

ANALYTICAL REPORT

PREPARED FOR

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Generated 3/14/2025 7:48:36 AM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-219706-1

Eurofins Cleveland

Job Notes

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

Authorization



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Definitions/Glossary

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

Job ID: 240-219706-1

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: 240-219706-1

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Job Narrative 240-219706-1

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 3/1/2025 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 2.8°C.

GC/MS VOA

Method 8260D: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: (240-219643-A-3 MS) and (240-219643-A-3 MSD). Elevated reporting limits (RLs) are provided.

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: 240-219706-1

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: 240-219706-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-219706-1	TRIP BLANK_45	Water	02/27/25 00:00	03/01/25 08:00
240-219706-2	MW-197S_022725	Water	02/27/25 09:50	03/01/25 08:00
240-219706-3	MW-195S_022725	Water	02/27/25 11:30	03/01/25 08:00
240-219706-4	MW-54S_022725	Water	02/27/25 13:15	03/01/25 08:00
240-219706-5	MW-53_022725	Water	02/27/25 15:00	03/01/25 08:00

Detection Summary

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

Job ID: 240-219706-1

Client Sample ID: TRIP BLANK_45

Lab Sample ID: 240-219706-1

No Detections.

Client Sample ID: MW-197S_022725

Lab Sample ID: 240-219706-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	20		1.0	0.46	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.95	J	1.0	0.51	ug/L	1		8260D	Total/NA
Trichloroethene	75		2.0	0.88	ug/L	2		8260D	Total/NA
Vinyl chloride	1.4		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-195S_022725

Lab Sample ID: 240-219706-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	1.3		1.0	0.49	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	140		10	4.6	ug/L	10		8260D	Total/NA
trans-1,2-Dichloroethene	220		10	5.1	ug/L	10		8260D	Total/NA
Trichloroethene	1900		100	44	ug/L	100		8260D	Total/NA
Vinyl chloride	5.9		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-54S_022725

Lab Sample ID: 240-219706-4

No Detections.

Client Sample ID: MW-53_022725

Lab Sample ID: 240-219706-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.74	J	1.0	0.44	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 240-219706-1

Client Sample ID: TRIP BLANK_45

Lab Sample ID: 240-219706-1

Date Collected: 02/27/25 00:00

Matrix: Water

Date Received: 03/01/25 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			03/08/25 01:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/08/25 01:19	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/08/25 01:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/08/25 01:19	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/08/25 01:19	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/08/25 01:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		62 - 137		03/08/25 01:19	1
4-Bromofluorobenzene (Surr)	80		56 - 136		03/08/25 01:19	1
Toluene-d8 (Surr)	91		78 - 122		03/08/25 01:19	1
Dibromofluoromethane (Surr)	114		73 - 120		03/08/25 01:19	1

Client Sample Results

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

Job ID: 240-219706-1

Client Sample ID: MW-197S_022725

Lab Sample ID: 240-219706-2

Date Collected: 02/27/25 09:50

Matrix: Water

Date Received: 03/01/25 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			03/11/25 16:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		68 - 127					03/11/25 16:45	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			03/08/25 01:36	1
cis-1,2-Dichloroethene	20		1.0	0.46	ug/L			03/08/25 01:36	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/08/25 01:36	1
trans-1,2-Dichloroethene	0.95	J	1.0	0.51	ug/L			03/08/25 01:36	1
Trichloroethene	75		2.0	0.88	ug/L			03/10/25 13:40	2
Vinyl chloride	1.4		1.0	0.45	ug/L			03/08/25 01:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					03/08/25 01:36	1
1,2-Dichloroethane-d4 (Surr)	105		62 - 137					03/10/25 13:40	2
4-Bromofluorobenzene (Surr)	77		56 - 136					03/08/25 01:36	1
4-Bromofluorobenzene (Surr)	84		56 - 136					03/10/25 13:40	2
Toluene-d8 (Surr)	96		78 - 122					03/08/25 01:36	1
Toluene-d8 (Surr)	98		78 - 122					03/10/25 13:40	2
Dibromofluoromethane (Surr)	101		73 - 120					03/08/25 01:36	1
Dibromofluoromethane (Surr)	107		73 - 120					03/10/25 13:40	2

