03/24/2023
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 completed 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 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 02/28/2023, 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 (03/01/2023) after 24 hours of sampling. On 03/01/2023 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-dichloroehtylene 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 previous sampling events conducted in June and August 2022. There does not appear to be a risk of TCE vapor entering your home from beneath the foundation at this time.

We will be submitting a recommendation of no further indoor air or sub-slab vapor sampling at your property to the Wisconsin Department of Natural Resources (WDNR). Once the WDNR confirms that there is no risk of TCE vapor entering your home from beneath the foundation, we will contact you to schedule a time to remove the sub-slab vapor sampling port from the basement that is convenient for you.

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

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

ARCADIS — Design & Consultancy for natural and built assets

Chemical Name	Location ID	North ROW Thomas Street^	North ROW Thomas Street^	North ROW Thomas Street^	133 East Thomas Street	133 East Thomas Street	133 East Thomas Street	133 East Thomas Street
	Sample ID	OA-1 (06082022)	OA-1 (08292022)	OA-1 (02282023)	IA-04B	IA-04B	IA-04B	IA-DUP
	Sample Date	6/9/2022	8/30/2022	3/1/2023	6/9/2022	8/30/2022	3/1/2023	3/1/2023
	Indoor Air VALs* ($\mu g/m^3$)							
cis-1,2-Dichloroethene	42	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	42	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	2.1	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1.7	ND	ND	ND	ND	ND	ND	ND

Chemical Name	Location ID	133 East Thomas Street	133 East Thomas Street	133 East Thomas Street
	Sample ID	SS-04	SS-04	SS-04
	Sample Date	6/9/2022	8/30/2022	3/1/2023
	Sub-Slab RSLs** ($\mu g/m^3$)			
cis-1,2-Dichloroethene	1400	ND	ND	ND
trans-1,2-Dichloroethene	1400	ND	ND	ND
Trichloroethene	70	ND	ND	ND
Vinyl chloride	56	ND	ND	ND

Acronyms and Abbreviations:

ID - Identification
ND - Not Detected
RL - Reporting Limit

ROW - Right-of-way
RSL - Risk Screening Level
$\mu g/m^3$ - microgram per cubic meter
VAL - Vapor Action Levels

*WI Remediation and Redevelopment Residential Indoor Air Vapor Action Levels - January 2023
**WI Remediation and Redevelopment Residential Sub-Slab Risk Screening Levels - January 2023
^North ROW of Thomas Street, Across from 127/129 East Thomas Street

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Analytical Report

3/16/2023

Amir Roghani

Arcadis U.S., Inc.

2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M-Wausau

Project #:

Workorder #: 2303169A

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 3/3/2023 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

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WORK ORDER #: 2303169A

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 #**	3M-Wausau
DATE RECEIVED:	03/03/2023	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	03/16/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OA-1(022823)	Modified TO-15 SIM	4.5 "Hg	2 psi
02A	IA-04B(022823)	Modified TO-15 SIM	5.5 "Hg	2 psi
03A	IA-DUP(022823)	Modified TO-15 SIM	5.0 "Hg	2 psi
04A	Lab Blank	Modified TO-15 SIM	NA	NA
05A	CCV	Modified TO-15 SIM	NA	NA
06A	LCS	Modified TO-15 SIM	NA	NA
06AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: _____

Technical Director

DATE: 03/16/23

LABORATORY NARRATIVE
Modified TO-15 SIM
Arcadis U.S., Inc.
Workorder# 2303169A

Three 6 Liter Summa Canister (100% SIM Ambient) samples were received on March 03, 2023. 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.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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(022823)

Lab ID#: 2303169A-01A

No Detections Were Found.

Client Sample ID: IA-04B(022823)

Lab ID#: 2303169A-02A

No Detections Were Found.

Client Sample ID: IA-DUP(022823)

Lab ID#: 2303169A-03A

No Detections Were Found.

Client Sample ID: OA-1(022823)

Lab ID#: 2303169A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031018sim	Date of Collection: 3/1/23 2:20:00 PM
Dil. Factor:	1.34	Date of Analysis: 3/10/23 09:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.013	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	0.13	Not Detected	0.53	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: IA-04B(022823)

Lab ID#: 2303169A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031019sim	Date of Collection: 3/1/23 3:29:00 PM
Dil. Factor:	1.39	Date of Analysis: 3/10/23 10:25 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	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: IA-DUP(022823)

Lab ID#: 2303169A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031020sim	Date of Collection: 3/1/23
Dil. Factor:	1.36	Date of Analysis: 3/10/23 11:04 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	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.15	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	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2303169A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031006simc	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 12:25 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	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	88	70-130

