



**Department of
Environmental
Conservation**

MEEKER AVENUE PLUME TRACKDOWN SITE

SOIL VAPOR INTRUSION DATA SUMMARY REPORT 2022/2023 HEATING SEASON

WORK ASSIGNMENT No. D009803-02.4

**MEEKER AVENUE PLUME TRACKDOWN
GREENPOINT/EAST WILLIAMSBURG
INDUSTRIAL AREA, BROOKLYN**

**SITE NO. 224121
KINGS COUNTY, NY**

Prepared for:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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DIVISION OF ENVIRONMENTAL REMEDIATION
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Final
September 2023

**SOIL VAPOR INTRUSION DATA SUMMARY REPORT
2022/2023 HEATING SEASON
FOR THE
MEEKER AVENUE PLUME TRACKDOWN SITE
SITE ID NO. 224121
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK**

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REMEDIATION BUREAU B
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**FINAL
SEPTEMBER 2023**

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LIST OF ACRONYMS AND ABBREVIATIONS

1,1,1-TCA	1,1,1-trichloroethane
1,1-DCE	1,1-dichloroethene, aka 1,1-dichloroethylene
AECOM	AECOM USA, Inc.
aka	also known as
ASP	Analytical Services Protocol
cis-1,2-DCE	cis-1,2-dichloroethene, aka cis-1,2-dichloroethylene
COC	chain-of-custody
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Approval Program
L/min	liters per minute
MeCl	methylene chloride, aka dichloromethane
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCE	perchloroethene, aka tetrachloroethene or tetrachloroethylene or perchloroethylene
PID	photoionization detector
ppb	part per billion
SC	Site Characterization
SSDS	subslab depressurization system
SVI	soil vapor intrusion
TCE	trichloroethene, aka trichloroethylene
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

1.0 INTRODUCTION

This Data Summary Report has been prepared to summarize the field activities and analytical results associated with the 2022/2023 heating season soil vapor intrusion (SVI) sampling performed by AECOM USA, Inc. (AECOM) at the Meeker Avenue Plume Trackdown Site (Site ID No. 224121) in Brooklyn, Kings County, New York (Figure 1). This report presents data and information from the 2022/2023 heating season SVI sampling and field activities conducted from December 7, 2022 to March 9, 2023.

1.1 Site Description and History

The original Meeker Avenue Plume Trackdown Site investigation area was bounded by the former ExxonMobil Brooklyn Terminal/ BP Terminal to the north (Norman Avenue/Bridgewater Street), Newtown Creek to the east, Lombardy Street to the south, and Kingsland Avenue to the west. During the first phase of Site Characterization (SC) fieldwork (May 7 through July 10, 2007), the southern boundary of the Site investigation area along Lombardy Street between Porter and Morgan Avenues was extended three blocks south to Richardson Street. During the second phase of SC fieldwork (November 5 through December 27, 2007), the southern boundary of the Site investigation area along Richardson Street between Vandervoort and Morgan Avenues was extended one block south to Frost Street. During the third phase of SC fieldwork (May 5 through July 24, 2008), the southern boundary was additionally extended one block south to Withers Street between Vandervoort and Morgan Avenues. In addition, the boundary in the northwestern corner of the Site investigation area was extended west from Kingsland Avenue between Norman and Nassau Avenues to Monitor Street.

A review of historical data during the fourth phase of SC fieldwork (November 3 through December 8, 2008) indicated that several additional potential sources of chlorinated solvent contamination may exist north of Norman Avenue, between Kingsland Avenue and Monitor Street. Therefore, the boundary in the northwestern corner of the Site investigation area was extended approximately one block north of Norman Avenue, between Kingsland Avenue and Monitor Street.

The Site boundary was once again expanded for the Phase VI SC field activities due to data obtained during the Groundwater Split Sampling Event, which was performed in November 2009 (URS Corporation – New York, February 2010). The data indicated the presence of a potential source of chlorinated solvents, including tetrachloroethene (PCE) and trichloroethene (TCE), in groundwater originating to the west-southwest of the investigation area. The southwest corner of the Site

investigation area was extended west to Kingsland Avenue between Driggs Avenue and Frost Street. The current Site investigation area is shown in Figure 2.

Land use within the Meeker Avenue Plume Trackdown Site investigation area is a mixture of residential and manufacturing, including both commercial and industrial facilities. The areas located north of Nassau Avenue, east of Van Dam Street, and south of Meeker Avenue are primarily used for manufacturing purposes. Residential areas are located in both the northwestern portion of the Site (extending from Van Dam Street between Nassau and Meeker Avenues to the western site boundary) and within the southern portion of the Site (along Beadel Street from Morgan to Porter Avenues, along Vandervoort Avenue from Lombardy Street to Division Place, and along Kingsland Avenue from Meeker Avenue to Frost Street). SVI sampling was performed within the Meeker Avenue Plume Trackdown Site by AECOM as follows:

- 2007-2008 heating season;
- 2008-2009 heating season;
- 2009-2010 heating season;
- 2010-2011 heating season;
- 2013-2014 heating season;
- 2014-2015 heating season;
- 2018-2019 heating season;
- July 2019;
- 2020-2021 heating season; and
- 2021-2022 heating season.

The USEPA added the Meeker Avenue Plume site to the Superfund program's National Priorities List (NPL) in March 2022, Docket ID No. EPA-HQ-OLEM-2021-0461. The USEPA conducted SVI Investigations concurrently in the 2022-2023 heating season, which are ongoing.

The targeted area for the 2022/2023 heating season SVI sampling focused on the structures resulting in a monitor determination from the 2021-2022 heating season SVI sampling event and one structure which was sampled for the first time.

2.0 FIELD INVESTIGATION ACTIVITIES

The 2022/2023 heating season SVI sampling was conducted from December 7, 2022 through March 9, 2023. The activities conducted during the SVI sampling event consisted of outreach, fieldwork, and report. The outreach and fieldwork for this task included the following activities:

- The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) notified AECOM which properties should be sampled.
- AECOM scheduled appointments for indoor air, subslab soil vapor and outdoor air sampling with the participating owner or tenants.
- AECOM conducted interviews with owners/tenants and completed NYSDOH's *Structure Sampling Questionnaire and Building Inventory* forms.
- Sampling was conducted following the procedures described in *Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Final*, [NYSDOH, October 2006 (updated May 2017)]. Each unit consisted of a minimum of an indoor air sample from the lowest level and a subslab soil vapor sample.
- A minimum of one outdoor air sample was collected per sampling day.
- All indoor air, outdoor air, and subslab soil vapor samples were analyzed for volatile organic compounds (VOCs) following United States Environmental Protection Agency (USEPA) *Compendium Method TO-15, Determination of VOCs in Air Collected in Specially Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)* (USEPA, January 1999). All VOCs were reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). TCE, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), carbon tetrachloride and vinyl chloride in all indoor and outdoor air samples were analyzed to a minimum detection limit of $0.20 \mu\text{g}/\text{m}^3$.
- AECOM conducted an inventory of chemicals present in each building and evaluated their potential to affect air sample results using a RAE Systems ppbRAE 3000 part-per-billion (ppb) range photoionization detector (PID).

Field duplicates of indoor air and subslab soil vapor samples were collected at a rate of 10 percent. Sampling locations are listed in Table 1.

2.1 Structure Sampling Questionnaire and Building Inventory

AECOM interviewed an owner, resident, or manager of each building and completed a *Structure Sampling Questionnaire and Building Inventory* form. As part of the interview process AECOM personnel also conducted and completed an inventory of chemicals found in each unit. A ppb PID was used to screen the indoor air and identify potential sources of VOCs from chemicals prior to collecting the air samples. PID readings were obtained for each individual container by placing the PID as close to the cap or nozzle as possible without touching or opening the container. The PID was also used to survey potential entry points such as cracks in the concrete slab.

2.1.1 Indoor Air and Outdoor Air Sampling

AECOM selected the indoor air sampling locations in consultation with the owner/tenant. Where possible, the indoor air locations were placed in a central area of the room in the breathing zone (approximately three feet above the floor). An outdoor air sample (a minimum of one per day) was set up upwind of the sampling location(s), when possible. Outdoor air associations are provided in Table 2.

The indoor air and outdoor air samples were collected using batch certified clean laboratory evacuated 1.4-liter Silonite™ ceramic coated canisters. Twenty-four-hour laboratory-calibrated flow regulators were used for residential locations. Eight-hour laboratory-calibrated flow regulators were used for commercial/manufacturing locations. Regulators for 1.4-liter canisters were calibrated at the flow rate of approximately 9.7×10^{-5} L/min for 24-hour samples and 0.0029 L/min for 8-hour samples. Upon opening the canister valve, the initial vacuum pressure was read from the built-in gauge on the flow controller and recorded onto a Summa canister field log. After the eight or 24-hour sampling period, the canister vacuum was recorded on a *Summa Canister Sampling Field Data Sheet* form and the valve was then closed.

2.1.2 Subslab Soil Vapor Sampling

AECOM selected the subslab soil vapor sampling locations in consultation with the owner/tenant. The locations were selected in areas without subsurface utilities, based on the owner/tenant knowledge and visual observations. At the subslab sample locations, an electric hammer drill was used to advance a 5/8-inch diameter hole through the concrete slab. The concrete slab was determined to be penetrated when no resistance was encountered. At location H-138 the concrete slab was not penetrated after drilling approximately two feet below the concrete surface. The drill bit was

then advanced several more inches into the underlying material. Upon removing the drill bit, the hole was immediately blocked, and the spoils were examined for wetness. All debris was removed using a hand brush to prevent it from re-entering the hole after unblocking. The subslab samples were collected using approximately 3 feet of a 1/8-inch inside diameter by 1/4-inch outside diameter Teflon tubing which was inserted through the hole in the slab. The tubing was sealed to the floor with modeling clay.

A helium tracer gas was utilized during the sampling of each subslab soil vapor location. The tracer gas was used to evaluate whether indoor (ambient) air was short circuiting into the sample collection tubing. To perform the test, a one-quart plastic enclosure was placed over the sealed subslab sample location. The sample tubing was run through a hole in the enclosure and a silicone gasket was used to seal the interface between the tubing and the enclosure. The enclosure was then sealed at the ground surface with a foam gasket. A tank containing ultra-high purity helium [99.999 percent (%)] was connected to the side port of the enclosure and enough helium was released to displace any ambient air and to maintain a positive pressure within the enclosure. Following the application of the tracer gas, one liter of soil vapor was purged using a Gillian GilAir-3 air sample pump at a rate of approximately 0.02 L/min and collected into a 1-liter Tedlar bag.

The contents of the Tedlar bag were measured outdoors for helium using a Radio detection/Dielectric MGD-2002 Multi-gas Detector and for VOCs with a PID. If the helium concentration was less than 10%, the enclosure was removed, and the tubing was connected to the Summa[®] canister via the flow controller and sampling commenced. If the concentration of helium exceeded 10%, the clay seal between the sample tubing and the concrete slab was redone and the seal was retested. After the subslab sample locations passed the helium test, the sample collection was initiated. The purged soil vapor remaining in the Tedlar bag was subsequently discharged outdoors.

The subslab samples were collected over the same duration as the indoor air samples (i.e., 24-hour for residential locations, 8-hour for commercial and manufacturing locations) using batch certified canisters equipped with flow controller valves pre-calibrated at the laboratory. Upon opening the canister valve, the initial vacuum pressure was read from the built-in gauge on the flow controller and recorded onto a Summa Canister Sampling Log. After the 8-hour or 24-hour sampling period, the canister vacuum was recorded, and the valve was then closed. The tubing was removed and the subslab sample point was then filled to grade with hydraulic cement.

2.2 Sample Analysis

The air samples were shipped via Federal Express by AECOM under chain-of-custody (COC) to the AECOM subcontracted NYSDEC contract standby laboratory, Merit Laboratories, Inc., located in East Lansing, MI. All the samples were analyzed for the VOCs as listed in Table 3. Merit Laboratories is a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for the analysis of VOCs by USEPA Method TO-15.

3.0 RESULTS OF THE INVESTIGATION

3.1 Data Validation and Data Usability Summary Report

The data package submitted by the laboratory was equivalent to the NYSDEC's Analytical Services Protocol (ASP) Category B Deliverable requirements. A Data Usability Summary Report (DUSR) was prepared by AECOM following the guidelines provided in Department of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B, Guidance for Data Deliverables and the Development of Data Usability Summary Reports* (May 2010). The complete validated analytical results and Form 1s are provided in the DUSRs (Appendix A).

3.2 Soil Vapor Intrusion Investigation Sampling Results

A summary of detected VOCs in the 2022/2023 Heating Season SVI samples, collected from 6 locations is presented in Table 4. Typically, one subslab soil vapor sample and one indoor air sample was collected from each location. A subslab soil vapor sample was not collected at H-138 because the concrete slab was not penetrated.

Not all of the compounds summarized below are addressed by the current NYSDOH guidance action matrices or indoor air guidelines (NYSDOH, 2006, updated in 2017). A copy of the NYSDOH Soil Vapor/Indoor Air Decision Matrices is provided in Appendix B. NYSDOH Air Guidelines are provided in Appendix C.

Per the NYSDOH, the decision matrix is used to evaluate the following compounds:

- Matrix A – TCE, carbon tetrachloride, 1,1-DCE and cis-1,2-DCE;
- Matrix B – 1,1,1-trichloroethane (1,1,1-TCA), PCE and methylene chloride (MeCl);
- Matrix C – vinyl chloride.

The NYSDOH Air Guideline Values for VOCs in indoor air include only TCE (2 $\mu\text{g}/\text{m}^3$), PCE (30 $\mu\text{g}/\text{m}^3$) and MeCl (60 $\mu\text{g}/\text{m}^3$).

TCE was detected in indoor air at 1 of the 6 buildings sampled at a concentration of 0.43 $\mu\text{g}/\text{m}^3$ (H-58-IA). TCE was detected in 4 of the 5 buildings where subslab soil vapor samples were collected, at concentrations ranging from 0.16 $\mu\text{g}/\text{m}^3$ (H-136-SS and H-148-SS) to 107 $\mu\text{g}/\text{m}^3$ (H-158-SS). TCE was not detected in the 4 outdoor air samples. The indoor air TCE detection was below the NYSDOH Ambient Air Guideline of 2 $\mu\text{g}/\text{m}^3$.

Carbon tetrachloride was detected in indoor air at all 6 of the 6 buildings sampled, at concentrations ranging from 0.44 $\mu\text{g}/\text{m}^3$ (H-153-IA) to 0.755 $\mu\text{g}/\text{m}^3$ (H-148-IA), and in 3 of the 5 subslab soil vapor sample locations, at concentrations ranging from 0.31 $\mu\text{g}/\text{m}^3$ (H-148-SS) to 0.44 $\mu\text{g}/\text{m}^3$ (H-137-SS and H-153-SS). Carbon tetrachloride was detected at all 4 outdoor air sample locations, at concentrations of 0.38 $\mu\text{g}/\text{m}^3$ (H-148-OA) to 0.50 $\mu\text{g}/\text{m}^3$ (H-137-OA).

Cis-1,2-DCE was detected in indoor air at 1 of the 6 buildings, at a concentration of 0.12 $\mu\text{g}/\text{m}^3$ (H-158-IA), and in 2 of the 5 subslab soil vapor sample locations, at concentrations ranging from 0.12 $\mu\text{g}/\text{m}^3$ (H-153-SS) to 19 $\mu\text{g}/\text{m}^3$ (H-158-SS). Cis-1,2-DCE was not detected in the outdoor air sample locations.

1,1-DCE was not detected in any indoor air, subslab soil vapor, or outdoor air sample locations.

1,1,1-TCA was not detected in any indoor air or outdoor air sample locations. Three of the 5 subslab soil vapor sample locations had detections ranging from 0.16 $\mu\text{g}/\text{m}^3$ (H-148-SS) to 4.4 $\mu\text{g}/\text{m}^3$ (H-158-SS).

PCE was detected in indoor air at all 6 building locations sampled, at concentrations ranging from 0.34 $\mu\text{g}/\text{m}^3$ (H-136-IA, H-137-IA, and H-148-IA) to 2.0 $\mu\text{g}/\text{m}^3$ (H-158-IA). PCE was detected in all 5 subslab soil vapor locations, at concentrations ranging from 0.41 $\mu\text{g}/\text{m}^3$ (H-137-SS) to 312 $\mu\text{g}/\text{m}^3$ (H-158-SS). PCE was detected in 3 of 4 outdoor air sample locations, at concentrations of 0.20 $\mu\text{g}/\text{m}^3$ (H-148-OA) to 0.47 $\mu\text{g}/\text{m}^3$ (H-158-OA).

MeCl was detected in indoor air at 2 of 6 building locations sampled, at concentrations ranging from 1.7 $\mu\text{g}/\text{m}^3$ (H-137-IA) to 2.4 $\mu\text{g}/\text{m}^3$ (H-148-IA). MeCl was detected in subslab soil vapor at 2 of 5 building locations sampled ranging from 2.1 $\mu\text{g}/\text{m}^3$ (H-148-SS) to 2.4 $\mu\text{g}/\text{m}^3$ (H-153-SS). MeCl was not detected in the 4 outdoor air sample locations. Indoor air MeCl detections were below the NYSDOH Ambient Air Guideline of 60 $\mu\text{g}/\text{m}^3$.

Vinyl chloride was not detected in indoor air or outdoor air at any building locations or outdoor locations sampled. Vinyl chloride was detected in subslab soil vapor at 4 of 5 building locations sampled, ranging from 0.13 $\mu\text{g}/\text{m}^3$ (H-136-SS) to 5.6 $\mu\text{g}/\text{m}^3$ (H-153-SS).

Other compounds detected in subslab soil vapor and indoor air at elevated concentrations (e.g., subslab greater than 100 $\mu\text{g}/\text{m}^3$ and indoor air greater than 10 $\mu\text{g}/\text{m}^3$) include, acetone and ethanol.

The analytical results were compared against the product inventories. Products most commonly encountered were household cleaning agents, paints, and insecticides. No products were removed prior to sampling.

Using NYSDOH decision Matrix A, B, and C, and the compounds listed by the NYSDOH, the recommended actions for the locations sampled are as follows:

3.2.1 Matrix A Evaluation

- The indoor TCE concentration of $0.43 \mu\text{g}/\text{m}^3$ (H-158-IA) in conjunction with a subslab TCE concentration of $107 \mu\text{g}/\text{m}^3$ (H-158-SS) resulted in a “Mitigate” recommendation.
- None of the remaining locations sampled had detected concentrations for the following Matrix A compounds (i.e., TCE, cis-1,2-DCE, 1,1-DCE, and carbon tetrachloride) that would result in a “Mitigate”, “Identify Source(s) and Resample or Mitigate”, or “Monitor” recommendation.

3.2.2 Matrix B Evaluation

- None of the locations sampled had detected concentrations for the following Matrix B compounds (i.e., PCE, 1,1,1-TCA and MeCl) that resulted in a “Mitigate”, “Identify Source(s) and Resample or Mitigate”, or “Monitor” recommendation.

3.2.3 Matrix C Evaluation

- None of the locations sampled had detected concentrations for the Matrix C compound (vinyl chloride) detected at concentrations that resulted in a “Mitigate”, “Identify Source(s) and Resample or Mitigate”, or “Monitor” recommendation.

3.2.4 Recommendations

The following recommended actions were determined in consultation with the NYSDOH:

- “Mitigate” recommendation at location H-158.
- “No further action” at the remaining locations.

None of the properties have detections exceeding NYSDOH Air Guideline Values for TCE, PCE, or MeCl.

It should be noted that a subslab soil vapor sample was not collected at H-138 in the December 2022 SVI sampling event because the concrete slab could not be penetrated. Data from the February

2022 SVI sampling event resulted in a “Monitor” determination at this location because the vinyl chloride concentration was $10 \mu\text{g}/\text{m}^3$ in the subslab soil vapor sample, although it was not detected ($< 0.074 \mu\text{g}/\text{m}^3$) in the corresponding indoor air sample. Vinyl chloride was not detected ($< 0.074 \mu\text{g}/\text{m}^3$) in the December 2022 indoor air sample.

4.0 FUTURE ACTIVITIES

The NYSDEC and NYSDOH have evaluated the results and provided recommendations to the property owner of location H-158.

5.0 REFERENCES

- New York State Department of Environmental Conservation. 2010. *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*. DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B. Division of Environmental Remediation. May.
- New York State Department of Health (NYSDOH). 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. Final. October. Revised May 2017.
- NYSDOH. 2013. New Ambient Air Guideline and Revised Fact Sheet for Tetrachloroethene. Interoffice Memorandum. September 13.
- NYSDOH. 2015. New Ambient Air Guideline and Revised Fact Sheet for Trichloroethene. Interoffice Memorandum. August.
- URS Corporation – New York. 2010. Final – Groundwater Split Sampling Letter Report. February.
- United States Environmental Protection Agency (USEPA). 1999. *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*. January.

TABLES

TABLE 1
2022/2023 HEATING SEASON SAMPLE LOCATION IDENTIFICATION
MEEKER AVENUE PLUME TRACKDOWN

Sample Location ID	Sample date	Laboratory SDG#	Number of Cans*	Sample duration	Property Type	Other Info
H-158	12/7-12/8/2022	S43328	3	24-hour	Residential	First sampling event
H-136	12/8-12/9/2022	S43328	2	24-hour	Residential	Monitor Status - First sampled 2/24/2022
H-137	12/8-12/9/2022	S43328	3	24-hour	Residential	Monitor Status - First sampled 2/24/2022
H-138	12/8-12/9/2022	S43328	2	24-hour	Residential	Monitor Status - First sampled 2/24/2022
H-148	1/24-1/25/2023	S44921	4	24-hour	Residential	Monitor Status - First sampled 3/8/2022
H-153	1/25/2023	S44921	3	8-hour	Commercial/Manufacturing	Monitor Status - First sampled 3/11/2022

* includes indoor air, subslab soil vapor, outdoor air, and/or field duplicates

TABLE 2
OUTDOOR AIR ASSOCIATIONS
MEEKER AVENUE PLUME TRACKDOWN

Sample Location ID	Associated Outdoor Air Sample	Sample Date	Sample Duration	Property Type
H-158	H-158-OA	12/7-8/2022	24-hour	Residential
H-136	H-137-OA	12/8-9/2022	24-hour	Residential
H-137				
H-138				
H-148	H-148-OA	1/24-25/2023	24-hour	Residential
H-153	H-153-OA	1/25/2023	8-hour	Commercial/Manufacturing

TABLE 3
SUMMARY OF PARAMETERS ANALYZED IN SUB-SLAB SOIL VAPOR, INDOOR AIR,
AND OUTDOOR AIR BY USEPA METHOD TO-15
MEEKER AVENUE PLUME TRACKDOWN

Compound	Detection Limit (1)	Compound	Detection Limit (1)
1,1,1-Trichloroethane	0.093	Bromoform	0.24
1,1,2,2-Tetrachloroethane	0.096	Bromomethane	0.13
1,1,2-Trichloro-1,2,2-trifluoroethane	0.18	Carbon Disulfide	0.059
1,1,2-Trichloroethane	0.082	Carbon tetrachloride	0.13
1,1-Dichloroethane*	0.1	Chlorobenzene	0.078
1,1-Dichloroethene*	0.095	Chloroethane*	0.12
1,2,4-Trichlorobenzene	0.11	Chloroform	0.098
1,2,4-Trimethylbenzene	0.14	Chloromethane	0.083
1,2-Dibromoethane (Ethylene dibromide)	0.077	Cyclohexane	0.083
1,2-Dichlorobenzene	0.14	Dibromochloromethane	0.14
1,2-Dichloroethane*	0.11	Dichlorodifluoromethane	0.13
1,2-Dichloroethene (cis)*	0.091	Ethanol	0.13
1,2-Dichloroethene (trans)*	0.083	Ethyl Acetate	0.18
1,2-Dichloropropane	0.092	Ethylbenzene	0.087
1,2-Dichlorotetrafluoroethane	0.2	Hexachlorobutadiene	0.31
1,3,5-Trimethylbenzene (Mesitylene)	0.12	Isopropyl alcohol	0.19
1,3-Butadiene	0.064	Methyl ethyl ketone (2-Butanone)	0.14
1,3-Dichlorobenzene	0.12	Methyl methacrylate	0.07
1,3-Dichloropropene (cis)	0.091	Methyl tert-butyl ether	0.036
1,3-Dichloropropene (trans)	0.059	Methylene chloride	0.49
1,4-Dichlorobenzene	0.11	Naphthalene	0.052
1,4-Dioxane	0.14	n-Heptane	0.061
1-Propene	0.065	n-Hexane	0.067
2,2,4-Trimethylpentane	0.065	Styrene	0.064
2-Chlorotoluene	0.12	t-Butyl alcohol	0.12
2-Hexanone	0.086	Tetrachloroethene*	0.16
4-Ethyltoluene	0.16	Tetrahydrofuran	0.086
4-Methyl-2-pentanone	0.07	Toluene	0.049
Acetone	0.14	Trichloroethene*	0.12
Allyl chloride	0.075	Trichlorofluoromethane	0.096
Benzene	0.061	Vinyl Acetate	0.053
Benzyl chloride	0.15	Vinyl chloride*	0.074
Bromodichloromethane	0.15	m&p-Xylene	0.17
Bromoethene (Vinyl Bromide)	0.15	o-Xylene	0.087

All units in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

USEPA Method TO-15, VOCs in Air Collected in SUMMA[®] Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS): USEPA Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, January 1999.

* -Tetrachloroethene, trichloroethene and their breakdown products.

(1) Merit Laboratories Sample Designation Groups (SDGs) S43328, S44921

TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-136-IA	H-136-SS	H-137-IA	H-137-OA	H-137-SS
Sample ID		224121-IA-136	224121-SS-136	224121-IA-137	224121-OA-137	224121-SS-137
Matrix		Indoor Air	Subslab Vapor	Indoor Air	Outdoor Air	Subslab Vapor
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/08/22	12/08/22	12/08/22	12/08/22	12/08/22
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.46 J	0.46 J	0.46 J	0.46 J	0.46 J
1,1,2-Trichloroethane	UG/M3	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U
1,1-Dichloroethane	UG/M3	0.1 U	0.607 J	0.1 U	0.1 U	1.2
1,2,4-Trimethylbenzene	UG/M3	0.25 J	0.29 J	0.39 J	0.15 J	0.15 J
1,2-Dichloroethane	UG/M3	0.11 U	1.2	0.11 U	0.11 U	1.2
1,2-Dichloroethene (cis)	UG/M3	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,3-Butadiene	UG/M3	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U
1,4-Dioxane	UG/M3	0.14 U	2.52 J	0.14 U	0.14 U	0.14 U
1-Propene	UG/M3	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
2,2,4-Trimethylpentane	UG/M3	0.654 J	0.23 J	0.93	0.654 J	0.065 U
2-Hexanone	UG/M3	0.086 U	0.451 J	0.086 U	0.086 U	1.64 J
4-Ethyltoluene	UG/M3	0.16 U	0.16 U	0.29 J	0.16 U	0.16 U
4-Methyl-2-pentanone	UG/M3	0.20 J	0.37 J	0.37 J	0.07 U	0.20 J
Acetone	UG/M3	20	100	26.4	9.5	29.9
Benzene	UG/M3	0.64	1.3	0.96	0.64	0.543 J
Bromodichloromethane	UG/M3	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Bromoform	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Carbon disulfide	UG/M3	0.059 U	7.8	0.22 J	0.059 U	0.872 J
Carbon tetrachloride	UG/M3	0.50 J	0.13 U	0.50 J	0.50 J	0.44 J
Chlorobenzene	UG/M3	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

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 [LOGDATE] >= #12/7/2022# AND ([LOCID] LIKE 'H-136*' OR [LOCID] LIKE 'H-137*' OR [LOCID] LIKE 'H-138*' OR [LOCID] LIKE 'H-148*' OR [LOCID] LIKE 'H-153*' OR [LOCID] LIKE 'H-158*')

TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-136-IA	H-136-SS	H-137-IA	H-137-OA	H-137-SS
Sample ID		224121-IA-136	224121-SS-136	224121-IA-137	224121-OA-137	224121-SS-137
Matrix		Indoor Air	Subslab Vapor	Indoor Air	Outdoor Air	Subslab Vapor
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/08/22	12/08/22	12/08/22	12/08/22	12/08/22
Parameter	Units					
Volatile Organic Compounds						
Chloroethane	UG/M3	0.12 U	1.50 J	0.12 U	0.12 U	4.828 J
Chloroform	UG/M3	0.34 J	0.34 J	0.20 J	0.15 J	0.34 J
Chloromethane	UG/M3	1.20 J	0.083 U	1.20 J	1.07 J	0.083 U
Cyclohexane	UG/M3	0.516 J	0.083 U	0.69	0.344 J	0.083 U
Dichlorodifluoromethane	UG/M3	2.5	2.5	2.0	2.5	2.5
Ethanol	UG/M3	47.9	80.5	29.8	13	11
Ethyl acetate	UG/M3	0.577 J	0.577 J	12	0.468 J	1.80 J
Ethylbenzene	UG/M3	0.434 J	0.30 J	0.738 J	0.35 J	0.13 J
Isopropyl alcohol	UG/M3	0.19 U	35.4	13	0.19 U	0.19 U
Methyl ethyl ketone (2-Butanone)	UG/M3	1.12 J	4.866 J	2.68 J	0.914 J	3.834 J
Methylene chloride	UG/M3	1.7 U	1.7 U	1.7	1.7 U	1.7 U
Naphthalene	UG/M3	1 U	1 U	1 U	1 U	1 U
n-Heptane	UG/M3	0.061 U	0.061 U	3.7	0.656 J	0.061 U
n-Hexane	UG/M3	1.1	1.4	1.4	1.1	1.4
Styrene	UG/M3	0.17 J	0.085 J	0.21 J	0.064 U	0.064 U
t-Butyl alcohol	UG/M3	0.12 U	5.366 J	1.46 J	0.12 U	0.728 J
Tetrachloroethene	UG/M3	0.34 J	2.0	0.34 J	0.34 J	0.41 J
Tetrahydrofuran	UG/M3	0.086 U	0.086 U	0.560 J	0.086 U	0.086 U
Toluene	UG/M3	3.4	2.6	7.9	3.0	1.1
Trichloroethene	UG/M3	0.12 U	0.16 J	0.12 U	0.12 U	0.12 U
Trichlorofluoromethane	UG/M3	1.1	1.1	1.1	1.1	1.1
Vinyl chloride	UG/M3	0.074 U	0.13 J	0.074 U	0.074 U	0.77
Xylene (total)	UG/M3	1.65 J	1.56 J	2.6	1.09 J	0.608 J

Flags assigned during chemistry validation are shown.

