# PREPARED FOR

Attn: Ms. Megan Meckley Arcadis US Inc. 28550 Cabot Drive Suite 500 Novi, Michigan 48377

Generated 2/25/2025 10:27:53 PM

**JOB DESCRIPTION** 

Ford LTP

**JOB NUMBER** 

240-219201-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203

# **Eurofins Cleveland**

# **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

# Authorization

Generated 2/25/2025 10:27:53 PM

Authorized for release by Michael DelMonico, Project Manager I Michael.DelMonico@et.eurofinsus.com (330)966-9783 Client: Arcadis US Inc. Project/Site: Ford LTP

Laboratory Job ID: 240-219201-1

# **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Method Summary	6
Sample Summary	7
Detection Summary	8
Client Sample Results	9
Surrogate Summary	11
QC Sample Results	12
QC Association Summary	15
Lab Chronicle	16
Certification Summary	17
Chain of Custody	18

3

4

\_\_\_\_

9

10

12

13

# **Definitions/Glossary**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

**Qualifiers** 

**GC/MS VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

Percent Recovery %R CFL Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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)

Estimated Detection Limit (Dioxin) EDL LOD Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE) LOQ

EPA recommended "Maximum Contaminant Level" MCL 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 **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

# **Case Narrative**

Client: Arcadis US Inc. Project: Ford LTP

Job ID: 240-219201-1 Eurofins Cleveland

Job Narrative 240-219201-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

### Receipt

The samples were received on 2/20/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.1°C and 2.4°C.

### GC/MS VOA

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

**Eurofins Cleveland** 

Page 5 of 21 2/25/2025

2

Job ID: 240-219201-1

9

4

5

\_

8

9

4 4

12

13

# **Method Summary**

Client: Arcadis US Inc.

Project/Site: Ford LTP

Job ID: 240-219201-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
8260D SIM	Volatile Organic Compounds (GC/MS)	SW846	EET CLE
5030C	Purge and Trap	SW846	EET CLE

## Protocol References:

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

### Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

e

3

4

5

8

4.0

1 1

4.0

# **Sample Summary**

Client: Arcadis US Inc.

Project/Site: Ford LTP

Job ID: 240-219201-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-219201-1	TRIP BLANK_40	Water	02/17/25 00:00	02/20/25 08:00
240-219201-2	MW-95S_021725	Water	02/17/25 10:30	02/20/25 08:00

3

4

5

Q

9

11

12

# **Detection Summary**

Client: Arcadis US Inc.

Project/Site: Ford LTP

Job ID: 240-219201-1

Client Sample ID: TRIP BLANK\_40 Lab Sample ID: 240-219201-1

No Detections.

No Detections.

Ш

4

5

7

10

\_\_\_\_

13

# **Client Sample Results**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK\_40

Lab Sample ID: 240-219201-1 Date Collected: 02/17/25 00:00

Matrix: Water

Date Received: 02/20/25 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 13:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 13:55	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 13:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 13:55	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 13:55	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 13:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		62 - 137			_		02/24/25 13:55	1
4-Bromofluorobenzene (Surr)	102		56 <sub>-</sub> 136					02/24/25 13:55	1
Toluene-d8 (Surr)	104		78 - 122					02/24/25 13:55	1
Dibromofluoromethane (Surr)	105		73 - 120					02/24/25 13:55	1

**Eurofins Cleveland** 

2/25/2025

Page 9 of 21

# **Client Sample Results**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

Date Received: 02/20/25 08:00

Client Sample ID: MW-95S\_021725

Lab Sample ID: 240-219201-2 Date Collected: 02/17/25 10:30

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			02/21/25 12:39	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 127					02/21/25 12:39	
- Method: SW846 8260D - Volat	ile Organic Comp	ounds by G	GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1.1 Diablaraathana		П	10		ua/l			02/24/25 14:19	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 14:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 14:18	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 14:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 14:18	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 14:18	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 14:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122		62 - 137	_		02/24/25 14:18	1
4-Bromofluorobenzene (Surr)	103		56 - 136			02/24/25 14:18	1
Toluene-d8 (Surr)	102		78 - 122			02/24/25 14:18	1
Dibromofluoromethane (Surr)	108		73 - 120			02/24/25 14:18	1

2/25/2025

# **Surrogate Summary**

Client: Arcadis US Inc.

