

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-231293-1

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Job Notes

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Authorization



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Definitions/Glossary

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

Job ID: 240-231293-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
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: 240-231293-1

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Job Narrative 240-231293-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 8/21/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.6°C and 2.8°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 240-668844 recovered above the upper control limit for 1,1-Dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are: TRIP BLANK_116 (240-231293-1), MW-30_081925 (240-231293-2), DUP-05 (240-231293-3) and MW-31_081925 (240-231293-4).

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: 240-231293-1

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: 240-231293-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-231293-1	TRIP BLANK_116	Water	08/19/25 00:00	08/21/25 08:00	Michigan
240-231293-2	MW-30_081925	Water	08/19/25 09:35	08/21/25 08:00	Michigan
240-231293-3	DUP-05	Water	08/19/25 00:00	08/21/25 08:00	Michigan
240-231293-4	MW-31_081925	Water	08/19/25 10:55	08/21/25 08:00	Michigan

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

Detection Summary

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

Job ID: 240-231293-1

Client Sample ID: TRIP BLANK_116

Lab Sample ID: 240-231293-1

No Detections.

Client Sample ID: MW-30_081925

Lab Sample ID: 240-231293-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.6		2.0	0.86	ug/L	1		8260D SIM	Total/NA

Client Sample ID: DUP-05

Lab Sample ID: 240-231293-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.9		2.0	0.86	ug/L	1		8260D SIM	Total/NA

Client Sample ID: MW-31_081925

Lab Sample ID: 240-231293-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 240-231293-1

Client Sample ID: TRIP BLANK_116

Lab Sample ID: 240-231293-1

Date Collected: 08/19/25 00:00

Matrix: Water

Date Received: 08/21/25 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			08/22/25 13:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 13:23	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 13:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 13:23	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 13:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 13:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137		08/22/25 13:23	1
4-Bromofluorobenzene (Surr)	96		56 - 136		08/22/25 13:23	1
Toluene-d8 (Surr)	100		78 - 122		08/22/25 13:23	1
Dibromofluoromethane (Surr)	104		73 - 120		08/22/25 13:23	1

Client Sample Results

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

Job ID: 240-231293-1

Client Sample ID: MW-30_081925

Lab Sample ID: 240-231293-2

Date Collected: 08/19/25 09:35

Matrix: Water

Date Received: 08/21/25 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	8.6		2.0	0.86	ug/L			08/25/25 15:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		68 - 127					08/25/25 15:01	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			08/22/25 15:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 15:58	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 15:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 15:58	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 15:58	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 15:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		62 - 137					08/22/25 15:58	1
4-Bromofluorobenzene (Surr)	94		56 - 136					08/22/25 15:58	1
Toluene-d8 (Surr)	101		78 - 122					08/22/25 15:58	1
Dibromofluoromethane (Surr)	104		73 - 120					08/22/25 15:58	1

Client Sample Results

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

Job ID: 240-231293-1

Client Sample ID: DUP-05

Lab Sample ID: 240-231293-3

Date Collected: 08/19/25 00:00

Matrix: Water

Date Received: 08/21/25 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	8.9		2.0	0.86	ug/L			08/25/25 15:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		68 - 127					08/25/25 15:25	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			08/22/25 16:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 16:24	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 16:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 16:24	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 16:24	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 16:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		62 - 137					08/22/25 16:24	1
4-Bromofluorobenzene (Surr)	92		56 - 136					08/22/25 16:24	1
Toluene-d8 (Surr)	100		78 - 122					08/22/25 16:24	1
Dibromofluoromethane (Surr)	103		73 - 120					08/22/25 16:24	1

Client Sample Results

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

Job ID: 240-231293-1

Client Sample ID: MW-31_081925

Lab Sample ID: 240-231293-4

Date Collected: 08/19/25 10:55

Matrix: Water

Date Received: 08/21/25 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			08/26/25 10:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		68 - 127					08/26/25 10:14	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			08/22/25 16:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 16:50	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 16:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 16:50	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 16:50	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 16:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		62 - 137					08/22/25 16:50	1
4-Bromofluorobenzene (Surr)	95		56 - 136					08/22/25 16:50	1
Toluene-d8 (Surr)	102		78 - 122					08/22/25 16:50	1
Dibromofluoromethane (Surr)	108		73 - 120					08/22/25 16:50	1

Surrogate Summary

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

Job ID: 240-231293-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-231293-1	TRIP BLANK_116	114	96	100	104
240-231293-2	MW-30_081925	118	94	101	104
240-231293-3	DUP-05	116	92	100	103
240-231293-4	MW-31_081925	120	95	102	108
240-231293-4 MS	MW-31-MS_081925	113	102	104	102
240-231293-4 MSD	MW-31-MSD_081925	113	100	102	101
LCS 240-668844/5	Lab Control Sample	110	99	101	101
MB 240-668844/10	Method Blank	114	97	103	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

