

ANALYTICAL REPORT

PREPARED FOR

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Generated 3/5/2025 7:09:07 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-219439-1

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	16
QC Sample Results	17
QC Association Summary	23
Lab Chronicle	24
Certification Summary	26
Chain of Custody	27



Definitions/Glossary

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

Job ID: 240-219439-1

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: 240-219439-1

Job ID: 240-219439-1

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Job Narrative 240-219439-1

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 2/26/2025 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 2.6°C.

GC/MS VOA

Method 8260D: No MS/MSD being reported due to surrogate failure. Reanalysis required.

Method 8260D: The MSD for batch 646530 was analyzed outside of the tune time. This is a batch QC sample; therefore, the data have been reported

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: 240-219439-1

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: 240-219439-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-219439-1	TRIP BLANK_151	Water	02/24/25 00:00	02/26/25 08:00
240-219439-2	MW-29_022425	Water	02/24/25 10:20	02/26/25 08:00
240-219439-3	MW-19_022425	Water	02/24/25 11:35	02/26/25 08:00
240-219439-4	MW-58_022425	Water	02/24/25 13:35	02/26/25 08:00
240-219439-5	MW-45_022425	Water	02/24/25 14:50	02/26/25 08:00
240-219439-6	DUP-02	Water	02/24/25 00:00	02/26/25 08:00
240-219439-7	DUP-04	Water	02/24/25 00:00	02/26/25 08:00

Detection Summary

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

Job ID: 240-219439-1

Client Sample ID: TRIP BLANK_151

Lab Sample ID: 240-219439-1

No Detections.

Client Sample ID: MW-29_022425

Lab Sample ID: 240-219439-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	15		2.0	0.86	ug/L	1		8260D SIM	Total/NA
Vinyl chloride	1.0		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-19_022425

Lab Sample ID: 240-219439-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	140		2.0	0.86	ug/L	1		8260D SIM	Total/NA
cis-1,2-Dichloroethene	0.52	J	1.0	0.46	ug/L	1		8260D	Total/NA
Trichloroethene	0.65	J	1.0	0.44	ug/L	1		8260D	Total/NA
Vinyl chloride	0.92	J	1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-58_022425

Lab Sample ID: 240-219439-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.6		2.0	0.86	ug/L	1		8260D SIM	Total/NA

Client Sample ID: MW-45_022425

Lab Sample ID: 240-219439-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	11		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	140		5.0	2.3	ug/L	5		8260D	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 240-219439-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	130		2.0	0.86	ug/L	1		8260D SIM	Total/NA
cis-1,2-Dichloroethene	0.53	J	1.0	0.46	ug/L	1		8260D	Total/NA
Trichloroethene	0.57	J	1.0	0.44	ug/L	1		8260D	Total/NA
Vinyl chloride	0.94	J	1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: DUP-04

Lab Sample ID: 240-219439-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	9.0		5.0	2.3	ug/L	5		8260D	Total/NA
Vinyl chloride	150		5.0	2.3	ug/L	5		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: 240-219439-1

Client Sample ID: TRIP BLANK_151

Lab Sample ID: 240-219439-1

Date Collected: 02/24/25 00:00

Matrix: Water

Date Received: 02/26/25 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			03/03/25 17:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/03/25 17:41	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/03/25 17:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/03/25 17:41	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/03/25 17:41	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/03/25 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137		03/03/25 17:41	1
4-Bromofluorobenzene (Surr)	95		56 - 136		03/03/25 17:41	1
Toluene-d8 (Surr)	104		78 - 122		03/03/25 17:41	1
Dibromofluoromethane (Surr)	98		73 - 120		03/03/25 17:41	1

Client Sample Results

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

Job ID: 240-219439-1

Client Sample ID: MW-29_022425

Lab Sample ID: 240-219439-2

Date Collected: 02/24/25 10:20

Matrix: Water

Date Received: 02/26/25 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	15		2.0	0.86	ug/L			02/27/25 17:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		68 - 127					02/27/25 17:07	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			02/28/25 13:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/25 13:56	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 13:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/25 13:56	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 13:56	1
Vinyl chloride	1.0		1.0	0.45	ug/L			02/28/25 13:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	127		62 - 137					02/28/25 13:56	1
4-Bromofluorobenzene (Surr)	75		56 - 136					02/28/25 13:56	1
Toluene-d8 (Surr)	88		78 - 122					02/28/25 13:56	1
Dibromofluoromethane (Surr)	118		73 - 120					02/28/25 13:56	1