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UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

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TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-138-IA	H-138-IA	H-148-22-IA	H-148-22-IA	H-148-22-OA
Sample ID		224121-IA-138	FD-120822	224121-IA-148	FD-01242023	224121-OA-148
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Outdoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/08/22	12/08/22	01/24/23	01/24/23	01/24/23
Parameter	Units		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.46 J	0.46 J	0.38 J	0.38 J	0.46 J
1,1,2-Trichloroethane	UG/M3	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U
1,1-Dichloroethane	UG/M3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2,4-Trimethylbenzene	UG/M3	0.20 J	0.20 J	0.98	2.0	0.14 U
1,2-Dichloroethane	UG/M3	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,2-Dichloroethene (cis)	UG/M3	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.12 U	0.12 U	0.15 J	0.492 J	0.12 U
1,3-Butadiene	UG/M3	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U
1,4-Dioxane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1-Propene	UG/M3	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
2,2,4-Trimethylpentane	UG/M3	0.701 J	0.701 J	0.37 J	0.33 J	0.23 J
2-Hexanone	UG/M3	0.086 U	0.086 U	0.086 U	0.086 U	0.086 U
4-Ethyltoluene	UG/M3	0.16 U	0.16 U	0.934 J	1.5	0.16 U
4-Methyl-2-pentanone	UG/M3	0.07 U	0.07 U	0.696 J	0.07 U	0.07 U
Acetone	UG/M3	10	12	34.9	31.4	9.3
Benzene	UG/M3	0.64	0.64	0.96	0.96	0.64
Bromodichloromethane	UG/M3	0.15 U	0.15 U	0.33 J	0.40 J	0.15 U
Bromoform	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Carbon disulfide	UG/M3	0.059 U	0.059 U	0.903 J	0.903 J	0.059 U
Carbon tetrachloride	UG/M3	0.50 J	0.50 J	0.755 J	0.755 J	0.38 J
Chlorobenzene	UG/M3	0.078 U	0.078 U	0.32 J	0.32 J	0.078 U

Flags assigned during chemistry validation are shown.

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J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

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TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-138-IA	H-138-IA	H-148-22-IA	H-148-22-IA	H-148-22-OA
Sample ID		224121-IA-138	FD-120822	224121-IA-148	FD-01242023	224121-OA-148
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Outdoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		12/08/22	12/08/22	01/24/23	01/24/23	01/24/23
Parameter	Units		Field Duplicate (1-1)		Field Duplicate (1-1)	
Volatile Organic Compounds						
Chloroethane	UG/M3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroform	UG/M3	0.098 J	0.15 J	3.9	4.4	0.098 J
Chloromethane	UG/M3	1.01 J	1.05 J	0.971 J	1.05 J	0.826 J
Cyclohexane	UG/M3	0.413 J	0.379 J	0.21 J	0.24 J	0.083 U
Dichlorodifluoromethane	UG/M3	2.0	2.0	2.0	2.0	2.0
Ethanol	UG/M3	15	15	516 J	580 J	17 J
Ethyl acetate	UG/M3	0.18 U	0.18 U	0.865 J	1.08 J	0.18 U
Ethylbenzene	UG/M3	0.39 J	0.39 J	0.87	0.87	0.22 J
Isopropyl alcohol	UG/M3	0.19 U	0.19 U	15 J	16 J	3.466 J
Methyl ethyl ketone (2-Butanone)	UG/M3	0.619 J	0.914 J	3.952 J	2.60 J	1.12 J
Methylene chloride	UG/M3	1.7 U	1.7 U	2.4	2.1	1.7 U
Naphthalene	UG/M3	1 U	1 U	0.052 U	1.0	0.052 U
n-Heptane	UG/M3	0.697 J	0.738 J	0.82	0.82	0.33 J
n-Hexane	UG/M3	1.1	1.1	1.4	1.1	0.493 J
Styrene	UG/M3	0.13 J	0.085 J	0.064 U	0.064 U	0.064 U
t-Butyl alcohol	UG/M3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Tetrachloroethene	UG/M3	0.41 J	0.41 J	0.34 J	0.27 J	0.20 J
Tetrahydrofuran	UG/M3	0.086 U	0.086 U	1.8	2.1	0.086 U
Toluene	UG/M3	3.4	3.4	5.7	5.7	1.5
Trichloroethene	UG/M3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Trichlorofluoromethane	UG/M3	1.1	1.1	1.1	1.1	1.1
Vinyl chloride	UG/M3	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U
Xylene (total)	UG/M3	1.43 J	1.43 J	1.87 J	2.26 J	0.521 J

Flags assigned during chemistry validation are shown.

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J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

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TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-148-22-SS	H-153-22-IA	H-153-22-OA	H-153-22-SS	H-158-IA
Sample ID		224121-SS-148	224121-IA153	224121-OA-153	224121-SS-153	224121-IA-158
Matrix		Subslab Vapor	Indoor Air	Outdoor Air	Subslab Vapor	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/24/23	01/25/23	01/25/23	01/25/23	12/07/22
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.16 J	0.093 U	0.093 U	0.928 J	0.093 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.46 J	0.38 J	0.46 J	0.69 J	0.46 J
1,1,2-Trichloroethane	UG/M3	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U
1,1-Dichloroethane	UG/M3	0.36 J	0.1 U	0.1 U	2.4	0.1 U
1,2,4-Trimethylbenzene	UG/M3	0.15 J	0.492 J	0.15 J	0.541 J	0.25 J
1,2-Dichloroethane	UG/M3	0.11 U	0.11 U	0.11 U	2.0	0.11 U
1,2-Dichloroethene (cis)	UG/M3	0.091 U	0.091 U	0.091 U	0.12 J	0.12 J
1,2-Dichlorotetrafluoroethane	UG/M3	0.2 U	0.2 U	0.2 U	0.28 J	0.2 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.12 U	0.12 U	0.12 U	0.25 J	0.12 U
1,3-Butadiene	UG/M3	0.064 U	0.064 U	0.064 U	12	0.064 U
1,4-Dioxane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1-Propene	UG/M3	0.065 U	0.065 U	0.065 U	69	0.065 U
2,2,4-Trimethylpentane	UG/M3	0.065 U	0.514 J	0.14 J	9.8	0.514 J
2-Hexanone	UG/M3	0.410 J	0.086 U	0.086 U	4.1	0.086 U
4-Ethyltoluene	UG/M3	0.16 U	0.688 J	0.16 U	0.98	0.16 U
4-Methyl-2-pentanone	UG/M3	0.07 U	0.29 J	0.33 J	1.47 J	0.07 U
Acetone	UG/M3	25.2	59.1	10	184	23
Benzene	UG/M3	0.607 J	1.3	0.64	37.1	0.96
Bromodichloromethane	UG/M3	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Bromoform	UG/M3	0.24 U	0.24 U	0.24 U	0.31 J	0.24 U
Carbon disulfide	UG/M3	0.872 J	0.623 J	0.19 J	3.799 J	0.059 U
Carbon tetrachloride	UG/M3	0.31 J	0.44 J	0.44 J	0.44 J	0.50 J
Chlorobenzene	UG/M3	0.078 U	0.078 U	0.078 U	0.28 J	0.078 U

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

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TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-148-22-SS	H-153-22-IA	H-153-22-OA	H-153-22-SS	H-158-IA
Sample ID		224121-SS-148	224121-IA153	224121-OA-153	224121-SS-153	224121-IA-158
Matrix		Subslab Vapor	Indoor Air	Outdoor Air	Subslab Vapor	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/24/23	01/25/23	01/25/23	01/25/23	12/07/22
Parameter	Units					
Volatile Organic Compounds						
Chloroethane	UG/M3	0.12 U	0.12 U	0.12 U	12	0.12 U
Chloroform	UG/M3	2.0	0.20 J	0.098 J	1.5	0.34 J
Chloromethane	UG/M3	0.083 U	0.971 J	0.909 J	2.912 J	1.38 J
Cyclohexane	UG/M3	0.083 U	0.447 J	0.083 U	1.0	0.24 J
Dichlorodifluoromethane	UG/M3	2.5	2.0	2.0	2.5	2.5
Ethanol	UG/M3	77.6 J	129 J	12 J	120 J	26.2
Ethyl acetate	UG/M3	0.18 U	24	0.18 U	0.505 J	0.18 U
Ethylbenzene	UG/M3	0.17 J	0.651 J	0.13 J	1.7	0.39 J
Isopropyl alcohol	UG/M3	7.9 J	66.6 J	3.368 J	0.19 U	6.9
Methyl ethyl ketone (2-Butanone)	UG/M3	3.185 J	8.6	0.944 J	107	1.59 J
Methylene chloride	UG/M3	2.1	1.7 U	1.7 U	2.4	1.7 U
Naphthalene	UG/M3	0.052 U	0.052 U	0.052 U	0.052 U	1 U
n-Heptane	UG/M3	0.82	3.7	0.492 J	4.9	1.2
n-Hexane	UG/M3	0.70	3.5	0.388 J	0.067 U	1.1
Styrene	UG/M3	0.064 U	0.085 J	0.064 U	0.511 J	0.30 J
t-Butyl alcohol	UG/M3	1.18 J	0.12 U	0.12 U	4.850 J	0.12 U
Tetrachloroethene	UG/M3	5.4	0.61 J	0.16 U	24	2.0
Tetrahydrofuran	UG/M3	0.086 U	0.086 U	0.086 U	0.086 U	0.086 U
Toluene	UG/M3	1.5	3.8	1.1	7.2	3.0
Trichloroethene	UG/M3	0.16 J	0.12 U	0.12 U	0.38 J	0.43 J
Trichlorofluoromethane	UG/M3	1.7	1.1	1.07 J	2.8	1.1
Vinyl chloride	UG/M3	0.074 U	0.074 U	0.074 U	5.6	0.074 U
Xylene (total)	UG/M3	0.782 J	2.47 J	0.521 J	3.0	1.39 J

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

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TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-158-OA	H-158-SS
Sample ID		224121-OA-158	224121-SS-158
Matrix		Outdoor Air	Subslab Vapor
Depth Interval (ft)		-	-
Date Sampled		12/07/22	12/07/22
Parameter	Units		
Volatile Organic Compounds			
1,1,1-Trichloroethane	UG/M3	0.093 U	4.4
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.46 J	0.46 J
1,1,2-Trichloroethane	UG/M3	0.082 U	0.16 J
1,1-Dichloroethane	UG/M3	0.1 U	11
1,2,4-Trimethylbenzene	UG/M3	0.15 J	0.25 J
1,2-Dichloroethane	UG/M3	0.11 U	6.1
1,2-Dichloroethene (cis)	UG/M3	0.091 U	19
1,2-Dichlorotetrafluoroethane	UG/M3	0.2 U	0.2 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.12 U	0.12 U
1,3-Butadiene	UG/M3	0.064 U	0.064 U
1,4-Dioxane	UG/M3	0.14 U	0.541 J
1-Propene	UG/M3	0.065 U	0.065 U
2,2,4-Trimethylpentane	UG/M3	0.514 J	0.93
2-Hexanone	UG/M3	0.086 U	4.1
4-Ethyltoluene	UG/M3	0.16 U	0.16 U
4-Methyl-2-pentanone	UG/M3	0.07 U	2.9
Acetone	UG/M3	18	590 D
Benzene	UG/M3	0.96	1.3
Bromodichloromethane	UG/M3	0.15 U	0.15 U
Bromoform	UG/M3	0.24 U	0.24 U
Carbon disulfide	UG/M3	0.22 J	26
Carbon tetrachloride	UG/M3	0.44 J	0.13 U
Chlorobenzene	UG/M3	0.078 U	0.078 U

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

Advanced Selection: 2022-23 SVI report
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Printed: 8/21/2023 12:25:22 PM
[LOGDATE] >= #12/7/2022# AND ([LOCID] LIKE 'H-136*' OR [LOCID] LIKE 'H-137*' OR [LOCID] LIKE 'H-138*' OR [LOCID] LIKE 'H-148*' OR [LOCID] LIKE 'H-153*' OR [LOCID] LIKE 'H-158*')

TABLE 4
SUMMARY OF DETECTED COMPOUNDS IN 2022/2023 HEATING SEASON SVI SAMPLES
MEEKER AVENUE PLUME TRACKDOWN SITE

Location ID		H-158-OA	H-158-SS
Sample ID		224121-OA-158	224121-SS-158
Matrix		Outdoor Air	Subslab Vapor
Depth Interval (ft)		-	-
Date Sampled		12/07/22	12/07/22
Parameter	Units		
Volatile Organic Compounds			
Chloroethane	UG/M3	0.12 U	20
Chloroform	UG/M3	0.15 J	2.4
Chloromethane	UG/M3	1.09 J	1.09 J
Cyclohexane	UG/M3	0.24 J	0.083 U
Dichlorodifluoromethane	UG/M3	2.0	2.5
Ethanol	UG/M3	12	119
Ethyl acetate	UG/M3	0.18 U	1.01 J
Ethylbenzene	UG/M3	0.26 J	0.30 J
Isopropyl alcohol	UG/M3	0.19 U	0.19 U
Methyl ethyl ketone (2-Butanone)	UG/M3	0.973 J	48.7
Methylene chloride	UG/M3	1.7 U	1.7 U
Naphthalene	UG/M3	1 U	1 U
n-Heptane	UG/M3	0.533 J	0.061 U
n-Hexane	UG/M3	0.70	0.067 U
Styrene	UG/M3	0.17 J	0.21 J
t-Butyl alcohol	UG/M3	0.12 U	22
Tetrachloroethene	UG/M3	0.47 J	312
Tetrahydrofuran	UG/M3	0.086 U	0.086 U
Toluene	UG/M3	2.3	3.8
Trichloroethene	UG/M3	0.12 U	107
Trichlorofluoromethane	UG/M3	1.1	1.1
Vinyl chloride	UG/M3	0.074 U	2.8
Xylene (total)	UG/M3	0.868 J	1.35 J

Flags assigned during chemistry validation are shown.

U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

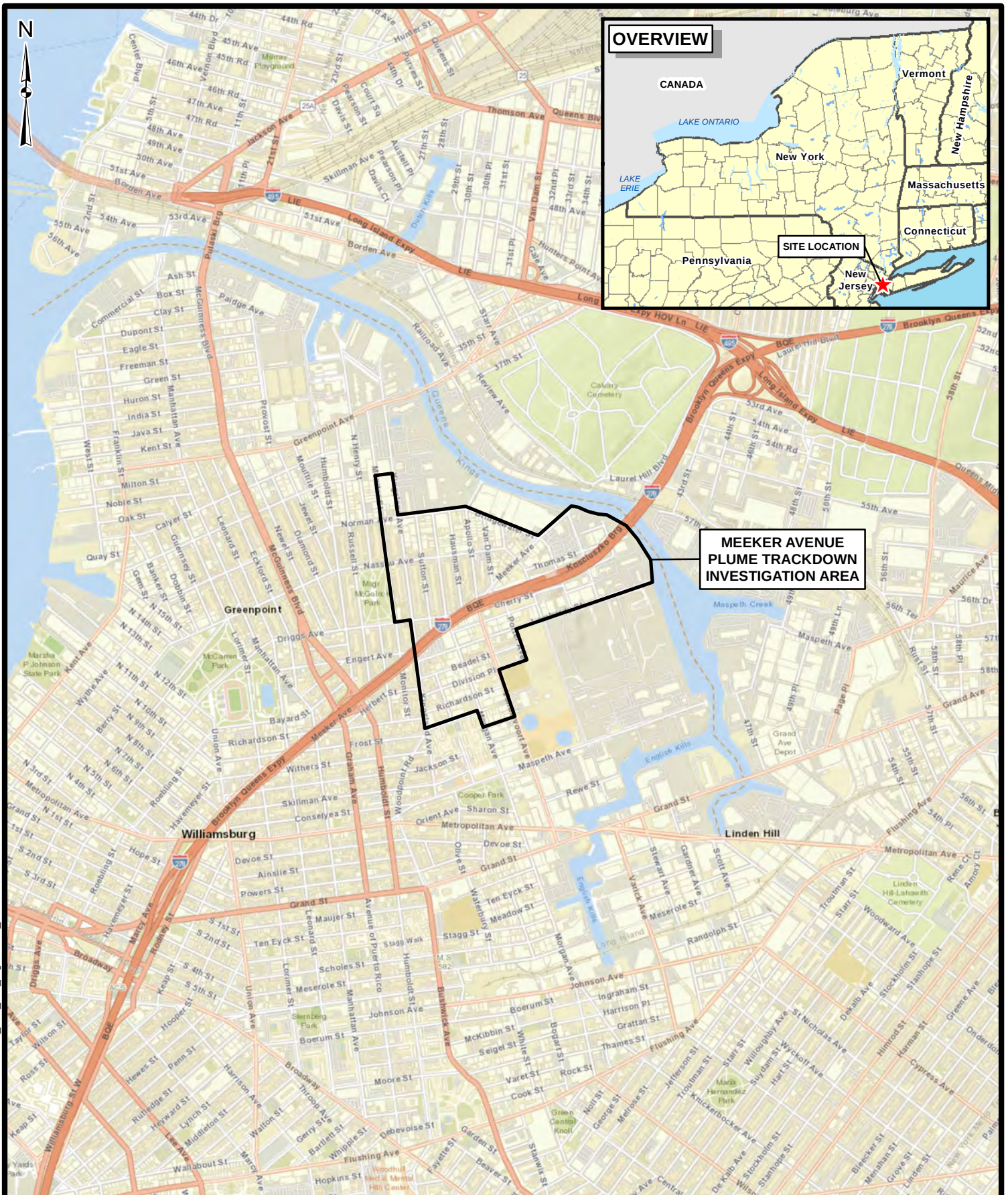
UG/M3 - Micrograms per cubic meter.

Only Detected Results Reported.

Detection Limits shown are MDL

Advanced Selection: 2022-23 SVI report
L:\DCS\Projects\11174989.00000\DB\PROGRAMEDMS.mde
Printed: 8/21/2023 12:25:25 PM
[LOGDATE] >= #12/7/2022# AND ([LOCID] LIKE 'H-136*' OR [LOCID] LIKE 'H-137*' OR [LOCID] LIKE 'H-138*' OR [LOCID] LIKE 'H-148*' OR [LOCID] LIKE 'H-153*' OR [LOCID] LIKE 'H-158*')

FIGURES



Source: ESRI World Street Map

AECOM

2022/2023 SVI INVESTIGATION
SITE LOCATION MAP
MEEKER AVENUE PLUME TRACKDOWN

FIGURE 1



APPENDIX A

DATA USABILITY SUMMARY REPORTS

DATA USABILITY SUMMARY REPORT

COMPANY: AECOM USA, Inc.
PROJECT NAME: Meeker Ave. SVI
CONTRACTED LAB: Merit Laboratories, Inc.
QA/QC LEVEL: Level 3 DUSR
ANALYTICAL METHOD(S): EPA Method TO-15
VALIDATION GUIDELINES: USEPA Region II data validation SOP (VOA-TO15 HW-31 Rev.6, Analysis of VOCs in Air contained in Canisters by Method TO-15, September 2016), Professional Judgment

SAMPLE MATRIX: Air
TYPES OF ANALYSES: Volatile Organic Compounds (VOCs)
DATA REVIEWER(S): Ann Marie Kropovitch
SDG NUMBER: 43328
SAMPLING DATE(S): December 7-8, 2022

SAMPLES:

<u>Client Sample ID</u>	<u>Laboratory ID</u>	<u>VOC</u>
224121-SS-158	S43328.01	X
224121-IA-158	S43328.02	X
224121-OA-158	S43328.03	X
224121-SS-136	S43328.04	X
224121-IA-136	S43328.05	X
224121-SS-137	S43328.06	X
224121-IA-137	S43328.07	X
224121-OA-137	S43328.08	X
224121-IA-138	S43328.09	X
FD-120822	S43328.10	X

Qualifier	Definition
U	The analyte was not detected and was reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result was an estimated value with an unknown bias.
J+	The result was an estimated quantity, but the result may be biased high.
J-	The result was an estimated quantity, but the result may be biased low.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value was the estimated concentration in the sample.
UJ	The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

DATA USABILITY SUMMARY

Merit Laboratories, Inc. – 43328

VOLATILE ORGANICS

SUMMARY

I.) General:

The analyses for Volatile Organics were performed per EPA Method TO-15.

Appendix A contains the qualified sample summary reports.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

III.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

IV.) GC/MS Tuning:

All GC/MS Tuning criteria were met. No data qualification was necessary.

V.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

All Continuing Calibration criteria were met. No data qualification was necessary.

VI.) Blanks:

Method Blanks:

There were detections in method blanks GV221227g1/GV221229g2 for the following compounds:

1,3-Dichlorobenzene	0.02/0.03 ppbv
1,4-Dichlorobenzene	0.02/0.02 ppbv
1,2,4-Trichlorobenzene	0.04/0.04 ppbv
Carbon disulfide	ND/0.02 ppbv
Methylene Chloride	0.20/0.20 ppbv
Naphthalene	0.04/0.06 ppbv

Since the blank results were less than or equal to the RL, the positive results for these compounds in the SDG samples, which were less than the RL, were qualified as undetected (U) with the result being raised to the RL.

Canister Blanks:

There were no detects in the canister check blanks for this SDG. No data qualification was necessary.

VII.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No data qualification was necessary.

VIII.) Laboratory Control Samples (LCS):

Two LCS / LCSD sets were analyzed by the laboratory for this SDG. All criteria were met. No data qualification was necessary.

IX.) Matrix Duplicate:

Matrix Duplicate analysis data was not submitted for this SDG. Data qualification based on the absence of MD data was not required. No data qualification was necessary.

X.) Field Duplicates:

A field duplicate sample (224121-IA-138/FD-120822) was identified as part of this SDG. The calculable Relative Percent Differences (RPDs) were:

1,1,2-Trichloro-1,2,2-trifluoroethane	0%
1,2,4-Trimethylbenzene	0%
2,2,4-Trimethylpentane	0%
Acetone	18.2%
Benzene	0%
Carbon tetrachloride	0%
Chloroform	41.9%
Chloromethane	3.8%
Cyclohexane	8.6%
Dichlorodifluoromethane	0%
Ethanol	0%
Ethylbenzene	0%
Methyl ethyl ketone (2-Butanone)	38.5%
n-Heptane	5.7%
n-Hexane	0%
Styrene	41.9%
Tetrachloroethene	0%
Toluene	0%
Trichlorofluoromethane	0%
Xylene (total)	0%

All RPDs were below the 50% QC limit. No qualification of the results were necessary.

XI.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

XII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

XIII.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met.

Appendix A

Qualified Form Is



Analytical Laboratory Report

Lab Sample ID: S43328.01

Sample Tag: 224121-SS-158

Collected Date/Time: 12/07/2022 14:12 - 12/08/2022 13:15

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-8	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 14:48, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	318.1	2.0	0.058	ppbv	1	67-64-1	J**
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.4	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	8.4	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	7.5	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.5	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.530	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	Not detected	0.2	0.020	ppbv	1	56-23-5	
Cyclohexane	Not detected	0.5	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	2.7	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	1.5	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	0.150	2.5	0.038	ppbv	1	123-91-1	J
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	1.0	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	4.8	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	ND	0.2	0.019	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	63.0	2.5	0.068	ppbv	1	64-17-5	

E-Concentration exceeds calibration range

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank

***use acetone result from dilution



Analytical Laboratory Report

Lab Sample ID: S43328.01 (continued)

Sample Tag: 224121-SS-158

TO-15, Method: TO-15, Run Date: 12/27/22 14:48, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	0.070	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.280	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	Not detected	1.1	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	Not detected	3.0	0.019	ppbv	1	110-54-3	
2-Hexanone*	1.0	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	7.5	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	16.5	2.0	0.046	ppbv	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.7	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.050	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	0.8	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	0.030	0.2	0.015	ppbv	1	79-00-5	J
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.050	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.2	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	7.4	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	46.0	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.0	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	20.0	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	1.1	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.230	0.4	0.038	ppbv	1		J
o-Xylene	0.080	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.310	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 14:48, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	755.6	4.8	0.14	ug/m3	1	67-64-1	J
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.3	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S43328.01 (continued)

Sample Tag: 224121-SS-158

TO-15, Method: TO-15, Run Date: 12/27/22 14:48, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	26	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	20	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	2.4	0.98	0.098	ug/m3	1	67-66-3	
Chloromethane	1.09	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	Not detected	1.3	0.13	ug/m3	1	56-23-5	
Cyclohexane	Not detected	1.7	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	11	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	6.1	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	0.541	9.0	0.14	ug/m3	1	123-91-1	J
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	4.0	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	19	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	ND	1.2	0.11	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	119	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.30	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	1.01	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	Not detected	4.5	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	Not detected	11	0.067	ug/m3	1	110-54-3	
2-Hexanone*	4.1	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	18	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	48.7	5.9	0.14	ug/m3	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	2.9	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.21	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	4.4	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	0.16	1.1	0.082	ug/m3	1	79-00-5	J

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.01 (continued)

Sample Tag: 224121-SS-158

TO-15, Method: TO-15, Run Date: 12/27/22 14:48, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.25	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.93	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	22	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	312	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.8	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	107	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	2.8	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.999	1.7	0.16	ug/m3	1		J
o-Xylene	0.35	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.35	2.6	0.25	ug/m3	1	1330-20-7	J

TO-15 (Replicate 01), Method: TO-15, Run Date: 12/30/22 12:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	250	20	0.58	ppbv	10	67-64-1	Y*** use this result
1,3-Butadiene	Not detected	20	0.29	ppbv	10	106-99-0	Y
Benzene	0.40	2	0.19	ppbv	10	71-43-2	JY
Bromodichloromethane	Not detected	2	0.23	ppbv	10	75-27-4	Y
Bromoform	Not detected	2	0.23	ppbv	10	75-25-2	Y
Bromomethane	Not detected	2	0.33	ppbv	10	74-83-9	Y
Vinyl bromide	Not detected	2	0.35	ppbv	10	593-60-2	Y
Benzyl chloride	Not detected	2	0.29	ppbv	10	100-44-7	Y
Carbon disulfide	ND	20	0.19	ppbv	10	75-15-0	UY
Chlorobenzene	Not detected	2	0.17	ppbv	10	108-90-7	Y
Chloroethane	7.50	20	0.46	ppbv	10	75-00-3	JY
Chloroform	0.30	2	0.20	ppbv	10	67-66-3	JY
Chloromethane	Not detected	20	0.40	ppbv	10	74-87-3	Y
3-Chloropropene	Not detected	20	0.24	ppbv	10	107-05-1	Y
2-Chlorotoluene	Not detected	2	0.24	ppbv	10	95-49-8	Y
Carbon tetrachloride	Not detected	2	0.20	ppbv	10	56-23-5	Y
Cyclohexane	Not detected	2	0.24	ppbv	10	110-82-7	Y
1,1-Dichloroethane	1.90	2	0.25	ppbv	10	75-34-3	JY
1,1-Dichloroethene	Not detected	2	0.24	ppbv	10	75-35-4	Y
1,2-Dibromoethane	Not detected	2	0.10	ppbv	10	106-93-4	Y
1,2-Dichloroethane	1.00	2	0.28	ppbv	10	107-06-2	JY
1,2-Dichloropropane	Not detected	2	0.20	ppbv	10	78-87-5	Y
1,4-Dioxane	Not detected	25	0.38	ppbv	10	123-91-1	Y
Dichlorodifluoromethane	0.30	2	0.26	ppbv	10	75-71-8	JY
Dibromochloromethane	Not detected	2	0.17	ppbv	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	2	0.21	ppbv	10	156-60-5	Y
cis-1,2-Dichloroethene	3	2	0.23	ppbv	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	2	0.20	ppbv	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	2	0.20	ppbv	10	541-73-1	Y

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration

B-Compound also found in associated method blank

Lab Sample ID: S43328.01 (continued)

Sample Tag: 224121-SS-158

TO-15 (Replicate 01), Method: TO-15, Run Date: 12/30/22 12:49, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dichlorobenzene	Not detected	2	0.24	ppbv	10	95-50-1	Y
1,4-Dichlorobenzene	Not detected	2	0.19	ppbv	10	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	2	0.13	ppbv	10	10061-02-6	Y
Ethanol*	53	25	0.68	ppbv	10	64-17-5	Y
Ethylbenzene	Not detected	2	0.20	ppbv	10	100-41-4	Y
Ethyl Acetate*	Not detected	20	0.49	ppbv	10	141-78-6	Y
4-Ethyltoluene	Not detected	2	0.32	ppbv	10	622-96-8	Y
Freon 113	Not detected	2	0.24	ppbv	10	76-13-1	Y
Freon 114	Not detected	2	0.29	ppbv	10	76-14-2	Y
Heptane	Not detected	2	0.15	ppbv	10	142-82-5	Y
Hexachlorobutadiene	Not detected	2	0.29	ppbv	10	87-68-3	Y
Hexane	Not detected	2	0.19	ppbv	10	110-54-3	Y
2-Hexanone*	Not detected	5	0.21	ppbv	10	591-78-6	Y
Isopropyl Alcohol*	Not detected	20	0.76	ppbv	10	67-63-0	Y
Methylene chloride	ND	5	1.4	ppbv	10	75-09-2	UY
2-Butanone (MEK)	6.80	20	0.46	ppbv	10	78-93-3	JY
4-Methyl-2-pentanone (MIBK)	Not detected	5	0.17	ppbv	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	2	0.10	ppbv	10	1634-04-4	Y
Methyl methacrylate	Not detected	2	0.17	ppbv	10	80-62-6	Y
Naphthalene	Not detected	2	0.10	ppbv	10	91-20-3	Y
Propylene*	Not detected	100	0.38	ppbv	10	115-07-1	Y
Styrene	Not detected	2	0.15	ppbv	10	100-42-5	Y
1,1,1-Trichloroethane	0.70	2	0.17	ppbv	10	71-55-6	JY
1,1,2,2-Tetrachloroethane	Not detected	2	0.14	ppbv	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	2	0.15	ppbv	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	5	0.15	ppbv	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	2	0.29	ppbv	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	2	0.25	ppbv	10	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	2	0.14	ppbv	10	540-84-1	Y
Tert-butyl Alcohol	3.90	20	0.41	ppbv	10	75-65-0	JY
Tetrachloroethene	41	2	0.24	ppbv	10	127-18-4	Y
Tetrahydrofuran*	Not detected	2	0.29	ppbv	10	109-99-9	Y
Toluene	0.60	2	0.13	ppbv	10	108-88-3	JY
Trichloroethene	15	2	0.23	ppbv	10	79-01-6	Y
Trichlorofluoromethane	0.20	2	0.17	ppbv	10	75-69-4	JY
Vinyl chloride	Not detected	2	0.29	ppbv	10	75-01-4	Y
Vinyl acetate	Not detected	20	0.15	ppbv	10	108-05-4	Y
p,m-Xylene	Not detected	4	0.38	ppbv	10		Y
o-Xylene	Not detected	2	0.20	ppbv	10	95-47-6	Y
Total Xylenes	Not detected	6	0.58	ppbv	10	1330-20-7	Y

