PREPARED FOR

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

Generated 8/19/2024 6:51:48 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-209171-1

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 8/19/2024 6:51:48 AM

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

Laboratory Job ID: 240-209171-1

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

-6

4

5

7

10

11

13

Definitions/Glossary

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

Qualifiers

GC/MS VOA

Qualifier Description

U Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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)
D:: E	

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

Case Narrative

Client: Arcadis U.S., Inc. Project: Ford LTP

Job ID: 240-209171-1 Eurofins Cleveland

Job Narrative 240-209171-1

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 8/9/2024 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 1.8°C and 2.5°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 20 8/19/2024

2

Job ID: 240-209171-1

3

4

5

6

R

9

10

11

Method Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209171-1

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

2

3

4

5

7

8

10

11

13

Sample Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209171-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-209171-1	TRIP BLANK_33	Water	08/07/24 00:00	08/09/24 08:00
240-209171-2	MW-116S 080724	Water	08/07/24 11:50	08/09/24 08:00

3

4

Q

9

10

12

13

Detection Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209171-1

Client Sample ID: TRIP BLANK_33

Lab Sample ID: 240-209171-1

No Detections.

Client Sample ID: MW-116S_080724 Lab Sample ID: 240-209171-2

No Detections.

1

3

А

7

Q

10

1 1

13

Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

Date Received: 08/09/24 08:00

Client Sample ID: TRIP BLANK_33

Lab Sample ID: 240-209171-1 Date Collected: 08/07/24 00:00

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result Qualifier RLMDL Unit D Prepared Analyzed Dil Fac 1.0 1,1-Dichloroethene 1.0 U 0.49 ug/L 08/16/24 00:55 cis-1,2-Dichloroethene 1.0 U 1.0 0.46 ug/L 08/16/24 00:55 Tetrachloroethene 1.0 U 1.0 0.44 ug/L 08/16/24 00:55 trans-1,2-Dichloroethene 1.0 U 1.0 0.51 ug/L 08/16/24 00:55 Trichloroethene 1.0 U 1.0 0.44 ug/L 08/16/24 00:55 Vinyl chloride 0.45 ug/L 1.0 U 1.0 08/16/24 00:55 %Recovery Qualifier Surrogate Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 105 62 - 137 08/16/24 00:55 4-Bromofluorobenzene (Surr) 99 08/16/24 00:55 56 - 136 102 78 - 122 08/16/24 00:55 Toluene-d8 (Surr) Dibromofluoromethane (Surr) 96 73 - 120 08/16/24 00:55

Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

Client Sample ID: MW-116S_080724

Lab Sample ID: 240-209171-2 Date Collected: 08/07/24 11:50

Matrix: Water

08/16/24 01:18

Date	Received:	08/09/24	08:00

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			08/15/24 10:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		68 - 127			_		08/15/24 10:56	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		68 - 127			-		08/15/24 10:56	1
Method: SW846 8260D - Volat	ile 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			08/16/24 01:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/16/24 01:18	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/16/24 01:18	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:18	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/16/24 01:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137			_		08/16/24 01:18	1
4-Bromofluorobenzene (Surr)	99		56 ₋ 136					08/16/24 01:18	1
Toluene-d8 (Surr)	105		78 ₋ 122					08/16/24 01:18	1

73 - 120

Surrogate Summary

Client: Arcadis U.S., Inc.

Job ID: 240-209171-1

Project/Site: Ford LTP

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

Matrix: Water Prep Type: Total/NA

				Percent Sui	rogate Reco
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-209171-1	TRIP BLANK_33	105	99	102	96
240-209171-2	MW-116S_080724	104	99	105	97
240-209176-A-2 MS	Matrix Spike	97	112	104	97
240-209176-C-2 MSD	Matrix Spike Duplicate	97	111	107	94
LCS 240-623528/4	Lab Control Sample	96	110	107	92
MB 240-623528/7	Method Blank	101	102	105	95

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 Reco	overy (Acceptance Limits
		DCA		
_ab Sample ID	Client Sample ID	(68-127)		
240-209169-D-6 MS	Matrix Spike	108		
240-209169-D-6 MSD	Matrix Spike Duplicate	108		
240-209171-2	MW-116S_080724	108		
LCS 240-623431/4	Lab Control Sample	103		
MB 240-623431/6	Method Blank	104		
Surrogate Legend				
DCA = 1,2-Dichloroetha	ne-d4 (Surr)			

_

E

6

8

11

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

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

Lab Sample ID: MB 240-623528/7

Matrix: Water

Analysis Batch: 623528

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

rep 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			08/15/24 22:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/15/24 22:38	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/15/24 22:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/15/24 22:38	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/15/24 22:38	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/15/24 22:38	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		08/15/24 22:38	1
4-Bromofluorobenzene (Surr)	102		56 ₋ 136		08/15/24 22:38	1
Toluene-d8 (Surr)	105		78 - 122		08/15/24 22:38	1
Dibromofluoromethane (Surr)	95		73 - 120		08/15/24 22:38	1

Lab Sample ID: LCS 240-623528/4

Matrix: Water

Analysis Batch: 623528

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	21.9		ug/L		87	63 - 134	
cis-1,2-Dichloroethene	25.0	25.3		ug/L		101	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	22.7		ug/L		91	70 - 122	
Vinyl chloride	12.5	11.0		ug/L		88	60 - 144	

	LCS LCS						
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	96		62 _ 137				
4-Bromofluorobenzene (Surr)	110		56 ₋ 136				
Toluene-d8 (Surr)	107		78 - 122				
Dibromofluoromethane (Surr)	92		73 - 120				

Lab Sample ID: 240-209176-A-2 MS

Matrix: Water

Analysis Batch: 623528

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

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Analyte %Rec Limits Unit 1.0 U 25.0 74 56 - 135 1,1-Dichloroethene 18.4 ug/L cis-1,2-Dichloroethene 1.0 U 25.0 23.5 94 66 - 128 ug/L Tetrachloroethene 1.0 U 25.0 17.9 ug/L 72 62 - 131 trans-1,2-Dichloroethene 1.0 U 25.0 18.8 ug/L 75 56 - 136 Trichloroethene 25.0 70 61 - 124 1.0 U 17.5 ug/L Vinyl chloride 1.0 U 12.5 10.0 ug/L 43 - 157

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	112		56 - 136
Toluene-d8 (Surr)	104		78 - 122

Eurofins Cleveland

Page 12 of 20

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

Job ID: 240-209171-1

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

Lab Sample ID: 240-209176-A-2 MS

Matrix: Water

Analysis Batch: 623528

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

MS MS

Surrogate %Recovery Qualifier Limits Dibromofluoromethane (Surr) 97 73 - 120

Lab Sample ID: 240-209176-C-2 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Analysis Batch: 623528

