

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-224764-1

Eurofins Cleveland

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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Definitions/Glossary

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

Job ID: 240-224764-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
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: 240-224764-1

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Job Narrative 240-224764-1

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 5/17/2025 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 2.9°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-656986 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene. 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.

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Method Summary

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

Job ID: 240-224764-1

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: 240-224764-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-224764-1	TRIP BLANK_111	Water	05/14/25 00:00	05/17/25 08:00
240-224764-2	MW-18_051425	Water	05/14/25 10:05	05/17/25 08:00
240-224764-3	MW-20_051425	Water	05/14/25 11:30	05/17/25 08:00
240-224764-4	MW-54S_051425	Water	05/14/25 13:45	05/17/25 08:00
240-224764-5	MW-54_051425	Water	05/14/25 15:00	05/17/25 08:00
240-224764-6	MW-63_051425	Water	05/14/25 16:20	05/17/25 08:00

Detection Summary

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

Job ID: 240-224764-1

Client Sample ID: TRIP BLANK_111

Lab Sample ID: 240-224764-1

No Detections.

Client Sample ID: MW-18_051425

Lab Sample ID: 240-224764-2

No Detections.

Client Sample ID: MW-20_051425

Lab Sample ID: 240-224764-3

No Detections.

Client Sample ID: MW-54S_051425

Lab Sample ID: 240-224764-4

No Detections.

Client Sample ID: MW-54_051425

Lab Sample ID: 240-224764-5

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
Vinyl chloride	0.86	J	1.0	0.45	ug/L	1			8260D	Total/NA

Client Sample ID: MW-63_051425

Lab Sample ID: 240-224764-6

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: 240-224764-1

Client Sample ID: TRIP BLANK_111

Lab Sample ID: 240-224764-1

Date Collected: 05/14/25 00:00

Matrix: Water

Date Received: 05/17/25 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			05/21/25 17:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/21/25 17:52	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/21/25 17:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/21/25 17:52	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/21/25 17:52	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/21/25 17:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		62 - 137		05/21/25 17:52	1
4-Bromofluorobenzene (Surr)	98		56 - 136		05/21/25 17:52	1
Toluene-d8 (Surr)	93		78 - 122		05/21/25 17:52	1
Dibromofluoromethane (Surr)	107		73 - 120		05/21/25 17:52	1

Client Sample Results

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

Job ID: 240-224764-1

Client Sample ID: MW-18_051425

Lab Sample ID: 240-224764-2

Date Collected: 05/14/25 10:05

Matrix: Water

Date Received: 05/17/25 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			05/28/25 07:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		68 - 127					05/28/25 07:33	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			05/21/25 23:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/21/25 23:54	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/21/25 23:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/21/25 23:54	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/21/25 23:54	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/21/25 23:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		62 - 137					05/21/25 23:54	1
4-Bromofluorobenzene (Surr)	95		56 - 136					05/21/25 23:54	1
Toluene-d8 (Surr)	93		78 - 122					05/21/25 23:54	1
Dibromofluoromethane (Surr)	104		73 - 120					05/21/25 23:54	1

Client Sample Results

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

Job ID: 240-224764-1

Client Sample ID: MW-20_051425

Lab Sample ID: 240-224764-3

Date Collected: 05/14/25 11:30

Matrix: Water

Date Received: 05/17/25 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			05/28/25 18:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		68 - 127					05/28/25 18:12	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			05/22/25 08:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/22/25 08:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 08:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/22/25 08:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 08:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/25 08:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		62 - 137					05/22/25 08:32	1
4-Bromofluorobenzene (Surr)	99		56 - 136					05/22/25 08:32	1
Toluene-d8 (Surr)	97		78 - 122					05/22/25 08:32	1
Dibromofluoromethane (Surr)	102		73 - 120					05/22/25 08:32	1

Client Sample Results

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

Job ID: 240-224764-1

Client Sample ID: MW-54S_051425

Lab Sample ID: 240-224764-4

Date Collected: 05/14/25 13:45

Matrix: Water

Date Received: 05/17/25 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			05/28/25 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		68 - 127					05/28/25 18:35	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			05/22/25 08:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/22/25 08:58	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 08:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/22/25 08:58	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 08:58	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/25 08:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		62 - 137					05/22/25 08:58	1
4-Bromofluorobenzene (Surr)	94		56 - 136					05/22/25 08:58	1
Toluene-d8 (Surr)	94		78 - 122					05/22/25 08:58	1
Dibromofluoromethane (Surr)	105		73 - 120					05/22/25 08:58	1

