**ANALYTICAL REPORT** 

# PREPARED FOR

Attn: Kristoffer Hinskey Arcadis U.S., Inc. 28550 Cabot Drive Suite 500 Novi, Michigan 48377

Generated 3/19/2024 7:22:18 AM

# **JOB DESCRIPTION**

Ford LTP - On Site

## **JOB NUMBER**

240-200745-1

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.

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## Authorization

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Authorized for release by Michael DelMonico, Project Manager I <u>Michael.DelMonico@et.eurofinsus.com</u> (330)497-9396 Client: Arcadis U.S., Inc. Project/Site: Ford LTP - On Site Laboratory Job ID: 240-200745-1

# **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	13
QC Sample Results	14
QC Association Summary	16
Lab Chronicle	17
Certification Summary	18
Chain of Custody	19

10

12

13

14

## **Definitions/Glossary**

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

#### **Qualifiers**

GC/MS V	OA
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Qualifier Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U Indicates the analyte was analyzed for but not detected.

**Qualifier Description** 

#### Glossary

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
%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) Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit Minimum Level (Dioxin) ML 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) Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

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Page 4 of 21

#### **Case Narrative**

Client: Arcadis U.S., Inc. Project: Ford LTP - On Site

Job ID: 240-200745-1 Eurofins Cleveland

Job Narrative 240-200745-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 3/8/2024 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 2.3°C and 3.3°C.

#### GC/MS VOA

Method 8260D\_SIM: An MS/MSD was prepared and analyzed with batch 240-605892, but is not reported due to the MS sample having a bad purge.

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

Job ID: 240-200745-1

## **Method Summary**

Client: Arcadis U.S., Inc.

Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

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

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## **Sample Summary**

Client: Arcadis U.S., Inc.
Project/Site: Ford LTP - On Site

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-200745-1	TRIP BLANK_55	Water	03/07/24 00:00	03/08/24 08:00
240-200745-2	MW-211S_030724	Water	03/07/24 10:17	03/08/24 08:00
240-200745-3	MW-212S_030724	Water	03/07/24 11:56	03/08/24 08:00
240-200745-4	MW-213S 030724	Water	03/07/24 13:33	03/08/24 08:00

Job ID: 240-200745-1

## **Detection Summary**

Client: Arcadis U.S., Inc.

Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

Client Sample ID: TRIP BLANK\_55 Lab Sample ID: 240-200745-1

No Detections.

No Detections.

Client Sample ID: MW-212S\_030724 Lab Sample ID: 240-200745-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.9		1.0	0.46	ug/L	1	_	8260D	Total/NA
Vinyl chloride	0.84	J	1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-213S\_030724 Lab Sample ID: 240-200745-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.73	J	1.0	0.45	ug/L	1	_	8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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Page 8 of 21 3/19/2024

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

Date Received: 03/08/24 08:00

Client Sample ID: TRIP BLANK\_55

Lab Sample ID: 240-200745-1 Date Collected: 03/07/24 00:00

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/24 13:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/24 13:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 13:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/24 13:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 13:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/24 13:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137			-		03/15/24 13:51	1
4-Bromofluorobenzene (Surr)	90		56 <sub>-</sub> 136					03/15/24 13:51	1
Toluene-d8 (Surr)	99		78 - 122					03/15/24 13:51	1
Dibromofluoromethane (Surr)	97		73 - 120					03/15/24 13:51	1

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

Date Received: 03/08/24 08:00

Surrogate

Toluene-d8 (Surr)

1,2-Dichloroethane-d4 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Client Sample ID: MW-211S\_030724