TO-15 (Replicate 01), Method: TO-15, Run Date: 12/30/22 12:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	590	48	1.4	ug/m3	10	67-64-1	Y
1,3-Butadiene	Not detected	44	0.64	ug/m3	10	106-99-0	Y
Benzene	1.3	6.4	0.61	ug/m3	10	71-43-2	JY
Bromodichloromethane	Not detected	13	1.5	ug/m3	10	75-27-4	Y
Bromoform	Not detected	21	2.4	ug/m3	10	75-25-2	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.01 (continued)

Sample Tag: 224121-SS-158

TO-15 (Replicate 01), Method: TO-15, Run Date: 12/30/22 12:49, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromomethane	Not detected	7.8	1.3	ug/m3	10	74-83-9	Y
Vinyl bromide	Not detected	8.7	1.5	ug/m3	10	593-60-2	Y
Benzyl chloride	Not detected	10	1.5	ug/m3	10	100-44-7	Y
Carbon disulfide	ND	62	0.59	ug/m3	10	75-15-0	UY
Chlorobenzene	Not detected	9.2	0.78	ug/m3	10	108-90-7	Y
Chloroethane	19.8	53	1.2	ug/m3	10	75-00-3	JY
Chloroform	1.5	9.8	0.98	ug/m3	10	67-66-3	JY
Chloromethane	Not detected	41	0.83	ug/m3	10	74-87-3	Y
3-Chloropropene	Not detected	63	0.75	ug/m3	10	107-05-1	Y
2-Chlorotoluene	Not detected	10	1.2	ug/m3	10	95-49-8	Y
Carbon tetrachloride	Not detected	13	1.3	ug/m3	10	56-23-5	Y
Cyclohexane	Not detected	6.9	0.83	ug/m3	10	110-82-7	Y
1,1-Dichloroethane	7.69	8.1	1.0	ug/m3	10	75-34-3	JY
1,1-Dichloroethene	Not detected	7.9	0.95	ug/m3	10	75-35-4	Y
1,2-Dibromoethane	Not detected	15	0.77	ug/m3	10	106-93-4	Y
1,2-Dichloroethane	4.05	8.1	1.1	ug/m3	10	107-06-2	JY
1,2-Dichloropropane	Not detected	9.2	0.92	ug/m3	10	78-87-5	Y
1,4-Dioxane	Not detected	90	1.4	ug/m3	10	123-91-1	Y
Dichlorodifluoromethane	1.5	9.9	1.3	ug/m3	10	75-71-8	JY
Dibromochloromethane	Not detected	17	1.4	ug/m3	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	7.9	0.83	ug/m3	10	156-60-5	Y
cis-1,2-Dichloroethene	12	7.9	0.91	ug/m3	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	9.1	0.91	ug/m3	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	12	1.2	ug/m3	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	12	1.4	ug/m3	10	95-50-1	Y
1,4-Dichlorobenzene	Not detected	12	1.1	ug/m3	10	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	9.1	0.59	ug/m3	10	10061-02-6	Y
Ethanol*	100	47	1.3	ug/m3	10	64-17-5	Y
Ethylbenzene	Not detected	8.7	0.87	ug/m3	10	100-41-4	Y
Ethyl Acetate*	Not detected	72	1.8	ug/m3	10	141-78-6	Y
4-Ethyltoluene	Not detected	9.8	1.6	ug/m3	10	622-96-8	Y
Freon 113	Not detected	15	1.8	ug/m3	10	76-13-1	Y
Freon 114	Not detected	14	2.0	ug/m3	10	76-14-2	Y
Heptane	Not detected	8.2	0.61	ug/m3	10	142-82-5	Y
Hexachlorobutadiene	Not detected	21	3.1	ug/m3	10	87-68-3	Y
Hexane	Not detected	7.0	0.67	ug/m3	10	110-54-3	Y
2-Hexanone*	Not detected	20	0.86	ug/m3	10	591-78-6	Y
Isopropyl Alcohol*	Not detected	49	1.9	ug/m3	10	67-63-0	Y
Methylene chloride	ND	17	4.9	ug/m3	10	75-09-2	UY
2-Butanone (MEK)	20.1	59	1.4	ug/m3	10	78-93-3	JY
4-Methyl-2-pentanone (MIBK)	Not detected	20	0.70	ug/m3	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	7.2	0.36	ug/m3	10	1634-04-4	Y
Methyl methacrylate	Not detected	8.2	0.70	ug/m3	10	80-62-6	Y
Naphthalene	Not detected	10	0.52	ug/m3	10	91-20-3	Y
Propylene*	Not detected	170	0.65	ug/m3	10	115-07-1	Y
Styrene	Not detected	8.5	0.64	ug/m3	10	100-42-5	Y
1,1,1-Trichloroethane	3.8	11	0.93	ug/m3	10	71-55-6	JY
1,1,2,2-Tetrachloroethane	Not detected	14	0.96	ug/m3	10	79-34-5	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.01 (continued)
Sample Tag: 224121-SS-158

TO-15 (Replicate 01), Method: TO-15, Run Date: 12/30/22 12:49, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloroethane	Not detected	11	0.82	ug/m3	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	37	1.1	ug/m3	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	9.8	1.4	ug/m3	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	9.8	1.2	ug/m3	10	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	9.3	0.65	ug/m3	10	540-84-1	Y
Tert-butyl Alcohol	11.8	61	1.2	ug/m3	10	75-65-0	JY
Tetrachloroethene	280	14	1.6	ug/m3	10	127-18-4	Y
Tetrahydrofuran*	Not detected	5.9	0.86	ug/m3	10	109-99-9	Y
Toluene	2.3	7.5	0.49	ug/m3	10	108-88-3	JY
Trichloroethene	81	11	1.2	ug/m3	10	79-01-6	Y
Trichlorofluoromethane	1.1	11	0.96	ug/m3	10	75-69-4	JY
Vinyl chloride	Not detected	5.1	0.74	ug/m3	10	75-01-4	Y
Vinyl acetate	Not detected	70	0.53	ug/m3	10	108-05-4	Y
p,m-Xylene	Not detected	17	1.6	ug/m3	10		Y
o-Xylene	Not detected	8.7	0.87	ug/m3	10	95-47-6	Y
Total Xylenes	Not detected	26	2.5	ug/m3	10	1330-20-7	Y

Y-Elevated reporting limit due to high target concentration
J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.02

Sample Tag: 224121-IA-158

Collected Date/Time: 12/07/2022 14:16 - 12/08/2022 13:16

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-8	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 15:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	9.8	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.070	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.670	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.080	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.070	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	0.030	0.2	0.023	ppbv	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	ND	0.2	0.019	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	13.9	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.090	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.02 (continued)

Sample Tag: 224121-IA-158

TO-15, Method: TO-15, Run Date: 12/27/22 15:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.3	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	2.8	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.540	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.070	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.050	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.110	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.3	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.080	0.2	0.023	ppbv	1	79-01-6	J
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.230	0.4	0.038	ppbv	1		J
o-Xylene	0.090	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.320	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 15:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	23	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.02 (continued)

Sample Tag: 224121-IA-158

TO-15, Method: TO-15, Run Date: 12/27/22 15:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	0.34	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	1.38	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.50	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.24	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	0.12	0.79	0.091	ug/m3	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	ND	1.2	0.11	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	26.2	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.39	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	1.2	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	6.9	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	1.59	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.30	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.25	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.514	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.02 (continued)
Sample Tag: 224121-IA-158

TO-15, Method: TO-15, Run Date: 12/27/22 15:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrachloroethene	2.0	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.0	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	0.43	1.1	0.12	ug/m3	1	79-01-6	J
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.999	1.7	0.16	ug/m3	1		J
o-Xylene	0.39	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.39	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.03

Sample Tag: 224121-OA-158

Collected Date/Time: 12/07/2022 14:25 - 12/08/2022 13:15

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-8	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 15:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	7.4	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.070	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.030	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.530	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.070	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	6.4	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.060	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.03 (continued)

Sample Tag: 224121-OA-158

TO-15, Method: TO-15, Run Date: 12/27/22 15:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.130	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.2	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.330	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.040	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.110	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.070	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.6	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.140	0.4	0.038	ppbv	1		J
o-Xylene	0.060	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.200	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 15:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	18	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.22	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.15	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.03 (continued)

Sample Tag: 224121-OA-158

TO-15, Method: TO-15, Run Date: 12/27/22 15:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.09	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.24	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	12	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.26	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.533	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.70	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	0.973	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.17	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.514	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.47	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.03 (continued)
Sample Tag: 224121-OA-158

TO-15, Method: TO-15, Run Date: 12/27/22 15:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	2.3	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.608	1.7	0.16	ug/m3	1		J
o-Xylene	0.26	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.868	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.04

Sample Tag: 224121-SS-136

Collected Date/Time: 12/08/2022 08:30 - 12/09/2022 07:40

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-6	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 16:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	42.3	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.4	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	2.5	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	0.570	2.0	0.046	ppbv	1	75-00-3	J
Chloroform	0.070	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	Not detected	2.0	0.040	ppbv	1	74-87-3	
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	Not detected	0.2	0.020	ppbv	1	56-23-5	
Cyclohexane	Not detected	0.3	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	0.150	0.2	0.025	ppbv	1	75-34-3	J
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	0.3	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	0.700	2.5	0.038	ppbv	1	123-91-1	J
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	42.7	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.070	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.160	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S43328.04 (continued)

Sample Tag: 224121-SS-136

TO-15, Method: TO-15, Run Date: 12/27/22 16:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	Not detected	0.4	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.4	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	0.110	0.5	0.021	ppbv	1	591-78-6	J
Isopropyl Alcohol*	14.4	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	1.650	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.090	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.020	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.060	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.050	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	1.770	2.0	0.041	ppbv	1	75-65-0	J
Tetrachloroethene	0.3	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.6	0.029	ppbv	1	109-99-9	
Toluene	0.7	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.030	0.2	0.023	ppbv	1	79-01-6	J
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	0.050	0.2	0.029	ppbv	1	75-01-4	J
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.240	0.4	0.038	ppbv	1		J
o-Xylene	0.120	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.360	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 16:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	100	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.3	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	7.8	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.04 (continued)

Sample Tag: 224121-SS-136

TO-15, Method: TO-15, Run Date: 12/27/22 16:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	1.50	5.3	0.12	ug/m3	1	75-00-3	J
Chloroform	0.34	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	Not detected	4.1	0.083	ug/m3	1	74-87-3	
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	Not detected	1.3	0.13	ug/m3	1	56-23-5	
Cyclohexane	Not detected	1.0	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	0.607	0.81	0.10	ug/m3	1	75-34-3	J
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	1.2	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	2.52	9.0	0.14	ug/m3	1	123-91-1	J
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	80.5	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.30	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	0.577	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	Not detected	1.6	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.4	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	0.451	2.0	0.086	ug/m3	1	591-78-6	J
Isopropyl Alcohol*	35.4	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	4.866	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.37	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.085	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.29	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.04 (continued)
Sample Tag: 224121-SS-136

TO-15, Method: TO-15, Run Date: 12/27/22 16:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	0.23	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	5.366	6.1	0.12	ug/m3	1	75-65-0	J
Tetrachloroethene	2.0	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	1.8	0.086	ug/m3	1	109-99-9	
Toluene	2.6	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	0.16	1.1	0.12	ug/m3	1	79-01-6	J
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	0.13	0.51	0.074	ug/m3	1	75-01-4	J
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.04	1.7	0.16	ug/m3	1		J
o-Xylene	0.521	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.56	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL
X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S43328.05

Sample Tag: 224121-IA-136

Collected Date/Time: 12/08/2022 08:32 - 12/09/2022 07:42

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-7	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 16:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	8.6	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.070	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.580	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.080	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.150	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	25.4	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.100	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.160	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.05 (continued)

Sample Tag: 224121-IA-136

TO-15, Method: TO-15, Run Date: 12/27/22 16:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	Not detected	0.3	0.015	ppbv	1	142-82-5	X
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.380	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.050	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.040	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.050	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.140	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.050	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.9	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.280	0.4	0.038	ppbv	1		J
o-Xylene	0.100	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.380	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 16:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	20	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.05 (continued)

Sample Tag: 224121-IA-136

TO-15, Method: TO-15, Run Date: 12/27/22 16:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	0.34	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	1.20	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.50	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.516	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	47.9	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.434	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	0.577	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	Not detected	1.2	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	1.12	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.20	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.17	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.25	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.654	0.93	0.065	ug/m3	1	540-84-1	J

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.05 (continued)
Sample Tag: 224121-IA-136

TO-15, Method: TO-15, Run Date: 12/27/22 16:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.34	1.4	0.16	ug/m3	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.4	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.22	1.7	0.16	ug/m3	1		J
o-Xylene	0.434	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.65	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.06

Sample Tag: 224121-SS-137

Collected Date/Time: 12/08/2022 08:59 - 12/09/2022 07:55

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-8	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 17:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	12.6	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.170	0.2	0.019	ppbv	1	71-43-2	J
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.280	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	1.830	2.0	0.046	ppbv	1	75-00-3	J
Chloroform	0.070	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	Not detected	2.0	0.040	ppbv	1	74-87-3	
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	0.3	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	0.3	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	ND	0.2	0.019	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	5.6	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.030	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.500	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.06 (continued)

Sample Tag: 224121-SS-137

TO-15, Method: TO-15, Run Date: 12/27/22 17:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	Not detected	0.4	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.4	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	0.400	0.5	0.021	ppbv	1	591-78-6	J
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	1.300	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.050	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	Not detected	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	0.240	2.0	0.041	ppbv	1	75-65-0	J
Tetrachloroethene	0.060	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.3	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	0.3	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.100	0.4	0.038	ppbv	1		J
o-Xylene	0.040	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.140	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 17:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	29.9	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.543	0.64	0.061	ug/m3	1	71-43-2	J
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.872	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.06 (continued)

Sample Tag: 224121-SS-137

TO-15, Method: TO-15, Run Date: 12/27/22 17:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	4.828	5.3	0.12	ug/m3	1	75-00-3	J
Chloroform	0.34	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	Not detected	4.1	0.083	ug/m3	1	74-87-3	
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	1.2	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	1.2	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	ND	1.2	0.11	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	11	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.13	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	1.80	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	Not detected	1.6	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.4	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	1.64	2.0	0.086	ug/m3	1	591-78-6	J
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	3.834	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.20	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S43328.06 (continued)
Sample Tag: 224121-SS-137

TO-15, Method: TO-15, Run Date: 12/27/22 17:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	Not detected	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	0.728	6.1	0.12	ug/m3	1	75-65-0	J
Tetrachloroethene	0.41	1.4	0.16	ug/m3	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	1.1	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	0.77	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.434	1.7	0.16	ug/m3	1		J
o-Xylene	0.17	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.608	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.07

Sample Tag: 224121-IA-137

Collected Date/Time: 12/08/2022 09:03 - 12/09/2022 07:57

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-1	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 17:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	11.1	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.070	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.040	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.580	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.080	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.2	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	15.8	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.170	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	3.2	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	0.060	0.2	0.032	ppbv	1	622-96-8	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.07 (continued)

Sample Tag: 224121-IA-137

TO-15, Method: TO-15, Run Date: 12/27/22 17:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.9	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.4	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	5.2	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	0.5	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.910	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.090	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.050	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.080	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.2	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	0.480	2.0	0.041	ppbv	1	75-65-0	J
Tetrachloroethene	0.050	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.190	0.2	0.029	ppbv	1	109-99-9	J
Toluene	2.1	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.4	0.4	0.038	ppbv	1		
o-Xylene	0.190	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.6	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 12/27/22 17:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	26.4	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.22	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.20	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.07 (continued)

Sample Tag: 224121-IA-137

TO-15, Method: TO-15, Run Date: 12/27/22 17:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.20	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.50	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.69	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	29.8	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.738	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	12	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	0.29	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	3.7	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.4	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	13	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	1.7	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	2.68	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.37	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.21	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.39	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.93	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	1.46	6.1	0.12	ug/m3	1	75-65-0	J
Tetrachloroethene	0.34	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.07 (continued)
Sample Tag: 224121-IA-137

TO-15, Method: TO-15, Run Date: 12/27/22 17:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	0.560	0.59	0.086	ug/m3	1	109-99-9	J
Toluene	7.9	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.7	1.7	0.16	ug/m3	1		
o-Xylene	0.825	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	2.6	2.6	0.25	ug/m3	1	1330-20-7	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.08
Sample Tag: 224121-OA-137
Collected Date/Time: 12/08/2022 09:15 - 12/09/2022 08:05
Matrix: Air
COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-6	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 18:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	4.0	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.030	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.520	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.080	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.100	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	7.1	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.080	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.130	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.08 (continued)

Sample Tag: 224121-OA-137

TO-15, Method: TO-15, Run Date: 12/27/22 18:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.160	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.310	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.140	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.050	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.180	0.4	0.038	ppbv	1		J
o-Xylene	0.070	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.250	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 18:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	9.5	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.15	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.08 (continued)

Sample Tag: 224121-OA-137

TO-15, Method: TO-15, Run Date: 12/27/22 18:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.07	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.50	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.344	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	13	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.35	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	0.468	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.656	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	0.914	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.654	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.34	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.08 (continued)
Sample Tag: 224121-OA-137

TO-15, Method: TO-15, Run Date: 12/27/22 18:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.0	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.782	1.7	0.16	ug/m3	1		J
o-Xylene	0.30	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.09	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.09

Sample Tag: 224121-IA-138

Collected Date/Time: 12/08/2022 10:52 - 12/09/2022 10:00

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-7	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 18:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	4.4	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.020	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.490	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.080	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.120	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	8.1	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.090	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S43328.09 (continued)

Sample Tag: 224121-IA-138

TO-15, Method: TO-15, Run Date: 12/27/22 18:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.170	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.210	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.030	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.040	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.150	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.060	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.9	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.250	0.4	0.038	ppbv	1		J
o-Xylene	0.080	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.330	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 18:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	10	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.098	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.09 (continued)

Sample Tag: 224121-IA-138

TO-15, Method: TO-15, Run Date: 12/27/22 18:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.01	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.50	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.413	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	15	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.39	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.697	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	0.619	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.13	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.20	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.701	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.41	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43328.09 (continued)
Sample Tag: 224121-IA-138

TO-15, Method: TO-15, Run Date: 12/27/22 18:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.4	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.09	1.7	0.16	ug/m3	1		J
o-Xylene	0.35	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.43	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

FD of 224121-IA-138

Lab Sample ID: S43328.10

Sample Tag: FD-120822

Collected Date/Time: 12/08/2022 00:01 - 12/09/2022 00:02

Matrix: Air

COC Reference: A6449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-7	N/A	12/12/22 13:00	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 12/27/22 19:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	5.1	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.030	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.510	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.080	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.110	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	7.7	2.5	0.068	ppbv	1	64-17-5	
Ethylbenzene	0.090	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

FD of 224121-IA-138

Lab Sample ID: S43328.10 (continued)

Sample Tag: FD-120822

TO-15, Method: TO-15, Run Date: 12/27/22 19:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.180	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	ND	0.5	0.14	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.310	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	ND	0.2	0.010	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.020	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.040	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.150	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.060	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.9	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.240	0.4	0.038	ppbv	1		J
o-Xylene	0.090	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.330	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 12/27/22 19:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	12	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.15	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

FD of 224121-IA-138

Lab Sample ID: S43328.10 (continued)

Sample Tag: FD-120822

TO-15, Method: TO-15, Run Date: 12/27/22 19:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.05	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.50	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.379	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	15	4.7	0.13	ug/m3	1	64-17-5	
Ethylbenzene	0.39	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.738	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	ND	1.7	0.49	ug/m3	1	75-09-2	U
2-Butanone (MEK)	0.914	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	ND	1.0	0.052	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.085	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.20	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.701	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.41	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

FD of 224121-IA-138

Lab Sample ID: S43328.10 (continued)
Sample Tag: FD-120822

TO-15, Method: TO-15, Run Date: 12/27/22 19:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.4	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.04	1.7	0.16	ug/m3	1		J
o-Xylene	0.39	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.43	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL

DATA USABILITY SUMMARY REPORT

COMPANY: AECOM USA, Inc.
PROJECT NAME: Meeker Ave. SVI
CONTRACTED LAB: Merit Laboratories, Inc.
QA/QC LEVEL: Level 3 DUSR
ANALYTICAL METHOD(S): EPA Method TO-15
VALIDATION GUIDELINES: USEPA Region II data validation SOP (VOA-TO15 HW-31 Rev.6, Analysis of VOCs in Air contained in Canisters by Method TO-15, September 2016), Professional Judgment

SAMPLE MATRIX: Air
TYPES OF ANALYSES: Volatile Organic Compounds (VOCs)
DATA REVIEWER(S): Ann Marie Kropovitch
SDG NUMBER: 44921
SAMPLING DATE(S): January 24-27, 2023

SAMPLES:

<u>Client Sample ID</u>	<u>Laboratory ID</u>	<u>VOC</u>
224121-SS-148	S44921.01	X
224121-IA-148	S44921.02	X
FD-01242023	S44921.03	X
224121-OA-148	S44921.04	X
224121-IAA-95	S44921.05	X
224121-IAB-95	S44921.06	X
224121-OA-95	S44921.07	X
224121-IA-97	S44921.08	X
224121-SS-153	S44921.09	X
224121-IA153	S44921.10	X
224121-OA-153	S44921.11	X
224121-IAA-87	S44921.12	X
224121-IAB-87	S44921.13	X
224121-OA-87	S44921.14	X
224121-IAA-80	S44921.15	X
224121-IAB-80	S44921.16	X
224121-OA-80	S44921.17	X
224121-IA-71	S44921.18	X
224121-OA-71	S44921.19	X
224121-IAA-106	S44921.20	X
224121-OA-106	S44921.21	X
224121-IAB-106	S44921.22	X
224121-IAA-69	S44921.23	X
224121-IAB-69	S44921.24	X
224121-OA-69	S44921.25	X

Qualifier	Definition
U	The analyte was not detected and was reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result was an estimated value with an unknown bias.
J+	The result was an estimated quantity, but the result may be biased high.
J-	The result was an estimated quantity, but the result may be biased low.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value was the estimated concentration in the sample.
UJ	The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

DATA USABILITY SUMMARY

Merit Laboratories, Inc. – 44921

VOLATILE ORGANICS

SUMMARY

I.) General:

The analyses for Volatile Organics were performed per EPA Method TO-15.

Appendix A contains the qualified sample summary reports.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

III.) Holding Times:

All Holding Time criteria were met. No data qualification was necessary.

IV.) GC/MS Tuning:

All GC/MS Tuning criteria were met. No data qualification was necessary.

V.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No data qualification was necessary.

Continuing Calibration:

Both Continuing Calibrations exhibited a high bias for isopropyl alcohol, ethanol, t-butyl alcohol, and 1,4-dioxane. The detected results for these compounds in all samples were qualified 'J.'

VI.) Blanks:

Method Blanks:

There were detections in method blanks BLKG20A/BLKG20B for the following compounds:

Acetone	0.18/0.17 ppbv
1,2-Dibromoethane	ND/0.01 ppbv
1,2-Dichlorobenzene	ND/0.03 ppbv
1,3-Dichlorobenzene	0.04/0.03 ppbv
1,4-Dichlorobenzene	0.02/0.02 ppbv

1,2,4-Trichlorobenzene	0.06/0.07 ppbv
Methylene Chloride	0.21/0.21 ppbv
Naphthalene	0.07/0.09 ppbv
Propylene	0.16/0.18 ppbv

Since the blank results were less than or equal to the RL, the positive results for these compounds in the SDG samples, which were less than the RL, were qualified as undetected (U) with the result being raised to the RL.

Canister Blanks:

There were no detects in the canister check blanks for this SDG. No data qualification was necessary.

VII.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No data qualification was necessary.

VIII.) Laboratory Control Samples (LCS):

Two LCS / LCSD sets were analyzed by the laboratory for this SDG. The percent recovery of isopropyl alcohol, ethanol, t-butyl alcohol, and 1,4-dioxane were above the upper QC limit. Since 1,4-dioxane was not detected in the samples, no qualification was necessary. The samples that were detected for the remaining compounds were qualified 'J.'

IX.) Matrix Duplicate:

Matrix Duplicate analysis data was not submitted for this SDG. Data qualification based on the absence of MD data was not required. No data qualification was necessary.

X.) Field Duplicates:

A field duplicate sample (224121-IA-148/FD-01242023) was identified as part of this SDG. The calculable Relative Percent Differences (RPDs) were:

1,2,4-Trimethylbenzene	68.4%
Acetone	10.6%
Benzene	0%
Chloroform	12.0%
Dichlorodifluoromethane	0%
Ethanol	11.7%
Ethylbenzene	0%
Isopropyl alcohol	6.4%
n-Heptane	0%
n-Hexane	24%
Methylene chloride	13.3%
Tetrahydrofuran	15.4%
Trichlorofluoromethane	0%

All RPDs were below the 50% QC limit with one exception. The result for 1,2,4-trimethylbenzene in both samples was qualified 'J'.

XI.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No data qualification was necessary.

XII.) Internal Standards Performance (ISTD):

All ISTD criteria were met. No data qualification was necessary.

XIII.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All CRQL criteria were met.

Appendix A

Qualified Form Is



Analytical Laboratory Report

Lab Sample ID: S44921.01

Sample Tag: 224121-SS-148

Collected Date/Time: 01/24/2023 12:57 - 01/25/2023 12:10

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-8	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 06:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	10.6	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.190	0.2	0.019	ppbv	1	71-43-2	J
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.280	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.4	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	Not detected	2.0	0.040	ppbv	1	74-87-3	
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.050	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	0.090	0.2	0.025	ppbv	1	75-34-3	J
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	41.2	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.040	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.01 (continued)

Sample Tag: 224121-SS-148

TO-15, Method: TO-15, Run Date: 02/21/23 06:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.2	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.2	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	0.100	0.5	0.021	ppbv	1	591-78-6	J
Isopropyl Alcohol*	3.2	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	0.6	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.080	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	0.030	0.2	0.017	ppbv	1	71-55-6	J
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	Not detected	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	0.390	2.0	0.041	ppbv	1	75-65-0	J
Tetrachloroethene	0.8	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.4	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.030	0.2	0.023	ppbv	1	79-01-6	J
Trichlorofluoromethane	0.3	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.130	0.4	0.038	ppbv	1		J
o-Xylene	0.050	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.180	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/21/23 06:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	25.2	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.607	0.64	0.061	ug/m3	1	71-43-2	J
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.872	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.01 (continued)

Sample Tag: 224121-SS-148

TO-15, Method: TO-15, Run Date: 02/21/23 06:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	2.0	0.98	0.098	ug/m3	1	67-66-3	
Chloromethane	Not detected	4.1	0.083	ug/m3	1	74-87-3	
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.31	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	0.36	0.81	0.10	ug/m3	1	75-34-3	J
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	77.6	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.17	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.82	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.70	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	0.410	2.0	0.086	ug/m3	1	591-78-6	J
Isopropyl Alcohol*	7.9	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	2.1	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	3.185	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	0.16	1.1	0.093	ug/m3	1	71-55-6	J
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	Not detected	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	1.18	6.1	0.12	ug/m3	1	75-65-0	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.01 (continued)

Sample Tag: 224121-SS-148

TO-15, Method: TO-15, Run Date: 02/21/23 06:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrachloroethene	5.4	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	1.5	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	0.16	1.1	0.12	ug/m3	1	79-01-6	J
Trichlorofluoromethane	1.7	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.564	1.7	0.16	ug/m3	1		J
o-Xylene	0.22	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.782	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.02

Sample Tag: 224121-IA-148

Collected Date/Time: 01/24/2023 12:59 - 01/25/2023 12:09

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-9	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 16:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	14.7	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	0.050	0.2	0.023	ppbv	1	75-27-4	J
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.290	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	0.070	0.2	0.017	ppbv	1	108-90-7	J
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.8	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.470	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.120	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.060	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	0.6	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	309.2	2.5	0.068	ppbv	1	64-17-5	E-J
Ethylbenzene	0.2	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.240	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.02 (continued)

Sample Tag: 224121-IA-148

TO-15, Method: TO-15, Run Date: 02/20/23 16:01, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	0.190	0.2	0.032	ppbv	1	622-96-8	J
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.2	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.4	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	6.3	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	0.7	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.340	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.170	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.2	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	0.030	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.080	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.050	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.6	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.5	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.280	0.4	0.038	ppbv	1		J
o-Xylene	0.150	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.430	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 16:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	34.9	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	0.33	1.3	0.15	ug/m3	1	75-27-4	J
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.903	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	0.32	0.92	0.078	ug/m3	1	108-90-7	J
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.02 (continued)

Sample Tag: 224121-IA-148

TO-15, Method: TO-15, Run Date: 02/20/23 16:01, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	3.9	0.98	0.098	ug/m3	1	67-66-3	
Chloromethane	0.971	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.755	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.21	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	3.6	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	582.6	4.7	0.13	ug/m3	1	64-17-5	E-J
Ethylbenzene	0.87	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	0.865	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.934	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.82	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.4	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	15	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	2.4	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	3.952	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.696	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.98	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	0.15	0.98	0.12	ug/m3	1	108-67-8	J
2,2,4-Trimethylpentane	0.37	0.93	0.065	ug/m3	1	540-84-1	J

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.02 (continued)

Sample Tag: 224121-IA-148

TO-15, Method: TO-15, Run Date: 02/20/23 16:01, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.34	1.4	0.16	ug/m3	1	127-18-4	J
Tetrahydrofuran*	1.8	0.59	0.086	ug/m3	1	109-99-9	
Toluene	5.7	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.22	1.7	0.16	ug/m3	1		J
o-Xylene	0.651	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.87	2.6	0.25	ug/m3	1	1330-20-7	J