Client Sample Results

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

Job ID: 240-224764-1

Client Sample ID: MW-54_051425

Lab Sample ID: 240-224764-5

Date Collected: 05/14/25 15:00

Matrix: Water

Date Received: 05/17/25 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			05/28/25 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		68 - 127					05/28/25 18:59	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			05/22/25 09:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/22/25 09:24	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 09:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/22/25 09:24	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 09:24	1
Vinyl chloride	0.86	J	1.0	0.45	ug/L			05/22/25 09:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		62 - 137					05/22/25 09:24	1
4-Bromofluorobenzene (Surr)	95		56 - 136					05/22/25 09:24	1
Toluene-d8 (Surr)	92		78 - 122					05/22/25 09:24	1
Dibromofluoromethane (Surr)	105		73 - 120					05/22/25 09:24	1

Client Sample Results

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

Job ID: 240-224764-1

Client Sample ID: MW-63_051425

Lab Sample ID: 240-224764-6

Date Collected: 05/14/25 16:20

Matrix: Water

Date Received: 05/17/25 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			05/28/25 20:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		68 - 127					05/28/25 20:09	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			05/22/25 09:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/22/25 09:50	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 09:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/22/25 09:50	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 09:50	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/25 09:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		62 - 137					05/22/25 09:50	1
4-Bromofluorobenzene (Surr)	99		56 - 136					05/22/25 09:50	1
Toluene-d8 (Surr)	96		78 - 122					05/22/25 09:50	1
Dibromofluoromethane (Surr)	107		73 - 120					05/22/25 09:50	1

Surrogate Summary

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

Job ID: 240-224764-1

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)
240-224764-1	TRIP BLANK_111	120	98	93	107
240-224764-2	MW-18_051425	116	95	93	104
240-224764-2 MS	MW-18-MS_051425	107	99	98	98
240-224764-2 MSD	MW-18-MSD_051425	112	97	97	104
240-224764-3	MW-20_051425	117	99	97	102
240-224764-4	MW-54S_051425	117	94	94	105
240-224764-5	MW-54_051425	118	95	92	105
240-224764-6	MW-63_051425	121	99	96	107
240-224764-6 MS	MW-63-MS_051425	116	95	95	109
240-224764-6 MSD	MW-63-MSD_051425	114	98	96	103
LCS 240-656892/5	Lab Control Sample	112	94	92	107
LCS 240-656986/3	Lab Control Sample	113	98	98	108
MB 240-656892/10	Method Blank	115	98	93	105
MB 240-656986/8	Method Blank	120	96	96	105
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)			
240-224764-2	MW-18_051425	101			
240-224764-2 MS	MW-18-MS_051425	98			
240-224764-2 MSD	MW-18-MSD_051425	95			
240-224764-3	MW-20_051425	83			
240-224764-4	MW-54S_051425	82			
240-224764-5	MW-54_051425	84			
240-224764-6	MW-63_051425	82			
240-224764-6 MS	MW-63-MS_051425	84			
240-224764-6 MSD	MW-63-MSD_051425	81			
LCS 240-657524/3	Lab Control Sample	97			
LCS 240-657615/6	Lab Control Sample	81			
MB 240-657524/5	Method Blank	100			
MB 240-657615/8	Method Blank	82			
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					

QC Sample Results

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

Job ID: 240-224764-1

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

Lab Sample ID: MB 240-656892/10

Matrix: Water

Analysis Batch: 656892

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			05/21/25 16:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/21/25 16:09	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/21/25 16:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/21/25 16:09	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/21/25 16:09	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/21/25 16:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		62 - 137		05/21/25 16:09	1
4-Bromofluorobenzene (Surr)	98		56 - 136		05/21/25 16:09	1
Toluene-d8 (Surr)	93		78 - 122		05/21/25 16:09	1
Dibromofluoromethane (Surr)	105		73 - 120		05/21/25 16:09	1

Lab Sample ID: LCS 240-656892/5

Matrix: Water

Analysis Batch: 656892

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	19.5		ug/L		97	63 - 134
cis-1,2-Dichloroethene	20.0	20.1		ug/L		100	77 - 123
Tetrachloroethene	20.0	18.9		ug/L		94	76 - 123
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	75 - 124
Trichloroethene	20.0	19.5		ug/L		97	70 - 122
Vinyl chloride	20.0	15.4		ug/L		77	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	92		78 - 122
Dibromofluoromethane (Surr)	107		73 - 120

