

March 24, 2026

Illinois Department of Transportation  
Keith Roberts, PE  
Acting Regional Engineer  
Division of Highways/Region 5/District 8  
1102 Eastport Plaza Drive  
Collinsville, Illinois 62234-6198

**Subject: Analytical Data for Soil Vapor Sampling According to Illinois Department of Transportation (IDOT) Permits No. 8-28548 and No. 8-28875**

Dear Mr. Roberts,

AECOM, on behalf of Shell Oil Products US (Shell), is submitting the attached analytical results for soil vapor samples collected in 2025 from the following vapor monitoring points in accordance with IDOT Permits No. 8-28548 and No. 8-28875:

- VMP-15
- VMP-55

If you have any questions or require further information, please contact Wendy Pennington at [wendy.pennington@aecom.com](mailto:wendy.pennington@aecom.com) (314-452-8929) or Samuel Fisher at [samuel.fisher@aecom.com](mailto:samuel.fisher@aecom.com) (314-296-1969).

Sincerely,  
AECOM, on behalf of Shell Oil Products US



Samuel Fisher, CHMM  
Environmental Scientist



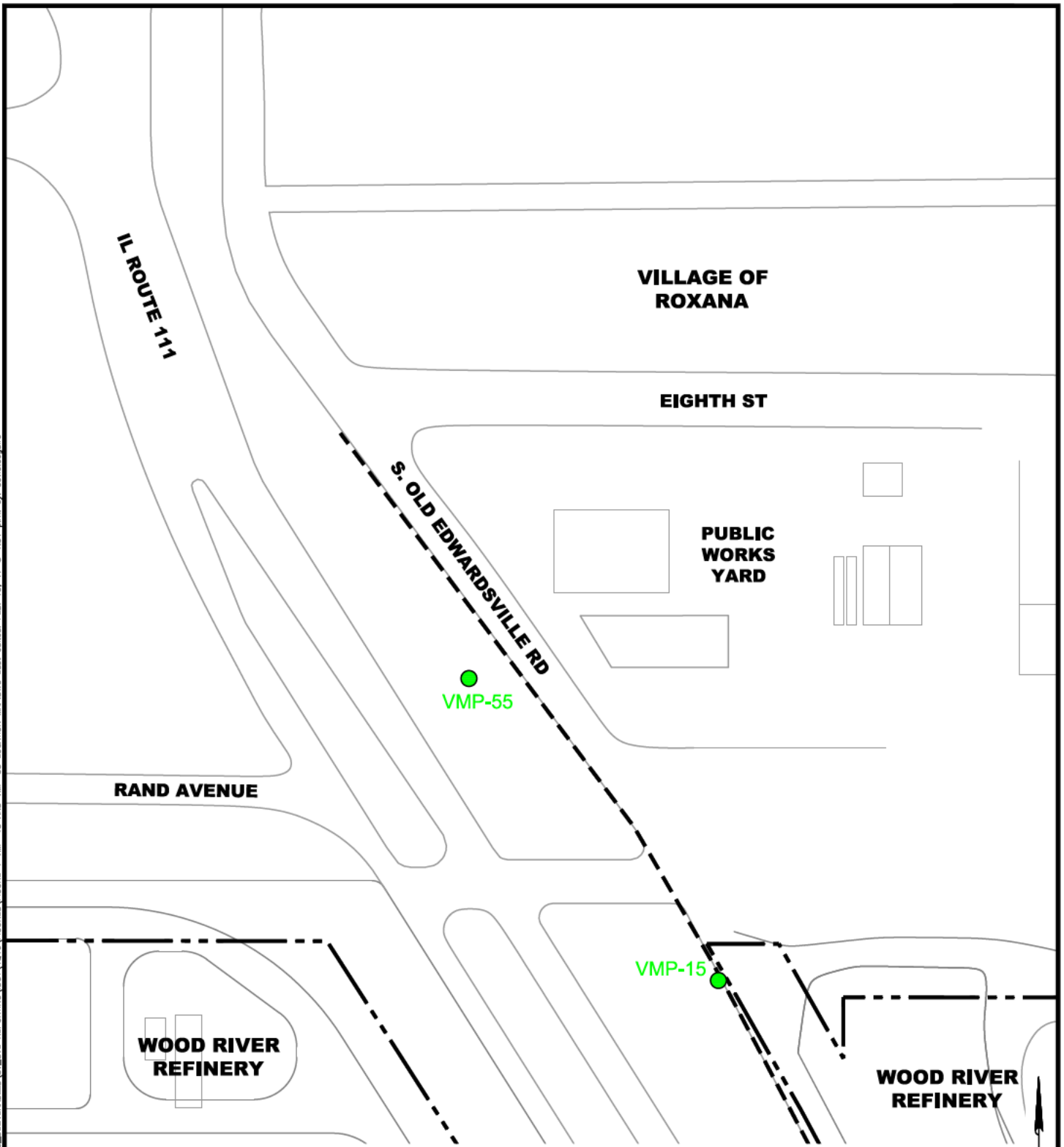
Wendy Pennington, PE  
Project Manager

cc:




Leroy Bealer, Shell  
Repositories – Roxana Public Library, Website  
Project File

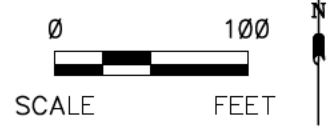
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File: P:\PROJECTS\ENVIRONMENTAL\SHLL\60477367\_ROXANA2016\6.0\_DELIVERABLES\SV\_SVE\_REPORTING\DOT\4016\FIGURES\FIGURE 1 VMP-15 AND VMP-55 LOCATION MAP.DWG Last edited: FEB. 15, 17 @ 1:51 p.m. by: david.dequire



**LEGEND**

-  VAPOR MONITORING POINT (VMP) LOCATION
-  APPROXIMATE BOUNDARY OF WOOD RIVER REFINERY
-  APPROXIMATE EAST BOUNDARY OF IL ROUTE 111 RIGHT-OF-WAY



SHELL OIL PRODUCTS US SOIL VAPOR MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60527968
<b>AECOM</b>		
DRN. BY:djd Feb 2017 DSGN. BY:djd CHKD. BY:smf	VMP-15 and VMP-55 Location Map	FIG. NO. 1

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**Analytical Report**

2/18/2025

Mr. Samuel Fisher

AECOM

411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor

Project #: 60738191-4.1.2

Workorder #: 2502059A

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 2/5/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

**WORK ORDER #: 2502059A**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1697061
<b>FAX:</b>		<b>PROJECT #</b>	60738191-4.1.2 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	02/05/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	02/18/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-55-20-020425	TO-15	6.1 "Hg	9.9 psi
01B	VMP-55-20-020425	TO-15	6.1 "Hg	9.9 psi
02A	VMP-15-5-020425	TO-15	5.1 "Hg	9.8 psi
03A	VMP-15-21.5-020425	TO-15	5.1 "Hg	10 psi
04A	VMP-15-25.5-020425	TO-15	5.9 "Hg	10.1 psi
05A	VMP-15-29-020425	TO-15	5.9 "Hg	10 psi
06A	Lab Blank	TO-15	NA	NA
06B	Lab Blank	TO-15	NA	NA
06C	Lab Blank	TO-15	NA	NA
06D	Lab Blank	TO-15	NA	NA
07A	CCV	TO-15	NA	NA
07B	CCV	TO-15	NA	NA
07C	CCV	TO-15	NA	NA
07D	CCV	TO-15	NA	NA
08A	LCS	TO-15	NA	NA
08AA	LCSD	TO-15	NA	NA
08B	LCS	TO-15	NA	NA
08BB	LCSD	TO-15	NA	NA
08C	LCS	TO-15	NA	NA
08CC	LCSD	TO-15	NA	NA
08D	LCS	TO-15	NA	NA
08DD	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 02/18/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**AECOM**  
**Workorder# 2502059A**

Five 1 Liter Summa Canister (100% Certified) samples were received on February 05, 2025. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilution was performed on sample VMP-55-20-020425 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: VMP-55-20-020425

Lab ID#: 2502059A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	210	3600	500	8500
Cyclohexane	52	320	180	1100
2,2,4-Trimethylpentane	52	27000	240	120000
Butane	210	560	500	1300

Client Sample ID: VMP-55-20-020425

Lab ID#: 2502059A-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Isopentane	700	22000	2100	64000

Client Sample ID: VMP-15-5-020425

Lab ID#: 2502059A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	0.45 J	5.0	2.2 J
Freon 11	1.0	0.15 J	5.6	0.84 J
Ethanol	10	4.4 J	19	8.3 J
Acetone	10	14	24	33
2-Butanone (Methyl Ethyl Ketone)	4.0	1.2 J	12	3.7 J
Chloroform	1.0	0.59 J	4.9	2.9 J

Client Sample ID: VMP-15-21.5-020425

Lab ID#: 2502059A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	0.46 J	5.0	2.3 J
Acetone	10	4.9 J	24	12 J
Chloroform	1.0	0.87 J	4.9	4.3 J
Benzene	1.0	0.18 J	3.2	0.58 J
Toluene	2.0	0.44 J	7.6	1.6 J

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VMP-15-25.5-020425**

**Lab ID#: 2502059A-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.0	0.44 J	5.2	2.2 J
Freon 11	1.0	0.15 J	5.9	0.86 J
Chloroform	1.0	9.4	5.1	46
Benzene	1.0	0.34 J	3.4	1.1 J
Trichloroethene	1.0	0.40 J	5.6	2.2 J
Bromodichloromethane	1.0	0.28 J	7.0	1.9 J
Toluene	2.1	0.28 J	7.9	1.1 J

**Client Sample ID: VMP-15-29-020425**

**Lab ID#: 2502059A-05A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.0	0.44 J	5.2	2.2 J
Freon 11	1.0	0.13 J	5.9	0.74 J
Acetone	10	12	25	28
2-Butanone (Methyl Ethyl Ketone)	4.2	1.8 J	12	5.4 J
Chloroform	1.0	18	5.1	88
Bromodichloromethane	1.0	0.40 J	7.0	2.7 J



Air Toxics

Client Sample ID: VMP-55-20-020425

Lab ID#: 2502059A-01A

EPA METHOD TO-15 GC/MS

File Name:	14021708	Date of Collection:	2/4/25 11:08:00 AM
Dil. Factor:	10.5	Date of Analysis:	2/17/25 11:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	52	Not Detected	260	Not Detected
Freon 114	52	Not Detected	370	Not Detected
Chloromethane	210	Not Detected	430	Not Detected
Vinyl Chloride	52	Not Detected	130	Not Detected
1,3-Butadiene	52	Not Detected	120	Not Detected
Bromomethane	210	Not Detected	820	Not Detected
Chloroethane	210	Not Detected	550	Not Detected
Freon 11	52	Not Detected	290	Not Detected
Ethanol	260	Not Detected	490	Not Detected
Freon 113	52	Not Detected	400	Not Detected
1,1-Dichloroethene	52	Not Detected	210	Not Detected
Acetone	210	3600	500	8500
2-Propanol	260	Not Detected	640	Not Detected
Carbon Disulfide	210	Not Detected	650	Not Detected
3-Chloropropene	210	Not Detected	660	Not Detected
Methylene Chloride	210	Not Detected	730	Not Detected
Methyl tert-butyl ether	52	Not Detected	190	Not Detected
trans-1,2-Dichloroethene	52	Not Detected	210	Not Detected
Hexane	52	Not Detected	180	Not Detected
1,1-Dichloroethane	52	Not Detected	210	Not Detected
2-Butanone (Methyl Ethyl Ketone)	210	Not Detected	620	Not Detected
cis-1,2-Dichloroethene	52	Not Detected	210	Not Detected
Tetrahydrofuran	52	Not Detected	150	Not Detected
Chloroform	52	Not Detected	260	Not Detected
1,1,1-Trichloroethane	52	Not Detected	290	Not Detected
Cyclohexane	52	320	180	1100
Carbon Tetrachloride	52	Not Detected	330	Not Detected
2,2,4-Trimethylpentane	52	27000	240	120000
Benzene	52	Not Detected	170	Not Detected
1,2-Dichloroethane	52	Not Detected	210	Not Detected
Heptane	52	Not Detected	220	Not Detected
Trichloroethene	52	Not Detected	280	Not Detected
1,2-Dichloropropane	52	Not Detected	240	Not Detected
1,4-Dioxane	210	Not Detected	760	Not Detected
Bromodichloromethane	52	Not Detected	350	Not Detected
cis-1,3-Dichloropropene	52	Not Detected	240	Not Detected
4-Methyl-2-pentanone	210	Not Detected	860	Not Detected
Toluene	52	Not Detected	200	Not Detected
trans-1,3-Dichloropropene	52	Not Detected	240	Not Detected
1,1,2-Trichloroethane	52	Not Detected	290	Not Detected
Tetrachloroethene	52	Not Detected	360	Not Detected
2-Hexanone	210	Not Detected	860	Not Detected



Air Toxics

Client Sample ID: VMP-55-20-020425

Lab ID#: 2502059A-01A

EPA METHOD TO-15 GC/MS

File Name:	14021708	Date of Collection:	2/4/25 11:08:00 AM
Dil. Factor:	10.5	Date of Analysis:	2/17/25 11:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	52	Not Detected	450	Not Detected
1,2-Dibromoethane (EDB)	52	Not Detected	400	Not Detected
Chlorobenzene	52	Not Detected	240	Not Detected
Ethyl Benzene	52	Not Detected	230	Not Detected
m,p-Xylene	52	Not Detected	230	Not Detected
o-Xylene	52	Not Detected	230	Not Detected
Styrene	52	Not Detected	220	Not Detected
Bromoform	52	Not Detected	540	Not Detected
Cumene	52	Not Detected	260	Not Detected
1,1,2,2-Tetrachloroethane	52	Not Detected	360	Not Detected
Propylbenzene	52	Not Detected	260	Not Detected
4-Ethyltoluene	52	Not Detected	260	Not Detected
1,3,5-Trimethylbenzene	52	Not Detected	260	Not Detected
1,2,4-Trimethylbenzene	52	Not Detected	260	Not Detected
1,3-Dichlorobenzene	52	Not Detected	320	Not Detected
1,4-Dichlorobenzene	52	Not Detected	320	Not Detected
alpha-Chlorotoluene	52	Not Detected	270	Not Detected
1,2-Dichlorobenzene	52	Not Detected	320	Not Detected
1,2,4-Trichlorobenzene	210	Not Detected	1600	Not Detected
Hexachlorobutadiene	210	Not Detected	2200	Not Detected
Butane	210	560	500	1300

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: VMP-55-20-020425

Lab ID#: 2502059A-01B

EPA METHOD TO-15 GC/MS

File Name:	14021709	Date of Collection:	2/4/25 11:08:00 AM	
Dil. Factor:	35.0	Date of Analysis:	2/17/25 12:17 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Isopentane	700	22000	2100	64000

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: VMP-15-5-020425

Lab ID#: 2502059A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021708	Date of Collection:	2/4/25 12:28:00 PM
Dil. Factor:	2.01	Date of Analysis:	2/17/25 02:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	0.45 J	5.0	2.2 J
Freon 114	1.0	Not Detected	7.0	Not Detected
Chloromethane	10	Not Detected	21	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,3-Butadiene	1.0	Not Detected	2.2	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	4.0	Not Detected	11	Not Detected
Freon 11	1.0	0.15 J	5.6	0.84 J
Ethanol	10	4.4 J	19	8.3 J
Freon 113	1.0	Not Detected	7.7	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Acetone	10	14	24	33
2-Propanol	4.0	Not Detected	9.9	Not Detected
Carbon Disulfide	4.0	Not Detected	12	Not Detected
3-Chloropropene	4.0	Not Detected	12	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	4.0	Not Detected	14	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Hexane	1.0	Not Detected	3.5	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	1.2 J	12	3.7 J
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	1.0	0.59 J	4.9	2.9 J
1,1,1-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Cyclohexane	1.0	Not Detected	3.4	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.3	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.7	Not Detected
Benzene	1.0	Not Detected	3.2	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Heptane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.6	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Bromodichloromethane	1.0	Not Detected	6.7	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.6	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.1	Not Detected
Toluene	2.0	Not Detected	7.6	Not Detected
trans-1,3-Dichloropropene	1.0	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Tetrachloroethene	1.0	Not Detected	6.8	Not Detected
2-Hexanone	4.0	Not Detected	16	Not Detected



Air Toxics

Client Sample ID: VMP-15-5-020425

Lab ID#: 2502059A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021708	Date of Collection:	2/4/25 12:28:00 PM
Dil. Factor:	2.01	Date of Analysis:	2/17/25 02:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.6	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	7.7	Not Detected
Chlorobenzene	1.0	Not Detected	4.6	Not Detected
Ethyl Benzene	1.0	Not Detected	4.4	Not Detected
m,p-Xylene	2.0	Not Detected	8.7	Not Detected
o-Xylene	1.0	Not Detected	4.4	Not Detected
Styrene	1.0	Not Detected	4.3	Not Detected
Bromoform	1.0	Not Detected	10	Not Detected
Cumene	1.0	Not Detected	4.9	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	6.9	Not Detected
Propylbenzene	1.0	Not Detected	4.9	Not Detected
4-Ethyltoluene	1.0	Not Detected	4.9	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	4.9	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	4.9	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.0	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.0	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.2	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.0	Not Detected
1,2,4-Trichlorobenzene	4.0	Not Detected	30	Not Detected
Hexachlorobutadiene	4.0	Not Detected	43	Not Detected
Butane	4.0	Not Detected	9.6	Not Detected
Isopentane	4.0	Not Detected	12	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	79	70-130



