

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-217905-1
Client Project/Site: 3M Wausau, WI - 30130403.01

For:
ARCADIS U.S., Inc.
126 North Jefferson Street
Suite 400
Milwaukee, Wisconsin 53202

Attn: Trena Seilheimer



Authorized for release by:
6/23/2022 1:14:31 PM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	6
Sample Summary	7
Client Sample Results	8
Definitions	31
Surrogate Summary	32
QC Sample Results	33
Chronicle	35
Certification Summary	39
Chain of Custody	40
Receipt Checklists	43

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Job ID: 500-217905-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-217905-1

Comments

No additional comments.

Receipt

The samples were received on 6/10/2022 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

GC/MS VOA

Method 8260B: The following samples were diluted due to the abundance of non-target analytes: W10A (500-217905-11), W40R (500-217905-20) and DUP-02 (060722) (500-217905-22). Elevated reporting limits (RLs) are provided.

Method 8260B: Internal standard (1,4-Dichlorobenzene-d4) response was outside of acceptance limits for the following sample: W21 (500-217905-8). The sample did not have detects of requested analytes using this internal standard. Surrogate 4-Bromofluorobenzene is also being quantitated with this internal standard.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W25

Lab Sample ID: 500-217905-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2.0		0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: W06R

Lab Sample ID: 500-217905-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.47	J	0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: W03A

Lab Sample ID: 500-217905-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.27	J	0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: W17

Lab Sample ID: 500-217905-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.35	J	0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: W72

Lab Sample ID: 500-217905-5

No Detections.

Client Sample ID: W71

Lab Sample ID: 500-217905-6

No Detections.

Client Sample ID: W08

Lab Sample ID: 500-217905-7

No Detections.

Client Sample ID: W21

Lab Sample ID: 500-217905-8

No Detections.

Client Sample ID: W11

Lab Sample ID: 500-217905-9

No Detections.

Client Sample ID: W18

Lab Sample ID: 500-217905-10

No Detections.

Client Sample ID: W10A

Lab Sample ID: 500-217905-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.1		1.0	0.33	ug/L	2		8260B	Total/NA

Client Sample ID: W13

Lab Sample ID: 500-217905-12

No Detections.

Client Sample ID: W73

Lab Sample ID: 500-217905-13

No Detections.

Client Sample ID: W74

Lab Sample ID: 500-217905-14

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W41

Lab Sample ID: 500-217905-15

No Detections.

Client Sample ID: W27

Lab Sample ID: 500-217905-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.1		0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: W22

Lab Sample ID: 500-217905-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.67	J	1.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	4.8		0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: W26R

Lab Sample ID: 500-217905-18

No Detections.

Client Sample ID: W29R

Lab Sample ID: 500-217905-19

No Detections.

Client Sample ID: W40R

Lab Sample ID: 500-217905-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.94	J	2.0	0.82	ug/L	2		8260B	Total/NA
Trichloroethene	6.2		1.0	0.33	ug/L	2		8260B	Total/NA

Client Sample ID: DUP-01 (060722)

Lab Sample ID: 500-217905-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.62		0.50	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: DUP-02 (060722)

Lab Sample ID: 500-217905-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.7		1.0	0.33	ug/L	2		8260B	Total/NA

Client Sample ID: TB-1

Lab Sample ID: 500-217905-23

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-217905-1	W25	Water	06/07/22 10:25	06/10/22 10:10
500-217905-2	W06R	Water	06/07/22 11:15	06/10/22 10:10
500-217905-3	W03A	Water	06/07/22 12:05	06/10/22 10:10
500-217905-4	W17	Water	06/07/22 13:30	06/10/22 10:10
500-217905-5	W72	Water	06/07/22 14:20	06/10/22 10:10
500-217905-6	W71	Water	06/07/22 15:05	06/10/22 10:10
500-217905-7	W08	Water	06/07/22 16:00	06/10/22 10:10
500-217905-8	W21	Water	06/07/22 16:55	06/10/22 10:10
500-217905-9	W11	Water	06/07/22 17:40	06/10/22 10:10
500-217905-10	W18	Water	06/07/22 10:40	06/10/22 10:10
500-217905-11	W10A	Water	06/07/22 11:55	06/10/22 10:10
500-217905-12	W13	Water	06/07/22 13:15	06/10/22 10:10
500-217905-13	W73	Water	06/07/22 14:40	06/10/22 10:10
500-217905-14	W74	Water	06/07/22 15:45	06/10/22 10:10
500-217905-15	W41	Water	06/07/22 16:50	06/10/22 10:10
500-217905-16	W27	Water	06/07/22 17:40	06/10/22 10:10
500-217905-17	W22	Water	06/08/22 13:25	06/10/22 10:10
500-217905-18	W26R	Water	06/08/22 14:10	06/10/22 10:10
500-217905-19	W29R	Water	06/08/22 15:05	06/10/22 10:10
500-217905-20	W40R	Water	06/08/22 15:55	06/10/22 10:10
500-217905-21	DUP-01 (060722)	Water	06/07/22 00:00	06/10/22 10:10
500-217905-22	DUP-02 (060722)	Water	06/07/22 00:00	06/10/22 10:10
500-217905-23	TB-1	Water	06/07/22 00:00	06/10/22 10:10