Client Sample Results

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

Job ID: 240-219706-1

Client Sample ID: MW-195S_022725

Lab Sample ID: 240-219706-3

Date Collected: 02/27/25 11:30

Matrix: Water

Date Received: 03/01/25 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			03/11/25 17:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		68 - 127					03/11/25 17:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.3		1.0	0.49	ug/L			03/08/25 01:54	1
cis-1,2-Dichloroethene	140		10	4.6	ug/L			03/10/25 13:58	10
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/08/25 01:54	1
trans-1,2-Dichloroethene	220		10	5.1	ug/L			03/10/25 13:58	10
Trichloroethene	1900		100	44	ug/L			03/11/25 11:53	100
Vinyl chloride	5.9		1.0	0.45	ug/L			03/08/25 01:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		62 - 137					03/08/25 01:54	1
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					03/10/25 13:58	10
1,2-Dichloroethane-d4 (Surr)	99		62 - 137					03/11/25 11:53	100
4-Bromofluorobenzene (Surr)	74		56 - 136					03/08/25 01:54	1
4-Bromofluorobenzene (Surr)	77		56 - 136					03/10/25 13:58	10
4-Bromofluorobenzene (Surr)	86		56 - 136					03/11/25 11:53	100
Toluene-d8 (Surr)	96		78 - 122					03/08/25 01:54	1
Toluene-d8 (Surr)	87		78 - 122					03/10/25 13:58	10
Toluene-d8 (Surr)	92		78 - 122					03/11/25 11:53	100
Dibromofluoromethane (Surr)	104		73 - 120					03/08/25 01:54	1
Dibromofluoromethane (Surr)	106		73 - 120					03/10/25 13:58	10
Dibromofluoromethane (Surr)	100		73 - 120					03/11/25 11:53	100

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Client Sample Results

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

Job ID: 240-219706-1

Client Sample ID: MW-54S_022725

Lab Sample ID: 240-219706-4

Date Collected: 02/27/25 13:15

Matrix: Water

Date Received: 03/01/25 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			03/11/25 17:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		68 - 127					03/11/25 17:32	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			03/08/25 02:12	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/08/25 02:12	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/08/25 02:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/08/25 02:12	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/10/25 14:15	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/08/25 02:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137					03/08/25 02:12	1
1,2-Dichloroethane-d4 (Surr)	111		62 - 137					03/10/25 14:15	1
4-Bromofluorobenzene (Surr)	81		56 - 136					03/08/25 02:12	1
4-Bromofluorobenzene (Surr)	85		56 - 136					03/10/25 14:15	1
Toluene-d8 (Surr)	96		78 - 122					03/08/25 02:12	1
Toluene-d8 (Surr)	94		78 - 122					03/10/25 14:15	1
Dibromofluoromethane (Surr)	120		73 - 120					03/08/25 02:12	1
Dibromofluoromethane (Surr)	116		73 - 120					03/10/25 14:15	1

Client Sample Results

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

Job ID: 240-219706-1

Client Sample ID: MW-53_022725

Lab Sample ID: 240-219706-5

Date Collected: 02/27/25 15:00

Matrix: Water

Date Received: 03/01/25 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			03/11/25 17:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		68 - 127					03/11/25 17:55	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			03/08/25 02:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/08/25 02:30	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/08/25 02:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/08/25 02:30	1
Trichloroethene	0.74	J	1.0	0.44	ug/L			03/08/25 02:30	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/08/25 02:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		62 - 137					03/08/25 02:30	1
4-Bromofluorobenzene (Surr)	80		56 - 136					03/08/25 02:30	1
Toluene-d8 (Surr)	93		78 - 122					03/08/25 02:30	1
Dibromofluoromethane (Surr)	116		73 - 120					03/08/25 02:30	1