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (68-127)			
240-231293-2	MW-30_081925	81			
240-231293-3	DUP-05	82			
240-231293-4	MW-31_081925	82			
240-231293-4 MS	MW-31-MS_081925	79			
240-231293-4 MSD	MW-31-MSD_081925	81			
240-231362-C-2 MS	Matrix Spike	77			
240-231362-C-2 MSD	Matrix Spike Duplicate	77			
LCS 240-669181/5	Lab Control Sample	81			
LCS 240-669266/5	Lab Control Sample	81			
MB 240-669181/7	Method Blank	81			
MB 240-669266/7	Method Blank	82			
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					

QC Sample Results

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

Job ID: 240-231293-1

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

Lab Sample ID: MB 240-668844/10

Matrix: Water

Analysis Batch: 668844

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			08/22/25 12:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 12:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 12:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 12:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 12:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 12:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137		08/22/25 12:57	1
4-Bromofluorobenzene (Surr)	97		56 - 136		08/22/25 12:57	1
Toluene-d8 (Surr)	103		78 - 122		08/22/25 12:57	1
Dibromofluoromethane (Surr)	102		73 - 120		08/22/25 12:57	1

Lab Sample ID: LCS 240-668844/5

Matrix: Water

Analysis Batch: 668844

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	26.4		ug/L		132	63 - 134
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	77 - 123
Tetrachloroethene	20.0	20.2		ug/L		101	76 - 123
trans-1,2-Dichloroethene	20.0	22.7		ug/L		114	75 - 124
Trichloroethene	20.0	19.7		ug/L		99	70 - 122
Vinyl chloride	20.0	20.0		ug/L		100	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	101		78 - 122
Dibromofluoromethane (Surr)	101		73 - 120

Lab Sample ID: 240-231293-4 MS

Matrix: Water

Analysis Batch: 668844

Client Sample ID: MW-31-MS_081925

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	23.9		ug/L		120	56 - 135
cis-1,2-Dichloroethene	1.0	U	20.0	18.5		ug/L		93	66 - 128
Tetrachloroethene	1.0	U	20.0	19.0		ug/L		95	62 - 131
trans-1,2-Dichloroethene	1.0	U	20.0	21.4		ug/L		107	56 - 136
Trichloroethene	1.0	U	20.0	17.7		ug/L		88	61 - 124
Vinyl chloride	1.0	U	20.0	20.0		ug/L		100	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		62 - 137
4-Bromofluorobenzene (Surr)	102		56 - 136
Toluene-d8 (Surr)	104		78 - 122

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QC Sample Results

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

Job ID: 240-231293-1

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

Lab Sample ID: 240-231293-4 MS

Matrix: Water

Analysis Batch: 668844

Client Sample ID: MW-31-MS_081925

Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	102		73 - 120

Lab Sample ID: 240-231293-4 MSD

Matrix: Water

Analysis Batch: 668844

Client Sample ID: MW-31-MSD_081925

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	26.6		ug/L		133	56 - 135	11	26
cis-1,2-Dichloroethene	1.0	U	20.0	20.0		ug/L		100	66 - 128	8	14
Tetrachloroethene	1.0	U	20.0	21.7		ug/L		108	62 - 131	13	20
trans-1,2-Dichloroethene	1.0	U	20.0	23.0		ug/L		115	56 - 136	7	15
Trichloroethene	1.0	U	20.0	19.8		ug/L		99	61 - 124	11	15
Vinyl chloride	1.0	U	20.0	19.9		ug/L		99	43 - 157	1	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	102		78 - 122
Dibromofluoromethane (Surr)	101		73 - 120

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

Lab Sample ID: MB 240-669181/7

Matrix: Water

Analysis Batch: 669181

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			08/25/25 14:37	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	81		68 - 127		08/25/25 14:37	1			

Lab Sample ID: LCS 240-669181/5

Matrix: Water

Analysis Batch: 669181

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	7.54		ug/L		75	75 - 121

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		68 - 127

Lab Sample ID: 240-231362-C-2 MS

Matrix: Water

Analysis Batch: 669181

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	8.17		ug/L		82	20 - 180

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QC Sample Results

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

Job ID: 240-231293-1

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

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

Lab Sample ID: 240-231362-C-2 MSD
Matrix: Water
Analysis Batch: 669181

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	7.83		ug/L		78	20 - 180	4	20

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

Lab Sample ID: MB 240-669266/7
Matrix: Water
Analysis Batch: 669266

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			08/26/25 09:50	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	82		68 - 127		08/26/25 09:50	1			