Date Collected: 03/07/24 10:17

Lab Sample ID: 240-200745-2

Prepared

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/13/24 13:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		68 - 127			-		03/13/24 13:30	1
Method: SW846 8260D - Volat Analyte		ounds by G Qualifier	C/MS RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
		•		MDI	Unit	n	Prepared	Analyzed	Dil Fac
		Qualifier		MDL 0.49		<u>D</u> .	Prepared	Analyzed 03/15/24 17:10	Dil Fac
Analyte	Result	Qualifier U	RL	0.49		D .	Prepared		Dil Fac
Analyte 1,1-Dichloroethene	Result 1.0	Qualifier U	RL	0.49 0.46	ug/L	<u> </u>	Prepared	03/15/24 17:10	Dil Fac 1 1 1
Analyte 1,1-Dichloroethene cis-1,2-Dichloroethene	Result 1.0 1.0	Qualifier U U U	1.0 1.0	0.49 0.46	ug/L ug/L ug/L	<u>D</u> -	Prepared	03/15/24 17:10 03/15/24 17:10	Dil Fac 1 1 1 1
Analyte 1,1-Dichloroethene cis-1,2-Dichloroethene Tetrachloroethene	Result 1.0 1.0 1.0	Qualifier U U U U	1.0 1.0 1.0 1.0	0.49 0.46 0.44	ug/L ug/L ug/L ug/L	<u>D</u> .	Prepared	03/15/24 17:10 03/15/24 17:10 03/15/24 17:10	Dil Fac 1 1 1 1 1 1 1 1

Limits

62 - 137

56 - 136

78 - 122

73 - 120

%Recovery Qualifier

110

91

97

100

Dil Fac

Analyzed

03/15/24 17:10

03/15/24 17:10

03/15/24 17:10

03/15/24 17:10

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

Client Sample ID: MW-212S\_030724

Lab Sample ID: 240-200745-3 Date Collected: 03/07/24 11:56

Matrix: Water

Analyzed

03/15/24 17:35

03/15/24 17:35

03/15/24 17:35

03/15/24 17:35

Prepared

Date	Received:	03/08/24	08:00
	. toooirou.	00,00,1	00.00

Surrogate

Toluene-d8 (Surr)

1,2-Dichloroethane-d4 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/13/24 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		68 - 127			-		03/13/24 13:54	1
Method: SW846 8260D - Volat Analyte	Result	Qualifier	RL		Unit	<u>D</u> .	Prepared	Analyzed	Dil Fac
Analyte		Qualifier			Unit ug/L	<u>D</u> .	Prepared	Analyzed 03/15/24 17:35	Dil Fac
	Result	Qualifier	RL	0.49		<u> </u>	Prepared		Dil Fac
Analyte 1,1-Dichloroethene	Result 1.0	Qualifier U	RL	0.49 0.46	ug/L	<u>D</u> -	Prepared	03/15/24 17:35	Dil Fac 1 1
Analyte 1,1-Dichloroethene cis-1,2-Dichloroethene	Result 1.0 1.9	Qualifier U	1.0 1.0	0.49 0.46 0.44	ug/L ug/L	<u> </u>	Prepared	03/15/24 17:35 03/15/24 17:35	Dil Fac 1 1 1
Analyte 1,1-Dichloroethene cis-1,2-Dichloroethene Tetrachloroethene	Result 1.0 1.9 1.0	Qualifier U U U	1.0 1.0 1.0	0.49 0.46 0.44 0.51	ug/L ug/L ug/L	<u> </u>	Prepared	03/15/24 17:35 03/15/24 17:35 03/15/24 17:35	Dil Fac 1 1 1 1

Limits

62 - 137

56 - 136

78 - 122

73 - 120

%Recovery Qualifier

110

92

97

102

Dil Fac

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

Date Received: 03/08/24 08:00

Client Sample ID: MW-213S\_030724

Lab Sample ID: 240-200745-4 Date Collected: 03/07/24 13:33

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/13/24 14:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		68 - 127			-		03/13/24 14:18	1
Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/24 18:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/24 18:00	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 18:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/24 18:00	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 18:00	1
Vinyl chloride	0.73	J	1.0	0.45	ug/L			03/15/24 18:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		62 - 137			-		03/15/24 18:00	1
4-Bromofluorobenzene (Surr)	89		56 <sub>-</sub> 136					03/15/24 18:00	1
Toluene-d8 (Surr)	99		78 - 122					03/15/24 18:00	1
Dibromofluoromethane (Surr)	101		73 - 120					03/15/24 18:00	1