•	Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	1.0	U	25.0	18.3		ug/L		73	56 - 135	1	26
cis-1,2-Dichloroethene	1.0	U	25.0	22.6		ug/L		91	66 - 128	4	14
Tetrachloroethene	1.0	U	25.0	18.5		ug/L		74	62 - 131	3	20
trans-1,2-Dichloroethene	1.0	U	25.0	19.2		ug/L		77	56 - 136	2	15
Trichloroethene	1.0	U	25.0	17.7		ug/L		71	61 - 124	2	15
Vinyl chloride	1.0	U	12.5	9.85		ug/L		79	43 - 157	2	24

MSD MSD

мв мв

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	111		56 - 136
Toluene-d8 (Surr)	107		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120

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

Lab Sample ID: MB 240-623431/6

Matrix: Water

Analysis Batch: 623431

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L	_		08/15/24 10:09	1
	МВ	MB							

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 104 68 - 127 08/15/24 10:09

Lab Sample ID: LCS 240-623431/4

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analysis Batch: 623431

Matrix: Water

		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dioxane	 	10.0	8.65		ug/L		86	75 - 121	

LCS LCS

Surrogate	%Recovery Quaimer	Limits
1,2-Dichloroethane-d4 (Surr)	103	68 - 127

Lab Sample ID: 240-209169-D-6 MS

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 623431

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dioxane	2.0	U	10.0	9.79		ug/L		98	20 - 180	

Eurofins Cleveland

QC Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

Method: 8260D	SIM - Volat	ile Organic	Compounds	(GC/MS) (Continued)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		68 - 127

Lab Sample ID: 240-209169-D-6 MSD

Matrix: Water

	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	9.78		ug/L		98	20 - 180	0	20

MSD MSD

Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 108 68 - 127

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

QC Association Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209171-1

GC/MS VOA

Analysis Batch: 623431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-209171-2	MW-116S_080724	Total/NA	Water	8260D SIM	
MB 240-623431/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-623431/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-209169-D-6 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-209169-D-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 623528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-209171-1	TRIP BLANK_33	Total/NA	Water	8260D	
240-209171-2	MW-116S_080724	Total/NA	Water	8260D	
MB 240-623528/7	Method Blank	Total/NA	Water	8260D	
LCS 240-623528/4	Lab Control Sample	Total/NA	Water	8260D	
240-209176-A-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-209176-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

А

6

0

9

10

11

12

Lab Chronicle

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK_33

Lab Sample ID: 240-209171-1 Date Collected: 08/07/24 00:00

Matrix: Water

Date Received: 08/09/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	623528	LEE	EET CLE	08/16/24 00:55

Client Sample ID: MW-116S_080724 Lab Sample ID: 240-209171-2

Date Collected: 08/07/24 11:50 Matrix: Water

Date Received: 08/09/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	623528	LEE	EET CLE	08/16/24 01:18
Total/NA	Analysis	8260D SIM		1	623431	MS	EET CLE	08/15/24 10:56

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.

Project/Site: Ford LTP

Job ID: 240-209171-1

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
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	08-31-25
lowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-02-25
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	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

8

9

10

15

13

Chain of Custody Record

MICHIGAN 190



TestAmerica Laboratory location: Brighton -- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

Client Contact	Regulat	ory program:			DW		NPD	ES		RCI	N.	_ O	ther										m	
ompany Name: Arcadis	Client Project !	danager: Kris b	linskey			Site	Cont	act: C	hristi	na We	aver		-	Lab	Conta	ct: Mi	ke Del	Monic	0				TestAmerica Laborato	iries, in
ddress: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240				Tale	nhan	e: 248	2-994-7	2240				Tele	nhone	: 330-4	97_93	96					 	
ity/State/Zip: Novi, MI, 48377							•								pnone									OCs
one: 248-994-2240	Email: kristoff	er.hinskey@arc	adis.com	1			AREL	ysis Tu	urnaro	ound 1	ıme				Т			nalys	es	$\neg \top$	\neg	\top	For lab use only	
	Sampler Name		1	Λ	.,	TAT	ıf dıll	icrent fro	m below														Walk-in client	Name and Address
oject Name: Ford LTP		Jelima	<u> </u>	14	13	_	0 da		≥ 2 v														Lab sampling	-
eject Number: 30206169.0401.03	Method of Ship	ment/Carrier:						1	1 v 2 d	veek lavs		2 4			9				SIM					
# US3410018772	Shipping/Track	ing No:				7			_ 1 d			Filtered Sample (Y / N)		8260D	8260D		l	Vinyl Chloride 8260D	1,4-Dioxane 8260D				Job/SDG No	
				Mat	rix		Con	tainers	& Pre	servati	ves	du	82600		DCE	۵		ride	ne 82					
			=	ĕ		T.				_		ed S	1 L	20-2	-1,2-	3260	3260	Ch ₀	ioxar				Sample Specific No	otes /
Sample Identification	Sample Date	Sample Time	Air	Sediment	Solid Other:	H2S04	HNO3	HCI	PAC S	NAOH Unpres	Other:	Filter	1 1-DCE	cis-1,2-DCE	Frans-1,2-DCE	PCE 8260D	TCE 8260D	/inyl	0-4.				Special Instruction	
				-	<i>37</i> <i>3</i>	一	Ē		~ ~		_		+		÷	十一				\mp	_	+		
TRIP BLANK_ 33			1					1				NC	<u>}</u>	(X	X	X	X	X			\bot		1 Trip Blank	
MW-1165_080729	(8/07/24	11.50	Ų					6				NG	X	$\parallel \times$	x	1ٰ×	×	X	$ \mathcal{X} $				3 VOAs for 8260E 3 VOAs for 8260E	
110/2 2 2 2	1201/01	(1.00	+	\vdash		+	Н	_	+	+			+	+		<u> </u>				-	+	+		
						\perp							\perp			_		_		\dashv				
																						İ		
			-	\vdash	+	+	Н	+	+	+		+	+	+	+	\vdash	<u> </u>		H	\dashv	+	+		
			İ		118		11 1 11 1			HI I I I														
			_	\vdash	-		Ш			Ш	141141	Mili	Ш		-		-			\dashv	+	+	 	
										1111		Ш	Ш							\perp				
					111					NAM IN														
				\vdash		0-209	171	Cha	ain of	Cus	toay				-	+				-+	+	+		
										i			1							\perp				
Possible Hazard Identification						s					nay be a							han I						-
	Irritant Poisc		Jnknow		,	Ц,		Return	to Cli	ent	i√ D	isposal	By La	ıb		Archive	For		Мо	onths				
ristractions/QC Requirements & Comments.	5785 / W	dgwilt	-2 ,	bre	4 yr	d																		
ccial Instructions/QC Requirements & Comments: bmit all results through Cadena at jtomalia@cade vol IV Reporting requested.	naco.com. Cadena #E	203728			•																			
linquished by	Company /	/ //	Dat	te/Tim	c:		_	R	Receive	ed by:		. /					Comp	oany:		<u> </u>			Date/Time:	. رسمه
for for	171	1hd 15	0	1/2	2/2/	15	:/3		110	ivi	(vi	1_	5/2	145					cha	13			Date/Time: 09/07/24 V	3 /
dinquished by:	Company:	dil	Dat	P/Im	3/24	i z		<	Receive	ed by:	(v)	12	2				Comp	pany:	TA				Date/Time: 818124 13	55 PA
clinquished by	Company	~13	Dat	te/Tim	c: `			3) F	Receive	ed in L	aborato	ry by:		~	A1							-		
Felicano	Company		8	181	24	40	\mathcal{C}		K	(ATI	aborato	NE	MÃ	RTJ	N			7	FC	12			Date/Time: 8(9(24 8	300

©2008, TestAmerica Laboratories, Inc. All rights reserved. TestAmerica & Design ¹⁶ are trademarks of TestAmerica Laboratories, Inc.

