

ANALYTICAL REPORT

PREPARED FOR

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Generated 5/22/2025 11:38:29 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-224511-1

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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Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Method Summary	6
Sample Summary	7
Detection Summary	8
Client Sample Results	9
Surrogate Summary	15
QC Sample Results	16
QC Association Summary	22
Lab Chronicle	23
Certification Summary	24
Chain of Custody	25



Definitions/Glossary

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

Job ID: 240-224511-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
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: 240-224511-1

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Job Narrative 240-224511-1

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 5/15/2025 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 2.9°C and 3.1°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-656697 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.

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Method Summary

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

Job ID: 240-224511-1

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: 240-224511-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-224511-1	TRIP BLANK_123	Water	05/12/25 00:00	05/15/25 08:00
240-224511-2	MW-10_051225	Water	05/12/25 09:50	05/15/25 08:00
240-224511-3	MW-04_051225	Water	05/12/25 11:00	05/15/25 08:00
240-224511-4	MW-02_051225	Water	05/12/25 12:25	05/15/25 08:00
240-224511-5	DUP-01	Water	05/12/25 00:00	05/15/25 08:00
240-224511-6	MW-46_051225	Water	05/12/25 14:10	05/15/25 08:00

Detection Summary

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

Job ID: 240-224511-1

Client Sample ID: TRIP BLANK_123

Lab Sample ID: 240-224511-1

No Detections.

Client Sample ID: MW-10_051225

Lab Sample ID: 240-224511-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.8		2.0	0.86	ug/L	1		8260D SIM	Total/NA
Vinyl chloride	4800		100	45	ug/L	100		8260D	Total/NA

Client Sample ID: MW-04_051225

Lab Sample ID: 240-224511-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.8	J	2.0	0.86	ug/L	1		8260D SIM	Total/NA
cis-1,2-Dichloroethene	4700		200	92	ug/L	200		8260D	Total/NA
trans-1,2-Dichloroethene	170	J	200	100	ug/L	200		8260D	Total/NA
Vinyl chloride	1900		200	90	ug/L	200		8260D	Total/NA

Client Sample ID: MW-02_051225

Lab Sample ID: 240-224511-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.5		2.0	0.86	ug/L	1		8260D SIM	Total/NA
cis-1,2-Dichloroethene	5300		200	92	ug/L	200		8260D	Total/NA
trans-1,2-Dichloroethene	740		200	100	ug/L	200		8260D	Total/NA
Vinyl chloride	330		200	90	ug/L	200		8260D	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-224511-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.8	J	2.0	0.86	ug/L	1		8260D SIM	Total/NA
cis-1,2-Dichloroethene	3900		130	58	ug/L	125		8260D	Total/NA
trans-1,2-Dichloroethene	130		130	64	ug/L	125		8260D	Total/NA
Trichloroethene	78	J	130	55	ug/L	125		8260D	Total/NA
Vinyl chloride	1700		130	56	ug/L	125		8260D	Total/NA

Client Sample ID: MW-46_051225

Lab Sample ID: 240-224511-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.3		2.0	0.86	ug/L	1		8260D SIM	Total/NA
cis-1,2-Dichloroethene	2.7		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	24		1.0	0.45	ug/L	1		8260D	Total/NA

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: 240-224511-1

Client Sample ID: TRIP BLANK_123

Lab Sample ID: 240-224511-1

Date Collected: 05/12/25 00:00

Matrix: Water

Date Received: 05/15/25 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			05/20/25 11:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/25 11:07	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/25 11:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/25 11:07	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/25 11:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/25 11:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		05/20/25 11:07	1
4-Bromofluorobenzene (Surr)	88		56 - 136		05/20/25 11:07	1
Toluene-d8 (Surr)	93		78 - 122		05/20/25 11:07	1
Dibromofluoromethane (Surr)	99		73 - 120		05/20/25 11:07	1