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	14.90	20	0.58	ppbv	10	67-64-1	JYB
1,3-Butadiene	Not detected	20	0.29	ppbv	10	106-99-0	Y
Benzene	0.20	2	0.19	ppbv	10	71-43-2	JY
Bromodichloromethane	Not detected	2	0.23	ppbv	10	75-27-4	Y
Bromoform	Not detected	2	0.23	ppbv	10	75-25-2	Y
Bromomethane	Not detected	2	0.33	ppbv	10	74-83-9	Y
Vinyl bromide	Not detected	2	0.35	ppbv	10	593-60-2	Y
Benzyl chloride	Not detected	2	0.29	ppbv	10	100-44-7	Y
Carbon disulfide	0.30	20	0.19	ppbv	10	75-15-0	JY
Chlorobenzene	Not detected	2	0.17	ppbv	10	108-90-7	Y
Chloroethane	Not detected	20	0.46	ppbv	10	75-00-3	Y
Chloroform	0.70	2	0.20	ppbv	10	67-66-3	JY
Chloromethane	Not detected	20	0.40	ppbv	10	74-87-3	Y
3-Chloropropene	Not detected	20	0.24	ppbv	10	107-05-1	Y
2-Chlorotoluene	Not detected	2	0.24	ppbv	10	95-49-8	Y
Carbon tetrachloride	Not detected	2	0.20	ppbv	10	56-23-5	Y
Cyclohexane	Not detected	2	0.24	ppbv	10	110-82-7	Y
1,1-Dichloroethane	Not detected	2	0.25	ppbv	10	75-34-3	Y
1,1-Dichloroethene	Not detected	2	0.24	ppbv	10	75-35-4	Y
1,2-Dibromoethane	Not detected	2	0.10	ppbv	10	106-93-4	Y
1,2-Dichloroethane	Not detected	2	0.28	ppbv	10	107-06-2	Y
1,2-Dichloropropane	Not detected	2	0.20	ppbv	10	78-87-5	Y
1,4-Dioxane	Not detected	25	0.38	ppbv	10	123-91-1	Y
Dichlorodifluoromethane	0.40	2	0.26	ppbv	10	75-71-8	JY
Dibromochloromethane	Not detected	2	0.17	ppbv	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	2	0.21	ppbv	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	2	0.23	ppbv	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	2	0.20	ppbv	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	2	0.20	ppbv	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	2	0.24	ppbv	10	95-50-1	Y
1,4-Dichlorobenzene	0.40	2	0.19	ppbv	10	106-46-7	JYB
trans-1,3-Dichloropropene	Not detected	2	0.13	ppbv	10	10061-02-6	Y
Ethanol*	274	25	0.68	ppbv	10	64-17-5	**
Ethylbenzene	Not detected	2	0.20	ppbv	10	100-41-4	Y

**** use this result**

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.02 (continued)

Sample Tag: 224121-IA-148

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethyl Acetate*	Not detected	20	0.49	ppbv	10	141-78-6	Y
4-Ethyltoluene	Not detected	2	0.32	ppbv	10	622-96-8	Y
Freon 113	Not detected	2	0.24	ppbv	10	76-13-1	Y
Freon 114	Not detected	2	0.29	ppbv	10	76-14-2	Y
Heptane	Not detected	2	0.15	ppbv	10	142-82-5	Y
Hexachlorobutadiene	Not detected	2	0.29	ppbv	10	87-68-3	Y
Hexane	Not detected	2	0.19	ppbv	10	110-54-3	Y
2-Hexanone*	Not detected	5	0.21	ppbv	10	591-78-6	Y
Isopropyl Alcohol*	Not detected	20	0.76	ppbv	10	67-63-0	Y
Methylene chloride	2.6	5	1.4	ppbv	10	75-09-2	JYB
2-Butanone (MEK)	Not detected	20	0.46	ppbv	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	5	0.17	ppbv	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	2	0.10	ppbv	10	1634-04-4	Y
Methyl methacrylate	Not detected	2	0.17	ppbv	10	80-62-6	Y
Naphthalene	Not detected	2	0.10	ppbv	10	91-20-3	Y
Propylene*	Not detected	100	0.38	ppbv	10	115-07-1	Y
Styrene	Not detected	2	0.15	ppbv	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	2	0.17	ppbv	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	2	0.14	ppbv	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	2	0.15	ppbv	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	5	0.15	ppbv	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	2	0.29	ppbv	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	2	0.25	ppbv	10	108-67-8	Y
2,2,4-Trimethylpentane	0.50	2	0.14	ppbv	10	540-84-1	JY
Tert-butyl Alcohol	Not detected	20	0.41	ppbv	10	75-65-0	Y
Tetrachloroethene	Not detected	2	0.24	ppbv	10	127-18-4	Y
Tetrahydrofuran*	Not detected	2	0.29	ppbv	10	109-99-9	Y
Toluene	1.20	2	0.13	ppbv	10	108-88-3	JY
Trichloroethene	Not detected	2	0.23	ppbv	10	79-01-6	Y
Trichlorofluoromethane	Not detected	2	0.17	ppbv	10	75-69-4	Y
Vinyl chloride	Not detected	2	0.29	ppbv	10	75-01-4	Y
Vinyl acetate	Not detected	20	0.15	ppbv	10	108-05-4	Y
p,m-Xylene	Not detected	4	0.38	ppbv	10		Y
o-Xylene	Not detected	2	0.20	ppbv	10	95-47-6	Y
Total Xylenes	Not detected	6	0.58	ppbv	10	1330-20-7	Y

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	35.39	48	1.4	ug/m3	10	67-64-1	JYB
1,3-Butadiene	Not detected	44	0.64	ug/m3	10	106-99-0	Y
Benzene	0.64	6.4	0.61	ug/m3	10	71-43-2	JY
Bromodichloromethane	Not detected	13	1.5	ug/m3	10	75-27-4	Y
Bromoform	Not detected	21	2.4	ug/m3	10	75-25-2	Y
Bromomethane	Not detected	7.8	1.3	ug/m3	10	74-83-9	Y
Vinyl bromide	Not detected	8.7	1.5	ug/m3	10	593-60-2	Y
Benzyl chloride	Not detected	10	1.5	ug/m3	10	100-44-7	Y
Carbon disulfide	0.93	62	0.59	ug/m3	10	75-15-0	JY
Chlorobenzene	Not detected	9.2	0.78	ug/m3	10	108-90-7	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.02 (continued)

Sample Tag: 224121-IA-148

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	53	1.2	ug/m3	10	75-00-3	Y
Chloroform	3.4	9.8	0.98	ug/m3	10	67-66-3	JY
Chloromethane	Not detected	41	0.83	ug/m3	10	74-87-3	Y
3-Chloropropene	Not detected	63	0.75	ug/m3	10	107-05-1	Y
2-Chlorotoluene	Not detected	10	1.2	ug/m3	10	95-49-8	Y
Carbon tetrachloride	Not detected	13	1.3	ug/m3	10	56-23-5	Y
Cyclohexane	Not detected	6.9	0.83	ug/m3	10	110-82-7	Y
1,1-Dichloroethane	Not detected	8.1	1.0	ug/m3	10	75-34-3	Y
1,1-Dichloroethene	Not detected	7.9	0.95	ug/m3	10	75-35-4	Y
1,2-Dibromoethane	Not detected	15	0.77	ug/m3	10	106-93-4	Y
1,2-Dichloroethane	Not detected	8.1	1.1	ug/m3	10	107-06-2	Y
1,2-Dichloropropane	Not detected	9.2	0.92	ug/m3	10	78-87-5	Y
1,4-Dioxane	Not detected	90	1.4	ug/m3	10	123-91-1	Y
Dichlorodifluoromethane	2.0	9.9	1.3	ug/m3	10	75-71-8	JY
Dibromochloromethane	Not detected	17	1.4	ug/m3	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	7.9	0.83	ug/m3	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	7.9	0.91	ug/m3	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	9.1	0.91	ug/m3	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	12	1.2	ug/m3	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	12	1.4	ug/m3	10	95-50-1	Y
1,4-Dichlorobenzene	2.4	12	1.1	ug/m3	10	106-46-7	JYB
trans-1,3-Dichloropropene	Not detected	9.1	0.59	ug/m3	10	10061-02-6	Y
Ethanol*	516	47	1.3	ug/m3	10	64-17-5	** J ** use this result
Ethylbenzene	Not detected	8.7	0.87	ug/m3	10	100-41-4	Y
Ethyl Acetate*	Not detected	72	1.8	ug/m3	10	141-78-6	Y
4-Ethyltoluene	Not detected	9.8	1.6	ug/m3	10	622-96-8	Y
Freon 113	Not detected	15	1.8	ug/m3	10	76-13-1	Y
Freon 114	Not detected	14	2.0	ug/m3	10	76-14-2	Y
Heptane	Not detected	8.2	0.61	ug/m3	10	142-82-5	Y
Hexachlorobutadiene	Not detected	21	3.1	ug/m3	10	87-68-3	Y
Hexane	Not detected	7.0	0.67	ug/m3	10	110-54-3	Y
2-Hexanone*	Not detected	20	0.86	ug/m3	10	591-78-6	Y
Isopropyl Alcohol*	Not detected	49	1.9	ug/m3	10	67-63-0	Y
Methylene chloride	9.0	17	4.9	ug/m3	10	75-09-2	JYB
2-Butanone (MEK)	Not detected	59	1.4	ug/m3	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	20	0.70	ug/m3	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	7.2	0.36	ug/m3	10	1634-04-4	Y
Methyl methacrylate	Not detected	8.2	0.70	ug/m3	10	80-62-6	Y
Naphthalene	Not detected	10	0.52	ug/m3	10	91-20-3	Y
Propylene*	Not detected	170	0.65	ug/m3	10	115-07-1	Y
Styrene	Not detected	8.5	0.64	ug/m3	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	11	0.93	ug/m3	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	14	0.96	ug/m3	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	11	0.82	ug/m3	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	37	1.1	ug/m3	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	9.8	1.4	ug/m3	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	9.8	1.2	ug/m3	10	108-67-8	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.02 (continued)
Sample Tag: 224121-IA-148

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	2.3	9.3	0.65	ug/m3	10	540-84-1	JY
Tert-butyl Alcohol	Not detected	61	1.2	ug/m3	10	75-65-0	Y
Tetrachloroethene	Not detected	14	1.6	ug/m3	10	127-18-4	Y
Tetrahydrofuran*	Not detected	5.9	0.86	ug/m3	10	109-99-9	Y
Toluene	4.52	7.5	0.49	ug/m3	10	108-88-3	JY
Trichloroethene	Not detected	11	1.2	ug/m3	10	79-01-6	Y
Trichlorofluoromethane	Not detected	11	0.96	ug/m3	10	75-69-4	Y
Vinyl chloride	Not detected	5.1	0.74	ug/m3	10	75-01-4	Y
Vinyl acetate	Not detected	70	0.53	ug/m3	10	108-05-4	Y
p,m-Xylene	Not detected	17	1.6	ug/m3	10		Y
o-Xylene	Not detected	8.7	0.87	ug/m3	10	95-47-6	Y
Total Xylenes	Not detected	26	2.5	ug/m3	10	1330-20-7	Y

J-Estimated value less than reporting limit, but greater than MDL Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03

Sample Tag: FD-01242023

Collected Date/Time: 01/24/2023 00:01 - 01/25/2023 00:02

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-6.5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 16:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	13.2	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	0.060	0.2	0.023	ppbv	1	75-27-4	J
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.290	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	0.070	0.2	0.017	ppbv	1	108-90-7	J
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.9	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.510	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.120	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.070	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	0.7	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	341.8	2.5	0.068	ppbv	1	64-17-5	E-J
Ethylbenzene	0.2	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.300	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03 (continued)

Sample Tag: FD-01242023

TO-15, Method: TO-15, Run Date: 02/20/23 16:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	0.3	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.2	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	6.5	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	0.6	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.880	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	0.2	0.2	0.010	ppbv	1	91-20-3	
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.4	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	0.100	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.070	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.040	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.7	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.5	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.360	0.4	0.038	ppbv	1		J
o-Xylene	0.160	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.520	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 16:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	31.4	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	0.40	1.3	0.15	ug/m3	1	75-27-4	J
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.903	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	0.32	0.92	0.078	ug/m3	1	108-90-7	J
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	4.4	0.98	0.098	ug/m3	1	67-66-3	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03 (continued)

Sample Tag: FD-01242023

TO-15, Method: TO-15, Run Date: 02/20/23 16:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.05	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.755	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.24	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	4.2	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	644.0	4.7	0.13	ug/m3	1	64-17-5	E-J
Ethylbenzene	0.87	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	1.08	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	1.5	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.82	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	16	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	2.1	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	2.60	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	1.0	1.0	0.052	ug/m3	1	91-20-3	
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	2.0	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	0.492	0.98	0.12	ug/m3	1	108-67-8	J
2,2,4-Trimethylpentane	0.33	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.27	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03 (continued)

Sample Tag: FD-01242023

TO-15, Method: TO-15, Run Date: 02/20/23 16:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	2.1	0.59	0.086	ug/m3	1	109-99-9	
Toluene	5.7	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.56	1.7	0.16	ug/m3	1		J
o-Xylene	0.695	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	2.26	2.6	0.25	ug/m3	1	1330-20-7	J

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	12.10	20	0.58	ppbv	10	67-64-1	JYB
1,3-Butadiene	Not detected	20	0.29	ppbv	10	106-99-0	Y
Benzene	0.20	2	0.19	ppbv	10	71-43-2	JY
Bromodichloromethane	Not detected	2	0.23	ppbv	10	75-27-4	Y
Bromoform	Not detected	2	0.23	ppbv	10	75-25-2	Y
Bromomethane	Not detected	2	0.33	ppbv	10	74-83-9	Y
Vinyl bromide	Not detected	2	0.35	ppbv	10	593-60-2	Y
Benzyl chloride	Not detected	2	0.29	ppbv	10	100-44-7	Y
Carbon disulfide	0.30	20	0.19	ppbv	10	75-15-0	JY
Chlorobenzene	Not detected	2	0.17	ppbv	10	108-90-7	Y
Chloroethane	Not detected	20	0.46	ppbv	10	75-00-3	Y
Chloroform	0.80	2	0.20	ppbv	10	67-66-3	JY
Chloromethane	Not detected	20	0.40	ppbv	10	74-87-3	Y
3-Chloropropene	Not detected	20	0.24	ppbv	10	107-05-1	Y
2-Chlorotoluene	Not detected	2	0.24	ppbv	10	95-49-8	Y
Carbon tetrachloride	Not detected	2	0.20	ppbv	10	56-23-5	Y
Cyclohexane	Not detected	2	0.24	ppbv	10	110-82-7	Y
1,1-Dichloroethane	Not detected	2	0.25	ppbv	10	75-34-3	Y
1,1-Dichloroethene	Not detected	2	0.24	ppbv	10	75-35-4	Y
1,2-Dibromoethane	Not detected	2	0.10	ppbv	10	106-93-4	Y
1,2-Dichloroethane	Not detected	2	0.28	ppbv	10	107-06-2	Y
1,2-Dichloropropane	Not detected	2	0.20	ppbv	10	78-87-5	Y
1,4-Dioxane	Not detected	25	0.38	ppbv	10	123-91-1	Y
Dichlorodifluoromethane	0.30	2	0.26	ppbv	10	75-71-8	JY
Dibromochloromethane	Not detected	2	0.17	ppbv	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	2	0.21	ppbv	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	2	0.23	ppbv	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	2	0.20	ppbv	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	2	0.20	ppbv	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	2	0.24	ppbv	10	95-50-1	Y
1,4-Dichlorobenzene	0.50	2	0.19	ppbv	10	106-46-7	JYB
trans-1,3-Dichloropropene	Not detected	2	0.13	ppbv	10	10061-02-6	Y
Ethanol*	310	25	0.68	ppbv	10	64-17-5	J**
Ethylbenzene	0.20	2	0.20	ppbv	10	100-41-4	JY
Ethyl Acetate*	Not detected	20	0.49	ppbv	10	141-78-6	Y
4-Ethyltoluene	Not detected	2	0.32	ppbv	10	622-96-8	Y

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration B-Compound also found in associated method blank

**** use this
result**



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03 (continued)

Sample Tag: FD-01242023

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	Not detected	2	0.24	ppbv	10	76-13-1	Y
Freon 114	Not detected	2	0.29	ppbv	10	76-14-2	Y
Heptane	Not detected	2	0.15	ppbv	10	142-82-5	Y
Hexachlorobutadiene	Not detected	2	0.29	ppbv	10	87-68-3	Y
Hexane	Not detected	2	0.19	ppbv	10	110-54-3	Y
2-Hexanone*	Not detected	5	0.21	ppbv	10	591-78-6	Y
Isopropyl Alcohol*	7.40	20	0.76	ppbv	10	67-63-0	JY
Methylene chloride	2.5	5	1.4	ppbv	10	75-09-2	JYB
2-Butanone (MEK)	Not detected	20	0.46	ppbv	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	5	0.17	ppbv	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	2	0.10	ppbv	10	1634-04-4	Y
Methyl methacrylate	Not detected	2	0.17	ppbv	10	80-62-6	Y
Naphthalene	0.10	2	0.10	ppbv	10	91-20-3	JYB
Propylene*	Not detected	100	0.38	ppbv	10	115-07-1	Y
Styrene	Not detected	2	0.15	ppbv	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	2	0.17	ppbv	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	2	0.14	ppbv	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	2	0.15	ppbv	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	5	0.15	ppbv	10	120-82-1	Y
1,2,4-Trimethylbenzene	0.30	2	0.29	ppbv	10	95-63-6	JY
1,3,5-Trimethylbenzene	Not detected	2	0.25	ppbv	10	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	2	0.14	ppbv	10	540-84-1	Y
Tert-butyl Alcohol	Not detected	20	0.41	ppbv	10	75-65-0	Y
Tetrachloroethene	Not detected	2	0.24	ppbv	10	127-18-4	Y
Tetrahydrofuran*	Not detected	2	0.29	ppbv	10	109-99-9	Y
Toluene	1.20	2	0.13	ppbv	10	108-88-3	JY
Trichloroethene	Not detected	2	0.23	ppbv	10	79-01-6	Y
Trichlorofluoromethane	Not detected	2	0.17	ppbv	10	75-69-4	Y
Vinyl chloride	Not detected	2	0.29	ppbv	10	75-01-4	Y
Vinyl acetate	Not detected	20	0.15	ppbv	10	108-05-4	Y
p,m-Xylene	Not detected	4	0.38	ppbv	10		Y
o-Xylene	Not detected	2	0.20	ppbv	10	95-47-6	Y
Total Xylenes	Not detected	6	0.58	ppbv	10	1330-20-7	Y

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	28.74	48	1.4	ug/m3	10	67-64-1	JYB
1,3-Butadiene	Not detected	44	0.64	ug/m3	10	106-99-0	Y
Benzene	0.64	6.4	0.61	ug/m3	10	71-43-2	JY
Bromodichloromethane	Not detected	13	1.5	ug/m3	10	75-27-4	Y
Bromoform	Not detected	21	2.4	ug/m3	10	75-25-2	Y
Bromomethane	Not detected	7.8	1.3	ug/m3	10	74-83-9	Y
Vinyl bromide	Not detected	8.7	1.5	ug/m3	10	593-60-2	Y
Benzyl chloride	Not detected	10	1.5	ug/m3	10	100-44-7	Y
Carbon disulfide	0.93	62	0.59	ug/m3	10	75-15-0	JY
Chlorobenzene	Not detected	9.2	0.78	ug/m3	10	108-90-7	Y
Chloroethane	Not detected	53	1.2	ug/m3	10	75-00-3	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03 (continued)

Sample Tag: FD-01242023

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	3.9	9.8	0.98	ug/m3	10	67-66-3	JY
Chloromethane	Not detected	41	0.83	ug/m3	10	74-87-3	Y
3-Chloropropene	Not detected	63	0.75	ug/m3	10	107-05-1	Y
2-Chlorotoluene	Not detected	10	1.2	ug/m3	10	95-49-8	Y
Carbon tetrachloride	Not detected	13	1.3	ug/m3	10	56-23-5	Y
Cyclohexane	Not detected	6.9	0.83	ug/m3	10	110-82-7	Y
1,1-Dichloroethane	Not detected	8.1	1.0	ug/m3	10	75-34-3	Y
1,1-Dichloroethene	Not detected	7.9	0.95	ug/m3	10	75-35-4	Y
1,2-Dibromoethane	Not detected	15	0.77	ug/m3	10	106-93-4	Y
1,2-Dichloroethane	Not detected	8.1	1.1	ug/m3	10	107-06-2	Y
1,2-Dichloropropane	Not detected	9.2	0.92	ug/m3	10	78-87-5	Y
1,4-Dioxane	Not detected	90	1.4	ug/m3	10	123-91-1	Y
Dichlorodifluoromethane	1.5	9.9	1.3	ug/m3	10	75-71-8	JY
Dibromochloromethane	Not detected	17	1.4	ug/m3	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	7.9	0.83	ug/m3	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	7.9	0.91	ug/m3	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	9.1	0.91	ug/m3	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	12	1.2	ug/m3	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	12	1.4	ug/m3	10	95-50-1	Y
1,4-Dichlorobenzene	3.0	12	1.1	ug/m3	10	106-46-7	JYB
trans-1,3-Dichloropropene	Not detected	9.1	0.59	ug/m3	10	10061-02-6	Y
Ethanol*	580	47	1.3	ug/m3	10	64-17-5	J **
Ethylbenzene	0.87	8.7	0.87	ug/m3	10	100-41-4	JY
Ethyl Acetate*	Not detected	72	1.8	ug/m3	10	141-78-6	Y
4-Ethyltoluene	Not detected	9.8	1.6	ug/m3	10	622-96-8	Y
Freon 113	Not detected	15	1.8	ug/m3	10	76-13-1	Y
Freon 114	Not detected	14	2.0	ug/m3	10	76-14-2	Y
Heptane	Not detected	8.2	0.61	ug/m3	10	142-82-5	Y
Hexachlorobutadiene	Not detected	21	3.1	ug/m3	10	87-68-3	Y
Hexane	Not detected	7.0	0.67	ug/m3	10	110-54-3	Y
2-Hexanone*	Not detected	20	0.86	ug/m3	10	591-78-6	Y
Isopropyl Alcohol*	18.2	49	1.9	ug/m3	10	67-63-0	JY
Methylene chloride	8.7	17	4.9	ug/m3	10	75-09-2	JYB
2-Butanone (MEK)	Not detected	59	1.4	ug/m3	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	20	0.70	ug/m3	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	7.2	0.36	ug/m3	10	1634-04-4	Y
Methyl methacrylate	Not detected	8.2	0.70	ug/m3	10	80-62-6	Y
Naphthalene	0.52	10	0.52	ug/m3	10	91-20-3	JYB
Propylene*	Not detected	170	0.65	ug/m3	10	115-07-1	Y
Styrene	Not detected	8.5	0.64	ug/m3	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	11	0.93	ug/m3	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	14	0.96	ug/m3	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	11	0.82	ug/m3	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	37	1.1	ug/m3	10	120-82-1	Y
1,2,4-Trimethylbenzene	1.5	9.8	1.4	ug/m3	10	95-63-6	JY
1,3,5-Trimethylbenzene	Not detected	9.8	1.2	ug/m3	10	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	9.3	0.65	ug/m3	10	540-84-1	Y
Tert-butyl Alcohol	Not detected	61	1.2	ug/m3	10	75-65-0	Y

J-Estimated value less than reporting limit, but greater than MDL Y-Elevated reporting limit due to high target concentration
B-Compound also found in associated method blank

**** use this
result**



Analytical Laboratory Report

FD of 224121-IA-148

Lab Sample ID: S44921.03 (continued)

Sample Tag: FD-01242023

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 11:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrachloroethene	Not detected	14	1.6	ug/m3	10	127-18-4	Y
Tetrahydrofuran*	Not detected	5.9	0.86	ug/m3	10	109-99-9	Y
Toluene	4.52	7.5	0.49	ug/m3	10	108-88-3	JY
Trichloroethene	Not detected	11	1.2	ug/m3	10	79-01-6	Y
Trichlorofluoromethane	Not detected	11	0.96	ug/m3	10	75-69-4	Y
Vinyl chloride	Not detected	5.1	0.74	ug/m3	10	75-01-4	Y
Vinyl acetate	Not detected	70	0.53	ug/m3	10	108-05-4	Y
p,m-Xylene	Not detected	17	1.6	ug/m3	10		Y
o-Xylene	Not detected	8.7	0.87	ug/m3	10	95-47-6	Y
Total Xylenes	Not detected	26	2.5	ug/m3	10	1330-20-7	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.04

Sample Tag: 224121-OA-148

Collected Date/Time: 01/24/2023 13:05 - 01/25/2023 12:09

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-5.5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 17:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	3.9	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.020	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.400	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.060	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	9.0	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.050	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.04 (continued)

Sample Tag: 224121-OA-148

TO-15, Method: TO-15, Run Date: 02/20/23 17:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.080	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.140	0.2	0.019	ppbv	1	110-54-3	J
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	1.410	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	Not detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.380	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.050	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.030	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.4	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.080	0.4	0.038	ppbv	1		J
o-Xylene	0.040	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.120	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 17:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	9.3	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.098	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.04 (continued)

Sample Tag: 224121-OA-148

TO-15, Method: TO-15, Run Date: 02/20/23 17:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.826	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.38	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	17	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.22	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.33	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.493	0.70	0.067	ug/m3	1	110-54-3	J
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	3.466	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	Not detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	1.12	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.23	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.20	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.04 (continued)
Sample Tag: 224121-OA-148

TO-15, Method: TO-15, Run Date: 02/20/23 17:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	1.5	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.35	1.7	0.16	ug/m3	1		J
o-Xylene	0.17	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.521	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.05
Sample Tag: 224121-IAA-95
Collected Date/Time: 01/25/2023 09:00 - 01/26/2023 15:58
Matrix: Air
COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 17:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	12.1	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.8	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.060	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.470	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.4	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	17.4	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.6	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.280	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	0.5	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.05 (continued)

Sample Tag: 224121-IAA-95

TO-15, Method: TO-15, Run Date: 02/20/23 17:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.6	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.8	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	7.3	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.560	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.490	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.110	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.040	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	1.4	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	0.3	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.6	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.070	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.8	0.2	0.029	ppbv	1	109-99-9	
Toluene	2.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.3	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	1.6	0.4	0.038	ppbv	1		
o-Xylene	0.8	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	2.4	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/20/23 17:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	28.7	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	2.6	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.29	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.05 (continued)

Sample Tag: 224121-IAA-95

TO-15, Method: TO-15, Run Date: 02/20/23 17:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.971	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	1.4	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	32.8	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	2.6	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	1.01	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	2.5	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	2.5	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	2.8	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	25	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	4.601	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	2.01	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.450	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	0.1	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.17	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	6.9	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	1.5	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	2.8	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.47	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.05 (continued)

Sample Tag: 224121-IAA-95

TO-15, Method: TO-15, Run Date: 02/20/23 17:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	2.4	0.59	0.086	ug/m3	1	109-99-9	
Toluene	11	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.7	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	6.9	1.7	0.16	ug/m3	1		
o-Xylene	3.5	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	10	2.6	0.25	ug/m3	1	1330-20-7	



Analytical Laboratory Report

Lab Sample ID: S44921.06

Sample Tag: 224121-IAB-95

Collected Date/Time: 01/25/2023 09:01 - 01/26/2023 15:58

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 18:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	17.0	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.8	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.130	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.060	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.380	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.3	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	18.5	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.6	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.160	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	0.5	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.06 (continued)

Sample Tag: 224121-IAB-95

TO-15, Method: TO-15, Run Date: 02/20/23 18:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.7	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.9	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	7.9	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.860	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.6	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.110	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.040	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	1.2	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	0.2	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.6	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.080	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.8	0.2	0.029	ppbv	1	109-99-9	
Toluene	2.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.3	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	1.6	0.4	0.038	ppbv	1		
o-Xylene	0.7	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	2.3	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/20/23 18:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	40.4	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	2.6	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.405	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.29	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.06 (continued)

Sample Tag: 224121-IAB-95

TO-15, Method: TO-15, Run Date: 02/20/23 18:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.785	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	1.0	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	34.9	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	2.6	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	0.577	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	2.5	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	2.9	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	3.2	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	27	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	5.486	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	2.5	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.450	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.17	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	5.9	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	0.98	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	2.8	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.54	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.06 (continued)

Sample Tag: 224121-IAB-95

TO-15, Method: TO-15, Run Date: 02/20/23 18:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	2.4	0.59	0.086	ug/m3	1	109-99-9	
Toluene	11	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.7	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	6.9	1.7	0.16	ug/m3	1		
o-Xylene	3.0	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	10.0	2.6	0.25	ug/m3	1	1330-20-7	



Analytical Laboratory Report

Lab Sample ID: S44921.07

Sample Tag: 224121-OA-95

Collected Date/Time: 01/25/2023 09:05 - 01/26/2023 16:00

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-2	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 18:37, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	9.3	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.380	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.130	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.330	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.100	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	13.0	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.130	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.470	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	0.050	0.2	0.032	ppbv	1	622-96-8	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.07 (continued)

Sample Tag: 224121-OA-95

TO-15, Method: TO-15, Run Date: 02/20/23 18:37, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.2	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.2	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	2.1	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	16.8	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.080	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.080	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.140	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.020	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.070	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.060	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.050	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.4	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.3	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.330	0.4	0.038	ppbv	1		J
o-Xylene	0.140	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.470	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 18:37, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	22	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	1.18	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.635	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.07 (continued)

Sample Tag: 224121-OA-95

TO-15, Method: TO-15, Run Date: 02/20/23 18:37, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.681	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.344	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	24.5	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.564	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	1.69	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.25	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.82	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.70	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	5.2	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	58.4	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	3.185	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.33	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.573	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	0.1	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.085	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.34	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.28	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.34	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.07 (continued)

Sample Tag: 224121-OA-95

TO-15, Method: TO-15, Run Date: 02/20/23 18:37, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	5.3	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.7	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.43	1.7	0.16	ug/m3	1		J
o-Xylene	0.608	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	2.04	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.08
Sample Tag: 224121-IA-97
Collected Date/Time: 01/25/2023 09:10 - 01/26/2023 16:04
Matrix: Air
COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-9	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 19:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	11.3	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.6	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	Not detected	2.0	0.019	ppbv	1	75-15-0	
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.130	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.390	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.3	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	17.1	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.5	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.140	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	0.070	0.2	0.032	ppbv	1	622-96-8	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.08 (continued)

Sample Tag: 224121-IA-97

TO-15, Method: TO-15, Run Date: 02/20/23 19:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.7	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.8	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	4.4	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.880	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.110	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.190	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.040	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.2	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	0.040	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.6	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.090	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.120	0.2	0.029	ppbv	1	109-99-9	J
Toluene	2.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.3	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	1.0	0.4	0.038	ppbv	1		
o-Xylene	0.4	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	1.4	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/20/23 19:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	26.8	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.9	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	Not detected	6.2	0.059	ug/m3	1	75-15-0	
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.635	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.08 (continued)