Lab Sample ID: LCS 240-669266/5
Matrix: Water
Analysis Batch: 669266

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	7.71		ug/L		77	75 - 121

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		68 - 127

Lab Sample ID: 240-231293-4 MS
Matrix: Water
Analysis Batch: 669266

Client Sample ID: MW-31-MS_081925
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	7.71		ug/L		77	20 - 180

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

Lab Sample ID: 240-231293-4 MSD
Matrix: Water
Analysis Batch: 669266

Client Sample ID: MW-31-MSD_081925
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	7.84		ug/L		78	20 - 180	2	20

Eurofins Cleveland

QC Sample Results

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

Job ID: 240-231293-1

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

Lab Sample ID: 240-231293-4 MSD
Matrix: Water
Analysis Batch: 669266

Client Sample ID: MW-31-MSD_081925
Prep Type: Total/NA

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		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: 240-231293-1

GC/MS VOA

Analysis Batch: 668844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-231293-1	TRIP BLANK_116	Total/NA	Water	8260D	
240-231293-2	MW-30_081925	Total/NA	Water	8260D	
240-231293-3	DUP-05	Total/NA	Water	8260D	
240-231293-4	MW-31_081925	Total/NA	Water	8260D	
MB 240-668844/10	Method Blank	Total/NA	Water	8260D	
LCS 240-668844/5	Lab Control Sample	Total/NA	Water	8260D	
240-231293-4 MS	MW-31-MS_081925	Total/NA	Water	8260D	
240-231293-4 MSD	MW-31-MSD_081925	Total/NA	Water	8260D	

Analysis Batch: 669181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-231293-2	MW-30_081925	Total/NA	Water	8260D SIM	
240-231293-3	DUP-05	Total/NA	Water	8260D SIM	
MB 240-669181/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-669181/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-231362-C-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-231362-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Analysis Batch: 669266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-231293-4	MW-31_081925	Total/NA	Water	8260D SIM	
MB 240-669266/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-669266/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-231293-4 MS	MW-31-MS_081925	Total/NA	Water	8260D SIM	
240-231293-4 MSD	MW-31-MSD_081925	Total/NA	Water	8260D SIM	

Lab Chronicle

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

Job ID: 240-231293-1

Client Sample ID: TRIP BLANK_116

Lab Sample ID: 240-231293-1

Date Collected: 08/19/25 00:00

Matrix: Water

Date Received: 08/21/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	668844	AJS	EET CLE	08/22/25 13:23

Client Sample ID: MW-30_081925

Lab Sample ID: 240-231293-2

Date Collected: 08/19/25 09:35

Matrix: Water

Date Received: 08/21/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	668844	AJS	EET CLE	08/22/25 15:58
Total/NA	Analysis	8260D SIM		1	669181	R5XG	EET CLE	08/25/25 15:01

Client Sample ID: DUP-05

Lab Sample ID: 240-231293-3

Date Collected: 08/19/25 00:00

Matrix: Water

Date Received: 08/21/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	668844	AJS	EET CLE	08/22/25 16:24
Total/NA	Analysis	8260D SIM		1	669181	R5XG	EET CLE	08/25/25 15:25

Client Sample ID: MW-31_081925

Lab Sample ID: 240-231293-4

Date Collected: 08/19/25 10:55

Matrix: Water

Date Received: 08/21/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	668844	AJS	EET CLE	08/22/25 16:50
Total/NA	Analysis	8260D SIM		1	669266	R5XG	EET CLE	08/26/25 10:14

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 240-231293-1

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	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	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	09-15-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

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

[illegible]

