PREPARED FOR

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

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JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-200379-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203

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Job Notes

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Authorization

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Client: Arcadis U.S., Inc. Project/Site: Ford LTP - Off Site Laboratory Job ID: 240-200379-1

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Definitions/Glossary

Client: Arcadis U.S., Inc.

Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

Qualifiers

GC/MS VOA
Qualifier 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.

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Case Narrative

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

Job ID: 240-200379-1 Eurofins Cleveland

Job Narrative 240-200379-1

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 3/2/2024 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 2.4°C and 3.8°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-605579 was outside the method criteria for the following analyte(s): Vinyl chloride. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D: The MSD for these samples was analyzed outside of the 12 hour QC tune time but is reported.

TRIP BLANK_36 (240-200379-1) and MW-149S_022924 (240-200379-2)

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

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Method Summary

Client: Arcadis U.S., Inc.

Job ID: 240-200379-1

Project/Site: Ford LTP - Off 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 - Off Site

Job ID: 240-200379-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-200379-1	TRIP BLANK_36	Water	02/29/24 00:00	03/02/24 08:00
240-200379-2	MW-149S_022924	Water	02/29/24 10:44	03/02/24 08:00

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Detection Summary

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK_36 Lab Sample ID: 240-200379-1

No Detections.

Client Sample ID: MW-149S_022924 Lab Sample ID: 240-200379-2

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D Method	Prep Type
Vinvl chloride	1.1	1.0	0.45 ug/L	1 8260D	Total/NA

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Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

Date Received: 03/02/24 08:00

Dibromofluoromethane (Surr)

Client Sample ID: TRIP BLANK_36

Lab Sample ID: 240-200379-1 Date Collected: 02/29/24 00:00

Matrix: Water

03/11/24 16:54

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 16:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 16:54	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 16:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 16:54	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 16:54	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/11/24 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		62 - 137			-		03/11/24 16:54	1
4-Bromofluorobenzene (Surr)	88		56 ₋ 136					03/11/24 16:54	1
Toluene-d8 (Surr)	101		78 - 122					03/11/24 16:54	1

73 - 120

102

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Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

Client Sample ID: MW-149S_022924

Lab Sample ID: 240-200379-2 Date Collected: 02/29/24 10:44

Matrix: Water

Date	Received:	03/02/24	08:00

Method: SW846 8260D SIM - V	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			03/08/24 16:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		68 - 127					03/08/24 16:55	1
- Method: SW846 8260D - Volati	le Organic Comp	ounds by C	GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 17:19	1
aia 1.2 Diablaraathana	1.0	11	1.0	0.46	/1			02/44/24 47:40	4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 17:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 17:19	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 17:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 17:19	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 17:19	1
Vinyl chloride	1.1		1.0	0.45	ug/L			03/12/24 13:19	1

Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119	62 - 137	03/11/24 17	19 1
1,2-Dichloroethane-d4 (Surr)	113	62 - 137	03/12/24 13	:19 1
4-Bromofluorobenzene (Surr)	90	56 - 136	03/11/24 17	:19 1
4-Bromofluorobenzene (Surr)	87	56 ₋ 136	03/12/24 13	:19 1
Toluene-d8 (Surr)	101	78 - 122	03/11/24 17	:19 1
Toluene-d8 (Surr)	96	78 - 122	03/12/24 13	:19 1
Dibromofluoromethane (Surr)	99	73 - 120	03/11/24 17	19 1
Dibromofluoromethane (Surr)	106	73 - 120	03/12/24 13	:19 1

Surrogate Summary

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

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)
240-200379-1	TRIP BLANK_36	119	88	101	102
240-200379-2	MW-149S_022924	119	90	101	99
240-200379-2	MW-149S_022924	113	87	96	106
240-200379-2 MS	MW-149S_022924	104	98	102	92
240-200379-2 MSD	MW-149S_022924	100	100	100	90
240-200913-B-4 MSD	Matrix Spike Duplicate	105	94	99	100
240-200913-C-4 MS	Matrix Spike	102	94	96	98
LCS 240-605579/4	Lab Control Sample	100	101	104	90
LCS 240-605753/4	Lab Control Sample	102	92	98	94
MB 240-605579/7	Method Blank	112	92	99	98
MB 240-605753/7	Method Blank	109	85	97	102