Client Sample Results

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

Job ID: 240-219439-1

Client Sample ID: MW-19_022425

Lab Sample ID: 240-219439-3

Date Collected: 02/24/25 11:35

Matrix: Water

Date Received: 02/26/25 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	140		2.0	0.86	ug/L			02/27/25 17:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		68 - 127					02/27/25 17:30	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			02/28/25 14:20	1
cis-1,2-Dichloroethene	0.52	J	1.0	0.46	ug/L			02/28/25 14:20	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 14:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/25 14:20	1
Trichloroethene	0.65	J	1.0	0.44	ug/L			02/28/25 14:20	1
Vinyl chloride	0.92	J	1.0	0.45	ug/L			02/28/25 14:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	128		62 - 137					02/28/25 14:20	1
4-Bromofluorobenzene (Surr)	75		56 - 136					02/28/25 14:20	1
Toluene-d8 (Surr)	92		78 - 122					02/28/25 14:20	1
Dibromofluoromethane (Surr)	116		73 - 120					02/28/25 14:20	1

Client Sample Results

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

Job ID: 240-219439-1

Client Sample ID: MW-58_022425

Lab Sample ID: 240-219439-4

Date Collected: 02/24/25 13:35

Matrix: Water

Date Received: 02/26/25 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	5.6		2.0	0.86	ug/L			02/27/25 17:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		68 - 127					02/27/25 17:54	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			02/28/25 14:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/25 14:43	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 14:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/25 14:43	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 14:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/25 14:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	130		62 - 137					02/28/25 14:43	1
4-Bromofluorobenzene (Surr)	75		56 - 136					02/28/25 14:43	1
Toluene-d8 (Surr)	89		78 - 122					02/28/25 14:43	1
Dibromofluoromethane (Surr)	120		73 - 120					02/28/25 14:43	1

Client Sample Results

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

Job ID: 240-219439-1

Client Sample ID: MW-45_022425

Lab Sample ID: 240-219439-5

Date Collected: 02/24/25 14:50

Matrix: Water

Date Received: 02/26/25 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			03/03/25 11:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		68 - 127					03/03/25 11:18	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			02/28/25 15:06	1
cis-1,2-Dichloroethene	11		1.0	0.46	ug/L			02/28/25 15:06	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 15:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/25 15:06	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 15:06	1
Vinyl chloride	140		5.0	2.3	ug/L			03/01/25 23:54	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	128		62 - 137					02/28/25 15:06	1
1,2-Dichloroethane-d4 (Surr)	94		62 - 137					03/01/25 23:54	5
4-Bromofluorobenzene (Surr)	73		56 - 136					02/28/25 15:06	1
4-Bromofluorobenzene (Surr)	97		56 - 136					03/01/25 23:54	5
Toluene-d8 (Surr)	86		78 - 122					02/28/25 15:06	1
Toluene-d8 (Surr)	104		78 - 122					03/01/25 23:54	5
Dibromofluoromethane (Surr)	119		73 - 120					02/28/25 15:06	1
Dibromofluoromethane (Surr)	102		73 - 120					03/01/25 23:54	5

Client Sample Results

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

Job ID: 240-219439-1

Client Sample ID: DUP-02

Lab Sample ID: 240-219439-6

Date Collected: 02/24/25 00:00

Matrix: Water

Date Received: 02/26/25 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	130		2.0	0.86	ug/L			03/03/25 11:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 127					03/03/25 11:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/01/25 22:59	1
cis-1,2-Dichloroethene	0.53	J	1.0	0.46	ug/L			03/01/25 22:59	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/01/25 22:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/01/25 22:59	1
Trichloroethene	0.57	J	1.0	0.44	ug/L			03/01/25 22:59	1
Vinyl chloride	0.94	J	1.0	0.45	ug/L			03/01/25 22:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		62 - 137					03/01/25 22:59	1
4-Bromofluorobenzene (Surr)	99		56 - 136					03/01/25 22:59	1
Toluene-d8 (Surr)	102		78 - 122					03/01/25 22:59	1
Dibromofluoromethane (Surr)	103		73 - 120					03/01/25 22:59	1