Lab Sample ID: 240-224764-2 MS

Matrix: Water

Analysis Batch: 656892

Client Sample ID: MW-18-MS_051425

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	1.0	U	20.0	18.0		ug/L		90	56 - 135
cis-1,2-Dichloroethene	1.0	U	20.0	17.4		ug/L		87	66 - 128
Tetrachloroethene	1.0	U	20.0	19.7		ug/L		98	62 - 131
trans-1,2-Dichloroethene	1.0	U	20.0	18.1		ug/L		91	56 - 136
Trichloroethene	1.0	U	20.0	18.2		ug/L		91	61 - 124
Vinyl chloride	1.0	U	20.0	14.5		ug/L		72	43 - 157

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

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224764-1

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

Lab Sample ID: 240-224764-2 MS

Matrix: Water

Analysis Batch: 656892

Client Sample ID: MW-18-MS_051425

Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	98		73 - 120

Lab Sample ID: 240-224764-2 MSD

Matrix: Water

Analysis Batch: 656892

Client Sample ID: MW-18-MSD_051425

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	1.0	U	20.0	19.1		ug/L		95	56 - 135	6	26
cis-1,2-Dichloroethene	1.0	U	20.0	18.8		ug/L		94	66 - 128	8	14
Tetrachloroethene	1.0	U	20.0	19.5		ug/L		97	62 - 131	1	20
trans-1,2-Dichloroethene	1.0	U	20.0	19.0		ug/L		95	56 - 136	5	15
Trichloroethene	1.0	U	20.0	19.1		ug/L		95	61 - 124	5	15
Vinyl chloride	1.0	U	20.0	16.0		ug/L		80	43 - 157	10	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		62 - 137
4-Bromofluorobenzene (Surr)	97		56 - 136
Toluene-d8 (Surr)	97		78 - 122
Dibromofluoromethane (Surr)	104		73 - 120

Lab Sample ID: MB 240-656986/8

Matrix: Water

Analysis Batch: 656986

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			05/22/25 05:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/22/25 05:05	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 05:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/22/25 05:05	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/22/25 05:05	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/25 05:05	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		62 - 137		05/22/25 05:05	1
4-Bromofluorobenzene (Surr)	96		56 - 136		05/22/25 05:05	1
Toluene-d8 (Surr)	96		78 - 122		05/22/25 05:05	1
Dibromofluoromethane (Surr)	105		73 - 120		05/22/25 05:05	1

Lab Sample ID: LCS 240-656986/3

Matrix: Water

Analysis Batch: 656986

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	18.4		ug/L		92	63 - 134
cis-1,2-Dichloroethene	20.0	19.0		ug/L		95	77 - 123
Tetrachloroethene	20.0	17.2		ug/L		86	76 - 123
trans-1,2-Dichloroethene	20.0	18.7		ug/L		93	75 - 124
Trichloroethene	20.0	18.0		ug/L		90	70 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224764-1

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

Lab Sample ID: LCS 240-656986/3

Matrix: Water

Analysis Batch: 656986

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	15.3		ug/L		76	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	108		73 - 120

Lab Sample ID: 240-224764-6 MS

Matrix: Water

Analysis Batch: 656986

Client Sample ID: MW-63-MS_051425

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	1.0	U	20.0	19.5		ug/L		98	56 - 135
cis-1,2-Dichloroethene	1.0	U	20.0	19.1		ug/L		96	66 - 128
Tetrachloroethene	1.0	U	20.0	19.2		ug/L		96	62 - 131
trans-1,2-Dichloroethene	1.0	U	20.0	19.3		ug/L		96	56 - 136
Trichloroethene	1.0	U	20.0	18.2		ug/L		91	61 - 124
Vinyl chloride	1.0	U	20.0	17.5		ug/L		88	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	116		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	95		78 - 122
Dibromofluoromethane (Surr)	109		73 - 120