Air Toxics

Client Sample ID: VMP-15-21.5-020425

Lab ID#: 2502059A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021307	Date of Collection:	2/4/25 12:55:00 PM
Dil. Factor:	2.02	Date of Analysis:	2/13/25 12:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	0.46 J	5.0	2.3 J
Freon 114	1.0	Not Detected	7.1	Not Detected
Chloromethane	10	Not Detected	21	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,3-Butadiene	1.0	Not Detected	2.2	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	4.0	Not Detected	11	Not Detected
Freon 11	1.0	Not Detected	5.7	Not Detected
Ethanol	10	Not Detected	19	Not Detected
Freon 113	1.0	Not Detected	7.7	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Acetone	10	4.9 J	24	12 J
2-Propanol	4.0	Not Detected	9.9	Not Detected
Carbon Disulfide	4.0	Not Detected	12	Not Detected
3-Chloropropene	4.0	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	4.0	Not Detected	14	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.0	Not Detected
Chloroform	1.0	0.87 J	4.9	4.3 J
1,1,1-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Cyclohexane	1.0	Not Detected	3.5	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.4	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.7	Not Detected
Benzene	1.0	0.18 J	3.2	0.58 J
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Heptane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.7	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Bromodichloromethane	1.0	Not Detected	6.8	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.6	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.1	Not Detected
Toluene	2.0	0.44 J	7.6	1.6 J
trans-1,3-Dichloropropene	1.0	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Tetrachloroethene	1.0	Not Detected	6.8	Not Detected
2-Hexanone	4.0	Not Detected	16	Not Detected

Client Sample ID: VMP-15-21.5-020425

Lab ID#: 2502059A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021307	Date of Collection:	2/4/25 12:55:00 PM
Dil. Factor:	2.02	Date of Analysis:	2/13/25 12:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.6	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	7.8	Not Detected
Chlorobenzene	1.0	Not Detected	4.6	Not Detected
Ethyl Benzene	1.0	Not Detected	4.4	Not Detected
m,p-Xylene	2.0	Not Detected	8.8	Not Detected
o-Xylene	1.0	Not Detected	4.4	Not Detected
Styrene	1.0	Not Detected	4.3	Not Detected
Bromoform	1.0	Not Detected	10	Not Detected
Cumene	1.0	Not Detected	5.0	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	6.9	Not Detected
Propylbenzene	1.0	Not Detected	5.0	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.0	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.0	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.0	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.1	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.1	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.2	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.1	Not Detected
1,2,4-Trichlorobenzene	4.0	Not Detected	30	Not Detected
Hexachlorobutadiene	4.0	Not Detected	43	Not Detected
Butane	4.0	Not Detected	9.6	Not Detected
Isopentane	4.0	Not Detected	12	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	77	70-130



Air Toxics

Client Sample ID: VMP-15-25.5-020425

Lab ID#: 2502059A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021224	Date of Collection:	2/4/25 1:20:00 PM
Dil. Factor:	2.10	Date of Analysis:	2/12/25 10:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	0.44 J	5.2	2.2 J
Freon 114	1.0	Not Detected	7.3	Not Detected
Chloromethane	10	Not Detected	22	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	41	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	0.15 J	5.9	0.86 J
Ethanol	10	Not Detected	20	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Acetone	10	Not Detected	25	Not Detected
2-Propanol	4.2	Not Detected	10	Not Detected
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Methyl tert-butyl ether	4.2	Not Detected	15	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	1.0	9.4	5.1	46
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	1.0	0.34 J	3.4	1.1 J
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	1.0	0.40 J	5.6	2.2 J
1,2-Dichloropropane	1.0	Not Detected	4.8	Not Detected
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Bromodichloromethane	1.0	0.28 J	7.0	1.9 J
cis-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	2.1	0.28 J	7.9	1.1 J
trans-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Tetrachloroethene	1.0	Not Detected	7.1	Not Detected
2-Hexanone	4.2	Not Detected	17	Not Detected

Client Sample ID: VMP-15-25.5-020425

Lab ID#: 2502059A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021224	Date of Collection:	2/4/25 1:20:00 PM
Dil. Factor:	2.10	Date of Analysis:	2/12/25 10:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.9	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.1	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	Not Detected	4.6	Not Detected
m,p-Xylene	2.1	Not Detected	9.1	Not Detected
o-Xylene	1.0	Not Detected	4.6	Not Detected
Styrene	1.0	Not Detected	4.5	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.2	Not Detected
Propylbenzene	1.0	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	45	Not Detected
Butane	4.2	Not Detected	10	Not Detected
Isopentane	4.2	Not Detected	12	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	79	70-130



Air Toxics

Client Sample ID: VMP-15-29-020425

Lab ID#: 2502059A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021308	Date of Collection:	2/4/25 1:44:00 PM
Dil. Factor:	2.09	Date of Analysis:	2/13/25 01:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	0.44 J	5.2	2.2 J
Freon 114	1.0	Not Detected	7.3	Not Detected
Chloromethane	10	Not Detected	22	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	40	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	0.13 J	5.9	0.74 J
Ethanol	10	Not Detected	20	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Acetone	10	12	25	28
2-Propanol	4.2	Not Detected	10	Not Detected
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Methyl tert-butyl ether	4.2	Not Detected	15	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	1.8 J	12	5.4 J
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	1.0	18	5.1	88
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	1.0	Not Detected	3.3	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.8	Not Detected
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Bromodichloromethane	1.0	0.40 J	7.0	2.7 J
cis-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	2.1	Not Detected	7.9	Not Detected
trans-1,3-Dichloropropene	1.0	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Tetrachloroethene	1.0	Not Detected	7.1	Not Detected
2-Hexanone	4.2	Not Detected	17	Not Detected

Client Sample ID: VMP-15-29-020425

Lab ID#: 2502059A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021308	Date of Collection:	2/4/25 1:44:00 PM
Dil. Factor:	2.09	Date of Analysis:	2/13/25 01:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.9	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.0	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	Not Detected	4.5	Not Detected
m,p-Xylene	2.1	Not Detected	9.1	Not Detected
o-Xylene	1.0	Not Detected	4.5	Not Detected
Styrene	1.0	Not Detected	4.4	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.1	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.2	Not Detected
Propylbenzene	1.0	Not Detected	5.1	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.1	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.1	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.1	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	44	Not Detected
Butane	4.2	Not Detected	9.9	Not Detected
Isopentane	4.2	Not Detected	12	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	83	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06A

EPA METHOD TO-15 GC/MS

File Name:	14021706a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/17/25 10:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	20	Not Detected	78	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	25	Not Detected	47	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	25	Not Detected	61	Not Detected
Carbon Disulfide	20	Not Detected	62	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	20	Not Detected	69	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	20	Not Detected	82	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06A

EPA METHOD TO-15 GC/MS

File Name:	14021706a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/17/25 10:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	0.57 J	24	2.8 J
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	0.78 J	30	4.7 J
alpha-Chlorotoluene	5.0	0.92 J	26	4.7 J
1,2-Dichlorobenzene	5.0	1.0 J	30	6.1 J
1,2,4-Trichlorobenzene	20	7.4 J	150	55 J
Hexachlorobutadiene	20	Not Detected	210	Not Detected
Butane	20	Not Detected	48	Not Detected
Isopentane	20	Not Detected	59	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021206a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/12/25 11:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021206a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 11:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
Isopentane	2.0	Not Detected	5.9	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	78	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021306a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/13/25 11:33 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021306a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/13/25 11:33 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
Isopentane	2.0	Not Detected	5.9	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	82	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06D

EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>60021706a</b>	<b>Date of Collection:</b>	<b>NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b>	<b>2/17/25 11:53 AM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2502059A-06D

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021706a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 11:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
Isopentane	2.0	Not Detected	5.9	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	79	70-130

Client Sample ID: CCV

Lab ID#: 2502059A-07A

EPA METHOD TO-15 GC/MS

File Name:	14021703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 09:01 AM

Compound	%Recovery
Freon 12	110
Freon 114	113
Chloromethane	106
Vinyl Chloride	101
1,3-Butadiene	88
Bromomethane	100
Chloroethane	101
Freon 11	114
Ethanol	124
Freon 113	112
1,1-Dichloroethene	106
Acetone	108
2-Propanol	109
Carbon Disulfide	102
3-Chloropropene	106
Methylene Chloride	111
Methyl tert-butyl ether	103
trans-1,2-Dichloroethene	102
Hexane	106
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	103
Tetrahydrofuran	103
Chloroform	105
1,1,1-Trichloroethane	104
Cyclohexane	105
Carbon Tetrachloride	107
2,2,4-Trimethylpentane	106
Benzene	102
1,2-Dichloroethane	104
Heptane	100
Trichloroethene	104
1,2-Dichloropropane	101
1,4-Dioxane	111
Bromodichloromethane	99
cis-1,3-Dichloropropene	100
4-Methyl-2-pentanone	97
Toluene	102
trans-1,3-Dichloropropene	101
1,1,2-Trichloroethane	102
Tetrachloroethene	108
2-Hexanone	101

Client Sample ID: CCV

Lab ID#: 2502059A-07A

EPA METHOD TO-15 GC/MS

File Name:	14021703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 09:01 AM

Compound	%Recovery
Dibromochloromethane	102
1,2-Dibromoethane (EDB)	103
Chlorobenzene	104
Ethyl Benzene	101
m,p-Xylene	103
o-Xylene	103
Styrene	101
Bromoform	96
Cumene	97
1,1,2,2-Tetrachloroethane	98
Propylbenzene	100
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	99
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	100
alpha-Chlorotoluene	94
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	110
Hexachlorobutadiene	110
Butane	92
Isopentane	111

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: CCV

Lab ID#: 2502059A-07B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 09:54 AM

Compound	%Recovery
Freon 12	99
Freon 114	89
Chloromethane	130
Vinyl Chloride	109
1,3-Butadiene	104
Bromomethane	103
Chloroethane	111
Freon 11	98
Ethanol	74
Freon 113	90
1,1-Dichloroethene	104
Acetone	95
2-Propanol	77
Carbon Disulfide	107
3-Chloropropene	95
Methylene Chloride	110
Methyl tert-butyl ether	90
trans-1,2-Dichloroethene	110
Hexane	103
1,1-Dichloroethane	117
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	102
Tetrahydrofuran	116
Chloroform	102
1,1,1-Trichloroethane	94
Cyclohexane	104
Carbon Tetrachloride	92
2,2,4-Trimethylpentane	107
Benzene	117
1,2-Dichloroethane	99
Heptane	107
Trichloroethene	105
1,2-Dichloropropane	108
1,4-Dioxane	98
Bromodichloromethane	109
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	98
Toluene	110
trans-1,3-Dichloropropene	101
1,1,2-Trichloroethane	118
Tetrachloroethene	98
2-Hexanone	105

Client Sample ID: CCV

Lab ID#: 2502059A-07B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 09:54 AM

Compound	%Recovery
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	109
Chlorobenzene	112
Ethyl Benzene	115
m,p-Xylene	118
o-Xylene	107
Styrene	121
Bromoform	92
Cumene	110
1,1,2,2-Tetrachloroethane	119
Propylbenzene	112
4-Ethyltoluene	122
1,3,5-Trimethylbenzene	118
1,2,4-Trimethylbenzene	120
1,3-Dichlorobenzene	110
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	106
1,2,4-Trichlorobenzene	82
Hexachlorobutadiene	92
Butane	111
Isopentane	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: CCV

Lab ID#: 2502059A-07C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/25 10:09 AM

Compound	%Recovery
Freon 12	98
Freon 114	90
Chloromethane	130
Vinyl Chloride	111
1,3-Butadiene	102
Bromomethane	102
Chloroethane	111
Freon 11	98
Ethanol	75
Freon 113	90
1,1-Dichloroethene	104
Acetone	96
2-Propanol	74
Carbon Disulfide	109
3-Chloropropene	97
Methylene Chloride	109
Methyl tert-butyl ether	90
trans-1,2-Dichloroethene	111
Hexane	102
1,1-Dichloroethane	116
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	102
Tetrahydrofuran	108
Chloroform	102
1,1,1-Trichloroethane	94
Cyclohexane	103
Carbon Tetrachloride	93
2,2,4-Trimethylpentane	105
Benzene	117
1,2-Dichloroethane	100
Heptane	106
Trichloroethene	105
1,2-Dichloropropane	108
1,4-Dioxane	100
Bromodichloromethane	104
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	96
Toluene	110
trans-1,3-Dichloropropene	97
1,1,2-Trichloroethane	115
Tetrachloroethene	94
2-Hexanone	98

Client Sample ID: CCV

Lab ID#: 2502059A-07C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/25 10:09 AM

Compound	%Recovery
Dibromochloromethane	104
1,2-Dibromoethane (EDB)	107
Chlorobenzene	110
Ethyl Benzene	112
m,p-Xylene	114
o-Xylene	102
Styrene	118
Bromoform	89
Cumene	107
1,1,2,2-Tetrachloroethane	115
Propylbenzene	109
4-Ethyltoluene	120
1,3,5-Trimethylbenzene	112
1,2,4-Trimethylbenzene	115
1,3-Dichlorobenzene	108
1,4-Dichlorobenzene	103
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	73
Hexachlorobutadiene	89
Butane	112
Isopentane	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: CCV

Lab ID#: 2502059A-07D

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 10:29 AM

Compound	%Recovery
Freon 12	98
Freon 114	92
Chloromethane	137 Q
Vinyl Chloride	116
1,3-Butadiene	110
Bromomethane	104
Chloroethane	119
Freon 11	95
Ethanol	77
Freon 113	90
1,1-Dichloroethene	106
Acetone	100
2-Propanol	78
Carbon Disulfide	112
3-Chloropropene	99
Methylene Chloride	114
Methyl tert-butyl ether	92
trans-1,2-Dichloroethene	109
Hexane	105
1,1-Dichloroethane	116
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	102
Tetrahydrofuran	115
Chloroform	103
1,1,1-Trichloroethane	94
Cyclohexane	104
Carbon Tetrachloride	91
2,2,4-Trimethylpentane	108
Benzene	116
1,2-Dichloroethane	100
Heptane	108
Trichloroethene	104
1,2-Dichloropropane	113
1,4-Dioxane	98
Bromodichloromethane	104
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	98
Toluene	110
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	113
Tetrachloroethene	94
2-Hexanone	102

Client Sample ID: CCV

Lab ID#: 2502059A-07D

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 10:29 AM

Compound	%Recovery
Dibromochloromethane	101
1,2-Dibromoethane (EDB)	103
Chlorobenzene	107
Ethyl Benzene	110
m,p-Xylene	113
o-Xylene	101
Styrene	115
Bromoform	89
Cumene	104
1,1,2,2-Tetrachloroethane	116
Propylbenzene	108
4-Ethyltoluene	116
1,3,5-Trimethylbenzene	112
1,2,4-Trimethylbenzene	113
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	102
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	103
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	89
Butane	113
Isopentane	116

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	89	70-130

Client Sample ID: LCS

Lab ID#: 2502059A-08A

EPA METHOD TO-15 GC/MS

File Name:	14021704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 09:25 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	104	70-130
Chloromethane	99	70-130
Vinyl Chloride	92	70-130
1,3-Butadiene	84	70-130
Bromomethane	94	70-130
Chloroethane	91	70-130
Freon 11	106	70-130
Ethanol	124	70-130
Freon 113	101	70-130
1,1-Dichloroethene	97	70-130
Acetone	100	70-130
2-Propanol	113	70-130
Carbon Disulfide	93	70-130
3-Chloropropene	98	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	94	70-130
Hexane	95	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
cis-1,2-Dichloroethene	101	70-130
Tetrahydrofuran	97	70-130
Chloroform	93	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	98	70-130
2,2,4-Trimethylpentane	99	70-130
Benzene	102	70-130
1,2-Dichloroethane	100	70-130
Heptane	95	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	97	70-130
1,4-Dioxane	102	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	97	70-130
4-Methyl-2-pentanone	99	70-130
Toluene	97	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	102	70-130
2-Hexanone	96	70-130

Client Sample ID: LCS

Lab ID#: 2502059A-08A

EPA METHOD TO-15 GC/MS

File Name:	14021704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 09:25 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	99	70-130
o-Xylene	98	70-130
Styrene	97	70-130
Bromoform	92	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	96	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	98	70-130
alpha-Chlorotoluene	89	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	122	70-130
Hexachlorobutadiene	119	70-130
Butane	87	70-130
Isopentane	96	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08AA

EPA METHOD TO-15 GC/MS

File Name:	14021705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 10:08 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	102	70-130
Chloromethane	99	70-130
Vinyl Chloride	93	70-130
1,3-Butadiene	87	70-130
Bromomethane	96	70-130
Chloroethane	94	70-130
Freon 11	110	70-130
Ethanol	123	70-130
Freon 113	102	70-130
1,1-Dichloroethene	97	70-130
Acetone	98	70-130
2-Propanol	113	70-130
Carbon Disulfide	98	70-130
3-Chloropropene	95	70-130
Methylene Chloride	103	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	97	70-130
1,1-Dichloroethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	97	70-130
cis-1,2-Dichloroethene	100	70-130
Tetrahydrofuran	95	70-130
Chloroform	94	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	99	70-130
Benzene	100	70-130
1,2-Dichloroethane	99	70-130
Heptane	93	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	104	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	97	70-130
1,1,2-Trichloroethane	98	70-130
Tetrachloroethene	101	70-130
2-Hexanone	96	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08AA

EPA METHOD TO-15 GC/MS

File Name:	14021705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 10:08 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	96	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	101	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	99	70-130
o-Xylene	95	70-130
Styrene	97	70-130
Bromoform	92	70-130
Cumene	92	70-130
1,1,2,2-Tetrachloroethane	94	70-130
Propylbenzene	92	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	95	70-130
1,4-Dichlorobenzene	97	70-130
alpha-Chlorotoluene	92	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	124	70-130
Hexachlorobutadiene	125	70-130
Butane	90	70-130
Isopentane	97	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 2502059A-08B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 10:22 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	91	70-130
Chloromethane	134 Q	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	110	70-130
Bromomethane	105	70-130
Chloroethane	113	70-130
Freon 11	97	70-130
Ethanol	103	70-130
Freon 113	87	70-130
1,1-Dichloroethene	104	70-130
Acetone	98	70-130
2-Propanol	114	70-130
Carbon Disulfide	108	70-130
3-Chloropropene	93	70-130
Methylene Chloride	112	70-130
Methyl tert-butyl ether	93	70-130
trans-1,2-Dichloroethene	110	70-130
Hexane	106	70-130
1,1-Dichloroethane	118	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	102	70-130
Tetrahydrofuran	122	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	95	70-130
Cyclohexane	107	70-130
Carbon Tetrachloride	89	70-130
2,2,4-Trimethylpentane	109	70-130
Benzene	114	70-130
1,2-Dichloroethane	97	70-130
Heptane	104	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	107	70-130
1,4-Dioxane	114	70-130
Bromodichloromethane	105	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	99	70-130
1,1,2-Trichloroethane	117	70-130
Tetrachloroethene	95	70-130
2-Hexanone	111	70-130