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W25

Lab Sample ID: 500-217905-1

Date Collected: 06/07/22 10:25

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/19/22 16:00	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/19/22 16:00	1
Trichloroethene	2.0		0.50	0.16	ug/L			06/19/22 16:00	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/19/22 16:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		72 - 124		06/19/22 16:00	1
Dibromofluoromethane (Surr)	95		75 - 120		06/19/22 16:00	1
1,2-Dichloroethane-d4 (Surr)	93		75 - 126		06/19/22 16:00	1
Toluene-d8 (Surr)	93		75 - 120		06/19/22 16:00	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W06R
Date Collected: 06/07/22 11:15
Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 11:48	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 11:48	1
Trichloroethene	0.47	J	0.50	0.16	ug/L			06/17/22 11:48	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 11:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		06/17/22 11:48	1
Dibromofluoromethane (Surr)	110		75 - 120		06/17/22 11:48	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		06/17/22 11:48	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 11:48	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W03A
Date Collected: 06/07/22 12:05
Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 12:11	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 12:11	1
Trichloroethene	0.27	J	0.50	0.16	ug/L			06/17/22 12:11	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 12:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		72 - 124		06/17/22 12:11	1
Dibromofluoromethane (Surr)	112		75 - 120		06/17/22 12:11	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		06/17/22 12:11	1
Toluene-d8 (Surr)	89		75 - 120		06/17/22 12:11	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W17

Lab Sample ID: 500-217905-4

Date Collected: 06/07/22 13:30

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 12:34	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 12:34	1
Trichloroethene	0.35	J	0.50	0.16	ug/L			06/17/22 12:34	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 12:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		72 - 124		06/17/22 12:34	1
Dibromofluoromethane (Surr)	111		75 - 120		06/17/22 12:34	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		06/17/22 12:34	1
Toluene-d8 (Surr)	92		75 - 120		06/17/22 12:34	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W72

Lab Sample ID: 500-217905-5

Date Collected: 06/07/22 14:20

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 12:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 12:58	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 12:58	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 12:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		72 - 124		06/17/22 12:58	1
Dibromofluoromethane (Surr)	108		75 - 120		06/17/22 12:58	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		06/17/22 12:58	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 12:58	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W71

Lab Sample ID: 500-217905-6

Date Collected: 06/07/22 15:05

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 13:21	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 13:21	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 13:21	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 13:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		72 - 124		06/17/22 13:21	1
Dibromofluoromethane (Surr)	114		75 - 120		06/17/22 13:21	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		06/17/22 13:21	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 13:21	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W08

Lab Sample ID: 500-217905-7

Date Collected: 06/07/22 16:00

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 13:45	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 13:45	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 13:45	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 13:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		72 - 124		06/17/22 13:45	1
Dibromofluoromethane (Surr)	114		75 - 120		06/17/22 13:45	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		06/17/22 13:45	1
Toluene-d8 (Surr)	88		75 - 120		06/17/22 13:45	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W21

Lab Sample ID: 500-217905-8

Date Collected: 06/07/22 16:55

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 14:09	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 14:09	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 14:09	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 14:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105	*3	72 - 124		06/17/22 14:09	1
Dibromofluoromethane (Surr)	114		75 - 120		06/17/22 14:09	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		06/17/22 14:09	1
Toluene-d8 (Surr)	89		75 - 120		06/17/22 14:09	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W11

Lab Sample ID: 500-217905-9

Date Collected: 06/07/22 17:40

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 14:32	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 14:32	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 14:32	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		06/17/22 14:32	1
Dibromofluoromethane (Surr)	109		75 - 120		06/17/22 14:32	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		06/17/22 14:32	1
Toluene-d8 (Surr)	89		75 - 120		06/17/22 14:32	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W18

Lab Sample ID: 500-217905-10

Date Collected: 06/07/22 10:40

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 14:56	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 14:56	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 14:56	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		72 - 124		06/17/22 14:56	1
Dibromofluoromethane (Surr)	110		75 - 120		06/17/22 14:56	1
1,2-Dichloroethane-d4 (Surr)	102		75 - 126		06/17/22 14:56	1
Toluene-d8 (Surr)	89		75 - 120		06/17/22 14:56	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W10A
Date Collected: 06/07/22 11:55
Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.82		2.0	0.82	ug/L			06/17/22 15:19	2
trans-1,2-Dichloroethene	<0.70		2.0	0.70	ug/L			06/17/22 15:19	2
Trichloroethene	1.1		1.0	0.33	ug/L			06/17/22 15:19	2
Vinyl chloride	<0.41		2.0	0.41	ug/L			06/17/22 15:19	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		72 - 124		06/17/22 15:19	2
Dibromofluoromethane (Surr)	111		75 - 120		06/17/22 15:19	2
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		06/17/22 15:19	2
Toluene-d8 (Surr)	91		75 - 120		06/17/22 15:19	2

