

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-220143-1

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Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Definitions/Glossary

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

Job ID: 240-220143-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
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

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Job Narrative 240-220143-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

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

GC/MS VOA

Method 8260D: The following sample(s) was analyzed outside of analytical holding time due to an incorrect screen for the sample. MW-23_030325 (240-220143-5). The original data will be reported that is within holding time with the out of hold data.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-648725 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to an incorrect dilution. MW-23_030325 (240-220143-5).

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: 240-220143-1

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: 240-220143-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-220143-1	TRIP BLANK_210	Water	03/03/25 00:00	03/08/25 08:00
240-220143-2	MW-36_030325	Water	03/03/25 10:25	03/08/25 08:00
240-220143-3	PW-16-01_030325	Water	03/03/25 12:10	03/08/25 08:00
240-220143-4	MW-221S_030325	Water	03/03/25 13:50	03/08/25 08:00
240-220143-5	MW-23_030325	Water	03/03/25 15:05	03/08/25 08:00

Detection Summary

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

Job ID: 240-220143-1

Client Sample ID: TRIP BLANK_210

Lab Sample ID: 240-220143-1

No Detections.

Client Sample ID: MW-36_030325

Lab Sample ID: 240-220143-2

No Detections.

Client Sample ID: PW-16-01_030325

Lab Sample ID: 240-220143-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.6		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	2.8		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-221S_030325

Lab Sample ID: 240-220143-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.2		1.0	0.46	ug/L	1		8260D	Total/NA
Trichloroethene	0.59	J	1.0	0.44	ug/L	1		8260D	Total/NA

Client Sample ID: MW-23_030325

Lab Sample ID: 240-220143-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene - RA	440	H	50	26	ug/L	50		8260D	Total/NA
Trichloroethene - RA	1300	H	50	22	ug/L	50		8260D	Total/NA
Vinyl chloride - RA	160	H	50	23	ug/L	50		8260D	Total/NA
cis-1,2-Dichloroethene - RA2	8200	H	200	92	ug/L	200		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: 240-220143-1

Client Sample ID: TRIP BLANK_210

Lab Sample ID: 240-220143-1

Date Collected: 03/03/25 00:00

Matrix: Water

Date Received: 03/08/25 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			03/14/25 19:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/14/25 19:40	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/14/25 19:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/14/25 19:40	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/14/25 19:40	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/14/25 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		03/14/25 19:40	1
4-Bromofluorobenzene (Surr)	103		56 - 136		03/14/25 19:40	1
Toluene-d8 (Surr)	109		78 - 122		03/14/25 19:40	1
Dibromofluoromethane (Surr)	93		73 - 120		03/14/25 19:40	1

Client Sample Results

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

Job ID: 240-220143-1

Client Sample ID: MW-36_030325

Lab Sample ID: 240-220143-2

Date Collected: 03/03/25 10:25

Matrix: Water

Date Received: 03/08/25 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			03/12/25 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		68 - 127					03/12/25 23:42	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			03/15/25 00:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/25 00:22	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 00:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/25 00:22	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 00:22	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/25 00:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		62 - 137					03/15/25 00:22	1
4-Bromofluorobenzene (Surr)	103		56 - 136					03/15/25 00:22	1
Toluene-d8 (Surr)	107		78 - 122					03/15/25 00:22	1
Dibromofluoromethane (Surr)	91		73 - 120					03/15/25 00:22	1

Client Sample Results

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

Job ID: 240-220143-1

Client Sample ID: PW-16-01_030325

Lab Sample ID: 240-220143-3

Date Collected: 03/03/25 12:10

Matrix: Water

Date Received: 03/08/25 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			03/13/25 12:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		68 - 127					03/13/25 12:59	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			03/15/25 00:48	1
cis-1,2-Dichloroethene	1.6		1.0	0.46	ug/L			03/15/25 00:48	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 00:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/25 00:48	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 00:48	1
Vinyl chloride	2.8		1.0	0.45	ug/L			03/15/25 00:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		62 - 137					03/15/25 00:48	1
4-Bromofluorobenzene (Surr)	101		56 - 136					03/15/25 00:48	1
Toluene-d8 (Surr)	109		78 - 122					03/15/25 00:48	1
Dibromofluoromethane (Surr)	92		73 - 120					03/15/25 00:48	1