Client Sample ID: LCS

Lab ID#: 2502059A-08B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 10:22 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	102	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	110	70-130
Ethyl Benzene	116	70-130
m,p-Xylene	117	70-130
o-Xylene	106	70-130
Styrene	119	70-130
Bromoform	89	70-130
Cumene	106	70-130
1,1,2,2-Tetrachloroethane	116	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	118	70-130
1,3,5-Trimethylbenzene	115	70-130
1,2,4-Trimethylbenzene	118	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	102	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	118	70-130
Hexachlorobutadiene	111	70-130
Butane	115	70-130
Isopentane	120	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	86	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 10:49 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	91	70-130
Chloromethane	135 Q	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	110	70-130
Bromomethane	106	70-130
Chloroethane	115	70-130
Freon 11	97	70-130
Ethanol	94	70-130
Freon 113	87	70-130
1,1-Dichloroethene	103	70-130
Acetone	102	70-130
2-Propanol	100	70-130
Carbon Disulfide	108	70-130
3-Chloropropene	96	70-130
Methylene Chloride	111	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	109	70-130
Hexane	109	70-130
1,1-Dichloroethane	119	70-130
2-Butanone (Methyl Ethyl Ketone)	108	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	122	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	108	70-130
Carbon Tetrachloride	89	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	116	70-130
1,2-Dichloroethane	96	70-130
Heptane	102	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	106	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	97	70-130
4-Methyl-2-pentanone	101	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	114	70-130
Tetrachloroethene	93	70-130
2-Hexanone	106	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/25 10:49 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	103	70-130
Chlorobenzene	107	70-130
Ethyl Benzene	113	70-130
m,p-Xylene	113	70-130
o-Xylene	105	70-130
Styrene	117	70-130
Bromoform	87	70-130
Cumene	105	70-130
1,1,2,2-Tetrachloroethane	113	70-130
Propylbenzene	104	70-130
4-Ethyltoluene	114	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	99	70-130
1,2-Dichlorobenzene	101	70-130
1,2,4-Trichlorobenzene	117	70-130
Hexachlorobutadiene	109	70-130
Butane	118	70-130
Isopentane	123	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2502059A-08C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/25 10:36 AM

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	91	70-130
Chloromethane	136 Q	70-130
Vinyl Chloride	113	70-130
1,3-Butadiene	109	70-130
Bromomethane	106	70-130
Chloroethane	112	70-130
Freon 11	98	70-130
Ethanol	102	70-130
Freon 113	89	70-130
1,1-Dichloroethene	104	70-130
Acetone	100	70-130
2-Propanol	112	70-130
Carbon Disulfide	109	70-130
3-Chloropropene	92	70-130
Methylene Chloride	112	70-130
Methyl tert-butyl ether	92	70-130
trans-1,2-Dichloroethene	109	70-130
Hexane	106	70-130
1,1-Dichloroethane	117	70-130
2-Butanone (Methyl Ethyl Ketone)	110	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	118	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	90	70-130
2,2,4-Trimethylpentane	109	70-130
Benzene	118	70-130
1,2-Dichloroethane	98	70-130
Heptane	106	70-130
Trichloroethene	105	70-130
1,2-Dichloropropane	109	70-130
1,4-Dioxane	117	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	107	70-130
trans-1,3-Dichloropropene	100	70-130
1,1,2-Trichloroethane	117	70-130
Tetrachloroethene	94	70-130
2-Hexanone	107	70-130

Client Sample ID: LCS

Lab ID#: 2502059A-08C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/25 10:36 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	103	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	109	70-130
Ethyl Benzene	114	70-130
m,p-Xylene	115	70-130
o-Xylene	105	70-130
Styrene	120	70-130
Bromoform	89	70-130
Cumene	107	70-130
1,1,2,2-Tetrachloroethane	117	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	118	70-130
1,3,5-Trimethylbenzene	115	70-130
1,2,4-Trimethylbenzene	117	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	102	70-130
alpha-Chlorotoluene	101	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	116	70-130
Hexachlorobutadiene	111	70-130
Butane	114	70-130
Isopentane	118	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/25 11:03 AM

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	90	70-130
Chloromethane	136 Q	70-130
Vinyl Chloride	113	70-130
1,3-Butadiene	110	70-130
Bromomethane	106	70-130
Chloroethane	112	70-130
Freon 11	98	70-130
Ethanol	96	70-130
Freon 113	87	70-130
1,1-Dichloroethene	103	70-130
Acetone	101	70-130
2-Propanol	105	70-130
Carbon Disulfide	109	70-130
3-Chloropropene	96	70-130
Methylene Chloride	113	70-130
Methyl tert-butyl ether	93	70-130
trans-1,2-Dichloroethene	110	70-130
Hexane	107	70-130
1,1-Dichloroethane	112	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	124	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	88	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	116	70-130
1,2-Dichloroethane	96	70-130
Heptane	105	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	107	70-130
1,4-Dioxane	109	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	99	70-130
Toluene	107	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	118	70-130
Tetrachloroethene	95	70-130
2-Hexanone	110	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/25 11:03 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	110	70-130
Chlorobenzene	113	70-130
Ethyl Benzene	118	70-130
m,p-Xylene	117	70-130
o-Xylene	108	70-130
Styrene	122	70-130
Bromoform	88	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	118	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	118	70-130
1,3,5-Trimethylbenzene	116	70-130
1,2,4-Trimethylbenzene	119	70-130
1,3-Dichlorobenzene	108	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	103	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	112	70-130
Butane	116	70-130
Isopentane	121	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	83	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2502059A-08D

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 10:56 AM

Compound	%Recovery	Method Limits
Freon 12	101	70-130
Freon 114	92	70-130
Chloromethane	137 Q	70-130
Vinyl Chloride	117	70-130
1,3-Butadiene	112	70-130
Bromomethane	108	70-130
Chloroethane	120	70-130
Freon 11	96	70-130
Ethanol	104	70-130
Freon 113	87	70-130
1,1-Dichloroethene	102	70-130
Acetone	101	70-130
2-Propanol	114	70-130
Carbon Disulfide	110	70-130
3-Chloropropene	94	70-130
Methylene Chloride	112	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	109	70-130
Hexane	105	70-130
1,1-Dichloroethane	120	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	123	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	93	70-130
Cyclohexane	106	70-130
Carbon Tetrachloride	87	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	118	70-130
1,2-Dichloroethane	100	70-130
Heptane	105	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	112	70-130
1,4-Dioxane	113	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	106	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	115	70-130
Tetrachloroethene	96	70-130
2-Hexanone	109	70-130

Client Sample ID: LCS

Lab ID#: 2502059A-08D

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 10:56 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	101	70-130
1,2-Dibromoethane (EDB)	105	70-130
Chlorobenzene	108	70-130
Ethyl Benzene	112	70-130
m,p-Xylene	112	70-130
o-Xylene	103	70-130
Styrene	118	70-130
Bromoform	89	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	117	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	117	70-130
1,3,5-Trimethylbenzene	113	70-130
1,2,4-Trimethylbenzene	116	70-130
1,3-Dichlorobenzene	107	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	101	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	111	70-130
Butane	117	70-130
Isopentane	122	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08DD

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 11:23 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	93	70-130
Chloromethane	142 Q	70-130
Vinyl Chloride	122	70-130
1,3-Butadiene	118	70-130
Bromomethane	111	70-130
Chloroethane	125	70-130
Freon 11	98	70-130
Ethanol	102	70-130
Freon 113	90	70-130
1,1-Dichloroethene	104	70-130
Acetone	108	70-130
2-Propanol	114	70-130
Carbon Disulfide	113	70-130
3-Chloropropene	97	70-130
Methylene Chloride	117	70-130
Methyl tert-butyl ether	98	70-130
trans-1,2-Dichloroethene	110	70-130
Hexane	111	70-130
1,1-Dichloroethane	124	70-130
2-Butanone (Methyl Ethyl Ketone)	115	70-130
cis-1,2-Dichloroethene	105	70-130
Tetrahydrofuran	129	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	110	70-130
Carbon Tetrachloride	90	70-130
2,2,4-Trimethylpentane	116	70-130
Benzene	116	70-130
1,2-Dichloroethane	98	70-130
Heptane	105	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	111	70-130
1,4-Dioxane	110	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	101	70-130
4-Methyl-2-pentanone	106	70-130
Toluene	105	70-130
trans-1,3-Dichloropropene	102	70-130
1,1,2-Trichloroethane	116	70-130
Tetrachloroethene	95	70-130
2-Hexanone	115	70-130

Client Sample ID: LCSD

Lab ID#: 2502059A-08DD

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60021705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/17/25 11:23 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	101	70-130
1,2-Dibromoethane (EDB)	106	70-130
Chlorobenzene	110	70-130
Ethyl Benzene	114	70-130
m,p-Xylene	115	70-130
o-Xylene	107	70-130
Styrene	119	70-130
Bromoform	88	70-130
Cumene	106	70-130
1,1,2,2-Tetrachloroethane	116	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	118	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	118	70-130
1,3-Dichlorobenzene	107	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	100	70-130
1,2-Dichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	120	70-130
Hexachlorobutadiene	112	70-130
Butane	122	70-130
Isopentane	129	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	89	70-130

**Method : TO-15 + Butane & Isopentane**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

**Method : TO-15 + Butane & Isopentane**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0
106-97-8	Butane	2.0
78-78-4	Isopentane	2.0

	<b>Surrogate</b>	<b>Method Limits</b>
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

**Analytical Report**

2/18/2025

Mr. Samuel Fisher

AECOM

411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor

Project #: 60738191-4.1.2

Workorder #: 2502059B

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 2/5/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

**WORK ORDER #: 2502059B**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	61697061
<b>FAX:</b>		<b>PROJECT #</b>	60738191-4.1.2 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	02/05/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	02/18/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-55-20-020425	Modified ASTM D-1946	6.1 "Hg	9.9 psi
02A	VMP-15-5-020425	Modified ASTM D-1946	5.1 "Hg	9.8 psi
03A	VMP-15-21.5-020425	Modified ASTM D-1946	5.1 "Hg	10 psi
04A	VMP-15-25.5-020425	Modified ASTM D-1946	5.9 "Hg	10.1 psi
05A	VMP-15-29-020425	Modified ASTM D-1946	5.9 "Hg	10 psi
06A	Lab Blank	Modified ASTM D-1946	NA	NA
06B	Lab Blank	Modified ASTM D-1946	NA	NA
07A	CCV	Modified ASTM D-1946	NA	NA
08A	LCS	Modified ASTM D-1946	NA	NA
08AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 02/18/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000

**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**AECOM**  
**Workorder# 2502059B**

Five 1 Liter Summa Canister (100% Certified) samples were received on February 05, 2025. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-55-20-020425**

**Lab ID#: 2502059B-01A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.21	3.1
Nitrogen	0.21	77
Methane	0.00021	2.7
Carbon Dioxide	0.021	17
Ethane	0.0021	0.0025

**Client Sample ID: VMP-15-5-020425**

**Lab ID#: 2502059B-02A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.20	18
Nitrogen	0.20	79
Carbon Dioxide	0.020	3.4

**Client Sample ID: VMP-15-21.5-020425**

**Lab ID#: 2502059B-03A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.20	5.5
Nitrogen	0.20	82
Carbon Dioxide	0.020	12

**Client Sample ID: VMP-15-25.5-020425**

**Lab ID#: 2502059B-04A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.21	7.3
Nitrogen	0.21	81
Carbon Dioxide	0.021	12

**Client Sample ID: VMP-15-29-020425**

**Lab ID#: 2502059B-05A**

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-15-29-020425**

**Lab ID#: 2502059B-05A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.21	7.3
Nitrogen	0.21	81
Carbon Dioxide	0.021	12



Air Toxics

Client Sample ID: VMP-55-20-020425

Lab ID#: 2502059B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021010	Date of Collection:	2/4/25 11:08:00 AM
Dil. Factor:	2.10	Date of Analysis:	2/10/25 05:59 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	3.1
Nitrogen	0.21	77
Carbon Monoxide	0.021	Not Detected
Methane	0.00021	2.7
Carbon Dioxide	0.021	17
Ethane	0.0021	0.0025
Ethene	0.0021	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-5-020425

Lab ID#: 2502059B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021011	Date of Collection:	2/4/25 12:28:00 PM
Dil. Factor:	2.01	Date of Analysis:	2/10/25 06:23 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.20	18
Nitrogen	0.20	79
Carbon Monoxide	0.020	Not Detected
Methane	0.00020	Not Detected
Carbon Dioxide	0.020	3.4
Ethane	0.0020	Not Detected
Ethene	0.0020	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-21.5-020425

Lab ID#: 2502059B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021012	Date of Collection:	2/4/25 12:55:00 PM
Dil. Factor:	2.02	Date of Analysis:	2/10/25 06:48 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.20	5.5
Nitrogen	0.20	82
Carbon Monoxide	0.020	Not Detected
Methane	0.00020	Not Detected
Carbon Dioxide	0.020	12
Ethane	0.0020	Not Detected
Ethene	0.0020	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-25.5-020425

Lab ID#: 2502059B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021013	Date of Collection:	2/4/25 1:20:00 PM
Dil. Factor:	2.10	Date of Analysis:	2/10/25 07:10 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	7.3
Nitrogen	0.21	81
Carbon Monoxide	0.021	Not Detected
Methane	0.00021	Not Detected
Carbon Dioxide	0.021	12
Ethane	0.0021	Not Detected
Ethene	0.0021	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-29-020425

Lab ID#: 2502059B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021014	Date of Collection:	2/4/25 1:44:00 PM
Dil. Factor:	2.09	Date of Analysis:	2/10/25 07:57 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	7.3
Nitrogen	0.21	81
Carbon Monoxide	0.021	Not Detected
Methane	0.00021	Not Detected
Carbon Dioxide	0.021	12
Ethane	0.0021	Not Detected
Ethene	0.0021	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: Lab Blank

Lab ID#: 2502059B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/10/25 02:57 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2502059B-06B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021004c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/10/25 03:22 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2502059B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021001	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/10/25 02:08 PM

Compound	%Recovery
Oxygen	99
Nitrogen	94
Carbon Monoxide	101
Methane	97
Carbon Dioxide	102
-----	
Ethane	97
Ethene	97
Helium	98

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 2502059B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/10/25 02:32 PM

Compound	%Recovery	Method Limits
Oxygen	104	85-115
Nitrogen	93	85-115
Carbon Monoxide	99	85-115
Methane	99	85-115
Carbon Dioxide	106	85-115
Ethane	100	85-115
Ethene	98	85-115
Helium	102	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2502059B-08AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10021026	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/25 12:24 PM

Compound	%Recovery	Method Limits
Oxygen	104	85-115
Nitrogen	93	85-115
Carbon Monoxide	100	85-115
Methane	97	85-115
Carbon Dioxide	106	85-115
Ethane	98	85-115
Ethene	97	85-115
Helium	102	85-115

Container Type: NA - Not Applicable

**Method : Modified ASTM D-1946 + He**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (%)</b>
7782-44-7	Oxygen	0.10
7727-37-9	Nitrogen	0.10
630-08-0	Carbon Monoxide	0.010
74-82-8	Methane	0.00010
124-38-9	Carbon Dioxide	0.010
74-84-0	Ethane	0.0010
74-85-1	Ethene	0.0010
<b>7440-59-7</b>	<b>Helium</b>	<b>0.050</b>

**Analytical Report**

5/9/2025  
Mr. Samuel Fisher  
AECOM  
411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor  
Project #: 607378191-4.2.2  
Workorder #: 2505089A

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 5/6/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 2505089A**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1697061
<b>FAX:</b>		<b>PROJECT #</b>	607378191-4.2.2 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	05/06/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	05/09/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-15-5-042925	TO-15	7.6 "Hg	9.9 psi
02A	VMP-15-21-042925	TO-15	7.8 "Hg	10.1 psi
03A	VMP-15-25-042925	TO-15	8 "Hg	10.1 psi
04A	VMP-55-20-042925	TO-15	7.1 "Hg	9.9 psi
05A	Lab Blank	TO-15	NA	NA
05B	Lab Blank	TO-15	NA	NA
06A	CCV	TO-15	NA	NA
06B	CCV	TO-15	NA	NA
07A	LCS	TO-15	NA	NA
07AA	LCSD	TO-15	NA	NA
07B	LCS	TO-15	NA	NA
07BB	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 05/09/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**AECOM**  
**Workorder# 2505089A**

Four 1 Liter Summa Canister (100% Certified) samples were received on May 06, 2025. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Dilution was performed on sample VMP-55-20-042925 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VMP-15-5-042925**

**Lab ID#: 2505089A-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.1	0.37 J	5.5	1.8 J
Freon 11	1.1	0.13 J	6.3	0.76 J
Ethanol	11	8.6 J	21	16 J
Acetone	11	6.4 J	27	15 J
2-Propanol	4.5	4.1 J	11	10 J
Methylene Chloride	11	0.68 J	39	2.4 J
Benzene	1.1	0.26 J	3.6	0.82 J