Surrogate Summary

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

Job ID: 240-219706-1

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)
240-219643-A-3 MS	Matrix Spike	89	94	89	93
240-219643-A-3 MSD	Matrix Spike Duplicate	91	100	93	96
240-219703-A-2 MSD	Matrix Spike Duplicate	86	94	90	92
240-219703-C-2 MS	Matrix Spike	88	97	94	95
240-219706-1	TRIP BLANK_45	109	80	91	114
240-219706-2	MW-197S_022725	101	77	96	101
240-219706-2	MW-197S_022725	105	84	98	107
240-219706-3	MW-195S_022725	100	74	96	104
240-219706-3	MW-195S_022725	101	77	87	106
240-219706-3	MW-195S_022725	99	86	92	100
240-219706-4	MW-54S_022725	114	81	96	120
240-219706-4	MW-54S_022725	111	85	94	116
240-219706-5	MW-53_022725	113	80	93	116
240-219759-B-2 MS	Matrix Spike	91	99	90	95
240-219759-B-2 MSD	Matrix Spike Duplicate	84	94	85	89
LCS 240-647324/4	Lab Control Sample	81	98	94	87
LCS 240-647469/4	Lab Control Sample	88	105	103	97
LCS 240-647644/4	Lab Control Sample	86	101	97	92
MB 240-647324/7	Method Blank	98	85	94	101
MB 240-647469/7	Method Blank	97	84	89	96
MB 240-647644/7	Method Blank	102	90	97	102
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)			
240-219646-B-2 MS	Matrix Spike	118			
240-219646-C-2 MSD	Matrix Spike Duplicate	114			
240-219706-2	MW-197S_022725	118			
240-219706-3	MW-195S_022725	113			
240-219706-4	MW-54S_022725	118			
240-219706-5	MW-53_022725	118			
LCS 240-647648/5	Lab Control Sample	105			
MB 240-647648/7	Method Blank	108			
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					

QC Sample Results

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

Job ID: 240-219706-1

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

Lab Sample ID: MB 240-647324/7

Matrix: Water

Analysis Batch: 647324

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			03/07/25 20:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/07/25 20:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/07/25 20:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/07/25 20:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/07/25 20:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/07/25 20:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		62 - 137		03/07/25 20:32	1
4-Bromofluorobenzene (Surr)	85		56 - 136		03/07/25 20:32	1
Toluene-d8 (Surr)	94		78 - 122		03/07/25 20:32	1
Dibromofluoromethane (Surr)	101		73 - 120		03/07/25 20:32	1

Lab Sample ID: LCS 240-647324/4

Matrix: Water

Analysis Batch: 647324

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	25.7		ug/L		103	63 - 134
cis-1,2-Dichloroethene	25.0	25.3		ug/L		101	77 - 123
Tetrachloroethene	25.0	21.6		ug/L		86	76 - 123
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	75 - 124
Trichloroethene	25.0	24.8		ug/L		99	70 - 122
Vinyl chloride	12.5	12.9		ug/L		103	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	94		78 - 122
Dibromofluoromethane (Surr)	87		73 - 120

Lab Sample ID: 240-219703-A-2 MSD

Matrix: Water

Analysis Batch: 647324

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	25.0	24.7		ug/L		99	56 - 135	2	26
cis-1,2-Dichloroethene	1.0	U	25.0	25.1		ug/L		100	66 - 128	2	14
Tetrachloroethene	1.0	U	25.0	17.2		ug/L		69	62 - 131	6	20
trans-1,2-Dichloroethene	1.0	U	25.0	25.5		ug/L		102	56 - 136	2	15
Trichloroethene	1.0	U	25.0	24.1		ug/L		96	61 - 124	1	15
Vinyl chloride	1.0	U	12.5	12.8		ug/L		102	43 - 157	11	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	90		78 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-219706-1

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

Lab Sample ID: 240-219703-A-2 MSD

Matrix: Water

Analysis Batch: 647324

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	92		73 - 120

Lab Sample ID: 240-219703-C-2 MS

Matrix: Water

Analysis Batch: 647324

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	1.0	U	25.0	24.3		ug/L		97	56 - 135
cis-1,2-Dichloroethene	1.0	U	25.0	25.6		ug/L		102	66 - 128
Tetrachloroethene	1.0	U	25.0	18.3		ug/L		73	62 - 131
trans-1,2-Dichloroethene	1.0	U	25.0	24.9		ug/L		100	56 - 136
Trichloroethene	1.0	U	25.0	23.9		ug/L		96	61 - 124
Vinyl chloride	1.0	U	12.5	11.4		ug/L		92	43 - 157

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		62 - 137
4-Bromofluorobenzene (Surr)	97		56 - 136
Toluene-d8 (Surr)	94		78 - 122
Dibromofluoromethane (Surr)	95		73 - 120

Lab Sample ID: MB 240-647469/7

Matrix: Water

Analysis Batch: 647469

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			03/10/25 12:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/10/25 12:56	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/10/25 12:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/10/25 12:56	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/10/25 12:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/10/25 12:56	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	97		62 - 137		03/10/25 12:56	1			
4-Bromofluorobenzene (Surr)	84		56 - 136		03/10/25 12:56	1			
Toluene-d8 (Surr)	89		78 - 122		03/10/25 12:56	1			
Dibromofluoromethane (Surr)	96		73 - 120		03/10/25 12:56	1			

