

09/27/2022

Wausau Area Property Management
C/O: Brougan Milbradt
1010 Grand Avenue
Schofield, WI 54476

SUBJECT: Vapor Sampling Results - Contaminants Not Detected
PROPERTY: 127 East Thomas Street, Wausau, WI 54401; BRRTS #0237000273

Dear Brougan Milbradt,

Included are the findings of a recent investigation completed by Arcadis U.S. Inc. (Arcadis) on your property located at 127 East Thomas Street, Wausau, WI 54401.

As you are aware, this investigation was conducted because of the potential for contaminant vapors to be generated from groundwater leaving the nearby Former Wausau Motor property and the potential for these vapors to migrate through soil, accumulate beneath the foundation of your home, and possibly enter your indoor air. The contaminant of concern at the former Wausau Motor property was trichloroethylene or TCE. The history of this site and the potential concerns to neighboring residents were described in detail in the original letter sent to your home. The former Wausau Motors site is currently used by 3M as a parking lot and rail car storage.

On 08/29/2022, Arcadis, hired by 3M, started collecting an indoor air sample and a duplicate indoor air sample in the basement of your building. These indoor air samples were collected the next day (08/30/2022) after 24 hours of sampling. On 08/30/2022 after collecting the indoor air samples, Arcadis collected a sub-slab vapor sample from the sub-slab sampling port. The sub-slab sample port was installed into the floor of your foundation during the first sampling event on 6/9/2022. The indoor air and sub-slab vapor samples were submitted to Eurofins Air Toxics LLC for laboratory analysis of four contaminants including TCE, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene and vinyl chloride.

Your Test Results:

Attached is a copy of the laboratory report for your sub-slab vapor and indoor air samples. The results of this round of sampling show that TCE and/or by-products were not detected in the indoor air or sub-slab vapor, confirming the results of the first sampling event conducted in June 2022. There does not appear to be a risk of TCE vapor entering your home from beneath the foundation at this time. In order to confirm the results, Arcadis will contact you to schedule one additional sampling visit in the near future.

Please feel free to contact me at 651-381-2583 if you have any questions about these results.

Sincerely,

Kevin Madson,
3M Center, Bldg 224-5-W-17
Maplewood, MN 55114
651-381-2583

Copy: Matt Thompson; Phone: 715-492-2304
Brougan Milbradt, Wausau Area Property Management



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "brownfield"



Table 1
Summary of Indoor Air and Sub-Slab Analytical Results
127 East Thomas Street
Wausau, WI

	Location ID	North ROW Thomas Street^	North ROW Thomas Street^	127 East Thomas Street	127 East Thomas Street	127 East Thomas Street	127 East Thomas Street
	Sample ID	OA-1 (06082022)	OA-1 (08292022)	IA-02B	IA-DUP	IA-02B	IA-DUP
	Sample Date	6/9/2022	8/30/2022	6/9/2022	6/9/2022	8/30/2022	8/30/2022
Chemical Name	Indoor Air VALs* (µg/m ³)						
cis-1,2-Dichloroethene	NL	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	42	ND	ND	ND	ND	ND	ND
Trichloroethene	2.1	ND	ND	ND	ND	ND	ND
Vinyl chloride	1.7	ND	ND	ND	ND	ND	ND

	Location ID	127 East Thomas Street	127 East Thomas Street
	Sample ID	SS-02	SS-02
	Sample Date	6/9/2022	8/30/2022
Chemical Name	Sub-Slab RSLs** (µg/m ³)		
cis-1,2-Dichloroethene	NL	ND	ND
trans-1,2-Dichloroethene	1400	ND	ND
Trichloroethene	70	ND	ND
Vinyl chloride	56	ND	ND

Acronyms and Abbreviations:

DUP - duplicate sample
 ID - Identification
 ND - Not Detected
 NL - Not Listed
 RL - Reporting Limit

ROW - Right-of-way
 RSL - Risk Screening Level
 µg/m³ - microgram per cubic meter
 VAL - Vapor Action Levels

*Wisconsin Remediation and Redevelopment Residential Indoor Air Vapor Action Levels - August 2022