**Client Sample ID: VMP-15-21-042925**

**Lab ID#: 2505089A-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.1	0.34 J	5.6	1.7 J
Ethanol	11	65	21	120
2-Propanol	4.6	13	11	33
Methylene Chloride	11	0.70 J	40	2.4 J
Chloroform	1.1	0.35 J	5.6	1.7 J
Butane	4.6	3.7 J	11	8.9 J
Isopentane	4.6	1.3 J	13	3.8 J

**Client Sample ID: VMP-15-25-042925**

**Lab ID#: 2505089A-03A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.2	0.35 J	5.7	1.8 J
Ethanol	12	31	22	59
Acetone	12	6.4 J	27	15 J
2-Propanol	4.6	19	11	48
Methylene Chloride	12	0.78 J	40	2.7 J
2-Butanone (Methyl Ethyl Ketone)	4.6	0.87 J	14	2.6 J
Chloroform	1.2	6.3	5.6	31
Butane	4.6	5.7	11	14
Isopentane	4.6	0.88 J	14	2.6 J



### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VMP-15-25-042925

Lab ID#: 2505089A-03A

Client Sample ID: VMP-55-20-042925

Lab ID#: 2505089A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	2700	7700	9600	27000
Cyclohexane	2700	28000	9400	97000
2,2,4-Trimethylpentane	2700	50000	13000	240000
Heptane	2700	3200	11000	13000
Toluene	2700	380 J	10000	1400 J
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Butane	11000	19000	26000	44000
Isopentane	11000	320000	32000	940000



Air Toxics

Client Sample ID: VMP-15-5-042925

Lab ID#: 2505089A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050713	Date of Collection:	4/29/25 9:20:00 AM
Dil. Factor:	2.24	Date of Analysis:	5/7/25 03:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	0.37 J	5.5	1.8 J
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	0.13 J	6.3	0.76 J
Ethanol	11	8.6 J	21	16 J
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	6.4 J	27	15 J
2-Propanol	4.5	4.1 J	11	10 J
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	0.68 J	39	2.4 J
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	0.26 J	3.6	0.82 J
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	2.2	Not Detected	8.4	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected

Client Sample ID: VMP-15-5-042925

Lab ID#: 2505089A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050713	Date of Collection:	4/29/25 9:20:00 AM
Dil. Factor:	2.24	Date of Analysis:	5/7/25 03:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	2.2	Not Detected	9.7	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected
Butane	4.5	Not Detected	11	Not Detected
Isopentane	4.5	Not Detected	13	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	87	70-130



Air Toxics

Client Sample ID: VMP-15-21-042925

Lab ID#: 2505089A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050711	Date of Collection:	4/29/25 9:41:00 AM
Dil. Factor:	2.28	Date of Analysis:	5/7/25 02:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	0.34 J	5.6	1.7 J
Freon 114	1.1	Not Detected	8.0	Not Detected
Chloromethane	11	Not Detected	24	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	11	65	21	120
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	Not Detected	27	Not Detected
2-Propanol	4.6	13	11	33
Carbon Disulfide	4.6	Not Detected	14	Not Detected
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	11	0.70 J	40	2.4 J
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	0.35 J	5.6	1.7 J
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.7	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	2.3	Not Detected	8.6	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected

Client Sample ID: VMP-15-21-042925

Lab ID#: 2505089A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050711	Date of Collection:	4/29/25 9:41:00 AM
Dil. Factor:	2.28	Date of Analysis:	5/7/25 02:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.7	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	2.3	Not Detected	9.9	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected
Butane	4.6	3.7 J	11	8.9 J
Isopentane	4.6	1.3 J	13	3.8 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	85	70-130



Air Toxics

Client Sample ID: VMP-15-25-042925

Lab ID#: 2505089A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050712	Date of Collection:	4/29/25 10:04:00 AM
Dil. Factor:	2.30	Date of Analysis:	5/7/25 02:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	0.35 J	5.7	1.8 J
Freon 114	1.2	Not Detected	8.0	Not Detected
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	Not Detected	2.9	Not Detected
1,3-Butadiene	1.2	Not Detected	2.5	Not Detected
Bromomethane	12	Not Detected	45	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.2	Not Detected	6.5	Not Detected
Ethanol	12	31	22	59
Freon 113	1.2	Not Detected	8.8	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	12	6.4 J	27	15 J
2-Propanol	4.6	19	11	48
Carbon Disulfide	4.6	Not Detected	14	Not Detected
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	12	0.78 J	40	2.7 J
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	0.87 J	14	2.6 J
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	6.3	5.6	31
1,1,1-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Cyclohexane	1.2	Not Detected	4.0	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.4	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.6	Not Detected
Heptane	1.2	Not Detected	4.7	Not Detected
Trichloroethene	1.2	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.2	Not Detected	7.7	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.7	Not Detected
Toluene	2.3	Not Detected	8.7	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Tetrachloroethene	1.2	Not Detected	7.8	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected



Air Toxics

Client Sample ID: VMP-15-25-042925

Lab ID#: 2505089A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050712	Date of Collection:	4/29/25 10:04:00 AM
Dil. Factor:	2.30	Date of Analysis:	5/7/25 02:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	9.8	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	8.8	Not Detected
Chlorobenzene	1.2	Not Detected	5.3	Not Detected
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
m,p-Xylene	2.3	Not Detected	10	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected
Styrene	1.2	Not Detected	4.9	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	7.9	Not Detected
Propylbenzene	1.2	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	6.9	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	6.9	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	6.9	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected
Butane	4.6	5.7	11	14
Isopentane	4.6	0.88 J	14	2.6 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: VMP-55-20-042925

Lab ID#: 2505089A-04A

EPA METHOD TO-15 GC/MS

<b>File Name:</b>	<b>14050826</b>	<b>Date of Collection:</b>	<b>4/29/25 11:24:00 AM</b>
<b>Dil. Factor:</b>	<b>548</b>	<b>Date of Analysis:</b>	<b>5/8/25 07:21 PM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2700	Not Detected	14000	Not Detected
Freon 114	2700	Not Detected	19000	Not Detected
Chloromethane	11000	Not Detected	23000	Not Detected
Vinyl Chloride	2700	Not Detected	7000	Not Detected
1,3-Butadiene	2700	Not Detected	6100	Not Detected
Bromomethane	11000	Not Detected	42000	Not Detected
Chloroethane	11000	Not Detected	29000	Not Detected
Freon 11	2700	Not Detected	15000	Not Detected
Ethanol	14000	Not Detected	26000	Not Detected
Freon 113	2700	Not Detected	21000	Not Detected
1,1-Dichloroethene	2700	Not Detected	11000	Not Detected
Acetone	11000	Not Detected	26000	Not Detected
2-Propanol	14000	Not Detected	34000	Not Detected
Carbon Disulfide	11000	Not Detected	34000	Not Detected
3-Chloropropene	11000	Not Detected	34000	Not Detected
Methylene Chloride	11000	Not Detected	38000	Not Detected
Methyl tert-butyl ether	2700	Not Detected	9900	Not Detected
trans-1,2-Dichloroethene	2700	Not Detected	11000	Not Detected
Hexane	2700	7700	9600	27000
1,1-Dichloroethane	2700	Not Detected	11000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	11000	Not Detected	32000	Not Detected
cis-1,2-Dichloroethene	2700	Not Detected	11000	Not Detected
Tetrahydrofuran	2700	Not Detected	8100	Not Detected
Chloroform	2700	Not Detected	13000	Not Detected
1,1,1-Trichloroethane	2700	Not Detected	15000	Not Detected
Cyclohexane	2700	28000	9400	97000
Carbon Tetrachloride	2700	Not Detected	17000	Not Detected
2,2,4-Trimethylpentane	2700	50000	13000	240000
Benzene	2700	Not Detected	8800	Not Detected
1,2-Dichloroethane	2700	Not Detected	11000	Not Detected
Heptane	2700	3200	11000	13000
Trichloroethene	2700	Not Detected	15000	Not Detected
1,2-Dichloropropane	2700	Not Detected	13000	Not Detected
1,4-Dioxane	11000	Not Detected	39000	Not Detected
Bromodichloromethane	2700	Not Detected	18000	Not Detected
cis-1,3-Dichloropropene	2700	Not Detected	12000	Not Detected
4-Methyl-2-pentanone	11000	Not Detected	45000	Not Detected
Toluene	2700	380 J	10000	1400 J
trans-1,3-Dichloropropene	2700	Not Detected	12000	Not Detected
1,1,2-Trichloroethane	2700	Not Detected	15000	Not Detected
Tetrachloroethene	2700	Not Detected	18000	Not Detected
2-Hexanone	11000	Not Detected	45000	Not Detected



Air Toxics

Client Sample ID: VMP-55-20-042925

Lab ID#: 2505089A-04A

EPA METHOD TO-15 GC/MS

File Name:	14050826	Date of Collection:	4/29/25 11:24:00 AM
Dil. Factor:	548	Date of Analysis:	5/8/25 07:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	2700	Not Detected	23000	Not Detected
1,2-Dibromoethane (EDB)	2700	Not Detected	21000	Not Detected
Chlorobenzene	2700	Not Detected	13000	Not Detected
Ethyl Benzene	2700	Not Detected	12000	Not Detected
m,p-Xylene	2700	Not Detected	12000	Not Detected
o-Xylene	2700	Not Detected	12000	Not Detected
Styrene	2700	Not Detected	12000	Not Detected
Bromoform	2700	Not Detected	28000	Not Detected
Cumene	2700	Not Detected	13000	Not Detected
1,1,2,2-Tetrachloroethane	2700	Not Detected	19000	Not Detected
Propylbenzene	2700	Not Detected	13000	Not Detected
4-Ethyltoluene	2700	Not Detected	13000	Not Detected
1,3,5-Trimethylbenzene	2700	Not Detected	13000	Not Detected
1,2,4-Trimethylbenzene	2700	Not Detected	13000	Not Detected
1,3-Dichlorobenzene	2700	Not Detected	16000	Not Detected
1,4-Dichlorobenzene	2700	Not Detected	16000	Not Detected
alpha-Chlorotoluene	2700	Not Detected	14000	Not Detected
1,2-Dichlorobenzene	2700	Not Detected	16000	Not Detected
1,2,4-Trichlorobenzene	11000	Not Detected	81000	Not Detected
Hexachlorobutadiene	11000	Not Detected	120000	Not Detected
Butane	11000	19000	26000	44000
Isopentane	11000	320000	32000	940000

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2505089A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050707a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/7/25 11:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	0.31 J	17	1.1 J
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2505089A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050707a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 11:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
Isopentane	2.0	Not Detected	5.9	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	88	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2505089A-05B

EPA METHOD TO-15 GC/MS

File Name:	14050805c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/8/25 09:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	20	Not Detected	78	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	25	Not Detected	47	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	25	Not Detected	61	Not Detected
Carbon Disulfide	20	Not Detected	62	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	20	Not Detected	69	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	20	Not Detected	82	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2505089A-05B

EPA METHOD TO-15 GC/MS

File Name:	14050805c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 09:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	0.73 J	30	4.4 J
alpha-Chlorotoluene	5.0	0.75 J	26	3.9 J
1,2-Dichlorobenzene	5.0	0.78 J	30	4.7 J
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected
Butane	20	Not Detected	48	Not Detected
Isopentane	20	Not Detected	59	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: CCV

Lab ID#: 2505089A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 08:53 AM

Compound	%Recovery
Freon 12	88
Freon 114	96
Chloromethane	102
Vinyl Chloride	100
1,3-Butadiene	98
Bromomethane	85
Chloroethane	98
Freon 11	83
Ethanol	84
Freon 113	96
1,1-Dichloroethene	92
Acetone	90
2-Propanol	94
Carbon Disulfide	99
3-Chloropropene	98
Methylene Chloride	98
Methyl tert-butyl ether	89
trans-1,2-Dichloroethene	93
Hexane	104
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	90
Tetrahydrofuran	101
Chloroform	90
1,1,1-Trichloroethane	83
Cyclohexane	95
Carbon Tetrachloride	86
2,2,4-Trimethylpentane	101
Benzene	96
1,2-Dichloroethane	79
Heptane	98
Trichloroethene	87
1,2-Dichloropropane	96
1,4-Dioxane	95
Bromodichloromethane	89
cis-1,3-Dichloropropene	94
4-Methyl-2-pentanone	92
Toluene	90
trans-1,3-Dichloropropene	86
1,1,2-Trichloroethane	90
Tetrachloroethene	89
2-Hexanone	91

Client Sample ID: CCV

Lab ID#: 2505089A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 08:53 AM

Compound	%Recovery
Dibromochloromethane	94
1,2-Dibromoethane (EDB)	89
Chlorobenzene	89
Ethyl Benzene	91
m,p-Xylene	92
o-Xylene	88
Styrene	96
Bromoform	90
Cumene	90
1,1,2,2-Tetrachloroethane	96
Propylbenzene	95
4-Ethyltoluene	99
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	92
1,4-Dichlorobenzene	91
alpha-Chlorotoluene	88
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	81
Hexachlorobutadiene	83
Butane	102
Isopentane	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: CCV

Lab ID#: 2505089A-06B

EPA METHOD TO-15 GC/MS

File Name:	14050802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 08:34 AM

Compound	%Recovery
Freon 12	108
Freon 114	114
Chloromethane	101
Vinyl Chloride	95
1,3-Butadiene	84
Bromomethane	103
Chloroethane	97
Freon 11	111
Ethanol	109
Freon 113	110
1,1-Dichloroethene	103
Acetone	100
2-Propanol	90
Carbon Disulfide	100
3-Chloropropene	90
Methylene Chloride	107
Methyl tert-butyl ether	91
trans-1,2-Dichloroethene	98
Hexane	93
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	101
Tetrahydrofuran	90
Chloroform	105
1,1,1-Trichloroethane	103
Cyclohexane	96
Carbon Tetrachloride	109
2,2,4-Trimethylpentane	98
Benzene	101
1,2-Dichloroethane	110
Heptane	95
Trichloroethene	108
1,2-Dichloropropane	100
1,4-Dioxane	115
Bromodichloromethane	106
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	92
Toluene	102
trans-1,3-Dichloropropene	97
1,1,2-Trichloroethane	105
Tetrachloroethene	110
2-Hexanone	96

Client Sample ID: CCV

Lab ID#: 2505089A-06B

EPA METHOD TO-15 GC/MS

File Name:	14050802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 08:34 AM

Compound	%Recovery
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	107
Chlorobenzene	105
Ethyl Benzene	99
m,p-Xylene	101
o-Xylene	98
Styrene	102
Bromoform	104
Cumene	97
1,1,2,2-Tetrachloroethane	102
Propylbenzene	97
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	102
alpha-Chlorotoluene	88
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	95
Hexachlorobutadiene	88
Butane	90
Isopentane	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCS

Lab ID#: 2505089A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 09:31 AM

Compound	%Recovery	Method Limits
Freon 12	88	70-130
Freon 114	99	70-130
Chloromethane	103	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	101	70-130
Bromomethane	88	70-130
Chloroethane	97	70-130
Freon 11	85	70-130
Ethanol	89	70-130
Freon 113	94	70-130
1,1-Dichloroethene	88	70-130
Acetone	89	70-130
2-Propanol	106	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	102	70-130
Methylene Chloride	99	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	95	70-130
Hexane	106	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	108	70-130
Chloroform	91	70-130
1,1,1-Trichloroethane	85	70-130
Cyclohexane	96	70-130
Carbon Tetrachloride	86	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	101	70-130
1,2-Dichloroethane	80	70-130
Heptane	99	70-130
Trichloroethene	89	70-130
1,2-Dichloropropane	99	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	87	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	98	70-130
Toluene	91	70-130
trans-1,3-Dichloropropene	90	70-130
1,1,2-Trichloroethane	90	70-130
Tetrachloroethene	90	70-130
2-Hexanone	94	70-130

Client Sample ID: LCS

Lab ID#: 2505089A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 09:31 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	90	70-130
Chlorobenzene	91	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	92	70-130
o-Xylene	90	70-130
Styrene	98	70-130
Bromoform	91	70-130
Cumene	90	70-130
1,1,2,2-Tetrachloroethane	95	70-130
Propylbenzene	92	70-130
4-Ethyltoluene	94	70-130
1,3,5-Trimethylbenzene	89	70-130
1,2,4-Trimethylbenzene	92	70-130
1,3-Dichlorobenzene	89	70-130
1,4-Dichlorobenzene	85	70-130
alpha-Chlorotoluene	86	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	94	70-130
Hexachlorobutadiene	89	70-130
Butane	100	70-130
Isopentane	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: LCSD

Lab ID#: 2505089A-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 09:56 AM

Compound	%Recovery	Method Limits
Freon 12	93	70-130
Freon 114	100	70-130
Chloromethane	108	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	101	70-130
Bromomethane	90	70-130
Chloroethane	103	70-130
Freon 11	87	70-130
Ethanol	90	70-130
Freon 113	97	70-130
1,1-Dichloroethene	91	70-130
Acetone	92	70-130
2-Propanol	105	70-130
Carbon Disulfide	102	70-130
3-Chloropropene	108	70-130
Methylene Chloride	102	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	95	70-130
Hexane	110	70-130
1,1-Dichloroethane	109	70-130
2-Butanone (Methyl Ethyl Ketone)	106	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	114	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	87	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	90	70-130
2,2,4-Trimethylpentane	108	70-130
Benzene	103	70-130
1,2-Dichloroethane	83	70-130
Heptane	102	70-130
Trichloroethene	92	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	97	70-130
Bromodichloromethane	88	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	101	70-130
Toluene	93	70-130
trans-1,3-Dichloropropene	89	70-130
1,1,2-Trichloroethane	91	70-130
Tetrachloroethene	89	70-130
2-Hexanone	96	70-130

Client Sample ID: LCSD

Lab ID#: 2505089A-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	60050705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/7/25 09:56 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	94	70-130
1,2-Dibromoethane (EDB)	91	70-130
Chlorobenzene	92	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	93	70-130
o-Xylene	92	70-130
Styrene	100	70-130
Bromoform	93	70-130
Cumene	92	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	92	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	91	70-130
1,4-Dichlorobenzene	89	70-130
alpha-Chlorotoluene	89	70-130
1,2-Dichlorobenzene	87	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	91	70-130
Butane	104	70-130
Isopentane	112	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2505089A-07B