Project/Site: Ford LTP

Job ID: 240-219201-1

# Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water Prep Type: Total/NA

				Percent Sui	rrogate Reco
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-219201-1	TRIP BLANK_40	121	102	104	105
240-219201-2	MW-95S_021725	122	103	102	108
240-219206-E-2 MSD	Matrix Spike Duplicate	114	106	103	101
240-219206-G-2 MS	Matrix Spike	118	106	105	103
LCS 240-645817/4	Lab Control Sample	117	106	105	101
MB 240-645817/7	Method Blank	120	108	104	105
0					

## Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

# Method: 8260D SIM - Volatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)
		DCA	
Lab Sample ID	Client Sample ID	(68-127)	
240-219201-2	MW-95S_021725	95	
240-219215-B-2 MSD	Matrix Spike Duplicate	98	
240-219215-C-2 MS	Matrix Spike	96	
LCS 240-645674/4	Lab Control Sample	95	
MB 240-645674/6	Method Blank	98	
MB 240-645674/6	•	98	

DCA = 1,2-Dichloroethane-d4 (Surr)

**Eurofins Cleveland** 

2

\_

7

9

11

Client: Arcadis US Inc. Job ID: 240-219201-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-645817/7

**Matrix: Water** 

Project/Site: Ford LTP

Analysis Batch: 645817

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 12:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 12:46	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 12:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 12:46	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 12:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 12:46	1

MB MB %Recovery Qualifier Dil Fac Surrogate Limits Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 62 - 137 02/24/25 12:46 120 4-Bromofluorobenzene (Surr) 108 56 - 136 02/24/25 12:46 02/24/25 12:46 Toluene-d8 (Surr) 104 78 - 122 Dibromofluoromethane (Surr) 105 73 - 120 02/24/25 12:46

Lab Sample ID: LCS 240-645817/4

**Matrix: Water** 

Analysis Batch: 645817

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	25.0	24.3		ug/L		97	63 - 134	
cis-1,2-Dichloroethene	25.0	23.5		ug/L		94	77 - 123	
Tetrachloroethene	25.0	23.7		ug/L		95	76 - 123	
trans-1,2-Dichloroethene	25.0	23.0		ug/L		92	75 - 124	
Trichloroethene	25.0	22.6		ug/L		91	70 - 122	
Vinyl chloride	12.5	12.4		ug/L		99	60 - 144	

LCS LCS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 117 62 - 137 4-Bromofluorobenzene (Surr) 56 - 136 106 Toluene-d8 (Surr) 105 78 - 122 73 - 120 Dibromofluoromethane (Surr) 101

Lab Sample ID: 240-219206-E-2 MSD

**Matrix: Water** 

Analysis Batch: 645817

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1.0	U	25.0	22.6		ug/L		90	56 - 135	4	26
1.0	U	25.0	22.5		ug/L		90	66 - 128	3	14
1.0	U	25.0	19.8		ug/L		79	62 - 131	5	20
1.0	U	25.0	20.8		ug/L		83	56 - 136	5	15
1.0	U	25.0	20.3		ug/L		81	61 - 124	2	15
1.0	U	12.5	11.2		ug/L		89	43 - 157	3	24
	Result 1.0 1.0 1.0 1.0 1.0 1.0	Sample   Result   Qualifier	Result         Qualifier         Added           1.0         U         25.0           1.0         U         25.0	Result         Qualifier         Added         Result           1.0         U         25.0         22.6           1.0         U         25.0         22.5           1.0         U         25.0         19.8           1.0         U         25.0         20.8           1.0         U         25.0         20.3	Result         Qualifier         Added         Result         Qualifier           1.0         U         25.0         22.6           1.0         U         25.0         22.5           1.0         U         25.0         19.8           1.0         U         25.0         20.8           1.0         U         25.0         20.3	Result         Qualifier         Added         Result         Qualifier         Unit           1.0         U         25.0         22.6         ug/L           1.0         U         25.0         22.5         ug/L           1.0         U         25.0         19.8         ug/L           1.0         U         25.0         20.8         ug/L           1.0         U         25.0         20.3         ug/L	Result         Qualifier         Added         Result         Qualifier         Unit         D           1.0         U         25.0         22.6         ug/L           1.0         U         25.0         22.5         ug/L           1.0         U         25.0         19.8         ug/L           1.0         U         25.0         20.8         ug/L           1.0         U         25.0         20.3         ug/L	Result         Qualifier         Added         Result         Qualifier         Unit         D         %Rec           1.0         U         25.0         22.6         ug/L         90           1.0         U         25.0         22.5         ug/L         90           1.0         U         25.0         19.8         ug/L         79           1.0         U         25.0         20.8         ug/L         83           1.0         U         25.0         20.3         ug/L         81	Result         Qualifier         Added         Result         Qualifier         Unit         D         %Rec         Limits           1.0         U         25.0         22.6         ug/L         90         56 - 135           1.0         U         25.0         22.5         ug/L         90         66 - 128           1.0         U         25.0         19.8         ug/L         79         62 - 131           1.0         U         25.0         20.8         ug/L         83         56 - 136           1.0         U         25.0         20.3         ug/L         81         61 - 124	Result         Qualifier         Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           1.0         U         25.0         22.6         ug/L         90         56 - 135         4           1.0         U         25.0         22.5         ug/L         90         66 - 128         3           1.0         U         25.0         19.8         ug/L         79         62 - 131         5           1.0         U         25.0         20.8         ug/L         83         56 - 136         5           1.0         U         25.0         20.3         ug/L         81         61 - 124         2

