

ANALYTICAL REPORT

PREPARED FOR

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Generated 6/3/2025 7:31:13 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-225263-1

Eurofins Cleveland

Job Notes

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Authorization



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Definitions/Glossary

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

Job ID: 240-225263-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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

Case Narrative

Client: Arcadis US Inc.
Project: Ford LTP

Job ID: 240-225263-1

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Job Narrative 240-225263-1

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 5/24/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.7°C and 0.8°C.

GC/MS VOA

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 US Inc.
Project/Site: Ford LTP

Job ID: 240-225263-1

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: 240-225263-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-225263-1	TRIP BLANK_74	Water	05/21/25 00:00	05/24/25 08:00
240-225263-2	MW-199S_052125	Water	05/21/25 09:35	05/24/25 08:00
240-225263-3	MW-51_052125	Water	05/21/25 10:55	05/24/25 08:00
240-225263-4	PW-16-02_052125	Water	05/21/25 12:00	05/24/25 08:00

Detection Summary

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

Job ID: 240-225263-1

Client Sample ID: TRIP BLANK_74

Lab Sample ID: 240-225263-1

No Detections.

Client Sample ID: MW-199S_052125

Lab Sample ID: 240-225263-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.4		2.0	0.86	ug/L	1		8260D SIM	Total/NA
Vinyl chloride	0.84	J	1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-51_052125

Lab Sample ID: 240-225263-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.7	J	2.0	0.86	ug/L	1		8260D SIM	Total/NA

Client Sample ID: PW-16-02_052125

Lab Sample ID: 240-225263-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 240-225263-1

Client Sample ID: TRIP BLANK_74

Lab Sample ID: 240-225263-1

Date Collected: 05/21/25 00:00

Matrix: Water

Date Received: 05/24/25 08:00

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			05/29/25 17:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/29/25 17:39	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 17:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/29/25 17:39	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 17:39	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/29/25 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137		05/29/25 17:39	1
4-Bromofluorobenzene (Surr)	83		56 - 136		05/29/25 17:39	1
Toluene-d8 (Surr)	97		78 - 122		05/29/25 17:39	1
Dibromofluoromethane (Surr)	103		73 - 120		05/29/25 17:39	1

Client Sample Results

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

Job ID: 240-225263-1

Client Sample ID: MW-199S_052125

Lab Sample ID: 240-225263-2

Date Collected: 05/21/25 09:35

Matrix: Water

Date Received: 05/24/25 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.4		2.0	0.86	ug/L			05/30/25 13:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		68 - 127					05/30/25 13:52	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			05/29/25 20:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/29/25 20:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 20:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/29/25 20:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 20:51	1
Vinyl chloride	0.84	J	1.0	0.45	ug/L			05/29/25 20:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		62 - 137					05/29/25 20:51	1
4-Bromofluorobenzene (Surr)	81		56 - 136					05/29/25 20:51	1
Toluene-d8 (Surr)	95		78 - 122					05/29/25 20:51	1
Dibromofluoromethane (Surr)	106		73 - 120					05/29/25 20:51	1

Client Sample Results

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

Job ID: 240-225263-1

Client Sample ID: MW-51_052125

Lab Sample ID: 240-225263-3

Date Collected: 05/21/25 10:55

Matrix: Water

Date Received: 05/24/25 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.7	J	2.0	0.86	ug/L			05/30/25 14:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		68 - 127					05/30/25 14:15	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			05/29/25 21:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/29/25 21:15	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 21:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/29/25 21:15	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 21:15	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/29/25 21:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		62 - 137					05/29/25 21:15	1
4-Bromofluorobenzene (Surr)	91		56 - 136					05/29/25 21:15	1
Toluene-d8 (Surr)	106		78 - 122					05/29/25 21:15	1
Dibromofluoromethane (Surr)	115		73 - 120					05/29/25 21:15	1

Client Sample Results

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

Job ID: 240-225263-1

Client Sample ID: PW-16-02_052125

Lab Sample ID: 240-225263-4

Date Collected: 05/21/25 12:00

Matrix: Water

Date Received: 05/24/25 08:00

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			05/30/25 14:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		68 - 127					05/30/25 14:38	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			05/30/25 22:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/30/25 22:47	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/30/25 22:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/30/25 22:47	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/30/25 22:47	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/30/25 22:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137					05/30/25 22:47	1
4-Bromofluorobenzene (Surr)	85		56 - 136					05/30/25 22:47	1
Toluene-d8 (Surr)	100		78 - 122					05/30/25 22:47	1
Dibromofluoromethane (Surr)	111		73 - 120					05/30/25 22:47	1