3/19/2024

## **Surrogate Summary**

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

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

Matrix: Water Prep Type: Total/NA

				Percent Su	rrogate Rec
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-200745-1	TRIP BLANK_55	104	90	99	97
240-200745-2	MW-211S_030724	110	91	97	100
240-200745-3	MW-212S_030724	110	92	97	102
240-200745-4	MW-213S_030724	109	89	99	101
240-200774-B-6 MS	Matrix Spike	103	104	101	100
240-200774-B-6 MSD	Matrix Spike Duplicate	103	105	102	99
LCS 240-606244/5	Lab Control Sample	99	106	103	96
MB 240-606244/7	Method Blank	104	91	101	97

#### 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)	
240-200745-2	MW-211S_030724	107	
240-200745-3	MW-212S_030724	105	
240-200745-4	MW-213S_030724	112	
LCS 240-605892/5	Lab Control Sample	109	
MB 240-605892/7	Method Blank	107	

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

Job ID: 240-200745-1 Client: Arcadis U.S., Inc.

Project/Site: Ford LTP - On Site

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

Lab Sample ID: MB 240-606244/7

**Matrix: Water** 

Analyte

Surrogate

Analysis Batch: 606244

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

мв мв Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 1.0 U 1.0 0.49 ug/L 03/15/24 12:36 1.0 U 1.0 0.46 ug/L 03/15/24 12:36

1,1-Dichloroethene cis-1,2-Dichloroethene Tetrachloroethene 1.0 U 1.0 0.44 ug/L 03/15/24 12:36 trans-1,2-Dichloroethene 1.0 U 1.0 0.51 ug/L 03/15/24 12:36 03/15/24 12:36 Trichloroethene 1.0 U 1.0 0.44 ug/L Vinyl chloride 1.0 U 1.0 0.45 ug/L 03/15/24 12:36

> MB MB %Recovery Qualifier Limits

62 - 137 1,2-Dichloroethane-d4 (Surr) 104 03/15/24 12:36 4-Bromofluorobenzene (Surr) 91 56 - 136 03/15/24 12:36 Toluene-d8 (Surr) 101 78 - 122 03/15/24 12:36 Dibromofluoromethane (Surr) 97 73 - 120 03/15/24 12:36

Lab Sample ID: LCS 240-606244/5

**Matrix: Water** 

Analysis Batch: 606244

Client Sample ID: Lab Control Sample

Prepared

Prep Type: Total/NA

Analyzed

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits 1,1-Dichloroethene 25.0 21.7 ug/L 87 63 - 134 cis-1,2-Dichloroethene 25.0 24.5 ug/L 98 77 - 123 Tetrachloroethene 25.0 24.2 ug/L 97 76 - 123 trans-1,2-Dichloroethene 25.0 96 75 - 124 24 1 ug/L Trichloroethene 25.0 23.4 ug/L 94 70 - 122 Vinyl chloride ug/L 99 60 - 144 12.5 12.4

LCS LCS %Recovery Limits Surrogate Qualifier 1,2-Dichloroethane-d4 (Surr) 99 62 - 137 4-Bromofluorobenzene (Surr) 106 56 - 136 Toluene-d8 (Surr) 103 78 - 122 73 - 120 Dibromofluoromethane (Surr) 96

Lab Sample ID: 240-200774-B-6 MS

**Matrix: Water** 

Analysis Batch: 606244

Client Sample ID: Matrix Spike

Sample Sample MS MS %Rec Spike Result Qualifier Added Analyte Result Qualifier Unit %Rec Limits cis-1,2-Dichloroethene 1.0 U 25.0 24.1 ug/L 97 66 - 128 ug/L Tetrachloroethene 1.0 U 25.0 23.5 94 62 - 131 Trichloroethene 1.0 U 25.0 23 1 ug/L 92 61 - 124Vinyl chloride 1.9 12.5 11.8 ug/L 79 43 - 157