Client Sample Results

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

Job ID: 240-219439-1

Client Sample ID: DUP-04

Lab Sample ID: 240-219439-7

Date Collected: 02/24/25 00:00

Matrix: Water

Date Received: 02/26/25 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			03/03/25 12:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		68 - 127					03/03/25 12:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	5.0	U	5.0	2.5	ug/L			03/01/25 23:26	5
cis-1,2-Dichloroethene	9.0		5.0	2.3	ug/L			03/01/25 23:26	5
Tetrachloroethene	5.0	U	5.0	2.2	ug/L			03/01/25 23:26	5
trans-1,2-Dichloroethene	5.0	U	5.0	2.6	ug/L			03/01/25 23:26	5
Trichloroethene	5.0	U	5.0	2.2	ug/L			03/01/25 23:26	5
Vinyl chloride	150		5.0	2.3	ug/L			03/01/25 23:26	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		62 - 137					03/01/25 23:26	5
4-Bromofluorobenzene (Surr)	93		56 - 136					03/01/25 23:26	5
Toluene-d8 (Surr)	98		78 - 122					03/01/25 23:26	5
Dibromofluoromethane (Surr)	95		73 - 120					03/01/25 23:26	5

Surrogate Summary

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

Job ID: 240-219439-1

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)
240-219439-1	TRIP BLANK_151	106	95	104	98
240-219439-2	MW-29_022425	127	75	88	118
240-219439-3	MW-19_022425	128	75	92	116
240-219439-4	MW-58_022425	130	75	89	120
240-219439-5	MW-45_022425	128	73	86	119
240-219439-5	MW-45_022425	94	97	104	102
240-219439-6	DUP-02	97	99	102	103
240-219439-7	DUP-04	91	93	98	95
240-219469-B-7 MS	Matrix Spike	107	95	104	103
240-219469-B-7 MSD	Matrix Spike Duplicate	107	95	104	104
240-219470-A-9 MS	Matrix Spike	91	96	101	97
240-219470-A-9 MSD	Matrix Spike Duplicate	89	93	97	95
LCS 240-646380/6	Lab Control Sample	99	95	102	96
LCS 240-646530/5	Lab Control Sample	90	95	100	97
LCS 240-646567/6	Lab Control Sample	100	94	102	102
MB 240-646380/12	Method Blank	125	78	93	115
MB 240-646530/9	Method Blank	99	99	105	105
MB 240-646567/10	Method Blank	104	91	100	99
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
TOL = Toluene-d8 (Surr)					
DBFM = Dibromofluoromethane (Surr)					

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (68-127)			
240-219435-A-3 MS	Matrix Spike	99			
240-219435-A-3 MSD	Matrix Spike Duplicate	102			
240-219439-2	MW-29_022425	100			
240-219439-3	MW-19_022425	102			
240-219439-4	MW-58_022425	100			
240-219439-5	MW-45_022425	98			
240-219439-6	DUP-02	95			
240-219439-7	DUP-04	97			
240-219499-B-3 MS	Matrix Spike	100			
240-219499-B-3 MSD	Matrix Spike Duplicate	99			
LCS 240-646307/4	Lab Control Sample	106			
LCS 240-646573/5	Lab Control Sample	99			
MB 240-646307/5	Method Blank	100			
MB 240-646573/7	Method Blank	96			
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					

QC Sample Results

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

Job ID: 240-219439-1

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

Lab Sample ID: MB 240-646380/12

Matrix: Water

Analysis Batch: 646380

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			02/28/25 13:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/25 13:09	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 13:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/25 13:09	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/25 13:09	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/25 13:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	125		62 - 137		02/28/25 13:09	1
4-Bromofluorobenzene (Surr)	78		56 - 136		02/28/25 13:09	1
Toluene-d8 (Surr)	93		78 - 122		02/28/25 13:09	1
Dibromofluoromethane (Surr)	115		73 - 120		02/28/25 13:09	1

Lab Sample ID: LCS 240-646380/6

Matrix: Water

Analysis Batch: 646380

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	22.3		ug/L		89	63 - 134
cis-1,2-Dichloroethene	25.0	23.5		ug/L		94	77 - 123
Tetrachloroethene	25.0	26.1		ug/L		104	76 - 123
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	75 - 124
Trichloroethene	25.0	22.3		ug/L		89	70 - 122
Vinyl chloride	25.0	22.4		ug/L		89	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	102		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

