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ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Megan Meckley
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Generated 3/20/2025 6:24:11 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-220133-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

myEOL

Job Notes

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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

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Table of Contents

Definitions/Glossary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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

Job Narrative
240-220133-1

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 3/8/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.3°C.

GC/MS VOA
Method 8260D: The laboratory control sample (LCS) analyzed in batch 240-648330 was below the recovery control criteria for the following analyte(s): cis-1,2-Dichloroethene . This variance only affects results measured above the reporting limit. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. This demonstrates the analyte reporting limit is valid, and it is acceptable to report ND results (non-detects). The samples associated with the LCS were non-detects for the affected analytes; therefore, the results were reported. The following samples are impacted: TRIP BLANK_208 (240-220133-1) and MW-39_030425 (240-220133-2).

TRIP BLANK_208 (240-220133-1) and MW-39_030425 (240-220133-2)

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-648402 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.

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

Method Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

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

Sample Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-220133-1	TRIP BLANK_208	Water	03/04/25 00:00	03/08/25 08:00
240-220133-2	MW-39_030425	Water	03/04/25 10:25	03/08/25 08:00
240-220133-3	MW-49_030425	Water	03/04/25 11:50	03/08/25 08:00
240-220133-4	MW-07_030425	Water	03/04/25 13:05	03/08/25 08:00

Detection Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Client Sample ID: TRIP BLANK_208 — Lab Sample ID: 240-220133-1

No Detections.

Client Sample ID: MW-39_030425 — Lab Sample ID: 240-220133-2

No Detections.

Client Sample ID: MW-49_030425 — Lab Sample ID: 240-220133-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	9.6		2.0	0.86	ug/L	1		8260D SIM	Total/NA
1,1-Dichloroethene	51	J	100	49	ug/L	100		8260D	Total/NA
cis-1,2-Dichloroethene	30000		500	230	ug/L	500		8260D	Total/NA
trans-1,2-Dichloroethene	120		100	51	ug/L	100		8260D	Total/NA
Vinyl chloride	7300		500	230	ug/L	500		8260D	Total/NA

Client Sample ID: MW-07_030425 — Lab Sample ID: 240-220133-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Client Sample ID: TRIP BLANK_208
Date Collected: 03/04/25 00:00
Date Received: 03/08/25 08:00

Lab Sample ID: 240-220133-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by 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			03/15/25 06:22	1
cis-1,2-Dichloroethene	1.0	U *-	1.0	0.46	ug/L			03/15/25 06:22	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 06:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/25 06:22	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 06:22	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/25 06:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*62 - 137*		*03/15/25 06:22*	*1*
4-Bromofluorobenzene (Surr)	*104*		*56 - 136*		*03/15/25 06:22*	*1*
Toluene-d8 (Surr)	*108*		*78 - 122*		*03/15/25 06:22*	*1*
Dibromofluoromethane (Surr)	*95*		*73 - 120*		*03/15/25 06:22*	*1*

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Client Sample ID: MW-39_030425
Date Collected: 03/04/25 10:25
Date Received: 03/08/25 08:00

Lab Sample ID: 240-220133-2
Matrix: Water

Method: SW846 8260D SIM - Volatile Organic Compounds (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			03/12/25 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*68 - 127*		*03/12/25 19:01*	*1*

Method: SW846 8260D - Volatile Organic Compounds by 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			03/15/25 10:14	1
cis-1,2-Dichloroethene	1.0	U *-	1.0	0.46	ug/L			03/15/25 10:14	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 10:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/25 10:14	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 10:14	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/25 10:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*62 - 137*		*03/15/25 10:14*	*1*
4-Bromofluorobenzene (Surr)	*98*		*56 - 136*		*03/15/25 10:14*	*1*
Toluene-d8 (Surr)	*105*		*78 - 122*		*03/15/25 10:14*	*1*
Dibromofluoromethane (Surr)	*93*		*73 - 120*		*03/15/25 10:14*	*1*