Client Sample Results

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

Job ID: 240-220143-1

Client Sample ID: MW-221S_030325

Lab Sample ID: 240-220143-4

Date Collected: 03/03/25 13:50

Matrix: Water

Date Received: 03/08/25 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			03/13/25 13:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		68 - 127					03/13/25 13:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/25 01:13	1
cis-1,2-Dichloroethene	2.2		1.0	0.46	ug/L			03/15/25 01:13	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/25 01:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/25 01:13	1
Trichloroethene	0.59	J	1.0	0.44	ug/L			03/15/25 01:13	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/25 01:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		62 - 137					03/15/25 01:13	1
4-Bromofluorobenzene (Surr)	97		56 - 136					03/15/25 01:13	1
Toluene-d8 (Surr)	105		78 - 122					03/15/25 01:13	1
Dibromofluoromethane (Surr)	92		73 - 120					03/15/25 01:13	1

Client Sample Results

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

Job ID: 240-220143-1

Client Sample ID: MW-23_030325

Lab Sample ID: 240-220143-5

Date Collected: 03/03/25 15:05

Matrix: Water

Date Received: 03/08/25 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			03/13/25 13:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		68 - 127					03/13/25 13:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	400	U	400	200	ug/L			03/15/25 01:39	400
cis-1,2-Dichloroethene	400	U	400	180	ug/L			03/15/25 01:39	400
Tetrachloroethene	400	U	400	180	ug/L			03/15/25 01:39	400
trans-1,2-Dichloroethene	400	U	400	200	ug/L			03/15/25 01:39	400
Trichloroethene	400	U	400	180	ug/L			03/15/25 01:39	400
Vinyl chloride	400	U	400	180	ug/L			03/15/25 01:39	400
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137					03/15/25 01:39	400
4-Bromofluorobenzene (Surr)	104		56 - 136					03/15/25 01:39	400
Toluene-d8 (Surr)	110		78 - 122					03/15/25 01:39	400
Dibromofluoromethane (Surr)	95		73 - 120					03/15/25 01:39	400

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	50	U H	50	25	ug/L			03/19/25 18:51	50
Tetrachloroethene	50	U H	50	22	ug/L			03/19/25 18:51	50
trans-1,2-Dichloroethene	440	H	50	26	ug/L			03/19/25 18:51	50
Trichloroethene	1300	H	50	22	ug/L			03/19/25 18:51	50
Vinyl chloride	160	H	50	23	ug/L			03/19/25 18:51	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					03/19/25 18:51	50
4-Bromofluorobenzene (Surr)	97		56 - 136					03/19/25 18:51	50
Toluene-d8 (Surr)	100		78 - 122					03/19/25 18:51	50
Dibromofluoromethane (Surr)	97		73 - 120					03/19/25 18:51	50

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	8200	H	200	92	ug/L			03/20/25 12:59	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					03/20/25 12:59	200
4-Bromofluorobenzene (Surr)	102		56 - 136					03/20/25 12:59	200
Toluene-d8 (Surr)	100		78 - 122					03/20/25 12:59	200
Dibromofluoromethane (Surr)	94		73 - 120					03/20/25 12:59	200

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Surrogate Summary

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

Job ID: 240-220143-1

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)
240-220027-C-11 MS	Matrix Spike	100	99	101	97
240-220027-C-11 MSD	Matrix Spike Duplicate	99	97	100	93
240-220134-B-2 MS	Matrix Spike	99	99	108	94
240-220134-B-2 MSD	Matrix Spike Duplicate	99	99	103	95
240-220143-1	TRIP BLANK_210	101	103	109	93
240-220143-2	MW-36_030325	100	103	107	91
240-220143-3	PW-16-01_030325	100	101	109	92
240-220143-4	MW-221S_030325	99	97	105	92
240-220143-5	MW-23_030325	104	104	110	95
240-220143-5 - RA	MW-23_030325	101	97	100	97
240-220143-5 - RA2	MW-23_030325	101	102	100	94
240-220152-C-4 MS	Matrix Spike	100	101	103	100
240-220152-C-4 MSD	Matrix Spike Duplicate	99	102	103	101
LCS 240-648191/5	Lab Control Sample	102	100	109	96
LCS 240-648725/5	Lab Control Sample	101	104	103	97
LCS 240-648905/7	Lab Control Sample	97	104	103	96
MB 240-648191/9	Method Blank	101	102	107	94
MB 240-648725/9	Method Blank	103	102	104	96
MB 240-648905/10	Method Blank	98	99	99	96
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)			
240-220134-E-2 MS	Matrix Spike	86			
240-220134-E-2 MSD	Matrix Spike Duplicate	83			
240-220143-2	MW-36_030325	79			
240-220143-3	PW-16-01_030325	82			
240-220143-4	MW-221S_030325	83			
240-220143-5	MW-23_030325	81			
240-220146-F-2 MS	Matrix Spike	79			
240-220146-F-2 MSD	Matrix Spike Duplicate	77			
LCS 240-647989/7	Lab Control Sample	89			
LCS 240-648063/5	Lab Control Sample	78			
MB 240-647989/9	Method Blank	84			
MB 240-648063/8	Method Blank	83			
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					