Lab Sample ID: LCS 240-647469/4

Matrix: Water

Analysis Batch: 647469

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	28.6		ug/L		114	63 - 134
cis-1,2-Dichloroethene	25.0	27.2		ug/L		109	77 - 123
Tetrachloroethene	25.0	21.7		ug/L		87	76 - 123
trans-1,2-Dichloroethene	25.0	27.9		ug/L		111	75 - 124
Trichloroethene	25.0	25.9		ug/L		104	70 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-219706-1

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

Lab Sample ID: LCS 240-647469/4

Matrix: Water

Analysis Batch: 647469

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	12.5	15.0		ug/L		120	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		62 - 137
4-Bromofluorobenzene (Surr)	105		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

Lab Sample ID: 240-219759-B-2 MS

Matrix: Water

Analysis Batch: 647469

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	1.0	U	25.0	24.4		ug/L		98	56 - 135
cis-1,2-Dichloroethene	2.5		25.0	28.2		ug/L		103	66 - 128
Tetrachloroethene	1.0	U	25.0	17.6		ug/L		71	62 - 131
trans-1,2-Dichloroethene	1.0	U	25.0	26.3		ug/L		105	56 - 136
Trichloroethene	0.79	J	25.0	24.8		ug/L		96	61 - 124
Vinyl chloride	9.1		12.5	15.6		ug/L		52	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	90		78 - 122
Dibromofluoromethane (Surr)	95		73 - 120

Lab Sample ID: 240-219759-B-2 MSD

Matrix: Water

Analysis Batch: 647469

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	25.0	27.8		ug/L		111	56 - 135	13	26
cis-1,2-Dichloroethene	2.5		25.0	29.8		ug/L		109	66 - 128	5	14
Tetrachloroethene	1.0	U	25.0	19.4		ug/L		78	62 - 131	9	20
trans-1,2-Dichloroethene	1.0	U	25.0	27.9		ug/L		112	56 - 136	6	15
Trichloroethene	0.79	J	25.0	26.9		ug/L		105	61 - 124	8	15
Vinyl chloride	9.1		12.5	16.5		ug/L		59	43 - 157	5	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	85		78 - 122
Dibromofluoromethane (Surr)	89		73 - 120

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-219706-1

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

Lab Sample ID: MB 240-647644/7

Matrix: Water

Analysis Batch: 647644

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			03/11/25 10:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/25 10:23	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/25 10:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/25 10:23	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/25 10:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/11/25 10:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		62 - 137		03/11/25 10:23	1
4-Bromofluorobenzene (Surr)	90		56 - 136		03/11/25 10:23	1
Toluene-d8 (Surr)	97		78 - 122		03/11/25 10:23	1
Dibromofluoromethane (Surr)	102		73 - 120		03/11/25 10:23	1

Lab Sample ID: LCS 240-647644/4

Matrix: Water

Analysis Batch: 647644

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	28.8		ug/L		115	63 - 134
cis-1,2-Dichloroethene	25.0	27.3		ug/L		109	77 - 123
Tetrachloroethene	25.0	22.1		ug/L		88	76 - 123
trans-1,2-Dichloroethene	25.0	29.0		ug/L		116	75 - 124
Trichloroethene	25.0	26.3		ug/L		105	70 - 122
Vinyl chloride	12.5	14.4		ug/L		115	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	97		78 - 122
Dibromofluoromethane (Surr)	92		73 - 120

Lab Sample ID: 240-219643-A-3 MS

Matrix: Water

Analysis Batch: 647644

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	50.0	48.1		ug/L		96	56 - 135
cis-1,2-Dichloroethene	2.0	U	50.0	51.1		ug/L		102	66 - 128
Tetrachloroethene	2.0	U	50.0	33.9		ug/L		68	62 - 131
trans-1,2-Dichloroethene	2.0	U	50.0	51.0		ug/L		102	56 - 136
Trichloroethene	2.0	U	50.0	47.3		ug/L		95	61 - 124
Vinyl chloride	2.0	U	25.0	27.0		ug/L		108	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	89		78 - 122