EPA METHOD TO-15 GC/MS

File Name:	14050803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 09:01 AM

Compound	%Recovery	Method Limits
Freon 12	116	70-130
Freon 114	119	70-130
Chloromethane	106	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	93	70-130
Bromomethane	110	70-130
Chloroethane	96	70-130
Freon 11	120	70-130
Ethanol	120	70-130
Freon 113	112	70-130
1,1-Dichloroethene	104	70-130
Acetone	107	70-130
2-Propanol	108	70-130
Carbon Disulfide	104	70-130
3-Chloropropene	100	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	106	70-130
Hexane	96	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	103	70-130
cis-1,2-Dichloroethene	111	70-130
Tetrahydrofuran	96	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	110	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	115	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	107	70-130
1,2-Dichloroethane	108	70-130
Heptane	90	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	106	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	103	70-130
Tetrachloroethene	107	70-130
2-Hexanone	95	70-130

Client Sample ID: LCS

Lab ID#: 2505089A-07B

EPA METHOD TO-15 GC/MS

File Name:	14050803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 09:01 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	105	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	97	70-130
o-Xylene	95	70-130
Styrene	100	70-130
Bromoform	99	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	94	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	100	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	83	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	106	70-130
Hexachlorobutadiene	99	70-130
Butane	94	70-130
Isopentane	96	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2505089A-07BB

EPA METHOD TO-15 GC/MS

File Name:	14050804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 09:27 AM

Compound	%Recovery	Method Limits
Freon 12	114	70-130
Freon 114	117	70-130
Chloromethane	106	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	93	70-130
Bromomethane	104	70-130
Chloroethane	99	70-130
Freon 11	118	70-130
Ethanol	115	70-130
Freon 113	112	70-130
1,1-Dichloroethene	103	70-130
Acetone	103	70-130
2-Propanol	107	70-130
Carbon Disulfide	104	70-130
3-Chloropropene	99	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	102	70-130
Hexane	96	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	107	70-130
Tetrahydrofuran	95	70-130
Chloroform	103	70-130
1,1,1-Trichloroethane	110	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	112	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	102	70-130
1,2-Dichloroethane	112	70-130
Heptane	90	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	99	70-130
1,4-Dioxane	106	70-130
Bromodichloromethane	100	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	93	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	107	70-130
Tetrachloroethene	108	70-130
2-Hexanone	95	70-130

Client Sample ID: LCSD

Lab ID#: 2505089A-07BB

EPA METHOD TO-15 GC/MS

File Name:	14050804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 09:27 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	104	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	99	70-130
o-Xylene	97	70-130
Styrene	98	70-130
Bromoform	100	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	100	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	84	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	105	70-130
Hexachlorobutadiene	99	70-130
Butane	96	70-130
Isopentane	100	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

**Method : TO-15 + Butane & Isopentane**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

**Method : TO-15 + Butane & Isopentane**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0
106-97-8	Butane	2.0
78-78-4	Isopentane	2.0

	<b>Surrogate</b>	<b>Method Limits</b>
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

**Analytical Report**

5/9/2025  
Mr. Samuel Fisher  
AECOM  
411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor  
Project #: 607378191-4.2.2  
Workorder #: 2505089B

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 5/6/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 2505089B**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1697061
<b>FAX:</b>		<b>PROJECT #</b>	607378191-4.2.2 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	05/06/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	05/09/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-15-5-042925	Modified ASTM D-1946	7.6 "Hg	9.9 psi
02A	VMP-15-21-042925	Modified ASTM D-1946	7.8 "Hg	10.1 psi
03A	VMP-15-25-042925	Modified ASTM D-1946	8 "Hg	10.1 psi
04A	VMP-55-20-042925	Modified ASTM D-1946	7.1 "Hg	9.9 psi
05A	Lab Blank	Modified ASTM D-1946	NA	NA
05B	Lab Blank	Modified ASTM D-1946	NA	NA
06A	CCV	Modified ASTM D-1946	NA	NA
07A	LCS	Modified ASTM D-1946	NA	NA
07AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 05/09/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000

**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**AECOM**  
**Workorder# 2505089B**

Four 1 Liter Summa Canister (100% Certified) samples were received on May 06, 2025. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-15-5-042925**

**Lab ID#: 2505089B-01A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	20
Nitrogen	0.22	79
Carbon Dioxide	0.022	1.2
Helium	0.11	0.0086 J

**Client Sample ID: VMP-15-21-042925**

**Lab ID#: 2505089B-02A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.23	14
Nitrogen	0.23	78
Carbon Dioxide	0.023	7.7
Helium	0.11	0.051 J

**Client Sample ID: VMP-15-25-042925**

**Lab ID#: 2505089B-03A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.23	15
Nitrogen	0.23	78
Carbon Dioxide	0.023	7.1

**Client Sample ID: VMP-55-20-042925**

**Lab ID#: 2505089B-04A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	3.8
Nitrogen	0.22	75
Methane	0.00022	4.7
Carbon Dioxide	0.022	16
Ethane	0.0022	0.0014 J



Air Toxics

Client Sample ID: VMP-15-5-042925

Lab ID#: 2505089B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050906	Date of Collection:	4/29/25 9:20:00 AM
Dil. Factor:	2.24	Date of Analysis:	5/9/25 09:12 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	20
Nitrogen	0.22	79
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	1.2
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	0.0086 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-21-042925

Lab ID#: 2505089B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050907	Date of Collection:	4/29/25 9:41:00 AM
Dil. Factor:	2.28	Date of Analysis:	5/9/25 09:37 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	14
Nitrogen	0.23	78
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	7.7
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.11	0.051 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-25-042925

Lab ID#: 2505089B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050908	Date of Collection: 4/29/25 10:04:00 AM
Dil. Factor:	2.30	Date of Analysis: 5/9/25 10:00 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	15
Nitrogen	0.23	78
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	7.1
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-55-20-042925

Lab ID#: 2505089B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050909	Date of Collection: 4/29/25 11:24:00 AM
Dil. Factor:	2.20	Date of Analysis: 5/9/25 10:24 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	3.8
Nitrogen	0.22	75
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	4.7
Carbon Dioxide	0.022	16
Ethane	0.0022	0.0014 J
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: Lab Blank

Lab ID#: 2505089B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050904	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/9/25 08:25 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2505089B-05B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050905c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/9/25 08:49 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2505089B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050901	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/8/25 09:38 PM

Compound	%Recovery
Oxygen	99
Nitrogen	92
Carbon Monoxide	99
Methane	102
Carbon Dioxide	99
-----	
Ethane	105
Ethene	105
Helium	104

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2505089B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/9/25 06:55 AM

Compound	%Recovery	Method Limits
Oxygen	102	85-115
Nitrogen	91	85-115
Carbon Monoxide	97	85-115
Methane	104	85-115
Carbon Dioxide	103	85-115
Ethane	110	85-115
Ethene	108	85-115
Helium	108	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2505089B-07AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10050903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/9/25 07:17 AM

Compound	%Recovery	Method Limits
Oxygen	102	85-115
Nitrogen	91	85-115
Carbon Monoxide	96	85-115
Methane	102	85-115
Carbon Dioxide	103	85-115
Ethane	108	85-115
Ethene	106	85-115
Helium	108	85-115

Container Type: NA - Not Applicable

**Method : Modified ASTM D-1946 + He**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (%)</b>
7782-44-7	Oxygen	0.10
7727-37-9	Nitrogen	0.10
630-08-0	Carbon Monoxide	0.010
74-82-8	Methane	0.00010
124-38-9	Carbon Dioxide	0.010
74-84-0	Ethane	0.0010
74-85-1	Ethene	0.0010
<b>7440-59-7</b>	<b>Helium</b>	<b>0.050</b>

**Analytical Report**

8/11/2025  
Mr. Samuel Fisher  
AECOM  
411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor  
Project #: 60738191-4.3.2  
Workorder #: 2507614AR1

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 7/24/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 2507614AR1**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1697061
<b>FAX:</b>		<b>PROJECT #</b>	60738191-4.3.2 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	07/24/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	08/06/2025		
<b>DATE REISSUED:</b>	08/11/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-15-5-072325	TO-15	7.0 "Hg	10 psi
02A	VMP-15-21.5-072325	TO-15	8.5 "Hg	10 psi
03A	VMP-15-25.5-072325	TO-15	9.0 "Hg	10 psi
04A	VMP-15-29-072325	TO-15	8.0 "Hg	10 psi
05A	VMP-55-20-072325	TO-15	7.5 "Hg	10 psi
06A	Lab Blank	TO-15	NA	NA
06B	Lab Blank	TO-15	NA	NA
07A	CCV	TO-15	NA	NA
07B	CCV	TO-15	NA	NA
08A	LCS	TO-15	NA	NA
08AA	LCSD	TO-15	NA	NA
08B	LCS	TO-15	NA	NA
08BB	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 08/11/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**AECOM**  
**Workorder# 2507614AR1**

Five 1 Liter Summa Canister (100% Certified) samples were received on July 24, 2025. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Dilution was performed on sample VMP-55-20-072325 due to the presence of high level target species.

Due to laboratory error, the work order was reissued on 8/11/2025 to quantify the result using the correct dilution factor determined from the initial receipt pressure measurement of sample VMP-15-25.5-072325.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: VMP-15-5-072325**

**Lab ID#: 2507614AR1-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	0.44 J	5.4	2.2 J
Freon 11	1.1	0.16 J	6.2	0.93 J
Ethanol	11	5.1 J	21	9.6 J
Acetone	11	17	26	41
2-Butanone (Methyl Ethyl Ketone)	4.4	0.82 J	13	2.4 J
Isopentane	4.4	0.68 J	13	2.0 J

**Client Sample ID: VMP-15-21.5-072325**

**Lab ID#: 2507614AR1-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	0.44 J	5.8	2.2 J
Methylene Chloride	12	0.59 J	41	2.0 J
Chloroform	1.2	1.1 J	5.7	5.2 J

**Client Sample ID: VMP-15-25.5-072325**

**Lab ID#: 2507614AR1-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	0.18 J	6.7	1.0 J
Ethanol	12	5.9 J	23	11 J
Carbon Disulfide	4.8	3.8 J	15	12 J
Methylene Chloride	12	0.68 J	42	2.3 J
Hexane	1.2	1.6	4.2	5.6
Chloroform	1.2	6.2	5.8	30
Cyclohexane	1.2	0.80 J	4.1	2.8 J
2,2,4-Trimethylpentane	1.2	10	5.6	49
Benzene	1.2	0.41 J	3.8	1.3 J
Heptane	1.2	1.3	4.9	5.5
Propylbenzene	1.2	0.89 J	5.9	4.4 J
Isopentane	4.8	1.1 J	14	3.2 J

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VMP-15-29-072325**

**Lab ID#: 2507614AR1-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.1	0.47 J	5.7	2.3 J
Freon 11	1.1	0.19 J	6.4	1.0 J
Ethanol	11	9.4 J	22	18 J
Chloroform	1.1	7.0	5.6	34
Benzene	1.1	0.31 J	3.6	1.0 J
Bromodichloromethane	1.1	0.28 J	7.7	1.8 J
Butane	4.6	1.6 J	11	3.7 J

**Client Sample ID: VMP-55-20-072325**

**Lab ID#: 2507614AR1-05A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	4500	1500 J	11000	3500 J
Hexane	1100	21000	3900	74000
Cyclohexane	1100	34000	3800	120000
2,2,4-Trimethylpentane	1100	31000	5200	140000
Heptane	1100	10000	4600	42000
Butane	4500	35000	11000	83000
Isopentane	4500	140000	13000	400000



Air Toxics

Client Sample ID: VMP-15-5-072325

Lab ID#: 2507614AR1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072909	Date of Collection:	7/23/25 10:43:00 AM
Dil. Factor:	2.19	Date of Analysis:	7/29/25 02:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	0.44 J	5.4	2.2 J
Freon 114	1.1	Not Detected	7.6	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	42	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	0.16 J	6.2	0.93 J
Ethanol	11	5.1 J	21	9.6 J
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Acetone	11	17	26	41
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.4	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	0.82 J	13	2.4 J
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	Not Detected	5.3	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.9	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.3	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	2.2	Not Detected	8.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.4	Not Detected
2-Hexanone	4.4	Not Detected	18	Not Detected

Client Sample ID: VMP-15-5-072325

Lab ID#: 2507614AR1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072909	Date of Collection:	7/23/25 10:43:00 AM
Dil. Factor:	2.19	Date of Analysis:	7/29/25 02:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.3	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected
Chlorobenzene	1.1	Not Detected	5.0	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	2.2	Not Detected	9.5	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.5	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	32	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected
Butane	4.4	Not Detected	10	Not Detected
Isopentane	4.4	0.68 J	13	2.0 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: VMP-15-21.5-072325

Lab ID#: 2507614AR1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072910	Date of Collection:	7/23/25 10:59:00 AM
Dil. Factor:	2.34	Date of Analysis:	7/29/25 02:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	0.44 J	5.8	2.2 J
Freon 114	1.2	Not Detected	8.2	Not Detected
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	12	Not Detected	45	Not Detected
Chloroethane	4.7	Not Detected	12	Not Detected
Freon 11	1.2	Not Detected	6.6	Not Detected
Ethanol	12	Not Detected	22	Not Detected
Freon 113	1.2	Not Detected	9.0	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	12	Not Detected	28	Not Detected
2-Propanol	4.7	Not Detected	12	Not Detected
Carbon Disulfide	4.7	Not Detected	14	Not Detected
3-Chloropropene	4.7	Not Detected	15	Not Detected
Methylene Chloride	12	0.59 J	41	2.0 J
Methyl tert-butyl ether	4.7	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	Not Detected	4.1	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	1.1 J	5.7	5.2 J
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Cyclohexane	1.2	Not Detected	4.0	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.5	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Heptane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.8	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	2.3	Not Detected	8.8	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
2-Hexanone	4.7	Not Detected	19	Not Detected

Client Sample ID: VMP-15-21.5-072325

Lab ID#: 2507614AR1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072910	Date of Collection:	7/23/25 10:59:00 AM
Dil. Factor:	2.34	Date of Analysis:	7/29/25 02:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.0	Not Detected
Chlorobenzene	1.2	Not Detected	5.4	Not Detected
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
m,p-Xylene	2.3	Not Detected	10	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected
Styrene	1.2	Not Detected	5.0	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.0	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,2,4-Trichlorobenzene	4.7	Not Detected	35	Not Detected
Hexachlorobutadiene	4.7	Not Detected	50	Not Detected
Butane	4.7	Not Detected	11	Not Detected
Isopentane	4.7	Not Detected	14	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: VMP-15-25.5-072325

Lab ID#: 2507614AR1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072911r1	Date of Collection:	7/23/25 11:47:00 AM
Dil. Factor:	2.40	Date of Analysis:	7/29/25 03:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	12	Not Detected	25	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	12	Not Detected	47	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
Freon 11	1.2	0.18 J	6.7	1.0 J
Ethanol	12	5.9 J	23	11 J
Freon 113	1.2	Not Detected	9.2	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	12	Not Detected	28	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	3.8 J	15	12 J
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	0.68 J	42	2.3 J
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	1.6	4.2	5.6
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	6.2	5.8	30
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Cyclohexane	1.2	0.80 J	4.1	2.8 J
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	10	5.6	49
Benzene	1.2	0.41 J	3.8	1.3 J
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	1.3	4.9	5.5
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	2.4	Not Detected	9.0	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
2-Hexanone	4.8	Not Detected	20	Not Detected

Client Sample ID: VMP-15-25.5-072325

Lab ID#: 2507614AR1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072911r1	Date of Collection:	7/23/25 11:47:00 AM
Dil. Factor:	2.40	Date of Analysis:	7/29/25 03:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.2	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	2.4	Not Detected	10	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	0.89 J	5.9	4.4 J
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected
Butane	4.8	Not Detected	11	Not Detected
Isopentane	4.8	1.1 J	14	3.2 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: VMP-15-29-072325

Lab ID#: 2507614AR1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072912	Date of Collection:	7/23/25 12:02:00 PM
Dil. Factor:	2.29	Date of Analysis:	7/29/25 03:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	0.47 J	5.7	2.3 J
Freon 114	1.1	Not Detected	8.0	Not Detected
Chloromethane	11	Not Detected	24	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.1	0.19 J	6.4	1.0 J
Ethanol	11	9.4 J	22	18 J
Freon 113	1.1	Not Detected	8.8	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	Not Detected	27	Not Detected
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	4.6	Not Detected	14	Not Detected
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	40	Not Detected
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	7.0	5.6	34
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	0.31 J	3.6	1.0 J
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.7	Not Detected
Trichloroethene	1.1	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	0.28 J	7.7	1.8 J
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	2.3	Not Detected	8.6	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.8	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected



Air Toxics

Client Sample ID: VMP-15-29-072325

Lab ID#: 2507614AR1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072912	Date of Collection:	7/23/25 12:02:00 PM
Dil. Factor:	2.29	Date of Analysis:	7/29/25 03:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.8	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.3	Not Detected
Ethyl Benzene	1.1	Not Detected	5.0	Not Detected
m,p-Xylene	2.3	Not Detected	9.9	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
Styrene	1.1	Not Detected	4.9	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.9	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected
Butane	4.6	1.6 J	11	3.7 J
Isopentane	4.6	Not Detected	14	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: VMP-55-20-072325