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)	
240-200378-B-2 MS	Matrix Spike	112	
240-200378-B-2 MSD	Matrix Spike Duplicate	123	
240-200379-2	MW-149S_022924	116	
LCS 240-605411/5	Lab Control Sample	110	
MB 240-605411/7	Method Blank	111	
Surrogate Legend			

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

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Job ID: 240-200379-1

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

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

Lab Sample ID: MB 240-605579/7

Matrix: Water

Analysis Batch: 605579

Client 9	Sample ID: Method Blank	
	Pron 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			03/11/24 12:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 12:42	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 12:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 12:42	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 12:42	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/11/24 12:42	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		62 - 137		03/11/24 12:42	1
4-Bromofluorobenzene (Surr)	92		56 - 136		03/11/24 12:42	1
Toluene-d8 (Surr)	99		78 - 122		03/11/24 12:42	1
Dibromofluoromethane (Surr)	98		73 - 120		03/11/24 12:42	1

Lab Sample ID: LCS 240-605579/4

Matrix: Water

Analysis Batch: 605579

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	20.1		ug/L		80	77 - 123	
Tetrachloroethene	25.0	24.7		ug/L		99	76 - 123	
trans-1,2-Dichloroethene	25.0	21.5		ug/L		86	75 - 124	
Trichloroethene	25.0	20.0		ug/L		80	70 - 122	
Vinyl chloride	12.5	14.7		ug/L		118	60 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	104		78 - 122
Dibromofluoromethane (Surr)	90		73 - 120

Lab Sample ID: 240-200379-2 MS

Matrix: Water

Analysis Batch: 605579

Client Sample ID: MW-149S_022924 **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	21.2		ug/L		85	56 - 135	
cis-1,2-Dichloroethene	1.0	U	25.0	19.8		ug/L		79	66 - 128	
Tetrachloroethene	1.0	U	25.0	22.5		ug/L		90	62 - 131	
trans-1,2-Dichloroethene	1.0	U	25.0	21.3		ug/L		85	56 - 136	
Trichloroethene	1.0	U	25.0	20.1		ug/L		80	61 - 124	

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		62 _ 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	102		78 - 122
Dibromofluoromethane (Surr)	92		73 - 120

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Job ID: 240-200379-1

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

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

Lab Sample ID: 240-200379-2 MSD

Matrix: Water

Analysis Batch: 605579

Client Sample	ID: MW-149S_022924	
	Prep Type: Total/NA	

-	Sample	Sample	Spike	MSD	MSD			%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier U	nit D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	1.0	U	25.0	22.9	ug]/L	91	56 - 135	8	26
cis-1,2-Dichloroethene	1.0	U	25.0	20.5	ug	ı/L	82	66 - 128	3	14
Tetrachloroethene	1.0	U	25.0	23.3	ug	ı/L	93	62 - 131	4	20
trans-1,2-Dichloroethene	1.0	U	25.0	21.9	ug	ı/L	88	56 - 136	3	15
Trichloroethene	1.0	U	25.0	19.9	ug	_J /L	80	61 - 124	1	15

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	100		78 - 122
Dibromofluoromethane (Surr)	90		73 - 120

Lab Sample ID: MB 240-605753/7

Matrix: Water

Analysis Batch: 605753

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte Result Qualifier RL MDL Unit Prepared Dil Fac Analyzed 1,1-Dichloroethene 1.0 U 1.0 0.49 ug/L 03/12/24 12:08 03/12/24 12:08 cis-1,2-Dichloroethene 1.0 U 1.0 0.46 ug/L 03/12/24 12:08 Tetrachloroethene 1.0 U 1.0 0.44 ug/L trans-1,2-Dichloroethene 1.0 U 1.0 03/12/24 12:08 0.51 ug/L Trichloroethene 1.0 U 1.0 0.44 ug/L 03/12/24 12:08 Vinyl chloride 1.0 U 1.0 0.45 ug/L 03/12/24 12:08

MB MB

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109	62 - 137		03/12/24 12:08	1
4-Bromofluorobenzene (Surr)	85	56 - 136		03/12/24 12:08	1
Toluene-d8 (Surr)	97	78 - 122		03/12/24 12:08	1
Dibromofluoromethane (Surr)	102	73 - 120		03/12/24 12:08	1