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	103		78 - 122

**Eurofins Cleveland** 

2/25/2025

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-219206-E-2 MSD

**Matrix: Water** 

Analysis Batch: 645817

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

MSD MSD

Surrogate %Recovery Qualifier Limits Dibromofluoromethane (Surr) 101 73 - 120

Lab Sample ID: 240-219206-G-2 MS Client Sample ID: Matrix Spike

**Matrix: Water** 

Prep Type: Total/NA Analysis Batch: 645817 Sample Sample Snika % Poo

	Sample	Sample	<b>Spike</b>	IVIS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.0	U	25.0	21.7		ug/L		87	56 - 135	
cis-1,2-Dichloroethene	1.0	U	25.0	23.2		ug/L		93	66 - 128	
Tetrachloroethene	1.0	U	25.0	20.8		ug/L		83	62 _ 131	
trans-1,2-Dichloroethene	1.0	U	25.0	21.8		ug/L		87	56 - 136	
Trichloroethene	1.0	U	25.0	20.8		ug/L		83	61 - 124	
Vinyl chloride	1.0	U	12.5	11.6		ug/L		92	43 - 157	

MS MS

MR MR

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	118		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	105		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

# Method: 8260D SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-645674/6

**Matrix: Water** 

Analysis Batch: 645674

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

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac 1,4-Dioxane 2.0 U 2.0 0.86 ug/L 02/21/25 11:52

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 98 68 - 127 02/21/25 11:52

Lab Sample ID: LCS 240-645674/4

**Matrix: Water** Prep Type: Total/NA Analysis Batch: 645674 Spike LCS LCS %Rec

Analyte Added Result Qualifier Unit %Rec Limits 1,4-Dioxane 10.0 9.15 ug/L 92 75 - 121

LCS LCS

%Recovery Qualifier Surrogate Limits 1,2-Dichloroethane-d4 (Surr) 68 - 127 95

Lab Sample ID: 240-219215-B-2 MSD

**Matrix: Water** 

Analysis Batch: 645674

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	2.0	U	10.0	9.85		ug/L		99	20 - 180	3	20

**Eurofins Cleveland** 

2/25/2025

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Client Sample ID: Matrix Spike Duplicate

# **QC Sample Results**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP Method: 8260D SIM - Volatile Organic Compounds (GC/MS) (Continued)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		68 - 127

Lab Sample ID: 240-219215-C-2 MS

**Matrix: Water** 

Analysis Batch: 645674

•	Sample	Sample	Spike
Analyte	Result	Qualifier	Added
1,4-Dioxane	2.0	U	10.0

MS MS Surrogate %Recovery Qualifier 1,2-Dichloroethane-d4 (Surr) 96

Client Sample ID: Matrix Spike

**Prep Type: Total/NA** 

MS MS %Rec Result Qualifier Limits Unit %Rec 9.56 96 20 - 180 ug/L

Limits 68 - 127

# **QC Association Summary**

Client: Arcadis US Inc.

Project/Site: Ford LTP

Job ID: 240-219201-1

# **GC/MS VOA**

# Analysis Batch: 645674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219201-2	MW-95S_021725	Total/NA	Water	8260D SIM	
MB 240-645674/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-645674/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-219215-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	
240-219215-C-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	

# Analysis Batch: 645817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219201-1	TRIP BLANK_40	Total/NA	Water	8260D	<u> </u>
240-219201-2	MW-95S_021725	Total/NA	Water	8260D	
MB 240-645817/7	Method Blank	Total/NA	Water	8260D	
LCS 240-645817/4	Lab Control Sample	Total/NA	Water	8260D	
240-219206-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	
240-219206-G-2 MS	Matrix Spike	Total/NA	Water	8260D	

3

Δ

5

8

9

11

19

13

# **Lab Chronicle**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK\_40

Lab Sample ID: 240-219201-1 Date Collected: 02/17/25 00:00

Matrix: Water

Date Received: 02/20/25 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	645817	LEE	EET CLE	02/24/25 13:55

Client Sample ID: MW-95S\_021725

Lab Sample ID: 240-219201-2 Date Collected: 02/17/25 10:30 Matrix: Water

Date Received: 02/20/25 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	645817	LEE	EET CLE	02/24/25 14:18
Total/NA	Analysis	8260D SIM		1	645674	R5XG	EET CLE	02/21/25 12:39

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

# **Accreditation/Certification Summary**

Client: Arcadis US Inc.