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-219706-1

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

Lab Sample ID: 240-219643-A-3 MS

Matrix: Water

Analysis Batch: 647644

Client Sample ID: Matrix Spike

Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	93		73 - 120

Lab Sample ID: 240-219643-A-3 MSD

Matrix: Water

Analysis Batch: 647644

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	50.0	58.0		ug/L		116	56 - 135	19	26
cis-1,2-Dichloroethene	2.0	U	50.0	56.3		ug/L		113	66 - 128	10	14
Tetrachloroethene	2.0	U	50.0	40.7		ug/L		81	62 - 131	18	20
trans-1,2-Dichloroethene	2.0	U	50.0	56.2		ug/L		112	56 - 136	10	15
Trichloroethene	2.0	U	50.0	54.3		ug/L		109	61 - 124	14	15
Vinyl chloride	2.0	U	25.0	32.9		ug/L		132	43 - 157	20	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	93		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

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

Lab Sample ID: MB 240-647648/7

Matrix: Water

Analysis Batch: 647648

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			03/11/25 10:53	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	108		68 - 127		03/11/25 10:53	1			

Lab Sample ID: LCS 240-647648/5

Matrix: Water

Analysis Batch: 647648

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	9.14		ug/L		91	75 - 121

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		68 - 127

Lab Sample ID: 240-219646-B-2 MS

Matrix: Water

Analysis Batch: 647648

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	10.3		ug/L		103	20 - 180

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-219706-1

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

		MS	MS									
Surrogate	%Recovery	Qualifier	Limits									
1,2-Dichloroethane-d4 (Surr)	118		68 - 127									
Lab Sample ID: 240-219646-C-2 MSD				Client Sample ID: Matrix Spike Duplicate								
Matrix: Water				Prep Type: Total/NA								
Analysis Batch: 647648												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
1,4-Dioxane	2.0	U	10.0	10.1		ug/L		101	20 - 180	1	20	
		MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits									
1,2-Dichloroethane-d4 (Surr)	114		68 - 127									

QC Association Summary

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

Job ID: 240-219706-1

GC/MS VOA

Analysis Batch: 647324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219706-1	TRIP BLANK_45	Total/NA	Water	8260D	
240-219706-2	MW-197S_022725	Total/NA	Water	8260D	
240-219706-3	MW-195S_022725	Total/NA	Water	8260D	
240-219706-4	MW-54S_022725	Total/NA	Water	8260D	
240-219706-5	MW-53_022725	Total/NA	Water	8260D	
MB 240-647324/7	Method Blank	Total/NA	Water	8260D	
LCS 240-647324/4	Lab Control Sample	Total/NA	Water	8260D	
240-219703-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	
240-219703-C-2 MS	Matrix Spike	Total/NA	Water	8260D	

Analysis Batch: 647469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219706-2	MW-197S_022725	Total/NA	Water	8260D	
240-219706-3	MW-195S_022725	Total/NA	Water	8260D	
240-219706-4	MW-54S_022725	Total/NA	Water	8260D	
MB 240-647469/7	Method Blank	Total/NA	Water	8260D	
LCS 240-647469/4	Lab Control Sample	Total/NA	Water	8260D	
240-219759-B-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-219759-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 647644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219706-3	MW-195S_022725	Total/NA	Water	8260D	
MB 240-647644/7	Method Blank	Total/NA	Water	8260D	
LCS 240-647644/4	Lab Control Sample	Total/NA	Water	8260D	
240-219643-A-3 MS	Matrix Spike	Total/NA	Water	8260D	
240-219643-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Analysis Batch: 647648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219706-2	MW-197S_022725	Total/NA	Water	8260D SIM	
240-219706-3	MW-195S_022725	Total/NA	Water	8260D SIM	
240-219706-4	MW-54S_022725	Total/NA	Water	8260D SIM	
240-219706-5	MW-53_022725	Total/NA	Water	8260D SIM	
MB 240-647648/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-647648/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-219646-B-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-219646-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Lab Chronicle

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

Job ID: 240-219706-1

Client Sample ID: TRIP BLANK_45

Lab Sample ID: 240-219706-1

Date Collected: 02/27/25 00:00

Matrix: Water

Date Received: 03/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	647324	LEE	EET CLE	03/08/25 01:19