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Client Sample ID: MW-49_030425
Date Collected: 03/04/25 11:50
Date Received: 03/08/25 08:00

Lab Sample ID: 240-220133-3
Matrix: Water

Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**9.6**		2.0	0.86	ug/L			03/12/25 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*68 - 127*		*03/12/25 19:24*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**51**	**J**	100	49	ug/L			03/17/25 20:04	100
cis-1,2-Dichloroethene	**30000**		500	230	ug/L			03/18/25 15:04	500
Tetrachloroethene	100	U	100	44	ug/L			03/17/25 20:04	100
trans-1,2-Dichloroethene	**120**		100	51	ug/L			03/17/25 20:04	100
Trichloroethene	100	U	100	44	ug/L			03/17/25 20:04	100
Vinyl chloride	**7300**		500	230	ug/L			03/18/25 15:04	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*62 - 137*		*03/17/25 20:04*	*100*
1,2-Dichloroethane-d4 (Surr)	*100*		*62 - 137*		*03/18/25 15:04*	*500*
4-Bromofluorobenzene (Surr)	*88*		*56 - 136*		*03/17/25 20:04*	*100*
4-Bromofluorobenzene (Surr)	*100*		*56 - 136*		*03/18/25 15:04*	*500*
Toluene-d8 (Surr)	*96*		*78 - 122*		*03/17/25 20:04*	*100*
Toluene-d8 (Surr)	*103*		*78 - 122*		*03/18/25 15:04*	*500*
Dibromofluoromethane (Surr)	*94*		*73 - 120*		*03/17/25 20:04*	*100*
Dibromofluoromethane (Surr)	*96*		*73 - 120*		*03/18/25 15:04*	*500*

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Client Sample ID: MW-07_030425
Date Collected: 03/04/25 13:05
Date Received: 03/08/25 08:00

Lab Sample ID: 240-220133-4
Matrix: Water

Method: SW846 8260D SIM - Volatile Organic Compounds (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			03/12/25 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*68 - 127*		*03/12/25 19:47*	*1*

Method: SW846 8260D - Volatile Organic Compounds by 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			03/17/25 20:27	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/17/25 20:27	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/17/25 20:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/17/25 20:27	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/17/25 20:27	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/17/25 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*62 - 137*		*03/17/25 20:27*	*1*
4-Bromofluorobenzene (Surr)	*87*		*56 - 136*		*03/17/25 20:27*	*1*
Toluene-d8 (Surr)	*95*		*78 - 122*		*03/17/25 20:27*	*1*
Dibromofluoromethane (Surr)	*94*		*73 - 120*		*03/17/25 20:27*	*1*

Surrogate Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-219864-C-3 MS	Matrix Spike	93	96	98	92
240-219864-C-3 MSD	Matrix Spike Duplicate	93	98	98	91
240-219879-B-5 MS	Matrix Spike	103	102	110	98
240-219879-B-5 MSD	Matrix Spike Duplicate	100	99	106	94
240-220133-1	TRIP BLANK_208	102	104	108	95
240-220133-2	MW-39_030425	101	98	105	93
240-220133-3	MW-49_030425	95	88	96	94
240-220133-3	MW-49_030425	100	100	103	96
240-220133-3 MS	MW-49_030425	100	100	108	96
240-220133-3 MSD	MW-49_030425	99	98	107	97
240-220133-4	MW-07_030425	95	87	95	94
LCS 240-648330/2	Lab Control Sample	99	102	110	96
LCS 240-648402/5	Lab Control Sample	92	98	100	92
LCS 240-648627/5	Lab Control Sample	95	98	104	98
MB 240-648330/4	Method Blank	101	99	106	94
MB 240-648402/9	Method Blank	96	89	96	91
MB 240-648627/9	Method Blank	101	102	102	99

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)
240-220133-2	MW-39_030425	98
240-220133-3	MW-49_030425	94
240-220133-4	MW-07_030425	96
240-220134-E-2 MS	Matrix Spike	86
240-220134-E-2 MSD	Matrix Spike Duplicate	83
LCS 240-647989/7	Lab Control Sample	89
MB 240-647989/9	Method Blank	84