Lab Sample ID: LCS 240-605753/4

Matrix: Water

Analysis Batch: 605753

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	22.0		ug/L		88	63 - 134	
cis-1,2-Dichloroethene	25.0	23.2		ug/L		93	77 - 123	
Tetrachloroethene	25.0	26.3		ug/L		105	76 - 123	
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	75 - 124	
Trichloroethene	25.0	22.9		ug/L		92	70 - 122	
Vinyl chloride	12.5	11.3		ug/L		91	60 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		62 - 137
4-Bromofluorobenzene (Surr)	92		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120

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Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

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

Lab Sample ID: 240-200913-B-4 MSD

Matrix: Water

Analysis Batch: 605753

Client Sample ID:	Matrix Spike Duplicate
	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	22.0		ug/L		88	56 - 135	9	26
cis-1,2-Dichloroethene	1.0	U	25.0	23.4		ug/L		93	66 - 128	8	14
Tetrachloroethene	1.0	U	25.0	23.2		ug/L		93	62 - 131	4	20
trans-1,2-Dichloroethene	1.0	U	25.0	23.3		ug/L		93	56 - 136	3	15
Trichloroethene	1.0	U	25.0	22.7		ug/L		91	61 - 124	8	15
Vinyl chloride	1.0	U	12.5	11.7		ug/L		94	43 - 157	5	24

MSD MSD %Recovery Qualifier Surrogate Limits 1,2-Dichloroethane-d4 (Surr) 62 - 137 105 4-Bromofluorobenzene (Surr) 94 56 - 136 Toluene-d8 (Surr) 99 78 - 122 Dibromofluoromethane (Surr) 100 73 - 120

Lab Sample ID: 240-200913-C-4 MS

Matrix: Water

Analysis Batch: 605753

Client Sample ID: Matrix Spike 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	20.1		ug/L		81	56 - 135	
cis-1,2-Dichloroethene	1.0	U	25.0	21.7		ug/L		87	66 - 128	
Tetrachloroethene	1.0	U	25.0	22.4		ug/L		89	62 - 131	
trans-1,2-Dichloroethene	1.0	U	25.0	22.5		ug/L		90	56 - 136	
Trichloroethene	1.0	U	25.0	21.0		ug/L		84	61 - 124	
Vinyl chloride	1.0	U	12.5	11.2		ug/L		89	43 - 157	

MS MS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 102 62 - 137 4-Bromofluorobenzene (Surr) 94 56 - 136 Toluene-d8 (Surr) 96 78 - 122 73 - 120 Dibromofluoromethane (Surr) 98

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

Lab Sample ID: MB 240-605411/7 Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 605411									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 11:22	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			68 - 127			-		03/08/24 11:22	1

QC Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

Lab Sample ID: LCS 240-605411/5

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

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

Matrix: Water Analysis Batch: 605411

Spike LCS LCS %Rec Result Qualifier Analyte Added Unit %Rec Limits 1,4-Dioxane 10.0 8.45 ug/L 84 75 - 121

LCS LCS

Surrogate %Recovery Qualifier Limits 68 - 127 1,2-Dichloroethane-d4 (Surr) 110

Lab Sample ID: 240-200378-B-2 MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Water

Analysis Batch: 605411

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 1,4-Dioxane 2.0 U 10.0 8.46 ug/L 85 20 - 180

MS MS Surrogate %Recovery Qualifier

Limits 1,2-Dichloroethane-d4 (Surr) 68 - 127 112

Lab Sample ID: 240-200378-B-2 MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Matrix: Water

Analysis Batch: 605411

RPD Sample Sample Spike MSD MSD %Rec Qualifier Added Qualifier RPD Analyte Result Result Unit %Rec Limits Limit ug/L 1,4-Dioxane 2.0 U 10.0 9.54 95 20 - 180 12 20

MSD MSD Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 123

68 - 127

QC Association Summary

Client: Arcadis U.S., Inc.

Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

GC/MS VOA

Analysis Batch: 605411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200379-2	MW-149S_022924	Total/NA	Water	8260D SIM	
MB 240-605411/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-605411/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-200378-B-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-200378-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 605579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200379-1	TRIP BLANK_36	Total/NA	Water	8260D	<u> </u>
240-200379-2	MW-149S_022924	Total/NA	Water	8260D	
MB 240-605579/7	Method Blank	Total/NA	Water	8260D	
LCS 240-605579/4	Lab Control Sample	Total/NA	Water	8260D	
240-200379-2 MS	MW-149S_022924	Total/NA	Water	8260D	
240-200379-2 MSD	MW-149S_022924	Total/NA	Water	8260D	