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W13

Lab Sample ID: 500-217905-12

Date Collected: 06/07/22 13:15

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 15:43	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 15:43	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 15:43	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 15:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		72 - 124		06/17/22 15:43	1
Dibromofluoromethane (Surr)	108		75 - 120		06/17/22 15:43	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		06/17/22 15:43	1
Toluene-d8 (Surr)	92		75 - 120		06/17/22 15:43	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W73

Lab Sample ID: 500-217905-13

Date Collected: 06/07/22 14:40

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 16:07	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 16:07	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 16:07	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		72 - 124		06/17/22 16:07	1
Dibromofluoromethane (Surr)	111		75 - 120		06/17/22 16:07	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		06/17/22 16:07	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 16:07	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W74

Lab Sample ID: 500-217905-14

Date Collected: 06/07/22 15:45

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 16:30	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 16:30	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 16:30	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 16:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		72 - 124		06/17/22 16:30	1
Dibromofluoromethane (Surr)	112		75 - 120		06/17/22 16:30	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		06/17/22 16:30	1
Toluene-d8 (Surr)	92		75 - 120		06/17/22 16:30	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W41

Lab Sample ID: 500-217905-15

Date Collected: 06/07/22 16:50

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 16:54	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 16:54	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 16:54	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		72 - 124		06/17/22 16:54	1
Dibromofluoromethane (Surr)	110		75 - 120		06/17/22 16:54	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		06/17/22 16:54	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 16:54	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W27

Lab Sample ID: 500-217905-16

Date Collected: 06/07/22 17:40

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 17:17	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 17:17	1
Trichloroethene	1.1		0.50	0.16	ug/L			06/17/22 17:17	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		72 - 124		06/17/22 17:17	1
Dibromofluoromethane (Surr)	109		75 - 120		06/17/22 17:17	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		06/17/22 17:17	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 17:17	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W22

Lab Sample ID: 500-217905-17

Date Collected: 06/08/22 13:25

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.67	J	1.0	0.41	ug/L			06/17/22 17:41	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 17:41	1
Trichloroethene	4.8		0.50	0.16	ug/L			06/17/22 17:41	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		06/17/22 17:41	1
Dibromofluoromethane (Surr)	109		75 - 120		06/17/22 17:41	1
1,2-Dichloroethane-d4 (Surr)	102		75 - 126		06/17/22 17:41	1
Toluene-d8 (Surr)	89		75 - 120		06/17/22 17:41	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W26R
Date Collected: 06/08/22 14:10
Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-18
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 18:04	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 18:04	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 18:04	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		72 - 124		06/17/22 18:04	1
Dibromofluoromethane (Surr)	112		75 - 120		06/17/22 18:04	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		06/17/22 18:04	1
Toluene-d8 (Surr)	92		75 - 120		06/17/22 18:04	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W29R

Lab Sample ID: 500-217905-19

Date Collected: 06/08/22 15:05

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/19/22 16:23	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/19/22 16:23	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/19/22 16:23	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/19/22 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		72 - 124		06/19/22 16:23	1
Dibromofluoromethane (Surr)	94		75 - 120		06/19/22 16:23	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 126		06/19/22 16:23	1
Toluene-d8 (Surr)	93		75 - 120		06/19/22 16:23	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W40R

Lab Sample ID: 500-217905-20

Date Collected: 06/08/22 15:55

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.94	J	2.0	0.82	ug/L			06/19/22 16:48	2
trans-1,2-Dichloroethene	<0.70		2.0	0.70	ug/L			06/19/22 16:48	2
Trichloroethene	6.2		1.0	0.33	ug/L			06/19/22 16:48	2
Vinyl chloride	<0.41		2.0	0.41	ug/L			06/19/22 16:48	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		72 - 124		06/19/22 16:48	2
Dibromofluoromethane (Surr)	96		75 - 120		06/19/22 16:48	2
1,2-Dichloroethane-d4 (Surr)	93		75 - 126		06/19/22 16:48	2
Toluene-d8 (Surr)	93		75 - 120		06/19/22 16:48	2

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: DUP-01 (060722)