Client Sample Results

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

Job ID: 240-224511-1

Client Sample ID: MW-10_051225

Lab Sample ID: 240-224511-2

Date Collected: 05/12/25 09:50

Matrix: Water

Date Received: 05/15/25 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	5.8		2.0	0.86	ug/L			05/19/25 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	75		68 - 127					05/19/25 12:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	100	U	100	49	ug/L			05/19/25 15:51	100
cis-1,2-Dichloroethene	100	U	100	46	ug/L			05/19/25 15:51	100
Tetrachloroethene	100	U	100	44	ug/L			05/19/25 15:51	100
trans-1,2-Dichloroethene	100	U	100	51	ug/L			05/19/25 15:51	100
Trichloroethene	100	U	100	44	ug/L			05/19/25 15:51	100
Vinyl chloride	4800		100	45	ug/L			05/19/25 15:51	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137					05/19/25 15:51	100
4-Bromofluorobenzene (Surr)	91		56 - 136					05/19/25 15:51	100
Toluene-d8 (Surr)	94		78 - 122					05/19/25 15:51	100
Dibromofluoromethane (Surr)	102		73 - 120					05/19/25 15:51	100

Client Sample Results

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

Job ID: 240-224511-1

Client Sample ID: MW-04_051225

Lab Sample ID: 240-224511-3

Date Collected: 05/12/25 11:00

Matrix: Water

Date Received: 05/15/25 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	1.8	J	2.0	0.86	ug/L			05/19/25 12:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	75		68 - 127					05/19/25 12:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	200	U	200	98	ug/L			05/19/25 16:09	200
cis-1,2-Dichloroethene	4700		200	92	ug/L			05/19/25 16:09	200
Tetrachloroethene	200	U	200	88	ug/L			05/19/25 16:09	200
trans-1,2-Dichloroethene	170	J	200	100	ug/L			05/19/25 16:09	200
Trichloroethene	200	U	200	88	ug/L			05/19/25 16:09	200
Vinyl chloride	1900		200	90	ug/L			05/19/25 16:09	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137					05/19/25 16:09	200
4-Bromofluorobenzene (Surr)	92		56 - 136					05/19/25 16:09	200
Toluene-d8 (Surr)	96		78 - 122					05/19/25 16:09	200
Dibromofluoromethane (Surr)	103		73 - 120					05/19/25 16:09	200

Client Sample Results

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

Job ID: 240-224511-1

Client Sample ID: MW-02_051225

Lab Sample ID: 240-224511-4

Date Collected: 05/12/25 12:25

Matrix: Water

Date Received: 05/15/25 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	5.5		2.0	0.86	ug/L			05/19/25 13:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	76		68 - 127					05/19/25 13:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	200	U	200	98	ug/L			05/19/25 16:27	200
cis-1,2-Dichloroethene	5300		200	92	ug/L			05/19/25 16:27	200
Tetrachloroethene	200	U	200	88	ug/L			05/19/25 16:27	200
trans-1,2-Dichloroethene	740		200	100	ug/L			05/19/25 16:27	200
Trichloroethene	200	U	200	88	ug/L			05/19/25 16:27	200
Vinyl chloride	330		200	90	ug/L			05/19/25 16:27	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					05/19/25 16:27	200
4-Bromofluorobenzene (Surr)	91		56 - 136					05/19/25 16:27	200
Toluene-d8 (Surr)	94		78 - 122					05/19/25 16:27	200
Dibromofluoromethane (Surr)	101		73 - 120					05/19/25 16:27	200

Client Sample Results

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

Job ID: 240-224511-1

Client Sample ID: DUP-01

Lab Sample ID: 240-224511-5

Date Collected: 05/12/25 00:00

Matrix: Water

Date Received: 05/15/25 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	1.8	J	2.0	0.86	ug/L			05/19/25 13:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	78		68 - 127					05/19/25 13:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	130	U	130	61	ug/L			05/20/25 12:57	125
cis-1,2-Dichloroethene	3900		130	58	ug/L			05/20/25 12:57	125
Tetrachloroethene	130	U	130	55	ug/L			05/20/25 12:57	125
trans-1,2-Dichloroethene	130		130	64	ug/L			05/20/25 12:57	125
Trichloroethene	78	J	130	55	ug/L			05/20/25 12:57	125
Vinyl chloride	1700		130	56	ug/L			05/20/25 12:57	125
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137					05/20/25 12:57	125
4-Bromofluorobenzene (Surr)	88		56 - 136					05/20/25 12:57	125
Toluene-d8 (Surr)	93		78 - 122					05/20/25 12:57	125
Dibromofluoromethane (Surr)	101		73 - 120					05/20/25 12:57	125