**Wisconsin Remediation and Redevelopment Residential Sub-Slab Risk Screening Levels - August 2022

^North ROW of Thomas Street, Across from 127/129 East Thomas Street

9/12/2022

Amir Roghani
Arcadis U.S., Inc.
2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau, WI

Project #: 30130403

Workorder #: 2208860A

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 8/31/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 SIM 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 #: 2208860A

Work Order Summary

CLIENT:	Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170 Lexington, KY 40509	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	859-253-9036	P.O. #	30130403
FAX:	(859) 253-9136	PROJECT #	30130403 3M Wausau, WI
DATE RECEIVED:	08/31/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	09/12/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OA-1(082922)	Modified TO-15 SIM	5.3 "Hg	1.6 psi
02A	IA-02B	Modified TO-15 SIM	5.7 "Hg	1.8 psi
04A	IA-DUP	Modified TO-15 SIM	5.7 "Hg	1.7 psi
05A	Lab Blank	Modified TO-15 SIM	NA	NA
06A	CCV	Modified TO-15 SIM	NA	NA
07A	LCS	Modified TO-15 SIM	NA	NA
07AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/12/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

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

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-15 SIM
Arcadis U.S., Inc.
Workorder# 2208860A

Four 6 Liter Summa Canister (100% SIM Ambient) samples were received on August 31, 2022. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

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>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate 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.

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
MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: OA-1(082922)

Lab ID#: 2208860A-01A

No Detections Were Found.

Client Sample ID: IA-02B

Lab ID#: 2208860A-02A

No Detections Were Found.

Client Sample ID: IA-DUP

Lab ID#: 2208860A-04A

No Detections Were Found.

Client Sample ID: OA-1(082922)

Lab ID#: 2208860A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090712sim	Date of Collection: 8/30/22 8:15:00 AM
Dil. Factor:	1.35	Date of Analysis: 9/7/22 07:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.034	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.54	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	89	70-130

Client Sample ID: IA-02B

Lab ID#: 2208860A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090713sim	Date of Collection: 8/30/22 11:30:00 AM
Dil. Factor:	1.38	Date of Analysis: 9/7/22 10:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: IA-DUP

Lab ID#: 2208860A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090715sim	Date of Collection: 8/30/22
Dil. Factor:	1.38	Date of Analysis: 9/7/22 11:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: Lab Blank

Lab ID#: 2208860A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090706sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 01:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: CCV

Lab ID#: 2208860A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090702sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 11:06 AM

Compound	%Recovery
Vinyl Chloride	100
cis-1,2-Dichloroethene	90
Trichloroethene	90
trans-1,2-Dichloroethene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 2208860A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090703sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 11:44 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	103	70-130
cis-1,2-Dichloroethene	91	70-130
Trichloroethene	93	70-130
trans-1,2-Dichloroethene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: LCSD

Lab ID#: 2208860A-07AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090704sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 12:21 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	104	70-130
cis-1,2-Dichloroethene	93	70-130
Trichloroethene	95	70-130
trans-1,2-Dichloroethene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

9/12/2022

Amir Roghani
Arcadis U.S., Inc.
2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau, WI
Project #: 30130403
Workorder #: 2208860B

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 8/31/2022 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 #: 2208860B

Work Order Summary

CLIENT:	Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170 Lexington, KY 40509	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	859-253-9036	P.O. #	30130403
FAX:	(859) 253-9136	PROJECT #	30130403 3M Wausau, WI
DATE RECEIVED:	08/31/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	09/12/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
05A	SS-02	TO-15	6.1 "Hg	10 psi
07A	Lab Blank	TO-15	NA	NA
08A	CCV	TO-15	NA	NA
09A	LCS	TO-15	NA	NA
09AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/12/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 2208860B

Two 1 Liter Summa Canister samples were received on August 31, 2022. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody was missing method assignment in the 'Requested Analyses' checkboxes for the associated samples. EATL proceeded with the analysis as per the original contract or verbal agreement.

Analytical Notes

There were no analytical discrepancies.

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



Air Toxics

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

Client Sample ID: SS-02

Lab ID#: 2208860B-05A

No Detections Were Found.