Surrogate Summary

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

Job ID: 240-225263-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-225215-A-2 MS	Matrix Spike	104	104	108	105
240-225215-B-2 MSD	Matrix Spike Duplicate	106	103	108	108
240-225263-1	TRIP BLANK_74	107	83	97	103
240-225263-2	MW-199S_052125	109	81	95	106
240-225263-3	MW-51_052125	120	91	106	115
240-225263-4	PW-16-02_052125	114	85	100	111
480-229505-E-4 MS	Matrix Spike	98	101	103	100
480-229505-E-4 MSD	Matrix Spike Duplicate	96	100	103	98
LCS 240-657746/5	Lab Control Sample	97	99	103	100
LCS 240-657981/5	Lab Control Sample	104	107	111	106
MB 240-657746/10	Method Blank	115	91	105	111
MB 240-657981/10	Method Blank	115	90	104	112

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (68-127)			
240-225263-2	MW-199S_052125	86			
240-225263-3	MW-51_052125	88			
240-225263-4	PW-16-02_052125	85			
240-225270-E-4 MS	Matrix Spike	89			
240-225270-E-4 MSD	Matrix Spike Duplicate	87			
LCS 240-658002/4	Lab Control Sample	86			
MB 240-658002/6	Method Blank	86			

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-225263-1

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

Lab Sample ID: MB 240-657746/10

Matrix: Water

Analysis Batch: 657746

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			05/29/25 12:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/29/25 12:33	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 12:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/29/25 12:33	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/29/25 12:33	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/29/25 12:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		62 - 137		05/29/25 12:33	1
4-Bromofluorobenzene (Surr)	91		56 - 136		05/29/25 12:33	1
Toluene-d8 (Surr)	105		78 - 122		05/29/25 12:33	1
Dibromofluoromethane (Surr)	111		73 - 120		05/29/25 12:33	1

Lab Sample ID: LCS 240-657746/5

Matrix: Water

Analysis Batch: 657746

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	20.7		ug/L		103	63 - 134
cis-1,2-Dichloroethene	20.0	19.7		ug/L		98	77 - 123
Tetrachloroethene	20.0	19.8		ug/L		99	76 - 123
trans-1,2-Dichloroethene	20.0	20.1		ug/L		101	75 - 124
Trichloroethene	20.0	18.1		ug/L		91	70 - 122
Vinyl chloride	20.0	17.2		ug/L		86	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	100		73 - 120

Lab Sample ID: 480-229505-E-4 MS

Matrix: Water

Analysis Batch: 657746

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	110	J	4000	3670		ug/L		89	56 - 135
cis-1,2-Dichloroethene	12000		4000	15500		ug/L		79	66 - 128
Tetrachloroethene	4400		4000	8050		ug/L		92	62 - 131
trans-1,2-Dichloroethene	170	J	4000	4010		ug/L		96	56 - 136
Trichloroethene	7800		4000	10900		ug/L		78	61 - 124
Vinyl chloride	1000		4000	4100		ug/L		77	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	103		78 - 122

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QC Sample Results

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

Job ID: 240-225263-1

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

Lab Sample ID: 480-229505-E-4 MS

Matrix: Water

Analysis Batch: 657746

Client Sample ID: Matrix Spike

Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	100		73 - 120

Lab Sample ID: 480-229505-E-4 MSD

Matrix: Water

Analysis Batch: 657746

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	110	J	4000	3770		ug/L		91	56 - 135	3	26
cis-1,2-Dichloroethene	12000		4000	15600		ug/L		82	66 - 128	1	14
Tetrachloroethene	4400		4000	7980		ug/L		90	62 - 131	1	20
trans-1,2-Dichloroethene	170	J	4000	4050		ug/L		97	56 - 136	1	15
Trichloroethene	7800		4000	10900		ug/L		78	61 - 124	0	15
Vinyl chloride	1000		4000	4160		ug/L		79	43 - 157	1	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