Project/Site: Ford LTP

Job ID: 240-219201-1

# **Laboratory: Eurofins Cleveland**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	08-31-25
lowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-02-25
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

4

6

9

10

13

**TestAmerica** 

Client Contact	Regulat	ory program:			□ DW			NPDES	6		RCRA		F* (	Other	·								·	,					
Company Name: Arcadis																								<u> </u>		TestAmerica Laborato	ries, Inc.		
Address: 28550 Cabot Drive, Suite 500	Client Project ?	Manager: Meg	an M	leckley			Site C	Contac	t: Sam	anth:	a Szpai	chler			ľ	Lab C	ontact	Mike	DelM	onico	1				ľ	COC No:			
	Telephone: 248	-994-2240					Telep	hone:	248-99	94-22	40				1	Telepi	Celephone: 330-497-9396								T				
City/State/Zip: Novi, MI, 48377	Email: kristoff	ar hingkay@ar	andir				_	Dalvar	s Turn	arou	ad Time	:				Analyses							15	1 of 1 CC for lab use only	)Cs				
Phone: 248-994-2240								,						1											Ť	or rate date only			
	Sampler Name			_	. ( )		TAT	TAT if different from below  3 weeks					i						-			V	Valk-in client	-					
Project Name: Ford LTP	P	HOPECO COST (GOV) 10 day 2 weeks																		ī	ab sampling	********							
Project Number: 30206169.0401.03	Method of Ship							Q	i		ا ۵			_	Σ.				- 1										
PO # US3460021848	Shipping/Track	ring No.					1			2 day			Filtered Sample (Y / N)	Composite-C/Grab-G		ا ۾	Trans-1,2-DCE 8260D		- 1	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM				,	ob/SDG No:			
10 # 033400021046	Surpping/17ack	dig No.											픨	9/3	8	cis-1,2-DCE 8260D	щ Ж			e 82	826(				ľ	OU/SDO NO.			
				I	Matrix	-		Contai	ners &	Prese	rvatives		m ag	I	826	ë	ĕ	9	e l	orid	ē				-				
				;	Ē	,.	,	_	_	Н	g		red :	posi	1,1-DCE 8260D	2-D	7	PCE 8260D	TCE 8260D	ਤ	ě				- 1	Sample Specific No	tes /		
Sample Identification	Sample Date	Sample Time	₹	Aqueous	Sediment	ther	H2SO4	HINO3	ō	ZnAc/ NaOH	Unpres Other:		Elle	Com	=	IS-1	ğ	S	S.E.	Ę.	4.				-	Special Instructio	ns:		
Sample Identification	Sample Date	Sample Time	F	<b>*</b>	s s	-	F		-	ZZ	1 0	_		¥		9		-	-	-	-	=	-	_	+			/	
TRIP BLANK_ 中心				1				1					N	G	Х	Х	X	X	Χ	X						1 Trip Blank		` /	
MW-955-021725	2/17/25	1030		6				(	a				N	G	X	X	X	X	X	X	X					3 VOAs for 8260D 3 VOAs for 8260D			
				$\Box$			$\Box$	$\top$	$\top$	П			П	$\dashv$		$\neg$		$\dashv$	$\neg$	T				$\neg$	$\neg$				
																				Щ				_	1				
																		_	-+	-									
				$\Box$	_			$\perp$	+	Н				_	-	=			$\dashv$	Щ	_	_	-	-	$\dashv$				
	1.1						ll				$\vdash \leftarrow$					- 1			,						- 1				
			╁	+-+			$\vdash$	-	1	$\vdash$	$\vdash$			-			-	$\dashv$		-	_	$\dashv$	-	+	$\dashv$				
					_					П							-	_											
			1							П											_					4			
			L	$\perp$			$\sqcup$			Ш		_(		1		i.	1	_	_					14	4 4	7.7			
			L											F	1	1							1	7		A CAN	NT		
			╁		_		$\vdash$	+	+	$\vdash$	-	_		E	3	2	+	$\dashv$	$\dashv$	$\dashv$	$\dashv$		- 7	U	一				
			Ш														00						1		1	1911			
RC 2/17/25			П											240-	2197	201 (	.00									17.0	1		
1										لبل	سليا		L				- 1			Щ									
Possible Hazard Identification  Non-Hazard Clammable Cin Irritant	□ Poiso	on B	_ Jnl	known			Sa		Jisposa turn to		fee may		iss. Dispose	al By	ample Lab	es are		d long hive I	ger tha	nln		nths							
Special Instructions/QC Requirements & Comments: 1213		on Pos					-													1									
Submit all results through Cadena at jtomalia@cadenaco.c	, ,		>4																										
Level IV Reporting requested.	oni. Cadena wi	200720																											
Relinquished by:	Company:			Date/	Time				Rec	eived	hv: .		_	_				lo	Compa	nv:	,				I	Date/Time:			
William William	Ar	cadis.			2/1	7/25	5 là	-الم	3		by: N	ivc		de	9 3	Sto	100	e	,.	<i>K</i>	+10	$\delta \alpha$	is			2/17/25 1	645		
Relinquished by	Company:			Date/	Time	حر ح		7	Rec	eived	by:	_	0					-	Compa			-	2		Ţ	Date/Time:		-	
	100	9001		2	Time 191	77	<u> 110</u>	$\cup$	$\perp$		1	U	1	1	1	<u> </u>	>				2	711	V				1:05	My	
Relinquished by:	Company	=1		Date/			14.	-	Rec	cived	Hind ab	orato	17 fx					9	Compa	3		115		QJ	M]	2/7/125 8	toa		
- Marie -	13	11		2	1196	2X	1110	25 0	in		<u> </u>	<u> </u>	TT	1	<i>ħ</i>					<u> </u>	V	#	办			1 7 (1 T) X	<u> </u>		
Q2006, TesiAmerica Laboratoriee, Inc., All rights reserved. TesiAmerica & Design 1 <sup>to</sup> are trademarks of fesiAmerica Laboratories, Inc.																				7	0	1/2	د/ه.	5					
неотноския и отворя — все и выстанка и сторитель в выстанка, по.																					•	010	7	-					