Analysis Batch: 605753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200379-2	MW-149S_022924	Total/NA	Water	8260D	
MB 240-605753/7	Method Blank	Total/NA	Water	8260D	
LCS 240-605753/4	Lab Control Sample	Total/NA	Water	8260D	
240-200913-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	
240-200913-C-4 MS	Matrix Spike	Total/NA	Water	8260D	

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Lab Chronicle

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK_36

Lab Sample ID: 240-200379-1 Date Collected: 02/29/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	605579	LEE	EET CLE	03/11/24 16:54

Client Sample ID: MW-149S_022924 Lab Sample ID: 240-200379-2

Date Collected: 02/29/24 10:44 Matrix: Water

Date Received: 03/02/24 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	605579	LEE	EET CLE	03/11/24 17:19
Total/NA	Analysis	8260D		1	605753	LEE	EET CLE	03/12/24 13:19
Total/NA	Analysis	8260D SIM		1	605411	MDH	EET CLE	03/08/24 16:55

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: 240-200379-1 Project/Site: Ford LTP - Off 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
Iowa	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

 $^{^{\}star}\,\text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

Eurofins Cleveland

MICHIGAN 190

Chain of Custody Record

Te	esta	411	nei	ricc
THE	LEADER	N ENVI	RONMENT	AL TESTIN

TestAmerica Laboratory location:	Brighton 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	
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Test#	meri	CC
THE LEADER IN	ENVIRONMENTA	TESTING

Client Contact	Regulat	tory program	:	D	w	N	IPDES		R	CRA		Othe	er										-		
Company Name: Arcadis	Client Project !	Manager: Kris	H Inskey			Site C	ontact	Chi	ristina V	/ eaver		-	-	Lab (Contac	t: MII	e Del	M on k	0	_		_	TestAmerica L	aboratories	, Inc.
Address: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240				Telep	hone: 2	248-9	994-2240					Telet	oh on e:	330~	97-93	96				-	-		\dashv
City/State/Zip: Novi, MI, 48377									maround									nalys	es				1 of 1	COC*	
Phone: 248-994-2240	Em all: kristoff	егли жеуша	(2015.CO																-3						
Project Name: Ford LTP Off-Site	Sampler Name	ebecca	Casi	iaau	1	TATi	l different		below 3 week	, L	-10											ľ	Walk-in client		
Project Number: 30167538.402,04	Method of Ship		000	igo.		10	day		2 week										5			ŀ	_ab sampling		
PO # 30167538.402.04						_			2 days		(N)	ab=G			82 60D			QQ	D SIM			- 1			
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				Matri	X		Contain	ers &	Preserva	tives	- 5	ite=C	8260D	SCE	2-00	300	8	loride	au a			H			
Sample i dentification	Sample Date	Sample Time	Air	Sediment	Other:	H2504	HCI	NaOH	ZnA of NeOH	Other:	Filtered	Composite=C/Grab=G	1,1-DCE	as-1,2-DCE	Trans-1,2-DCE	PCE 82 60D	TCE 8260D	Vinyl Chloride 82 60D	1,4-Diox					ectific Notes / structions:	
TRIP BLANK_ 3(0			1				1				N	G	Х	Х	Х	Х	Х	Х					1 Trip Bla	ınk	7
MW-1495_022924	2/29/24	1044	6				0				N	6	X	X	Х	X	X	X	X				3 VOAs for 3 VOAs for		, -
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Possible Hazard I dentification Non-Hazard Flammable Sk	n Irritant Poisc	n B I	Unknow	'n		San			al (A fee		e assess Dispos			les are		red la		tan 1	month) Mor			_			\dashv
Special Instructions/QC Requirements & Comments:			Olikilok				i cio		Circii		Dispos	SEL 13 9	Cab			Cillye	r Or 1		IVIO	ıtas					\dashv
Sample Address: 34450 Beacon Stample Address: 34450 Beacon Stample Cadena at John Stample C	enaco.com. Cadena #	E203631																							-1
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Refinquished by: Hilliam Canting	Company:	ndis	-	e/Time: 2/29	124	17	34		Cerved by	lovi	Cold	St	010	ge			Comp	Arc	∞d	<u>:S</u>			2/29/24	173	jч
Reinquisi ed by Sun Say	- Arco		<u>ب</u> رت ب	O Time	1	(50	>	R ec	Lei yed by	fe								any:					3/1/24	600	
R elin qui sh ed bo	Company	7	Day	3/1/20	1 1	530		7	elved in	Labora	500	بر					Comp	any:	ハ			1	2.9-37	18A	m
												_	_				$\overline{}$	_							السيب