Sample Tag: 224121-IA-97

TO-15, Method: TO-15, Run Date: 02/20/23 19:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.805	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	1.0	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	32.2	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	2.2	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	0.505	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.34	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	2.9	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	2.8	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	15	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	2.60	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.451	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.778	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.17	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.98	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	0.20	0.98	0.12	ug/m3	1	108-67-8	J
2,2,4-Trimethylpentane	2.8	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.61	1.4	0.16	ug/m3	1	127-18-4	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.08 (continued)

Sample Tag: 224121-IA-97

TO-15, Method: TO-15, Run Date: 02/20/23 19:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	0.354	0.59	0.086	ug/m3	1	109-99-9	J
Toluene	11	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.7	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	4.3	1.7	0.16	ug/m3	1		
o-Xylene	1.7	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	6.1	2.6	0.25	ug/m3	1	1330-20-7	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.09

Sample Tag: 224121-SS-153

Collected Date/Time: 01/25/2023 09:55 - 01/26/2023 16:32

Matrix: Air

COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-9	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 14:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	77.5	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	5.4	2.0	0.029	ppbv	1	106-99-0	
Benzene	11.6	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	0.030	0.2	0.023	ppbv	1	75-25-2	J
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	1.220	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	0.060	0.2	0.017	ppbv	1	108-90-7	J
Chloroethane	4.6	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.3	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	1.410	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.3	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	0.6	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	0.5	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.6	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	0.030	0.2	0.023	ppbv	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	541-73-1	U
1,2-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	95-50-1	U
1,4-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	63.5	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.4	0.2	0.020	ppbv	1	100-41-4	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.09 (continued)

Sample Tag: 224121-SS-153

TO-15, Method: TO-15, Run Date: 02/21/23 14:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethyl Acetate*	0.140	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	0.2	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.090	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	0.040	0.2	0.029	ppbv	1	76-14-2	J
Heptane	1.2	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	Not detected	4.6	0.019	ppbv	1	110-54-3	
2-Hexanone*	1.0	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	11.2	0.076	ppbv	1	67-63-0	
XMethylene chloride	0.7	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	36.4	2.0	0.046	ppbv	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.360	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.6	0.017	ppbv	1		80-62-6
XNaphthalene	Not detected	0.2	0.2	ppbv	1		91-20-3
UPropylene*	40	10	0.038	ppbv	1	115-07-1	
Styrene	0.120	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	0.170	0.2	0.017	ppbv	1	71-55-6	J
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.5	ppbv	1	120-82-1	U
1,2,4-Trimethylbenzene	0.110	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	0.050	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	2.1	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	1.600	2.0	0.041	ppbv	1	75-65-0	J
Tetrachloroethene	3.5	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	1.0	0.029	ppbv	1	109-99-9	
Toluene	1.9	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.070	0.2	0.023	ppbv	1	79-01-6	J
Trichlorofluoromethane	0.5	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	2.2	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.5	0.4	0.038	ppbv	1		
o-Xylene	0.2	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	0.7	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/21/23 14:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	184	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	12	4.4	0.064	ug/m3	1	106-99-0	
Benzene	37.1	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	0.31	2.1	0.24	ug/m3	1	75-25-2	J
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	3.799	6.2	0.059	ug/m3	1	75-15-0	J

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.09 (continued)

Sample Tag: 224121-SS-153

TO-15, Method: TO-15, Run Date: 02/21/23 14:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	0.28	0.92	0.078	ug/m3	1	108-90-7	J
Chloroethane	12	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	1.5	0.98	0.098	ug/m3	1	67-66-3	
Chloromethane	2.912	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	1.0	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	2.4	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	2.0	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	2.4	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	0.12	0.79	0.091	ug/m3	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	541-73-1	U
1,2-Dichlorobenzene	Not detected	0.18	0.18	ug/m3	1	95-50-1	U
1,4-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	120	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	1.7	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	0.505	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.98	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.69	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	0.28	1.4	0.20	ug/m3	1	76-14-2	J
Heptane	4.9	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	Not detected	16	0.067	ug/m3	1	110-54-3	
2-Hexanone*	4.1	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	27.5	0.19	ug/m3	1	67-63-0	
Methylene chloride	2.4	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	107	5.9	0.14	ug/m3	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	1.47	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	2.5	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	69	17	0.065	ug/m3	1	115-07-1	
Styrene	0.511	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	0.928	1.1	0.093	ug/m3	1	71-55-6	J
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	3.7	ug/m3	1	120-82-1	U
1,2,4-Trimethylbenzene	0.541	0.98	0.14	ug/m3	1	95-63-6	J

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.09 (continued)

Sample Tag: 224121-SS-153

TO-15, Method: TO-15, Run Date: 02/21/23 14:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,3,5-Trimethylbenzene	0.25	0.98	0.12	ug/m3	1	108-67-8	J
2,2,4-Trimethylpentane	9.8	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	4.850	6.1	0.12	ug/m3	1	75-65-0	J
Tetrachloroethene	24	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	2.9	0.086	ug/m3	1	109-99-9	
Toluene	7.2	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	0.38	1.1	0.12	ug/m3	1	79-01-6	J
Trichlorofluoromethane	2.8	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	5.6	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	2.2	1.7	0.16	ug/m3	1		
o-Xylene	0.87	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	3.0	2.6	0.25	ug/m3	1	1330-20-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S44921.10
Sample Tag: 224121-IA153
Collected Date/Time: 01/25/2023 09:47 - 01/26/2023 16:37
Matrix: Air
COC Reference: A6629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-8	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 19:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	24.9	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.4	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.200	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.040	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.470	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.130	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	68.7	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.150	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	6.7	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	0.140	0.2	0.032	ppbv	1	622-96-8	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.10 (continued)

Sample Tag: 224121-1A153

TO-15, Method: TO-15, Run Date: 02/20/23 19:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.9	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	1.0	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	27.1	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	Not detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	2.9	2.0	0.046	ppbv	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.070	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	15	0.038	ppbv	1	115-07-1	
Styrene	0.020	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.100	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.110	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.090	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.0	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.4	0.4	0.038	ppbv	1		
o-Xylene	0.160	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.570	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 19:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	59.1	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.3	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.623	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S44921.10 (continued)

Sample Tag: 224121-1A153

TO-15, Method: TO-15, Run Date: 02/20/23 19:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	0.20	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	0.971	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.447	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	129	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.651	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	24	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	0.688	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	3.7	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	3.5	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	66.6	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	Not detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	8.6	5.9	0.14	ug/m3	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	0.29	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	26	0.065	ug/m3	1	115-07-1	
Styrene	0.085	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.492	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.514	0.93	0.065	ug/m3	1	540-84-1	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S44921.10 (continued)

Sample Tag: 224121-IA153

TO-15, Method: TO-15, Run Date: 02/20/23 19:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	0.61	1.4	0.16	ug/m3	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.8	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.7	1.7	0.16	ug/m3	1		
o-Xylene	0.695	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	2.47	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.11

Sample Tag: 224121-OA-153

Collected Date/Time: 01/25/2023 09:30 - 01/26/2023 16:40

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-4	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 20:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	4.3	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.060	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.020	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.440	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	6.2	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.030	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.11 (continued)

Sample Tag: 224121-OA-153

TO-15, Method: TO-15, Run Date: 02/20/23 20:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.120	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.110	0.2	0.019	ppbv	1	110-54-3	J
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	1.370	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	Not detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.320	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.080	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.030	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	Not detected	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.3	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.190	0.2	0.017	ppbv	1	75-69-4	J
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.080	0.4	0.038	ppbv	1		J
o-Xylene	0.040	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.120	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 20:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	10	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.19	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.098	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.11 (continued)

Sample Tag: 224121-OA-153

TO-15, Method: TO-15, Run Date: 02/20/23 20:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.909	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	12	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.13	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.492	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.388	0.70	0.067	ug/m3	1	110-54-3	J
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	3.368	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	Not Detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	0.944	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.33	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.14	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	Not detected	1.4	0.16	ug/m3	1	127-18-4	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.11 (continued)

Sample Tag: 224121-OA-153

TO-15, Method: TO-15, Run Date: 02/20/23 20:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	1.1	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.07	1.1	0.096	ug/m3	1	75-69-4	J
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.35	1.7	0.16	ug/m3	1		J
o-Xylene	0.17	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.521	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.12

Sample Tag: 224121-IAA-87

Collected Date/Time: 01/26/2023 07:45 - 01/26/2023 15:00

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-4	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 20:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	21.1	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.170	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.030	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.470	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.140	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	26.9	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.4	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.310	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.12 (continued)

Sample Tag: 224121-IAA-87

TO-15, Method: TO-15, Run Date: 02/20/23 20:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	0.120	0.2	0.032	ppbv	1	622-96-8	J
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.4	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.5	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	231.2	2.0	0.076	ppbv	1	67-63-0	E--J
Methylene chloride	24.2	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.560	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.320	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.060	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.2	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	0.060	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.060	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.3	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	0.090	0.2	0.029	ppbv	1	109-99-9	J
Toluene	3.5	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.190	0.2	0.017	ppbv	1	75-69-4	J
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	1.6	0.4	0.038	ppbv	1		
o-Xylene	0.5	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	2.1	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/20/23 20:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	50.1	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.529	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.12 (continued)

Sample Tag: 224121-IAA-87

TO-15, Method: TO-15, Run Date: 02/20/23 20:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.15	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	0.971	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.482	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	50.7	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	1.7	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	1.12	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.590	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	1.6	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.8	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	568.6	4.0	0.19	ug/m3	1	67-63-0	E, J
Methylene chloride	84.1	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	4.601	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	1.31	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.26	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.98	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	0.29	0.98	0.12	ug/m3	1	108-67-8	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.12 (continued)

Sample Tag: 224121-IAA-87

TO-15, Method: TO-15, Run Date: 02/20/23 20:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	0.28	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	2.0	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	0.27	0.59	0.086	ug/m3	1	109-99-9	J
Toluene	13	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.07	1.1	0.096	ug/m3	1	75-69-4	J
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	6.9	1.7	0.16	ug/m3	1		
o-Xylene	2.2	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	9.1	2.6	0.25	ug/m3	1	1330-20-7	

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	18.40	20	0.58	ppbv	10	67-64-1	JYB
1,3-Butadiene	Not detected	20	0.29	ppbv	10	106-99-0	Y
Benzene	0.20	2	0.19	ppbv	10	71-43-2	JY
Bromodichloromethane	Not detected	2	0.23	ppbv	10	75-27-4	Y
Bromoform	Not detected	2	0.23	ppbv	10	75-25-2	Y
Bromomethane	Not detected	2	0.33	ppbv	10	74-83-9	Y
Vinyl bromide	Not detected	2	0.35	ppbv	10	593-60-2	Y
Benzyl chloride	Not detected	2	0.29	ppbv	10	100-44-7	Y
Carbon disulfide	0.20	20	0.19	ppbv	10	75-15-0	JY
Chlorobenzene	Not detected	2	0.17	ppbv	10	108-90-7	Y
Chloroethane	Not detected	20	0.46	ppbv	10	75-00-3	Y
Chloroform	Not detected	2	0.20	ppbv	10	67-66-3	Y
Chloromethane	Not detected	20	0.40	ppbv	10	74-87-3	Y
3-Chloropropene	Not detected	20	0.24	ppbv	10	107-05-1	Y
2-Chlorotoluene	Not detected	2	0.24	ppbv	10	95-49-8	Y
Carbon tetrachloride	Not detected	2	0.20	ppbv	10	56-23-5	Y
Cyclohexane	Not detected	2	0.24	ppbv	10	110-82-7	Y
1,1-Dichloroethane	Not detected	2	0.25	ppbv	10	75-34-3	Y
1,1-Dichloroethene	Not detected	2	0.24	ppbv	10	75-35-4	Y
1,2-Dibromoethane	Not detected	2	0.10	ppbv	10	106-93-4	Y
1,2-Dichloroethane	Not detected	2	0.28	ppbv	10	107-06-2	Y
1,2-Dichloropropane	Not detected	2	0.20	ppbv	10	78-87-5	Y
1,4-Dioxane	Not detected	25	0.38	ppbv	10	123-91-1	Y
Dichlorodifluoromethane	Not detected	2	0.26	ppbv	10	75-71-8	Y
Dibromochloromethane	Not detected	2	0.17	ppbv	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	2	0.21	ppbv	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	2	0.23	ppbv	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	2	0.20	ppbv	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	2	0.20	ppbv	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	2	0.24	ppbv	10	95-50-1	Y
1,4-Dichlorobenzene	Not detected	2	0.19	ppbv	10	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	2	0.13	ppbv	10	10061-02-6	Y
Ethanol*	21.20	25	0.68	ppbv	10	64-17-5	JY

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.12 (continued)

Sample Tag: 224121-IAA-87

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:13, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	0.30	2	0.20	ppbv	10	100-41-4	JY
Ethyl Acetate*	Not detected	20	0.49	ppbv	10	141-78-6	Y
4-Ethyltoluene	Not detected	2	0.32	ppbv	10	622-96-8	Y
Freon 113	Not detected	2	0.24	ppbv	10	76-13-1	Y
Freon 114	Not detected	2	0.29	ppbv	10	76-14-2	Y
Heptane	0.20	2	0.15	ppbv	10	142-82-5	JY
Hexachlorobutadiene	Not detected	2	0.29	ppbv	10	87-68-3	Y
Hexane	Not detected	2	0.19	ppbv	10	110-54-3	Y
2-Hexanone*	Not detected	5	0.21	ppbv	10	591-78-6	Y
Isopropyl Alcohol*	170	20	0.76	ppbv	10	67-63-0	Y J ** Use this result
Methylene chloride	19	5	1.4	ppbv	10	75-09-2	Y
2-Butanone (MEK)	Not detected	20	0.46	ppbv	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	5	0.17	ppbv	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	2	0.10	ppbv	10	1634-04-4	Y
Methyl methacrylate	Not detected	2	0.17	ppbv	10	80-62-6	Y
Naphthalene	Not detected	2	0.10	ppbv	10	91-20-3	Y
Propylene*	Not detected	100	0.38	ppbv	10	115-07-1	Y
Styrene	Not detected	2	0.15	ppbv	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	2	0.17	ppbv	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	2	0.14	ppbv	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	2	0.15	ppbv	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	5	0.15	ppbv	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	2	0.29	ppbv	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	2	0.25	ppbv	10	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	2	0.14	ppbv	10	540-84-1	Y
Tert-butyl Alcohol	Not detected	20	0.41	ppbv	10	75-65-0	Y
Tetrachloroethene	Not detected	2	0.24	ppbv	10	127-18-4	Y
Tetrahydrofuran*	Not detected	2	0.29	ppbv	10	109-99-9	Y
Toluene	2	2	0.13	ppbv	10	108-88-3	Y
Trichloroethene	Not detected	2	0.23	ppbv	10	79-01-6	Y
Trichlorofluoromethane	Not detected	2	0.17	ppbv	10	75-69-4	Y
Vinyl chloride	Not detected	2	0.29	ppbv	10	75-01-4	Y
Vinyl acetate	Not detected	20	0.15	ppbv	10	108-05-4	Y
p,m-Xylene	1.00	4	0.38	ppbv	10		JY
o-Xylene	0.40	2	0.20	ppbv	10	95-47-6	JY
Total Xylenes	1.40	6	0.58	ppbv	10	1330-20-7	JY

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	43.71	48	1.4	ug/m3	10	67-64-1	JYB
1,3-Butadiene	Not detected	44	0.64	ug/m3	10	106-99-0	Y
Benzene	0.64	6.4	0.61	ug/m3	10	71-43-2	JY
Bromodichloromethane	Not detected	13	1.5	ug/m3	10	75-27-4	Y
Bromoform	Not detected	21	2.4	ug/m3	10	75-25-2	Y
Bromomethane	Not detected	7.8	1.3	ug/m3	10	74-83-9	Y
Vinyl bromide	Not detected	8.7	1.5	ug/m3	10	593-60-2	Y
Benzyl chloride	Not detected	10	1.5	ug/m3	10	100-44-7	Y
Carbon disulfide	0.62	62	0.59	ug/m3	10	75-15-0	JY

J-Estimated value less than reporting limit, but greater than MDL Y-Elevated reporting limit due to high target concentration

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.12 (continued)

Sample Tag: 224121-IAA-87

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:13, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	9.2	0.78	ug/m3	10	108-90-7	Y
Chloroethane	Not detected	53	1.2	ug/m3	10	75-00-3	Y
Chloroform	Not detected	9.8	0.98	ug/m3	10	67-66-3	Y
Chloromethane	Not detected	41	0.83	ug/m3	10	74-87-3	Y
3-Chloropropene	Not detected	63	0.75	ug/m3	10	107-05-1	Y
2-Chlorotoluene	Not detected	10	1.2	ug/m3	10	95-49-8	Y
Carbon tetrachloride	Not detected	13	1.3	ug/m3	10	56-23-5	Y
Cyclohexane	Not detected	6.9	0.83	ug/m3	10	110-82-7	Y
1,1-Dichloroethane	Not detected	8.1	1.0	ug/m3	10	75-34-3	Y
1,1-Dichloroethene	Not detected	7.9	0.95	ug/m3	10	75-35-4	Y
1,2-Dibromoethane	Not detected	15	0.77	ug/m3	10	106-93-4	Y
1,2-Dichloroethane	Not detected	8.1	1.1	ug/m3	10	107-06-2	Y
1,2-Dichloropropane	Not detected	9.2	0.92	ug/m3	10	78-87-5	Y
1,4-Dioxane	Not detected	90	1.4	ug/m3	10	123-91-1	Y
Dichlorodifluoromethane	Not detected	9.9	1.3	ug/m3	10	75-71-8	Y
Dibromochloromethane	Not detected	17	1.4	ug/m3	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	7.9	0.83	ug/m3	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	7.9	0.91	ug/m3	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	9.1	0.91	ug/m3	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	12	1.2	ug/m3	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	12	1.4	ug/m3	10	95-50-1	Y
1,4-Dichlorobenzene	Not detected	12	1.1	ug/m3	10	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	9.1	0.59	ug/m3	10	10061-02-6	Y
Ethanol*	39.95	47	1.3	ug/m3	10	64-17-5	JY
Ethylbenzene	1.3	8.7	0.87	ug/m3	10	100-41-4	JY
Ethyl Acetate*	Not detected	72	1.8	ug/m3	10	141-78-6	Y
4-Ethyltoluene	Not detected	9.8	1.6	ug/m3	10	622-96-8	Y
Freon 113	Not detected	15	1.8	ug/m3	10	76-13-1	Y
Freon 114	Not detected	14	2.0	ug/m3	10	76-14-2	Y
Heptane	0.82	8.2	0.61	ug/m3	10	142-82-5	JY
Hexachlorobutadiene	Not detected	21	3.1	ug/m3	10	87-68-3	Y
Hexane	Not detected	7.0	0.67	ug/m3	10	110-54-3	Y
2-Hexanone*	Not detected	20	0.86	ug/m3	10	591-78-6	Y
Isopropyl Alcohol*	420	49	1.9	ug/m3	10	67-63-0	Y J**Use this result
Methylene chloride	66	17	4.9	ug/m3	10	75-09-2	Y
2-Butanone (MEK)	Not detected	59	1.4	ug/m3	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	20	0.70	ug/m3	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	7.2	0.36	ug/m3	10	1634-04-4	Y
Methyl methacrylate	Not detected	8.2	0.70	ug/m3	10	80-62-6	Y
Naphthalene	Not detected	10	0.52	ug/m3	10	91-20-3	Y
Propylene*	Not detected	170	0.65	ug/m3	10	115-07-1	Y
Styrene	Not detected	8.5	0.64	ug/m3	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	11	0.93	ug/m3	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	14	0.96	ug/m3	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	11	0.82	ug/m3	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	37	1.1	ug/m3	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	9.8	1.4	ug/m3	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	9.8	1.2	ug/m3	10	108-67-8	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.12 (continued)

Sample Tag: 224121-IAA-87

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:13, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	Not detected	9.3	0.65	ug/m3	10	540-84-1	Y
Tert-butyl Alcohol	Not detected	61	1.2	ug/m3	10	75-65-0	Y
Tetrachloroethene	Not detected	14	1.6	ug/m3	10	127-18-4	Y
Tetrahydrofuran*	Not detected	5.9	0.86	ug/m3	10	109-99-9	Y
Toluene	7.5	7.5	0.49	ug/m3	10	108-88-3	Y
Trichloroethene	Not detected	11	1.2	ug/m3	10	79-01-6	Y
Trichlorofluoromethane	Not detected	11	0.96	ug/m3	10	75-69-4	Y
Vinyl chloride	Not detected	5.1	0.74	ug/m3	10	75-01-4	Y
Vinyl acetate	Not detected	70	0.53	ug/m3	10	108-05-4	Y
p,m-Xylene	4.34	17	1.6	ug/m3	10		JY
o-Xylene	1.7	8.7	0.87	ug/m3	10	95-47-6	JY
Total Xylenes	6.08	26	2.5	ug/m3	10	1330-20-7	JY

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.13

Sample Tag: 224121-IAB-87

Collected Date/Time: 01/26/2023 07:45 - 01/26/2023 15:00

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-3.5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 21:14, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	18.7	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.160	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.030	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.490	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.120	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	27.3	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.3	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.260	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.13 (continued)

Sample Tag: 224121-IAB-87

TO-15, Method: TO-15, Run Date: 02/20/23 21:14, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	0.130	0.2	0.032	ppbv	1	622-96-8	J
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.3	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.5	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	240.8	2.0	0.076	ppbv	1	67-63-0	E
Methylene chloride	17.1	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	1.080	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.320	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.090	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.060	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.190	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	0.050	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.060	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.3	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	2.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	1.3	0.4	0.038	ppbv	1		
o-Xylene	0.5	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	1.8	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/20/23 21:14, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	44.4	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.498	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.13 (continued)

Sample Tag: 224121-IAB-87

TO-15, Method: TO-15, Run Date: 02/20/23 21:14, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.15	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	1.01	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.413	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	51.4	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	1.3	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	0.937	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.639	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	1.2	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	1.8	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	591.9	4.9	0.19	ug/m3	1	67-63-0	E-J
Methylene chloride	59.4	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	3.185	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	1.31	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.37	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.26	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.934	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	0.25	0.98	0.12	ug/m3	1	108-67-8	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.13 (continued)

Sample Tag: 224121-IAB-87

TO-15, Method: TO-15, Run Date: 02/20/23 21:14, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	0.28	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	2.0	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	11	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	5.6	1.7	0.16	ug/m3	1		
o-Xylene	2.2	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	7.8	2.6	0.25	ug/m3	1	1330-20-7	

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	18.20	20	0.58	ppbv	10	67-64-1	JYB
1,3-Butadiene	Not detected	20	0.29	ppbv	10	106-99-0	Y
Benzene	0.20	2	0.19	ppbv	10	71-43-2	JY
Bromodichloromethane	Not detected	2	0.23	ppbv	10	75-27-4	Y
Bromoform	Not detected	2	0.23	ppbv	10	75-25-2	Y
Bromomethane	Not detected	2	0.33	ppbv	10	74-83-9	Y
Vinyl bromide	Not detected	2	0.35	ppbv	10	593-60-2	Y
Benzyl chloride	Not detected	2	0.29	ppbv	10	100-44-7	Y
Carbon disulfide	0.20	20	0.19	ppbv	10	75-15-0	JY
Chlorobenzene	Not detected	2	0.17	ppbv	10	108-90-7	Y
Chloroethane	Not detected	20	0.46	ppbv	10	75-00-3	Y
Chloroform	Not detected	2	0.20	ppbv	10	67-66-3	Y
Chloromethane	Not detected	20	0.40	ppbv	10	74-87-3	Y
3-Chloropropene	Not detected	20	0.24	ppbv	10	107-05-1	Y
2-Chlorotoluene	Not detected	2	0.24	ppbv	10	95-49-8	Y
Carbon tetrachloride	Not detected	2	0.20	ppbv	10	56-23-5	Y
Cyclohexane	Not detected	2	0.24	ppbv	10	110-82-7	Y
1,1-Dichloroethane	Not detected	2	0.25	ppbv	10	75-34-3	Y
1,1-Dichloroethene	Not detected	2	0.24	ppbv	10	75-35-4	Y
1,2-Dibromoethane	Not detected	2	0.10	ppbv	10	106-93-4	Y
1,2-Dichloroethane	Not detected	2	0.28	ppbv	10	107-06-2	Y
1,2-Dichloropropane	Not detected	2	0.20	ppbv	10	78-87-5	Y
1,4-Dioxane	Not detected	25	0.38	ppbv	10	123-91-1	Y
Dichlorodifluoromethane	0.30	2	0.26	ppbv	10	75-71-8	JY
Dibromochloromethane	Not detected	2	0.17	ppbv	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	2	0.21	ppbv	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	2	0.23	ppbv	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	2	0.20	ppbv	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	2	0.20	ppbv	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	2	0.24	ppbv	10	95-50-1	Y
1,4-Dichlorobenzene	Not detected	2	0.19	ppbv	10	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	2	0.13	ppbv	10	10061-02-6	Y
Ethanol*	23.30	25	0.68	ppbv	10	64-17-5	JY

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.13 (continued)

Sample Tag: 224121-IAB-87

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	0.50	2	0.20	ppbv	10	100-41-4	JY
Ethyl Acetate*	Not detected	20	0.49	ppbv	10	141-78-6	Y
4-Ethyltoluene	Not detected	2	0.32	ppbv	10	622-96-8	Y
Freon 113	Not detected	2	0.24	ppbv	10	76-13-1	Y
Freon 114	Not detected	2	0.29	ppbv	10	76-14-2	Y
Heptane	0.20	2	0.15	ppbv	10	142-82-5	JY
Hexachlorobutadiene	Not detected	2	0.29	ppbv	10	87-68-3	Y
Hexane	Not detected	2	0.19	ppbv	10	110-54-3	Y
2-Hexanone*	Not detected	5	0.21	ppbv	10	591-78-6	Y
Isopropyl Alcohol*	190	20	0.76	ppbv	10	67-63-0	Y J**Use this result
Methylene chloride	15	5	1.4	ppbv	10	75-09-2	Y
2-Butanone (MEK)	Not detected	20	0.46	ppbv	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	5	0.17	ppbv	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	2	0.10	ppbv	10	1634-04-4	Y
Methyl methacrylate	Not detected	2	0.17	ppbv	10	80-62-6	Y
Naphthalene	Not detected	2	0.10	ppbv	10	91-20-3	Y
Propylene*	Not detected	100	0.38	ppbv	10	115-07-1	Y
Styrene	Not detected	2	0.15	ppbv	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	2	0.17	ppbv	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	2	0.14	ppbv	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	2	0.15	ppbv	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	5	0.15	ppbv	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	2	0.29	ppbv	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	2	0.25	ppbv	10	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	2	0.14	ppbv	10	540-84-1	Y
Tert-butyl Alcohol	Not detected	20	0.41	ppbv	10	75-65-0	Y
Tetrachloroethene	0.30	2	0.24	ppbv	10	127-18-4	JY
Tetrahydrofuran*	Not detected	2	0.29	ppbv	10	109-99-9	Y
Toluene	2	2	0.13	ppbv	10	108-88-3	Y
Trichloroethene	Not detected	2	0.23	ppbv	10	79-01-6	Y
Trichlorofluoromethane	Not detected	2	0.17	ppbv	10	75-69-4	Y
Vinyl chloride	Not detected	2	0.29	ppbv	10	75-01-4	Y
Vinyl acetate	Not detected	20	0.15	ppbv	10	108-05-4	Y
p,m-Xylene	0.90	4	0.38	ppbv	10		JY
o-Xylene	0.30	2	0.20	ppbv	10	95-47-6	JY
Total Xylenes	1.20	6	0.58	ppbv	10	1330-20-7	JY

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	43.23	48	1.4	ug/m3	10	67-64-1	JYB
1,3-Butadiene	Not detected	44	0.64	ug/m3	10	106-99-0	Y
Benzene	0.64	6.4	0.61	ug/m3	10	71-43-2	JY
Bromodichloromethane	Not detected	13	1.5	ug/m3	10	75-27-4	Y
Bromoform	Not detected	21	2.4	ug/m3	10	75-25-2	Y
Bromomethane	Not detected	7.8	1.3	ug/m3	10	74-83-9	Y
Vinyl bromide	Not detected	8.7	1.5	ug/m3	10	593-60-2	Y
Benzyl chloride	Not detected	10	1.5	ug/m3	10	100-44-7	Y
Carbon disulfide	0.62	62	0.59	ug/m3	10	75-15-0	JY

J-Estimated value less than reporting limit, but greater than MDL Y-Elevated reporting limit due to high target concentration

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.13 (continued)