Lab Sample ID: 240-224764-6 MSD

Matrix: Water

Analysis Batch: 656986

Client Sample ID: MW-63-MSD_051425

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	1.0	U	20.0	19.7		ug/L		98	56 - 135	1	26
cis-1,2-Dichloroethene	1.0	U	20.0	18.7		ug/L		93	66 - 128	2	14
Tetrachloroethene	1.0	U	20.0	19.5		ug/L		97	62 - 131	2	20
trans-1,2-Dichloroethene	1.0	U	20.0	19.2		ug/L		96	56 - 136	0	15
Trichloroethene	1.0	U	20.0	18.8		ug/L		94	61 - 124	3	15
Vinyl chloride	1.0	U	20.0	17.4		ug/L		87	43 - 157	1	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	96		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224764-1

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

Lab Sample ID: MB 240-657524/5

Matrix: Water

Analysis Batch: 657524

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			05/27/25 23:44	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		68 - 127					05/27/25 23:44	1

Lab Sample ID: LCS 240-657524/3

Matrix: Water

Analysis Batch: 657524

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	8.69		ug/L		87	75 - 121
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	97		68 - 127						

Lab Sample ID: 240-224764-2 MS

Matrix: Water

Analysis Batch: 657524

Client Sample ID: MW-18-MS_051425

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	9.11		ug/L		91	20 - 180
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	98		68 - 127						

Lab Sample ID: 240-224764-2 MSD

Matrix: Water

Analysis Batch: 657524

Client Sample ID: MW-18-MSD_051425

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	9.48		ug/L		95	20 - 180	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	95		68 - 127								

Lab Sample ID: MB 240-657615/8

Matrix: Water

Analysis Batch: 657615

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			05/28/25 12:20	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		68 - 127					05/28/25 12:20	1

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224764-1

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

Lab Sample ID: LCS 240-657615/6

Matrix: Water

Analysis Batch: 657615

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	8.38		ug/L		84	75 - 121		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		81		68 - 127							

Lab Sample ID: 240-224764-6 MS

Matrix: Water

Analysis Batch: 657615

Client Sample ID: MW-63-MS_051425

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	8.47		ug/L		85	20 - 180		
Surrogate		MS %Recovery	MS Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		84		68 - 127							

Lab Sample ID: 240-224764-6 MSD

Matrix: Water

Analysis Batch: 657615

Client Sample ID: MW-63-MSD_051425

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	9.02		ug/L		90	20 - 180	6	20
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		81		68 - 127							

QC Association Summary

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

Job ID: 240-224764-1

GC/MS VOA

Analysis Batch: 656892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224764-1	TRIP BLANK_111	Total/NA	Water	8260D	
240-224764-2	MW-18_051425	Total/NA	Water	8260D	
MB 240-656892/10	Method Blank	Total/NA	Water	8260D	
LCS 240-656892/5	Lab Control Sample	Total/NA	Water	8260D	
240-224764-2 MS	MW-18-MS_051425	Total/NA	Water	8260D	
240-224764-2 MSD	MW-18-MSD_051425	Total/NA	Water	8260D	

Analysis Batch: 656986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224764-3	MW-20_051425	Total/NA	Water	8260D	
240-224764-4	MW-54S_051425	Total/NA	Water	8260D	
240-224764-5	MW-54_051425	Total/NA	Water	8260D	
240-224764-6	MW-63_051425	Total/NA	Water	8260D	
MB 240-656986/8	Method Blank	Total/NA	Water	8260D	
LCS 240-656986/3	Lab Control Sample	Total/NA	Water	8260D	
240-224764-6 MS	MW-63-MS_051425	Total/NA	Water	8260D	
240-224764-6 MSD	MW-63-MSD_051425	Total/NA	Water	8260D	

Analysis Batch: 657524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224764-2	MW-18_051425	Total/NA	Water	8260D SIM	
MB 240-657524/5	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-657524/3	Lab Control Sample	Total/NA	Water	8260D SIM	
240-224764-2 MS	MW-18-MS_051425	Total/NA	Water	8260D SIM	
240-224764-2 MSD	MW-18-MSD_051425	Total/NA	Water	8260D SIM	

Analysis Batch: 657615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224764-3	MW-20_051425	Total/NA	Water	8260D SIM	
240-224764-4	MW-54S_051425	Total/NA	Water	8260D SIM	
240-224764-5	MW-54_051425	Total/NA	Water	8260D SIM	
240-224764-6	MW-63_051425	Total/NA	Water	8260D SIM	
MB 240-657615/8	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-657615/6	Lab Control Sample	Total/NA	Water	8260D SIM	
240-224764-6 MS	MW-63-MS_051425	Total/NA	Water	8260D SIM	
240-224764-6 MSD	MW-63-MSD_051425	Total/NA	Water	8260D SIM	