**Chain of Custody Record** 

TestAmerica Laboratory location: Farmington Hills — 38855 Hills Tech Drive, Suite 600, Farmington Hills 48331

Eurofins—Cleveland Sample Receipt Form/Narrative Login # :
Barberton Facility  Client Arrange  Cooler unpacked by
2-26-25
Receipt After-hours Drop-off Date/Time Storage Location
Foam Box Client Cooler Box
Wet Ica Blue Ice Dry Ice Water
IR GUN# 3 (CFO.6 °C) Observed Cooler Temp. °C Corrected Cooler Temp °C
No NA
NA —
3 Shippers' packing slip attached to the cooler(s)? 4. Did custody papers accompany the sample(s)?  Yes No  Oil and Grease Oil of Grease
Were the custody papers relinquished & signed in the appropriate place?
7 Did all bottles arrive in good condition (Unbroken)?
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?  9 For each sample, does the COC specify preservatives (NN), # of containers (NN), and sample type of grab/comp(NN)?
10 Were correct bottle(s) used for the test(s) indicated?  11 Sufficient quantity received to perform indicated analyses?  Yes No
12 Are these work share samples and all listed on the COC?  If yes, Questions 13-17 have been checked at the originating laboratory
<b>P</b> <u>Y</u> <u>E</u>
13 Were air bubbles >6 mm in any VOA vials? Larger than this.  16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #GTX 611 Yes No  17 Was a LL Hg or Me Hg trip blank present?
Contacted PM Date by via Verbal Voice Mail Other
Concerning
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES
19. SAMPLE CONDITION  Sample(s)
20. SAMPLE PRESERVATION
Sample(s)were further preserved in the laboratory Time preservedPreservative(s) added/Lot number(s):were further preserved in the laboratory
VOA Sample Preservation - Date/Time VOAs Frozen.

Page 19 of 21

Wet Ice Blue Ice Dry Ice			IR GUN #:	x Other	Client Box	EC C
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC C
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Olher	Client Box	EC C
lue Ice None			IR GUN #:	x Other	Client Box	EC C
lue Ice None			IR GUN #:	x Other	Client Box	EC C
ve ice None			IR GUN #:	x Other	Client Box	EC C
Blue Ice later None			IR GUN #:	x Other	Client Box	EC C
ā			IR GUN #:	x Other	Client Box	5 OH
Wet Ice Blue Ice Dry Ice Water Nane	A Company of the Comp		IR GUN #:	x Other	Client Box	EC C
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC C
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC C
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC C
e Ice None			IR GUN #:	x Olher	Client Box	EC C
None			IR GUN #:	x Olher	Client Box	EC C
e Ice None			IR GUN #:	x Other	Client Box	EC C
e Ice None			IR GUN #:	x Other	Client Box	EC C
Wet ice Blue ice Dry ice Water None			IR GUN #:	x Other	Client box	EC C
None	The state of the s		IR GUN #:	x Other	Client Box	EC CI
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC C
je ice None			IR GUN #:	x Ofher	Client Box	EC C
e ice None			IR GUN #:	x Other	Client Box	EC CI
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC C
Wet Ice Stue Ice Dry Ice Water Nane			IR GUN ≢:	x Olher	Client Box	EC CI
e Ice None			IR GUN #:	x Other	Client box	EC Q
Blue			IR GUN #:	x Other	Client Box	EC CI
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC CI
lue			IR GUN #:	x Ofher	Client Box	EC CI
lue			IR GUN #:	x Ofher	Client Box	EC CI
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	x Other	Client Box	EC CI
Wet ice Blue ice Dry ice Water None			IR GUN #:	x Olher	Client Box	EC CI
ve Ice None			(R GUN #:	k Other	Client Box	EC CI
lue Ice None		d d	IR GUN #:	c Other	Client Box	EC CI
ue Ice None	ب د	2	IR GUN#: 13	c Other	Client Box	EC CI
Wet Ice Bive Ice Dry Ice Water None	)   	ا م.لا	IR GUN #: 3	c Other	Client Box	EC CI
	IR Gun # Observed Corrected (Circle) Temp °C Temp °C	Observed Temp °C	IR Gun # (Circle)	iption	Cooler Description (Circle)	Coole