VOA Sample Preservation - Date/Time VOAs Frozen
Sample(s)were further preserved in the laboratory Time preservedPreservative(s) added/Lot number(s):were further preserved in the laboratory
20. SAMPLE PRESERVATION
19. SAMPLE CONDITION were received after the recommended holding time had expired. Sample(s) were received in a broken container were received with bubble >6 mm in diameter (Notify PM)
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES
Contacted PM Date by VIA Verbal Voice Mail Other Concerning
The course was any common processing.
13 Were all preserved sample(s) at the correct pH upon receipt? 14. Were VOAs on the COC? 15 Were air bubbles >6 mm in any VOA vials? 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # N Yes (No Yes) 17 Was a LL Hg or Me Hg trip blank present? Yes No (NA pH Strip Lot# HC442471 Yes (No Yes) Yes (No Yes) Yes (No Yes)
11 Sufficient quantity received to perform indicated analyses? 12. Are these work share samples and all listed on the COC? If yes, Questions 13-17 have been checked at the originating laboratory
8 Could all bottle labels (D/Date/Time) be reconciled with the COC? 9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)? 10 Were correct bottle(s) used for the test(s) indicated?
Were the custody papers relinquished & signed in the appropriate place? Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
A STATE OF THE STA
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 7 Yes No -Were the seals on the outside of the cooler(s) signed & dated? -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? -Were tamper/custody seals interfand incompromised? Were tamper/custody seals interfand incompromised?
IR GUN# 22 (CF -Q · 1 °C) Observed Cooler Temp.
COOLANT Wet Ice Blue Ice Dry Ice Water None Cooler temperature upon receipt Cooler temperature upon receipt
Foam Box Client Cooler Box Oth
qp UPS FAS Waypoils Client Drop Off E
8(9)24
Client Acrop () Cooler unpacked by:
burolms=Cleveland Sample Receipt FormASarrative Eogin # : Eogin #

Page 19 of 20

ater None Slue Ice ater None Blue Ice ater None	A CONTRACTOR OF THE PARTY OF TH	- The second sec	IR GUN #	Box Other	EC Client
None e Ice None					
None		A contract of the contract of	IR GUN #:	Box Olher	EC Client
Ø	A company of the contract of t		IR GUN #:	Box Olher	EC Client
Je ice None			IR GUN #:	Box Other	EC Client
Blue Ice later None	The second secon		IR GUN #:	Box Other	EC Client
Blue Ice later None	THE PARTY OF THE P	And the same of th	IR GUN #:	Box Other	EC Client
Blue Ice later None	And the second s		IR GUN #:	Box Other	EC Client
Wet ice Blue ice Dry ice Water None	Cartes Control		IR GUN #:	Box Other	EC Client
Wet ice Blue ice Dry ice Water None			IR GUN #:	Box Other	EC Client
Bive er			IR GUN #:	Box Other	EC Client
Wet ice Blue ice Dry ice Water Name		The state of the s	IR GUN #:	Box Other	EC Client
Blue Ice er None		the state of the s	IR GUN #	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None		And the second s	IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None	and the state of t		IR GUN #:	Box Other	EC Client
Blue Ice er None		One-server server IR GUN #:	Box Other	EC Client	
Bive Ice er None			IR GUN #:	Box Other	EC Client
lue ice None		and the state of t	IR GUN #:	Box Other	EC Client
Blue Ice later None	Management of the state of the	To the same of the	IR GUN #:	Box Other	EC Client
Blue Ice r None			IR GUN #:	Box Olher	EC Client
Slue Ice None		annie arrivermina del del respecto del como como como como como como como com	IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	Box Other	EC Client
Wet ice Blue ice Dry ice Water None			IR GUN #:	Box Other	EC Client
Blue Ice None			IR GUN #:	Box Other	EC Client
None None			IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	Box Other	EC Client
ice None			IR GUN #:	Box Other	KC Client
Blue Ice r None			IR GUN #:	Box Other	EC Cllent
Wet Ice Blue Ice Dry Ice Water Nane		-	IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	Box Other	EC Client
Wet Ice Blue Ice Dry Ice Water None			IR GUN #:	Box Other	EC Client
e Ice None	2.5	2.6	IR GUN #:	Box Other	EC Client
Je Ice None	3./	1, 9	IR GUN #: 22	Box Other	(EC) Client
	Corrected Temp °C	Observed Temp °C	IR Gun # (Circle)	scription le)	Cooler Description (Circle)
	fultiple Cooler For	d Sample Receipt Multiple Cooler Form	Eurofins - Cleveland		7,7011

DATA VERIFICATION REPORT



August 19, 2024

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

CADENA project ID: E203728

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

Project number: 30206169.0401.04_WA-02

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

Laboratory submittal: 209171-1 Sample date: 2024-08-07

Report received by CADENA: 2024-08-19

Initial Data Verification completed by CADENA: 2024-08-19

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 http://clms.cadenaco.com/index.cfm.

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: 209171-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BL/ 240209 8/7/202	1711 4						
				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 # 240-209171-1

CADENA Verification Report: 2024-08-19

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 55533R Review Level: Tier III Project: 30206169.0401.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-209171-1 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 10	Labib	IVIALITA	Collection Date	Farent Sample	VOC	VOC SIM
TRIP BLANK_33	240-209171-1	Water	08/07/2024		Х	
MW-116S_080724	240-209171-2	Water	08/07/2024		Х	X

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

Items Reviewed	Rep	orted		mance otable	Not
	No	Yes	No	Yes	Required
Sample receipt condition		Х		Х	
Requested analyses and sample results		X		Х	
Master tracking list		X		Х	
4. Methods of analysis		X		Х	
5. Reporting limits		X		Х	
6. Sample collection date		X		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

Rep	orted			Not Required
No	Yes	No	Yes	Required
C/MS)				
	Х		Х	
	Х		Х	
	Х		Х	
	Х		Х	
	Х		Х	
	Х		Х	
	Х		Х	
X				Х
	Х		Х	
	Х		Х	
	Х		Х	
	Х		Х	
	X		Х	
	Х		Х	
	No C/MS)	X X X X X X X X X X X X X X X X X X X	Reported Acce No Yes No C/MS) X X X X X X X X X X X X X	No Yes No Yes

