

10/11/2022 Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau Project #: 30106487 Workorder #: 2209825

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 9/28/2022 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

Brian Whittaker Project Manager

180 Blue Ravine Road, Suite B Folsom, CA 95630



WORK ORDER #: 2209825

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. #	
FAX:	(859) 253-9136	PROJECT #	30106487 3M Wausau
DATE RECEIVED:	09/28/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/11/2022		

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	VS-SB1(20220926)	Modified TO-15 SIM	4.1 "Hg	2 psi
02A	VS-SB2(20220926)	Modified TO-15 SIM	3.7 "Hg	1.8 psi
03A	VS-TB(20220926)	Modified TO-15 SIM	6.1 "Hg	1.7 psi
04A	OA-1(20220926)	Modified TO-15 SIM	5.9 "Hg	1.7 psi
05A	VS-DUP1(20220926)	Modified TO-15 SIM	6.3 "Hg	1.9 psi
06A	Lab Blank	Modified TO-15 SIM	NA	NA
07A	CCV	Modified TO-15 SIM	NA	NA
08A	LCS	Modified TO-15 SIM	NA	NA
08AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:

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DATE: <u>10/11/22</u>

Technical Director

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 Modified TO-15 SIM Arcadis U.S., Inc. Workorder# 2209825

Five 6 Liter Summa Canister (100% SIM Ambient) samples were received on September 28, 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.

Requirement	TO-15	ATL Modifications
ICAL %RSD acceptance criteria	=30% RSD with 2<br compounds allowed out to < 40% RSD	Project specific; default criteria is =30% RSD with 10% of compounds allowed out to < 40% RSD</td
Daily Calibration	+- 30% Difference	Project specific; default criteria is = 30% Difference<br with 10% of compounds allowed out up to =40%.; flag<br 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: VS-SB1(20220926)

Lab ID#: 2209825-01A No Detections Were Found.

Client Sample ID: VS-SB2(20220926)

Lab ID#: 2209825-02A

No Detections Were Found.

Client Sample ID: VS-TB(20220926)

Lab ID#: 2209825-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.028	0.043	0.11	0.17
Trichloroethene	0.028	0.62	0.15	3.4

Client Sample ID: OA-1(20220926)

Lab ID#: 2209825-04A

No Detections Were Found.

Client Sample ID: VS-DUP1(20220926)

Lab ID#: 2209825-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ua/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.029	0.045	0.11	0.18
Trichloroethene	0.029	0.65	0.15	3.5



Client Sample ID: VS-SB1(20220926) Lab ID#: 2209825-01A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:			Date of Collection: 9/26/22 3:20:00 Date of Analysis: 10/6/22 01:28 AM		
Compound	Rpt. Limit (ppbv)	it Amount Rpt. Limit		Amount (ug/m3)	
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected	
cis-1,2-Dichloroethene	0.026	Not Detected	0.10	Not Detected	
Trichloroethene	0.026	Not Detected	0.14	Not Detected	
trans-1,2-Dichloroethene	0.13	Not Detected	0.52	Not Detected	

	(,	Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130



Client Sample ID: VS-SB2(20220926) Lab ID#: 2209825-02A MODIFIED EPA METHOD TO-15 GC/MS SIM

Т

		Date of Collection: 9/26/22 3:24:00 F Date of Analysis: 10/6/22 02:09 AM		
		Rpt. Limit (ug/m3)	Amount (ug/m3)	
Vinyl Chloride	0.013	Not Detected	0.033	Not Detected
cis-1,2-Dichloroethene	0.026	Not Detected	0.10	Not Detected
Trichloroethene	0.026	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.51	Not Detected

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130



Client Sample ID: VS-TB(20220926) Lab ID#: 2209825-03A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: Dil. Factor:	60100521simDate of Collection: 9/26/22 2:45:01.40Date of Analysis: 10/6/22 02:51 A			
Rpt. Lin Compound (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	0.043	0.11	0.17
Trichloroethene	0.028	0.62	0.15	3.4
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected

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	(,	Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	124	70-130



Client Sample ID: OA-1(20220926) Lab ID#: 2209825-04A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: Dil. Factor:	60100522sim 1.39			6/22 2:40:00 PM 22 03:32 AM
Compound	Rpt. Limit			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

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	(Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130



Client Sample ID: VS-DUP1(20220926) Lab ID#: 2209825-05A MODIFIED EPA METHOD TO-15 GC/MS SIM

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File Name: Dil. Factor:	60100523sim 1.43			6/22 22 04:14 AM
Compound (ppbv)		Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
cis-1,2-Dichloroethene	0.029	0.045	0.11	0.18
Trichloroethene	0.029	0.65	0.15	3.5
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected

	(,	Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	124	70-130



Client Sample ID: Lab Blank Lab ID#: 2209825-06A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: Dil. Factor:	60100505sim 1.00		Date of Collection: NA Date of Analysis: 10/5/22 01:00 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

Т

Container Type: NA - Not Applicable

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	78	70-130



Client Sample ID: CCV Lab ID#: 2209825-07A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	60100502sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/5/22 10:36 AM
Compound		%Recovery
Vinyl Chloride		83
cis-1,2-Dichloroethene		108
Trichloroethene		90
trans-1,2-Dichloroethene		110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	122	70-130



Client Sample ID: LCS Lab ID#: 2209825-08A MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: Dil. Factor:	60100503sim 1.00	Date of Collection: NA Date of Analysis: 10/5/22 11:17 AM	
Compound		%Recovery	
Vinyl Chloride		86	70-130
cis-1,2-Dichloroethene		108	70-130
Trichloroethene		91	70-130
trans-1,2-Dichloroethene		112	70-130
Container Type: NA - Not Ap	plicable		
			Method
Surrogates		%Recovery	Limits

Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	119	70-130



Client Sample ID: LCSD Lab ID#: 2209825-08AA MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: Dil. Factor:	60100504sim 1.00	Date of Collection: NA Date of Analysis: 10/5/22 11:59 AM		
Compound		%Recovery	Method Limits	
Vinyl Chloride		94	70-130	
cis-1,2-Dichloroethene		118	70-130	
Trichloroethene		99	70-130	
trans-1,2-Dichloroethene		122	70-130	
Container Type: NA - Not Ap	plicable			
			Method	
Surrogates		%Recovery	Limits	
1,2-Dichloroethane-d4		114	70-130	
Toluene-d8		109	70-130	

95

70-130

1,2-Dichloroethane-d4	
Toluene-d8	
4-Bromofluorobenzene	



10/11/2022 Amir Roghani Arcadis U.S., Inc. 2464 Fortune Drive #170

Lexington KY 40509

Project Name: 3M Wausau Project #: Workorder #: 2209824

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 9/28/2022 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

Brian Whittaker Project Manager

180 Blue Ravine Road, Suite B Folsom, CA 95630



WORK ORDER #: 2209824

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: DATE COMPLETED:	09/28/2022 10/11/2022	CONTACT:	Brian Whittaker
DATE COMILETED.	10/ 11/ 2022		
			RECEIPT

FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	VP-SB1(20220927)	TO-15	4.5 "Hg	10 psi
02A	VP-SB2(20220927)	TO-15	3.5 "Hg	10 psi
03A	VP-TB(20220927)	TO-15	5.5 "Hg	10 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

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DATE: <u>10/11/22</u>

FINAL

Technical Director

CERTIFIED BY:

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# 2209824

Three 1 Liter Summa Canister samples were received on September 28, 2022. 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: VP-SB1(20220927)

Lab ID#: 2209824-01A No Detections Were Found.

Client Sample ID: VP-SB2(20220927)

Lab ID#: 2209824-02A No Detections Were Found.

Client Sample ID: VP-TB(20220927)

Lab ID#: 2209824-03A No Detections Were Found.



Client Sample ID: VP-SB1(20220927) Lab ID#: 2209824-01A EPA METHOD TO-15 GC/MS

Т

File Name: Dil. Factor:	p100521 1.98		of Collection: 9/27/22 10:59:00 A of Analysis: 10/5/22 11:39 PM Rpt. Limit Amount (ug/m3) (ug/m3)	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)		
Vinyl Chloride	0.99	Not Detected	2.5	Not Detected
cis-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Trichloroethene	0.99	Not Detected	5.3	Not Detected
trans-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected

Container Type: 1 Liter Summa Canister

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	82	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	118	70-130



Client Sample ID: VP-SB2(20220927) Lab ID#: 2209824-02A EPA METHOD TO-15 GC/MS

Т

File Name: Dil. Factor:	p100522 1.90	Date of Collection: 9/27/22 11:17:00 Date of Analysis: 10/6/22 12:09 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit Amo (ug/m3) (ug/r	
Vinyl Chloride	0.95	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.95	Not Detected	3.8	Not Detected
Trichloroethene	0.95	Not Detected	5.1	Not Detected
trans-1,2-Dichloroethene	0.95	Not Detected	3.8	Not Detected

Container Type: 1 Liter Summa Canister

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	128	70-130



Client Sample ID: VP-TB(20220927) Lab ID#: 2209824-03A EPA METHOD TO-15 GC/MS

Т

File Name: Dil. Factor:	p100523 2.06		ate of Collection: 9/27/22 10:07:00 ate of Analysis: 10/6/22 12:39 AM	
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	5.5	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected

Container Type: 1 Liter Summa Canister

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	119	70-130



Client Sample ID: Lab Blank Lab ID#: 2209824-04A EPA METHOD TO-15 GC/MS

Т

File Name: Dil. Factor:	p100508e 1.00		of Collection: NA of Analysis: 10/5/	22 02:51 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

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	112	70-130



Client Sample ID: CCV Lab ID#: 2209824-05A EPA METHOD TO-15 GC/MS

File Name: Dil. Factor:	p100506 1.00		
Compound	%Recovery		
Vinyl Chloride		78	
cis-1,2-Dichloroethene		95	
Trichloroethene		100	

Container Type: NA - Not Applicable

trans-1,2-Dichloroethene

·····		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	117	70-130

88



Client Sample ID: LCS Lab ID#: 2209824-06A EPA METHOD TO-15 GC/MS

Т

Dil. Factor:	p100503 1.00	Date of Collection: NA Date of Analysis: 10/5/22 11:30	
Compound		%Recovery	Method Limits
Vinyl Chloride		90	70-130
cis-1,2-Dichloroethene		102	70-130
Trichloroethene		105	70-130
trans-1,2-Dichloroethene		96	70-130

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	90	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	121	70-130	



Client Sample ID: LCSD Lab ID#: 2209824-06AA EPA METHOD TO-15 GC/MS

Т

File Name: Dil. Factor: Compound	p100504 1.00	Date of Collection: NA Date of Analysis: 10/5/22 11:58 AM	
		%Recovery	Method Limits
Vinyl Chloride		85	70-130
cis-1,2-Dichloroethene		100	70-130
Trichloroethene		107	70-130
trans-1,2-Dichloroethene		97	70-130

SurrogatesMethod
Limits1,2-Dichloroethane-d49270-130Toluene-d810370-1304-Bromofluorobenzene11970-130