Client Sample ID: CCV

Lab ID#: 2303169A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031002sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 08:47 AM

Compound	%Recovery
Vinyl Chloride	121
cis-1,2-Dichloroethene	116
Trichloroethene	99
trans-1,2-Dichloroethene	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: LCS

Lab ID#: 2303169A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031003sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 09:58 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	122	70-130
cis-1,2-Dichloroethene	117	70-130
Trichloroethene	94	70-130
trans-1,2-Dichloroethene	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: LCSD

Lab ID#: 2303169A-06AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031004sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 10:36 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	121	70-130
cis-1,2-Dichloroethene	117	70-130
Trichloroethene	93	70-130
trans-1,2-Dichloroethene	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

Analytical Report

3/16/2023

 Amir Roghani

Arcadis U.S., Inc.

2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M-Wausau

Project #:

Workorder #: 2303169B

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 3/3/2023 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

Eurofins Air Toxics, LLC

180 Blue Ravine Road, Suite B
Folsom, CA 95630

T | 916-985-1000
F | 916-351-8279
www.airtoxics.com

Page 1 of 9

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Air Toxics

WORK ORDER #:   2303169B

Work Order Summary

CLIENT: Amir Roghani   **BILL TO:**   Accounts Payable
                         Arcadis U.S., Inc.   Arcadis U.S., Inc.
                         2464 Fortune Drive #170   630 Plaza Drive
                         Lexington, KY 40509   Suite 600
                                                                     Highlands Ranch, CO 80129

PHONE: 859-253-9036   **P.O. #**   30130403

FAX: (859) 253-9136   **PROJECT #**   3M-Wausau

DATE RECEIVED: 03/03/2023   **CONTACT:**   Brian Whittaker

DATE COMPLETED: 03/16/2023

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
04A	SS-04(030123)	TO-15	5.7 "Hg	9.9 psi
05A	Lab Blank	TO-15	NA	NA
06A	CCV	TO-15	NA	NA
07A	LCS	TO-15	NA	NA
07AA	LCSD	TO-15	NA	NA

CERTIFIED BY: _____   DATE: 03/16/23

Technical Director

LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 2303169B

One 1 Liter Summa Canister sample was received on March 03, 2023. 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

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-04(030123)

Lab ID#: 2303169B-04A

No Detections Were Found.

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Client Sample ID: SS-04(030123)
Lab ID#: 2303169B-04A
EPA METHOD TO-15 GC/MS

File Name:	a031416	Date of Collection: 3/1/23 4:17:00 PM
Dil. Factor:	2.07	Date of Analysis: 3/14/23 07:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected

Container Type: 1 Liter Summa Canister

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

Client Sample ID: Lab Blank
Lab ID#: 2303169B-05A
EPA METHOD TO-15 GC/MS

File Name:	a031406f	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 02:40 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	97	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: CCV
Lab ID#: 2303169B-06A
EPA METHOD TO-15 GC/MS

File Name:	a031402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 12:29 PM

Compound	%Recovery
Vinyl Chloride	102
cis-1,2-Dichloroethene	98
Trichloroethene	100
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: LCS
Lab ID#: 2303169B-07A
EPA METHOD TO-15 GC/MS

File Name:	a031403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 12:54 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	109	70-130
cis-1,2-Dichloroethene	96	70-130
Trichloroethene	100	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	102	70-130

File Name:	a031404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 01:19 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	108	70-130
cis-1,2-Dichloroethene	98	70-130
Trichloroethene	99	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

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

Analytical Report

3/16/2023

Amir Roghani

Arcadis U.S., Inc.

2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M-Wausau

Project #:

Workorder #: 2303169A

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 3/3/2023 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

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WORK ORDER #:   2303169A

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 #**	3M-Wausau
DATE RECEIVED:	03/03/2023	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	03/16/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OA-1(022823)	Modified TO-15 SIM	4.5 "Hg	2 psi
02A	IA-04B(022823)	Modified TO-15 SIM	5.5 "Hg	2 psi
03A	IA-DUP(022823)	Modified TO-15 SIM	5.0 "Hg	2 psi
04A	Lab Blank	Modified TO-15 SIM	NA	NA
05A	CCV	Modified TO-15 SIM	NA	NA
06A	LCS	Modified TO-15 SIM	NA	NA
06AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: _____   DATE: 03/16/23 _____

Technical Director

LABORATORY NARRATIVE
Modified TO-15 SIM
Arcadis U.S., Inc.
Workorder# 2303169A

Three 6 Liter Summa Canister (100% SIM Ambient) samples were received on March 03, 2023. 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.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=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

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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(022823)

Lab ID#: 2303169A-01A
No Detections Were Found.