Client Sample Results

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

Job ID: 240-224511-1

Client Sample ID: MW-46_051225

Lab Sample ID: 240-224511-6

Date Collected: 05/12/25 14:10

Matrix: Water

Date Received: 05/15/25 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	3.3		2.0	0.86	ug/L			05/19/25 13:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	77		68 - 127					05/19/25 13:59	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			05/19/25 17:03	1
cis-1,2-Dichloroethene	2.7		1.0	0.46	ug/L			05/19/25 17:03	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/25 17:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/25 17:03	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/25 17:03	1
Vinyl chloride	24		1.0	0.45	ug/L			05/19/25 17:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137					05/19/25 17:03	1
4-Bromofluorobenzene (Surr)	87		56 - 136					05/19/25 17:03	1
Toluene-d8 (Surr)	93		78 - 122					05/19/25 17:03	1
Dibromofluoromethane (Surr)	105		73 - 120					05/19/25 17:03	1

Surrogate Summary

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

Job ID: 240-224511-1

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)
240-224303-B-8 MS	Matrix Spike	86	86	84	89
240-224303-B-8 MSD	Matrix Spike Duplicate	98	95	91	98
240-224511-1	TRIP BLANK_123	103	88	93	99
240-224511-2	MW-10_051225	103	91	94	102
240-224511-3	MW-04_051225	105	92	96	103
240-224511-4	MW-02_051225	101	91	94	101
240-224511-5	DUP-01	106	88	93	101
240-224511-6	MW-46_051225	107	87	93	105
240-224589-B-4 MS	Matrix Spike	112	90	99	103
240-224589-B-4 MSD	Matrix Spike Duplicate	104	91	97	101
240-224629-B-2 MS	Matrix Spike	93	93	89	93
240-224629-B-2 MSD	Matrix Spike Duplicate	97	98	95	98
LCS 240-656494/4	Lab Control Sample	98	97	96	99
LCS 240-656690/4	Lab Control Sample	105	89	96	96
LCS 240-656697/4	Lab Control Sample	99	100	95	98
MB 240-656494/7	Method Blank	97	91	92	96
MB 240-656690/7	Method Blank	111	88	98	100
MB 240-656697/7	Method Blank	105	92	94	103
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)			
240-224507-D-8 MS	Matrix Spike	73			
240-224507-D-8 MSD	Matrix Spike Duplicate	75			
240-224511-2	MW-10_051225	75			
240-224511-3	MW-04_051225	75			
240-224511-4	MW-02_051225	76			
240-224511-5	DUP-01	78			
240-224511-6	MW-46_051225	77			
LCS 240-656497/5	Lab Control Sample	76			
MB 240-656497/7	Method Blank	76			
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					

QC Sample Results

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

Job ID: 240-224511-1

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

Lab Sample ID: MB 240-656494/7

Matrix: Water

Analysis Batch: 656494

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			05/19/25 10:12	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/25 10:12	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/25 10:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/25 10:12	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/25 10:12	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/25 10:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		62 - 137		05/19/25 10:12	1
4-Bromofluorobenzene (Surr)	91		56 - 136		05/19/25 10:12	1
Toluene-d8 (Surr)	92		78 - 122		05/19/25 10:12	1
Dibromofluoromethane (Surr)	96		73 - 120		05/19/25 10:12	1

Lab Sample ID: LCS 240-656494/4

Matrix: Water

Analysis Batch: 656494

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	25.0	23.0		ug/L		92	63 - 134
cis-1,2-Dichloroethene	25.0	23.7		ug/L		95	77 - 123
Tetrachloroethene	25.0	22.8		ug/L		91	76 - 123
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	75 - 124
Trichloroethene	25.0	23.7		ug/L		95	70 - 122
Vinyl chloride	12.5	8.87		ug/L		71	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		62 - 137
4-Bromofluorobenzene (Surr)	97		56 - 136
Toluene-d8 (Surr)	96		78 - 122
Dibromofluoromethane (Surr)	99		73 - 120