# **Login Container Summary Report**

Temperature readings						2
Client Sample ID	<u>Lab ID</u>	Container Type	Container pH Temp		Preservation Preservation Added Lot Number	
TRIP BLANK_40	240-219201-A 1	Voa Vial 40ml - Hydrochloric Acid				
MW-95S_021725	240-219201-A-2	Voa Vial 40ml - Hydrochloric Acid	***************************************			
MW-95S_021725	240-219201-B-2	Voa Vial 40ml - Hydrochloric Acid		and the second s	A CONTRACTOR OF THE PARTY OF TH	
MW-95S_021725	240-219201-C-2	Voa Vial 40ml - Hydrochloric Acid			***************************************	
MW-958_021725	240-219201-D-2	Voa Vial 40ml - Hydrochloric Acid		***************************************		
MW-95S_021725	240-219201-E-2	Voa Vial 40ml - Hydrochloric Acid				

2/25/2025

Page 1 of 1

# DATA VERIFICATION REPORT



February 26, 2025

Megan Meckley Arcadis 28550 Cabot Drive Suite 500 Novi, MI US 48377

CADENA project ID: E203728

Project: Ford Livonia Transmission Plant - ON-SITE Soil Gas, Ground Water and Soil

Project number: 30251157.401.04 (vapor 301.04) 30206169.0401.04

Event Specific Scope of Work References: Sample COC Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 219201-1 Sample date: 2025-02-17

Report received by CADENA: 2025-02-25

Initial Data Verification completed by CADENA: 2025-02-26

Number of Samples:2 Sample Matrices:Water Test Categories:GCMS VOC

Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

There were no significant QC anomalies or exceptions to report.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

The definitions of the qualifiers used for this data package are defined in the analytical report. CADENA valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory analytical report access the CADENA CLMS at <a href="http://clms.cadenaco.com/index.cfm">http://clms.cadenaco.com/index.cfm</a>.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

**Project Scientist** 

# **CADENA Valid Qualifiers**

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
В	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
Е	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

# **Analytical Results Summary**

**CADENA Project ID:** E203728

**Laboratory:** Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 219201-1

		Sample Name:	TRIP BL	ANK_40			MW-959	S_02172	.5	
		Lab Sample ID:	240219	2011			240219	2012		
		Sample Date:	2/17/20	25			2/17/20	25		
				Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC										
OSW-826	<u>0D</u>									
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l		ND	1.0	ug/l	
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l		ND	1.0	ug/l	
	Tetrachloroethene	127-18-4	ND	1.0	ug/l		ND	1.0	ug/l	
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l		ND	1.0	ug/l	
	Trichloroethene	79-01-6	ND	1.0	ug/l		ND	1.0	ug/l	
	Vinyl chloride	75-01-4	ND	1.0	ug/l		ND	1.0	ug/l	
OSW-826	<u>ODSIM</u>									
	1,4-Dioxane	123-91-1					ND	2.0	ug/l	



# Ford Motor Company – Livonia Transmission Project

# **Data Review**

# Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-219201-1

CADENA Verification Report: 2025-02-26

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 58421R Review Level: Tier III Project: 30206169.0401.02

# **SUMMARY**

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-219201-1 for samples collected in association with the Ford – Livonia, Michigan site. The review was conducted as a Tier III validation in addition to a verification/Tier II validation review performed by CADENA Inc. and included review of level IV laboratory data package completeness. Only elements of a Tier III validation effort (Tier III) include a detailed review of laboratory raw data to check for errors in calculation, calibration review, internal standard review and compound identification) and omitted deviations from the CADENA verification/Tier II report are documented in this report. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample	Parent Sample	Ana	lysis
Sample ID	Labib	Watrix	Collection Date	raient Sample	voc	VOC SIM
TRIP BLANK_40	240-219201-1	Water	02/17/2025		Х	
MW-95S_021725	240-219201-2	Water	02/17/2025		X	X

# **ANALYTICAL DATA PACKAGE DOCUMENTATION**

The table below is the evaluation of the data package completeness.

Items Reviewed	Rep	orted	Perfori Accep		Not Required
	No	Yes	No	Yes	Required
Sample receipt condition		Х		X	
2. Requested analyses and sample results		X		Х	
Master tracking list		Х		Х	
4. Methods of analysis		Х		Х	
5. Reporting limits		Х		Х	
6. Sample collection date		Х		Х	
7. Laboratory sample received date		Х		Х	
8. Sample preservation verification (as applicable)		Х		Х	
Sample preparation/extraction/analysis dates		Х		Х	
10. Fully executed Chain-of-Custody (COC) form		Х		Х	
Narrative summary of Quality Assurance or sample problems provided		Х		Х	
12. Data Package Completeness and Compliance		Х		Х	

### ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260D and 8260D SIM. Data were reviewed in accordance with USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005, November 2020 (with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999), as appropriate.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- · Concentration (C) Qualifiers
  - U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- · Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
  - UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
  - UB Analyte considered non-detect at the listed value due to associated blank contamination.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

# **VOLATILE ORGANIC COMPOUND (VOC) ANALYSES**

# 1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260D/8260D-SIM	Water	14 days from collection to analysis	Cool to < 6 °C; pH < 2 with HCl

All samples were analyzed within the specified holding time criteria.