Client Sample ID: SS-02

Lab ID#: 2208860B-05A

EPA METHOD TO-15 GC/MS

File Name:	a090919	Date of Collection:	8/30/22 11:55:00 AM
Dil. Factor:	2.11	Date of Analysis:	9/9/22 10:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	79	70-130

Client Sample ID: Lab Blank

Lab ID#: 2208860B-07A

EPA METHOD TO-15 GC/MS

File Name:	a090909c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 03:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	81	70-130

Client Sample ID: CCV

Lab ID#: 2208860B-08A

EPA METHOD TO-15 GC/MS

File Name:	a090907	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 02:06 PM

Compound	%Recovery
Vinyl Chloride	115
cis-1,2-Dichloroethene	107
Trichloroethene	120
trans-1,2-Dichloroethene	107

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: LCS

Lab ID#: 2208860B-09A

EPA METHOD TO-15 GC/MS

File Name:	a090905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 12:57 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	112	70-130
cis-1,2-Dichloroethene	102	70-130
Trichloroethene	106	70-130
trans-1,2-Dichloroethene	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: LCSD

Lab ID#: 2208860B-09AA

EPA METHOD TO-15 GC/MS

File Name:	a090906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 01:24 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	113	70-130
cis-1,2-Dichloroethene	103	70-130
Trichloroethene	105	70-130
trans-1,2-Dichloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130

09/27/2022

Terry Kilian-Lewandowski
133 East Thomas
Wausau, WI 54401

SUBJECT: Vapor Sampling Results - Contaminants Not Detected
PROPERTY: 133 East Thomas Street, Wausau, WI 54401; BRRTS #0237000273

Dear Terry Kilian-Lewandowski,

Included are the findings of a recent investigation conducted by Arcadis U.S. Inc. (Arcadis) on your property located at 133 East Thomas Street, Wausau, WI 54401.

As you are aware, this investigation was conducted because of the potential for contaminant vapors to be generated from groundwater leaving the nearby Former Wausau Motors property and the potential for these vapors to migrate through soil, accumulate beneath the foundation of your home, and possibly enter your indoor air. The contaminant of concern at the Former Wausau Motors property was trichloroethylene or TCE. The history of this site and the potential concerns to neighboring residents were described in detail in the original letter sent to your home. The former Wausau Motors site is currently used by 3M Company (3M) as a parking lot and rail car storage.

On 08/29/2022, Arcadis hired by 3M, started collecting an indoor air sample in the basement of your building. This indoor air sample was collected the next day (08/30/2022) after 24 hours of sampling. On 08/30/2022 after collecting the indoor air sample, Arcadis collected a sub-slab vapor sample from the sub-slab sampling port. The sub-slab sample port was installed into the floor of your foundation during the first sampling event on 6/9/2022. The indoor air and sub-slab vapor samples were submitted to Eurofins Air Toxics LLC for laboratory analysis of four contaminants including TCE, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene and vinyl chloride.

Your Test Results:

Attached is a copy of the laboratory report for your sub-slab vapor and indoor air samples. The results of this round of sampling show that TCE and/or by-products were not detected in the indoor air or sub-slab vapor, confirming the results of the first sampling event conducted in June 2022. There does not appear to be a risk of TCE vapor entering your home from beneath the foundation at this time. In order to confirm the results, Arcadis will contact you to schedule one additional sampling visit in the near future.

Please feel free to contact me at 651-381-2583 if you have any questions about these results.

Sincerely,

Kevin Madson,
3M Center, Bldg 224-5-W-17
Maplewood, MN 55114
651-381-2583

Copy: Matt Thompson; Phone: 715-492-2304
Terry Kilian-Lewandowski



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "brownfield"



Table 1
Summary of Indoor Air and Sub-Slab Analytical Results
133 East Thomas Street
Wausau, WI

	Location ID	North ROW Thomas Street^	North ROW Thomas Street^	133 East Thomas Street	133 East Thomas Street
	Sample ID	OA-1 (06082022)	OA-1 (08292022)	IA-04B	IA-04B
	Sample Date	6/9/2022	8/30/2022	6/9/2022	8/30/2022
Chemical Name	Indoor Air VALs* ($\mu\text{g}/\text{m}^3$)				
cis-1,2-Dichloroethene	NL	ND	ND	ND	ND
trans-1,2-Dichloroethene	42	ND	ND	ND	ND
Trichloroethene	2.1	ND	ND	ND	ND
Vinyl chloride	1.7	ND	ND	ND	ND