Lab Sample ID: MB 240-657981/10

Matrix: Water

Analysis Batch: 657981

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			05/30/25 14:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/30/25 14:16	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/30/25 14:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/30/25 14:16	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/30/25 14:16	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/30/25 14:16	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		62 - 137		05/30/25 14:16	1
4-Bromofluorobenzene (Surr)	90		56 - 136		05/30/25 14:16	1
Toluene-d8 (Surr)	104		78 - 122		05/30/25 14:16	1
Dibromofluoromethane (Surr)	112		73 - 120		05/30/25 14:16	1

Lab Sample ID: LCS 240-657981/5

Matrix: Water

Analysis Batch: 657981

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS			
Analyte	Added	Result	Qualifier	Unit	D	%Rec Limits
1,1-Dichloroethene	20.0	19.2		ug/L		96 63 - 134
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99 77 - 123
Tetrachloroethene	20.0	20.1		ug/L		100 76 - 123
trans-1,2-Dichloroethene	20.0	19.9		ug/L		99 75 - 124
Trichloroethene	20.0	19.0		ug/L		95 70 - 122

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QC Sample Results

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

Job ID: 240-225263-1

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

Lab Sample ID: LCS 240-657981/5

Matrix: Water

Analysis Batch: 657981

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	20.0	15.9		ug/L		79	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		62 - 137
4-Bromofluorobenzene (Surr)	107		56 - 136
Toluene-d8 (Surr)	111		78 - 122
Dibromofluoromethane (Surr)	106		73 - 120

Lab Sample ID: 240-225215-A-2 MS

Matrix: Water

Analysis Batch: 657981

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
cis-1,2-Dichloroethene	1.0	U	20.0	19.7		ug/L		99	66 - 128
trans-1,2-Dichloroethene	1.0	U	20.0	19.5		ug/L		98	56 - 136
Trichloroethene	1.0	U	20.0	17.4		ug/L		87	61 - 124
Vinyl chloride	1.0	U F1	20.0	31.1		ug/L		155	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	108		78 - 122
Dibromofluoromethane (Surr)	105		73 - 120

Lab Sample ID: 240-225215-B-2 MSD

Matrix: Water

Analysis Batch: 657981

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
cis-1,2-Dichloroethene	1.0	U	20.0	20.1		ug/L		100	66 - 128	2	14
trans-1,2-Dichloroethene	1.0	U	20.0	19.8		ug/L		99	56 - 136	1	15
Trichloroethene	1.0	U	20.0	17.4		ug/L		87	61 - 124	0	15
Vinyl chloride	1.0	U F1	20.0	31.6	F1	ug/L		158	43 - 157	2	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		62 - 137
4-Bromofluorobenzene (Surr)	103		56 - 136
Toluene-d8 (Surr)	108		78 - 122
Dibromofluoromethane (Surr)	108		73 - 120

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

Lab Sample ID: MB 240-658002/6

Matrix: Water

Analysis Batch: 658002

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			05/30/25 12:41	1

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-225263-1

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

Lab Sample ID: MB 240-658002/6

Matrix: Water

Analysis Batch: 658002

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB								
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
1,2-Dichloroethane-d4 (Surr)	86		68 - 127		05/30/25 12:41	1				

Lab Sample ID: LCS 240-658002/4

Matrix: Water

Analysis Batch: 658002

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dioxane			10.0	8.43		ug/L		84	75 - 121	
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	86		68 - 127							

Lab Sample ID: 240-225270-E-4 MS

Matrix: Water

Analysis Batch: 658002

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	
1,4-Dioxane	2.0	U	10.0	9.28		ug/L		93	20 - 180	
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	89		68 - 127							

Lab Sample ID: 240-225270-E-4 MSD

Matrix: Water

Analysis Batch: 658002

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		RPD	Limit
1,4-Dioxane	2.0	U	10.0	8.87		ug/L		89	20 - 180		5	20
Surrogate	%Recovery	Qualifier	Limits									
1,2-Dichloroethane-d4 (Surr)	87		68 - 127									