# 2. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

# 3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

### 3.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All compounds associated with the initial calibrations were within the specified control limits.

# 3.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the continuing calibrations were within the specified control limits.

### 4. Internal Standard Performance

Internal standard performance criteria ensure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

# 5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate sample was not collected for samples from this SDG.

# 6. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

No compounds were detected in the samples within this SDG.

# 7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

# **DATA VALIDATION CHECKLIST FOR VOCs**

VOCs: 8260D/8260D-SIM	Rep	orted		rmance ptable	Not Required
	No	Yes	No	Yes	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (G	C/MS)				
Tier II Validation					
Holding times/Preservation		Х		Х	
Tier III Validation					
System performance and column resolution		Х		Х	
Initial calibration %RSDs		Х		Х	
Continuing calibration RRFs		Х		Х	
Continuing calibration %Ds		Х		Х	
Instrument tune and performance check		Х		Х	
Ion abundance criteria for each instrument used		Х		Х	
Field Duplicate RPD	Х				Х
Internal standard		Х		Х	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		Х		Х	
B. Quantitation Reports		Х		Х	
C. RT of sample compounds within the established RT windows		Х		Х	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		Х		Х	

# Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Febin J S

SIGNATURE:

DATE: March 20, 2025

PEER REVIEW: Andrew Korycinski

DATE: March 26, 2025

# NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS

**TestAmerica** 

Client Contact	Regulat	ory program:			□ DW			NPDES	6		RCRA		F* (	Other	·								·	,				
Company Name: Arcadis																								<u> </u>		TestAmerica Laborato	ries, Inc.	
Address: 28550 Cabot Drive, Suite 500	Client Project ?	Manager: Meg	an M	leckley			Site C	Contac	t: Sam	anth:	a Szpai	chler			ľ	Lab C	ontact	Mike	DelM	onico	1				ľ	COC No:		
	Telephone: 248	-994-2240					Telep	hone:	248-99	94-22	40				1	Telepi	one: 3	30-49	7-9396						T			
City/State/Zip: Novi, MI, 48377	Email: kristoff	ar hingkay@ar	andir				_	Dalvar	s Turn	arou	ad Time	:							An	alvse	25				15	1 of 1 CC for lab use only	)Cs	
Phone: 248-994-2240								,						1				Т	1	J					Ť	or rate date only		
	Sampler Name			_	. ( )		TAT	f differen								i						-			V	Valk-in client	-	
Project Name: Ford LTP	P	rebecco	2	(O)	5ng	an	10	dav		3 we 2 we															ī	ab sampling	*******	
Project Number: 30206169.0401.03	Method of Ship	ment/Carrier:			- 4		1			1 wc			5	Q	i		ا ۵			_	Σ.				- 1			
PO # US3460021848	Shipping/Track	ring No.					1			2 day			Filtered Sample (Y / N)	Composite-C/Grab-G		ا ۾	Trans-1,2-DCE 8260D		- 1	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM				,	ob/SDG No:		
10 # 033400021046	Surpping/17ack	dig No.											픨	9/3	8	cis-1,2-DCE 8260D	щ Ж			e 82	826(				ľ	OU/SDO NO.		
				I	Matrix	-		Contai	ners &	Prese	rvatives		m ag	I	826	ë	ĕ	9	e l	orid A	ē				-			
			1	;	Ē	,.	,	_	_	Н	g		red :	posi	1,1-DCE 8260D	2-D	7	PCE 8260D	TCE 8260D	ਤ	ě				- 1	Sample Specific No	tes /	
Sample Identification	Sample Date	Sample Time	₹	Aqueous	Sediment	ther	H2SO4	HINO3	ō	ZnAc/ NaOH	Unpres Other:		Elle	Com	=	15-1	ğ	S	S.E.	Ę.	4.				-	Special Instructio	ns:	
Sample Identification	Sample Date	Sample Time	F	<b>*</b>	s s	-	F		-	ZZ	1 0	_		¥		9		-	-	-	-	=	-	_	+			/
TRIP BLANK_ 中心				1				1					N	G	Х	Х	X	X	Χ	X						1 Trip Blank		` /
MW-955-021725	2/17/25	1030		6				(	a				N	G	X	X	X	X	X	X	X					3 VOAs for 8260D 3 VOAs for 8260D		
				$\Box$			$\Box$	$\top$	$\top$	П			П	$\dashv$		$\neg$		$\dashv$	$\neg$	T				$\neg$	$\neg$			
																				Щ				_	1			
																		_	-+	-								
				$\Box$	_			$\perp$	+	Н				_	-	=			$\dashv$	Щ	_	_	-	-	$\dashv$			
	1.1						ll				$\vdash \leftarrow$					- 1			,						- 1			
			╁	+-+			$\vdash$	-	1	$\vdash$	$\vdash$			-			-	$\dashv$		-	_	$\dashv$	-	+	$\dashv$			
					_					П							-	_										
			1							П											_					4		
			L	$\perp$			$\sqcup$			Ш		_(		1		i.	1	_	_					14	4 4	7.7		
			L											F	1	1							1	7		A CAN	NT	
			╁		_		$\vdash$	+	+	$\vdash$	-	_		E	3	2	+	$\dashv$	$\dashv$	$\dashv$	$\dashv$		- 7	U	一			
			Ш														00						1		1	1911		
RC 2/17/25			П											240-	2197	201 (	.00									17.0	1	
1										لبل	سليا		L				- 1			Щ								
Possible Hazard Identification  Non-Hazard Clammable Cin Irritant	□ Poiso	on B	_ Jnl	known			Sa		Jisposa turn to		fee may		iss. Dispose	al By	ample Lab	es are		d long hive I	ger tha	nln		nths						
Special Instructions/QC Requirements & Comments: 1213		on Pos					-													1								
Submit all results through Cadena at jtomalia@cadenaco.c	, ,		>4																									
Level IV Reporting requested.	oni. Cadena wi	200720																										
Relinquished by:	Company:			Date/	Time				Rec	eived	hv: .		_	_				lo	Compa	nv:	,				I	Date/Time:		
William William	Ar	cadis.			2/1	7/25	5 là	-الم	3		by: N	ivc		de	9 3	Sto	100	e	,.	<i>K</i>	+10	$\delta \alpha$	is			2/17/25 1	645	
Relinquished by	Company:			Date/	Time	حر ح		7	Rec	eived	by:	_	0					-	Compa			-	2		Ţ	Date/Time:		-
	100	9001		2	Time 191	77	<u> 110</u>	$\cup$	$\perp$		1	U	1	1	1	<u> </u>	>				2	711	V				1:05	My
Relinquished by:	Company	=1		Date/			14.	-	Rec	cived	Hind ab	orato	17 fx					9	Compa	3		115		QJ	M]	2/7/125 8	toa	
- Marie -	13	11		2	1196	2X	1110	25 0	in		<u> </u>	<u> </u>	TT	1	<i>ħ</i>					<u> </u>	V	#	办			1 7 (1 T) X	<u> </u>	
Q2006, TesiAmerica Laboratoriee, Inc., All rights reserved. TesiAmerica & Design 1 <sup>to</sup> are trademarks of fesiAmerica Laboratories, Inc.																				7	0	1/2	د/ه.	5				
неотноския и отворя — все и выстанка и сторитель в выстанка, по.																					•	010	7	-				