Lab Sample ID: 500-217905-21

Date Collected: 06/07/22 00:00

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/19/22 17:12	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/19/22 17:12	1
Trichloroethene	0.62		0.50	0.16	ug/L			06/19/22 17:12	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/19/22 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		72 - 124		06/19/22 17:12	1
Dibromofluoromethane (Surr)	94		75 - 120		06/19/22 17:12	1
1,2-Dichloroethane-d4 (Surr)	94		75 - 126		06/19/22 17:12	1
Toluene-d8 (Surr)	93		75 - 120		06/19/22 17:12	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: DUP-02 (060722)

Lab Sample ID: 500-217905-22

Date Collected: 06/07/22 00:00

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.82		2.0	0.82	ug/L			06/19/22 17:36	2
trans-1,2-Dichloroethene	<0.70		2.0	0.70	ug/L			06/19/22 17:36	2
Trichloroethene	1.7		1.0	0.33	ug/L			06/19/22 17:36	2
Vinyl chloride	<0.41		2.0	0.41	ug/L			06/19/22 17:36	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		72 - 124		06/19/22 17:36	2
Dibromofluoromethane (Surr)	94		75 - 120		06/19/22 17:36	2
1,2-Dichloroethane-d4 (Surr)	92		75 - 126		06/19/22 17:36	2
Toluene-d8 (Surr)	93		75 - 120		06/19/22 17:36	2



Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: TB-1

Lab Sample ID: 500-217905-23

Date Collected: 06/07/22 00:00

Matrix: Water

Date Received: 06/10/22 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/19/22 17:59	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/19/22 17:59	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/19/22 17:59	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/19/22 17:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		72 - 124		06/19/22 17:59	1
Dibromofluoromethane (Surr)	94		75 - 120		06/19/22 17:59	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 126		06/19/22 17:59	1
Toluene-d8 (Surr)	92		75 - 120		06/19/22 17:59	1

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (72-124)	DBFM (75-120)	DCA (75-126)	TOL (75-120)
500-217905-1	W25	110	95	93	93
500-217905-2	W06R	101	110	105	90
500-217905-3	W03A	97	112	105	89
500-217905-4	W17	104	111	104	92
500-217905-5	W72	109	108	103	90
500-217905-6	W71	106	114	104	90
500-217905-7	W08	104	114	106	88
500-217905-7 MS	W08	98	108	98	91
500-217905-7 MSD	W08	101	103	99	93
500-217905-8	W21	105 *3	114	106	89
500-217905-9	W11	101	109	105	89
500-217905-10	W18	108	110	102	89
500-217905-11	W10A	93	111	105	91
500-217905-12	W13	109	108	103	92
500-217905-13	W73	106	111	103	90
500-217905-14	W74	103	112	104	92
500-217905-15	W41	100	110	106	90
500-217905-16	W27	96	109	103	90
500-217905-17	W22	101	109	102	89
500-217905-18	W26R	109	112	103	92
500-217905-19	W29R	111	94	92	93
500-217905-20	W40R	107	96	93	93
500-217905-21	DUP-01 (060722)	111	94	94	93
500-217905-22	DUP-02 (060722)	106	94	92	93
500-217905-23	TB-1	109	94	92	92
LCS 500-661597/5	Lab Control Sample	99	101	97	94
LCS 500-661823/5	Lab Control Sample	107	96	92	93
MB 500-661597/8	Method Blank	108	106	104	90
MB 500-661823/7	Method Blank	111	95	92	93

Surrogate Legend

- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-661597/8
Matrix: Water
Analysis Batch: 661597

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/17/22 10:40	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/17/22 10:40	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/17/22 10:40	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/17/22 10:40	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		72 - 124		06/17/22 10:40	1
Dibromofluoromethane (Surr)	106		75 - 120		06/17/22 10:40	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		06/17/22 10:40	1
Toluene-d8 (Surr)	90		75 - 120		06/17/22 10:40	1

Lab Sample ID: LCS 500-661597/5
Matrix: Water
Analysis Batch: 661597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
cis-1,2-Dichloroethene	50.0	49.7		ug/L		99	70 - 125
trans-1,2-Dichloroethene	50.0	49.9		ug/L		100	70 - 125
Trichloroethene	50.0	43.9		ug/L		88	70 - 125
Vinyl chloride	50.0	44.7		ug/L		89	64 - 126

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		72 - 124
Dibromofluoromethane (Surr)	101		75 - 120
1,2-Dichloroethane-d4 (Surr)	97		75 - 126
Toluene-d8 (Surr)	94		75 - 120

Lab Sample ID: 500-217905-7 MS
Matrix: Water
Analysis Batch: 661597

Client Sample ID: W08
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
cis-1,2-Dichloroethene	<0.41		50.0	49.9		ug/L		100	70 - 125
trans-1,2-Dichloroethene	<0.35		50.0	49.4		ug/L		99	70 - 125
Trichloroethene	<0.16		50.0	43.7		ug/L		87	70 - 125
Vinyl chloride	<0.20		50.0	44.7		ug/L		89	64 - 126