MS MS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 103 62 - 137 4-Bromofluorobenzene (Surr) 104 56 - 136 Toluene-d8 (Surr) 101 78 - 122 Dibromofluoromethane (Surr) 100 73 - 120

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Client: Arcadis U.S., Inc. Job ID: 240-200745-1 Project/Site: Ford LTP - On Site

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

_	
Lab Sample ID: 240-200774-B-6 MSD	

**Matrix: Water** 

Analysis Batch: 606244

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
cis-1,2-Dichloroethene	1.0	U	25.0	23.8		ug/L		95	66 - 128	1	14
Tetrachloroethene	1.0	U	25.0	22.7		ug/L		91	62 - 131	4	20
Trichloroethene	1.0	U	25.0	22.3		ug/L		89	61 - 124	3	15
Vinyl chloride	1.9		12.5	14.7		ug/L		102	43 - 157	22	24

	MSD	MSD			
Surrogate	%Recovery	Qualifier	Limits		
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		
4-Bromofluorobenzene (Surr)	105		56 - 136		
Toluene-d8 (Surr)	102		78 - 122		
Dibromofluoromethane (Surr)	99		73 - 120		

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

Lab Sample ID: MB 240-605892/7

**Matrix: Water** 

Analysis Batch: 605892

Analysis Butch. 000032	МВ	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/13/24 10:20	1
	MB	МВ							

Surrogate	%Recovery Qualifie	er Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107	68 - 127		03/13/24 10:20	1

Lab Sample ID: LCS 240-605892/5

**Matrix: Water** 

Analysis Batch: 605892

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dioxane	 10.0	8.28		ug/L		83	75 - 121	

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109	68 - 127

**Client Sample ID: Matrix Spike Duplicate** 

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

## **QC Association Summary**

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

## **GC/MS VOA**

## Analysis Batch: 605892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200745-2	MW-211S_030724	Total/NA	Water	8260D SIM	
240-200745-3	MW-212S_030724	Total/NA	Water	8260D SIM	
240-200745-4	MW-213S_030724	Total/NA	Water	8260D SIM	
MB 240-605892/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-605892/5	Lab Control Sample	Total/NA	Water	8260D SIM	

#### Analysis Batch: 606244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200745-1	TRIP BLANK_55	Total/NA	Water	8260D	
240-200745-2	MW-211S_030724	Total/NA	Water	8260D	
240-200745-3	MW-212S_030724	Total/NA	Water	8260D	
240-200745-4	MW-213S_030724	Total/NA	Water	8260D	
MB 240-606244/7	Method Blank	Total/NA	Water	8260D	
LCS 240-606244/5	Lab Control Sample	Total/NA	Water	8260D	
240-200774-B-6 MS	Matrix Spike	Total/NA	Water	8260D	
240-200774-B-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

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5

7

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#### Lab Chronicle

Client: Arcadis U.S., Inc. Job ID: 240-200745-1

Project/Site: Ford LTP - On Site

Client Sample ID: TRIP BLANK\_55

Lab Sample ID: 240-200745-1 Date Collected: 03/07/24 00:00

**Matrix: Water** 

Date Received: 03/08/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	606244	CDG	EET CLE	03/15/24 13:51

Client Sample ID: MW-211S\_030724 Lab Sample ID: 240-200745-2

Date Collected: 03/07/24 10:17 **Matrix: Water** 

Date Received: 03/08/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	606244	CDG	EET CLE	03/15/24 17:10
Total/NA	Analysis	8260D SIM		1	605892	MDH	EET CLE	03/13/24 13:30

Client Sample ID: MW-212S\_030724 Lab Sample ID: 240-200745-3

Date Collected: 03/07/24 11:56 Matrix: Water

Date Received: 03/08/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	606244	CDG	EET CLE	03/15/24 17:35
Total/NA	Analysis	8260D SIM		1	605892	MDH	EET CLE	03/13/24 13:54