3/15/2024

Chent Cooler Received on Receipt After-hours Drop-off Date/Time Eurofins - Cleyeland Sample Receipt Form/Narrative Eurofins Cooler# Packing material used I⁴ Grd Exp COOLANT Butte Wise Foam Box Foam Client Cooler Dry Ice Opened on Site Name Chent Drop Plastic Bag Вox None None Eurofins Courier Storage Location Other Other Login# Other Cooler unpacked

upon receipt Blue Ice Water ee Multiple Cooler Form

ů Observed Cooler Temp

Cooler temperature S S °C Corrected Cooler Temp

റ്

Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity -Were tamper/custody seals intact and uncompromised? Were taniper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Were the seals on the outside of the cooler(s) signed & dated? ö 3

NA

Receiving: checked for pH by Tests that are not

2

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

Did all bottles arrive in good condition (Unbroken)?

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

For each sample, does the COC specify preservatives (TNI), # of containers (NI), and sample type of grab/comp(NIN)? Were correct bottle(s) used for the test(s) indicated? S S

Yes No

S.

ö

70 70

VOAs
Oil and Grease
TOC

Sufficient quantity received to perform indicated analyses?

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

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

13 14 15 16 Were all preserved sample(s) at the correct pH upon receipt?

Were VOAs on the COC?

Was a VOA trip blank present in the cooler(s)? Were air bubbles >6 mm in any VOA vials?

Larger than this

TEGS NA

Yes

NO NO

pH Strip Lot# HC316719

Was a LL Hg or Me Hg trip blank present? Trip Blank Lot #

Date ঠ

Contacted PM vıa Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

additional next page

Samples processed by

Sample(s) Sample(s) Sample(s) 19 SAMPLE CONDITION were received after the recommended holding time had expired were received with bubble >6 mm in diameter (Notify PM) were received in a broken container

SAMPLE PRESERVATION

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

VOA Sample Preservation Date/Tupe VOAs Frozen

	ALC: N		# GUN 9	Jax Offer	EC CIMI
Welke Musice				other	2 CT 2
Wolke She ke			5 CW.	OF SE	50 CE 2
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West Con State State			# C## 7:	ı	1
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Wider Hen			R GEN #:	O CHAN	8 2 1
Mark Stee Co.			M GAN 4:	Hour Other	
Welke Busics			N GENE:	Fox Other	EC CHAR
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any eng 63 loss			P Cart	Fox Officer	20 E
Was be she for			ROM:	- Chief	2
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West Hon			M CHH #:	Jox Other	7 CF
Mark Ton			SX GUN 9:	Nox Other	CI-A
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DATA VERIFICATION REPORT



March 15, 2024

Kris Hinskey Arcadis Inc 10559 Citation Ave Suite 100 Brighton, MI 48116

CADENA project ID: E203631

Project: Ford Livonia Transmission Project - OFF-SITE - Soil Gas and Groundwater

Project number: 30167538.402.04

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

Laboratory submittal: 200379-1 Sample date: 2024-02-29

Report received by CADENA: 2024-03-15

Initial Data Verification completed by CADENA: 2024-03-15

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.

The following minor QC exceptions or missing information were noted:

GCMS VOC CCV STANDARD response outliers as noted in the laboratory submittal case narrative were not used to qualify client sample results as part of this level 2 data package verification review.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, 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.				
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 the result is less than the sample Quantitation limit, but greater than zero. The flag is also in data validation to indicate a reported value should be considered estimated due to associate 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: E203631

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 200379-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BLA 2402003 2/29/202	791		MW-149S_022924 2402003792 2/29/2024			4	
				Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC										
OSW-8260	<u>D</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		1.1	1.0	ug/l	
OSW-8260	<u>DSIM</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 # 240-200379-1