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		72 - 124
Dibromofluoromethane (Surr)	108		75 - 120
1,2-Dichloroethane-d4 (Surr)	98		75 - 126
Toluene-d8 (Surr)	91		75 - 120

QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-217905-7 MSD
Matrix: Water
Analysis Batch: 661597

Client Sample ID: W08
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	<0.41		50.0	43.8		ug/L		88	70 - 125	13	20
trans-1,2-Dichloroethene	<0.35		50.0	42.7		ug/L		85	70 - 125	14	20
Trichloroethene	<0.16		50.0	40.7		ug/L		81	70 - 125	7	20
Vinyl chloride	<0.20		50.0	44.6		ug/L		89	64 - 126	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		72 - 124
Dibromofluoromethane (Surr)	103		75 - 120
1,2-Dichloroethane-d4 (Surr)	99		75 - 126
Toluene-d8 (Surr)	93		75 - 120

Lab Sample ID: MB 500-661823/7
Matrix: Water
Analysis Batch: 661823

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/19/22 14:22	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/19/22 14:22	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/19/22 14:22	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/19/22 14:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		72 - 124		06/19/22 14:22	1
Dibromofluoromethane (Surr)	95		75 - 120		06/19/22 14:22	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 126		06/19/22 14:22	1
Toluene-d8 (Surr)	93		75 - 120		06/19/22 14:22	1

Lab Sample ID: LCS 500-661823/5
Matrix: Water
Analysis Batch: 661823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	50.0	44.2		ug/L		88	70 - 125
trans-1,2-Dichloroethene	50.0	43.2		ug/L		86	70 - 125
Trichloroethene	50.0	45.1		ug/L		90	70 - 125
Vinyl chloride	50.0	48.1		ug/L		96	64 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		72 - 124
Dibromofluoromethane (Surr)	96		75 - 120
1,2-Dichloroethane-d4 (Surr)	92		75 - 126
Toluene-d8 (Surr)	93		75 - 120

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W25

Date Collected: 06/07/22 10:25

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661823	06/19/22 16:00	W1T	TAL CHI

Client Sample ID: W06R

Date Collected: 06/07/22 11:15

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 11:48	JDD	TAL CHI

Client Sample ID: W03A

Date Collected: 06/07/22 12:05

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 12:11	JDD	TAL CHI

Client Sample ID: W17

Date Collected: 06/07/22 13:30

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 12:34	JDD	TAL CHI

Client Sample ID: W72

Date Collected: 06/07/22 14:20

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 12:58	JDD	TAL CHI

Client Sample ID: W71

Date Collected: 06/07/22 15:05

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 13:21	JDD	TAL CHI

Client Sample ID: W08

Date Collected: 06/07/22 16:00

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 13:45	JDD	TAL CHI

Eurofins Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W21

Date Collected: 06/07/22 16:55

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 14:09	JDD	TAL CHI

Client Sample ID: W11

Date Collected: 06/07/22 17:40

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 14:32	JDD	TAL CHI

Client Sample ID: W18

Date Collected: 06/07/22 10:40

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 14:56	JDD	TAL CHI

Client Sample ID: W10A

Date Collected: 06/07/22 11:55

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	661597	06/17/22 15:19	JDD	TAL CHI

Client Sample ID: W13

Date Collected: 06/07/22 13:15

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 15:43	JDD	TAL CHI

Client Sample ID: W73

Date Collected: 06/07/22 14:40

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 16:07	JDD	TAL CHI

Client Sample ID: W74

Date Collected: 06/07/22 15:45

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 16:30	JDD	TAL CHI

Eurofins Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: W41

Date Collected: 06/07/22 16:50

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 16:54	JDD	TAL CHI

Client Sample ID: W27

Date Collected: 06/07/22 17:40

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 17:17	JDD	TAL CHI

Client Sample ID: W22

Date Collected: 06/08/22 13:25

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 17:41	JDD	TAL CHI

Client Sample ID: W26R

Date Collected: 06/08/22 14:10

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661597	06/17/22 18:04	JDD	TAL CHI

Client Sample ID: W29R

Date Collected: 06/08/22 15:05

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661823	06/19/22 16:23	W1T	TAL CHI

Client Sample ID: W40R

Date Collected: 06/08/22 15:55

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	661823	06/19/22 16:48	W1T	TAL CHI

Client Sample ID: DUP-01 (060722)

Date Collected: 06/07/22 00:00

Date Received: 06/10/22 10:10

Lab Sample ID: 500-217905-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661823	06/19/22 17:12	W1T	TAL CHI

Eurofins Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Client Sample ID: DUP-02 (060722)

Lab Sample ID: 500-217905-22

Date Collected: 06/07/22 00:00

Matrix: Water

Date Received: 06/10/22 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	661823	06/19/22 17:36	W1T	TAL CHI