QC Association Summary

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

Job ID: 240-225263-1

GC/MS VOA

Analysis Batch: 657746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-225263-1	TRIP BLANK_74	Total/NA	Water	8260D	
240-225263-2	MW-199S_052125	Total/NA	Water	8260D	
240-225263-3	MW-51_052125	Total/NA	Water	8260D	
MB 240-657746/10	Method Blank	Total/NA	Water	8260D	
LCS 240-657746/5	Lab Control Sample	Total/NA	Water	8260D	
480-229505-E-4 MS	Matrix Spike	Total/NA	Water	8260D	
480-229505-E-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 657981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-225263-4	PW-16-02_052125	Total/NA	Water	8260D	
MB 240-657981/10	Method Blank	Total/NA	Water	8260D	
LCS 240-657981/5	Lab Control Sample	Total/NA	Water	8260D	
240-225215-A-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-225215-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 658002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-225263-2	MW-199S_052125	Total/NA	Water	8260D SIM	
240-225263-3	MW-51_052125	Total/NA	Water	8260D SIM	
240-225263-4	PW-16-02_052125	Total/NA	Water	8260D SIM	
MB 240-658002/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-658002/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-225270-E-4 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-225270-E-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Lab Chronicle

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

Job ID: 240-225263-1

Client Sample ID: TRIP BLANK_74

Lab Sample ID: 240-225263-1

Date Collected: 05/21/25 00:00

Matrix: Water

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	657746	AJS	EET CLE	05/29/25 17:39

Client Sample ID: MW-199S_052125

Lab Sample ID: 240-225263-2

Date Collected: 05/21/25 09:35

Matrix: Water

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	657746	AJS	EET CLE	05/29/25 20:51
Total/NA	Analysis	8260D SIM		1	658002	R5XG	EET CLE	05/30/25 13:52

Client Sample ID: MW-51_052125

Lab Sample ID: 240-225263-3

Date Collected: 05/21/25 10:55

Matrix: Water

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	657746	AJS	EET CLE	05/29/25 21:15
Total/NA	Analysis	8260D SIM		1	658002	R5XG	EET CLE	05/30/25 14:15

Client Sample ID: PW-16-02_052125

Lab Sample ID: 240-225263-4

Date Collected: 05/21/25 12:00

Matrix: Water

Date Received: 05/24/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	657981	AJS	EET CLE	05/30/25 22:47
Total/NA	Analysis	8260D SIM		1	658002	R5XG	EET CLE	05/30/25 14:38

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: 240-225263-1

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 (UST)	State	112225	02-28-26
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	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
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

8/8

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THE LEADER IN ENVIRONMENTAL TESTING

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✓
✓
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MICHIGAN
190



240-225263 COC

2:05 pm

Eurofins - Cleveland Sample Receipt Form/Narrative		Login # _____	
Barberton Facility			
Client <u>Ford</u>	Site Name _____	Cooler unpacked by: <u>JE</u>	
Cooler Received on <u>5-24-25</u>	Opened on <u>5-24-25</u>		
FedEx: 1 st Grd Exp <u>UPS</u> FAS <u>Waypoint</u>	Client Drop Off _____	Eurofins Courier _____	Other _____
Receipt After-hours Drop-off Date/Time _____		Storage Location _____	
Eurofins Cooler # <u>EC</u>	Roam Box _____	Client Cooler _____	Box _____
Packing material used: Bubble Wrap _____	Roam _____	Plastic Bag <u>None</u>	Other _____
COOLANT: <u>Verice</u> Blue Ice _____	Dry Ice _____	Water <u>None</u>	
1 Cooler temperature upon receipt <u>40.5</u> °C	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
<input checked="" type="checkbox"/> See Multiple Cooler Form			
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Were the seals on the outside of the cooler(s) signed & dated? <u>Yes</u> <u>No</u> <u>NA</u> -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? <u>Yes</u> <u>No</u> <u>NA</u> -Were tamper/custody seals intact and uncompromised? <u>Yes</u> <u>No</u> <u>NA</u> 3 Shippers' packing slip attached to the cooler(s)? <u>Yes</u> <u>No</u> <u>NA</u> 4 Did custody papers accompany the sample(s)? <u>Yes</u> <u>No</u> <u>NA</u> 5 Were the custody papers relinquished & signed in the appropriate place? <u>Yes</u> <u>No</u> <u>NA</u> 6 Was/were the person(s) who collected the samples clearly identified on the COC? <u>Yes</u> <u>No</u> <u>NA</u> 7 Did all bottles arrive in good condition (Unbroken)? <u>Yes</u> <u>No</u> <u>NA</u> 8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? <u>Yes</u> <u>No</u> <u>NA</u> 9 For each sample, does the COC specify preservatives <u>DN</u> , # of containers <u>YN</u> , and sample type of grab/comp <u>YN</u> ? <u>Yes</u> <u>No</u> <u>NA</u> 10 Were correct bottle(s) used for the test(s) indicated? <u>Yes</u> <u>No</u> <u>NA</u> 11 Sufficient quantity received to perform indicated analyses? <u>Yes</u> <u>No</u> <u>NA</u> 12 Are these work share samples and all listed on the COC? <u>Yes</u> <u>No</u> <u>NA</u> If yes, Questions 13-17 have been checked at the originating laboratory 13 Were all preserved sample(s) at the correct pH upon receipt? <u>Yes</u> <u>No</u> <u>NA</u> pH Strip Lot# HC463162 14 Were VOAs on the COC? <u>Yes</u> <u>No</u> <u>NA</u> 15 Were air bubbles >6 mm in any VOA vials? <u>Yes</u> <u>No</u> <u>NA</u> 16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>NA</u> 17 Was a LL Hg or Me Hg trip blank present? <u>Yes</u> <u>No</u> <u>NA</u>			
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____ Concerning _____			
18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES <input type="checkbox"/> additional next page		Labeled by: <u>[Signature]</u>	
		Labels Verified 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 _____			