Lab ID#: 2507614AR1-05A

EPA METHOD TO-15 GC/MS

File Name:	14072820	Date of Collection:	7/23/25 12:42:00 PM
Dil. Factor:	224	Date of Analysis:	7/28/25 04:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1100	Not Detected	5500	Not Detected
Freon 114	1100	Not Detected	7800	Not Detected
Chloromethane	4500	Not Detected	9200	Not Detected
Vinyl Chloride	1100	Not Detected	2900	Not Detected
1,3-Butadiene	1100	Not Detected	2500	Not Detected
Bromomethane	4500	Not Detected	17000	Not Detected
Chloroethane	4500	Not Detected	12000	Not Detected
Freon 11	1100	Not Detected	6300	Not Detected
Ethanol	5600	Not Detected	10000	Not Detected
Freon 113	1100	Not Detected	8600	Not Detected
1,1-Dichloroethene	1100	Not Detected	4400	Not Detected
Acetone	4500	1500 J	11000	3500 J
2-Propanol	5600	Not Detected	14000	Not Detected
Carbon Disulfide	4500	Not Detected	14000	Not Detected
3-Chloropropene	4500	Not Detected	14000	Not Detected
Methylene Chloride	4500	Not Detected	16000	Not Detected
Methyl tert-butyl ether	1100	Not Detected	4000	Not Detected
trans-1,2-Dichloroethene	1100	Not Detected	4400	Not Detected
Hexane	1100	21000	3900	74000
1,1-Dichloroethane	1100	Not Detected	4500	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4500	Not Detected	13000	Not Detected
cis-1,2-Dichloroethene	1100	Not Detected	4400	Not Detected
Tetrahydrofuran	1100	Not Detected	3300	Not Detected
Chloroform	1100	Not Detected	5500	Not Detected
1,1,1-Trichloroethane	1100	Not Detected	6100	Not Detected
Cyclohexane	1100	34000	3800	120000
Carbon Tetrachloride	1100	Not Detected	7000	Not Detected
2,2,4-Trimethylpentane	1100	31000	5200	140000
Benzene	1100	Not Detected	3600	Not Detected
1,2-Dichloroethane	1100	Not Detected	4500	Not Detected
Heptane	1100	10000	4600	42000
Trichloroethene	1100	Not Detected	6000	Not Detected
1,2-Dichloropropane	1100	Not Detected	5200	Not Detected
1,4-Dioxane	4500	Not Detected	16000	Not Detected
Bromodichloromethane	1100	Not Detected	7500	Not Detected
cis-1,3-Dichloropropene	1100	Not Detected	5100	Not Detected
4-Methyl-2-pentanone	4500	Not Detected	18000	Not Detected
Toluene	1100	Not Detected	4200	Not Detected
trans-1,3-Dichloropropene	1100	Not Detected	5100	Not Detected
1,1,2-Trichloroethane	1100	Not Detected	6100	Not Detected
Tetrachloroethene	1100	Not Detected	7600	Not Detected
2-Hexanone	4500	Not Detected	18000	Not Detected

Client Sample ID: VMP-55-20-072325

Lab ID#: 2507614AR1-05A

EPA METHOD TO-15 GC/MS

File Name:	14072820	Date of Collection:	7/23/25 12:42:00 PM
Dil. Factor:	224	Date of Analysis:	7/28/25 04:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1100	Not Detected	9500	Not Detected
1,2-Dibromoethane (EDB)	1100	Not Detected	8600	Not Detected
Chlorobenzene	1100	Not Detected	5200	Not Detected
Ethyl Benzene	1100	Not Detected	4900	Not Detected
m,p-Xylene	1100	Not Detected	4900	Not Detected
o-Xylene	1100	Not Detected	4900	Not Detected
Styrene	1100	Not Detected	4800	Not Detected
Bromoform	1100	Not Detected	12000	Not Detected
Cumene	1100	Not Detected	5500	Not Detected
1,1,2,2-Tetrachloroethane	1100	Not Detected	7700	Not Detected
Propylbenzene	1100	Not Detected	5500	Not Detected
4-Ethyltoluene	1100	Not Detected	5500	Not Detected
1,3,5-Trimethylbenzene	1100	Not Detected	5500	Not Detected
1,2,4-Trimethylbenzene	1100	Not Detected	5500	Not Detected
1,3-Dichlorobenzene	1100	Not Detected	6700	Not Detected
1,4-Dichlorobenzene	1100	Not Detected	6700	Not Detected
alpha-Chlorotoluene	1100	Not Detected	5800	Not Detected
1,2-Dichlorobenzene	1100	Not Detected	6700	Not Detected
1,2,4-Trichlorobenzene	4500	Not Detected	33000	Not Detected
Hexachlorobutadiene	4500	Not Detected	48000	Not Detected
Butane	4500	35000	11000	83000
Isopentane	4500	140000	13000	400000

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2507614AR1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072906a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/29/25 11:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2507614AR1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072906a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 11:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
Isopentane	2.0	Not Detected	5.9	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2507614AR1-06B

EPA METHOD TO-15 GC/MS

File Name:	14072805c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/28/25 09:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	20	Not Detected	78	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	25	Not Detected	47	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	25	Not Detected	61	Not Detected
Carbon Disulfide	20	Not Detected	62	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	20	Not Detected	69	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	20	Not Detected	82	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected



Air Toxics

Client Sample ID: Lab Blank  
 Lab ID#: 2507614AR1-06B  
 EPA METHOD TO-15 GC/MS

File Name:	14072805c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/28/25 09:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	0.86 J	26	4.5 J
1,2-Dichlorobenzene	5.0	0.53 J	30	3.2 J
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected
Butane	20	Not Detected	48	Not Detected
Isopentane	20	Not Detected	59	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: CCV

Lab ID#: 2507614AR1-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 10:25 AM

Compound	%Recovery
Freon 12	99
Freon 114	97
Chloromethane	93
Vinyl Chloride	84
1,3-Butadiene	93
Bromomethane	105
Chloroethane	102
Freon 11	104
Ethanol	101
Freon 113	102
1,1-Dichloroethene	105
Acetone	95
2-Propanol	102
Carbon Disulfide	99
3-Chloropropene	101
Methylene Chloride	106
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	108
Hexane	98
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	104
Tetrahydrofuran	102
Chloroform	104
1,1,1-Trichloroethane	101
Cyclohexane	98
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	102
Benzene	99
1,2-Dichloroethane	107
Heptane	104
Trichloroethene	104
1,2-Dichloropropane	99
1,4-Dioxane	100
Bromodichloromethane	106
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	99
Toluene	100
trans-1,3-Dichloropropene	102
1,1,2-Trichloroethane	99
Tetrachloroethene	101
2-Hexanone	100

Client Sample ID: CCV

Lab ID#: 2507614AR1-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 10:25 AM

Compound	%Recovery
Dibromochloromethane	104
1,2-Dibromoethane (EDB)	102
Chlorobenzene	97
Ethyl Benzene	101
m,p-Xylene	103
o-Xylene	100
Styrene	103
Bromoform	104
Cumene	102
1,1,2,2-Tetrachloroethane	98
Propylbenzene	100
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	97
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	98
Hexachlorobutadiene	98
Butane	77
Isopentane	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV  
 Lab ID#: 2507614AR1-07B  
 EPA METHOD TO-15 GC/MS

File Name:	14072802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 08:14 AM

Compound	%Recovery
Freon 12	107
Freon 114	103
Chloromethane	97
Vinyl Chloride	96
1,3-Butadiene	97
Bromomethane	106
Chloroethane	99
Freon 11	117
Ethanol	112
Freon 113	112
1,1-Dichloroethene	110
Acetone	107
2-Propanol	114
Carbon Disulfide	100
3-Chloropropene	110
Methylene Chloride	116
Methyl tert-butyl ether	112
trans-1,2-Dichloroethene	98
Hexane	113
1,1-Dichloroethane	109
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	110
Tetrahydrofuran	98
Chloroform	111
1,1,1-Trichloroethane	113
Cyclohexane	98
Carbon Tetrachloride	112
2,2,4-Trimethylpentane	109
Benzene	106
1,2-Dichloroethane	103
Heptane	103
Trichloroethene	107
1,2-Dichloropropane	98
1,4-Dioxane	101
Bromodichloromethane	95
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	100
Toluene	102
trans-1,3-Dichloropropene	97
1,1,2-Trichloroethane	90
Tetrachloroethene	100
2-Hexanone	96

**Client Sample ID: CCV**  
**Lab ID#: 2507614AR1-07B**  
**EPA METHOD TO-15 GC/MS**

<b>File Name:</b>	<b>14072802</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/28/25 08:14 AM</b>

Compound	%Recovery
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	91
Chlorobenzene	100
Ethyl Benzene	96
m,p-Xylene	99
o-Xylene	98
Styrene	92
Bromoform	91
Cumene	92
1,1,2,2-Tetrachloroethane	84
Propylbenzene	85
4-Ethyltoluene	97
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	85
1,4-Dichlorobenzene	87
alpha-Chlorotoluene	93
1,2-Dichlorobenzene	87
1,2,4-Trichlorobenzene	91
Hexachlorobutadiene	96
Butane	105
Isopentane	108

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: LCS

Lab ID#: 2507614AR1-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 09:17 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	97	70-130
Chloromethane	102	70-130
Vinyl Chloride	110	70-130
1,3-Butadiene	103	70-130
Bromomethane	101	70-130
Chloroethane	100	70-130
Freon 11	101	70-130
Ethanol	93	70-130
Freon 113	95	70-130
1,1-Dichloroethene	97	70-130
Acetone	87	70-130
2-Propanol	102	70-130
Carbon Disulfide	96	70-130
3-Chloropropene	92	70-130
Methylene Chloride	99	70-130
Methyl tert-butyl ether	92	70-130
trans-1,2-Dichloroethene	100	70-130
Hexane	90	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	91	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	98	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	92	70-130
Carbon Tetrachloride	98	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	102	70-130
1,2-Dichloroethane	110	70-130
Heptane	102	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	99	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	107	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	102	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	104	70-130
2-Hexanone	95	70-130

Client Sample ID: LCS

Lab ID#: 2507614AR1-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 09:17 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	97	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	103	70-130
o-Xylene	99	70-130
Styrene	103	70-130
Bromoform	102	70-130
Cumene	99	70-130
1,1,2,2-Tetrachloroethane	98	70-130
Propylbenzene	98	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	102	70-130
1,2,4-Trimethylbenzene	102	70-130
1,3-Dichlorobenzene	99	70-130
1,4-Dichlorobenzene	98	70-130
alpha-Chlorotoluene	98	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	92	70-130
Hexachlorobutadiene	100	70-130
Butane	101	70-130
Isopentane	96	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCSD

Lab ID#: 2507614AR1-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 09:51 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	97	70-130
Chloromethane	106	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	105	70-130
Bromomethane	105	70-130
Chloroethane	100	70-130
Freon 11	103	70-130
Ethanol	96	70-130
Freon 113	96	70-130
1,1-Dichloroethene	100	70-130
Acetone	90	70-130
2-Propanol	106	70-130
Carbon Disulfide	96	70-130
3-Chloropropene	95	70-130
Methylene Chloride	100	70-130
Methyl tert-butyl ether	95	70-130
trans-1,2-Dichloroethene	105	70-130
Hexane	92	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
cis-1,2-Dichloroethene	98	70-130
Tetrahydrofuran	98	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	94	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	100	70-130
Benzene	100	70-130
1,2-Dichloroethane	107	70-130
Heptane	101	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	96	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	97	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	101	70-130
2-Hexanone	96	70-130

Client Sample ID: LCSD

Lab ID#: 2507614AR1-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a072904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/25 09:51 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	103	70-130
1,2-Dibromoethane (EDB)	100	70-130
Chlorobenzene	97	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	100	70-130
o-Xylene	99	70-130
Styrene	103	70-130
Bromoform	102	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	97	70-130
Propylbenzene	97	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	101	70-130
1,2,4-Trimethylbenzene	102	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	98	70-130
1,2-Dichlorobenzene	97	70-130
1,2,4-Trichlorobenzene	102	70-130
Hexachlorobutadiene	107	70-130
Butane	107	70-130
Isopentane	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCS  
 Lab ID#: 2507614AR1-08B  
 EPA METHOD TO-15 GC/MS

File Name:	14072803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 08:37 AM

Compound	%Recovery	Method Limits
Freon 12	101	70-130
Freon 114	102	70-130
Chloromethane	98	70-130
Vinyl Chloride	101	70-130
1,3-Butadiene	94	70-130
Bromomethane	105	70-130
Chloroethane	101	70-130
Freon 11	116	70-130
Ethanol	120	70-130
Freon 113	108	70-130
1,1-Dichloroethene	104	70-130
Acetone	110	70-130
2-Propanol	120	70-130
Carbon Disulfide	96	70-130
3-Chloropropene	104	70-130
Methylene Chloride	112	70-130
Methyl tert-butyl ether	112	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	108	70-130
1,1-Dichloroethane	106	70-130
2-Butanone (Methyl Ethyl Ketone)	102	70-130
cis-1,2-Dichloroethene	111	70-130
Tetrahydrofuran	98	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	112	70-130
Cyclohexane	100	70-130
Carbon Tetrachloride	110	70-130
2,2,4-Trimethylpentane	107	70-130
Benzene	113	70-130
1,2-Dichloroethane	104	70-130
Heptane	106	70-130
Trichloroethene	110	70-130
1,2-Dichloropropane	99	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	98	70-130
Toluene	104	70-130
trans-1,3-Dichloropropene	95	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	104	70-130
2-Hexanone	91	70-130

Client Sample ID: LCS  
 Lab ID#: 2507614AR1-08B  
 EPA METHOD TO-15 GC/MS

File Name:	14072803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 08:37 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	95	70-130
1,2-Dibromoethane (EDB)	94	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	101	70-130
o-Xylene	99	70-130
Styrene	94	70-130
Bromoform	90	70-130
Cumene	89	70-130
1,1,2,2-Tetrachloroethane	85	70-130
Propylbenzene	84	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	85	70-130
1,4-Dichlorobenzene	84	70-130
alpha-Chlorotoluene	90	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	102	70-130
Hexachlorobutadiene	99	70-130
Butane	101	70-130
Isopentane	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: LCSD  
 Lab ID#: 2507614AR1-08BB  
 EPA METHOD TO-15 GC/MS

File Name:	14072804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 09:06 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	102	70-130
Chloromethane	99	70-130
Vinyl Chloride	96	70-130
1,3-Butadiene	95	70-130
Bromomethane	104	70-130
Chloroethane	103	70-130
Freon 11	119	70-130
Ethanol	127	70-130
Freon 113	109	70-130
1,1-Dichloroethene	107	70-130
Acetone	108	70-130
2-Propanol	123	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	102	70-130
Methylene Chloride	112	70-130
Methyl tert-butyl ether	112	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	109	70-130
1,1-Dichloroethane	108	70-130
2-Butanone (Methyl Ethyl Ketone)	107	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	100	70-130
Chloroform	109	70-130
1,1,1-Trichloroethane	117	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	112	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	110	70-130
1,2-Dichloroethane	104	70-130
Heptane	102	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	95	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	99	70-130
Toluene	104	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	106	70-130
2-Hexanone	94	70-130

Client Sample ID: LCSD  
 Lab ID#: 2507614AR1-08BB  
 EPA METHOD TO-15 GC/MS

File Name:	14072804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 09:06 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	94	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	102	70-130
o-Xylene	103	70-130
Styrene	95	70-130
Bromoform	92	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	87	70-130
Propylbenzene	88	70-130
4-Ethyltoluene	100	70-130
1,3,5-Trimethylbenzene	100	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	87	70-130
1,4-Dichlorobenzene	87	70-130
alpha-Chlorotoluene	93	70-130
1,2-Dichlorobenzene	91	70-130
1,2,4-Trichlorobenzene	109	70-130
Hexachlorobutadiene	109	70-130
Butane	104	70-130
Isopentane	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

**Method : TO-15 + Butane & Isopentane**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

**Method : TO-15 + Butane & Isopentane**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0
106-97-8	Butane	2.0
78-78-4	Isopentane	2.0

	<b>Surrogate</b>	<b>Method Limits</b>
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

**Analytical Report**

8/7/2025

Mr. Samuel Fisher

AECOM

411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor

Project #: 60738191-4.3.2

Workorder #: 2507614B

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 7/24/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

**WORK ORDER #: 2507614B**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1697061
<b>FAX:</b>		<b>PROJECT #</b>	60738191-4.3.2 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	07/24/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	08/07/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-15-5-072325	Modified ASTM D-1946	7.0 "Hg	10 psi
02A	VMP-15-21.5-072325	Modified ASTM D-1946	8.5 "Hg	10 psi
03A	VMP-15-25.5-072325	Modified ASTM D-1946	9.0 "Hg	10 psi
04A	VMP-15-29-072325	Modified ASTM D-1946	8.0 "Hg	10 psi
05A	VMP-55-20-072325	Modified ASTM D-1946	7.5 "Hg	10 psi
06A	Lab Blank	Modified ASTM D-1946	NA	NA
06B	Lab Blank	Modified ASTM D-1946	NA	NA
07A	CCV	Modified ASTM D-1946	NA	NA
08A	LCS	Modified ASTM D-1946	NA	NA
08AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 08/07/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000

**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**AECOM**  
**Workorder# 2507614B**

Five 1 Liter Summa Canister (100% Certified) samples were received on July 24, 2025. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-15-5-072325**

**Lab ID#: 2507614B-01A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	16
Nitrogen	1.1	81
Methane	0.00022	0.00014 J
Carbon Dioxide	0.022	2.7

**Client Sample ID: VMP-15-21.5-072325**

**Lab ID#: 2507614B-02A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.23	14
Nitrogen	1.2	80
Carbon Dioxide	0.023	6.1

**Client Sample ID: VMP-15-25.5-072325**

**Lab ID#: 2507614B-03A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	15
Nitrogen	1.2	80
Carbon Dioxide	0.024	4.9

**Client Sample ID: VMP-15-29-072325**

**Lab ID#: 2507614B-04A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.23	16
Nitrogen	1.1	80
Carbon Dioxide	0.023	4.2
Helium	0.11	0.080 J

**Client Sample ID: VMP-55-20-072325**

**Lab ID#: 2507614B-05A**

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-55-20-072325**

**Lab ID#: 2507614B-05A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	3.2
Nitrogen	1.1	85
Methane	0.00022	0.99
Carbon Dioxide	0.022	11