Client Sample ID: TB-1

Lab Sample ID: 500-217905-23

Date Collected: 06/07/22 00:00

Matrix: Water

Date Received: 06/10/22 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	661823	06/19/22 17:59	W1T	TAL CHI

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: 3M Wausau, WI - 30130403.01

Job ID: 500-217905-1

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

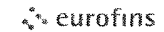
Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-22

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Eurofins Chicago

2417 Bond Street
University Park IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

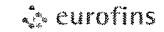


Client Information		Sampler LR	Lab PM Fredrick Sandie	Carrier Tracking No(s)	COC No. 500-102262-43203 1			
Client Contact Trenna Seilheimer		Phone	E-Mail Sandra.Fredrick@et.eurofinsus.com	State of Origin	Page Page 1 of 3			
Company ARCADIS US Inc		PWSID	Analysis Requested 500-217905					
Address 126 North Jefferson Street Suite 400		Due Date Requested	Preservation Codes A HCl M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R H2SO4 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecat yd ate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L Etc Y Tuna Z other specify Other					
City Milwaukee		TAT Requested (days) Standard						
State Zip WI 53202		Compliance Project. <input type="checkbox"/> Yes <input type="checkbox"/> No						
Phone 414 276-7742(Tel)		PO # 30130403 01						
Email trenna.seilheimer@arcadis.com		NO #						
Project Name 3M Wausau WI 30130403 01		Project # 50018062	Total Number of Containers 8280B TCE, cis-1,2-DCE, trans-1,2-DCE & VC					
SSOW#		SSOW#						
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, B=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perforated (MS/MS) (Yes or No)	Special Instructions/Note
		Preservation Code:						
1	W25	6/7/22	1025	G	Water	N	X	
2	W06R		1115		Water			
3	W03A		1205		Water			
4	W17		1330		Water			
5	W72		1420		Water			
6	W71		1505		Water			
7	W08		1600		Water		4	MS/MSD
8	W21		1655		Water		N	
9	W11		1740		Water			
10	W18		1040		Water			
11	W10A		1155		Water			
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested I II III IV Other (specify)				Special Instructions, QC Requirements				
Empty Kit Relinquished by		Date		Time		Method of Shipment		
Relinquished by <i>Trenna Seilheimer</i>		Date/Time 6-7-2022 1500		Company ARCADIS		Received by <i>Shirley Smith</i>		Date/Time 6/10/22 1010
Relinquished by		Date/Time		Company		Received by		Date/Time
Relinquished by		Date/Time		Company		Received by		Date/Time
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) and Other Remarks 26-5/6				

Eurofins Chicago

2417 Bond Street
University Park IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

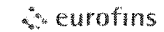


Client Information		Sampler <i>LR</i>	Lab PM Fredrick Sandie	Carrier Tracking No(s)	COC No 500-102262-43203 2		
Client Contact Trenna Seilheimer		Phone	E-Mail Sandra.Fredrick@et.eurofins.com	State of Origin	Page Page 2 of 3		
Company ARCADIS U S Inc.		PWSID	Analysis Requested				
Address 126 North Jefferson Street Suite 400 City Milwaukee State Zip WI 53202		Due Date Requested					
Phone 414-276-7742(Tel)		TAT Requested (days) <i>Standard</i>	Preservation Codes A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO7 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H ascorbic Acid T TSP Dousecalhydrate I ce U Acetone J DI Water v MCAA K EDTA w pH 4.5 L LDI Y Trizma Z othe (specify)				
Email trenna.seilheimer@arcadis.com		Compliance Project. <input type="checkbox"/> Yes <input type="checkbox"/> No					
Project Name 3M Wausau WI 30130403 01		PO # 30130403 01	Field Filtered Sample (Yes or No) Parental (Yes or No) 3260B - TCE, cis-1,2-DCE, trans-1,2-DCE & VC				
Site		WO #					
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, AA=Air)	Total Number of Containers	Special Instructions/Note
				Preservation Code			
12	W13	6/7/22	1315	G	Water	NW	X
13	W73		1440		Water		
14	W74		1545		Water		
15	W41		1650		Water		
16	W27		1740		Water		
17	W22	6/8/22	1325		Water		
18	W26R		1410		Water		
19	W29R		1505		Water		
20	W40R		1555		Water		
21	DUP-01 (060722)	6/7/22	-		Water		Duplicate
22	DUP-02 (060722)		-		Water		Duplicate
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deleterious Requested I II III IV Other (specify)				Special Instructions/QC Requirements			
Empty Kit Requisitioned by <i>Nora Nelson</i>		Date 6-9-2022	Time 1500	Company Arcadis	Received by <i>Shirley Scott</i>	Date/Time 6/10/22 1010	Company EPA
Requisitioned by		Date/Time	Company	Received by	Date/Time	Company	
Requisitioned by		Date/Time	Company	Received by	Date/Time	Company	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No	Cooler Temperature(s) and Other Remarks					