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

Page 23 of 24

[illegible]

W1-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

Temperature readings				
Client Sample ID	Lab ID	Container Type	Container pH	Preservation Temp Added
				Preservation Lot Number
TRIP BLANK_74	240-225263-A-1	Voa Vial 40ml - Hydrochloric Acid		
MW-199S_052125	240-225263-A-2	Voa Vial 40ml - Hydrochloric Acid		
MW-199S_052125	240-225263-B-2	Voa Vial 40ml - Hydrochloric Acid		
MW-199S_052125	240-225263-C-2	Voa Vial 40ml - Hydrochloric Acid		
MW-199S_052125	240-225263-D-2	Voa Vial 40ml - Hydrochloric Acid		
MW-199S_052125	240-225263-E-2	Voa Vial 40ml - Hydrochloric Acid		
MW-199S_052125	240-225263-G-2	Voa Vial 40ml - Hydrochloric Acid		
MW-51_052125	240-225263-A-3	Voa Vial 40ml - Hydrochloric Acid		
MW-51_052125	240-225263-B-3	Voa Vial 40ml - Hydrochloric Acid		
MW-51_052125	240-225263-C-3	Voa Vial 40ml - Hydrochloric Acid		
MW-51_052125	240-225263-D-3	Voa Vial 40ml - Hydrochloric Acid		
MW-51_052125	240-225263-E-3	Voa Vial 40ml - Hydrochloric Acid		
MW-51_052125	240-225263-F-3	Voa Vial 40ml - Hydrochloric Acid		
PW-16-02_052125	240-225263-A-4	Voa Vial 40ml - Hydrochloric Acid		
PW-16-02_052125	240-225263-B-4	Voa Vial 40ml - Hydrochloric Acid		
PW-16-02_052125	240-225263-C-4	Voa Vial 40ml - Hydrochloric Acid		
PW-16-02_052125	240-225263-D-4	Voa Vial 40ml - Hydrochloric Acid		
PW-16-02_052125	240-225263-E-4	Voa Vial 40ml - Hydrochloric Acid		
PW-16-02_052125	240-225263-F-4	Voa Vial 40ml - Hydrochloric Acid		

DATA VERIFICATION REPORT



June 03, 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)

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 225263-1

Sample date: 2025-05-21

Report received by CADENA: 2025-06-03

Initial Data Verification completed by CADENA: 2025-06-03

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:

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, 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 contaminants) 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 contaminants) 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: 225263-1

Sample Name: TRIP BLANK_74

Lab Sample ID: 2402252631

Sample Date: 5/21/2025

MW-199S_052125

2402252632

5/21/2025

MW-51_052125

2402252633

5/21/2025

PW-16-02_052125

2402252634

5/21/2025

Analyte	Cas No.	Report				Valid				Report				Valid				Report				Valid			
		Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier				

GC/MS VOC

OSW-8260D

1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	0.84	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---

OSW-8260DSIM

1,4-Dioxane	123-91-1					2.4	2.0	ug/l	---	1.7	2.0	ug/l	J	ND	2.0	ug/l	---
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