CADENA Verification Report: 2024-03-15

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 53386R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-200379-1 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_36	240-200379-1	Water	02/29/2024		Х	
MW-149S_022924	240-200379-2	Water	02/29/2024		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 calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample ID	Initial / Continuing	Compounds	Criteria
TRIP BLANK_36	Continuing Calibration Verification %D	Vinyl chloride	+38.8%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
	RRF <0.05	Non-detect	R
Initial and Continuing	KKF <0.05	Detect	J
	BBE -0.041	Non-detect	R
Calibration	RRF <0.01 ¹	Detect	J
	RRF >0.05 or RRF >0.01 ¹	Non-detect	No Action
	KKF >0.00 01 KKF >0.01	Detect	NO ACTION

Initial/Continuing	Criteria	Sample Result	Qualification
	0/ DCD - 200/ or a correlation coefficient -0.00	Non-detect	UJ
Initial Calibration	%RSD > 20% or a correlation coefficient <0.99	Detect	J
	0/ DOD 000/	Non-detect	R
	%RSD > 90%	Detect	J
	0/D 000/ (; ; ; ; ; ;)	Non-detect	UJ
	%D >20% (increase in sensitivity)	Detect	J
	0/D 000/ / 1	Non-detect	UJ
Continuing Calibration	%D >20% (decrease in sensitivity)	Detect	J
	0/D 000// // // // // // // // // // // //	Non-detect	R
	%D > 90% (increase/decrease in sensitivity)	Detect	J

Note:

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.

All identified compounds met the specified criteria.

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.

¹RRF of 0.01 only applies to compounds which are typically poor responding compounds

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 8260D/8260D-SIM	Rep	orted	Perfo Acce	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		X		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		Х		Х	
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: March 25, 2024

PEER REVIEW: Andrew Korycinski

DATE: April 3, 2024

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

MICHIGAN 190

Chain of Custody Record

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Company Name: Arcadis																										Laboratories, Ir	ıc.
Address: 28550 Cabot Drive, Suite 500	Client Project !	danager: Kris	H Insk	ey									Lab Contact: Mike DelMonico					COC Na									
	Telephone: 248	-994-2240											Telephone: 330-497-9396														
City/State/Zip: Novi, MI, 48377							Analysis Turnaround Time					Anglyses					1 of										
Phone: 248-994-2240	Em all: kristoff	er.hin skey@ar	cadis.	moo.								Analyses					For lab use only										
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Project Name: Ford LTP Off-Site	R	Rebecca Ostigan Method of Shipment/Carrier:			10 day 2 weeks												1000										
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Client Sample Results

Client: Arcadis U.S., Inc. Job ID: 240-200379-1

Client Sample ID: TRIP BLANK_36

Project/Site: Ford LTP - Off Site

Lab Sample ID: 240-200379-1

Date Collected: 02/29/24 00:00 **Matrix: Water** Date Received: 03/02/24 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			03/11/24 16:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 16:54	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 16:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 16:54	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 16:54	1
Vinyl chloride	1.0	A NI	1.0	0.45	ug/L			03/11/24 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		62 - 137					03/11/24 16:54	1
4-Bromofluorobenzene (Surr)	88		56 ₋ 136					03/11/24 16:54	1
Toluene-d8 (Surr)	101		78 - 122					03/11/24 16:54	1
Dibromofluoromethane (Surr)	102		73 - 120					03/11/24 16:54	1

Client Sample ID: MW-149S_022924 Lab Sample ID: 240-200379-2

Date Collected: 02/29/24 10:44 Date Received: 03/02/24 08:00

Method: SW846 8260D SIN	/I - Volatile Orga	anic Comp	ounds (GC/N	(IS)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 16:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		68 - 127			-		03/08/24 16:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 17:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 17:19	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 17:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 17:19	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 17:19	1
Vinyl chloride	1.1		1.0	0.45	ug/L			03/12/24 13:19	1

Surrogate	%Recovery Qualifier	Limits	Prepared An	alyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119	62 - 137	03/11/	/24 17:19	1
1,2-Dichloroethane-d4 (Surr)	113	62 - 137	03/12	/24 13:19	1
4-Bromofluorobenzene (Surr)	90	56 - 136	03/11/	/24 17:19	1
4-Bromofluorobenzene (Surr)	87	56 - 136	03/12	/24 13:19	1
Toluene-d8 (Surr)	101	78 - 122	03/11/	/24 17:19	1
Toluene-d8 (Surr)	96	78 - 122	03/12	/24 13:19	1
Dibromofluoromethane (Surr)	99	73 - 120	03/11.	/24 17:19	1
Dibromofluoromethane (Surr)	106	73 - 120	03/12	/24 13:19	1

Matrix: Water