Surrogate Legend

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

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

Lab Sample ID: MB 240-648330/4
Matrix: Water
Analysis Batch: 648330

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/25 05:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/25 05:05	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 05:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/25 05:05	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 05:05	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/25 05:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*62 - 137*		*03/15/25 05:05*	*1*
4-Bromofluorobenzene (Surr)	*99*		*56 - 136*		*03/15/25 05:05*	*1*
Toluene-d8 (Surr)	*106*		*78 - 122*		*03/15/25 05:05*	*1*
Dibromofluoromethane (Surr)	*94*		*73 - 120*		*03/15/25 05:05*	*1*

Lab Sample ID: LCS 240-648330/2
Matrix: Water
Analysis Batch: 648330

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene			20.0	14.6		ug/L		73	63 - 134		
cis-1,2-Dichloroethene			20.0	14.5	*-	ug/L		72	77 - 123		
Tetrachloroethene			20.0	16.1		ug/L		81	76 - 123		
trans-1,2-Dichloroethene			20.0	15.1		ug/L		75	75 - 124		
Trichloroethene			20.0	14.6		ug/L		73	70 - 122		
Vinyl chloride			20.0	18.1		ug/L		90	60 - 144		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*62 - 137*
4-Bromofluorobenzene (Surr)	*102*		*56 - 136*
Toluene-d8 (Surr)	*110*		*78 - 122*
Dibromofluoromethane (Surr)	*96*		*73 - 120*

Lab Sample ID: 240-219879-B-5 MS
Matrix: Water
Analysis Batch: 648330

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

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*62 - 137*
4-Bromofluorobenzene (Surr)	*102*		*56 - 136*
Toluene-d8 (Surr)	*110*		*78 - 122*
Dibromofluoromethane (Surr)	*98*		*73 - 120*

Lab Sample ID: 240-219879-B-5 MSD
Matrix: Water
Analysis Batch: 648330

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

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*62 - 137*

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

Lab Sample ID: 240-219879-B-5 MSD
Matrix: Water
Analysis Batch: 648330

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*99*		*56 - 136*
Toluene-d8 (Surr)	*106*		*78 - 122*
Dibromofluoromethane (Surr)	*94*		*73 - 120*

Lab Sample ID: MB 240-648402/9
Matrix: Water
Analysis Batch: 648402

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/17/25 11:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/17/25 11:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/17/25 11:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/17/25 11:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/17/25 11:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/17/25 11:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*96*		*62 - 137*		*03/17/25 11:51*	*1*
4-Bromofluorobenzene (Surr)	*89*		*56 - 136*		*03/17/25 11:51*	*1*
Toluene-d8 (Surr)	*96*		*78 - 122*		*03/17/25 11:51*	*1*
Dibromofluoromethane (Surr)	*91*		*73 - 120*		*03/17/25 11:51*	*1*

Lab Sample ID: LCS 240-648402/5
Matrix: Water
Analysis Batch: 648402

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	20.0	18.3		ug/L		91	63 - 134
cis-1,2-Dichloroethene	20.0	17.9		ug/L		89	77 - 123
Tetrachloroethene	20.0	18.4		ug/L		92	76 - 123
trans-1,2-Dichloroethene	20.0	17.5		ug/L		88	75 - 124
Trichloroethene	20.0	17.8		ug/L		89	70 - 122
Vinyl chloride	20.0	16.4		ug/L		82	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*92*		*62 - 137*
4-Bromofluorobenzene (Surr)	*98*		*56 - 136*
Toluene-d8 (Surr)	*100*		*78 - 122*
Dibromofluoromethane (Surr)	*92*		*73 - 120*

Lab Sample ID: 240-219864-C-3 MS
Matrix: Water
Analysis Batch: 648402

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	2.4	J	80.0	71.4		ug/L		86	56 - 135
cis-1,2-Dichloroethene	4.0	U	80.0	69.5		ug/L		87	66 - 128
Tetrachloroethene	11		80.0	82.8		ug/L		90	62 - 131