Lab Sample ID: 240-224303-B-8 MS

Matrix: Water

Analysis Batch: 656494

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	4.0	U	100	93.5		ug/L		93	56 - 135
cis-1,2-Dichloroethene	200		100	276	E	ug/L		81	66 - 128
Tetrachloroethene	4.0	U	100	87.2		ug/L		87	62 - 131
trans-1,2-Dichloroethene	3.1	J	100	94.7		ug/L		92	56 - 136
Trichloroethene	4.0	U	100	94.5		ug/L		95	61 - 124
Vinyl chloride	58	F1	50.0	79.2	F1	ug/L		42	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		62 - 137
4-Bromofluorobenzene (Surr)	86		56 - 136
Toluene-d8 (Surr)	84		78 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224511-1

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

Lab Sample ID: 240-224303-B-8 MS

Matrix: Water

Analysis Batch: 656494

Client Sample ID: Matrix Spike

Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	89		73 - 120

Lab Sample ID: 240-224303-B-8 MSD

Matrix: Water

Analysis Batch: 656494

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	4.0	U	100	111		ug/L		111	56 - 135	17	26
cis-1,2-Dichloroethene	200		100	288	E	ug/L		93	66 - 128	4	14
Tetrachloroethene	4.0	U	100	98.7		ug/L		99	62 - 131	12	20
trans-1,2-Dichloroethene	3.1	J	100	106		ug/L		103	56 - 136	11	15
Trichloroethene	4.0	U	100	104		ug/L		104	61 - 124	9	15
Vinyl chloride	58	F1	50.0	91.7		ug/L		67	43 - 157	15	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	91		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

Lab Sample ID: MB 240-656690/7

Matrix: Water

Analysis Batch: 656690

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			05/20/25 12:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/25 12:34	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/25 12:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/25 12:34	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/25 12:34	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/25 12:34	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	111		62 - 137		05/20/25 12:34	1			
4-Bromofluorobenzene (Surr)	88		56 - 136		05/20/25 12:34	1			
Toluene-d8 (Surr)	98		78 - 122		05/20/25 12:34	1			
Dibromofluoromethane (Surr)	100		73 - 120		05/20/25 12:34	1			

Lab Sample ID: LCS 240-656690/4

Matrix: Water

Analysis Batch: 656690

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	25.0	22.4		ug/L		90	63 - 134
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	77 - 123
Tetrachloroethene	25.0	22.4		ug/L		89	76 - 123
trans-1,2-Dichloroethene	25.0	23.9		ug/L		96	75 - 124
Trichloroethene	25.0	24.5		ug/L		98	70 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224511-1

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

Lab Sample ID: LCS 240-656690/4

Matrix: Water

Analysis Batch: 656690

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	12.5	9.59		ug/L		77	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		62 - 137
4-Bromofluorobenzene (Surr)	89		56 - 136
Toluene-d8 (Surr)	96		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

Lab Sample ID: 240-224589-B-4 MS

Matrix: Water

Analysis Batch: 656690

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	1.0	U	25.0	23.1		ug/L		92	56 - 135
cis-1,2-Dichloroethene	1.0	U	25.0	23.7		ug/L		95	66 - 128
Tetrachloroethene	0.79	J	25.0	23.3		ug/L		90	62 - 131
trans-1,2-Dichloroethene	1.0	U	25.0	22.1		ug/L		88	56 - 136
Trichloroethene	1.0	U	25.0	22.9		ug/L		92	61 - 124
Vinyl chloride	1.0	U	12.5	9.75		ug/L		78	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		62 - 137
4-Bromofluorobenzene (Surr)	90		56 - 136
Toluene-d8 (Surr)	99		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