Client Sample ID: MW-197S_022725

Lab Sample ID: 240-219706-2

Date Collected: 02/27/25 09:50

Matrix: Water

Date Received: 03/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	647324	LEE	EET CLE	03/08/25 01:36
Total/NA	Analysis	8260D		2	647469	LEE	EET CLE	03/10/25 13:40
Total/NA	Analysis	8260D SIM		1	647648	R5XG	EET CLE	03/11/25 16:45

Client Sample ID: MW-195S_022725

Lab Sample ID: 240-219706-3

Date Collected: 02/27/25 11:30

Matrix: Water

Date Received: 03/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	647324	LEE	EET CLE	03/08/25 01:54
Total/NA	Analysis	8260D		10	647469	LEE	EET CLE	03/10/25 13:58
Total/NA	Analysis	8260D		100	647644	LEE	EET CLE	03/11/25 11:53
Total/NA	Analysis	8260D SIM		1	647648	R5XG	EET CLE	03/11/25 17:08

Client Sample ID: MW-54S_022725

Lab Sample ID: 240-219706-4

Date Collected: 02/27/25 13:15

Matrix: Water

Date Received: 03/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	647324	LEE	EET CLE	03/08/25 02:12
Total/NA	Analysis	8260D		1	647469	LEE	EET CLE	03/10/25 14:15
Total/NA	Analysis	8260D SIM		1	647648	R5XG	EET CLE	03/11/25 17:32

Client Sample ID: MW-53_022725

Lab Sample ID: 240-219706-5

Date Collected: 02/27/25 15:00

Matrix: Water

Date Received: 03/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	647324	LEE	EET CLE	03/08/25 02:30
Total/NA	Analysis	8260D SIM		1	647648	R5XG	EET CLE	03/11/25 17:55

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: 240-219706-1

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

Chain of Custody Record

TestAmerica Laboratory location: Farmington Hills — 38655 Hills Tech Drive, Suite 600, Farmington Hills 48331

1-7/2.8

Client Contact		Regulatory program:		TestAmerica Laboratories, Inc.												
Company Name: Arcadis		☐ DW ☐ NPDES ☐ RCRA ☐ Other		COC No:												
Address: 28550 Cabot Drive, Suite 500		Client Project Manager: Megan Meckley		Site Contact: Samantha Szaichler												
City/State/Zip: Novi, MI, 48377		Telephone: 248-994-2240		Telephone: 248-994-2240												
Phone: 248-994-2240		Email: kristoffer.hinskey@arcadis.com		Telephone: 330-497-9396												
Project Name: Ford LTP		Sampler Name: Maryam Hanani		Analysis Turnaround Time												
Project Number: 30206169.0401.03		Method of Shipment/Carrier:		TAT if different from below 10 day ☒ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day												
PO # US3460021848		Shipping/Tracking No:		Analyses												
Sample Identification		Sample Date	Sample Time	Matrix	Containers & Preservatives	Filtered Sample (Y/N)	Composite=C / Grab=G	1,1-DCE 8260D	cis-1,2-DCE 8260D	Trans-1,2-DCE 8260D	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM	For lab use only	
				Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH	Unpres	Other:
TRIP BLANK_45	---	---		1												1 Trip Blank
MW-197S_022725	2/27/25	0950		6												3 VOAs for 8260D 3 VOAs for 8260D SIM
MW-195S_022725	2/27/25	1130		6												
MW-54S_022725	2/27/25	1315		6												
MW-53_022725	2/27/25	1500		6												
Possible Hazard Identification		☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)												
Special Instructions/QC Requirements & Comments: Onsite		☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months														
Submit all results through Cadena at jtomialia@cadenaco.com. Cadena #E203728 Level IV Reporting requested.																
Relinquished by: Maryam Hanani	Company: Arcadis	Date/Time: 2/27/25 1625	Received by: Novi Cold Storage	Company: Arcadis	Date/Time: 2/27/25 1625											
Relinquished by: [Signature]	Company: Arcadis	Date/Time: 2/28/25 1658	Received by: [Signature]	Company: EETA	Date/Time: 2/28/25 1658											
Relinquished by: [Signature]	Company: EETA	Date/Time: 2/28/25 1659	Received in Laboratory by: Martin	Company: EET	Date/Time: 3/1/25 800											