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

Lab Sample ID: 240-219864-C-3 MS
Matrix: Water
Analysis Batch: 648402

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	4.0	U	80.0	69.4		ug/L		87	56 - 136
Trichloroethene	53		80.0	121		ug/L		85	61 - 124
Vinyl chloride	4.0	U	80.0	63.2		ug/L		79	43 - 157

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*62 - 137*
4-Bromofluorobenzene (Surr)	*96*		*56 - 136*
Toluene-d8 (Surr)	*98*		*78 - 122*
Dibromofluoromethane (Surr)	*92*		*73 - 120*

Lab Sample ID: 240-219864-C-3 MSD
Matrix: Water
Analysis Batch: 648402

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	2.4	J	80.0	71.7		ug/L		87	56 - 135	0	26
cis-1,2-Dichloroethene	4.0	U	80.0	69.4		ug/L		87	66 - 128	0	14
Tetrachloroethene	11		80.0	81.8		ug/L		89	62 - 131	1	20
trans-1,2-Dichloroethene	4.0	U	80.0	68.3		ug/L		85	56 - 136	2	15
Trichloroethene	53		80.0	120		ug/L		83	61 - 124	1	15
Vinyl chloride	4.0	U	80.0	62.9		ug/L		79	43 - 157	1	24

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*62 - 137*
4-Bromofluorobenzene (Surr)	*98*		*56 - 136*
Toluene-d8 (Surr)	*98*		*78 - 122*
Dibromofluoromethane (Surr)	*91*		*73 - 120*

Lab Sample ID: MB 240-648627/9
Matrix: Water
Analysis Batch: 648627

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/18/25 12:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/18/25 12:58	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/18/25 12:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/18/25 12:58	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/18/25 12:58	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/18/25 12:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*62 - 137*		*03/18/25 12:58*	*1*
4-Bromofluorobenzene (Surr)	*102*		*56 - 136*		*03/18/25 12:58*	*1*
Toluene-d8 (Surr)	*102*		*78 - 122*		*03/18/25 12:58*	*1*
Dibromofluoromethane (Surr)	*99*		*73 - 120*		*03/18/25 12:58*	*1*

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

Lab Sample ID: LCS 240-648627/5
Matrix: Water
Analysis Batch: 648627

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene			20.0	17.6		ug/L		88	63 - 134		
cis-1,2-Dichloroethene			20.0	17.6		ug/L		88	77 - 123		
Tetrachloroethene			20.0	19.6		ug/L		98	76 - 123		
trans-1,2-Dichloroethene			20.0	18.5		ug/L		92	75 - 124		
Trichloroethene			20.0	18.0		ug/L		90	70 - 122		
Vinyl chloride			20.0	19.1		ug/L		96	60 - 144		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*62 - 137*
4-Bromofluorobenzene (Surr)	*98*		*56 - 136*
Toluene-d8 (Surr)	*104*		*78 - 122*
Dibromofluoromethane (Surr)	*98*		*73 - 120*

Lab Sample ID: 240-220133-3 MS
Matrix: Water
Analysis Batch: 648627

Client Sample ID: MW-49_030425
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene	500	U	10000	8600		ug/L		86	56 - 135		
cis-1,2-Dichloroethene	30000		10000	38000		ug/L		85	66 - 128		
Tetrachloroethene	500	U	10000	9770		ug/L		98	62 - 131		
trans-1,2-Dichloroethene	500	U	10000	9200		ug/L		92	56 - 136		
Trichloroethene	500	U	10000	8760		ug/L		88	61 - 124		
Vinyl chloride	7300		10000	17600		ug/L		104	43 - 157		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*62 - 137*
4-Bromofluorobenzene (Surr)	*100*		*56 - 136*
Toluene-d8 (Surr)	*108*		*78 - 122*
Dibromofluoromethane (Surr)	*96*		*73 - 120*