Lab Sample ID: MB 240-646530/9

Matrix: Water

Analysis Batch: 646530

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/01/25 16:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/01/25 16:09	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/01/25 16:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/01/25 16:09	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/01/25 16:09	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/01/25 16:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		62 - 137		03/01/25 16:09	1
4-Bromofluorobenzene (Surr)	99		56 - 136		03/01/25 16:09	1
Toluene-d8 (Surr)	105		78 - 122		03/01/25 16:09	1

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QC Sample Results

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

Job ID: 240-219439-1

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

Lab Sample ID: MB 240-646530/9

Matrix: Water

Analysis Batch: 646530

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105	Qualifier	73 - 120		03/01/25 16:09	1

Lab Sample ID: LCS 240-646530/5

Matrix: Water

Analysis Batch: 646530

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		98	63 - 134
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	77 - 123
Tetrachloroethene	20.0	17.9		ug/L		90	76 - 123
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	75 - 124
Trichloroethene	20.0	18.9		ug/L		94	70 - 122
Vinyl chloride	20.0	22.8		ug/L		114	60 - 144

Surrogate	LCS	LCS	Limits
1,2-Dichloroethane-d4 (Surr)	90	Qualifier	62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	100		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

Lab Sample ID: 240-219470-A-9 MS

Matrix: Water

Analysis Batch: 646530

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	1000	U	20000	17200		ug/L		86	56 - 135
cis-1,2-Dichloroethene	1000	U	20000	18200		ug/L		91	66 - 128
Tetrachloroethene	1000	U	20000	15200		ug/L		76	62 - 131
trans-1,2-Dichloroethene	1000	U	20000	17800		ug/L		89	56 - 136
Trichloroethene	1000	U	20000	16500		ug/L		82	61 - 124
Vinyl chloride	1000	U	20000	20600		ug/L		103	43 - 157

Surrogate	MS	MS	Limits
1,2-Dichloroethane-d4 (Surr)	91	Qualifier	62 - 137
4-Bromofluorobenzene (Surr)	96		56 - 136
Toluene-d8 (Surr)	101		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

Lab Sample ID: 240-219470-A-9 MSD

Matrix: Water

Analysis Batch: 646530

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	1000	U	20000	17200		ug/L		86	56 - 135	0	26
cis-1,2-Dichloroethene	1000	U	20000	18600		ug/L		93	66 - 128	2	14
Tetrachloroethene	1000	U	20000	14500		ug/L		73	62 - 131	4	20
trans-1,2-Dichloroethene	1000	U	20000	17900		ug/L		90	56 - 136	1	15
Trichloroethene	1000	U	20000	16300		ug/L		81	61 - 124	1	15

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QC Sample Results

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

Job ID: 240-219439-1

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

Lab Sample ID: 240-219470-A-9 MSD

Matrix: Water

Analysis Batch: 646530

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
Vinyl chloride	1000	U	20000	20800		ug/L		104	43 - 157	1	24
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	89		62 - 137								
4-Bromofluorobenzene (Surr)	93		56 - 136								
Toluene-d8 (Surr)	97		78 - 122								
Dibromofluoromethane (Surr)	95		73 - 120								

Lab Sample ID: MB 240-646567/10

Matrix: Water

Analysis Batch: 646567

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/03/25 11:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/03/25 11:47	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/03/25 11:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/03/25 11:47	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/03/25 11:47	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/03/25 11:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137					03/03/25 11:47	1
4-Bromofluorobenzene (Surr)	91		56 - 136					03/03/25 11:47	1
Toluene-d8 (Surr)	100		78 - 122					03/03/25 11:47	1
Dibromofluoromethane (Surr)	99		73 - 120					03/03/25 11:47	1

Lab Sample ID: LCS 240-646567/6

Matrix: Water

Analysis Batch: 646567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	20.0	17.2		ug/L		86	63 - 134
cis-1,2-Dichloroethene	20.0	17.5		ug/L		88	77 - 123
Tetrachloroethene	20.0	17.1		ug/L		86	76 - 123
trans-1,2-Dichloroethene	20.0	16.7		ug/L		84	75 - 124
Trichloroethene	20.0	17.5		ug/L		88	70 - 122
Vinyl chloride	20.0	16.2		ug/L		81	60 - 144
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	100		62 - 137				
4-Bromofluorobenzene (Surr)	94		56 - 136				
Toluene-d8 (Surr)	102		78 - 122				
Dibromofluoromethane (Surr)	102		73 - 120				