	Location ID	133 East Thomas Street	133 East Thomas Street
	Sample ID	SS-04	SS-04
	Sample Date	6/9/2022	8/30/2022
Chemical Name	Sub-Slab RSLs** ($\mu\text{g}/\text{m}^3$)		
cis-1,2-Dichloroethene	NL	ND	ND
trans-1,2-Dichloroethene	1400	ND	ND
Trichloroethene	70	ND	ND
Vinyl chloride	56	ND	ND

Acronyms and Abbreviations:

ID - Identification
 ND - Not Detected
 NL - Not Listed
 RL - Reporting Limit
 ROW - Right-of-way
 RSL - Risk Screening Level
 $\mu\text{g}/\text{m}^3$ - microgram per cubic meter
 VAL - Vapor Action Levels

*WI Remediation and Redevelopment Residential Indoor Air Vapor Action Levels - August 2022

**WI Remediation and Redevelopment Residential Sub-Slab Risk Screening Levels - August 2022

^North ROW of Thomas Street, Across from 127/129 East Thomas Street

9/12/2022

Amir Roghani
Arcadis U.S., Inc.
2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau, WI

Project #: 30130403

Workorder #: 2208860A

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 8/31/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 SIM 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 #: 2208860A

Work Order Summary

CLIENT:	Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170 Lexington, KY 40509	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	859-253-9036	P.O. #	30130403
FAX:	(859) 253-9136	PROJECT #	30130403 3M Wausau, WI
DATE RECEIVED:	08/31/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	09/12/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A0	OA-1(082922)	Modified TO-15 SIM	5.3 "Hg	1.6 psi
3A	IA-04B	Modified TO-15 SIM	5.9 "Hg	1.7 psi
05A	Lab Blank	Modified TO-15 SIM	NA	NA
06A	CCV	Modified TO-15 SIM	NA	NA
07A	LCS	Modified TO-15 SIM	NA	NA
07AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/12/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-15 SIM
Arcadis U.S., Inc.
Workorder# 2208860A

Four 6 Liter Summa Canister (100% SIM Ambient) samples were received on August 31, 2022. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

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>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate 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.

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
MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: OA-1(082922)

Lab ID#: 2208860A-01A

No Detections Were Found.

Client Sample ID: IA-04B

Lab ID#: 2208860A-03A

No Detections Were Found.

Client Sample ID: OA-1(082922)

Lab ID#: 2208860A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090712sim	Date of Collection: 8/30/22 8:15:00 AM
Dil. Factor:	1.35	Date of Analysis: 9/7/22 07:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.034	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.54	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	89	70-130

Client Sample ID: IA-04B

Lab ID#: 2208860A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090714sim	Date of Collection: 8/30/22 1:15:00 PM
Dil. Factor:	1.39	Date of Analysis: 9/7/22 11:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: Lab Blank

Lab ID#: 2208860A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090706sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 01:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: CCV

Lab ID#: 2208860A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090702sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 11:06 AM

Compound	%Recovery
Vinyl Chloride	100
cis-1,2-Dichloroethene	90
Trichloroethene	90
trans-1,2-Dichloroethene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 2208860A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090703sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 11:44 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	103	70-130
cis-1,2-Dichloroethene	91	70-130
Trichloroethene	93	70-130
trans-1,2-Dichloroethene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: LCSD

Lab ID#: 2208860A-07AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090704sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 12:21 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	104	70-130
cis-1,2-Dichloroethene	93	70-130
Trichloroethene	95	70-130
trans-1,2-Dichloroethene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

9/12/2022

Amir Roghani
Arcadis U.S., Inc.
2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau, WI
Project #: 30130403
Workorder #: 2208860B

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 8/31/2022 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 #: 2208860B

Work Order Summary

CLIENT:	Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170 Lexington, KY 40509	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	859-253-9036	P.O. #	30130403
FAX:	(859) 253-9136	PROJECT #	30130403 3M Wausau, WI
DATE RECEIVED:	08/31/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	09/12/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
06A	SS-04	TO-15	6.3 "Hg	9.9 psi
07A	Lab Blank	TO-15	NA	NA
08A	CCV	TO-15	NA	NA
09A	LCS	TO-15	NA	NA
09AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/12/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 2208860B

Two 1 Liter Summa Canister samples were received on August 31, 2022. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody was missing method assignment in the 'Requested Analyses' checkboxes for the associated samples. EATL proceeded with the analysis as per the original contract or verbal agreement.