Eurofins - Cleveland Sample Receipt Form/Narrative Barberton Facility		Login # : _____
Client <u>Arca dia</u>		Site Name _____
Cooler Received on <u>8/28/25</u>	UPS <u>FAS</u> <u>Waypoint</u>	Opened on <u>8/21/25</u>
Receipt After-hours: Drop-off Date/Time _____		Eurofins Courier _____ Other _____
Eurofins Cooler # <u>EC</u>	Foam Box _____ Client Cooler _____ Box _____ Other _____	Storage Location _____
Packing material used: <u>Bubble</u> Wrap _____ Foam _____ Plastic Bag _____ None _____ Other _____		
COOLANT: <u>Wet Ice</u> _____ Blue Ice _____ Dry Ice _____ Water _____ None _____		
1. Cooler temperature upon receipt _____ °C		
IR GUN # <u>13</u>	(CF <u>+</u> <u>2</u> °C)	Observed Cooler Temp. _____ °C
Corrected Cooler Temp. _____ °C		
Tests that are not checked for pH by Receiving: VOA's Oil and Grease TOC		
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ -Were the seals on the outside of the cooler(s) signed & dated? <u>(Yes)</u> No <u>NA</u> -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? <u>(Yes)</u> No <u>NA</u> -Were tamper/custody seals intact and uncompromised? <u>(Yes)</u> No <u>NA</u> 3. Shippers' packing slip attached to the cooler(s)? <u>(Yes)</u> No <u>NA</u> 4. Did custody papers accompany the sample(s)? <u>(Yes)</u> No <u>NA</u> 5. Were the custody papers relinquished & signed in the appropriate place? <u>(Yes)</u> No <u>NA</u> 6. Was/were the person(s) who collected the samples clearly identified on the COC? <u>(Yes)</u> No <u>NA</u> 7. Did all bottles arrive in good condition (Unbroken)? <u>(Yes)</u> No <u>NA</u> 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? <u>(Yes)</u> No <u>NA</u> 9. For each sample, does the COC specify preservative(s) <u>(Y/N)</u> , # of containers <u>(Y/N)</u> , and sample type of grab/comp <u>(Y/N)</u> ? <u>(Yes)</u> No <u>NA</u> 10. Were correct bottle(s) used for the test(s) indicated? <u>(Yes)</u> No <u>NA</u> 11. Sufficient quantity received to perform indicated analyses? <u>(Yes)</u> No <u>NA</u> 12. Are these work share samples and all listed on the COC? <u>(Yes)</u> No <u>NA</u> If yes, Questions 13-17 have been checked at the originating laboratory. 13. Were all preserved sample(s) at the correct pH upon receipt? <u>(Yes)</u> No <u>NA</u> pH Strip Lot# HC463162 14. Were VOAs on the COC? <u>(Yes)</u> No <u>NA</u> 15. Were air bubbles >6 mm in any VOA vials? <u>(Yes)</u> No <u>NA</u> Larger than this. <u>(Yes)</u> No <u>NA</u> 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ <u>(Yes)</u> No <u>NA</u> 17. Was a LL Hg or Me Hg trip blank present? <u>(Yes)</u> No <u>NA</u>		
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____ Concerning _____		
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		Labeled by: _____ Labels Verified by: _____
19. SAMPLE CONDITION Sample(s) _____ were received after the recommended holding time had expired. Sample(s) _____ were received in a broken container. Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)		
20. SAMPLE PRESERVATION Sample(s) _____ were further preserved in the laboratory. Time preserved: _____ Preservative(s) added/Lot number(s): _____ VOA Sample Preservation - Date/Time VOAs Frozen: _____		

Login #: _____

8/28/2025

[illegible]

8/21/2025

LogIn Container Summary Report

240-231293

8/28/2025

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservation Temp	Preservation Added	Preservation Lot Number
TRIP BLANK_116	240-231293-A-1	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-30_081925	240-231293-A-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-30_081925	240-231293-B-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-30_081925	240-231293-C-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-30_081925	240-231293-D-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-30_081925	240-231293-E-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-30_081925	240-231293-F-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-05	240-231293-A-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-05	240-231293-B-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-05	240-231293-C-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-05	240-231293-D-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-05	240-231293-E-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
DUP-05	240-231293-F-3	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-A-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-A-4 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-A-4 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-B-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-B-4 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-B-4 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-C-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-C-4 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-C-4 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-D-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-D-4 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-D-4 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-E-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-E-4 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-E-4 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-F-4	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-F-4 MS	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____
MW-31_081925	240-231293-F-4 MSD	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____	_____

DATA VERIFICATION REPORT



August 28, 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 LTP

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 231293-1

Sample date: 2025-08-19

Report received by CADENA: 2025-08-28

Initial Data Verification completed by CADENA: 2025-08-28

Number of Samples:4

Sample Matrices:Water

Test Categories:GCMS VOC

Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

The following minor QC exceptions or missing information were noted:

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

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

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

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: 231293-1

Sample Name: TRIP BLANK_116

Lab Sample ID: 2402312931

Sample Date: 8/19/2025

MW-30_081925

2402312932

8/19/2025

DUP-05

2402312933

8/19/2025

MW-31_081925

2402312934

8/19/2025

Analyte	Cas No.	Report				Valid	Report				Valid	Report				Valid	Report				Valid
		Result	Limit	Units	Qualifier		Result	Limit	Units	Qualifier		Result	Limit	Units	Qualifier		Result	Limit	Units	Qualifier	

GC/MS VOC

OSW-8260D

1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---

OSW-8260DSIM

1,4-Dioxane	123-91-1					8.6	2.0	ug/l	---	8.9	2.0	ug/l	---	ND	2.0	ug/l	---
-------------	----------	--	--	--	--	-----	-----	------	-----	-----	-----	------	-----	----	-----	------	-----