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QC Sample Results

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

Job ID: 240-219439-1

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

Lab Sample ID: 240-219469-B-7 MS

Matrix: Water

Analysis Batch: 646567

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	67	U	1330	1240		ug/L		93	56 - 135
cis-1,2-Dichloroethene	67	U	1330	1210		ug/L		91	66 - 128
Tetrachloroethene	120		1330	1280		ug/L		87	62 - 131
trans-1,2-Dichloroethene	67	U	1330	1170		ug/L		88	56 - 136
Trichloroethene	2100		1330	3230		ug/L		86	61 - 124
Vinyl chloride	67	U	1330	1160		ug/L		87	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	104		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

Lab Sample ID: 240-219469-B-7 MSD

Matrix: Water

Analysis Batch: 646567

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	67	U	1330	1270		ug/L		95	56 - 135	2	26
cis-1,2-Dichloroethene	67	U	1330	1310		ug/L		98	66 - 128	8	14
Tetrachloroethene	120		1330	1340		ug/L		91	62 - 131	5	20
trans-1,2-Dichloroethene	67	U	1330	1290		ug/L		97	56 - 136	10	15
Trichloroethene	2100		1330	3220		ug/L		86	61 - 124	0	15
Vinyl chloride	67	U	1330	1260		ug/L		94	43 - 157	8	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	104		78 - 122
Dibromofluoromethane (Surr)	104		73 - 120

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

Lab Sample ID: MB 240-646307/5

Matrix: Water

Analysis Batch: 646307

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			02/27/25 13:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		68 - 127		02/27/25 13:12	1

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QC Sample Results

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

Job ID: 240-219439-1

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

Lab Sample ID: LCS 240-646307/4

Matrix: Water

Analysis Batch: 646307

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	9.80		ug/L		98	75 - 121		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		106		68 - 127							

Lab Sample ID: 240-219435-A-3 MS

Matrix: Water

Analysis Batch: 646307

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	10.0		ug/L		100	20 - 180		
Surrogate		MS %Recovery	MS Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		99		68 - 127							

Lab Sample ID: 240-219435-A-3 MSD

Matrix: Water

Analysis Batch: 646307

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.98		ug/L		100	20 - 180	0	20
Surrogate		MSD %Recovery	MSD Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		102		68 - 127							

Lab Sample ID: MB 240-646573/7

Matrix: Water

Analysis Batch: 646573

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/03/25 10:45	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		68 - 127					03/03/25 10:45	1

Lab Sample ID: LCS 240-646573/5

Matrix: Water

Analysis Batch: 646573

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	9.28		ug/L		93	75 - 121		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)		99		68 - 127							

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-219439-1

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

Lab Sample ID: 240-219499-B-3 MS

Matrix: Water

Analysis Batch: 646573

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	9.61		ug/L		96	20 - 180		
Surrogate	MS %Recovery	MS Qualifier	MS Limits								
1,2-Dichloroethane-d4 (Surr)	100		68 - 127								

Lab Sample ID: 240-219499-B-3 MSD

Matrix: Water

Analysis Batch: 646573

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.63		ug/L		96	20 - 180	0	20
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	99		68 - 127								

QC Association Summary

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

Job ID: 240-219439-1

GC/MS VOA

Analysis Batch: 646307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219439-2	MW-29_022425	Total/NA	Water	8260D SIM	
240-219439-3	MW-19_022425	Total/NA	Water	8260D SIM	
240-219439-4	MW-58_022425	Total/NA	Water	8260D SIM	
MB 240-646307/5	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-646307/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-219435-A-3 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-219435-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 646380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219439-2	MW-29_022425	Total/NA	Water	8260D	
240-219439-3	MW-19_022425	Total/NA	Water	8260D	
240-219439-4	MW-58_022425	Total/NA	Water	8260D	
240-219439-5	MW-45_022425	Total/NA	Water	8260D	
MB 240-646380/12	Method Blank	Total/NA	Water	8260D	
LCS 240-646380/6	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 646530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219439-5	MW-45_022425	Total/NA	Water	8260D	
240-219439-6	DUP-02	Total/NA	Water	8260D	
240-219439-7	DUP-04	Total/NA	Water	8260D	
MB 240-646530/9	Method Blank	Total/NA	Water	8260D	
LCS 240-646530/5	Lab Control Sample	Total/NA	Water	8260D	
240-219470-A-9 MS	Matrix Spike	Total/NA	Water	8260D	
240-219470-A-9 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 646567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219439-1	TRIP BLANK_151	Total/NA	Water	8260D	
MB 240-646567/10	Method Blank	Total/NA	Water	8260D	
LCS 240-646567/6	Lab Control Sample	Total/NA	Water	8260D	
240-219469-B-7 MS	Matrix Spike	Total/NA	Water	8260D	
240-219469-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 646573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219439-5	MW-45_022425	Total/NA	Water	8260D SIM	
240-219439-6	DUP-02	Total/NA	Water	8260D SIM	
240-219439-7	DUP-04	Total/NA	Water	8260D SIM	
MB 240-646573/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-646573/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-219499-B-3 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-219499-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Lab Chronicle