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Bindu Sree M B

SIGNATURE: BAShims

DATE: September 11, 2024

PEER REVIEW: Andrew Korycinski

DATE: September 17, 2024

NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

Chain of Custody Record





TestAmerica Laboratory location: Brighton -- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

Client Contact	Regulati	ory program:		DW		NPI	DES	□ R	CRA	□ Ot	ther [
Company Name: Arcadis		,, p. og. a									1									TestAmerica Lab	oratories, Inc
20550 G. L. D. L. G. L. 200	Client Project N	lient Project Manager: Kris Hinskey Si				Site Contact: Christina Weaver Lab Contact: N				Lab Contact: Mike DelMonico					COC No:						
Address: 28550 Cabot Drive, Suite 500	Telephone: 248-	elephone: 248-994-2240 T					Telephone: 248-994-2240 Telephone:					hone: 3	30-49	7-9396	-						
City/State/Zip: Novi, MI, 48377	Emple balance	ail: kristoffer.hinskey@arcadis.com				Anal	vsis Ti	urnaround	Time		_				An	alyse	s		—	1 of 1 For lab use only	COCs
Phone: 248-994-2240	Email: Kristorie	r.ninskey@arc	auis.com										T	T	T	1		\Box			
Project Name: Ford LTP	Sampler Name:		. 10		T.4	AT if diff		om below 3 weeks				-			- 1					Walk-in client	Sergnesia
		Jelung	<u> </u>	MB		10 da		2 week									_			Lab sampling	
Project Number: 30206169.0401.03	Method of Ship	nent/Carrier: \						1 week 2 days		Z			9			۵	SIS				
PO # US3410018772	Shipping/Track	ing No:					1	□ 1 day		Filtered Sample (Y / N)		8260D	8260D			Vinyl Chloride 8260D	1,4-Dioxane 8260D			Job/SDG No:	
			N	Matrix		Con	tainers	& Preserva	tives	de la	2601	E 82	DCE	اہ		ride	e 8.				-57593
			=	ž	Τ.				11	ed Sy	8 8	S-DC	-1,2	3260	3260	양	ioxar			Sample Specif	ic Notes /
Sample Identification	Sample Date	Sample Time	Air	Sediment	Other: H2SO4	HNO3	HC	ZaAci NAOH	Other:	Filtered Sa	1,1-DCE 8260D	cis-1,2-DCE	Trans-1,2-DCE	PCE 8260D	TCE 8260D	Į,	4 .			Special Instr	
	- Dampie Date	Dampie Time	$\neg \vdash$	S S	- -	-		~ NZ -	+		+	1		Ŧ	-	-		++	一		
TRIP BLANK_ 33			1				1			NG	3 X	X	Х	X	X	X				1 Trip Blank	·
MW-1165_080729	(8/07/24	11.50	Ų				(,],	N 6	X	X	X	\times	x	χ.	1			3 VOAs for 82 3 VOAs for 82	
VIO 1101-000721	101101	(1.00	- 18	\dashv	+	+	9	+	+	-	+	1 ,				+	$\dot{+}$	+	+	3 VOAS 101 82	GOD SIIVI
				+		_	\vdash		+	-	_	\perp		\dashv	-	79	_	-	-	 	
												1 1					1				
				1/1				1 14 1 1 1 1 1 1 1 1		1888(1)	B1 (8 B1			\dashv				11			
				4							Ш			\perp			_	\bot			
	4						l III		11 14 11	Maria											
				+						Ш			-	\dashv	\dashv	\dashv	_	+			
					240-20	19171	i Cha	ain of Cu	stody												
					240-20																
				-		+	-		1	-	+-	$\overline{\mathbf{H}}$	_	-	-	-	_	\perp	\rightarrow		
Possible Hazard Identification									may be as:							ıa 1 m					
Non-Hazard lammable c Special Instructions/QC Requirements & Comments:	n Irritant Poiso		Jnknown			1	Return	n to Client	i∙ Dis	sposal .	By Lab		Ar	hive f	orı		Monti	<u>s</u>			
	3789 / W	dgwilt	2 b.	2649	wa																
Submit all results through Cadena at jtomalia@cad Level IV Reporting requested.	lenaco.com. Cadena #E	203728		•																	
Relinquished by:	Company: _/	/ / /	Date/	Time			IR	Received by			-			10	ompa	nv:				Date/Time:	-, -
for the	TIV.	1hd 15	09	1/07/	24 (5:13		Novi	· (old	<u>/</u>	5/2	14.5	e		/	AVI	rdl	3		Date/Time: 09/07/24	15.13
Relinquished by:	Company:	4.50	Date/	Time:	/	- ·	R	Received by	100	10					Compa	ny:				Date/Time: 818124	1000
Palinari della la	mac	us			4 1	3:					<u>~</u>	5				E	7				1326
Relinquished by Penchers	Company		Date/	1 24	140	CC	,	nı bevissen F A X	HARIN	y Dy: E	MÄR	TIN		ľ	Compa	'''y:	7/1	2		Date/Time: 8(9(24	1800
00000			10,70	,1	1 10			IV A I	HUHILI	• •	11		•				<u></u>			<u> </u>	

©2008, TestAmerica Laboratories, Inc., All rights reserved. TestAmerica & Design ¹⁶ are trademarks of TestAmerica Laboratories, Inc.

Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209171-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK_33

Lab Sample ID: 240-209171-1 Date Collected: 08/07/24 00:00 **Matrix: Water**

Date Received: 08/09/24 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			08/16/24 00:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/16/24 00:55	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 00:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/16/24 00:55	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 00:55	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/16/24 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137			_		08/16/24 00:55	1
4-Bromofluorobenzene (Surr)	99		56 ₋ 136					08/16/24 00:55	1
Toluene-d8 (Surr)	102		78 - 122					08/16/24 00:55	1
Dibromofluoromethane (Surr)	96		73 - 120					08/16/24 00:55	1

Client Sample ID: MW-116S_080724

Date Collected: 08/07/24 11:50

Date Received: 08/09/24 08:00

Method: SW846 8260D SIM - \	/olatile Organic C	ompounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			08/15/24 10:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		68 - 127			_		08/15/24 10:56	1

1,2-Dichloroethane-d4 (Surr) —	108		68 - 127					08/15/24 10:56	1
Method: SW846 8260D - Volatil	e Organic Comp	ounds by G	SC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			08/16/24 01:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/16/24 01:18	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/16/24 01:18	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:18	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/16/24 01:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137			-		08/16/24 01:18	1