Lab Sample ID: 240-224589-B-4 MSD

Matrix: Water

Analysis Batch: 656690

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	1.0	U	25.0	23.7		ug/L		95	56 - 135	3	26
cis-1,2-Dichloroethene	1.0	U	25.0	22.2		ug/L		89	66 - 128	7	14
Tetrachloroethene	0.79	J	25.0	25.0		ug/L		97	62 - 131	7	20
trans-1,2-Dichloroethene	1.0	U	25.0	23.6		ug/L		95	56 - 136	7	15
Trichloroethene	1.0	U	25.0	22.9		ug/L		91	61 - 124	0	15
Vinyl chloride	1.0	U	12.5	9.01		ug/L		72	43 - 157	8	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		62 - 137
4-Bromofluorobenzene (Surr)	91		56 - 136
Toluene-d8 (Surr)	97		78 - 122
Dibromofluoromethane (Surr)	101		73 - 120

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224511-1

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

Lab Sample ID: MB 240-656697/7

Matrix: Water

Analysis Batch: 656697

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			05/20/25 10:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/20/25 10:49	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/20/25 10:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/20/25 10:49	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/20/25 10:49	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/20/25 10:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137		05/20/25 10:49	1
4-Bromofluorobenzene (Surr)	92		56 - 136		05/20/25 10:49	1
Toluene-d8 (Surr)	94		78 - 122		05/20/25 10:49	1
Dibromofluoromethane (Surr)	103		73 - 120		05/20/25 10:49	1

Lab Sample ID: LCS 240-656697/4

Matrix: Water

Analysis Batch: 656697

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	25.0	27.9		ug/L		111	63 - 134
cis-1,2-Dichloroethene	25.0	26.2		ug/L		105	77 - 123
Tetrachloroethene	25.0	26.7		ug/L		107	76 - 123
trans-1,2-Dichloroethene	25.0	26.8		ug/L		107	75 - 124
Trichloroethene	25.0	26.2		ug/L		105	70 - 122
Vinyl chloride	12.5	10.1		ug/L		81	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	95		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

Lab Sample ID: 240-224629-B-2 MS

Matrix: Water

Analysis Batch: 656697

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	25.0	23.9		ug/L		96	66 - 128
trans-1,2-Dichloroethene	1.0	U	25.0	24.1		ug/L		96	56 - 136
Trichloroethene	1.0	U	25.0	22.6		ug/L		91	61 - 124
Vinyl chloride	1.0	U	12.5	8.76		ug/L		70	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		62 - 137
4-Bromofluorobenzene (Surr)	93		56 - 136
Toluene-d8 (Surr)	89		78 - 122
Dibromofluoromethane (Surr)	93		73 - 120

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224511-1

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

Lab Sample ID: 240-224629-B-2 MSD

Matrix: Water

Analysis Batch: 656697

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	25.0	25.4		ug/L		102	66 - 128	6	14
trans-1,2-Dichloroethene	1.0	U	25.0	25.8		ug/L		103	56 - 136	7	15
Trichloroethene	1.0	U	25.0	24.8		ug/L		99	61 - 124	9	15
Vinyl chloride	1.0	U	12.5	10.0		ug/L		80	43 - 157	13	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	95		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

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

Lab Sample ID: MB 240-656497/7

Matrix: Water

Analysis Batch: 656497

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			05/19/25 10:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	76		68 - 127		05/19/25 10:52	1

Lab Sample ID: LCS 240-656497/5

Matrix: Water

Analysis Batch: 656497

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	9.18		ug/L		92	75 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	76		68 - 127

Lab Sample ID: 240-224507-D-8 MS

Matrix: Water

Analysis Batch: 656497

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	9.77		ug/L		98	20 - 180

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	73		68 - 127

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-224511-1

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

Lab Sample ID: 240-224507-D-8 MSD

Matrix: Water

Analysis Batch: 656497

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	10.5		ug/L		105	20 - 180	7	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	75		68 - 127								