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

Job ID: 240-219439-1

Client Sample ID: TRIP BLANK_151

Lab Sample ID: 240-219439-1

Date Collected: 02/24/25 00:00

Matrix: Water

Date Received: 02/26/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	646567	HMB	EET CLE	03/03/25 17:41

Client Sample ID: MW-29_022425

Lab Sample ID: 240-219439-2

Date Collected: 02/24/25 10:20

Matrix: Water

Date Received: 02/26/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	646380	MS	EET CLE	02/28/25 13:56
Total/NA	Analysis	8260D SIM		1	646307	MDH	EET CLE	02/27/25 17:07

Client Sample ID: MW-19_022425

Lab Sample ID: 240-219439-3

Date Collected: 02/24/25 11:35

Matrix: Water

Date Received: 02/26/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	646380	MS	EET CLE	02/28/25 14:20
Total/NA	Analysis	8260D SIM		1	646307	MDH	EET CLE	02/27/25 17:30

Client Sample ID: MW-58_022425

Lab Sample ID: 240-219439-4

Date Collected: 02/24/25 13:35

Matrix: Water

Date Received: 02/26/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	646380	MS	EET CLE	02/28/25 14:43
Total/NA	Analysis	8260D SIM		1	646307	MDH	EET CLE	02/27/25 17:54

Client Sample ID: MW-45_022425

Lab Sample ID: 240-219439-5

Date Collected: 02/24/25 14:50

Matrix: Water

Date Received: 02/26/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	646380	MS	EET CLE	02/28/25 15:06
Total/NA	Analysis	8260D		5	646530	MS	EET CLE	03/01/25 23:54
Total/NA	Analysis	8260D SIM		1	646573	R5XG	EET CLE	03/03/25 11:18

Client Sample ID: DUP-02

Lab Sample ID: 240-219439-6

Date Collected: 02/24/25 00:00

Matrix: Water

Date Received: 02/26/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	646530	MS	EET CLE	03/01/25 22:59
Total/NA	Analysis	8260D SIM		1	646573	R5XG	EET CLE	03/03/25 11:42

Eurofins Cleveland

Lab Chronicle

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

Job ID: 240-219439-1

Client Sample ID: DUP-04
Date Collected: 02/24/25 00:00
Date Received: 02/26/25 08:00

Lab Sample ID: 240-219439-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	646530	MS	EET CLE	03/01/25 23:26
Total/NA	Analysis	8260D SIM		1	646573	R5XG	EET CLE	03/03/25 12:05

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 240-219439-1

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-25
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
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]