QC Sample Results

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

Job ID: 240-220143-1

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

Lab Sample ID: MB 240-648191/9

Matrix: Water

Analysis Batch: 648191

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			03/14/25 17:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/14/25 17:31	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/14/25 17:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/14/25 17:31	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/14/25 17:31	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/14/25 17:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		03/14/25 17:31	1
4-Bromofluorobenzene (Surr)	102		56 - 136		03/14/25 17:31	1
Toluene-d8 (Surr)	107		78 - 122		03/14/25 17:31	1
Dibromofluoromethane (Surr)	94		73 - 120		03/14/25 17:31	1

Lab Sample ID: LCS 240-648191/5

Matrix: Water

Analysis Batch: 648191

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	16.9		ug/L		84	63 - 134
cis-1,2-Dichloroethene	20.0	17.0		ug/L		85	77 - 123
Tetrachloroethene	20.0	17.9		ug/L		90	76 - 123
trans-1,2-Dichloroethene	20.0	17.5		ug/L		88	75 - 124
Trichloroethene	20.0	17.0		ug/L		85	70 - 122
Vinyl chloride	20.0	16.2		ug/L		81	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	109		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

Lab Sample ID: 240-220134-B-2 MS

Matrix: Water

Analysis Batch: 648191

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 F1 F2	20.0	9.81	F1	ug/L		49	56 - 135
cis-1,2-Dichloroethene	21	F1 F2	20.0	10.3	F1	ug/L		-53	66 - 128
Tetrachloroethene	1.0	U F1 F2	20.0	11.1	F1	ug/L		56	62 - 131
trans-1,2-Dichloroethene	1.2	F1 F2	20.0	10.3	F1	ug/L		46	56 - 136
Trichloroethene	3.2	F1 F2	20.0	10.3	F1	ug/L		36	61 - 124
Vinyl chloride	1.0	U	20.0	13.9		ug/L		69	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	108		78 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-220143-1

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

Lab Sample ID: 240-220134-B-2 MS

Matrix: Water

Analysis Batch: 648191

Client Sample ID: Matrix Spike

Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	94		73 - 120

Lab Sample ID: 240-220134-B-2 MSD

Matrix: Water

Analysis Batch: 648191

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 F1 F2	20.0	16.1	F2	ug/L		81	56 - 135	49	26
cis-1,2-Dichloroethene	21	F1 F2	20.0	16.0	F1 F2	ug/L		-25	66 - 128	43	14
Tetrachloroethene	1.0	U F1 F2	20.0	16.9	F2	ug/L		84	62 - 131	41	20
trans-1,2-Dichloroethene	1.2	F1 F2	20.0	16.7	F2	ug/L		78	56 - 136	47	15
Trichloroethene	3.2	F1 F2	20.0	16.3	F2	ug/L		66	61 - 124	45	15
Vinyl chloride	1.0	U	20.0	17.7		ug/L		89	43 - 157	24	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	95		73 - 120

Lab Sample ID: MB 240-648725/9

Matrix: Water

Analysis Batch: 648725

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			03/19/25 16:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/19/25 16:16	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/19/25 16:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/19/25 16:16	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/19/25 16:16	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/19/25 16:16	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		03/19/25 16:16	1
4-Bromofluorobenzene (Surr)	102		56 - 136		03/19/25 16:16	1
Toluene-d8 (Surr)	104		78 - 122		03/19/25 16:16	1
Dibromofluoromethane (Surr)	96		73 - 120		03/19/25 16:16	1

Lab Sample ID: LCS 240-648725/5

Matrix: Water

Analysis Batch: 648725

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	15.9		ug/L		80	63 - 134
cis-1,2-Dichloroethene	20.0	16.8		ug/L		84	77 - 123
Tetrachloroethene	20.0	17.8		ug/L		89	76 - 123
trans-1,2-Dichloroethene	20.0	17.1		ug/L		86	75 - 124
Trichloroethene	20.0	17.5		ug/L		87	70 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-220143-1