Analytical Notes

There were no analytical discrepancies.

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



Air Toxics

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

Client Sample ID: SS-04

Lab ID#: 2208860B-06A

No Detections Were Found.

Client Sample ID: SS-04

Lab ID#: 2208860B-06A

EPA METHOD TO-15 GC/MS

File Name:	a090920	Date of Collection:	8/30/22 1:42:00 PM
Dil. Factor:	2.12	Date of Analysis:	9/9/22 11:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Trichloroethene	1.1	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	80	70-130

Client Sample ID: Lab Blank

Lab ID#: 2208860B-07A

EPA METHOD TO-15 GC/MS

File Name:	a090909c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/9/22 03:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	81	70-130

Client Sample ID: CCV

Lab ID#: 2208860B-08A

EPA METHOD TO-15 GC/MS

File Name:	a090907	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 02:06 PM

Compound	%Recovery
Vinyl Chloride	115
cis-1,2-Dichloroethene	107
Trichloroethene	120
trans-1,2-Dichloroethene	107

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: LCS

Lab ID#: 2208860B-09A

EPA METHOD TO-15 GC/MS

File Name:	a090905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 12:57 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	112	70-130
cis-1,2-Dichloroethene	102	70-130
Trichloroethene	106	70-130
trans-1,2-Dichloroethene	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: LCSD

Lab ID#: 2208860B-09AA

EPA METHOD TO-15 GC/MS

File Name:	a090906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 01:24 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	113	70-130
cis-1,2-Dichloroethene	103	70-130
Trichloroethene	105	70-130
trans-1,2-Dichloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130

9/12/2022

Amir Roghani
Arcadis U.S., Inc.
2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau, WI

Project #: 30130403

Workorder #: 2208860A

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 8/31/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 SIM 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 #: 2208860A

Work Order Summary

CLIENT:	Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170 Lexington, KY 40509	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	859-253-9036	P.O. #	30130403
FAX:	(859) 253-9136	PROJECT #	30130403 3M Wausau, WI
DATE RECEIVED:	08/31/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	09/12/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OA-1(082922)	Modified TO-15 SIM	5.3 "Hg	1.6 psi
02A	IA-02B	Modified TO-15 SIM	5.7 "Hg	1.8 psi
03A	IA-04B	Modified TO-15 SIM	5.9 "Hg	1.7 psi
04A	IA-DUP	Modified TO-15 SIM	5.7 "Hg	1.7 psi
05A	Lab Blank	Modified TO-15 SIM	NA	NA
06A	CCV	Modified TO-15 SIM	NA	NA
07A	LCS	Modified TO-15 SIM	NA	NA
07AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/12/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-15 SIM
Arcadis U.S., Inc.
Workorder# 2208860A

Four 6 Liter Summa Canister (100% SIM Ambient) samples were received on August 31, 2022. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

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>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate 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.

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



Air Toxics

**Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: OA-1(082922)

Lab ID#: 2208860A-01A

No Detections Were Found.

Client Sample ID: IA-02B

Lab ID#: 2208860A-02A

No Detections Were Found.

Client Sample ID: IA-04B

Lab ID#: 2208860A-03A

No Detections Were Found.

Client Sample ID: IA-DUP

Lab ID#: 2208860A-04A

No Detections Were Found.