QC Association Summary

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

Job ID: 240-224511-1

GC/MS VOA

Analysis Batch: 656494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224511-2	MW-10_051225	Total/NA	Water	8260D	
240-224511-3	MW-04_051225	Total/NA	Water	8260D	
240-224511-4	MW-02_051225	Total/NA	Water	8260D	
240-224511-6	MW-46_051225	Total/NA	Water	8260D	
MB 240-656494/7	Method Blank	Total/NA	Water	8260D	
LCS 240-656494/4	Lab Control Sample	Total/NA	Water	8260D	
240-224303-B-8 MS	Matrix Spike	Total/NA	Water	8260D	
240-224303-B-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 656497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224511-2	MW-10_051225	Total/NA	Water	8260D SIM	
240-224511-3	MW-04_051225	Total/NA	Water	8260D SIM	
240-224511-4	MW-02_051225	Total/NA	Water	8260D SIM	
240-224511-5	DUP-01	Total/NA	Water	8260D SIM	
240-224511-6	MW-46_051225	Total/NA	Water	8260D SIM	
MB 240-656497/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-656497/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-224507-D-8 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-224507-D-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 656690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224511-5	DUP-01	Total/NA	Water	8260D	
MB 240-656690/7	Method Blank	Total/NA	Water	8260D	
LCS 240-656690/4	Lab Control Sample	Total/NA	Water	8260D	
240-224589-B-4 MS	Matrix Spike	Total/NA	Water	8260D	
240-224589-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 656697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-224511-1	TRIP BLANK_123	Total/NA	Water	8260D	
MB 240-656697/7	Method Blank	Total/NA	Water	8260D	
LCS 240-656697/4	Lab Control Sample	Total/NA	Water	8260D	
240-224629-B-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-224629-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Lab Chronicle

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

Job ID: 240-224511-1

Client Sample ID: TRIP BLANK_123

Lab Sample ID: 240-224511-1

Date Collected: 05/12/25 00:00

Matrix: Water

Date Received: 05/15/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656697	LEE	EET CLE	05/20/25 11:07

Client Sample ID: MW-10_051225

Lab Sample ID: 240-224511-2

Date Collected: 05/12/25 09:50

Matrix: Water

Date Received: 05/15/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		100	656494	LEE	EET CLE	05/19/25 15:51
Total/NA	Analysis	8260D SIM		1	656497	R5XG	EET CLE	05/19/25 12:26

Client Sample ID: MW-04_051225

Lab Sample ID: 240-224511-3

Date Collected: 05/12/25 11:00

Matrix: Water

Date Received: 05/15/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		200	656494	LEE	EET CLE	05/19/25 16:09
Total/NA	Analysis	8260D SIM		1	656497	R5XG	EET CLE	05/19/25 12:49

Client Sample ID: MW-02_051225

Lab Sample ID: 240-224511-4

Date Collected: 05/12/25 12:25

Matrix: Water

Date Received: 05/15/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		200	656494	LEE	EET CLE	05/19/25 16:27
Total/NA	Analysis	8260D SIM		1	656497	R5XG	EET CLE	05/19/25 13:12

Client Sample ID: DUP-01

Lab Sample ID: 240-224511-5

Date Collected: 05/12/25 00:00

Matrix: Water

Date Received: 05/15/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		125	656690	LEE	EET CLE	05/20/25 12:57
Total/NA	Analysis	8260D SIM		1	656497	R5XG	EET CLE	05/19/25 13:36

Client Sample ID: MW-46_051225

Lab Sample ID: 240-224511-6

Date Collected: 05/12/25 14:10

Matrix: Water

Date Received: 05/15/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	656494	LEE	EET CLE	05/19/25 17:03
Total/NA	Analysis	8260D SIM		1	656497	R5XG	EET CLE	05/19/25 13:59

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: 240-224511-1

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

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

[illegible]

Client Arcadis Site Name _____ Cooler unpacked by: DS

Cooler Received on 5/15/25 Opened on 5/15/25

Field # 1st Grid Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

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

Eurofins Cooler # E Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Well Ice Blue Ice Dry Ice Water None _____

1. Cooler temperature upon receipt _____ ☒ See Multiple Cooler Form

IR GUN # _____ (GF _____ °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ☒ Yes ☒ No ☒ NA