Sample Tag: 224121-IAB-87

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chlorobenzene	Not detected	9.2	0.78	ug/m3	10	108-90-7	Y
Chloroethane	Not detected	53	1.2	ug/m3	10	75-00-3	Y
Chloroform	Not detected	9.8	0.98	ug/m3	10	67-66-3	Y
Chloromethane	Not detected	41	0.83	ug/m3	10	74-87-3	Y
3-Chloropropene	Not detected	63	0.75	ug/m3	10	107-05-1	Y
2-Chlorotoluene	Not detected	10	1.2	ug/m3	10	95-49-8	Y
Carbon tetrachloride	Not detected	13	1.3	ug/m3	10	56-23-5	Y
Cyclohexane	Not detected	6.9	0.83	ug/m3	10	110-82-7	Y
1,1-Dichloroethane	Not detected	8.1	1.0	ug/m3	10	75-34-3	Y
1,1-Dichloroethene	Not detected	7.9	0.95	ug/m3	10	75-35-4	Y
1,2-Dibromoethane	Not detected	15	0.77	ug/m3	10	106-93-4	Y
1,2-Dichloroethane	Not detected	8.1	1.1	ug/m3	10	107-06-2	Y
1,2-Dichloropropane	Not detected	9.2	0.92	ug/m3	10	78-87-5	Y
1,4-Dioxane	Not detected	90	1.4	ug/m3	10	123-91-1	Y
Dichlorodifluoromethane	1.5	9.9	1.3	ug/m3	10	75-71-8	JY
Dibromochloromethane	Not detected	17	1.4	ug/m3	10	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	7.9	0.83	ug/m3	10	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	7.9	0.91	ug/m3	10	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	9.1	0.91	ug/m3	10	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	12	1.2	ug/m3	10	541-73-1	Y
1,2-Dichlorobenzene	Not detected	12	1.4	ug/m3	10	95-50-1	Y
1,4-Dichlorobenzene	Not detected	12	1.1	ug/m3	10	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	9.1	0.59	ug/m3	10	10061-02-6	Y
Ethanol*	43.90	47	1.3	ug/m3	10	64-17-5	JY
Ethylbenzene	2.2	8.7	0.87	ug/m3	10	100-41-4	JY
Ethyl Acetate*	Not detected	72	1.8	ug/m3	10	141-78-6	Y
4-Ethyltoluene	Not detected	9.8	1.6	ug/m3	10	622-96-8	Y
Freon 113	Not detected	15	1.8	ug/m3	10	76-13-1	Y
Freon 114	Not detected	14	2.0	ug/m3	10	76-14-2	Y
Heptane	0.82	8.2	0.61	ug/m3	10	142-82-5	JY
Hexachlorobutadiene	Not detected	21	3.1	ug/m3	10	87-68-3	Y
Hexane	Not detected	7.0	0.67	ug/m3	10	110-54-3	Y
2-Hexanone*	Not detected	20	0.86	ug/m3	10	591-78-6	Y
Isopropyl Alcohol*	470	49	1.9	ug/m3	10	67-63-0	Y
Methylene chloride	52	17	4.9	ug/m3	10	75-09-2	Y
2-Butanone (MEK)	Not detected	59	1.4	ug/m3	10	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	20	0.70	ug/m3	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	7.2	0.36	ug/m3	10	1634-04-4	Y
Methyl methacrylate	Not detected	8.2	0.70	ug/m3	10	80-62-6	Y
Naphthalene	Not detected	10	0.52	ug/m3	10	91-20-3	Y
Propylene*	Not detected	170	0.65	ug/m3	10	115-07-1	Y
Styrene	Not detected	8.5	0.64	ug/m3	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	11	0.93	ug/m3	10	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	14	0.96	ug/m3	10	79-34-5	Y
1,1,2-Trichloroethane	Not detected	11	0.82	ug/m3	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	37	1.1	ug/m3	10	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	9.8	1.4	ug/m3	10	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	9.8	1.2	ug/m3	10	108-67-8	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.13 (continued)

Sample Tag: 224121-IAB-87

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 12:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,2,4-Trimethylpentane	Not detected	9.3	0.65	ug/m3	10	540-84-1	Y
Tert-butyl Alcohol	Not detected	61	1.2	ug/m3	10	75-65-0	Y
Tetrachloroethene	2.0	14	1.6	ug/m3	10	127-18-4	JY
Tetrahydrofuran*	Not detected	5.9	0.86	ug/m3	10	109-99-9	Y
Toluene	7.5	7.5	0.49	ug/m3	10	108-88-3	Y
Trichloroethene	Not detected	11	1.2	ug/m3	10	79-01-6	Y
Trichlorofluoromethane	Not detected	11	0.96	ug/m3	10	75-69-4	Y
Vinyl chloride	Not detected	5.1	0.74	ug/m3	10	75-01-4	Y
Vinyl acetate	Not detected	70	0.53	ug/m3	10	108-05-4	Y
p,m-Xylene	3.9	17	1.6	ug/m3	10		JY
o-Xylene	1.3	8.7	0.87	ug/m3	10	95-47-6	JY
Total Xylenes	5.21	26	2.5	ug/m3	10	1330-20-7	JY

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.14
Sample Tag: 224121-OA-87
Collected Date/Time: 01/26/2023 07:45 - 01/26/2023 14:57
Matrix: Air
COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-3	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 21:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	8.0	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.060	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.020	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.410	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.080	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	7.8	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.060	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.14 (continued)

Sample Tag: 224121-OA-87

TO-15, Method: TO-15, Run Date: 02/20/23 21:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.190	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.2	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	0.5	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.510	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.010	ppbv	1	91-20-3	
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.040	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	Not detected	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	0.060	0.2	0.029	ppbv	1	109-99-9	J
Toluene	0.2	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.150	0.4	0.038	ppbv	1		J
o-Xylene	0.050	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.200	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 21:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	19	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.19	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.098	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	0.847	4.1	0.083	ug/m3	1	74-87-3	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.14 (continued)

Sample Tag: 224121-OA-87

TO-15, Method: TO-15, Run Date: 02/20/23 21:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.28	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	15	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.26	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.779	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.70	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	1.7	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	1.50	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	0.052	ug/m3	1	91-20-3	
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.19	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	Not detected	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	0.18	0.59	0.086	ug/m3	1	109-99-9	J
Toluene	0.75	0.75	0.049	ug/m3	1	108-88-3	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.14 (continued)
Sample Tag: 224121-OA-87

TO-15, Method: TO-15, Run Date: 02/20/23 21:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.651	1.7	0.16	ug/m3	1		J
o-Xylene	0.22	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.868	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.15
Sample Tag: 224121-IAA-80
Collected Date/Time: 01/26/2023 08:20 - 01/26/2023 15:40
Matrix: Air
COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-3	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 22:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	21.1	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.6	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.060	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.040	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.500	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	1,312.1	2.5	0.068	ppbv	1	64-17-5	E, J
Ethylbenzene	0.110	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.140	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL
E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.15 (continued)

Sample Tag: 224121-IAA-80

TO-15, Method: TO-15, Run Date: 02/20/23 22:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.180	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.2	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	3.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	Not detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.580	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.100	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.120	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	1.1	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.070	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.050	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.4	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.7	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.290	0.4	0.038	ppbv	1		J
o-Xylene	0.130	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.420	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 22:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	50.1	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.9	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.19	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.15 (continued)

Sample Tag: 224121-IAA-80

TO-15, Method: TO-15, Run Date: 02/20/23 22:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.20	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	1.03	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	2,472.3	4.7	0.13	ug/m3	1	64-17-5	E-J
Ethylbenzene	0.478	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	0.505	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.738	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.70	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	7.4	0.19	ug/m3	1	67-63-0	J
Methylene chloride	Not detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	1.71	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.410	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.491	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	4.7	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.34	0.98	0.14	ug/m3	1	95-63-6	J

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.15 (continued)

Sample Tag: 224121-IAA-80

TO-15, Method: TO-15, Run Date: 02/20/23 22:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.23	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	2.7	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	2.6	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.26	1.7	0.16	ug/m3	1		J
o-Xylene	0.564	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.82	2.6	0.25	ug/m3	1	1330-20-7	J

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 14:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	36.0	300	8.7	ppbv	150	67-64-1	JYB
1,3-Butadiene	Not detected	300	4.4	ppbv	150	106-99-0	Y
Benzene	Not detected	30	2.9	ppbv	150	71-43-2	Y
Bromodichloromethane	Not detected	30	3.5	ppbv	150	75-27-4	Y
Bromoform	Not detected	30	3.5	ppbv	150	75-25-2	Y
Bromomethane	Not detected	30	5.0	ppbv	150	74-83-9	Y
Vinyl bromide	Not detected	30	5.3	ppbv	150	593-60-2	Y
Benzyl chloride	Not detected	30	4.4	ppbv	150	100-44-7	Y
Carbon disulfide	Not detected	300	2.9	ppbv	150	75-15-0	Y
Chlorobenzene	Not detected	30	2.6	ppbv	150	108-90-7	Y
Chloroethane	Not detected	300	6.9	ppbv	150	75-00-3	Y
Chloroform	Not detected	30	3.0	ppbv	150	67-66-3	Y
Chloromethane	Not detected	300	6.0	ppbv	150	74-87-3	Y
3-Chloropropene	Not detected	300	3.6	ppbv	150	107-05-1	Y
2-Chlorotoluene	Not detected	30	3.6	ppbv	150	95-49-8	Y
Carbon tetrachloride	Not detected	30	3.0	ppbv	150	56-23-5	Y
Cyclohexane	Not detected	30	3.6	ppbv	150	110-82-7	Y
1,1-Dichloroethane	Not detected	30	3.8	ppbv	150	75-34-3	Y
1,1-Dichloroethene	Not detected	30	3.6	ppbv	150	75-35-4	Y
1,2-Dibromoethane	Not detected	30	1.5	ppbv	150	106-93-4	Y
1,2-Dichloroethane	Not detected	30	4.2	ppbv	150	107-06-2	Y
1,2-Dichloropropane	Not detected	30	3.0	ppbv	150	78-87-5	Y
1,4-Dioxane	Not detected	380	5.7	ppbv	150	123-91-1	Y
Dichlorodifluoromethane	Not detected	30	3.9	ppbv	150	75-71-8	Y
Dibromochloromethane	Not detected	30	2.6	ppbv	150	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	30	3.2	ppbv	150	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	30	3.5	ppbv	150	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	30	3.0	ppbv	150	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	30	3.0	ppbv	150	541-73-1	Y
1,2-Dichlorobenzene	Not detected	30	3.6	ppbv	150	95-50-1	Y
1,4-Dichlorobenzene	Not detected	30	2.9	ppbv	150	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	30	2.0	ppbv	150	10061-02-6	Y

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.15 (continued)

Sample Tag: 224121-IAA-80

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 14:46, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethanol*	2,420	380	10	ppbv	150	64-17-5	Y **Use this re-sult
Ethylbenzene	Not detected	30	3.0	ppbv	150	100-41-4	Y
Ethyl Acetate*	Not detected	300	7.4	ppbv	150	141-78-6	Y
4-Ethyltoluene	Not detected	30	4.8	ppbv	150	622-96-8	Y
Freon 113	Not detected	30	3.6	ppbv	150	76-13-1	Y
Freon 114	Not detected	30	4.4	ppbv	150	76-14-2	Y
Heptane	Not detected	30	2.3	ppbv	150	142-82-5	Y
Hexachlorobutadiene	Not detected	30	4.4	ppbv	150	87-68-3	Y
Hexane	Not detected	30	2.9	ppbv	150	110-54-3	Y
2-Hexanone*	Not detected	80	3.2	ppbv	150	591-78-6	Y
Isopropyl Alcohol*	Not detected	300	11	ppbv	150	67-63-0	Y J
Methylene chloride	33	80	21	ppbv	150	75-09-2	JYB
2-Butanone (MEK)	Not detected	300	6.9	ppbv	150	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	80	2.6	ppbv	150	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	30	1.5	ppbv	150	1634-04-4	Y
Methyl methacrylate	Not detected	30	2.6	ppbv	150	80-62-6	Y
Naphthalene	Not detected	30	1.5	ppbv	150	91-20-3	Y
Propylene*	33.0	2,000	5.7	ppbv	150	115-07-1	JYB
Styrene	Not detected	30	2.3	ppbv	150	100-42-5	Y
1,1,1-Trichloroethane	Not detected	30	2.6	ppbv	150	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	30	2.1	ppbv	150	79-34-5	Y
1,1,2-Trichloroethane	Not detected	30	2.3	ppbv	150	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	80	2.3	ppbv	150	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	30	4.4	ppbv	150	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	30	3.8	ppbv	150	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	30	2.1	ppbv	150	540-84-1	Y
Tert-butyl Alcohol	Not detected	300	6.2	ppbv	150	75-65-0	Y
Tetrachloroethene	Not detected	30	3.6	ppbv	150	127-18-4	Y
Tetrahydrofuran*	Not detected	30	4.4	ppbv	150	109-99-9	Y
Toluene	Not detected	30	2.0	ppbv	150	108-88-3	Y
Trichloroethene	Not detected	30	3.5	ppbv	150	79-01-6	Y
Trichlorofluoromethane	Not detected	30	2.6	ppbv	150	75-69-4	Y
Vinyl chloride	Not detected	30	4.4	ppbv	150	75-01-4	Y
Vinyl acetate	Not detected	300	2.3	ppbv	150	108-05-4	Y
p,m-Xylene	Not detected	60	5.7	ppbv	150		Y
o-Xylene	Not detected	30	3.0	ppbv	150	95-47-6	Y
Total Xylenes	Not detected	90	8.7	ppbv	150	1330-20-7	Y

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 14:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	85.5	710	21	ug/m3	150	67-64-1	JYB
1,3-Butadiene	Not detected	660	9.7	ug/m3	150	106-99-0	Y
Benzene	Not detected	96	9.3	ug/m3	150	71-43-2	Y
Bromodichloromethane	Not detected	200	23	ug/m3	150	75-27-4	Y
Bromoform	Not detected	310	36	ug/m3	150	75-25-2	Y
Bromomethane	Not detected	120	19	ug/m3	150	74-83-9	Y
Vinyl bromide	Not detected	130	23	ug/m3	150	593-60-2	Y
Benzyl chloride	Not detected	160	23	ug/m3	150	100-44-7	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.15 (continued)

Sample Tag: 224121-IAA-80

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 14:46, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Carbon disulfide	Not detected	930	9.0	ug/m3	150	75-15-0	Y
Chlorobenzene	Not detected	140	12	ug/m3	150	108-90-7	Y
Chloroethane	Not detected	790	18	ug/m3	150	75-00-3	Y
Chloroform	Not detected	150	15	ug/m3	150	67-66-3	Y
Chloromethane	Not detected	620	12	ug/m3	150	74-87-3	Y
3-Chloropropene	Not detected	940	11	ug/m3	150	107-05-1	Y
2-Chlorotoluene	Not detected	160	19	ug/m3	150	95-49-8	Y
Carbon tetrachloride	Not detected	190	19	ug/m3	150	56-23-5	Y
Cyclohexane	Not detected	100	12	ug/m3	150	110-82-7	Y
1,1-Dichloroethane	Not detected	120	15	ug/m3	150	75-34-3	Y
1,1-Dichloroethene	Not detected	120	14	ug/m3	150	75-35-4	Y
1,2-Dibromoethane	Not detected	230	12	ug/m3	150	106-93-4	Y
1,2-Dichloroethane	Not detected	120	17	ug/m3	150	107-06-2	Y
1,2-Dichloropropane	Not detected	140	14	ug/m3	150	78-87-5	Y
1,4-Dioxane	Not detected	1,400	21	ug/m3	150	123-91-1	Y
Dichlorodifluoromethane	Not detected	150	19	ug/m3	150	75-71-8	Y
Dibromochloromethane	Not detected	260	22	ug/m3	150	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	120	13	ug/m3	150	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	120	14	ug/m3	150	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	140	14	ug/m3	150	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	180	18	ug/m3	150	541-73-1	Y
1,2-Dichlorobenzene	Not detected	180	22	ug/m3	150	95-50-1	Y
1,4-Dichlorobenzene	Not detected	180	17	ug/m3	150	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	140	9.1	ug/m3	150	10061-02-6	Y
Ethanol*	4,560	720	19	ug/m3	150	64-17-5	Y J **Use this result
Ethylbenzene	Not detected	130	13	ug/m3	150	100-41-4	Y
Ethyl Acetate*	Not detected	1,100	27	ug/m3	150	141-78-6	Y
4-Ethyltoluene	Not detected	150	24	ug/m3	150	622-96-8	Y
Freon 113	Not detected	230	28	ug/m3	150	76-13-1	Y
Freon 114	Not detected	210	31	ug/m3	150	76-14-2	Y
Heptane	Not detected	120	9.4	ug/m3	150	142-82-5	Y
Hexachlorobutadiene	Not detected	320	47	ug/m3	150	87-68-3	Y
Hexane	Not detected	110	10	ug/m3	150	110-54-3	Y
2-Hexanone*	Not detected	330	13	ug/m3	150	591-78-6	Y
Isopropyl Alcohol*	Not detected	740	27	ug/m3	150	67-63-0	Y
Methylene chloride	110	280	73	ug/m3	150	75-09-2	JYB
2-Butanone (MEK)	Not detected	880	20	ug/m3	150	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	330	11	ug/m3	150	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	110	5.4	ug/m3	150	1634-04-4	Y
Methyl methacrylate	Not detected	120	11	ug/m3	150	80-62-6	Y
Naphthalene	Not detected	160	7.9	ug/m3	150	91-20-3	Y
Propylene*	56.8	3,400	9.8	ug/m3	150	115-07-1	JYB
Styrene	Not detected	130	9.8	ug/m3	150	100-42-5	Y
1,1,1-Trichloroethane	Not detected	160	14	ug/m3	150	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	210	14	ug/m3	150	79-34-5	Y
1,1,2-Trichloroethane	Not detected	160	13	ug/m3	150	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	590	17	ug/m3	150	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	150	22	ug/m3	150	95-63-6	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.15 (continued)
Sample Tag: 224121-IAA-80

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 14:46, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,3,5-Trimethylbenzene	Not detected	150	19	ug/m3	150	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	140	9.8	ug/m3	150	540-84-1	Y
Tert-butyl Alcohol	Not detected	910	19	ug/m3	150	75-65-0	Y
Tetrachloroethene	Not detected	200	24	ug/m3	150	127-18-4	Y
Tetrahydrofuran*	Not detected	88	13	ug/m3	150	109-99-9	Y
Toluene	Not detected	110	7.5	ug/m3	150	108-88-3	Y
Trichloroethene	Not detected	160	19	ug/m3	150	79-01-6	Y
Trichlorofluoromethane	Not detected	170	15	ug/m3	150	75-69-4	Y
Vinyl chloride	Not detected	77	11	ug/m3	150	75-01-4	Y
Vinyl acetate	Not detected	1,100	8.1	ug/m3	150	108-05-4	Y
p,m-Xylene	Not detected	260	25	ug/m3	150		Y
o-Xylene	Not detected	130	13	ug/m3	150	95-47-6	Y
Total Xylenes	Not detected	390	38	ug/m3	150	1330-20-7	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S44921.16
Sample Tag: 224121-IAB-80
Collected Date/Time: 01/26/2023 08:21 - 01/26/2023 15:42
Matrix: Air
COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-4.5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 22:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	22.4	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.6	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.050	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.050	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.470	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.060	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.040	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol	1,355.3	2.5	0.068	ppbv	1	64-17-5	E J
Ethylbenzene	0.100	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	

J-Estimated value less than reporting limit, but greater than MDL
E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.16 (continued)

Sample Tag: 224121-IAB-80

TO-15, Method: TO-15, Run Date: 02/20/23 22:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.190	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.2	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	3.1	0.076	ppbv	1	67-63-0	
Methylene chloride	Not Detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.800	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.060	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.080	0.2	0.017	ppbv	1	80-62-6	J
Naphthalene	Not Detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.7	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.050	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.040	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.4	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.8	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.230	0.4	0.038	ppbv	1		J
o-Xylene	0.100	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.330	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 22:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	53.2	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.9	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.16	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.16 (continued)

Sample Tag: 224121-IAB-80

TO-15, Method: TO-15, Run Date: 02/20/23 22:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.24	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	0.971	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.38	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.14	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	2,553.7	4.7	0.13	ug/m3	1	64-17-5	E
Ethylbenzene	0.434	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.779	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.70	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	7.6	0.19	ug/m3	1	67-63-0	
Methylene chloride	Not Detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	2.36	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.25	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	0.33	0.82	0.070	ug/m3	1	80-62-6	J
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	U
Styrene	3.0	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.25	0.98	0.14	ug/m3	1	95-63-6	J

J-Estimated value less than reporting limit, but greater than MDL

E-Concentration exceeds calibration range

X-Elevated reporting limit due to matrix interference

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.16 (continued)

Sample Tag: 224121-IAB-80

TO-15, Method: TO-15, Run Date: 02/20/23 22:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.19	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	2.7	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.0	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.999	1.7	0.16	ug/m3	1		J
o-Xylene	0.434	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.43	2.6	0.25	ug/m3	1	1330-20-7	J

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	48.0	320	9.3	ppbv	160	67-64-1	JYB
1,3-Butadiene	Not detected	320	4.6	ppbv	160	106-99-0	Y
Benzene	Not detected	30	3.0	ppbv	160	71-43-2	Y
Bromodichloromethane	Not detected	30	3.7	ppbv	160	75-27-4	Y
Bromoform	Not detected	30	3.7	ppbv	160	75-25-2	Y
Bromomethane	Not detected	30	5.3	ppbv	160	74-83-9	Y
Vinyl bromide	Not detected	30	5.6	ppbv	160	593-60-2	Y
Benzyl chloride	Not detected	30	4.6	ppbv	160	100-44-7	Y
Carbon disulfide	Not detected	320	3.0	ppbv	160	75-15-0	Y
Chlorobenzene	Not detected	30	2.7	ppbv	160	108-90-7	Y
Chloroethane	Not detected	320	7.4	ppbv	160	75-00-3	Y
Chloroform	Not detected	30	3.2	ppbv	160	67-66-3	Y
Chloromethane	Not detected	320	6.4	ppbv	160	74-87-3	Y
3-Chloropropene	Not detected	320	3.8	ppbv	160	107-05-1	Y
2-Chlorotoluene	Not detected	30	3.8	ppbv	160	95-49-8	Y
Carbon tetrachloride	Not detected	30	3.2	ppbv	160	56-23-5	Y
Cyclohexane	Not detected	30	3.8	ppbv	160	110-82-7	Y
1,1-Dichloroethane	Not detected	30	4.0	ppbv	160	75-34-3	Y
1,1-Dichloroethene	Not detected	30	3.8	ppbv	160	75-35-4	Y
1,2-Dibromoethane	Not detected	30	1.6	ppbv	160	106-93-4	Y
1,2-Dichloroethane	Not detected	30	4.5	ppbv	160	107-06-2	Y
1,2-Dichloropropane	Not detected	30	3.2	ppbv	160	78-87-5	Y
1,4-Dioxane	Not detected	400	6.1	ppbv	160	123-91-1	Y
Dichlorodifluoromethane	Not detected	30	4.2	ppbv	160	75-71-8	Y
Dibromochloromethane	Not detected	30	2.7	ppbv	160	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	30	3.4	ppbv	160	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	30	3.7	ppbv	160	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	30	3.2	ppbv	160	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	30	3.2	ppbv	160	541-73-1	Y
1,2-Dichlorobenzene	Not detected	30	3.8	ppbv	160	95-50-1	Y
1,4-Dichlorobenzene	Not detected	30	3.0	ppbv	160	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	30	2.1	ppbv	160	10061-02-6	Y

J-Estimated value less than reporting limit, but greater than MDL

Y-Elevated reporting limit due to high target concentration B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.16 (continued)

Sample Tag: 224121-IAB-80

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethanol*	2,700	400	11	ppbv	160	64-17-5	Y J ** Use this result
Ethylbenzene	Not detected	30	3.2	ppbv	160	100-41-4	Y
Ethyl Acetate*	Not detected	320	7.8	ppbv	160	141-78-6	Y
4-Ethyltoluene	Not detected	30	5.1	ppbv	160	622-96-8	Y
Freon 113	Not detected	30	3.8	ppbv	160	76-13-1	Y
Freon 114	Not detected	30	4.6	ppbv	160	76-14-2	Y
Heptane	Not detected	30	2.4	ppbv	160	142-82-5	Y
Hexachlorobutadiene	Not detected	30	4.6	ppbv	160	87-68-3	Y
Hexane	Not detected	30	3.0	ppbv	160	110-54-3	Y
2-Hexanone*	Not detected	80	3.4	ppbv	160	591-78-6	Y
Isopropyl Alcohol*	Not detected	320	12	ppbv	160	67-63-0	Y
Methylene chloride	35	80	22	ppbv	160	75-09-2	JYB
2-Butanone (MEK)	Not detected	320	7.4	ppbv	160	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	80	2.7	ppbv	160	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	30	1.6	ppbv	160	1634-04-4	Y
Methyl methacrylate	Not detected	30	2.7	ppbv	160	80-62-6	Y
Naphthalene	Not detected	30	1.6	ppbv	160	91-20-3	Y
Propylene*	32.0	2,000	6.1	ppbv	160	115-07-1	JYB
Styrene	Not detected	30	2.4	ppbv	160	100-42-5	Y
1,1,1-Trichloroethane	Not detected	30	2.7	ppbv	160	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	30	2.2	ppbv	160	79-34-5	Y
1,1,2-Trichloroethane	Not detected	30	2.4	ppbv	160	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	80	2.4	ppbv	160	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	30	4.6	ppbv	160	95-63-6	Y
1,3,5-Trimethylbenzene	Not detected	30	4.0	ppbv	160	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	30	2.2	ppbv	160	540-84-1	Y
Tert-butyl Alcohol	Not detected	320	6.6	ppbv	160	75-65-0	Y
Tetrachloroethene	Not detected	30	3.8	ppbv	160	127-18-4	Y
Tetrahydrofuran*	Not detected	30	4.6	ppbv	160	109-99-9	Y
Toluene	Not detected	30	2.1	ppbv	160	108-88-3	Y
Trichloroethene	Not detected	30	3.7	ppbv	160	79-01-6	Y
Trichlorofluoromethane	Not detected	30	2.7	ppbv	160	75-69-4	Y
Vinyl chloride	Not detected	30	4.6	ppbv	160	75-01-4	Y
Vinyl acetate	Not detected	320	2.4	ppbv	160	108-05-4	Y
p,m-Xylene	Not detected	60	6.1	ppbv	160		Y
o-Xylene	Not detected	30	3.2	ppbv	160	95-47-6	Y
Total Xylenes	Not detected	100	9.3	ppbv	160	1330-20-7	Y

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	114	760	22	ug/m3	160	67-64-1	JYB
1,3-Butadiene	Not detected	710	10	ug/m3	160	106-99-0	Y
Benzene	Not detected	96	9.6	ug/m3	160	71-43-2	Y
Bromodichloromethane	Not detected	200	25	ug/m3	160	75-27-4	Y
Bromoform	Not detected	310	38	ug/m3	160	75-25-2	Y
Bromomethane	Not detected	120	21	ug/m3	160	74-83-9	Y
Vinyl bromide	Not detected	130	24	ug/m3	160	593-60-2	Y
Benzyl chloride	Not detected	160	24	ug/m3	160	100-44-7	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.16 (continued)

Sample Tag: 224121-IAB-80

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Carbon disulfide	Not detected	1,000	9.3	ug/m3	160	75-15-0	Y
Chlorobenzene	Not detected	140	12	ug/m3	160	108-90-7	Y
Chloroethane	Not detected	840	20	ug/m3	160	75-00-3	Y
Chloroform	Not detected	150	16	ug/m3	160	67-66-3	Y
Chloromethane	Not detected	660	13	ug/m3	160	74-87-3	Y
3-Chloropropene	Not detected	1,000	12	ug/m3	160	107-05-1	Y
2-Chlorotoluene	Not detected	160	20	ug/m3	160	95-49-8	Y
Carbon tetrachloride	Not detected	190	20	ug/m3	160	56-23-5	Y
Cyclohexane	Not detected	100	13	ug/m3	160	110-82-7	Y
1,1-Dichloroethane	Not detected	120	16	ug/m3	160	75-34-3	Y
1,1-Dichloroethene	Not detected	120	15	ug/m3	160	75-35-4	Y
1,2-Dibromoethane	Not detected	230	12	ug/m3	160	106-93-4	Y
1,2-Dichloroethane	Not detected	120	18	ug/m3	160	107-06-2	Y
1,2-Dichloropropane	Not detected	140	15	ug/m3	160	78-87-5	Y
1,4-Dioxane	Not detected	1,400	22	ug/m3	160	123-91-1	Y
Dichlorodifluoromethane	Not detected	150	21	ug/m3	160	75-71-8	Y
Dibromochloromethane	Not detected	260	23	ug/m3	160	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	120	13	ug/m3	160	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	120	15	ug/m3	160	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	140	15	ug/m3	160	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	180	19	ug/m3	160	541-73-1	Y
1,2-Dichlorobenzene	Not detected	180	23	ug/m3	160	95-50-1	Y
1,4-Dichlorobenzene	Not detected	180	18	ug/m3	160	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	140	9.5	ug/m3	160	10061-02-6	Y
Ethanol*	5,100	750	21	ug/m3	160	64-17-5	Y J **Use this re- sult
Ethylbenzene	Not detected	130	14	ug/m3	160	100-41-4	Y
Ethyl Acetate*	Not detected	1,200	28	ug/m3	160	141-78-6	Y
4-Ethyltoluene	Not detected	150	25	ug/m3	160	622-96-8	Y
Freon 113	Not detected	230	29	ug/m3	160	76-13-1	Y
Freon 114	Not detected	210	32	ug/m3	160	76-14-2	Y
Heptane	Not detected	120	9.8	ug/m3	160	142-82-5	Y
Hexachlorobutadiene	Not detected	320	49	ug/m3	160	87-68-3	Y
Hexane	Not detected	110	11	ug/m3	160	110-54-3	Y
2-Hexanone*	Not detected	330	14	ug/m3	160	591-78-6	Y
Isopropyl Alcohol*	Not detected	790	29	ug/m3	160	67-63-0	Y
Methylene chloride	120	280	76	ug/m3	160	75-09-2	JYB
2-Butanone (MEK)	Not detected	940	22	ug/m3	160	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	330	11	ug/m3	160	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	110	5.8	ug/m3	160	1634-04-4	Y
Methyl methacrylate	Not detected	120	11	ug/m3	160	80-62-6	Y
Naphthalene	Not detected	160	8.4	ug/m3	160	91-20-3	Y
Propylene*	55.1	3,400	10	ug/m3	160	115-07-1	JYB
Styrene	Not detected	130	10	ug/m3	160	100-42-5	Y
1,1,1-Trichloroethane	Not detected	160	15	ug/m3	160	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	210	15	ug/m3	160	79-34-5	Y
1,1,2-Trichloroethane	Not detected	160	13	ug/m3	160	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	590	18	ug/m3	160	120-82-1	Y
1,2,4-Trimethylbenzene	Not detected	150	23	ug/m3	160	95-63-6	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.16 (continued)
Sample Tag: 224121-IAB-80

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,3,5-Trimethylbenzene	Not detected	150	20	ug/m3	160	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	140	10	ug/m3	160	540-84-1	Y
Tert-butyl Alcohol	Not detected	970	20	ug/m3	160	75-65-0	Y
Tetrachloroethene	Not detected	200	26	ug/m3	160	127-18-4	Y
Tetrahydrofuran*	Not detected	88	14	ug/m3	160	109-99-9	Y
Toluene	Not detected	110	7.9	ug/m3	160	108-88-3	Y
Trichloroethene	Not detected	160	20	ug/m3	160	79-01-6	Y
Trichlorofluoromethane	Not detected	170	15	ug/m3	160	75-69-4	Y
Vinyl chloride	Not detected	77	12	ug/m3	160	75-01-4	Y
Vinyl acetate	Not detected	1,100	8.5	ug/m3	160	108-05-4	Y
p,m-Xylene	Not detected	260	26	ug/m3	160		Y
o-Xylene	Not detected	130	14	ug/m3	160	95-47-6	Y
Total Xylenes	Not detected	430	40	ug/m3	160	1330-20-7	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S44921.17