Lab Sample ID: 240-200745-4 Client Sample ID: MW-213S\_030724

Date Collected: 03/07/24 13:33 **Matrix: Water** 

Date Received: 03/08/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D			606244	CDG	EET CLE	03/15/24 18:00
Total/NA	Analysis	8260D SIM		1	605892	MDH	EET CLE	03/13/24 14:18

Laboratory References:

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

## **Accreditation/Certification Summary**

Client: Arcadis U.S., Inc. Job ID: 240-200745-1 Project/Site: Ford LTP - On Site

#### **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	02-27-24 *		
Illinois	NELAP	200004	07-31-24		
lowa	State	421	06-01-25		
Kentucky (WW)	State	KY98016	12-30-24		
Minnesota	NELAP	039-999-348	12-31-24		
New Jersey	NELAP	OH001	06-30-24		
New York	NELAP	10975	04-01-24		
Oregon	NELAP	4062	02-27-25		
Pennsylvania	NELAP	68-00340	08-31-24		
Texas	NELAP	T104704517-22-19	08-31-24		
USDA	US Federal Programs	P330-18-00281	01-05-27		
Virginia	NELAP	460175	09-14-24		
West Virginia DEP	State	210	12-31-24		

 $<sup>{}^{\</sup>star}\operatorname{Accreditation/Certification\ renewal\ pending\ -\ accreditation/certification\ considered\ valid}.$ 

# **MICHIGAN**

190					Cnair																			esiAmenc		
Client Contact	TestAmerica Labora	tory location: _ ory program:	Brighto	n 10			ve, S			RCI			Other		763					_		3/1	5"	HE LEADER IN ENVIRONMENTAL TES		
pasy Name: Arcadis	Keguai	ory program.					141 1			1101	•		Otaci	. [										TestAmerica Laboratories,		
ress: 28550 Cabot Drive, Suite 500	Client Project N	Telephone: 248-994-2240  Eurgil: kristoffer.hiuskey@greadis.com  Sampler Nam e:														Lab Contact: Mike DelMonico Telephone: 330-497-9396								COC No:		
	Telephone: 248																					1 of 1 COCs				
State/Zip: Novi, MI.48377	Email: kristoffe								nt as to	und T	ime			_	Analyses						, <u>.</u> ,			1 of 1 COCs For lab use only		
ne: 248-994-2240	Sampler Name								om below	,		+												Walk-in client		
ect Name: Ford LTP On-Site	helaecca (c			Higo	λn	10 day 2 weeks						1								Lab sampling						
ect Number: 301 67538,401.03	Method of Ship	Method of Shipment/Carrier:							- · · · · · · · · · · · · · · · · · · ·							8				SIN						
301 67538.401.03	Shipping/Track	isg No:				1			- 1 d	-		(7)	Grab		82600	826(			8260	82 60D SIM				Job/SDG No:		
		Matrix					Containers & Preservatives						32600	, E	DOE	ا ۾	٥	ride	88							
Sample Identification	Sample Date	Sample Time	Air	Sodiment	Solid Other:	H2804	HN 03	HCI	NaOH ZnAď	Unpres	Other:	Filtered Sample (Y / N)	Composite=C/Grab=G	1,1-DCE 82600	cis-12-DCE	Trans-1,2-DCE 82600	PCE 82600	TCE 8260D	Vinyl Chloride 82600	1,4-Dioxane				Sample Specific Notes / Special Instructions:		
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FedEx. 1st Grd Exp Eurofins Cooler# Receipt After-hours Drop-off Date/Time Foam Box Chent Cooler

FAS **Жауропр** Client Drop Off Box Eurofins Courter Storage Location Other

Other

Packing material used. COOLANT Wet Bubble Willy (Board Blue Ice Dry Ice Plastic Bag Water

Cooler temperature upon receipt None None

Other

IR GUN#  $(CF \dot{Q})$ () °C) Observed Cooler Temp See Multiple Cooler Form Corrected Cooler Temp Ä

5 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? -Were tamper/custody seals intact and uncompromised? -Were the seals on the outside of the cooler(s) signed & dated?

4. (A) X-1. (A) X-1.

