dibromoethane	TO15-LL	<1.54	ug/m3	<1.54	ug/m3	<1.54	ug/m3
1,2-Dibromoethane	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV
Chlorobenzene	TO15-LL	<0.921	ug/m3	<0.921	ug/m3	<0.921	ug/m3
Chlorobenzene	TO15-LL	<0.200	ppbV	<0.200	ppbV	<0.200	ppbV

Ethylbenzene	TO15-LL		9.51	ug/m3	6.91	ug/m3	<0.869	ug/m3
Ethylbenzene	TO15-LL		2.19	ppbV	1.59	ppbV	<0.200	ppbV
p/m-Xylene	TO15-LL		28.6	ug/m3	24.9	ug/m3	<1.74	ug/m3
p/m-Xylene	TO15-LL		6.58	ppbV	5.74	ppbV	<0.400	ppbV
Bromoform	TO15-LL	<2.07		ug/m3	<2.07	ug/m3	<2.07	ug/m3
Bromoform	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
Styrene	TO15-LL		12	ug/m3	9.62	ug/m3	<0.852	ug/m3
Styrene	TO15-LL		2.81	ppbV	2.26	ppbV	<0.200	ppbV
1,1,2,2-Tetrachloroethane	TO15-LL	<1.37		ug/m3	<1.37	ug/m3	<1.37	ug/m3
1,1,2,2-Tetrachloroethane	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
o-Xylene	TO15-LL		12.8	ug/m3	11.6	ug/m3	<0.869	ug/m3
o-Xylene	TO15-LL		2.95	ppbV	2.68	ppbV	<0.200	ppbV
4-Ethyltoluene	TO15-LL	<0.983		ug/m3	<0.983	ug/m3	<0.983	ug/m3
4-Ethyltoluene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
1,3,5-Trimethylbenzene	TO15-LL	<0.983		ug/m3	<0.983	ug/m3	<0.983	ug/m3
1,3,5-Trimethylbenzene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
1,2,4-Trimethylbenzene	TO15-LL		3.45	ug/m3	2.58	ug/m3	<0.983	ug/m3
1,2,4-Trimethylbenzene	TO15-LL		0.701	ppbV	0.524	ppbV	<0.200	ppbV
Benzyl chloride	TO15-LL	<1.04		ug/m3	<1.04	ug/m3	<1.04	ug/m3
Benzyl chloride	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
1,3-Dichlorobenzene	TO15-LL	<1.20		ug/m3	<1.20	ug/m3	<1.20	ug/m3
1,3-Dichlorobenzene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
1,4-Dichlorobenzene	TO15-LL	<1.20		ug/m3	<1.20	ug/m3	<1.20	ug/m3
1,4-Dichlorobenzene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
1,2-Dichlorobenzene	TO15-LL	<1.20		ug/m3	<1.20	ug/m3	<1.20	ug/m3
1,2-Dichlorobenzene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
1,2,4-Trichlorobenzene	TO15-LL	<1.48		ug/m3	<1.48	ug/m3	<1.48	ug/m3
1,2,4-Trichlorobenzene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
Hexachlorobutadiene	TO15-LL	<2.13		ug/m3	<2.13	ug/m3	<2.13	ug/m3
Hexachlorobutadiene	TO15-LL	<0.200		ppbV	<0.200	ppbV	<0.200	ppbV
Vinyl chloride	TO15-SIM	<0.051		ug/m3	<0.051	ug/m3	<0.051	ug/m3
Vinyl chloride	TO15-SIM	<0.020		ppbV	<0.020	ppbV	<0.020	ppbV
1,1-Dichloroethene	TO15-SIM	<0.079		ug/m3	<0.079	ug/m3	<0.079	ug/m3
1,1-Dichloroethene	TO15-SIM	<0.020		ppbV	<0.020	ppbV	<0.020	ppbV
cis-1,2-Dichloroethene	TO15-SIM	<0.079		ug/m3	<0.079	ug/m3	<0.079	ug/m3
cis-1,2-Dichloroethene	TO15-SIM	<0.020		ppbV	<0.020	ppbV	<0.020	ppbV
1,1,1-Trichloroethane	TO15-SIM	<0.109		ug/m3	<0.109	ug/m3	<0.109	ug/m3
1,1,1-Trichloroethane	TO15-SIM	<0.020		ppbV	<0.020	ppbV	<0.020	ppbV
Carbon tetrachloride	TO15-SIM		0.396	ug/m3	0.396	ug/m3	0.403	ug/m3
Carbon tetrachloride	TO15-SIM		0.063	ppbV	0.063	ppbV	0.064	ppbV
Trichloroethene	TO15-SIM	<0.107		ug/m3	<0.107	ug/m3	<0.107	ug/m3
Trichloroethene	TO15-SIM	<0.020		ppbV	<0.020	ppbV	<0.020	ppbV
Tetrachloroethene	TO15-SIM		1.51	ug/m3	0.325	ug/m3	0.136	ug/m3
Tetrachloroethene	TO15-SIM		0.222	ppbV	0.048	ppbV	0.02	ppbV