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

Lab Sample ID: LCS 240-648725/5

Matrix: Water

Analysis Batch: 648725

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	20.0	18.3		ug/L		91	60 - 144

	LCS %Recovery	LCS Qualifier	Limits
Surrogate			
1,2-Dichloroethane-d4 (Surr)	101		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

Lab Sample ID: 240-220027-C-11 MS

Matrix: Water

Analysis Batch: 648725

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	2.0	U	40.0	30.0		ug/L		75	56 - 135
cis-1,2-Dichloroethene	2.0	U	40.0	31.9		ug/L		80	66 - 128
Tetrachloroethene	2.0	U	40.0	34.1		ug/L		85	62 - 131
trans-1,2-Dichloroethene	2.0	U	40.0	31.4		ug/L		79	56 - 136
Trichloroethene	2.5		40.0	35.5		ug/L		83	61 - 124
Vinyl chloride	2.0	U	40.0	33.8		ug/L		84	43 - 157

	MS %Recovery	MS Qualifier	Limits
Surrogate			
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	101		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

Lab Sample ID: 240-220027-C-11 MSD

Matrix: Water

Analysis Batch: 648725

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	2.0	U	40.0	31.7		ug/L		79	56 - 135	6	26
cis-1,2-Dichloroethene	2.0	U	40.0	33.1		ug/L		83	66 - 128	4	14
Tetrachloroethene	2.0	U	40.0	34.2		ug/L		86	62 - 131	0	20
trans-1,2-Dichloroethene	2.0	U	40.0	33.6		ug/L		84	56 - 136	7	15
Trichloroethene	2.5		40.0	35.0		ug/L		81	61 - 124	1	15
Vinyl chloride	2.0	U	40.0	36.7		ug/L		92	43 - 157	8	24

	MSD %Recovery	MSD Qualifier	Limits
Surrogate			
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	97		56 - 136
Toluene-d8 (Surr)	100		78 - 122
Dibromofluoromethane (Surr)	93		73 - 120

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QC Sample Results

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

Job ID: 240-220143-1

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

Lab Sample ID: MB 240-648905/10

Matrix: Water

Analysis Batch: 648905

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			03/20/25 11:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/20/25 11:41	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/20/25 11:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/20/25 11:41	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/20/25 11:41	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/20/25 11:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		62 - 137		03/20/25 11:41	1
4-Bromofluorobenzene (Surr)	99		56 - 136		03/20/25 11:41	1
Toluene-d8 (Surr)	99		78 - 122		03/20/25 11:41	1
Dibromofluoromethane (Surr)	96		73 - 120		03/20/25 11:41	1

Lab Sample ID: LCS 240-648905/7

Matrix: Water

Analysis Batch: 648905

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	16.5		ug/L		82	63 - 134
cis-1,2-Dichloroethene	20.0	16.6		ug/L		83	77 - 123
Tetrachloroethene	20.0	17.9		ug/L		90	76 - 123
trans-1,2-Dichloroethene	20.0	17.2		ug/L		86	75 - 124
Trichloroethene	20.0	17.0		ug/L		85	70 - 122
Vinyl chloride	20.0	19.0		ug/L		95	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

Lab Sample ID: 240-220152-C-4 MS

Matrix: Water

Analysis Batch: 648905

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	20.0	16.2		ug/L		81	56 - 135
cis-1,2-Dichloroethene	1.0	U	20.0	16.1		ug/L		80	66 - 128
Tetrachloroethene	1.0	U	20.0	16.8		ug/L		84	62 - 131
trans-1,2-Dichloroethene	1.0	U	20.0	16.8		ug/L		84	56 - 136
Trichloroethene	1.0	U	20.0	16.0		ug/L		80	61 - 124
Vinyl chloride	1.0	U	20.0	18.1		ug/L		90	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	103		78 - 122

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QC Sample Results

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

Job ID: 240-220143-1

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

Lab Sample ID: 240-220152-C-4 MS

Matrix: Water

Analysis Batch: 648905

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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