Sample Tag: 224121-OA-80

Collected Date/Time: 01/26/2023 08:35 - 01/26/2023 15:47

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-3	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 23:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	19.8	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.6	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.080	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.020	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.390	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	7.1	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.070	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.17 (continued)

Sample Tag: 224121-OA-80

TO-15, Method: TO-15, Run Date: 02/20/23 23:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.130	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.170	0.2	0.019	ppbv	1	110-54-3	J
2-Hexanone*	0.030	0.5	0.021	ppbv	1	591-78-6	J
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	Not Detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.360	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not Detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.3	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.030	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.7	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	0.090	0.2	0.029	ppbv	1	109-99-9	J
Toluene	0.3	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.120	0.2	0.023	ppbv	1	79-01-6	J
Trichlorofluoromethane	0.190	0.2	0.017	ppbv	1	75-69-4	J
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.110	0.4	0.038	ppbv	1		J
o-Xylene	0.040	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.150	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 23:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	47.0	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	1.9	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.25	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.098	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.17 (continued)

Sample Tag: 224121-OA-80

TO-15, Method: TO-15, Run Date: 02/20/23 23:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.805	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	13	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.30	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.533	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.599	0.70	0.067	ug/m3	1	110-54-3	J
2-Hexanone*	0.12	2.0	0.086	ug/m3	1	591-78-6	J
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	Not detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	1.06	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	1.3	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.14	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	4.7	1.4	0.16	ug/m3	1	127-18-4	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.17 (continued)
Sample Tag: 224121-OA-80

TO-15, Method: TO-15, Run Date: 02/20/23 23:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	0.27	0.59	0.086	ug/m3	1	109-99-9	J
Toluene	1.1	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	0.645	1.1	0.12	ug/m3	1	79-01-6	J
Trichlorofluoromethane	1.07	1.1	0.096	ug/m3	1	75-69-4	J
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.478	1.7	0.16	ug/m3	1		J
o-Xylene	0.17	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.651	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.18

Sample Tag: 224121-IA-71

Collected Date/Time: 01/26/2023 11:55 - 01/27/2023 11:22

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-6	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/20/23 23:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	7.3	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.310	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.030	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.410	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.040	0.2	0.024	ppbv	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	24.2	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.080	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.18 (continued)

Sample Tag: 224121-IA-71

TO-15, Method: TO-15, Run Date: 02/20/23 23:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.160	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.7	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	0.050	0.5	0.021	ppbv	1	591-78-6	J
Isopropyl Alcohol*	3.4	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	Not detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.500	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.030	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.060	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	Not detected	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.7	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.110	0.4	0.038	ppbv	1		J
o-Xylene	0.050	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.160	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/20/23 23:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	17	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.965	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.15	0.98	0.098	ug/m3	1	67-66-3	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.18 (continued)

Sample Tag: 224121-IA-71

TO-15, Method: TO-15, Run Date: 02/20/23 23:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.847	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	0.14	0.69	0.083	ug/m3	1	110-82-7	J
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	45.6	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.35	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.656	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	2.5	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	0.20	2.0	0.086	ug/m3	1	591-78-6	J
Isopropyl Alcohol*	8.4	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	Not detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	1.47	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.15	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.28	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	Not detected	1.4	0.16	ug/m3	1	127-18-4	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.18 (continued)
Sample Tag: 224121-IA-71

TO-15, Method: TO-15, Run Date: 02/20/23 23:50, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	2.6	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.478	1.7	0.16	ug/m3	1		J
o-Xylene	0.22	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.695	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.19

Sample Tag: 224121-OA-71

Collected Date/Time: 01/26/2023 12:00 - 01/27/2023 11:22

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-4.5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 00:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	3.5	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.030	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	Not detected	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.380	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	6.1	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.030	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.19 (continued)

Sample Tag: 224121-OA-71

TO-15, Method: TO-15, Run Date: 02/21/23 00:22, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.050	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.100	0.2	0.019	ppbv	1	110-54-3	J
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	2.2	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	Not detected	0.5	0.5	ppbv	1	75-09-2	U
2-Butanone (MEK)	0.160	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.040	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	Not detected	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.5	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.030	0.2	0.023	ppbv	1	79-01-6	J
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.060	0.4	0.038	ppbv	1		J
o-Xylene	0.020	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.080	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/21/23 00:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	8.3	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.093	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	Not detected	0.98	0.098	ug/m3	1	67-66-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.19 (continued)

Sample Tag: 224121-OA-71

TO-15, Method: TO-15, Run Date: 02/21/23 00:22, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.785	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	11	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.13	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.20	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.352	0.70	0.067	ug/m3	1	110-54-3	J
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	5.4	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	Not detected	1.7	1.7	ug/m3	1	75-09-2	U
2-Butanone (MEK)	0.472	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.19	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	Not detected	1.4	0.16	ug/m3	1	127-18-4	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.19 (continued)

Sample Tag: 224121-OA-71

TO-15, Method: TO-15, Run Date: 02/21/23 00:22, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	1.9	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	0.16	1.1	0.12	ug/m3	1	79-01-6	J
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.26	1.7	0.16	ug/m3	1		J
o-Xylene	0.087	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.35	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.20

Sample Tag: 224121-IAA-106

Collected Date/Time: 01/27/2023 10:09 - 01/27/2023 16:46

Matrix: Air

COC Reference: A6647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 00:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	5.6	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	0.030	0.2	0.023	ppbv	1	75-27-4	J
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.050	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.4	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.330	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.4	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	7.3	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.120	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.070	2.0	0.049	ppbv	1	141-78-6	J

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.20 (continued)

Sample Tag: 224121-IAA-106

TO-15, Method: TO-15, Run Date: 02/21/23 00:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	0.130	0.2	0.032	ppbv	1	622-96-8	J
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.5	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.8	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	1.0	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.470	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.060	0.5	0.017	ppbv	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	0.030	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.180	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	0.080	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.5	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.040	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	0.110	0.2	0.029	ppbv	1	109-99-9	J
Toluene	1.1	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.340	0.4	0.038	ppbv	1		J
o-Xylene	0.130	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.470	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/21/23 00:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	13	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	0.20	1.3	0.15	ug/m3	1	75-27-4	J
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.16	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.20 (continued)

Sample Tag: 224121-IAA-106

TO-15, Method: TO-15, Run Date: 02/21/23 00:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	2.0	0.98	0.098	ug/m3	1	67-66-3	
Chloromethane	0.681	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	1.4	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	14	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.521	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	0.25	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	0.639	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	2.0	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	2.8	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	3.5	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	1.39	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	0.25	2.0	0.070	ug/m3	1	108-10-1	J
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	0.13	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.885	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	0.39	0.98	0.12	ug/m3	1	108-67-8	J
2,2,4-Trimethylpentane	2.3	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.20 (continued)
Sample Tag: 224121-IAA-106

TO-15, Method: TO-15, Run Date: 02/21/23 00:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrachloroethene	0.27	1.4	0.16	ug/m3	1	127-18-4	J
Tetrahydrofuran*	0.324	0.59	0.086	ug/m3	1	109-99-9	J
Toluene	4.1	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.48	1.7	0.16	ug/m3	1		J
o-Xylene	0.564	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	2.04	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.21

Sample Tag: 224121-OA-106

Collected Date/Time: 01/27/2023 10:12 - 01/27/2023 16:46

Matrix: Air

COC Reference: A6646

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-4.5	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 01:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	10.3	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.3	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.050	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.3	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.400	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	0.3	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.2	ppbv	1	106-46-7 U	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	9.1	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.100	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.21 (continued)

Sample Tag: 224121-OA-106

TO-15, Method: TO-15, Run Date: 02/21/23 01:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	0.090	0.2	0.032	ppbv	1	622-96-8	J
Freon 113	0.060	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.8	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	1.1	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	1.0	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.890	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.100	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	0.030	0.2	0.025	ppbv	1	108-67-8	J
2,2,4-Trimethylpentane	0.4	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.030	0.2	0.024	ppbv	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.0	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.260	0.4	0.038	ppbv	1		J
o-Xylene	0.110	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.370	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/21/23 01:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	24.5	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.96	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.16	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.21 (continued)

Sample Tag: 224121-OA-106

TO-15, Method: TO-15, Run Date: 02/21/23 01:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloroform	1.5	0.98	0.098	ug/m3	1	67-66-3	
Chloromethane	0.826	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	1.0	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	1.2	ug/m3	1	106-46-7	U
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	17	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.434	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	0.44	0.98	0.16	ug/m3	1	622-96-8	J
Freon 113	0.46	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	3.3	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	3.9	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	3.5	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	2.62	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.492	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	0.15	0.98	0.12	ug/m3	1	108-67-8	J
2,2,4-Trimethylpentane	1.9	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.21 (continued)

Sample Tag: 224121-OA-106

TO-15, Method: TO-15, Run Date: 02/21/23 01:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrachloroethene	0.20	1.4	0.16	ug/m3	1	127-18-4	J
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	3.8	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	1.13	1.7	0.16	ug/m3	1		J
o-Xylene	0.478	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	1.61	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.22

Sample Tag: 224121-IAB-106

Collected Date/Time: 01/27/2023 10:19 - 01/27/2023 16:46

Matrix: Air

COC Reference: A6646

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-4	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 03:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	3.6	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.020	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	Not detected	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.520	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.2	0.023	ppbv	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	4.9	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.040	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	Not detected	2.0	0.049	ppbv	1	141-78-6	
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.22 (continued)

Sample Tag: 224121-IAB-106

TO-15, Method: TO-15, Run Date: 02/21/23 03:58, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.060	0.2	0.015	ppbv	1	142-82-5	J
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.100	0.2	0.019	ppbv	1	110-54-3	J
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	2.0	0.076	ppbv	1	67-63-0	
Methylene chloride	0.5	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.180	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.5	ppbv	1	120-82-1	U
1,2,4-Trimethylbenzene	Not detected	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.060	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	0.060	2.0	0.041	ppbv	1	75-65-0	J
Tetrachloroethene	Not detected	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	0.2	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	Not detected	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.080	0.4	0.038	ppbv	1		J
o-Xylene	0.040	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.120	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/21/23 03:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	8.6	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.062	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	Not detected	0.98	0.098	ug/m3	1	67-66-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.22 (continued)

Sample Tag: 224121-IAB-106

TO-15, Method: TO-15, Run Date: 02/21/23 03:58, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	1.07	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	Not detected	0.79	0.091	ug/m3	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	9.2	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.17	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	Not detected	7.2	0.18	ug/m3	1	141-78-6	
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	0.25	0.82	0.061	ug/m3	1	142-82-5	J
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	0.352	0.70	0.067	ug/m3	1	110-54-3	J
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	4.9	0.19	ug/m3	1	67-63-0	
Methylene chloride	1.7	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	0.531	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	3.7	ug/m3	1	120-82-1	U
1,2,4-Trimethylbenzene	Not detected	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.28	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	0.18	6.1	0.12	ug/m3	1	75-65-0	J
Tetrachloroethene	Not detected	1.4	0.16	ug/m3	1	127-18-4	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.22 (continued)
Sample Tag: 224121-IAB-106

TO-15, Method: TO-15, Run Date: 02/21/23 03:58, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	0.75	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	Not detected	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	0.35	1.7	0.16	ug/m3	1		J
o-Xylene	0.17	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	0.521	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.23

Sample Tag: 224121-IAA-69

Collected Date/Time: 01/27/2023 09:05 - 01/27/2023 16:34

Matrix: Air

COC Reference: A6646

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-2	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 04:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	921.5	2.0	0.058	ppbv	1	67-64-1	E
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	1.1	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.040	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.110	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.530	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	1.4	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	0.030	0.2	0.023	ppbv	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	78.1	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	4.1	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.420	2.0	0.049	ppbv	1	141-78-6	J

E-Concentration exceeds calibration range

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.23 (continued)

Sample Tag: 224121-IAA-69

TO-15, Method: TO-15, Run Date: 02/21/23 04:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	1.8	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	18.8	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	4.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	9.2	0.076	ppbv	1	67-63-0	
Methylene chloride	Detected	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	20.4	2.0	0.046	ppbv	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.4	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	585	0.038	ppbv	1	115-07-1	
Styrene	0.090	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	4.7	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	1.7	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	1.3	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.3	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	3.2	0.2	0.029	ppbv	1	109-99-9	
Toluene	39.3	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	3.2	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	15.4	0.4	0.038	ppbv	1		
o-Xylene	4.6	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	20.0	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/21/23 04:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2.189	4.8	0.14	ug/m3	1	67-64-1	E
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	3.5	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

1-Response exceeds quantifiable range.

B-Compound also found in associated method blank

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.23 (continued)

Sample Tag: 224121-IAA-69

TO-15, Method: TO-15, Run Date: 02/21/23 04:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Carbon disulfide	0.12	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.537	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	1.09	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	4.8	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	0.12	0.79	0.091	ug/m3	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	147	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	18	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	1.51	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	8.8	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	77.1	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	15	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	23	0.19	ug/m3	1	67-63-0	
Methylene chloride	Detected	1.7	0.49	ug/m3	1	75-09-2	1
2-Butanone (MEK)	60.2	5.9	0.14	ug/m3	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	1.6	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	1,010	0.065	ug/m3	1	115-07-1	
Styrene	0.38	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

1-Response exceeds quantifiable range.

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.23 (continued)

Sample Tag: 224121-IAA-69

TO-15, Method: TO-15, Run Date: 02/21/23 04:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	23	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	8.4	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	6.1	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	2.0	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	9.4	0.59	0.086	ug/m3	1	109-99-9	
Toluene	148	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	17	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	66.9	1.7	0.16	ug/m3	1		
o-Xylene	20	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	86.8	2.6	0.25	ug/m3	1	1330-20-7	

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 20:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,600	300	8.7	ppbv	150	67-64-1	Y **use this re-
1,3-Butadiene	Not detected	300	4.4	ppbv	150	106-99-0	Y sult
Benzene	Not detected	30	2.9	ppbv	150	71-43-2	Y
Bromodichloromethane	Not detected	30	3.5	ppbv	150	75-27-4	Y
Bromoform	Not detected	30	3.5	ppbv	150	75-25-2	Y
Bromomethane	Not detected	30	5.0	ppbv	150	74-83-9	Y
Vinyl bromide	Not detected	30	5.3	ppbv	150	593-60-2	Y
Benzyl chloride	Not detected	30	4.4	ppbv	150	100-44-7	Y
Carbon disulfide	Not detected	300	2.9	ppbv	150	75-15-0	Y
Chlorobenzene	Not detected	30	2.6	ppbv	150	108-90-7	Y
Chloroethane	Not detected	300	6.9	ppbv	150	75-00-3	Y
Chloroform	Not detected	30	3.0	ppbv	150	67-66-3	Y
Chloromethane	Not detected	300	6.0	ppbv	150	74-87-3	Y
3-Chloropropene	Not detected	300	3.6	ppbv	150	107-05-1	Y
2-Chlorotoluene	Not detected	30	3.6	ppbv	150	95-49-8	Y
Carbon tetrachloride	Not detected	30	3.0	ppbv	150	56-23-5	Y
Cyclohexane	Not detected	30	3.6	ppbv	150	110-82-7	Y
1,1-Dichloroethane	Not detected	30	3.8	ppbv	150	75-34-3	Y
1,1-Dichloroethene	Not detected	30	3.6	ppbv	150	75-35-4	Y
1,2-Dibromoethane	Not detected	30	1.5	ppbv	150	106-93-4	Y
1,2-Dichloroethane	Not detected	30	4.2	ppbv	150	107-06-2	Y
1,2-Dichloropropane	Not detected	30	3.0	ppbv	150	78-87-5	Y
1,4-Dioxane	Not detected	380	5.7	ppbv	150	123-91-1	Y
Dichlorodifluoromethane	Not detected	30	3.9	ppbv	150	75-71-8	Y
Dibromochloromethane	Not detected	30	2.6	ppbv	150	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	30	3.2	ppbv	150	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	30	3.5	ppbv	150	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	30	3.0	ppbv	150	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	30	3.0	ppbv	150	541-73-1	Y
1,2-Dichlorobenzene	Not detected	30	3.6	ppbv	150	95-50-1	Y
1,4-Dichlorobenzene	Not detected	30	2.9	ppbv	150	106-46-7	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S44921.23 (continued)

Sample Tag: 224121-IAA-69

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 20:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	30	2.0	ppbv	150	10061-02-6	Y
Ethanol*	100	380	10	ppbv	150	64-17-5	JY
Ethylbenzene	10.5	30	3.0	ppbv	150	100-41-4	JY
Ethyl Acetate*	Not detected	300	7.4	ppbv	150	141-78-6	Y
4-Ethyltoluene	Not detected	30	4.8	ppbv	150	622-96-8	Y
Freon 113	Not detected	30	3.6	ppbv	150	76-13-1	Y
Freon 114	Not detected	30	4.4	ppbv	150	76-14-2	Y
Heptane	21.0	30	2.3	ppbv	150	142-82-5	JY
Hexachlorobutadiene	Not detected	30	4.4	ppbv	150	87-68-3	Y
Hexane	Not detected	30	2.9	ppbv	150	110-54-3	Y
2-Hexanone*	Not detected	80	3.2	ppbv	150	591-78-6	Y
Isopropyl Alcohol*	Not detected	300	11	ppbv	150	67-63-0	Y
Methylene chloride	9,080	80	21	ppbv	150	75-09-2	Y
2-Butanone (MEK)	13.5	300	6.9	ppbv	150	78-93-3	JY
4-Methyl-2-pentanone (MIBK)	Not detected	80	2.6	ppbv	150	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	30	1.5	ppbv	150	1634-04-4	Y
Methyl methacrylate	Not detected	30	2.6	ppbv	150	80-62-6	Y
Naphthalene	Not detected	30	1.5	ppbv	150	91-20-3	Y
Propylene*	Not detected	2,005	5.7	ppbv	150	115-07-1	YX
Styrene	Not detected	30	2.3	ppbv	150	100-42-5	Y
1,1,1-Trichloroethane	Not detected	30	2.6	ppbv	150	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	30	2.1	ppbv	150	79-34-5	Y
1,1,2-Trichloroethane	Not detected	30	2.3	ppbv	150	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	80	2.3	ppbv	150	120-82-1	Y
1,2,4-Trimethylbenzene	4.5	30	4.4	ppbv	150	95-63-6	JY
1,3,5-Trimethylbenzene	Not detected	30	3.8	ppbv	150	108-67-8	Y
2,2,4-Trimethylpentane	4.5	30	2.1	ppbv	150	540-84-1	JY
Tert-butyl Alcohol	Not detected	300	6.2	ppbv	150	75-65-0	Y
Tetrachloroethene	Not detected	30	3.6	ppbv	150	127-18-4	Y
Tetrahydrofuran*	Not detected	30	4.4	ppbv	150	109-99-9	Y
Toluene	50	30	2.0	ppbv	150	108-88-3	Y
Trichloroethene	Not detected	30	3.5	ppbv	150	79-01-6	Y
Trichlorofluoromethane	Not detected	30	2.6	ppbv	150	75-69-4	Y
Vinyl chloride	Not detected	30	4.4	ppbv	150	75-01-4	Y
Vinyl acetate	Not detected	300	2.3	ppbv	150	108-05-4	Y
p,m-Xylene	18.0	60	5.7	ppbv	150		JY
o-Xylene	6.0	30	3.0	ppbv	150	95-47-6	JY
Total Xylenes	24.0	90	8.7	ppbv	150	1330-20-7	JY

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 20:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	3,800	710	21	ug/m3	150	67-64-1	Y **use this result
1,3-Butadiene	Not detected	660	9.7	ug/m3	150	106-99-0	Y
Benzene	Not detected	96	9.3	ug/m3	150	71-43-2	Y
Bromodichloromethane	Not detected	200	23	ug/m3	150	75-27-4	Y
Bromoform	Not detected	310	36	ug/m3	150	75-25-2	Y
Bromomethane	Not detected	120	19	ug/m3	150	74-83-9	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S44921.23 (continued)

Sample Tag: 224121-IAA-69

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 20:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Vinyl bromide	Not detected	130	23	ug/m3	150	593-60-2	Y
Benzyl chloride	Not detected	160	23	ug/m3	150	100-44-7	Y
Carbon disulfide	Not detected	930	9.0	ug/m3	150	75-15-0	Y
Chlorobenzene	Not detected	140	12	ug/m3	150	108-90-7	Y
Chloroethane	Not detected	790	18	ug/m3	150	75-00-3	Y
Chloroform	Not detected	150	15	ug/m3	150	67-66-3	Y
Chloromethane	Not detected	620	12	ug/m3	150	74-87-3	Y
3-Chloropropene	Not detected	940	11	ug/m3	150	107-05-1	Y
2-Chlorotoluene	Not detected	160	19	ug/m3	150	95-49-8	Y
Carbon tetrachloride	Not detected	190	19	ug/m3	150	56-23-5	Y
Cyclohexane	Not detected	100	12	ug/m3	150	110-82-7	Y
1,1-Dichloroethane	Not detected	120	15	ug/m3	150	75-34-3	Y
1,1-Dichloroethene	Not detected	120	14	ug/m3	150	75-35-4	Y
1,2-Dibromoethane	Not detected	230	12	ug/m3	150	106-93-4	Y
1,2-Dichloroethane	Not detected	120	17	ug/m3	150	107-06-2	Y
1,2-Dichloropropane	Not detected	140	14	ug/m3	150	78-87-5	Y
1,4-Dioxane	Not detected	1,400	21	ug/m3	150	123-91-1	Y
Dichlorodifluoromethane	Not detected	150	19	ug/m3	150	75-71-8	Y
Dibromochloromethane	Not detected	260	22	ug/m3	150	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	120	13	ug/m3	150	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	120	14	ug/m3	150	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	140	14	ug/m3	150	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	180	18	ug/m3	150	541-73-1	Y
1,2-Dichlorobenzene	Not detected	180	22	ug/m3	150	95-50-1	Y
1,4-Dichlorobenzene	Not detected	180	17	ug/m3	150	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	140	9.1	ug/m3	150	10061-02-6	Y
Ethanol*	190	720	19	ug/m3	150	64-17-5	JY
Ethylbenzene	45.6	130	13	ug/m3	150	100-41-4	JY
Ethyl Acetate*	Not detected	1,100	27	ug/m3	150	141-78-6	Y
4-Ethyltoluene	Not detected	150	24	ug/m3	150	622-96-8	Y
Freon 113	Not detected	230	28	ug/m3	150	76-13-1	Y
Freon 114	Not detected	210	31	ug/m3	150	76-14-2	Y
Heptane	86.1	120	9.4	ug/m3	150	142-82-5	JY
Hexachlorobutadiene	Not detected	320	47	ug/m3	150	87-68-3	Y
Hexane	Not detected	110	10	ug/m3	150	110-54-3	Y
2-Hexanone*	Not detected	330	13	ug/m3	150	591-78-6	Y
Isopropyl Alcohol*	Not detected	740	27	ug/m3	150	67-63-0	Y
Methylene chloride	31,500	280	73	ug/m3	150	75-09-2	Y
2-Butanone (MEK)	39.8	880	20	ug/m3	150	78-93-3	JY
4-Methyl-2-pentanone (MIBK)	Not detected	330	11	ug/m3	150	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	110	5.4	ug/m3	150	1634-04-4	Y
Methyl methacrylate	Not detected	120	11	ug/m3	150	80-62-6	Y
Naphthalene	Not detected	160	7.9	ug/m3	150	91-20-3	Y
Propylene*	Not detected	3,451	9.8	ug/m3	150	115-07-1	YX
Styrene	Not detected	130	9.8	ug/m3	150	100-42-5	Y
1,1,1-Trichloroethane	Not detected	160	14	ug/m3	150	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	210	14	ug/m3	150	79-34-5	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S44921.23 (continued)

Sample Tag: 224121-IAA-69

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 20:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloroethane	Not detected	160	13	ug/m3	150	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	590	17	ug/m3	150	120-82-1	Y
1,2,4-Trimethylbenzene	22	150	22	ug/m3	150	95-63-6	JY
1,3,5-Trimethylbenzene	Not detected	150	19	ug/m3	150	108-67-8	Y
2,2,4-Trimethylpentane	21	140	9.8	ug/m3	150	540-84-1	JY
Tert-butyl Alcohol	Not detected	910	19	ug/m3	150	75-65-0	Y
Tetrachloroethene	Not detected	200	24	ug/m3	150	127-18-4	Y
Tetrahydrofuran*	Not detected	88	13	ug/m3	150	109-99-9	Y
Toluene	190	110	7.5	ug/m3	150	108-88-3	Y
Trichloroethene	Not detected	160	19	ug/m3	150	79-01-6	Y
Trichlorofluoromethane	Not detected	170	15	ug/m3	150	75-69-4	Y
Vinyl chloride	Not detected	77	11	ug/m3	150	75-01-4	Y
Vinyl acetate	Not detected	1,100	8.1	ug/m3	150	108-05-4	Y
p,m-Xylene	78.2	260	25	ug/m3	150		JY
o-Xylene	26	130	13	ug/m3	150	95-47-6	JY
Total Xylenes	104	390	38	ug/m3	150	1330-20-7	JY

Y-Elevated reporting limit due to high target concentration
J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.24

Sample Tag: 224121-IAB-69

Collected Date/Time: 01/27/2023 09:07 - 01/27/2023 16:32

Matrix: Air

COC Reference: A6646

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-3	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 05:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	909.5	2.0	0.058	ppbv	1	67-64-1	E
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	1.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.030	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	0.110	0.2	0.020	ppbv	1	67-66-3	J
Chloromethane	0.450	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.070	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	1.5	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.4	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	0.030	0.2	0.023	ppbv	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	83.3	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	3.7	0.2	0.020	ppbv	1	100-41-4	
Ethyl Acetate*	0.420	2.0	0.049	ppbv	1	141-78-6	J

E-Concentration exceeds calibration range

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.24 (continued)

Sample Tag: 224121-IAB-69

TO-15, Method: TO-15, Run Date: 02/21/23 05:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Ethyltoluene	1.6	0.2	0.032	ppbv	1	622-96-8	
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	18.6	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	3.3	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	Not detected	8.0	0.076	ppbv	1	67-63-0	
Methylene chloride	Detected	0.5	0.14	ppbv	1	75-09-2	1
2-Butanone (MEK)	7.0	2.0	0.046	ppbv	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	0.5	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	545	0.038	ppbv	1	115-07-1	
Styrene	0.100	0.2	0.015	ppbv	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	4.3	0.2	0.029	ppbv	1	95-63-6	
1,3,5-Trimethylbenzene	1.6	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	1.4	0.2	0.014	ppbv	1	540-84-1	
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.3	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	3.5	0.2	0.029	ppbv	1	109-99-9	
Toluene	40.7	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	3.1	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	14.0	0.4	0.038	ppbv	1		
o-Xylene	4.1	0.2	0.020	ppbv	1	95-47-6	
Total Xylenes	18.1	0.6	0.058	ppbv	1	1330-20-7	

TO-15, Method: TO-15, Run Date: 02/21/23 05:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,160	4.8	0.14	ug/m3	1	67-64-1	E
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	3.8	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

1-Response exceeds quantifiable range.

B-Compound also found in associated method blank

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S44921.24 (continued)

Sample Tag: 224121-IAB-69

TO-15, Method: TO-15, Run Date: 02/21/23 05:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Carbon disulfide	0.093	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	0.537	0.98	0.098	ug/m3	1	67-66-3	J
Chloromethane	0.929	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.44	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	5.2	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.0	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	0.12	0.79	0.091	ug/m3	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	157	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	16	0.87	0.087	ug/m3	1	100-41-4	
Ethyl Acetate*	1.51	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	7.9	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	76.2	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	12	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	Not detected	20	0.19	ug/m3	1	67-63-0	
Methylene chloride	Detected	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	21	5.9	0.14	ug/m3	1	78-93-3	
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	2.0	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	938	0.065	ug/m3	1	115-07-1	
Styrene	0.426	0.85	0.064	ug/m3	1	100-42-5	J
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	

J-Estimated value less than reporting limit, but greater than MDL

X-Elevated reporting limit due to matrix interference

1-Response exceeds quantifiable range.