Client Sample ID: VMP-15-5-072325

Lab ID#: 2507614B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072818	Date of Collection: 7/23/25 10:43:00 AM
Dil. Factor:	2.19	Date of Analysis: 7/28/25 05:35 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	16
Nitrogen	1.1	81
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	0.00014 J
Carbon Dioxide	0.022	2.7
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-21.5-072325

Lab ID#: 2507614B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072819	Date of Collection: 7/23/25 10:59:00 AM
Dil. Factor:	2.34	Date of Analysis: 7/28/25 06:13 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	14
Nitrogen	1.2	80
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	6.1
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-25.5-072325

Lab ID#: 2507614B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072820	Date of Collection: 7/23/25 11:47:00 AM
Dil. Factor:	2.40	Date of Analysis: 7/28/25 06:37 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	15
Nitrogen	1.2	80
Carbon Monoxide	0.024	Not Detected
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	4.9
Ethane	0.0024	Not Detected
Ethene	0.0024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-15-29-072325

Lab ID#: 2507614B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072821	Date of Collection: 7/23/25 12:02:00 PM
Dil. Factor:	2.29	Date of Analysis: 7/28/25 07:01 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	16
Nitrogen	1.1	80
Carbon Monoxide	0.023	Not Detected
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	4.2
Ethane	0.0023	Not Detected
Ethene	0.0023	Not Detected
Helium	0.11	0.080 J

J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: VMP-55-20-072325

Lab ID#: 2507614B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072824	Date of Collection: 7/23/25 12:42:00 PM
Dil. Factor:	2.24	Date of Analysis: 7/28/25 08:14 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	3.2
Nitrogen	1.1	85
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	0.99
Carbon Dioxide	0.022	11
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2507614B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072804	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/28/25 11:24 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.50	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2507614B-06B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072803c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/28/25 10:59 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2507614B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072801	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 10:02 AM

Compound	%Recovery
Oxygen	100
Nitrogen	94
Carbon Monoxide	91
Methane	94
Carbon Dioxide	101
-----	
Ethane	98
Ethene	99
Helium	100

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2507614B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 10:35 AM

Compound	%Recovery	Method Limits
Oxygen	103	85-115
Nitrogen	93	85-115
Carbon Monoxide	87	85-115
Methane	96	85-115
Carbon Dioxide	104	85-115
Ethane	102	85-115
Ethene	100	85-115
Helium	105	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2507614B-08AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11072825	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/28/25 08:40 PM

Compound	%Recovery	Method Limits
Oxygen	103	85-115
Nitrogen	93	85-115
Carbon Monoxide	87	85-115
Methane	96	85-115
Carbon Dioxide	104	85-115
Ethane	101	85-115
Ethene	100	85-115
Helium	104	85-115

Container Type: NA - Not Applicable

**Method : Modified ASTM D-1946 + He**

<b>CAS Number</b>	<b>Compound</b>	<b>Rpt. Limit (%)</b>
7782-44-7	Oxygen	0.10
7727-37-9	Nitrogen	0.50
630-08-0	Carbon Monoxide	0.010
74-82-8	Methane	0.00010
124-38-9	Carbon Dioxide	0.010
74-84-0	Ethane	0.0010
74-85-1	Ethene	0.0010
<b>7440-59-7</b>	<b>Helium</b>	<b>0.050</b>

**Analytical Report**

11/17/2025  
Mr. Samuel Fisher  
AECOM  
411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor  
Project #: 60771235-4.5.1  
Workorder #: 2511278A

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 11/13/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 2511278A**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1739680
<b>FAX:</b>		<b>PROJECT #</b>	60771235-4.5.1 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	11/13/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	11/17/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-15-5-110325	TO-15	6.3 "Hg	9.8 psi
02A	VMP-15-21.5-110325	TO-15	6.9 "Hg	10 psi
03A	VMP-15-25.5-110325	TO-15	7.3 "Hg	10 psi
04A	VMP-15-29-110325	TO-15	6.1 "Hg	9.9 psi
05A	VMP-55-20-110325	TO-15	6.9 "Hg	9.5 psi
06A	Lab Blank	TO-15	NA	NA
06B	Lab Blank	TO-15	NA	NA
07A	CCV	TO-15	NA	NA
07B	CCV	TO-15	NA	NA
08A	LCS	TO-15	NA	NA
08AA	LCSD	TO-15	NA	NA
08B	LCS	TO-15	NA	NA
08BB	LCSD	TO-15	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 11/17/25

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000

**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**AECOM**  
**Workorder# 2511278A**

Five 1 Liter Summa Canister samples were received on November 13, 2025. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilution was performed on sample VMP-55-20-110325 due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VMP-15-5-110325

Lab ID#: 2511278A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	10	8.4 J	20	16 J
Acetone	10	7.7 J	25	18 J

Client Sample ID: VMP-15-21.5-110325

Lab ID#: 2511278A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	11	21	20	40
Acetone	11	6.0 J	26	14 J
2-Propanol	4.4	1.6 J	11	3.8 J
Chloroform	1.1	1.1	5.3	5.4
Trichloroethene	1.1	1.4	5.8	7.4

Client Sample ID: VMP-15-25.5-110325

Lab ID#: 2511278A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	11	24	21	45
Acetone	11	4.3 J	26	10 J
Chloroform	1.1	2.3	5.4	11

Client Sample ID: VMP-15-29-110325

Lab ID#: 2511278A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	10	4.0 J	25	9.4 J
Chloroform	1.0	3.1	5.1	15

Client Sample ID: VMP-55-20-110325

Lab ID#: 2511278A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS**

**Client Sample ID: VMP-55-20-110325**

**Lab ID#: 2511278A-05A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Acetone	2100	1200 J	5100	2900 J
Hexane	540	13000	1900	47000
Cyclohexane	540	34000	1800	120000
2,2,4-Trimethylpentane	540	26000	2500	120000
Heptane	540	15000	2200	61000
Butane	2100	16000	5100	37000
Isopentane	2100	64000	6300	190000



Air Toxics

Client Sample ID: VMP-15-5-110325

Lab ID#: 2511278A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111422	Date of Collection:	11/3/25 11:35:00 AM
Dil. Factor:	2.11	Date of Analysis:	11/15/25 12:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Freon 114	1.0	Not Detected	7.4	Not Detected
Chloromethane	10	Not Detected	22	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	41	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	Not Detected	5.9	Not Detected
Ethanol	10	8.4 J	20	16 J
Freon 113	1.0	Not Detected	8.1	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Acetone	10	7.7 J	25	18 J
2-Propanol	4.2	Not Detected	10	Not Detected
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	37	Not Detected
Methyl tert-butyl ether	4.2	Not Detected	15	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	1.0	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.8	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	1.0	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.3	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	1.0	Not Detected	5.7	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.9	Not Detected
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Bromodichloromethane	1.0	Not Detected	7.1	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	2.1	Not Detected	8.0	Not Detected
trans-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.8	Not Detected
Tetrachloroethene	1.0	Not Detected	7.2	Not Detected
2-Hexanone	4.2	Not Detected	17	Not Detected



Air Toxics

Client Sample ID: VMP-15-5-110325

Lab ID#: 2511278A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111422	Date of Collection:	11/3/25 11:35:00 AM
Dil. Factor:	2.11	Date of Analysis:	11/15/25 12:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	9.0	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.1	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	Not Detected	4.6	Not Detected
m,p-Xylene	2.1	Not Detected	9.2	Not Detected
o-Xylene	1.0	Not Detected	4.6	Not Detected
Styrene	1.0	Not Detected	4.5	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.2	Not Detected
Propylbenzene	1.0	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	45	Not Detected
Butane	4.2	Not Detected UJ	10	Not Detected UJ
Isopentane	4.2	Not Detected	12	Not Detected

J = Estimated value.

UJ = Analyte associated with low bias in the CCV.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: VMP-15-21.5-110325

Lab ID#: 2511278A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111423	Date of Collection:	11/3/25 11:53:00 AM
Dil. Factor:	2.18	Date of Analysis:	11/15/25 01:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	1.1	Not Detected	7.6	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	42	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.1	Not Detected
Ethanol	11	21	20	40
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Acetone	11	6.0 J	26	14 J
2-Propanol	4.4	1.6 J	11	3.8 J
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.4	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	1.1	5.3	5.4
1,1,1-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.8	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	1.4	5.8	7.4
1,2-Dichloropropane	1.1	Not Detected	5.0	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.3	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	2.2	Not Detected	8.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Tetrachloroethene	1.1	Not Detected	7.4	Not Detected
2-Hexanone	4.4	Not Detected	18	Not Detected

Client Sample ID: VMP-15-21.5-110325

Lab ID#: 2511278A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111423	Date of Collection:	11/3/25 11:53:00 AM
Dil. Factor:	2.18	Date of Analysis:	11/15/25 01:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.3	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected
Chlorobenzene	1.1	Not Detected	5.0	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
m,p-Xylene	2.2	Not Detected	9.5	Not Detected
o-Xylene	1.1	Not Detected	4.7	Not Detected
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.5	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.6	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	32	Not Detected
Hexachlorobutadiene	4.4	Not Detected	46	Not Detected
Butane	4.4	Not Detected UJ	10	Not Detected UJ
Isopentane	4.4	Not Detected	13	Not Detected

J = Estimated value.

UJ = Analyte associated with low bias in the CCV.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: VMP-15-25.5-110325

Lab ID#: 2511278A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111424	Date of Collection:	11/3/25 12:17:00 PM
Dil. Factor:	2.22	Date of Analysis:	11/15/25 02:11 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.2	Not Detected
Ethanol	11	24	21	45
Freon 113	1.1	Not Detected	8.5	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	4.3 J	26	10 J
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.4	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	2.3	5.4	11
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	2.2	Not Detected	8.4	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.5	Not Detected
2-Hexanone	4.4	Not Detected	18	Not Detected

Client Sample ID: VMP-15-25.5-110325

Lab ID#: 2511278A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111424	Date of Collection:	11/3/25 12:17:00 PM
Dil. Factor:	2.22	Date of Analysis:	11/15/25 02:11 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.5	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	2.2	Not Detected	9.6	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected
Butane	4.4	Not Detected UJ	10	Not Detected UJ
Isopentane	4.4	Not Detected	13	Not Detected

J = Estimated value.

UJ = Analyte associated with low bias in the CCV.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: VMP-15-29-110325

Lab ID#: 2511278A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111425	Date of Collection:	11/3/25 12:55:00 PM
Dil. Factor:	2.10	Date of Analysis:	11/15/25 02:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Freon 114	1.0	Not Detected	7.3	Not Detected
Chloromethane	10	Not Detected	22	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,3-Butadiene	1.0	Not Detected	2.3	Not Detected
Bromomethane	10	Not Detected	41	Not Detected
Chloroethane	4.2	Not Detected	11	Not Detected
Freon 11	1.0	Not Detected	5.9	Not Detected
Ethanol	10	Not Detected	20	Not Detected
Freon 113	1.0	Not Detected	8.0	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Acetone	10	4.0 J	25	9.4 J
2-Propanol	4.2	Not Detected	10	Not Detected
Carbon Disulfide	4.2	Not Detected	13	Not Detected
3-Chloropropene	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Methyl tert-butyl ether	4.2	Not Detected	15	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.0	Not Detected	3.1	Not Detected
Chloroform	1.0	3.1	5.1	15
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Cyclohexane	1.0	Not Detected	3.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
2,2,4-Trimethylpentane	1.0	Not Detected	4.9	Not Detected
Benzene	1.0	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Heptane	1.0	Not Detected	4.3	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected
1,2-Dichloropropane	1.0	Not Detected	4.8	Not Detected
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Bromodichloromethane	1.0	Not Detected	7.0	Not Detected
cis-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.0	Not Detected	4.3	Not Detected
Toluene	2.1	Not Detected	7.9	Not Detected
trans-1,3-Dichloropropene	1.0	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Tetrachloroethene	1.0	Not Detected	7.1	Not Detected
2-Hexanone	4.2	Not Detected	17	Not Detected



Air Toxics

Client Sample ID: VMP-15-29-110325

Lab ID#: 2511278A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111425	Date of Collection:	11/3/25 12:55:00 PM
Dil. Factor:	2.10	Date of Analysis:	11/15/25 02:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.0	Not Detected	8.9	Not Detected
1,2-Dibromoethane (EDB)	1.0	Not Detected	8.1	Not Detected
Chlorobenzene	1.0	Not Detected	4.8	Not Detected
Ethyl Benzene	1.0	Not Detected	4.6	Not Detected
m,p-Xylene	2.1	Not Detected	9.1	Not Detected
o-Xylene	1.0	Not Detected	4.6	Not Detected
Styrene	1.0	Not Detected	4.5	Not Detected
Bromoform	1.0	Not Detected	11	Not Detected
Cumene	1.0	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.0	Not Detected	7.2	Not Detected
Propylbenzene	1.0	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.0	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.0	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
alpha-Chlorotoluene	1.0	Not Detected	5.4	Not Detected
1,2-Dichlorobenzene	1.0	Not Detected	6.3	Not Detected
1,2,4-Trichlorobenzene	4.2	Not Detected	31	Not Detected
Hexachlorobutadiene	4.2	Not Detected	45	Not Detected
Butane	4.2	Not Detected UJ	10	Not Detected UJ
Isopentane	4.2	Not Detected	12	Not Detected

J = Estimated value.

UJ = Analyte associated with low bias in the CCV.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: VMP-55-20-110325

Lab ID#: 2511278A-05A

EPA METHOD TO-15 GC/MS

File Name:	14111427	Date of Collection:	11/3/25 10:21:00 AM
Dil. Factor:	107	Date of Analysis:	11/14/25 08:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	540	Not Detected	2600	Not Detected
Freon 114	540	Not Detected	3700	Not Detected
Chloromethane	2100	Not Detected	4400	Not Detected
Vinyl Chloride	540	Not Detected	1400	Not Detected
1,3-Butadiene	540	Not Detected	1200	Not Detected
Bromomethane	2100	Not Detected	8300	Not Detected
Chloroethane	2100	Not Detected	5600	Not Detected
Freon 11	540	Not Detected	3000	Not Detected
Ethanol	2700	Not Detected	5000	Not Detected
Freon 113	540	Not Detected	4100	Not Detected
1,1-Dichloroethene	540	Not Detected	2100	Not Detected
Acetone	2100	1200 J	5100	2900 J
2-Propanol	2700	Not Detected	6600	Not Detected
Carbon Disulfide	2100	Not Detected	6700	Not Detected
3-Chloropropene	2100	Not Detected	6700	Not Detected
Methylene Chloride	2100	Not Detected	7400	Not Detected
Methyl tert-butyl ether	540	Not Detected	1900	Not Detected
trans-1,2-Dichloroethene	540	Not Detected	2100	Not Detected
Hexane	540	13000	1900	47000
1,1-Dichloroethane	540	Not Detected	2200	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2100	Not Detected	6300	Not Detected
cis-1,2-Dichloroethene	540	Not Detected	2100	Not Detected
Tetrahydrofuran	540	Not Detected	1600	Not Detected
Chloroform	540	Not Detected	2600	Not Detected
1,1,1-Trichloroethane	540	Not Detected	2900	Not Detected
Cyclohexane	540	34000	1800	120000
Carbon Tetrachloride	540	Not Detected	3400	Not Detected
2,2,4-Trimethylpentane	540	26000	2500	120000
Benzene	540	Not Detected	1700	Not Detected
1,2-Dichloroethane	540	Not Detected	2200	Not Detected
Heptane	540	15000	2200	61000
Trichloroethene	540	Not Detected	2900	Not Detected
1,2-Dichloropropane	540	Not Detected	2500	Not Detected
1,4-Dioxane	2100	Not Detected	7700	Not Detected
Bromodichloromethane	540	Not Detected	3600	Not Detected
cis-1,3-Dichloropropene	540	Not Detected	2400	Not Detected
4-Methyl-2-pentanone	2100	Not Detected	8800	Not Detected
Toluene	540	Not Detected	2000	Not Detected
trans-1,3-Dichloropropene	540	Not Detected	2400	Not Detected
1,1,2-Trichloroethane	540	Not Detected	2900	Not Detected
Tetrachloroethene	540	Not Detected	3600	Not Detected
2-Hexanone	2100	Not Detected	8800	Not Detected

Client Sample ID: VMP-55-20-110325

Lab ID#: 2511278A-05A

EPA METHOD TO-15 GC/MS

File Name:	14111427	Date of Collection:	11/3/25 10:21:00 AM
Dil. Factor:	107	Date of Analysis:	11/14/25 08:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	540	Not Detected	4600	Not Detected
1,2-Dibromoethane (EDB)	540	Not Detected	4100	Not Detected
Chlorobenzene	540	Not Detected	2500	Not Detected
Ethyl Benzene	540	Not Detected	2300	Not Detected
m,p-Xylene	540	Not Detected	2300	Not Detected
o-Xylene	540	Not Detected	2300	Not Detected
Styrene	540	Not Detected	2300	Not Detected
Bromoform	540	Not Detected	5500	Not Detected
Cumene	540	Not Detected	2600	Not Detected
1,1,2,2-Tetrachloroethane	540	Not Detected	3700	Not Detected
Propylbenzene	540	Not Detected	2600	Not Detected
4-Ethyltoluene	540	Not Detected	2600	Not Detected
1,3,5-Trimethylbenzene	540	Not Detected	2600	Not Detected
1,2,4-Trimethylbenzene	540	Not Detected	2600	Not Detected
1,3-Dichlorobenzene	540	Not Detected	3200	Not Detected
1,4-Dichlorobenzene	540	Not Detected	3200	Not Detected
alpha-Chlorotoluene	540	Not Detected	2800	Not Detected
1,2-Dichlorobenzene	540	Not Detected	3200	Not Detected
1,2,4-Trichlorobenzene	2100	Not Detected	16000	Not Detected
Hexachlorobutadiene	2100	Not Detected	23000	Not Detected
Butane	2100	16000	5100	37000
Isopentane	2100	64000	6300	190000