Eurofins - Cleveland Sample Receipt Form/Narrative		Login # _____	
Barberton Facility			
Client <u>Accadis</u>	Site Name _____	Cooler unpacked by: <u>W. Martin</u>	
Cooler Received on <u>2/26/25</u>	Opened on <u>2/26/25</u>		
FedEx: 1 st Grd Exp <u>UPS FAS W</u>	Print Client Drop Off <u>Eurofins Courier</u>	Other _____	
Receipt After-hours Drop-off Date/Time _____		Storage Location _____	
Eurofins Cooler # <u>EC</u>	Room Box Client Cooler Box Other _____		
Packing material used. Bubble Wrap Foam Plastic Bag None Other _____			
COOLANT. <u>Wet Ice</u> Blue Ice Dry Ice Water None _____			
☐ See Multiple Cooler Form			
1 Cooler temperature upon receipt	IR GUN # <u>21</u> (CF <u>411</u> °C)	Observed Cooler Temp. <u>15</u> °C	Corrected Cooler Temp. <u>2.6</u> °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> Tests that are not checked for pH by Receiving: VOA's Oil and Grease TOC			
-Were the seals on the outside of the cooler(s) signed & dated? <u>Yes</u> ☒ No ☐ NA			
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? <u>Yes</u> ☒ No ☐ NA			
-Were tamper/custody seals intact and uncompromised? <u>Yes</u> ☒ No ☐ NA			
3 Shippers' packing slip attached to the cooler(s)? <u>Yes</u> ☒ No ☐ NA			
4. Did custody papers accompany the sample(s)? <u>Yes</u> ☒ No ☐ NA			
5 Were the custody papers relinquished & signed in the appropriate place? <u>Yes</u> ☒ No ☐ NA			
6 Was/were the person(s) who collected the samples clearly identified on the COC? <u>Yes</u> ☒ No ☐ NA			
7 Did all bottles arrive in good condition (Unbroken)? <u>Yes</u> ☒ No ☐ NA			
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? <u>Yes</u> ☒ 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)? <u>Yes</u> ☒ No ☐ NA			
10 Were correct bottle(s) used for the test(s) indicated? <u>Yes</u> ☒ No ☐ NA			
11 Sufficient quantity received to perform indicated analyses? <u>Yes</u> ☒ No ☐ NA			
12. Are these work share samples and all listed on the COC? <u>Yes</u> ☒ 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? <u>Yes</u> ☒ No ☐ NA pH Strip Lot# HC448976			
14 Were VOAs on the COC? <u>Yes</u> ☒ No ☐ NA			
15 Were air bubbles >6 mm in any VOA vials? <u>Yes</u> ☒ Larger than this ☐ NA			
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>COC41361T</u> <u>Yes</u> ☒ No ☐ NA			
17 Was a LL Hg or Me Hg trip blank present? <u>Yes</u> ☒ No ☐ NA			
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____			
Concerning _____			
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		Samples processed by _____	
19. SAMPLE CONDITION			
Sample(s) _____ were received after the recommended holding time had expired			
Sample(s) _____ were received in a broken container			
Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)			
20. SAMPLE PRESERVATION			
Sample(s) _____ were further preserved in the laboratory			
Time preserved. _____ Preservative(s) added/Lot number(s): _____			
VOA Sample Preservation - Date/Time VOAs Frozen. _____			

Temperature readings

Client Sample ID	Lab ID	Container Type	Container pH	Preservation Temp	Preservation Added	Preservation Lot Number
TRIP BLANK_151	240-219439-A-1	Voa Vial 40ml - Hydrochloric Acid				
MW-29_022425	240-219439-A-2	Voa Vial 40ml - Hydrochloric Acid				
MW-29_022425	240-219439-B-2	Voa Vial 40ml - Hydrochloric Acid				
MW-29_022425	240-219439-C-2	Voa Vial 40ml - Hydrochloric Acid				
MW-29_022425	240-219439-D-2	Voa Vial 40ml - Hydrochloric Acid				
MW-29_022425	240-219439-E-2	Voa Vial 40ml - Hydrochloric Acid				
MW-29_022425	240-219439-F-2	Voa Vial 40ml - Hydrochloric Acid				
MW-19_022425	240-219439-A-3	Voa Vial 40ml - Hydrochloric Acid				
MW-19_022425	240-219439-B-3	Voa Vial 40ml - Hydrochloric Acid				
MW-19_022425	240-219439-C-3	Voa Vial 40ml - Hydrochloric Acid				
MW-19_022425	240-219439-D-3	Voa Vial 40ml - Hydrochloric Acid				
MW-19_022425	240-219439-E-3	Voa Vial 40ml - Hydrochloric Acid				
MW-19_022425	240-219439-F-3	Voa Vial 40ml - Hydrochloric Acid				
MW-58_022425	240-219439-A-4	Voa Vial 40ml - Hydrochloric Acid				
MW-58_022425	240-219439-B-4	Voa Vial 40ml - Hydrochloric Acid				
MW-58_022425	240-219439-C-4	Voa Vial 40ml - Hydrochloric Acid				
MW-58_022425	240-219439-D-4	Voa Vial 40ml - Hydrochloric Acid				
MW-58_022425	240-219439-E-4	Voa Vial 40ml - Hydrochloric Acid				
MW-58_022425	240-219439-F-4	Voa Vial 40ml - Hydrochloric Acid				
MW-45_022425	240-219439-A-5	Voa Vial 40ml - Hydrochloric Acid				
MW-45_022425	240-219439-B-5	Voa Vial 40ml - Hydrochloric Acid				
MW-45_022425	240-219439-C-5	Voa Vial 40ml - Hydrochloric Acid				
MW-45_022425	240-219439-D-5	Voa Vial 40ml - Hydrochloric Acid				
MW-45_022425	240-219439-E-5	Voa Vial 40ml - Hydrochloric Acid				
MW-45_022425	240-219439-F-5	Voa Vial 40ml - Hydrochloric Acid				
DUP-02	240-219439-A-6	Voa Vial 40ml - Hydrochloric Acid				
DUP-02	240-219439-B-6	Voa Vial 40ml - Hydrochloric Acid				
DUP-02	240-219439-C-6	Voa Vial 40ml - Hydrochloric Acid				
DUP-02	240-219439-D-6	Voa Vial 40ml - Hydrochloric Acid				
DUP-02	240-219439-E-6	Voa Vial 40ml - Hydrochloric Acid				
DUP-02	240-219439-F-6	Voa Vial 40ml - Hydrochloric Acid				
DUP-04	240-219439-A-7	Voa Vial 40ml - Hydrochloric Acid				
DUP-04	240-219439-B-7	Voa Vial 40ml - Hydrochloric Acid				
DUP-04	240-219439-C-7	Voa Vial 40ml - Hydrochloric Acid				
DUP-04	240-219439-D-7	Voa Vial 40ml - Hydrochloric Acid				