Lab Sample ID: 240-220152-C-4 MSD

Matrix: Water

Analysis Batch: 648905

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	20.0	17.1		ug/L		86	56 - 135	5	26
cis-1,2-Dichloroethene	1.0	U	20.0	16.9		ug/L		84	66 - 128	5	14
Tetrachloroethene	1.0	U	20.0	17.8		ug/L		89	62 - 131	6	20
trans-1,2-Dichloroethene	1.0	U	20.0	17.9		ug/L		90	56 - 136	7	15
Trichloroethene	1.0	U	20.0	16.8		ug/L		84	61 - 124	5	15
Vinyl chloride	1.0	U	20.0	19.4		ug/L		97	43 - 157	7	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	102		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	101		73 - 120

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

Lab Sample ID: MB 240-647989/9

Matrix: Water

Analysis Batch: 647989

Client Sample ID: Method Blank

Prep Type: Total/NA

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

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

Lab Sample ID: LCS 240-647989/7

Matrix: Water

Analysis Batch: 647989

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

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

Lab Sample ID: 240-220134-E-2 MS

Matrix: Water

Analysis Batch: 647989

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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

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QC Sample Results

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

Job ID: 240-220143-1

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

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

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

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

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

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

Lab Sample ID: MB 240-648063/8
Matrix: Water
Analysis Batch: 648063

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			03/13/25 12:12	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	83		68 - 127		03/13/25 12:12	1			

Lab Sample ID: LCS 240-648063/5
Matrix: Water
Analysis Batch: 648063

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane			10.0	8.76		ug/L		88	75 - 121

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	78		68 - 127

Lab Sample ID: 240-220146-F-2 MS
Matrix: Water
Analysis Batch: 648063

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	9.80		ug/L		98	20 - 180

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		68 - 127

Lab Sample ID: 240-220146-F-2 MSD
Matrix: Water
Analysis Batch: 648063

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	9.64		ug/L		96	20 - 180	2	20

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QC Sample Results

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

Job ID: 240-220143-1

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

Lab Sample ID: 240-220146-F-2 MSD
Matrix: Water
Analysis Batch: 648063

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

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	77		68 - 127

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Association Summary

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

Job ID: 240-220143-1

GC/MS VOA

Analysis Batch: 647989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220143-2	MW-36_030325	Total/NA	Water	8260D SIM	
MB 240-647989/9	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-647989/7	Lab Control Sample	Total/NA	Water	8260D SIM	
240-220134-E-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-220134-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 648063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220143-3	PW-16-01_030325	Total/NA	Water	8260D SIM	
240-220143-4	MW-221S_030325	Total/NA	Water	8260D SIM	
240-220143-5	MW-23_030325	Total/NA	Water	8260D SIM	
MB 240-648063/8	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-648063/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-220146-F-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-220146-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 648191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220143-1	TRIP BLANK_210	Total/NA	Water	8260D	
240-220143-2	MW-36_030325	Total/NA	Water	8260D	
240-220143-3	PW-16-01_030325	Total/NA	Water	8260D	
240-220143-4	MW-221S_030325	Total/NA	Water	8260D	
240-220143-5	MW-23_030325	Total/NA	Water	8260D	
MB 240-648191/9	Method Blank	Total/NA	Water	8260D	
LCS 240-648191/5	Lab Control Sample	Total/NA	Water	8260D	
240-220134-B-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-220134-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 648725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220143-5 - RA	MW-23_030325	Total/NA	Water	8260D	
MB 240-648725/9	Method Blank	Total/NA	Water	8260D	
LCS 240-648725/5	Lab Control Sample	Total/NA	Water	8260D	
240-220027-C-11 MS	Matrix Spike	Total/NA	Water	8260D	
240-220027-C-11 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 648905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220143-5 - RA2	MW-23_030325	Total/NA	Water	8260D	
MB 240-648905/10	Method Blank	Total/NA	Water	8260D	
LCS 240-648905/7	Lab Control Sample	Total/NA	Water	8260D	
240-220152-C-4 MS	Matrix Spike	Total/NA	Water	8260D	
240-220152-C-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Lab Chronicle

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

Job ID: 240-220143-1

Client Sample ID: TRIP BLANK_210

Lab Sample ID: 240-220143-1

Date Collected: 03/03/25 00:00

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648191	AJS	EET CLE	03/14/25 19:40

Client Sample ID: MW-36_030325

Lab Sample ID: 240-220143-2

Date Collected: 03/03/25 10:25

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648191	AJS	EET CLE	03/15/25 00:22
Total/NA	Analysis	8260D SIM		1	647989	R5XG	EET CLE	03/12/25 23:42