-1	Guiroguic	7011CCCVC1 y	Qualifici	Liiiits	Trepared	Analyzea	Diriac
	1,2-Dichloroethane-d4 (Surr)	104		62 - 137		08/16/24 01:18	1
	4-Bromofluorobenzene (Surr)	99		56 - 136		08/16/24 01:18	1
	Toluene-d8 (Surr)	105		78 - 122		08/16/24 01:18	1
ĺ	Dibromofluoromethane (Surr)	97		73 - 120		08/16/24 01:18	1

Lab Sample ID: 240-209171-2

Matrix: Water

PREPARED FOR

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

Generated 8/19/2024 6:54:10 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-209172-1

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 8/19/2024 6:54:10 AM

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

Laboratory Job ID: 240-209172-1

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

-6

4

9

7

9

10

12

13

Definitions/Glossary

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

Qualifiers

GC/MS VOA

U 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							
%R	Percent Recovery							
CFI	Contains Free Liquid							

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

Eurofins Cleveland

8/19/2024

Page 4 of 20

•

4

Ę

7

8

46

11

12

13

Case Narrative

Client: Arcadis U.S., Inc. Project: Ford LTP

Job ID: 240-209172-1 Eurofins Cleveland

Job Narrative 240-209172-1

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 8/9/2024 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 1.8°C and 2.5°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 20 8/19/2024

2

Job ID: 240-209172-1

9

4

5

_

8

9

46

Method Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209172-1

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

Eurofins Cleveland

Sample Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209172-1

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received

 240-209172-1
 TRIP BLANK_34
 Water
 08/07/24 00:00
 08/09/24 08:00

 240-209172-2
 MW-216S_080724
 Water
 08/07/24 12:45
 08/09/24 08:00

Detection Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209172-1

Client Sample ID: TRIP BLANK_34

Lab Sample ID: 240-209172-1

No Detections.

No Detections.

1

0

8

111

13

Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

Date Received: 08/09/24 08:00

Client Sample ID: TRIP BLANK_34

Lab Sample ID: 240-209172-1 Date Collected: 08/07/24 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			08/16/24 01:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/16/24 01:40	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/16/24 01:40	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:40	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/16/24 01:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137			_		08/16/24 01:40	1
4-Bromofluorobenzene (Surr)	99		56 ₋ 136					08/16/24 01:40	1
Toluene-d8 (Surr)	100		78 - 122					08/16/24 01:40	1
Dibromofluoromethane (Surr)	103		73 - 120					08/16/24 01:40	1

Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

Date Received: 08/09/24 08:00

Client Sample ID: MW-216S_080724

Lab Sample ID: 240-209172-2 Date Collected: 08/07/24 12:45

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			08/15/24 11:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		68 - 127			_		08/15/24 11:19	1
Method: SW846 8260D - Volat	•	•		MDI	Unit	n	Propared	Analyzod	Dil Fac
Analyte	Result	Qualifier	RL		Unit	<u>D</u> _	Prepared	Analyzed	Dil Fac
Method: SW846 8260D - Volat Analyte 1,1-Dichloroethene	•	Qualifier			Unit ug/L	<u>D</u> -	Prepared	Analyzed 08/16/24 02:03	Dil Fac
Analyte	Result	Qualifier U	RL	0.49		<u>D</u> -	Prepared	·	Dil Fac
Analyte 1,1-Dichloroethene	Result 1.0	Qualifier U	RL	0.49 0.46	ug/L	<u>D</u> -	Prepared	08/16/24 02:03	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 0.44	ug/L ug/L	<u>D</u> -	Prepared	08/16/24 02:03 08/16/24 02:03	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	0.49 0.46 0.44 0.51	ug/L ug/L ug/L	<u> </u>	Prepared	08/16/24 02:03 08/16/24 02:03 08/16/24 02:03	Dil Fac 1 1 1 1 1 1

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103	62 - 137		08/16/24 02:03	1
4-Bromofluorobenzene (Surr)	99	56 - 136		08/16/24 02:03	1
Toluene-d8 (Surr)	103	78 - 122		08/16/24 02:03	1
Dibromofluoromethane (Surr)	99	73 - 120		08/16/24 02:03	1

Surrogate Summary

Client: Arcadis U.S., Inc. Job ID: 240-209172-1 Project/Site: Ford LTP

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

Matrix: Water Prep Type: Total/NA

				Percent Sur	rrogate Rec
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-209172-1	TRIP BLANK_34	107	99	100	103
240-209172-2	MW-216S_080724	103	99	103	99
240-209176-A-2 MS	Matrix Spike	97	112	104	97
240-209176-C-2 MSD	Matrix Spike Duplicate	97	111	107	94
LCS 240-623528/4	Lab Control Sample	96	110	107	92
MB 240-623528/7	Method Blank	101	102	105	95
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)	
240-209169-D-6 MS	Matrix Spike	108	
240-209169-D-6 MSD	Matrix Spike Duplicate	108	
240-209172-2	MW-216S_080724	106	
LCS 240-623431/4	Lab Control Sample	103	
MB 240-623431/6	Method Blank	104	
Surrogate Legend			

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

Eurofins Cleveland

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

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

Lab Sample ID: MB 240-623528/7

Matrix: Water

Analysis Batch: 623528

Client S	ample 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			08/15/24 22:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/15/24 22:38	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/15/24 22:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/15/24 22:38	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/15/24 22:38	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/15/24 22:38	1

MB MB %Recovery Qualifier Dil Fac Surrogate Limits Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 101 62 - 137 08/15/24 22:38 4-Bromofluorobenzene (Surr) 102 56 - 136 08/15/24 22:38 08/15/24 22:38 Toluene-d8 (Surr) 105 78 - 122 Dibromofluoromethane (Surr) 95 73 - 120 08/15/24 22:38

Lab Sample ID: LCS 240-623528/4

Matrix: Water

Analysis Batch: 623528

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	21.9		ug/L		87	63 - 134	
cis-1,2-Dichloroethene	25.0	25.3		ug/L		101	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	22.7		ug/L		91	70 - 122	
Vinyl chloride	12.5	11.0		ug/L		88	60 - 144	

LCS LCS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 96 62 - 137 4-Bromofluorobenzene (Surr) 56 - 136 110 Toluene-d8 (Surr) 107 78 - 122 73 - 120 Dibromofluoromethane (Surr) 92

Analysis Batch: 623528

Lab Sample ID: 240-209176-A-2 MS Client Sample ID: Matrix Spike **Matrix: Water** Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.0	U	25.0	18.4		ug/L		74	56 - 135	
cis-1,2-Dichloroethene	1.0	U	25.0	23.5		ug/L		94	66 - 128	
Tetrachloroethene	1.0	U	25.0	17.9		ug/L		72	62 - 131	
trans-1,2-Dichloroethene	1.0	U	25.0	18.8		ug/L		75	56 - 136	
Trichloroethene	1.0	U	25.0	17.5		ug/L		70	61 - 124	
Vinyl chloride	1.0	U	12.5	10.0		ug/L		80	43 - 157	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	112		56 - 136
Toluene-d8 (Surr)	104		78 - 122