Eurofins Chicago

2417 Bond Street
University Park IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record



Client Information				Sampler <i>UR</i>	Lab PM Fredrick Sandie	Carrier Tracking No(s)	COC No: 500-102262-43203 3	
Client Contact Trenna Seiheimer				Phone	E-Mail Sandra.Fredrick@et.eurofins.us.com	State of Origin:	Page Page 3 of 3	
Company ARCADIS U S Inc				PV #/ID	Analysis Requested		Job #: <i>500-217905</i>	
Address 126 North Jefferson Street Suite 400				Due Date Requested	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8260B TCE, cis-1,2-DCE, trans-1,2-DCE & VC		Preservation Codes A HCL M Hexane B NaOH N None C Zn Acetate O AsNa ⁺ D Nitric Acid P Na ₂ O ₄ S E NaHSO ₄ Q Na ₂ S ₂ O ₃ F MeOH R Na ₂ S ₂ O ₃ G Amchlor S H ₂ S ₂ O ₄ H Ascorbic Acid T TSP Dodecalborate U Acetone V NaCAA W pH 4.0 Y Trizma Z other (specify)	
City Milwaukee				TAT Requested (days) <i>Standard</i>				
State Zip WI 53202				Compliance Project. <input type="checkbox"/> Yes <input type="checkbox"/> No				
Phone 414-276-7742(Tel)				PO # 30130403 01				
Email trenna.seiheimer@arcadis.com				WC #	Total Number of Containers		Other:	
Project Name 3M Wausau WI 30130403 01				Project # 50018062				
Site				SSOW#				
Sample Identification				Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT Tils., Ue. A., Air)	
				Preservation Code				Special Instructions/Note
<i>23 TB-1</i>				-	-	-	Water	
							Water	
							Water	
							Water	
							Water	
							Water	
							Water	
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I II III IV Other (specify)				Special Instructions/QC Requirements				
Empty Kit Requisitioned by				Date	Time	Method of Shipmen		
Requisitioned by <i>[Signature]</i>				Date/Time <i>6-9-2022 1500</i>	Company <i>ARCADIS</i>	Received by <i>[Signature]</i>	Date/Time <i>6/10/22 1010</i>	
Requisitioned by				Date/Time	Company	Received by	Date/Time	
Requisitioned by				Date/Time	Company	Received by	Date/Time	
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No				
				Cooler Temperature(s) and Other Remarks				

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-217905-1

Login Number: 217905

List Number: 1

Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



6/23/2022

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

Lexington KY 40509

Project Name: 3M Wausau
Project #: 30130903.01
Workorder #: 2206327A

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 6/10/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified 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 #: 2206327A

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. #	30130903.01
FAX:	(859) 253-9136	PROJECT #	30130903.01 3M Wausau
DATE RECEIVED:	06/10/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	06/23/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OA-1 (06082022)	Modified TO-15	6.5 "Hg	2 psi
02A	IA-03B	Modified TO-15	5.5 "Hg	2 psi
03A	IA-04B	Modified TO-15	6.0 "Hg	2 psi
04A	IA-02B	Modified TO-15	6.0 "Hg	2 psi
05A	IA-DUP	Modified TO-15	6.5 "Hg	2 psi
06A	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 06/23/22

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
Arcadis U.S., Inc.
Workorder# 2206327A

Five 6 Liter Summa Canister (100% Cert Ambient) samples were received on June 10, 2022. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan 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>
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight 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.

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 FULL SCAN

Client Sample ID: OA-1 (06082022)

Lab ID#: 2206327A-01A

No Detections Were Found.

Client Sample ID: IA-03B

Lab ID#: 2206327A-02A

No Detections Were Found.

Client Sample ID: IA-04B

Lab ID#: 2206327A-03A

No Detections Were Found.

Client Sample ID: IA-02B

Lab ID#: 2206327A-04A

No Detections Were Found.

Client Sample ID: IA-DUP

Lab ID#: 2206327A-05A

No Detections Were Found.