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Preservation</u> <u>Temp</u>	<u>Added</u> <u>Lot Number</u>
DUP-04	240-219439-E-7	Voa Vial 40ml - Hydrochloric Acid			
DUP-04	240-219439-F-7	Voa Vial 40ml - Hydrochloric Acid			

DATA VERIFICATION REPORT



March 05, 2025

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

CADENA project ID: E203728

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

Project number: 30251157.401.04 (vapor 301.04) 30206169.0401.04

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 219439-1

Sample date: 2025-02-24

Report received by CADENA: 2025-03-05

Initial Data Verification completed by CADENA: 2025-03-05

Number of Samples:7

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 MS/MSD issues as noted in the laboratory submittal case narrative were not used to qualify client sample results as part of this level 2 data package verification review.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

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

CADENA Valid Qualifiers

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminants) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminants) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

Analytical Results Summary

CADENA Project ID: E203728
Laboratory: Eurofins Environment Testing LLC - Cleveland
Laboratory Submittal: 219439-1

		Sample Name: TRIP BLANK_151					MW-29_022425					MW-19_022425					MW-58_022425					MW-45_022425					DUP-02					DUP-04				
		Lab Sample ID: 2402194391					2402194392					2402194393					2402194394					2402194395					2402194396					2402194397				
		Sample Date: 2/24/2025					2/24/2025					2/24/2025					2/24/2025					2/24/2025					2/24/2025					2/24/2025				
Analyte	Cas No.	Report			Valid	Report			Valid	Report			Valid	Report			Valid	Report			Valid	Report			Valid	Report			Valid	Report			Valid			
		Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	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	---	ND	1.0	ug/l	---	ND	5.0	ug/l	---			
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.52	1.0	ug/l	J	ND	1.0	ug/l	---	11	1.0	ug/l	---	0.53	1.0	ug/l	J	9.0	5.0	ug/l	---	ND	5.0	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	---	ND	1.0	ug/l	---	ND	5.0	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	---	ND	1.0	ug/l	---	ND	5.0	ug/l	---			
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.65	1.0	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.57	1.0	ug/l	J	ND	5.0	ug/l	---	ND	5.0	ug/l	---			
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	1.0	1.0	ug/l	---	0.92	1.0	ug/l	J	ND	1.0	ug/l	---	140	5.0	ug/l	---	0.94	1.0	ug/l	J	150	5.0	ug/l	---	ND	5.0	ug/l	---			
OSW-8260DSIM																																				
1,4-Dioxane	123-91-1					15	2.0	ug/l	---	140	2.0	ug/l	---	5.6	2.0	ug/l	---	ND	2.0	ug/l	---	130	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---			