Lab Sample ID: 240-220133-3 MSD
Matrix: Water
Analysis Batch: 648627

Client Sample ID: MW-49_030425
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	500	U	10000	8720		ug/L		87	56 - 135	1	26
cis-1,2-Dichloroethene	30000		10000	37900		ug/L		83	66 - 128	0	14
Tetrachloroethene	500	U	10000	9880		ug/L		99	62 - 131	1	20
trans-1,2-Dichloroethene	500	U	10000	9210		ug/L		92	56 - 136	0	15
Trichloroethene	500	U	10000	9210		ug/L		92	61 - 124	5	15
Vinyl chloride	7300		10000	17100		ug/L		99	43 - 157	3	24

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*62 - 137*
4-Bromofluorobenzene (Surr)	*98*		*56 - 136*
Toluene-d8 (Surr)	*107*		*78 - 122*

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

Lab Sample ID: 240-220133-3 MSD
Matrix: Water
Analysis Batch: 648627

Client Sample ID: MW-49_030425
Prep Type: Total/NA

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

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

Lab Sample ID: MB 240-647989/9
Matrix: Water
Analysis Batch: 647989

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/12/25 17:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*84*		*68 - 127*		*03/12/25 17:27*	*1*

Lab Sample ID: LCS 240-647989/7
Matrix: Water
Analysis Batch: 647989

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane			10.0	9.36		ug/L		94	75 - 121		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*89*		*68 - 127*

Lab Sample ID: 240-220134-E-2 MS
Matrix: Water
Analysis Batch: 647989

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane	2.0	U	10.0	9.50		ug/L		95	20 - 180		

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*86*		*68 - 127*

Lab Sample ID: 240-220134-E-2 MSD
Matrix: Water
Analysis Batch: 647989

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.71		ug/L		97	20 - 180	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*83*		*68 - 127*

QC Association Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

GC/MS VOA

Analysis Batch: 647989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220133-2	MW-39_030425	Total/NA	Water	8260D SIM	
240-220133-3	MW-49_030425	Total/NA	Water	8260D SIM	
240-220133-4	MW-07_030425	Total/NA	Water	8260D SIM	
MB 240-647989/9	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-647989/7	Lab Control Sample	Total/NA	Water	8260D SIM	
240-220134-E-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-220134-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 648330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220133-1	TRIP BLANK_208	Total/NA	Water	8260D	
240-220133-2	MW-39_030425	Total/NA	Water	8260D	
MB 240-648330/4	Method Blank	Total/NA	Water	8260D	
LCS 240-648330/2	Lab Control Sample	Total/NA	Water	8260D	
240-219879-B-5 MS	Matrix Spike	Total/NA	Water	8260D	
240-219879-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 648402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220133-3	MW-49_030425	Total/NA	Water	8260D	
240-220133-4	MW-07_030425	Total/NA	Water	8260D	
MB 240-648402/9	Method Blank	Total/NA	Water	8260D	
LCS 240-648402/5	Lab Control Sample	Total/NA	Water	8260D	
240-219864-C-3 MS	Matrix Spike	Total/NA	Water	8260D	
240-219864-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 648627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220133-3	MW-49_030425	Total/NA	Water	8260D	
MB 240-648627/9	Method Blank	Total/NA	Water	8260D	
LCS 240-648627/5	Lab Control Sample	Total/NA	Water	8260D	
240-220133-3 MS	MW-49_030425	Total/NA	Water	8260D	
240-220133-3 MSD	MW-49_030425	Total/NA	Water	8260D	

Lab Chronicle

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

Client Sample ID: TRIP BLANK_208

Lab Sample ID: 240-220133-1

Date Collected: 03/04/25 00:00

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648330	AJS	EET CLE	03/15/25 06:22

Client Sample ID: MW-39_030425

Lab Sample ID: 240-220133-2

Date Collected: 03/04/25 10:25

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648330	AJS	EET CLE	03/15/25 10:14
Total/NA	Analysis	8260D SIM		1	647989	R5XG	EET CLE	03/12/25 19:01