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2511278A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111405c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/25 12:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2511278A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111405c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 12:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Butane	2.0	Not Detected UJ	4.8	Not Detected UJ
Isopentane	2.0	Not Detected	5.9	Not Detected

UJ = Analyte associated with low bias in the CCV.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2511278A-06B

EPA METHOD TO-15 GC/MS

File Name:	14111406c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/25 09:59 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	20	Not Detected	78	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	25	Not Detected	47	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	25	Not Detected	61	Not Detected
Carbon Disulfide	20	Not Detected	62	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	20	Not Detected	69	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	20	Not Detected	82	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2511278A-06B

EPA METHOD TO-15 GC/MS

File Name:	14111406c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 09:59 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected
Butane	20	Not Detected	48	Not Detected
Isopentane	20	Not Detected	59	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: CCV

Lab ID#: 2511278A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 10:31 AM

Compound	%Recovery
Freon 12	93
Freon 114	92
Chloromethane	85
Vinyl Chloride	81
1,3-Butadiene	84
Bromomethane	102
Chloroethane	92
Freon 11	92
Ethanol	123
Freon 113	96
1,1-Dichloroethene	89
Acetone	97
2-Propanol	110
Carbon Disulfide	87
3-Chloropropene	84
Methylene Chloride	106
Methyl tert-butyl ether	83
trans-1,2-Dichloroethene	91
Hexane	101
1,1-Dichloroethane	93
2-Butanone (Methyl Ethyl Ketone)	84
cis-1,2-Dichloroethene	88
Tetrahydrofuran	111
Chloroform	88
1,1,1-Trichloroethane	91
Cyclohexane	83
Carbon Tetrachloride	94
2,2,4-Trimethylpentane	109
Benzene	90
1,2-Dichloroethane	95
Heptane	89
Trichloroethene	95
1,2-Dichloropropane	95
1,4-Dioxane	109
Bromodichloromethane	93
cis-1,3-Dichloropropene	87
4-Methyl-2-pentanone	97
Toluene	91
trans-1,3-Dichloropropene	91
1,1,2-Trichloroethane	96
Tetrachloroethene	102
2-Hexanone	97

Client Sample ID: CCV

Lab ID#: 2511278A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 10:31 AM

Compound	%Recovery
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	100
Chlorobenzene	94
Ethyl Benzene	96
m,p-Xylene	96
o-Xylene	95
Styrene	94
Bromoform	113
Cumene	95
1,1,2,2-Tetrachloroethane	91
Propylbenzene	100
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	97
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	106
Butane	67 Q
Isopentane	92

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: CCV

Lab ID#: 2511278A-07B

EPA METHOD TO-15 GC/MS

File Name:	14111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 08:11 AM

Compound	%Recovery
Freon 12	102
Freon 114	112
Chloromethane	89
Vinyl Chloride	88
1,3-Butadiene	87
Bromomethane	101
Chloroethane	90
Freon 11	111
Ethanol	98
Freon 113	115
1,1-Dichloroethene	93
Acetone	92
2-Propanol	90
Carbon Disulfide	97
3-Chloropropene	105
Methylene Chloride	94
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	100
Hexane	91
1,1-Dichloroethane	93
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	101
Tetrahydrofuran	88
Chloroform	102
1,1,1-Trichloroethane	111
Cyclohexane	88
Carbon Tetrachloride	109
2,2,4-Trimethylpentane	86
Benzene	91
1,2-Dichloroethane	88
Heptane	83
Trichloroethene	91
1,2-Dichloropropane	85
1,4-Dioxane	94
Bromodichloromethane	99
cis-1,3-Dichloropropene	92
4-Methyl-2-pentanone	90
Toluene	88
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	90
Tetrachloroethene	99
2-Hexanone	90

Client Sample ID: CCV

Lab ID#: 2511278A-07B

EPA METHOD TO-15 GC/MS

File Name:	14111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 08:11 AM

Compound	%Recovery
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	95
Chlorobenzene	96
Ethyl Benzene	89
m,p-Xylene	93
o-Xylene	90
Styrene	94
Bromoform	110
Cumene	92
1,1,2,2-Tetrachloroethane	88
Propylbenzene	89
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	91
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	95
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	103
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	84
Hexachlorobutadiene	85
Butane	83
Isopentane	85

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2511278A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 11:04 AM

Compound	%Recovery	Method Limits
Freon 12	92	70-130
Freon 114	91	70-130
Chloromethane	75	70-130
Vinyl Chloride	79	70-130
1,3-Butadiene	81	70-130
Bromomethane	101	70-130
Chloroethane	91	70-130
Freon 11	89	70-130
Ethanol	125	70-130
Freon 113	93	70-130
1,1-Dichloroethene	84	70-130
Acetone	94	70-130
2-Propanol	119	70-130
Carbon Disulfide	84	70-130
3-Chloropropene	83	70-130
Methylene Chloride	100	70-130
Methyl tert-butyl ether	82	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	97	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	84	70-130
cis-1,2-Dichloroethene	85	70-130
Tetrahydrofuran	108	70-130
Chloroform	83	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	84	70-130
Carbon Tetrachloride	92	70-130
2,2,4-Trimethylpentane	107	70-130
Benzene	91	70-130
1,2-Dichloroethane	92	70-130
Heptane	87	70-130
Trichloroethene	94	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	91	70-130
cis-1,3-Dichloropropene	88	70-130
4-Methyl-2-pentanone	95	70-130
Toluene	89	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	95	70-130
Tetrachloroethene	100	70-130
2-Hexanone	96	70-130

Client Sample ID: LCS

Lab ID#: 2511278A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 11:04 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	104	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	95	70-130
o-Xylene	95	70-130
Styrene	94	70-130
Bromoform	112	70-130
Cumene	92	70-130
1,1,2,2-Tetrachloroethane	89	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	97	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	98	70-130
Hexachlorobutadiene	111	70-130
Butane	62 Q	70-130
Isopentane	90	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCSD

Lab ID#: 2511278A-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 11:38 AM

Compound	%Recovery	Method Limits
Freon 12	94	70-130
Freon 114	92	70-130
Chloromethane	74	70-130
Vinyl Chloride	81	70-130
1,3-Butadiene	83	70-130
Bromomethane	102	70-130
Chloroethane	92	70-130
Freon 11	90	70-130
Ethanol	124	70-130
Freon 113	94	70-130
1,1-Dichloroethene	85	70-130
Acetone	94	70-130
2-Propanol	121	70-130
Carbon Disulfide	86	70-130
3-Chloropropene	87	70-130
Methylene Chloride	100	70-130
Methyl tert-butyl ether	82	70-130
trans-1,2-Dichloroethene	91	70-130
Hexane	98	70-130
1,1-Dichloroethane	90	70-130
2-Butanone (Methyl Ethyl Ketone)	83	70-130
cis-1,2-Dichloroethene	88	70-130
Tetrahydrofuran	110	70-130
Chloroform	85	70-130
1,1,1-Trichloroethane	89	70-130
Cyclohexane	85	70-130
Carbon Tetrachloride	92	70-130
2,2,4-Trimethylpentane	108	70-130
Benzene	90	70-130
1,2-Dichloroethane	92	70-130
Heptane	87	70-130
Trichloroethene	93	70-130
1,2-Dichloropropane	93	70-130
1,4-Dioxane	106	70-130
Bromodichloromethane	90	70-130
cis-1,3-Dichloropropene	87	70-130
4-Methyl-2-pentanone	96	70-130
Toluene	88	70-130
trans-1,3-Dichloropropene	93	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	102	70-130
2-Hexanone	98	70-130

Client Sample ID: LCSD

Lab ID#: 2511278A-08AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 11:38 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	105	70-130
1,2-Dibromoethane (EDB)	101	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	97	70-130
o-Xylene	95	70-130
Styrene	95	70-130
Bromoform	112	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	95	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	96	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	98	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	103	70-130
Hexachlorobutadiene	117	70-130
Butane	64 Q	70-130
Isopentane	90	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: LCS

Lab ID#: 2511278A-08B

EPA METHOD TO-15 GC/MS

File Name:	14111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 08:35 AM

Compound	%Recovery	Method Limits
Freon 12	107	70-130
Freon 114	113	70-130
Chloromethane	97	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	86	70-130
Bromomethane	111	70-130
Chloroethane	96	70-130
Freon 11	116	70-130
Ethanol	100	70-130
Freon 113	111	70-130
1,1-Dichloroethene	92	70-130
Acetone	94	70-130
2-Propanol	103	70-130
Carbon Disulfide	102	70-130
3-Chloropropene	106	70-130
Methylene Chloride	94	70-130
Methyl tert-butyl ether	106	70-130
trans-1,2-Dichloroethene	103	70-130
Hexane	89	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	106	70-130
Tetrahydrofuran	87	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	113	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	114	70-130
2,2,4-Trimethylpentane	90	70-130
Benzene	98	70-130
1,2-Dichloroethane	95	70-130
Heptane	89	70-130
Trichloroethene	99	70-130
1,2-Dichloropropane	90	70-130
1,4-Dioxane	91	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	94	70-130
trans-1,3-Dichloropropene	104	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	108	70-130
2-Hexanone	91	70-130

Client Sample ID: LCS

Lab ID#: 2511278A-08B

EPA METHOD TO-15 GC/MS

File Name:	14111403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 08:35 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	98	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	95	70-130
o-Xylene	95	70-130
Styrene	99	70-130
Bromoform	115	70-130
Cumene	94	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	93	70-130
1,3,5-Trimethylbenzene	94	70-130
1,2,4-Trimethylbenzene	93	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	97	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	97	70-130
1,2,4-Trichlorobenzene	99	70-130
Hexachlorobutadiene	95	70-130
Butane	82	70-130
Isopentane	83	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: LCSD

Lab ID#: 2511278A-08BB

EPA METHOD TO-15 GC/MS

File Name:	14111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 09:04 AM

Compound	%Recovery	Method Limits
Freon 12	112	70-130
Freon 114	116	70-130
Chloromethane	101	70-130
Vinyl Chloride	98	70-130
1,3-Butadiene	90	70-130
Bromomethane	117	70-130
Chloroethane	102	70-130
Freon 11	118	70-130
Ethanol	98	70-130
Freon 113	113	70-130
1,1-Dichloroethene	97	70-130
Acetone	98	70-130
2-Propanol	102	70-130
Carbon Disulfide	107	70-130
3-Chloropropene	112	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	113	70-130
trans-1,2-Dichloroethene	104	70-130
Hexane	92	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	97	70-130
cis-1,2-Dichloroethene	108	70-130
Tetrahydrofuran	94	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	116	70-130
Cyclohexane	92	70-130
Carbon Tetrachloride	116	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	96	70-130
1,2-Dichloroethane	96	70-130
Heptane	86	70-130
Trichloroethene	98	70-130
1,2-Dichloropropane	89	70-130
1,4-Dioxane	90	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	96	70-130
4-Methyl-2-pentanone	90	70-130
Toluene	93	70-130
trans-1,3-Dichloropropene	105	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	105	70-130
2-Hexanone	91	70-130

Client Sample ID: LCSD

Lab ID#: 2511278A-08BB

EPA METHOD TO-15 GC/MS

File Name:	14111404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 09:04 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	99	70-130
o-Xylene	92	70-130
Styrene	98	70-130
Bromoform	116	70-130
Cumene	93	70-130
1,1,2,2-Tetrachloroethane	90	70-130
Propylbenzene	94	70-130
4-Ethyltoluene	92	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	97	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	95	70-130
1,2,4-Trichlorobenzene	93	70-130
Hexachlorobutadiene	90	70-130
Butane	92	70-130
Isopentane	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	107	70-130

**Analytical Report**

11/17/2025  
Mr. Samuel Fisher  
AECOM  
411 Broadway Ave

South Roxana IL 62087

Project Name: Roxana Quarterly Soil Vapor  
Project #: 60771235-4.5.1  
Workorder #: 2511278B

Dear Mr. Samuel Fisher

The following report includes the data for the above referenced project for sample(s) received on 11/13/2025 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker  
Project Manager

**WORK ORDER #: 2511278B**

Work Order Summary

<b>CLIENT:</b>	Mr. Samuel Fisher AECOM 411 Broadway Ave South Roxana, IL 62087	<b>BILL TO:</b>	Accounts Payable Austin (non-Federal) AECOM PO Box 203970 Austin, TX 78720
<b>PHONE:</b>	314-296-1969	<b>P.O. #</b>	1739680
<b>FAX:</b>		<b>PROJECT #</b>	60771235-4.5.1 Roxana Quarterly Soil
<b>DATE RECEIVED:</b>	11/13/2025	<b>CONTACT:</b>	Vapor Brran Whittaker
<b>DATE COMPLETED:</b>	11/17/2025		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VMP-15-5-110325	Modified ASTM D-1946	6.3 "Hg	9.8 psi
02A	VMP-15-21.5-110325	Modified ASTM D-1946	6.9 "Hg	10 psi
03A	VMP-15-25.5-110325	Modified ASTM D-1946	7.3 "Hg	10 psi
04A	VMP-15-29-110325	Modified ASTM D-1946	6.1 "Hg	9.9 psi
05A	VMP-55-20-110325	Modified ASTM D-1946	6.9 "Hg	9.5 psi
06A	Lab Blank	Modified ASTM D-1946	NA	NA
06B	Lab Blank	Modified ASTM D-1946	NA	NA
07A	CCV	Modified ASTM D-1946	NA	NA
08A	LCS	Modified ASTM D-1946	NA	NA
08AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:   
 \_\_\_\_\_  
 Technical Director

DATE: 11/17/25  
 \_\_\_\_\_

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2836569, NH NELAP-209224-A, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-13180, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-21  
 Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000

**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**AECOM**  
**Workorder# 2511278B**

Five 1 Liter Summa Canister samples were received on November 13, 2025. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-15-5-110325**

**Lab ID#: 2511278B-01A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.21	20
Nitrogen	1.0	79
Carbon Dioxide	0.021	0.66

**Client Sample ID: VMP-15-21.5-110325**

**Lab ID#: 2511278B-02A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	16
Nitrogen	1.1	80
Carbon Dioxide	0.022	4.2

**Client Sample ID: VMP-15-25.5-110325**

**Lab ID#: 2511278B-03A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	17
Nitrogen	1.1	79
Carbon Dioxide	0.022	4.0

**Client Sample ID: VMP-15-29-110325**

**Lab ID#: 2511278B-04A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.21	16
Nitrogen	1.0	79
Carbon Dioxide	0.021	4.6

**Client Sample ID: VMP-55-20-110325**

**Lab ID#: 2511278B-05A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
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**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VMP-55-20-110325**

**Lab ID#: 2511278B-05A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.21	3.8
Nitrogen	1.1	80
Methane	0.00021	0.62
Carbon Dioxide	0.021	16

Client Sample ID: VMP-15-5-110325

Lab ID#: 2511278B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111408	Date of Collection: 11/3/25 11:35:00 AM
Dil. Factor:	2.11	Date of Analysis: 11/14/25 12:36 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	20
Nitrogen	1.0	79
Carbon Monoxide	0.021	Not Detected
Methane	0.00021	Not Detected
Carbon Dioxide	0.021	0.66
Ethane	0.0021	Not Detected
Ethene	0.0021	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-15-21.5-110325

Lab ID#: 2511278B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111409	Date of Collection:	11/3/25 11:53:00 AM
Dil. Factor:	2.18	Date of Analysis:	11/14/25 01:23 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	16
Nitrogen	1.1	80
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	4.2
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-15-25.5-110325

Lab ID#: 2511278B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111410	Date of Collection: 11/3/25 12:17:00 PM
Dil. Factor:	2.22	Date of Analysis: 11/14/25 01:48 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	17
Nitrogen	1.1	79
Carbon Monoxide	0.022	Not Detected
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	4.0
Ethane	0.0022	Not Detected
Ethene	0.0022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-15-29-110325

Lab ID#: 2511278B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111411	Date of Collection: 11/3/25 12:55:00 PM
Dil. Factor:	2.10	Date of Analysis: 11/14/25 02:12 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	16
Nitrogen	1.0	79
Carbon Monoxide	0.021	Not Detected
Methane	0.00021	Not Detected
Carbon Dioxide	0.021	4.6
Ethane	0.0021	Not Detected
Ethene	0.0021	Not Detected
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: VMP-55-20-110325

Lab ID#: 2511278B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111412	Date of Collection:	11/3/25 10:21:00 AM
Dil. Factor:	2.14	Date of Analysis:	11/14/25 02:37 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	3.8
Nitrogen	1.1	80
Carbon Monoxide	0.021	Not Detected
Methane	0.00021	0.62
Carbon Dioxide	0.021	16
Ethane	0.0021	Not Detected
Ethene	0.0021	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister



Client Sample ID: Lab Blank

Lab ID#: 2511278B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/25 10:44 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.50	Not Detected
Carbon Monoxide	0.010	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Ethane	0.0010	Not Detected
Ethene	0.0010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2511278B-06B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111403c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/14/25 10:18 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2511278B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111401	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 09:31 AM

Compound	%Recovery
Oxygen	104
Nitrogen	91
Carbon Monoxide	100
Methane	100
Carbon Dioxide	101
-----	
Ethane	100
Ethene	105
Helium	106

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2511278B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 09:55 AM

Compound	%Recovery	Method Limits
Oxygen	100	85-115
Nitrogen	91	85-115
Carbon Monoxide	100	85-115
Methane	100	85-115
Carbon Dioxide	103	85-115
Ethane	103	85-115
Ethene	103	85-115
Helium	108	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2511278B-08AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10111425	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/14/25 09:27 PM

Compound	%Recovery	Method Limits
Oxygen	100	85-115
Nitrogen	91	85-115
Carbon Monoxide	100	85-115
Methane	102	85-115
Carbon Dioxide	103	85-115
Ethane	104	85-115
Ethene	105	85-115
Helium	108	85-115

Container Type: NA - Not Applicable