Client Sample ID: PW-16-01_030325

Lab Sample ID: 240-220143-3

Date Collected: 03/03/25 12:10

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648191	AJS	EET CLE	03/15/25 00:48
Total/NA	Analysis	8260D SIM		1	648063	R5XG	EET CLE	03/13/25 12:59

Client Sample ID: MW-221S_030325

Lab Sample ID: 240-220143-4

Date Collected: 03/03/25 13:50

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	648191	AJS	EET CLE	03/15/25 01:13
Total/NA	Analysis	8260D SIM		1	648063	R5XG	EET CLE	03/13/25 13:23

Client Sample ID: MW-23_030325

Lab Sample ID: 240-220143-5

Date Collected: 03/03/25 15:05

Matrix: Water

Date Received: 03/08/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		400	648191	AJS	EET CLE	03/15/25 01:39
Total/NA	Analysis	8260D	RA	50	648725	HMB	EET CLE	03/19/25 18:51
Total/NA	Analysis	8260D	RA2	200	648905	HMB	EET CLE	03/20/25 12:59
Total/NA	Analysis	8260D SIM		1	648063	R5XG	EET CLE	03/13/25 13:46

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: 240-220143-1

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
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]

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Temperature readings

Client Sample ID	Lab ID	Container Type	Container Preservation		
			pH	Temp	Added Lot Number
TRIP BLANK_210	240-220143-A-1	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-36_030325	240-220143-A-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-36_030325	240-220143-B-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-36_030325	240-220143-C-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-36_030325	240-220143-D-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-36_030325	240-220143-E-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-36_030325	240-220143-F-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
PW-16-01_030325	240-220143-A-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
PW-16-01_030325	240-220143-B-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
PW-16-01_030325	240-220143-C-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
PW-16-01_030325	240-220143-D-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
PW-16-01_030325	240-220143-E-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
PW-16-01_030325	240-220143-F-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-221S_030325	240-220143-A-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-221S_030325	240-220143-B-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-221S_030325	240-220143-C-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-221S_030325	240-220143-D-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-221S_030325	240-220143-E-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-221S_030325	240-220143-F-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-23_030325	240-220143-A-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-23_030325	240-220143-B-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-23_030325	240-220143-C-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-23_030325	240-220143-D-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-23_030325	240-220143-E-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-23_030325	240-220143-F-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____

DATA VERIFICATION REPORT



March 22, 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: 220143-1

Sample date: 2025-03-03

Report received by CADENA: 2025-03-21

Initial Data Verification completed by CADENA: 2025-03-22

Number of Samples:5

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:

HTQ - GCMS VOC sample -005 analyses were performed outside of reference holding time so all associated results should be considered to be estimated and qualified with J flags if detected and UJ flags if non-detect.

GCMS VOC QC batch MS/MSD recovery outliers were not determined using a client sample so qualification was not required based on these sample-specific QC outliers.

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

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

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

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

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

CADENA Valid Qualifiers

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

Qualified Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 220143-1

Sample Name: MW-23_030325

Lab Sample ID: 2402201435

Sample Date: 3/3/2025

Analyte	Cas No.	Result	Report	Valid		
			Limit	Units	Qualifier	
GC/MS VOC						
OSW-8260D						
1,1-Dichloroethene	75-35-4	ND	50	ug/l	UJ	
cis-1,2-Dichloroethene	156-59-2	8200	200	ug/l	J	
Tetrachloroethene	127-18-4	ND	50	ug/l	UJ	
trans-1,2-Dichloroethene	156-60-5	440	50	ug/l	J	
Trichloroethene	79-01-6	1300	50	ug/l	J	
Vinyl chloride	75-01-4	160	50	ug/l	J	

Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 220143-1

Analyte	Cas No.	Sample Name: TRIP BLANK_210				MW-36_030325				PW-16-01_030325				MW-221S_030325				MW-23_030325			
		Lab Sample ID: 2402201431				2402201432				2402201433				2402201434				2402201435			
		Sample Date: 3/3/2025				3/3/2025				3/3/2025				3/3/2025				3/3/2025			
		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
GC/MS VOC																					
<u>OSW-8260D</u>																					
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	50	ug/l	UJ
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	1.6	1.0	ug/l	---	2.2	1.0	ug/l	---	8200	200	ug/l	J
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	50	ug/l	UJ
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	---	440	50	ug/l	J
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.59	1.0	ug/l	J	1300	50	ug/l	J
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	2.8	1.0	ug/l	---	ND	1.0	ug/l	---	160	50	ug/l	J
<u>OSW-8260DSIM</u>																					
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---