Lab Chronicle

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

Job ID: 240-224764-1

Client Sample ID: TRIP BLANK_111

Lab Sample ID: 240-224764-1

Date Collected: 05/14/25 00:00

Matrix: Water

Date Received: 05/17/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656892	AJS	EET CLE	05/21/25 17:52

Client Sample ID: MW-18_051425

Lab Sample ID: 240-224764-2

Date Collected: 05/14/25 10:05

Matrix: Water

Date Received: 05/17/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656892	AJS	EET CLE	05/21/25 23:54
Total/NA	Analysis	8260D SIM		1	657524	R5XG	EET CLE	05/28/25 07:33

Client Sample ID: MW-20_051425

Lab Sample ID: 240-224764-3

Date Collected: 05/14/25 11:30

Matrix: Water

Date Received: 05/17/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656986	AJS	EET CLE	05/22/25 08:32
Total/NA	Analysis	8260D SIM		1	657615	R5XG	EET CLE	05/28/25 18:12

Client Sample ID: MW-54S_051425

Lab Sample ID: 240-224764-4

Date Collected: 05/14/25 13:45

Matrix: Water

Date Received: 05/17/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656986	AJS	EET CLE	05/22/25 08:58
Total/NA	Analysis	8260D SIM		1	657615	R5XG	EET CLE	05/28/25 18:35

Client Sample ID: MW-54_051425

Lab Sample ID: 240-224764-5

Date Collected: 05/14/25 15:00

Matrix: Water

Date Received: 05/17/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656986	AJS	EET CLE	05/22/25 09:24
Total/NA	Analysis	8260D SIM		1	657615	R5XG	EET CLE	05/28/25 18:59

Client Sample ID: MW-63_051425

Lab Sample ID: 240-224764-6

Date Collected: 05/14/25 16:20

Matrix: Water

Date Received: 05/17/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656986	AJS	EET CLE	05/22/25 09:50
Total/NA	Analysis	8260D SIM		1	657615	R5XG	EET CLE	05/28/25 20:09

Laboratory References:

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

Eurofins Cleveland

Accreditation/Certification Summary

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

Job ID: 240-224764-1

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

Chain of Custody Record

4/4

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

Client Contact			Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other															TestAmerica Laboratories, Inc.											
Company Name: Arcadis			Client Project Manager: Megan Meckley					Site Contact: Samantha Szpachler					Lab Contact: Mike DelMonico					COC No:											
Address: 28550 Cabot Drive, Suite 500			Telephone: 248-994-2240					Telephone: 248-994-2240					Telephone: 330-497-9396					1 of 1 COCs											
City/State/Zip: Novi, MI, 48377			Email: megan.meckley@arcadis.com					Analysis Turnaround Time					Analyses					For lab use only											
Phone: 248-994-2240			Sampler Name: Noah Downie					TAT if different from below										Walk-in client											
Project Name: Ford LTP			Method of Shipment/Carrier:					10 day ☒ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day ☐										Lab sampling											
Project Number: 30251157.401.04			Shipping/Tracking No:															Job/SDG No:											
PO # US3460023914																													
Sample Identification			Sample Date	Sample Time	Matrix						Containers & Preservatives						Sample Specific Notes / Special Instructions:												
					Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnO	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			
TRIP BLANK_111			---	---	1						1								NG	X	X	X	X	X	X			1 Trip Blank	
MW-18-051425			05/14/25	10:05	6						6								NG	X	X	X	X	X	X			3 VOAs for 8260D 3 VOAs for 8260D SIM	
MW-18-MS-051425				↓	6						6								NG	X	X	X	X	X	X			Run MS	
MW-18-MSD-051425				↓	6						6								NG	X	X	X	X	X	X			Run MSD	
MW-20-051425				11:30	6						6								NG	X	X	X	X	X	X				
MW-54S-051425				13:45	6						6								NG	X	X	X	X	X	X				
MW-54-051425				15:00	6						6								NG	X	X	X	X	X	X				
MW-63-051425				16:20	6						6								NG	X	X	X	X	X	X				
MW-63-MS-051425				16:20	6						6								NG	X	X	X	X	X	X			Run MS	
MW-63-MSD-051425				16:20	6						6								NG	X	X	X	X	X	X			Run MSD	
Possible Hazard Identification															Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)														
☒ Non-Hazard ☐ Flammable ☐ Irritant ☐ Poison B ☐ Unknown															☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months														
Special Instructions/QC Requirements & Comments: Ford LTP onsite																													
Submit all results through Cadena at jtomalia@cadenaco.com, Cadena #E203728																													
Level IV Reporting requested.																													
Relinquished by: Noah Downie					Company: Arcadis					Date/Time: 05/14/25 1710					Received by: Novi cold storage					Company: Arcadis					Date/Time: 05/14/25 1710				
Relinquished by: [Signature]					Company: Arcadis					Date/Time: 5/16/25 1547					Received by: [Signature]					Company: BETA					Date/Time: 5-16-25 1548				
Relinquished by: [Signature]					Company: BETA					Date/Time: 5/16/25 1600					Received in Laboratory by: J MOROSIKW					Company: En					Date/Time: 5/17/25 82				