Client Sample ID: IA-04B(022823)

Lab ID#: 2303169A-02A
No Detections Were Found.

Client Sample ID: IA-DUP(022823)

Lab ID#: 2303169A-03A
No Detections Were Found.

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Client Sample ID: OA-1(022823)
Lab ID#: 2303169A-01A
MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031018sim		Date of Collection: 3/1/23 2:20:00 PM	
Dil. Factor:	1.34		Date of Analysis: 3/10/23 09:44 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.013	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	0.13	Not Detected	0.53	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: IA-04B(022823)

Lab ID#: 2303169A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**20031019sim**	Date of Collection: 3/1/23 3:29:00 PM
Dil. Factor:	**1.39**	Date of Analysis: 3/10/23 10:25 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	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: IA-DUP(022823)

Lab ID#: 2303169A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	**20031020sim**	Date of Collection: 3/1/23
Dil. Factor:	**1.36**	Date of Analysis: 3/10/23 11:04 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	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.15	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	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: Lab Blank

Lab ID#: 2303169A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031006simc	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 12:25 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	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: CCV

Lab ID#: 2303169A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031002sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 08:47 AM

Compound	%Recovery
Vinyl Chloride	121
cis-1,2-Dichloroethene	116
Trichloroethene	99
trans-1,2-Dichloroethene	112

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: LCS

Lab ID#: 2303169A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031003sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 09:58 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	122	70-130
cis-1,2-Dichloroethene	117	70-130
Trichloroethene	94	70-130
trans-1,2-Dichloroethene	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: LCSD

Lab ID#: 2303169A-06AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	20031004sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/10/23 10:36 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	121	70-130
cis-1,2-Dichloroethene	117	70-130
Trichloroethene	93	70-130
trans-1,2-Dichloroethene	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

Analytical Report

3/16/2023

 Amir Roghani

Arcadis U.S., Inc.

2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M-Wausau

Project #:

Workorder #: 2303169B

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 3/3/2023 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

Eurofins Air Toxics, LLC · 180 Blue Ravine Road, Suite B Folsom, CA 95630 · T | 916-985-1000 · F | 916-351-8279 · www.airtoxics.com

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WORK ORDER #: 2303169B

Work Order Summary

CLIENT:	Amir Roghani	**BILL TO:**	Accounts Payable	
	Arcadis U.S., Inc.		Arcadis U.S., Inc.	
	2464 Fortune Drive #170		630 Plaza Drive	
	Lexington, KY 40509		Suite 600	
			Highlands Ranch, CO 80129	

PHONE:	859-253-9036	**P.O. #**	30130403
FAX:	(859) 253-9136	**PROJECT #**	3M-Wausau
DATE RECEIVED:	03/03/2023	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	03/16/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
04A	SS-04(030123)	TO-15	5.7 "Hg	9.9 psi
05A	Lab Blank	TO-15	NA	NA
06A	CCV	TO-15	NA	NA
07A	LCS	TO-15	NA	NA
07AA	LCSD	TO-15	NA	NA

CERTIFIED BY: _____ DATE: 03/16/23

Technical Director

LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 2303169B

One 1 Liter Summa Canister sample was received on March 03, 2023. 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

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

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

Client Sample ID: SS-04(030123)

Lab ID#: 2303169B-04A

No Detections Were Found.

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Client Sample ID: SS-04(030123)
Lab ID#: 2303169B-04A
EPA METHOD TO-15 GC/MS

File Name:	a031416	Date of Collection: 3/1/23 4:17:00 PM
Dil. Factor:	2.07	Date of Analysis: 3/14/23 07:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected

Container Type: 1 Liter Summa Canister

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

Client Sample ID: Lab Blank
Lab ID#: 2303169B-05A
EPA METHOD TO-15 GC/MS

File Name:	a031406f	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 02:40 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	97	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: CCV
Lab ID#: 2303169B-06A
EPA METHOD TO-15 GC/MS

File Name:	a031402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 12:29 PM

Compound	%Recovery
Vinyl Chloride	102
cis-1,2-Dichloroethene	98
Trichloroethene	100
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: LCS
Lab ID#: 2303169B-07A
EPA METHOD TO-15 GC/MS

File Name:	a031403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 12:54 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	109	70-130
cis-1,2-Dichloroethene	96	70-130
Trichloroethene	100	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	102	70-130

EPA METHOD TO-15 GC/MS

File Name:	a031404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/14/23 01:19 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	108	70-130
cis-1,2-Dichloroethene	98	70-130
Trichloroethene	99	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

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