Eurofins Cleveland

Job ID: 240-209172-1

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

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

Lab Sample ID: 240-209176-A-2 MS

Matrix: Water

Analysis Batch: 623528

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

MS MS

Surrogate %Recovery Qualifier Limits Dibromofluoromethane (Surr) 97 73 - 120

Lab Sample ID: 240-209176-C-2 MSD

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 623528

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	1.0	U	25.0	18.3		ug/L		73	56 - 135	1	26
cis-1,2-Dichloroethene	1.0	U	25.0	22.6		ug/L		91	66 - 128	4	14
Tetrachloroethene	1.0	U	25.0	18.5		ug/L		74	62 - 131	3	20
trans-1,2-Dichloroethene	1.0	U	25.0	19.2		ug/L		77	56 - 136	2	15
Trichloroethene	1.0	U	25.0	17.7		ug/L		71	61 - 124	2	15
Vinyl chloride	1.0	П	12.5	9.85		ua/l		79	43 157	2	24

MSD MSD

MR MR

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	111		56 - 136
Toluene-d8 (Surr)	107		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120

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

Lab Sample ID: MB 240-623431/6

Matrix: Water

Analysis Batch: 623431

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			08/15/24 10:09	1
	MB	МВ							

Surrogate %Recovery Qualifier Limits Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 104 68 - 127 08/15/24 10:09

Lab Sample ID: LCS 240-623431/4

Matrix: Water			Prep Type: Total/NA
Analysis Batch: 623431			
	Spike	LCS LCS	%Rec

Analyte Added Result Qualifier Unit %Rec Limits 1,4-Dioxane 10.0 8.65 ug/L 75 - 121

LCS LCS %Recovery Qualifier Surrogate Limits 1,2-Dichloroethane-d4 (Surr) 68 - 127 103

Lab Sample ID: 240-209169-D-6 MS

Matrix: Water

Analysis Batch: 623431

	Sample	Sample	Spike	MS	MS					%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	I	D	%Rec	Limits	
1,4-Dioxane	2.0	U	10.0	9.79		ug/L			98	20 - 180	

Eurofins Cleveland

Prep Type: Total/NA

QC Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

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

%Recovery Qualifier

108

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		68 - 127

Lab Sample ID: 240-209169-D-6 MSI	Lab Sami	ole ID:	240-2091	69-D-6	MSD
-----------------------------------	----------	---------	----------	--------	-----

Matrix: Water

Surrogate

1,2-Dichloroethane-d4 (Surr)

	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	9.78		ug/L		98	20 - 180	0	20
	MSD	MSD									

Limits

68 - 127

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

QC Association Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209172-1

GC/MS VOA

Analysis Batch: 623431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-209172-2	MW-216S_080724	Total/NA	Water	8260D SIM	
MB 240-623431/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-623431/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-209169-D-6 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-209169-D-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 623528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-209172-1	TRIP BLANK_34	Total/NA	Water	8260D	<u> </u>
240-209172-2	MW-216S_080724	Total/NA	Water	8260D	
MB 240-623528/7	Method Blank	Total/NA	Water	8260D	
LCS 240-623528/4	Lab Control Sample	Total/NA	Water	8260D	
240-209176-A-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-209176-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

4

6

Q

9

10

Lab Chronicle

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK_34

Lab Sample ID: 240-209172-1 Date Collected: 08/07/24 00:00

Matrix: Water

Dilution Batch Batch Batch Prepared Prep Type Туре Method Run Factor **Number Analyst** Lab or Analyzed Total/NA 8260D 623528 LEE EET CLE 08/16/24 01:40 Analysis

Client Sample ID: MW-216S_080724 Lab Sample ID: 240-209172-2

Date Collected: 08/07/24 12:45 **Matrix: Water**

Date Received: 08/09/24 08:00

Date Received: 08/09/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	623528	LEE	EET CLE	08/16/24 02:03
Total/NA	Analysis	8260D SIM		1	623431	MS	EET CLE	08/15/24 11:19

Laboratory References:

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

Page 16 of 20

Accreditation/Certification Summary

Client: Arcadis U.S., Inc.

Project/Site: Ford LTP

Job ID: 240-209172-1

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		
Georgia	State	4062	02-27-25		
Illinois	NELAP	200004	08-31-25		
lowa	State	421	06-01-25		
Kentucky (UST)	State	112225	02-27-25		
Kentucky (WW)	State	KY98016	12-30-24		
Minnesota	NELAP	039-999-348	12-31-24		
New Jersey	NELAP	OH001	07-03-25		
New York	NELAP	10975	04-02-25		
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	08-31-24		
USDA	US Federal Programs	P330-18-00281	01-05-27		
Virginia	NELAP	460175	09-14-24		
West Virginia DEP	State	210	12-31-24		

-

6

0

9

10

12

Chain of Custody Record

MICHIGAN

TestAmerica Laboratory location: Brighton — 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 610-229-2763 Client Contact - DW NPDES ☐ RCRA Other Regulatory program: TestAmerica Laboratories, Inc. Company Name: Arcadis Lab Contact: Mike DelMonico COC No: Client Project Manager: Kris Hinskey Site Contact: Christina Weaver Address: 28550 Cabot Drive, Suite 500 Telephone: 330-497-9396 Telephone: 248-994-2240 Telephone: 248-994-2240 COCs City/State/Zip: Novi, MI, 48377 Analysis Turnaround Time Analyses Email: kristoffer.hinskey@arcadis.com For lab use only Phone: 248-994-2240 Walk-in client Sampler Name: Jeremy MYLB 3 weeks Project Name: Ford LTP 2 weeks Lab sampling Project Number: 30206169.0401.03 1 week I,4-Dioxane 8260D SIM Trans-1,2-DCE 8260D 2 days Vinyl Chloride 8260D is-1,2-DCE 8260D PO # US3410018772 1 day Job/SDG No: Shipping/Tracking No: PCE 8260D TCE 8260D Sample Specific Notes / Sediment HNO3 NaOH ZaAd NaOH Special Instructions: Ę Sample Date Sample Time Sample Identification TRIP BLANK_ 3" Х X INIGI Χ Х 1 Trip Blank 3 VOAs for 8260D Ç MW-2165_680724 08/07/24 X 3 VOAs for 8260D SIM 25.00 Possible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Return to Client Disposal By Lab Archive For Mo Poison B - Jnknown vin Irritant Special Instructions/QC Requirements & Comments: Special Instructions/QC Requirements & Comments: 31651 Uadgworth basilyard Level IV Reporting requested. Date/Time: 18/07/24 (5:15 Date/Time: 68/07/74 Relinquished by Alladis Date/Time: 8/8/24 Relinquished by 818/24

©2006, TestAmerica Laboratories, Inc. All rights reserved. TestAmerica & Design ** are trademarks of TestAmerica Laboratories, Inc.