Client Sample ID: MW-49_030425

Lab Sample ID: 240-220133-3

Date Collected: 03/04/25 11:50

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		500	648627	MDH	EET CLE	03/18/25 15:04
Total/NA	Analysis	8260D		100	648402	AJS	EET CLE	03/17/25 20:04
Total/NA	Analysis	8260D SIM		1	647989	R5XG	EET CLE	03/12/25 19:24

Client Sample ID: MW-07_030425

Lab Sample ID: 240-220133-4

Date Collected: 03/04/25 13:05

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648402	AJS	EET CLE	03/17/25 20:27
Total/NA	Analysis	8260D SIM		1	647989	R5XG	EET CLE	03/12/25 19:47

Laboratory References:

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

Accreditation/Certification Summary

Client: Arcadis US Inc.
Project/Site: Ford LTP

Job ID: 240-220133-1

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
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-25
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	03-18-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

MICHIGAN 190

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager: Megan Meckley	Site Contact: Samantha Szpaichler	Lab Contact: Mike DelMonico	COC No:
Company Name: Arcadis	Telephone: 248-994-2240	Telephone: 248-994-2240	Telephone: 330-497-9396	1 of 1 COCs
Address: 28550 Cabot Drive, Suite 500	Email: kristoffer.hinskey@arcadis.com	Analysis Turnaround Time	Analyses	For lab use only
City/State/Zip: Novi, MI, 48377	Sampler Name: Kaylee DeRoo	TAT if different from below: 10 day; ☐ 3 weeks ☑ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client:
Phone: 248-994-2240	Method of Shipment/Carrier:			Lab sampling:
Project Name: Ford LTP	Shipping/Tracking No:			Job/SDG No:
Project Number: 30206169.0401.03				
PO # US3460021848				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	1,1-DCE 8260D	cis-1,2-DCE 8260D	Trans-1,2-DCE 8260D	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM	Sample Specific Notes / Special Instructions:
TRIP BLANK_ 208	----	---		1						1					N	G	X	X	X	X	X	X		1 Trip Blank
MW-39_030425	3/4/25	1025		6						6					N	G	X	X	X	X	X	X	X	3 VOAs for 8260D 3 VOAs for 8260D SIM
MW-49_030425	3/4/25	1150		6						6					N	G	X	X	X	X	X	X	X	
MW-07_030425	3/4/25	1305		6						6					N	G	X	X	X	X	X	X	X	
				KO 3/4/25																				

240-220133 COC

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For ☐ Months

Special Instructions/QC Requirements & Comments:

Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728
Level IV Reporting requested.

onsite

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Kaylee DeRoo	Arcadis	3/4/25/1430	Novi Cold Storage	Arcadis	3/4/25/1430
	Arcadis	3/4/25 1330			3/7/25 1336
		3/7/25 1100	Received in Laboratory by: VMartin	Company: 3/8/25 800	Date/Time: EUR

Eurofins – Cleveland Sample Receipt Form/Narrative Login # :
Barberton Facility

Client Arcadis Site Name

Cooler Received on 3/18/25 Opened on 3/18/25

Cooler unpacked by: VMartin

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC *Foam Box Client Cooler Box Other*

Packing material used. Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 21 (CF +1.1 °C) Observed Cooler Temp 3.2 °C Corrected Cooler Temp. 4.3 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 *Did all bottles arrive in good condition (Unbroken)?*	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
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?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA *pH Strip Lot# HC448976*
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 163271	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