-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 ☒ NA

-Were tamper/custody seals intact and uncompromised? ☒ Yes ☒ No ☒ NA

3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☒ No ☒ NA

4. Did custody papers accompany the sample(s)? ☒ Yes ☒ No ☒ NA

5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☒ No ☒ NA

6. Was/were the person(s) who collected the samples clearly identified on the COC? ☒ Yes ☒ No ☒ NA

7. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☒ No ☒ NA

8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? ☒ Yes ☒ No ☒ NA

9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? ☒ Yes ☒ No ☒ NA

10. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☒ No ☒ NA

11. Sufficient quantity received to perform indicated analyses? ☒ Yes ☒ No ☒ NA

12. Are these work share samples and all listed on the COC? ☒ Yes ☒ No ☒ NA

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# HC457151

14. Were VOAs on the COC? ☒ Yes ☒ No ☒ NA

15. Were air bubbles > 6 mm in any VOA vials? ☒ Yes ☒ No ☒ NA Larger than this.

16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # NA ☒ Yes ☒ No ☒ NA

17. Was a LL Hg or Me Hg trip blank present? ☒ Yes ☒ No ☒ NA

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

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: _____

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

Temperature readings: _____

5/22/2025

Client Sample ID	Lab ID	Container Type	Container pH	Preservation Temp	Preservation Added	Preservation Lot Number
TRIP BLANK_123	240-224511-A-1	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-10_051225	240-224511-A-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-10_051225	240-224511-B-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-10_051225	240-224511-C-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-10_051225	240-224511-D-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-10_051225	240-224511-E-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-10_051225	240-224511-G-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-04_051225	240-224511-A-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-04_051225	240-224511-B-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-04_051225	240-224511-C-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-04_051225	240-224511-D-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-04_051225	240-224511-E-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-04_051225	240-224511-F-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-02_051225	240-224511-A-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-02_051225	240-224511-B-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-02_051225	240-224511-C-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-02_051225	240-224511-D-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-02_051225	240-224511-E-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-02_051225	240-224511-F-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-01	240-224511-A-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-01	240-224511-B-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-01	240-224511-C-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-01	240-224511-D-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-01	240-224511-E-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-01	240-224511-F-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-46_051225	240-224511-A-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-46_051225	240-224511-B-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-46_051225	240-224511-C-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-46_051225	240-224511-D-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-46_051225	240-224511-E-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-46_051225	240-224511-F-6	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____

DATA VERIFICATION REPORT



May 22, 2025

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

CADENA project ID: E203728

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

Project number: 30251157.401.04 (vapor 301.04)

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 224511-1

Sample date: 2025-05-12

Report received by CADENA: 2025-05-22

Initial Data Verification completed by CADENA: 2025-05-22

Number of Samples:6

Sample Matrices: Water and trip blank

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:

MS/MSD recovery outliers or sample duplicate RPD outliers were not determined using a client sample from this submittal for the test and QC batch noted so qualification was not required based on these sample-specific QC outliers: GCMS VOC QC batch 656494.

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

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, 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>.

Sincerely,

Jim Tomalia, Project Scientist

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: 224511-1

		Sample Name: TRIP BLANK_123				MW-10_051225				MW-04_051225				MW-02_051225				DUP-01				MW-46_051225			
		Lab Sample ID: 2402245111				2402245112				2402245113				2402245114				2402245115				2402245116			
		Sample Date: 5/12/2025				5/12/2025				5/12/2025				5/12/2025				5/12/2025				5/12/2025			
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	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	100	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---	ND	130	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	100	ug/l	---	4700	200	ug/l	---	5300	200	ug/l	---	3900	130	ug/l	---	2.7	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	100	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---	ND	130	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	100	ug/l	---	170	200	ug/l	J	740	200	ug/l	---	130	130	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	100	ug/l	---	ND	200	ug/l	---	ND	200	ug/l	---	78	130	ug/l	J	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	4800	100	ug/l	---	1900	200	ug/l	---	330	200	ug/l	---	1700	130	ug/l	---	24	1.0	ug/l	---
OSW-8260DSIM																									
1,4-Dioxane	123-91-1					5.8	2.0	ug/l	---	1.8	2.0	ug/l	J	5.5	2.0	ug/l	---	1.8	2.0	ug/l	J	3.3	2.0	ug/l	---