Client Sample ID: OA-1(082922)

Lab ID#: 2208860A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090712sim	Date of Collection: 8/30/22 8:15:00 AM
Dil. Factor:	1.35	Date of Analysis: 9/7/22 07:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.034	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.54	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	89	70-130

Client Sample ID: IA-02B

Lab ID#: 2208860A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090713sim	Date of Collection: 8/30/22 11:30:00 AM
Dil. Factor:	1.38	Date of Analysis: 9/7/22 10:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: IA-04B

Lab ID#: 2208860A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090714sim	Date of Collection: 8/30/22 1:15:00 PM
Dil. Factor:	1.39	Date of Analysis: 9/7/22 11:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: IA-DUP

Lab ID#: 2208860A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090715sim	Date of Collection: 8/30/22
Dil. Factor:	1.38	Date of Analysis: 9/7/22 11:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: Lab Blank

Lab ID#: 2208860A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090706sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 01:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: CCV

Lab ID#: 2208860A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090702sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 11:06 AM

Compound	%Recovery
Vinyl Chloride	100
cis-1,2-Dichloroethene	90
Trichloroethene	90
trans-1,2-Dichloroethene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 2208860A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090703sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 11:44 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	103	70-130
cis-1,2-Dichloroethene	91	70-130
Trichloroethene	93	70-130
trans-1,2-Dichloroethene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: LCSD

Lab ID#: 2208860A-07AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	16090704sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/22 12:21 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	104	70-130
cis-1,2-Dichloroethene	93	70-130
Trichloroethene	95	70-130
trans-1,2-Dichloroethene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

9/12/2022

Amir Roghani
Arcadis U.S., Inc.
2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau, WI

Project #: 30130403

Workorder #: 2208860B

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 8/31/2022 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 #: 2208860B

Work Order Summary

CLIENT:	Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170 Lexington, KY 40509	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	859-253-9036	P.O. #	30130403
FAX:	(859) 253-9136	PROJECT #	30130403 3M Wausau, WI
DATE RECEIVED:	08/31/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	09/12/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
05A	SS-02	TO-15	6.1 "Hg	10 psi
06A	SS-04	TO-15	6.3 "Hg	9.9 psi
07A	Lab Blank	TO-15	NA	NA
08A	CCV	TO-15	NA	NA
09A	LCS	TO-15	NA	NA
09AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/12/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

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

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 2208860B

Two 1 Liter Summa Canister samples were received on August 31, 2022. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody was missing method assignment in the 'Requested Analyses' checkboxes for the associated samples. EATL proceeded with the analysis as per the original contract or verbal agreement.

Analytical Notes

There were no analytical discrepancies.

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: SS-02

Lab ID#: 2208860B-05A

No Detections Were Found.

Client Sample ID: SS-04

Lab ID#: 2208860B-06A

No Detections Were Found.

Client Sample ID: SS-02

Lab ID#: 2208860B-05A

EPA METHOD TO-15 GC/MS

File Name:	a090919	Date of Collection:	8/30/22 11:55:00 AM
Dil. Factor:	2.11	Date of Analysis:	9/9/22 10:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	79	70-130

Client Sample ID: SS-04

Lab ID#: 2208860B-06A

EPA METHOD TO-15 GC/MS

File Name:	a090920	Date of Collection:	8/30/22 1:42:00 PM
Dil. Factor:	2.12	Date of Analysis:	9/9/22 11:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Trichloroethene	1.1	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	80	70-130

Client Sample ID: Lab Blank

Lab ID#: 2208860B-07A

EPA METHOD TO-15 GC/MS

File Name:	a090909c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 03:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	81	70-130

Client Sample ID: CCV

Lab ID#: 2208860B-08A

EPA METHOD TO-15 GC/MS

File Name:	a090907	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 02:06 PM

Compound	%Recovery
Vinyl Chloride	115
cis-1,2-Dichloroethene	107
Trichloroethene	120
trans-1,2-Dichloroethene	107

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: LCS

Lab ID#: 2208860B-09A

EPA METHOD TO-15 GC/MS

File Name:	a090905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 12:57 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	112	70-130
cis-1,2-Dichloroethene	102	70-130
Trichloroethene	106	70-130
trans-1,2-Dichloroethene	105	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: LCSD

Lab ID#: 2208860B-09AA

EPA METHOD TO-15 GC/MS

File Name:	a090906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/22 01:24 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	113	70-130
cis-1,2-Dichloroethene	103	70-130
Trichloroethene	105	70-130
trans-1,2-Dichloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	94	70-130