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

20. SAMPLE PRESERVATION

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

VOA Sample Preservation - Date/Time VOAs Frozen

3/8/2025

Login Container Summary Report

240-220133

3/20/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
TRIP BLANK_208	240-220133-A-1	Voa Vial 40ml - Hydrochloric Acid				
MW-39_030425	240-220133-A-2	Voa Vial 40ml - Hydrochloric Acid				
MW-39_030425	240-220133-B-2	Voa Vial 40ml - Hydrochloric Acid				
MW-39_030425	240-220133-C-2	Voa Vial 40ml - Hydrochloric Acid				
MW-39_030425	240-220133-D-2	Voa Vial 40ml - Hydrochloric Acid				
MW-39_030425	240-220133-E-2	Voa Vial 40ml - Hydrochloric Acid				
MW-39_030425	240-220133-F-2	Voa Vial 40ml - Hydrochloric Acid				
MW-49_030425	240-220133-A-3	Voa Vial 40ml - Hydrochloric Acid				
MW-49_030425	240-220133-B-3	Voa Vial 40ml - Hydrochloric Acid				
MW-49_030425	240-220133-C-3	Voa Vial 40ml - Hydrochloric Acid				
MW-49_030425	240-220133-D-3	Voa Vial 40ml - Hydrochloric Acid				
MW-49_030425	240-220133-E-3	Voa Vial 40ml - Hydrochloric Acid				
MW-49_030425	240-220133-F-3	Voa Vial 40ml - Hydrochloric Acid				
MW-07_030425	240-220133-A-4	Voa Vial 40ml - Hydrochloric Acid				
MW-07_030425	240-220133-B-4	Voa Vial 40ml - Hydrochloric Acid				
MW-07_030425	240-220133-C-4	Voa Vial 40ml - Hydrochloric Acid				
MW-07_030425	240-220133-D-4	Voa Vial 40ml - Hydrochloric Acid				
MW-07_030425	240-220133-E-4	Voa Vial 40ml - Hydrochloric Acid				
MW-07_030425	240-220133-F-4	Voa Vial 40ml - Hydrochloric Acid				

DATA VERIFICATION REPORT

March 20, 2025

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

CADENA project ID: E203728
Project: Ford Livonia Transmission Plant - ON-SITE Soil Gas, Ground Water and Soil
Project number: 30251157.401.04 (vapor 301.04) 30206169.0401.04
Event Specific Scope of Work References: Sample COC
Laboratory: Eurofins Environment Testing LLC - Cleveland
Laboratory submittal: 220133-1
Sample date: 2025-03-04
Report received by CADENA: 2025-03-20
Initial Data Verification completed by CADENA: 2025-03-20
Number of Samples:4
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:

LCS - GCMS VOC QC batch LCS recoveries was outlying biased low for the following analyte: CIS-1,2-DICHLOROETHENE. The following client sample results should be considered to be estimated and qualified with UJ flags if non-detect: -001,-002.

GCMS VOC QC batch CCV 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.

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Inc, 1099 Highland Drive, Suite E, Ann Arbor, MI 48108 517-819-0356

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	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.
E	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.

Qualified Results Summary

CADENA Project ID: E203728
Laboratory: Eurofins Environment Testing LLC - Cleveland
Laboratory Submittal: 220133-1

		Sample Name:	TRIP BLANK_208				MW-39_030425			
		Lab Sample ID:	2402201331				2402201332			
		Sample Date:	3/4/2025				3/4/2025			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC									
OSW-8260D									
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	UJ	ND	1.0	ug/l	UJ

Analytical Results Summary

CADENA Project ID: E203728
Laboratory: Eurofins Environment Testing LLC - Cleveland
Laboratory Submittal: 220133-1

		Sample Name:	TRIP BLANK_208				MW-39_030425				MW-49_030425				MW-07_030425			
		Lab Sample ID:	2402201331				2402201332				2402201333				2402201334			
		Sample Date:	3/4/2025				3/4/2025				3/4/2025				3/4/2025			
Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC																	
OSW-8260D																	
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	51	100	ug/l	J	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	UJ	ND	1.0	ug/l	UJ	30000	500	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	100	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	120	100	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	100	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	7300	500	ug/l	---	ND	1.0	ug/l	---
OSW-8260DSIM																	
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	9.6	2.0	ug/l	---	ND	2.0	ug/l	---