Receiving:

**VOAs** TOC

Oil and Grease

X

Tests that are not checked for pH by

ြိ

Nes (B)

Shippers' packing slip attached to the cooler(s)?

Did custody papers accompany the sample(s)?

Were the custody papers relinquished & signed in the appropriate place?

9 Was/were the person(s) who collected the samples clearly identified on the COC?

Did all bottles arrive in good condition (Unbroken)?

No No

1

Z

Could all bottle labels (ID/Date/Time) be reconciled with the COC?

For each sample, does the COC specify preservatives (NN), # of containers (NN), and sample type of grab/comp(NN)?

Were correct bottle(s) used for the test(s) indicated?

Sufficient quantity received to perform indicated analyses?

Are these work share samples and all listed on the COC?

Yes (1)

Yes (1)

11

12

If yes, Questions 13 17 have been checked at the originating laboratory

13 14 Were all preserved sample(s) at the correct pH upon receipt? Were VOAs on the COC?

Were air bubbles >6 mm in any VOA vials?

Was a VOA trip blank present in the cooler(s)?

Was a LL Hg or Me Hg trip blank present?

← Larger than this
Trip Blank Lot # (920)14

pH Strip Lot# IHC316719

Date à via Verbal Voice Mail Other

Concerning

Contacted PM

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES 📋 addıtıonal next page Samples processed by

19 SAMPLE CONDITION

Sample(s) Sample(s) were received after the recommended holding time had expired were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) Time preserved. Preservative(s) added/Lot number(s) were further preserved in the laboratory

VOA Sample Preservation Date/Time VOAs Frozen.

HC32908

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CHAN INC OTHER ROWER.	Class 100 Other ROWS.	Clark for Other RCHAF.  Clark
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Clerk fox Other ROWE:	Clerk Fex Other ROWE:	Clerk Sex Other ROWE:
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Clerk box Other RGDHF:	Clerk box Other RGDNF:	Cleri box Other RGMF:
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Chail Box Other ROWE:	Clerk Sex Other RGDN F:	Clerk Sox Other RGDN F:
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## DATA VERIFICATION REPORT



REVISED REPORT: March 22, 2024 REVISION SUMMARY: DVR updated to include the ARS table.

Kris Hinskey Arcadis of Michigan 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: 30167538.401.03

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

Laboratory submittal: 200745-1 Sample date: 2024-03-07

Report received by CADENA: 2024-03-19

Initial Data Verification completed by CADENA: 2024-03-19

Number of Samples:4

Sample Matrices: Water and trip blank

Test Categories: GCMS VOC

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

The following minor QC exceptions or missing information were noted:

GCMS VOC-SIM QC batch 605892 did not include MS/MSD analysis results due to a bad purge on the instrument according to the laboratory submittal case narrative.

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.

Analytical results reported between RDL and MDL are flagged 'J' and considered estimated values.

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: 200745-1

		Sample Name:	TRIP BLA	NK_55			MW-211	S_03072	4		MW-212	S_03072	4	MW-213S_030724						
		Lab Sample ID:	2402007	451			2402007	7452			2402007	7453			2402007454					
		Sample Date:	3/7/2024	1			3/7/202	4			3/7/2024	4								
				Report		Valid		Report		Valid		Report		Valid		Report		Valid		
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier		
GC/MS VOC																				
OSW-826	<u>60D</u>																			
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l		ND	1.0	ug/l		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		1.9	1.0	ug/l		ND	1.0	ug/l			
	Tetrachloroethene	127-18-4	ND	1.0	ug/l		ND	1.0	ug/l		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		ND	1.0	ug/l		ND	1.0	ug/l			
	Trichloroethene	79-01-6	ND	1.0	ug/l		ND	1.0	ug/l		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		0.84	1.0	ug/l	J	0.73	1.0	ug/l	J		
OSW-826	60DSIM																			
	1.4-Dioxane	123-91-1					ND	2.0	ug/l		ND	2.0	ug/l		ND	2.0	ug/l			