Eurofins - Cleveland Sample Receipt Form/Narrative		Login # _____	
Barberton Facility			
Client <u>Arco's</u>	Site Name _____	Cooler unpacked by: <u>Martin</u>	
Cooler Received on <u>3/11/25</u>	Opened on <u>3/11/25</u>		
FedEx: 1 st Grd Exp <u>UPS FAS</u>	Waypoint <u>Client Drop Off</u>	Eurofins Courier	Other _____
Receipt After-hours Drop-off Date/Time _____		Storage Location _____	
Eurofins Cooler # <u>EC</u>	Foam Box <u>EC</u>	Client Cooler	Box _____ Other _____
Packing material used: Bubble Wrap <u>Wet Ice</u> Blue Ice _____ Foam Plastic Bag _____ None _____ Other _____			
COOLANT: <u>Wet Ice</u> Blue Ice _____ Dry Ice _____ Water _____ None _____			
1 Cooler temperature upon receipt	☐ See Multiple Cooler Form		
IR GUN # <u>21</u>	(CF <u>41.1</u> °C)	Observed Cooler Temp. <u>17</u> °C	Corrected Cooler Temp. <u>2.8</u> °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> ☒ Yes ☐ No -Were the seals on the outside of the cooler(s) signed & dated? ☒ Yes ☐ No ☐ NA -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? ☒ Yes ☐ No ☐ NA -Were tamper/custody seals intact and uncompromised? ☒ Yes ☐ No ☐ NA 3 Shippers' packing slip attached to the cooler(s)? ☒ Yes ☐ No ☐ NA 4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No ☐ NA 5 Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No ☐ NA 6. Was/were the person(s) who collected the samples clearly identified on the COC? ☒ Yes ☐ No ☐ NA 7 Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No ☐ NA 8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? ☒ Yes ☐ No ☐ NA 9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? ☒ Yes ☐ No ☐ NA 10 Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No ☐ NA 11 Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No ☐ NA 12. Are these work share samples and all listed on the COC? ☒ Yes ☐ No ☐ NA If yes, Questions 13-17 have been checked at the originating laboratory 13 Were all preserved sample(s) at the correct pH upon receipt? ☒ Yes ☐ No ☐ NA pH Strip Lot# HC448976 14 Were VOAs on the COC? ☒ Yes ☐ No ☐ NA 15 Were air bubbles >6 mm in any VOA vials? ☒ Yes ☐ No ☐ NA ☒ Larger than this 16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>6125601 J</u> ☒ Yes ☐ No ☐ NA 17 Was a LL Hg or Me Hg trip blank present? ☒ Yes ☐ No ☐ NA			
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____ Concerning _____			
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		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_45	240-219706-A-1	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-197S_022725	240-219706-A-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-197S_022725	240-219706-B-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-197S_022725	240-219706-C-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-197S_022725	240-219706-D-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-197S_022725	240-219706-E-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-197S_022725	240-219706-F-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-195S_022725	240-219706-A-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-195S_022725	240-219706-B-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-195S_022725	240-219706-C-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-195S_022725	240-219706-D-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-195S_022725	240-219706-E-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-195S_022725	240-219706-F-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54S_022725	240-219706-A-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54S_022725	240-219706-B-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54S_022725	240-219706-C-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54S_022725	240-219706-D-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54S_022725	240-219706-E-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-54S_022725	240-219706-F-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-53_022725	240-219706-A-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-53_022725	240-219706-B-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-53_022725	240-219706-C-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-53_022725	240-219706-D-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-53_022725	240-219706-E-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-53_022725	240-219706-F-5	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____

DATA VERIFICATION REPORT



March 14, 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: 219706-1

Sample date: 2025-02-27

Report received by CADENA: 2025-03-14

Initial Data Verification completed by CADENA: 2025-03-14

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.

There were no significant QC anomalies or exceptions to report.

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: 219706-1

		Sample Name: TRIP BLANK_45				MW-197S_022725				MW-195S_022725				MW-54S_022725				MW-53_022725			
		Lab Sample ID: 2402197061				2402197062				2402197063				2402197064				2402197065			
		Sample Date: 2/27/2025				2/27/2025				2/27/2025				2/27/2025				2/27/2025			
Analyte	Cas No.	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																					
OSW-8260D																					
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	1.3	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	20	1.0	ug/l	---	140	10	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	0.95	1.0	ug/l	J	220	10	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	75	2.0	ug/l	---	1900	100	ug/l	---	ND	1.0	ug/l	---	0.74	1.0	ug/l	J
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	1.4	1.0	ug/l	---	5.9	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
OSW-8260DSIM																					
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---