Client Sample ID: OA-1 (06082022)

Lab ID#: 2206327A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062021 sim	Date of Collection: 6/9/22 9:00:00 AM
Dil. Factor:	1.45	Date of Analysis: 6/20/22 10:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.14	Not Detected	0.37	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Trichloroethene	0.14	Not Detected	0.78	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	84	70-130

Client Sample ID: IA-03B

Lab ID#: 2206327A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062023sim	Date of Collection: 6/9/22 10:00:00 AM
Dil. Factor:	1.39	Date of Analysis: 6/20/22 11:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.14	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Trichloroethene	0.14	Not Detected	0.75	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: IA-04B

Lab ID#: 2206327A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062024sim	Date of Collection:	6/9/22 10:20:00 AM
Dil. Factor:	1.42	Date of Analysis:	6/21/22 12:35 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.14	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Trichloroethene	0.14	Not Detected	0.76	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	86	70-130

Client Sample ID: IA-02B

Lab ID#: 2206327A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062025sim	Date of Collection: 6/9/22 12:00:00 PM
Dil. Factor:	1.42	Date of Analysis: 6/21/22 01:14 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.14	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Trichloroethene	0.14	Not Detected	0.76	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	88	70-130

Client Sample ID: IA-DUP

Lab ID#: 2206327A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062026sim	Date of Collection:	6/9/22
Dil. Factor:	1.45	Date of Analysis:	6/21/22 06:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.14	Not Detected	0.37	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
cis-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Trichloroethene	0.14	Not Detected	0.78	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: Lab Blank

Lab ID#: 2206327A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062006sime	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/20/22 11:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	84	70-130

Client Sample ID: CCV

Lab ID#: 2206327A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062002sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/20/22 08:36 AM

Compound	%Recovery
Vinyl Chloride	90
trans-1,2-Dichloroethene	88
cis-1,2-Dichloroethene	98
Trichloroethene	120

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	126	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 2206327A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062003sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/20/22 09:26 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	91	70-130
trans-1,2-Dichloroethene	86	70-130
cis-1,2-Dichloroethene	95	70-130
Trichloroethene	115	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	124	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 2206327A-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	22062004sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/20/22 10:15 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	91	70-130
trans-1,2-Dichloroethene	86	70-130
cis-1,2-Dichloroethene	96	70-130
Trichloroethene	114	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	123	70-130
4-Bromofluorobenzene	100	70-130

6/23/2022

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

Lexington KY 40509

Project Name: 3M Wausau
Project #: 30130903.01
Workorder #: 2206327B

Dear Amir Roghani

The following report includes the data for the above referenced project for sample(s) received on 6/10/2022 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 #: 2206327B

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. #	30130903.01
FAX:	(859) 253-9136	PROJECT #	30130903.01 3M Wausau
DATE RECEIVED:	06/10/2022	CONTACT:	Brian Whittaker
DATE COMPLETED:	06/20/2022		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
06A	SS-03	TO-15	5.5 "Hg	9.9 psi
07A	SS-04	TO-15	6.9 "Hg	9.9 psi
08A	SS-02	TO-15	5.5 "Hg	10 psi
09A	Lab Blank	TO-15	NA	NA
10A	CCV	TO-15	NA	NA
11A	LCS	TO-15	NA	NA
11AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 06/23/22

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# 2206327B

Three 1 Liter Summa Canister samples were received on June 10, 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: SS-03

Lab ID#: 2206327B-06A

No Detections Were Found.

Client Sample ID: SS-04

Lab ID#: 2206327B-07A

No Detections Were Found.

Client Sample ID: SS-02

Lab ID#: 2206327B-08A

No Detections Were Found.

Client Sample ID: SS-03

Lab ID#: 2206327B-06A

EPA METHOD TO-15 GC/MS

File Name:	p061817	Date of Collection:	6/9/22 12:26:00 PM
Dil. Factor:	2.05	Date of Analysis:	6/19/22 12:25 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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	108	70-130

Client Sample ID: SS-04

Lab ID#: 2206327B-07A

EPA METHOD TO-15 GC/MS

File Name:	p061818	Date of Collection:	6/9/22 1:33:00 PM
Dil. Factor:	2.17	Date of Analysis:	6/19/22 12:55 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Trichloroethene	1.1	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	108	70-130

Client Sample ID: SS-02

Lab ID#: 2206327B-08A

EPA METHOD TO-15 GC/MS

File Name:	p061819	Date of Collection:	6/9/22 2:32:00 PM
Dil. Factor:	2.06	Date of Analysis:	6/19/22 01:24 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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: Lab Blank

Lab ID#: 2206327B-09A

EPA METHOD TO-15 GC/MS

File Name:	p061805d	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/18/22 04:10 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	101	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: CCV

Lab ID#: 2206327B-10A

EPA METHOD TO-15 GC/MS

File Name:	p061802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/18/22 02:30 PM

Compound	%Recovery
Vinyl Chloride	88
cis-1,2-Dichloroethene	104
Trichloroethene	98
trans-1,2-Dichloroethene	97

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: LCS

Lab ID#: 2206327B-11A

EPA METHOD TO-15 GC/MS

File Name:	p061803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/18/22 02:58 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	98	70-130
cis-1,2-Dichloroethene	113	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	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: LCSD

Lab ID#: 2206327B-11AA

EPA METHOD TO-15 GC/MS

File Name:	p061804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/18/22 03:27 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	97	70-130
cis-1,2-Dichloroethene	113	70-130
Trichloroethene	108	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130