Company EETA

Relinquished by

KATHARINE MÄRTIN

818/24 1400

Date/Time: 819124

8
9

	1	4

VOA Sample Preservation - Date/Time VOAs Frozen
Sample(s)were further preserved in the laboratory Freservative(s) added/Lot number(s)were further preserved in the laboratory
20. SAMPLE PRESERVATION
19. SAMPLE CONDITION were received after the recommended holding time had expired. were received after the recommended holding time had expired. were received in a broken container were received with bubble >6 mm in diameter (Notify PM)
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES
Concerning Date by Via verbat voice Mait Other
ubbles >6 mm in any VOA vials? Larger than this. NA trip blank present in the cooler(s)? Trip Blank Lot # N1 Hg or Me Hg trip blank present?
ting laboratory ipt?
For each sample, does the COC specify preservatives (M), # of containers (M), and Were correct bottle(s) used for the test(s) indicated? 1 Sufficient quantity received to perform indicated analyses? 2. Are these work share samples and all listed on the COC?
5 Were the custody papers relinquished & signed in the appropriate place? 6. Was/were the person(s) who collected the samples clearly identified on the COC? 7 Did all bottles arrive in good condition (Unbroken)? 8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? 7 No
-Were tamper/custody seals intact and uncompromised? Shippers' packing slip attached to the cooler(s)? Did custody papers accompany the sample(s)? Yes No Yes No
If Yes Quantity 2 Yes No dated? Yes No Yes No Yes No
pt C Observed Cooler I
ox Client Cooler Box Foam Plastic Bag N Ice Dry Ice Water 1
FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other Receipt After-hours Drop-off Date/Time Storage Location
Site Name Cooler unp
Euroffus = Gleveland Sample Receipt Form/Narrative Login# .

Page 19 of 20

Circle Circle Circle Temp °C Temp °C Circle	1				Complete Com	
Circle Circle Circle Temp °C Temp °C Circle Circle Right *	Blue Ice			IR GUN #-	Вох	EC CI
Circle C	Blue Ice er None			IR GUN #:	Вох	
Circle C	None None	Green have the street and the street		RGUN#:	вох	ļ
Circle Circle Circle Temp °C Temp °C Temp °C Circle e ice None	The second second second second second second second second second second second second second second second se		IR GUN #:	Box		
Circle Circle Circle Temp °C Temp °C Temp °C Circle Circle Temp °C Circle Circle Temp °C Circle Circle Temp °C Cir	e Ice None	The second secon	The state of the s	IR GUN #:	вох	
Cient bx Other R GIN # Temp °C Welter Bin	e Ice None	And the second s	The deliberation of the state o	IR GUN #:	Box	
Cient bx Other R GUN #:	e ice None			IR GUN #:	вох	
Cilent box Other IR GUN #:	e ice None	i i i i i i i i i i i i i i i i i i i	, and the state of	IR GUN #:	ьох	l l
Cilent bx Other IR GUN #: Temp °C Temp °C Temp °C Temp °C Cilent bx Other Weller Bund Cilent Bx Other Weller Bund IR GUN #: A.S Weller Bund	e ice None		And the state of t	IR GUN #:	Box	
Cilent bx Other IR GUN #: Temp °C Temp °C Temp °C Temp °C Cilent bx Other IR GUN #: A.S. Well ce sur Well ce	e ice None			IR GUN #:	вох	
Cilent Dox Other IR GUN #:	e Ice None	Abandaker redire in the second of the second	the state of the s	IR GUN #:	Box	1
Cilent tox Other It culw #:	blue Ice aler None	AND THE REAL PROPERTY AND THE PROPERTY A		IR GUN #:	Вох	
Cilent tox Other IR GUN #:	Blue Ice later None	Propriesta de la companya de la comp	a de la composiçõe de l	IR GUN #:	Вох	
Cilent box Other IR GUN #:	e ice None			IR GUN #:	вох	
Client tox Other R GUN 4: 22. Circle) Temp °C Temp °C Circle of the tox Circle of tox	e Ice None			IR GUN #:	Вох	
Client box Other IR GUN #:	e ice None			IR GUN #:	Вох	
Client Box Other IR GUN #:	Blue Ice later None			IR GUN #:	Box	
Client box Other IR GUN #:	Bive ice later None	TO THE RESIDENCE OF THE PROPERTY OF THE PROPER		IR GUN #:	вох	
Client Box Other IR GUN #:	Blue ice later None			IR GUN #:	Box	
Client Box Other IR GUN #:	Blueice later None		pro-proposal and the state of t	IR GUN #:	Вох	
Client Box Other IR GUN #:	Blue Ice later None			IR GUN #:	Вох	
Circle) (Circle) Temp °C Temp °C (Circle) Temp °C (Circle) In gun #:	Blue Ice /ater None			IR GUN #:	Вох	
Circle) (Circle) Temp °C Temp °C (Circle) Image: Circle blue blue blue blue blue blue blue bl	le Ice None	Acceptant mander of the second		IR GUN #:	вох	
(Circle) (Circle) (Circle) Temp °C Temp °C (Circle) Weatles water Blue water Client 8 ox Other IR GUN #:	re Ice None		Miller and the second s	IR GUN #:	Box	
Client Box Other IR GUN #:	Je ice None)R GUN #:	Вох	
Client Box Other IR GUN #:	Je Ice None			IR GUN #:	Вох	
Client Box Other IR GUN #:	⊮ ⊼ ∶			IR GUN #:	Вох	
(Circle) (Circle) Temp °C Temp °C (Circle) Client box Other IR GUN #:	Biue			IR GUN #:	Box	
(Circle) (Circle) Temp °C Temp °C (Circle) Client box Other IR GUN #:	ie Ice None			IR GUN #:	Вох	
(Circle) (Circle) Temp °C Temp °C (Circle) Client box Other IR GUN #:	le ice None			IR GUN #:	Box	Ì
(Circle) (Circle) Temp °C Temp °C (Circle) Client box Other IR GUN #:	le Ice None			IR GUN #:	Box	
(Circle) (Circle) Temp °C Temp °C (Circle) Client box Other IR GUN #: 22 (None	- Albertal Andreas - Albertal - Albert		IR GUN #·	вох	
(Circle) (Circle) Temp °C (Circle) Client Box Other IR GUN #: 22 (19)	e Ice None	2.5	2.6	IR GUN #:	Вох	
(Circle) Temp °C Temp °C	e ice None	8.1	[. q	IR GUN #: 22	Box	\
Corrected	l	Corrected Temp °C	Observed Temp °C	(Circle)	(Circle)	Coole

WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

Page 20 of 20 8/19/2024

DATA VERIFICATION REPORT



August 19, 2024

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

CADENA project ID: E203728

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

Project number: 30206169.0401.04_WA-02

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

Laboratory submittal: 209172-1 Sample date: 2024-08-07

Report received by CADENA: 2024-08-19

Initial Data Verification completed by CADENA: 2024-08-19

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 http://clms.cadenaco.com/index.cfm.