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.24 (continued)

Sample Tag: 224121-IAB-69

TO-15, Method: TO-15, Run Date: 02/21/23 05:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	21	0.98	0.14	ug/m3	1	95-63-6	
1,3,5-Trimethylbenzene	7.9	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	6.5	0.93	0.065	ug/m3	1	540-84-1	
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	2.0	1.4	0.16	ug/m3	1	127-18-4	
Tetrahydrofuran*	10	0.59	0.086	ug/m3	1	109-99-9	
Toluene	153	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	17	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	60.8	1.7	0.16	ug/m3	1		
o-Xylene	18	0.87	0.087	ug/m3	1	95-47-6	
Total Xylenes	78.6	2.6	0.25	ug/m3	1	1330-20-7	

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,600	300	8.7	ppbv	150	67-64-1	Y **use this result
1,3-Butadiene	Not detected	300	4.4	ppbv	150	106-99-0	Y
Benzene	Not detected	30	2.9	ppbv	150	71-43-2	Y
Bromodichloromethane	Not detected	30	3.5	ppbv	150	75-27-4	Y
Bromoform	Not detected	30	3.5	ppbv	150	75-25-2	Y
Bromomethane	Not detected	30	5.0	ppbv	150	74-83-9	Y
Vinyl bromide	Not detected	30	5.3	ppbv	150	593-60-2	Y
Benzyl chloride	Not detected	30	4.4	ppbv	150	100-44-7	Y
Carbon disulfide	Not detected	300	2.9	ppbv	150	75-15-0	Y
Chlorobenzene	Not detected	30	2.6	ppbv	150	108-90-7	Y
Chloroethane	Not detected	300	6.9	ppbv	150	75-00-3	Y
Chloroform	Not detected	30	3.0	ppbv	150	67-66-3	Y
Chloromethane	Not detected	300	6.0	ppbv	150	74-87-3	Y
3-Chloropropene	Not detected	300	3.6	ppbv	150	107-05-1	Y
2-Chlorotoluene	Not detected	30	3.6	ppbv	150	95-49-8	Y
Carbon tetrachloride	Not detected	30	3.0	ppbv	150	56-23-5	Y
Cyclohexane	Not detected	30	3.6	ppbv	150	110-82-7	Y
1,1-Dichloroethane	Not detected	30	3.8	ppbv	150	75-34-3	Y
1,1-Dichloroethene	Not detected	30	3.6	ppbv	150	75-35-4	Y
1,2-Dibromoethane	Not detected	30	1.5	ppbv	150	106-93-4	Y
1,2-Dichloroethane	Not detected	30	4.2	ppbv	150	107-06-2	Y
1,2-Dichloropropane	Not detected	30	3.0	ppbv	150	78-87-5	Y
1,4-Dioxane	Not detected	380	5.7	ppbv	150	123-91-1	Y
Dichlorodifluoromethane	Not detected	30	3.9	ppbv	150	75-71-8	Y
Dibromochloromethane	Not detected	30	2.6	ppbv	150	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	30	3.2	ppbv	150	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	30	3.5	ppbv	150	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	30	3.0	ppbv	150	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	30	3.0	ppbv	150	541-73-1	Y
1,2-Dichlorobenzene	Not detected	30	3.6	ppbv	150	95-50-1	Y
1,4-Dichlorobenzene	Not detected	30	2.9	ppbv	150	106-46-7	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S44921.24 (continued)

Sample Tag: 224121-IAB-69

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	30	2.0	ppbv	150	10061-02-6	Y
Ethanol*	170	380	10	ppbv	150	64-17-5	JY
Ethylbenzene	7.5	30	3.0	ppbv	150	100-41-4	JY
Ethyl Acetate*	Not detected	300	7.4	ppbv	150	141-78-6	Y
4-Ethyltoluene	Not detected	30	4.8	ppbv	150	622-96-8	Y
Freon 113	Not detected	30	3.6	ppbv	150	76-13-1	Y
Freon 114	Not detected	30	4.4	ppbv	150	76-14-2	Y
Heptane	22.5	30	2.3	ppbv	150	142-82-5	JY
Hexachlorobutadiene	Not detected	30	4.4	ppbv	150	87-68-3	Y
Hexane	Not detected	30	2.9	ppbv	150	110-54-3	Y
2-Hexanone*	Not detected	80	3.2	ppbv	150	591-78-6	Y
Isopropyl Alcohol*	Not detected	300	11	ppbv	150	67-63-0	Y
Methylene chloride	8,100	80	21	ppbv	150	75-09-2	Y
2-Butanone (MEK)	Not detected	300	6.9	ppbv	150	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	80	2.6	ppbv	150	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	30	1.5	ppbv	150	1634-04-4	Y
Methyl methacrylate	Not detected	30	2.6	ppbv	150	80-62-6	Y
Naphthalene	Not detected	30	1.5	ppbv	150	91-20-3	Y
Propylene*	Not detected	2,000	5.7	ppbv	150	115-07-1	Y
Styrene	Not detected	30	2.3	ppbv	150	100-42-5	Y
1,1,1-Trichloroethane	Not detected	30	2.6	ppbv	150	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	30	2.1	ppbv	150	79-34-5	Y
1,1,2-Trichloroethane	Not detected	30	2.3	ppbv	150	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	80	2.3	ppbv	150	120-82-1	Y
1,2,4-Trimethylbenzene	4.5	30	4.4	ppbv	150	95-63-6	JY
1,3,5-Trimethylbenzene	Not detected	30	3.8	ppbv	150	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	30	2.1	ppbv	150	540-84-1	Y
Tert-butyl Alcohol	Not detected	300	6.2	ppbv	150	75-65-0	Y
Tetrachloroethene	Not detected	30	3.6	ppbv	150	127-18-4	Y
Tetrahydrofuran*	Not detected	30	4.4	ppbv	150	109-99-9	Y
Toluene	50	30	2.0	ppbv	150	108-88-3	Y
Trichloroethene	Not detected	30	3.5	ppbv	150	79-01-6	Y
Trichlorofluoromethane	Not detected	30	2.6	ppbv	150	75-69-4	Y
Vinyl chloride	Not detected	30	4.4	ppbv	150	75-01-4	Y
Vinyl acetate	Not detected	300	2.3	ppbv	150	108-05-4	Y
p,m-Xylene	16.5	60	5.7	ppbv	150		JY
o-Xylene	4.5	30	3.0	ppbv	150	95-47-6	JY
Total Xylenes	21.0	90	8.7	ppbv	150	1330-20-7	JY

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	3,800	710	21	ug/m3	150	67-64-1	Y **use this result
1,3-Butadiene	Not detected	660	9.7	ug/m3	150	106-99-0	Y
Benzene	Not detected	96	9.3	ug/m3	150	71-43-2	Y
Bromodichloromethane	Not detected	200	23	ug/m3	150	75-27-4	Y
Bromoform	Not detected	310	36	ug/m3	150	75-25-2	Y
Bromomethane	Not detected	120	19	ug/m3	150	74-83-9	Y
Vinyl bromide	Not detected	130	23	ug/m3	150	593-60-2	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.24 (continued)

Sample Tag: 224121-IAB-69

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Benzyl chloride	Not detected	160	23	ug/m3	150	100-44-7	Y
Carbon disulfide	Not detected	930	9.0	ug/m3	150	75-15-0	Y
Chlorobenzene	Not detected	140	12	ug/m3	150	108-90-7	Y
Chloroethane	Not detected	790	18	ug/m3	150	75-00-3	Y
Chloroform	Not detected	150	15	ug/m3	150	67-66-3	Y
Chloromethane	Not detected	620	12	ug/m3	150	74-87-3	Y
3-Chloropropene	Not detected	940	11	ug/m3	150	107-05-1	Y
2-Chlorotoluene	Not detected	160	19	ug/m3	150	95-49-8	Y
Carbon tetrachloride	Not detected	190	19	ug/m3	150	56-23-5	Y
Cyclohexane	Not detected	100	12	ug/m3	150	110-82-7	Y
1,1-Dichloroethane	Not detected	120	15	ug/m3	150	75-34-3	Y
1,1-Dichloroethene	Not detected	120	14	ug/m3	150	75-35-4	Y
1,2-Dibromoethane	Not detected	230	12	ug/m3	150	106-93-4	Y
1,2-Dichloroethane	Not detected	120	17	ug/m3	150	107-06-2	Y
1,2-Dichloropropane	Not detected	140	14	ug/m3	150	78-87-5	Y
1,4-Dioxane	Not detected	1,400	21	ug/m3	150	123-91-1	Y
Dichlorodifluoromethane	Not detected	150	19	ug/m3	150	75-71-8	Y
Dibromochloromethane	Not detected	260	22	ug/m3	150	124-48-1	Y
trans-1,2-Dichloroethene	Not detected	120	13	ug/m3	150	156-60-5	Y
cis-1,2-Dichloroethene	Not detected	120	14	ug/m3	150	156-59-2	Y
cis-1,3-Dichloropropene	Not detected	140	14	ug/m3	150	10061-01-5	Y
1,3-Dichlorobenzene	Not detected	180	18	ug/m3	150	541-73-1	Y
1,2-Dichlorobenzene	Not detected	180	22	ug/m3	150	95-50-1	Y
1,4-Dichlorobenzene	Not detected	180	17	ug/m3	150	106-46-7	Y
trans-1,3-Dichloropropene	Not detected	140	9.1	ug/m3	150	10061-02-6	Y
Ethanol*	320	720	19	ug/m3	150	64-17-5	JY
Ethylbenzene	33	130	13	ug/m3	150	100-41-4	JY
Ethyl Acetate*	Not detected	1,100	27	ug/m3	150	141-78-6	Y
4-Ethyltoluene	Not detected	150	24	ug/m3	150	622-96-8	Y
Freon 113	Not detected	230	28	ug/m3	150	76-13-1	Y
Freon 114	Not detected	210	31	ug/m3	150	76-14-2	Y
Heptane	92.2	120	9.4	ug/m3	150	142-82-5	JY
Hexachlorobutadiene	Not detected	320	47	ug/m3	150	87-68-3	Y
Hexane	Not detected	110	10	ug/m3	150	110-54-3	Y
2-Hexanone*	Not detected	330	13	ug/m3	150	591-78-6	Y
Isopropyl Alcohol*	Not detected	740	27	ug/m3	150	67-63-0	Y
Methylene chloride	28,000	280	73	ug/m3	150	75-09-2	Y
2-Butanone (MEK)	Not detected	880	20	ug/m3	150	78-93-3	Y
4-Methyl-2-pentanone (MIBK)	Not detected	330	11	ug/m3	150	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	110	5.4	ug/m3	150	1634-04-4	Y
Methyl methacrylate	Not detected	120	11	ug/m3	150	80-62-6	Y
Naphthalene	Not detected	160	7.9	ug/m3	150	91-20-3	Y
Propylene*	Not detected	3,400	9.8	ug/m3	150	115-07-1	Y
Styrene	Not detected	130	9.8	ug/m3	150	100-42-5	Y
1,1,1-Trichloroethane	Not detected	160	14	ug/m3	150	71-55-6	Y
1,1,2,2-Tetrachloroethane	Not detected	210	14	ug/m3	150	79-34-5	Y
1,1,2-Trichloroethane	Not detected	160	13	ug/m3	150	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	590	17	ug/m3	150	120-82-1	Y

Y-Elevated reporting limit due to high target concentration

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.24 (continued)
Sample Tag: 224121-IAB-69

TO-15 (Replicate 01), Method: TO-15, Run Date: 02/21/23 15:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trimethylbenzene	22	150	22	ug/m3	150	95-63-6	JY
1,3,5-Trimethylbenzene	Not detected	150	19	ug/m3	150	108-67-8	Y
2,2,4-Trimethylpentane	Not detected	140	9.8	ug/m3	150	540-84-1	Y
Tert-butyl Alcohol	Not detected	910	19	ug/m3	150	75-65-0	Y
Tetrachloroethene	Not detected	200	24	ug/m3	150	127-18-4	Y
Tetrahydrofuran*	Not detected	88	13	ug/m3	150	109-99-9	Y
Toluene	190	110	7.5	ug/m3	150	108-88-3	Y
Trichloroethene	Not detected	160	19	ug/m3	150	79-01-6	Y
Trichlorofluoromethane	Not detected	170	15	ug/m3	150	75-69-4	Y
Vinyl chloride	Not detected	77	11	ug/m3	150	75-01-4	Y
Vinyl acetate	Not detected	1,100	8.1	ug/m3	150	108-05-4	Y
p,m-Xylene	71.6	260	25	ug/m3	150		JY
o-Xylene	20	130	13	ug/m3	150	95-47-6	JY
Total Xylenes	91.2	390	38	ug/m3	150	1330-20-7	JY

J-Estimated value less than reporting limit, but greater than MDL Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S44921.25
Sample Tag: 224121-OA-69
Collected Date/Time: 01/27/2023 09:10 - 01/27/2023 16:34
Matrix: Air
COC Reference: A6646

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Air Canister	None	No	RT	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Pressure check for TO-15*	-2	N/A	02/10/23 13:30	BDO	

Organics - Volatiles

TO-15, Method: TO-15, Run Date: 02/21/23 05:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	11.4	2.0	0.058	ppbv	1	67-64-1	
1,3-Butadiene	Not detected	2.0	0.029	ppbv	1	106-99-0	
Benzene	0.2	0.2	0.019	ppbv	1	71-43-2	
Bromodichloromethane	Not detected	0.2	0.023	ppbv	1	75-27-4	
Bromoform	Not detected	0.2	0.023	ppbv	1	75-25-2	
Bromomethane	Not detected	0.2	0.033	ppbv	1	74-83-9	
Vinyl bromide	Not detected	0.2	0.035	ppbv	1	593-60-2	
Benzyl chloride	Not detected	0.2	0.029	ppbv	1	100-44-7	
Carbon disulfide	0.170	2.0	0.019	ppbv	1	75-15-0	J
Chlorobenzene	Not detected	0.2	0.017	ppbv	1	108-90-7	
Chloroethane	Not detected	2.0	0.046	ppbv	1	75-00-3	
Chloroform	Not detected	0.2	0.020	ppbv	1	67-66-3	
Chloromethane	0.460	2.0	0.040	ppbv	1	74-87-3	J
3-Chloropropene	Not detected	2.0	0.024	ppbv	1	107-05-1	
2-Chlorotoluene	Not detected	0.2	0.024	ppbv	1	95-49-8	
Carbon tetrachloride	0.060	0.2	0.020	ppbv	1	56-23-5	J
Cyclohexane	Not detected	0.2	0.024	ppbv	1	110-82-7	
1,1-Dichloroethane	Not detected	0.2	0.025	ppbv	1	75-34-3	
1,1-Dichloroethene	Not detected	0.2	0.024	ppbv	1	75-35-4	
1,2-Dibromoethane	Not detected	0.2	0.010	ppbv	1	106-93-4	
1,2-Dichloroethane	Not detected	0.2	0.028	ppbv	1	107-06-2	
1,2-Dichloropropane	Not detected	0.2	0.020	ppbv	1	78-87-5	
1,4-Dioxane	Not detected	2.5	0.038	ppbv	1	123-91-1	
Dichlorodifluoromethane	0.5	0.2	0.026	ppbv	1	75-71-8	
Dibromochloromethane	Not detected	0.2	0.017	ppbv	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.2	0.021	ppbv	1	156-60-5	
cis-1,2-Dichloroethene	0.180	0.2	0.023	ppbv	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.2	0.020	ppbv	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	0.2	0.020	ppbv	1	541-73-1	
1,2-Dichlorobenzene	Not detected	0.2	0.024	ppbv	1	95-50-1	
1,4-Dichlorobenzene	Not detected	0.2	0.019	ppbv	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.2	0.013	ppbv	1	10061-02-6	
Ethanol*	12.6	2.5	0.068	ppbv	1	64-17-5	J
Ethylbenzene	0.160	0.2	0.020	ppbv	1	100-41-4	J
Ethyl Acetate*	0.080	2.0	0.049	ppbv	1	141-78-6	J
4-Ethyltoluene	Not detected	0.2	0.032	ppbv	1	622-96-8	

J-Estimated value less than reporting limit, but greater than MDL



Analytical Laboratory Report

Lab Sample ID: S44921.25 (continued)

Sample Tag: 224121-OA-69

TO-15, Method: TO-15, Run Date: 02/21/23 05:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Freon 113	0.050	0.2	0.024	ppbv	1	76-13-1	J
Freon 114	Not detected	0.2	0.029	ppbv	1	76-14-2	
Heptane	0.4	0.2	0.015	ppbv	1	142-82-5	
Hexachlorobutadiene	Not detected	0.2	0.029	ppbv	1	87-68-3	
Hexane	0.6	0.2	0.019	ppbv	1	110-54-3	
2-Hexanone*	Not detected	0.5	0.021	ppbv	1	591-78-6	
Isopropyl Alcohol*	3.6	2.0	0.076	ppbv	1	67-63-0	J
Methylene chloride	1.8	0.5	0.14	ppbv	1	75-09-2	
2-Butanone (MEK)	0.430	2.0	0.046	ppbv	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	0.5	0.017	ppbv	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.2	0.010	ppbv	1	1634-04-4	
Methyl methacrylate	Not detected	0.2	0.017	ppbv	1	80-62-6	
Naphthalene	Not detected	0.2	0.2	ppbv	1	91-20-3	U
Propylene*	Not detected	10	0.038	ppbv	1	115-07-1	
Styrene	Not detected	0.2	0.015	ppbv	1	100-42-5	
1,1,1-Trichloroethane	Not detected	0.2	0.017	ppbv	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	0.2	0.014	ppbv	1	79-34-5	
1,1,2-Trichloroethane	Not detected	0.2	0.015	ppbv	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	0.5	0.015	ppbv	1	120-82-1	
1,2,4-Trimethylbenzene	0.050	0.2	0.029	ppbv	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.2	0.025	ppbv	1	108-67-8	
2,2,4-Trimethylpentane	0.070	0.2	0.014	ppbv	1	540-84-1	J
Tert-butyl Alcohol	Not detected	2.0	0.041	ppbv	1	75-65-0	
Tetrachloroethene	0.5	0.2	0.024	ppbv	1	127-18-4	
Tetrahydrofuran*	Not detected	0.2	0.029	ppbv	1	109-99-9	
Toluene	1.4	0.2	0.013	ppbv	1	108-88-3	
Trichloroethene	0.2	0.2	0.023	ppbv	1	79-01-6	
Trichlorofluoromethane	0.2	0.2	0.017	ppbv	1	75-69-4	
Vinyl chloride	Not detected	0.2	0.029	ppbv	1	75-01-4	
Vinyl acetate	Not detected	2.0	0.015	ppbv	1	108-05-4	
p,m-Xylene	0.5	0.4	0.038	ppbv	1		
o-Xylene	0.130	0.2	0.020	ppbv	1	95-47-6	J
Total Xylenes	0.580	0.6	0.058	ppbv	1	1330-20-7	J

TO-15, Method: TO-15, Run Date: 02/21/23 05:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	27.1	4.8	0.14	ug/m3	1	67-64-1	
1,3-Butadiene	Not detected	4.4	0.064	ug/m3	1	106-99-0	
Benzene	0.64	0.64	0.061	ug/m3	1	71-43-2	
Bromodichloromethane	Not detected	1.3	0.15	ug/m3	1	75-27-4	
Bromoform	Not detected	2.1	0.24	ug/m3	1	75-25-2	
Bromomethane	Not detected	0.78	0.13	ug/m3	1	74-83-9	
Vinyl bromide	Not detected	0.87	0.15	ug/m3	1	593-60-2	
Benzyl chloride	Not detected	1.0	0.15	ug/m3	1	100-44-7	
Carbon disulfide	0.529	6.2	0.059	ug/m3	1	75-15-0	J
Chlorobenzene	Not detected	0.92	0.078	ug/m3	1	108-90-7	
Chloroethane	Not detected	5.3	0.12	ug/m3	1	75-00-3	
Chloroform	Not detected	0.98	0.098	ug/m3	1	67-66-3	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.25 (continued)

Sample Tag: 224121-OA-69

TO-15, Method: TO-15, Run Date: 02/21/23 05:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	0.950	4.1	0.083	ug/m3	1	74-87-3	J
3-Chloropropene	Not detected	6.3	0.075	ug/m3	1	107-05-1	
2-Chlorotoluene	Not detected	1.0	0.12	ug/m3	1	95-49-8	
Carbon tetrachloride	0.38	1.3	0.13	ug/m3	1	56-23-5	J
Cyclohexane	Not detected	0.69	0.083	ug/m3	1	110-82-7	
1,1-Dichloroethane	Not detected	0.81	0.10	ug/m3	1	75-34-3	
1,1-Dichloroethene	Not detected	0.79	0.095	ug/m3	1	75-35-4	
1,2-Dibromoethane	Not detected	1.5	0.077	ug/m3	1	106-93-4	
1,2-Dichloroethane	Not detected	0.81	0.11	ug/m3	1	107-06-2	
1,2-Dichloropropane	Not detected	0.92	0.092	ug/m3	1	78-87-5	
1,4-Dioxane	Not detected	9.0	0.14	ug/m3	1	123-91-1	
Dichlorodifluoromethane	2.5	0.99	0.13	ug/m3	1	75-71-8	
Dibromochloromethane	Not detected	1.7	0.14	ug/m3	1	124-48-1	
trans-1,2-Dichloroethene	Not detected	0.79	0.083	ug/m3	1	156-60-5	
cis-1,2-Dichloroethene	0.714	0.79	0.091	ug/m3	1	156-59-2	J
cis-1,3-Dichloropropene	Not detected	0.91	0.091	ug/m3	1	10061-01-5	
1,3-Dichlorobenzene	Not detected	1.2	0.12	ug/m3	1	541-73-1	
1,2-Dichlorobenzene	Not detected	1.2	0.14	ug/m3	1	95-50-1	
1,4-Dichlorobenzene	Not detected	1.2	0.11	ug/m3	1	106-46-7	
trans-1,3-Dichloropropene	Not detected	0.91	0.059	ug/m3	1	10061-02-6	
Ethanol*	23.7	4.7	0.13	ug/m3	1	64-17-5	J
Ethylbenzene	0.695	0.87	0.087	ug/m3	1	100-41-4	J
Ethyl Acetate*	0.29	7.2	0.18	ug/m3	1	141-78-6	J
4-Ethyltoluene	Not detected	0.98	0.16	ug/m3	1	622-96-8	
Freon 113	0.38	1.5	0.18	ug/m3	1	76-13-1	J
Freon 114	Not detected	1.4	0.20	ug/m3	1	76-14-2	
Heptane	1.6	0.82	0.061	ug/m3	1	142-82-5	
Hexachlorobutadiene	Not detected	2.1	0.31	ug/m3	1	87-68-3	
Hexane	2.1	0.70	0.067	ug/m3	1	110-54-3	
2-Hexanone*	Not detected	2.0	0.086	ug/m3	1	591-78-6	
Isopropyl Alcohol*	8.8	4.9	0.19	ug/m3	1	67-63-0	J
Methylene chloride	6.3	1.7	0.49	ug/m3	1	75-09-2	
2-Butanone (MEK)	1.27	5.9	0.14	ug/m3	1	78-93-3	J
4-Methyl-2-pentanone (MIBK)	Not detected	2.0	0.070	ug/m3	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	0.72	0.036	ug/m3	1	1634-04-4	
Methyl methacrylate	Not detected	0.82	0.070	ug/m3	1	80-62-6	
Naphthalene	Not detected	1.0	1.0	ug/m3	1	91-20-3	U
Propylene*	Not detected	17	0.065	ug/m3	1	115-07-1	
Styrene	Not detected	0.85	0.064	ug/m3	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1.1	0.093	ug/m3	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1.4	0.096	ug/m3	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1.1	0.082	ug/m3	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	3.7	0.11	ug/m3	1	120-82-1	
1,2,4-Trimethylbenzene	0.25	0.98	0.14	ug/m3	1	95-63-6	J
1,3,5-Trimethylbenzene	Not detected	0.98	0.12	ug/m3	1	108-67-8	
2,2,4-Trimethylpentane	0.33	0.93	0.065	ug/m3	1	540-84-1	J
Tert-butyl Alcohol	Not detected	6.1	0.12	ug/m3	1	75-65-0	
Tetrachloroethene	3.4	1.4	0.16	ug/m3	1	127-18-4	

J-Estimated value less than reporting limit, but greater than MDL

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S44921.25 (continued)

Sample Tag: 224121-OA-69

TO-15, Method: TO-15, Run Date: 02/21/23 05:34, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Tetrahydrofuran*	Not detected	0.59	0.086	ug/m3	1	109-99-9	
Toluene	5.3	0.75	0.049	ug/m3	1	108-88-3	
Trichloroethene	1.1	1.1	0.12	ug/m3	1	79-01-6	
Trichlorofluoromethane	1.1	1.1	0.096	ug/m3	1	75-69-4	
Vinyl chloride	Not detected	0.51	0.074	ug/m3	1	75-01-4	
Vinyl acetate	Not detected	7.0	0.053	ug/m3	1	108-05-4	
p,m-Xylene	2.2	1.7	0.16	ug/m3	1		
o-Xylene	0.564	0.87	0.087	ug/m3	1	95-47-6	J
Total Xylenes	2.52	2.6	0.25	ug/m3	1	1330-20-7	J

J-Estimated value less than reporting limit, but greater than MDL

APPENDIX B

NYSDOH SOIL VAPOR/INDOOR AIR DECISION MATRICES

Soil Vapor / Indoor Air Matrix A

May 2017

Analytes Assigned:

Trichloroethene (TCE), *cis*-1,2-Dichloroethene (c12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

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

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

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

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

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

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

ADDITIONAL NOTES FOR MATRIX A

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

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

Soil Vapor / Indoor Air Matrix B

May 2017

Analytes Assigned:

Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

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

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

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

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

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

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

ADDITIONAL NOTES FOR MATRIX B

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

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

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:

Vinyl Chloride

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

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

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

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

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

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

ADDITIONAL NOTES FOR MATRIX C

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

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

APPENDIX C

NYSDOH AIR GUIDELINES

Soil Vapor Intrusion Updates

Throughout this web page, reference is made to the **final guidance**. This refers to the [Guidance for Evaluating Soil Vapor Intrusion in New York State, October 2006](#).

The updates provide herein will be incorporated, as applicable, into the guidance document itself upon its periodic revision. If you have suggestions you would like us to consider during the next revision process, please share them with us at BEEI@health.ny.gov.

May 2017: Updates to Soil Vapor / Indoor Air Decision Matrices

Update

Based on reviews of toxicity data, risk assessments, and soil vapor intrusion data collected in New York State over the past decade, NYSDOH has assigned eight volatile chemicals to [three newly revised and renamed Soil Vapor / Indoor Air Decision Matrices](#). These assignments and SVI Decision Matrices supersede those provided in the [final guidance](#) and in subsequent updates to the guidance (please note: the June 2007 update is no longer posted on this web page). The assignments are summarized in the following table:

Soil Vapor/Indoor Air Matrix	Volatile Chemical
Matrix A	carbon tetrachloride 1,1-dichloroethene <i>cis</i> -1,2-dichloroethene trichloroethene
Matrix B	methylene chloride tetrachloroethene 1,1,1-trichloroethane
Matrix C	vinyl chloride

These modifications to the SVI Decision Matrices should not be interpreted as reflecting changes in the recommended approach for how, when, and where to collect soil vapor or soil vapor intrusion samples during the investigation of a contaminated site.

An overview of the Decision Matrices and factors NYSDOH considers when developing and assigning chemicals to them is provided in [Section 3.4 of the 2006 guidance](#).

August 2015: New Ambient Air Guideline for Trichloroethene

Announcement

NYSDOH has lowered their guideline for trichloroethene in ambient air from 5 micrograms per cubic meter (mcg/m³) to 2 mcg/m³ and developed a recommended immediate action level of 20 mcg/m³. The air guideline identified in [Table 3.1 of the final guidance](#) is no longer applicable.

September 2013: New Ambient Air Guideline for Tetrachloroethene

Announcement

NYSDOH has lowered their guideline for tetrachloroethene in ambient air from 100 micrograms per cubic meter (mcg/m³) to 30 mcg/m³ and their recommended immediate action level from 1000 mcg/m³ to 300 mcg/m³. The air guideline identified in [Table 3.1 of the final guidance](#) is no longer applicable.

May 2010: Update on Building Questionnaires and Product Inventories

The Indoor Air Quality Questionnaire and Building Inventory Form in [Appendix B of the final guidance \(as revised March 2007\)](#) is provided to aid with the evaluation of indoor air sampling results by collecting pertinent building and household product information that may influence soil vapor intrusion and indoor air quality.

Update

Based on comments received from field personnel and homeowners, as well as a review of indoor air evaluations at remedial sites, the NYSDOH and New York State Department of Environmental Conservation (NYSDEC) have created an abbreviated [Indoor Air Quality Questionnaire and Building Inventory Form](#).

The [abbreviated form](#) is intended to decrease the amount of time spent gathering and reporting the supplemental building information while still collecting the most relevant information necessary for conducting a soil vapor intrusion investigation. It is intended to supplement, rather than replace, the original form. When completed properly, the [abbreviated form](#) will capture the information needed to perform the data evaluation process in most cases. However, in the event that a complete evaluation cannot be conducted or additional information is needed, the NYSDEC and NYSDOH may recommend a return to the structure to collect the additional information and complete the [original form \(as revised March 2007\)](#).

April 2010: Clarification on Data Validation

Reference is often made to "third-party data validation" of soil vapor, sub-slab vapor, indoor air and outdoor air results. While the purpose is the same, validation of these soil vapor intrusion data does not mean the same as formal "third-party data validation," which is typically associated with litigation activities. A NYSDEC Analytical Service Protocol Category B format data deliverable for the sample analyses is still reviewed by a qualified individual not directly associated with the project or the analytical laboratory and the output of the review is in the form of a Data Usability Summary Report (DUSR) rather than a validation report containing detailed evaluation of every piece of information generated by the analysis. More information about DUSRs and the qualifications necessary to prepare a DUSR is available in the NYSDEC's [DER-10: Technical Guidance for Site Investigation and Remediation](#) (May 3, 2010).

January 2010: Update to Section 2.7.2

[Section 2.7.2\(d\) of the final guidance](#) contains the following recommendation: during the construction of sub-slab implants and probes, porous, inert backfill material (e.g., glass beads, washed #1 crushed stone, etc.) should be added to cover about 1 inch of the probe tip for permanent installations.

Update

NOTE: Updates to this final guidance are available at
http://health.ny.gov/environmental/indoors/vapor_intrusion/update.htm

the scientific basis for the guidance value. The peer reviewers provided technical comments on the data and methods used to derive the guidelines, each of which were addressed by the NYSDOH. Upon completion of the reviews and responses to comments, the guidelines were finalized.

Air guideline values derived by the NYSDOH are summarized in Table 3.1. Additional information about these guidelines is provided in the following:

- Appendix D — overview of how the NYSDOH develops air guidelines; and
- Appendix H — copies of fact sheets that discuss the air guidelines for PCE and TCE.

The purpose of a guideline is to help guide decisions about the nature of efforts to reduce exposure to the chemical. Reasonable and practical actions should be taken to reduce exposures when indoor air levels are above background, even when they are below the guideline. The urgency to complete these actions increases with indoor air levels, particularly when air levels are above the guideline, and additional actions taken if the initial actions do not sufficiently reduce levels. In all cases, the specific corrective actions to be taken depend on a case-by-case evaluation of the situation. The goal of the recommended actions is to reduce chemical levels in indoor air to as close to background as practical.

Table 3.1 Air guideline values derived by the NYSDOH

Chemical		Air Guideline Value (mcg/m ³)	Reference
methylene chloride (also referred to as dichloromethane)	MeCl	60	1
polychlorinated biphenyls	PCBs	1*	2,3
tetrachlorodibenzo- <i>p</i> -dioxin equivalents	TCDD	0.00001*	3,4
tetrachloroethene	PCE	100	5
trichloroethene	TCE	5	6,7

*The guideline is specific to indoor air.

References:

- [1] NYSDOH. 1988. Letter from N. Kim to T. Allen, Division of Air, New York State Department of Environmental Conservation. November 28, 1988.
- [2] NYSDOH. 1985. Binghamton State Office Building (BSOB) Re-Entry Guidelines: PCBs. Document 1330P. Albany, NY: Bureau of Toxic Substance Assessment.
- [3] NYSDOH. 1988. Letter from D. Axelrod to J. Egan, New York State Office of General Services. March 8, 1988.
- [4] NYSDOH. 1984. Re-Entry Guidelines. Binghamton State Office Building. Document 0549P. Albany, NY: Bureau of Toxic Substance Assessment.
- [5] NYSDOH. 1997. Tetrachloroethene Ambient Air Criteria Document. Albany, NY: Bureau of Toxic Substance Assessment.
- [6] NYSDOH. 2003. Letter from N. Kim to D. Desnoyers, Division of Environmental Remediation, New York State Department of Environmental Conservation. October 31, 2003. [Provided in Appendix D.]
- [7] NYSDOH. 2006. Final Report: Trichloroethene (TCE) Air Criteria Document. Center for Environmental Health, Bureau of Toxic Substance Assessment. Troy, NY.