**Chain of Custody Record** 

TestAmerica Laboratory location: Farmington Hills — 38855 Hills Tech Drive, Suite 600, Farmington Hills 48331

# **Definitions/Glossary**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

# **Qualifiers**

$\sim$	$\sim$ 1		•	١,	$\overline{}$	. ^
G		IVI		v	u	74
	•	•••	•	•	•	•

Qualifier Qualifier Description

U Indicates the analyte was analyzed for but not detected.

# **Glossary**

DL, RA, RE, IN

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	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
DI	Detection Limit (DoD/DOE)

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

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

**Eurofins Cleveland** 

Page 4 of 21

4

-

\_\_\_\_

7

8

46

11

12

# **Client Sample Results**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK\_40

Lab Sample ID: 240-219201-1 Date Collected: 02/17/25 00:00

Matrix: Water

Date Received: 02/20/25 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 13:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 13:55	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 13:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 13:55	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 13:55	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 13:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		62 - 137			_		02/24/25 13:55	1
4-Bromofluorobenzene (Surr)	102		56 <sub>-</sub> 136					02/24/25 13:55	1
Toluene-d8 (Surr)	104		78 - 122					02/24/25 13:55	1
Dibromofluoromethane (Surr)	105		73 - 120					02/24/25 13:55	1

**Eurofins Cleveland** 

2/25/2025

Page 9 of 21

# **Client Sample Results**

Client: Arcadis US Inc. Job ID: 240-219201-1

Project/Site: Ford LTP

Date Received: 02/20/25 08:00

Client Sample ID: MW-95S\_021725

Lab Sample ID: 240-219201-2 Date Collected: 02/17/25 10:30

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			02/21/25 12:39	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 127					02/21/25 12:39	
- Method: SW846 8260D - Volat	ile Organic Comp	ounds by G	GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1.1 Diablaraathana		П	10		ua/l			02/24/25 14:19	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 14:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 14:18	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 14:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 14:18	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 14:18	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 14:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122		62 - 137	_		02/24/25 14:18	1
4-Bromofluorobenzene (Surr)	103		56 - 136			02/24/25 14:18	1
Toluene-d8 (Surr)	102		78 - 122			02/24/25 14:18	1
Dibromofluoromethane (Surr)	108		73 - 120			02/24/25 14:18	1

2/25/2025