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: 209172-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BL/ 240209 8/7/202	1721 4			MW-216 240209 8/7/202	1722 4		
				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 # 240-209172-1

CADENA Verification Report: 2024-08-20

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 55534R Review Level: Tier III Project: 30206169.0401.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-209172-1 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 10	Labib	IVIALITA	Collection Date	Farent Sample	VOC	VOC SIM
TRIP BLANK_34	240-209172-1	Water	08/07/2024		Х	
MW-216S_080724	240-209172-2	Water	08/07/2024		Х	Х

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

Items Reviewed	Rep	orted		mance otable	Not
	No	Yes	No	Yes	Required
Sample receipt condition		Х		Х	
Requested analyses and sample results		X		Х	
Master tracking list		X		Х	
4. Methods of analysis		X		Х	
5. Reporting limits		X		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: Bindu Sree M B

SIGNATURE: BAShims

DATE: September 11, 2024

PEER REVIEW: Andrew Korycinski

DATE: September 17, 2024

NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

Chain of Custody Record

MICHIGAN 190



TestAmerica Laboratory location: Brighton — 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

												_													
Client Contact	Regulat	Regulatory program: DW				NPDES RCRA Other															TestAmerica Laboratories, Inc				
Company Name: Arcadis	Client Project	Manager: Kris	Hinskey		Site	Con	tact: Cl	hristi	na Weav	er			Lab (ab Contact: Mike DelMonico						COC No:	aboratorie	s, inc.			
Address: 28550 Cabot Drive, Suite 500	Telephone: 248	_				Telephone: 248-994-2240 Te						Talas	h	220.4	97-939	14					_				
City/State/Zip: Novi, MI, 48377					1 61							reiep	mone.	330-4							1 of 1 COCs				
Phone: 248-994-2240	Email: kristoff	er.hinskey@ar	cadis.com		-								Analyses								For lab use only				
	Sampler Name	TAT if different from below 3 weeks														Walk-in client		roguments							
Project Name: Ford LTP		Method of Shipment/Carrier:			10 day 2 weeks														Lab sampling	115					
Project Number: 30206169.0401.03	Method of Ship	thipment/Carrier:						ę			Q	SIM						100							
PO # US3410018772	Shipping/Track	Shipping/Tracking No:			pping/Tracking No:				1 day					260D	8260D			8260	2600				Job/SDG No		
	-		1	Matrix		Con	tainers	& Pre	escrvatives		T C	3260	SE 83	DCE	۾	۵	ride	ne 8				MANAGEMENT OF THE PARTY OF THE			
C 14	Samula Data	Sample Time	Air Aqueous	Solid Solid	12504	HNO3	HC:	HOH.	NaOH Unpres		Filtered Sample (Y/N) Composite=C/Grab=G	1,1-DCE 8260D	cis-1,2-DCE 8260D	Trans-1,2-DCE	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D					ecific Notes nstructions:		
Sample Identification	Sample Date	Sample Time	ĦĦ	w w	, 1=	÷		2 2	Z 3 0	_		1			_	\vdash		-		+=					
TRIP BLANK_ 34			1				1				NG	X	Х	X	X	Х	Х					1 Trip Bla	ank		
MW-2165_680724	08/07/24	12:45	Ç				6				NB	χ	Х	Х	×	X	×	X				3 VOAs fo 3 VOAs fo		SIM	
	1																								
			+++	++				+	++	-	+-	-	-		_				+	+					
	A .5			+	-	+	H	1	11111111							HI HILL	111	+	+	+-					
	7-12-													li i											
												11.11	Ш	Ш											
			 	++		+		1	240-2	09172	Cha	in of	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII					+		+					
			$\sqcup \sqcup$						240-2	.00172	Ona			Ouy				1	\rightarrow				_		
									1 1	1		ĺ			ĺ										
							\vdash	+	+		\top								\neg						
					_		Dist		A C			Coope			and lo		h 1	nonth)		\perp			-		
Possible Hazard Identification Non-Hazard Tammable Sin I	ritant Poiso	on B	Jnknown				Return		A fee ma	Dis				~ A			IIAN 1	Moi	iths						
Special Instructions/QC Requirements & Comments: Submit all results through Cadena at jtomalia@caden Level IV Reporting requested.	7651 W aco.com. Cadena #B	adgwo!	+ (V	havil	-yard																				
Relinquished by:	Company:	1 - 2	Date/	Time:	, ,,	-()	∠ R	eccive	ed by:		ſ:					Comp	any:					Date/Time:			
my pr	AU	(adi)	08	Time: 10717	,4 15	666	5	No	ed by:	Lold	5	1/1	sc_				16	4 dr					7 15	-115	
Relinquished by:	Company:	elis	Date/	Time: 16(2:	7 1	3:			ed by:				0			Comp	any:	A				Date/Time: 818/24	1,22	· pn	
Relinquished by	Company.		Date/	Time: 8/24	140	\propto	R	Receiv	ed in Lat	ARI	NE	MÄ	RTJ	N		Comp	pany:	U	2			Date/Time:	4 80	50	

©2008, TestAmerica Laboratories, Inc. All rights reserved. TestAmerica & Design ¹⁶ are trademarks of TestAmerica Laboratories, Inc.

Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-209172-1

Project/Site: Ford LTP

Client Sample ID: TRIP BLANK_34

Lab Sample ID: 240-209172-1 Date Collected: 08/07/24 00:00 **Matrix: Water**

Date Received: 08/09/24 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			08/16/24 01:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/16/24 01:40	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/16/24 01:40	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 01:40	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/16/24 01:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137			_		08/16/24 01:40	1
4-Bromofluorobenzene (Surr)	99		56 ₋ 136					08/16/24 01:40	1
Toluene-d8 (Surr)	100		78 - 122					08/16/24 01:40	1
Dibromofluoromethane (Surr)	103		73 - 120					08/16/24 01:40	1

Client Sample ID: MW-216S_080724

Date Collected: 08/07/24 12:45

Date Received: 08/09/24 08:00

Method: SW846 8260D SIM - Vo	latile Organic C	ompounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			08/15/24 11:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		68 - 127			_		08/15/24 11:19	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		68 - 127			-		08/15/24 11:19	1
- Method: SW846 8260D - Volat	ile 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			08/16/24 02:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/16/24 02:03	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 02:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/16/24 02:03	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/16/24 02:03	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/16/24 02:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137			_		08/16/24 02:03	1
4-Bromofluorobenzene (Surr)	99		56 ₋ 136					08/16/24 02:03	1
Toluene-d8 (Surr)	103		78 - 122					08/16/24 02:03	1
Dibromofluoromethane (Surr)	99		73 - 120					08/16/24 02:03	1

Lab Sample ID: 240-209172-2

Matrix: Water