Eurofins - Cleveland Sample Receipt Form/Narrative		Login # : _____	
Barberton Facility			
Client <u>MACAHOIS</u>	Site Name _____	Cooler unpacked by: <u>JMOROSKO</u>	
Cooler Received on <u>5/17/25</u>	Opened on <u>5/17/25</u>		
FedEx: 1 st Gnd Exp <u>UPS</u> FAS <u>Waypoint</u>	Client Drop Off <u>Eurofins Courier</u>	Other _____	
Receipt After-hours: Drop-off Date/Time _____		Storage Location _____	
Eurofins Cooler # <u>EC</u>	Foam Box _____	Client Cooler _____	Box _____
Packing material used: Bubble Wrap _____	Foam _____	Plastic Bag _____	None _____
Other _____	Other _____		
COOLANT: Wet Ice <u>Wet Ice</u>	Blue Ice _____	Dry Ice _____	Water _____
None _____			
1. Cooler temperature upon receipt ☐ See Multiple Cooler Form IR GUN # <u>13</u> (CF <u>TD.5</u> °C) Observed Cooler Temp. <u>2.4</u> °C Corrected Cooler Temp. <u>2.9</u> °C			
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> -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 kins (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 (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? <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# HC457151 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> Larger than this. 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>covered</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 _____			

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

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		Labeled by: _____
		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: _____		

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container	Preservation	Preservation
			pH	Temp	Added
					Lot Number
TRIP BLANK_111	240-224764-A-1	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-A-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-A-2 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-A-2 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-B-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-B-2 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-B-2 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-C-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-C-2 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-C-2 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-D-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-D-2 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-D-2 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-E-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-E-2 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-E-2 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-F-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-F-2 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-18_051425	240-224764-F-2 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-A-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-B-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-C-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-D-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-E-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-F-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-A-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-B-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-C-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-D-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-E-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-F-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-20_051425	240-224764-A-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservation Temp</u>	<u>Preservation Added</u>	<u>Preservation Lot Number</u>
MW-54_051425	240-224764-B-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54_051425	240-224764-C-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54_051425	240-224764-D-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54_051425	240-224764-E-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54_051425	240-224764-F-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-A-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-A-6 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-A-6 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-B-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-B-6 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-B-6 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-C-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-C-6 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-C-6 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-D-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-D-6 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-D-6 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-E-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-E-6 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-E-6 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-F-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-F-6 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-63_051425	240-224764-F-6 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____

DATA VERIFICATION REPORT



May 29, 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: 224764-1

Sample date: 2025-05-14

Report received by CADENA: 2025-05-29

Initial Data Verification completed by CADENA: 2025-05-29

Number of Samples:6

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, 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 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: 224764-1

		Sample Name: TRIP BLANK_111				MW-18_051425				MW-20_051425				MW-54S_051425				MW-54_051425				MW-63_051425			
		Lab Sample ID: 2402247641				2402247642				2402247643				2402247644				2402247645				2402247646			
		Sample Date: 5/14/2025				5/14/2025				5/14/2025				5/14/2025				5/14/2025				5/14/2025			
		Report		Valid		Report		Valid		Report		Valid		Report		Valid		Report		Valid		Report		Valid	
Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	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	---	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	---	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	---	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	---	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	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.86	1.0	ug/l	J	ND	1.0	ug/l	---
OSW-8260DSIM																									
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	1.7	2.0	ug/l	J	ND	2.0	ug/l	---