

# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

Ford LTP - On Site

## JOB NUMBER

240-195678-1

# Eurofins Cleveland

## Job Notes

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## Authorization



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# Definitions/Glossary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

## 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.
α	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/Site: Ford LTP - On Site

Job ID: 240-195678-1

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## Job ID: 240-195678-1

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### Laboratory: Eurofins Cleveland

#### Narrative

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#### Job Narrative 240-195678-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample 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 11/17/2023 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.7°C, 2.9°C and 3.5°C

#### GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Method Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

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 - On Site

Job ID: 240-195678-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-195678-1	TRIP BLANK_100	Water	11/14/23 00:00	11/17/23 09:40
240-195678-2	MW-208S_111423	Water	11/14/23 10:15	11/17/23 09:40
240-195678-3	MW-15-61D_111423	Water	11/14/23 12:45	11/17/23 09:40
240-195678-4	MW-15-60D_111423	Water	11/14/23 14:53	11/17/23 09:40

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

# Detection Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

**Client Sample ID: TRIP BLANK\_100**

**Lab Sample ID: 240-195678-1**

No Detections.

**Client Sample ID: MW-208S\_111423**

**Lab Sample ID: 240-195678-2**

No Detections.

**Client Sample ID: MW-15-61D\_111423**

**Lab Sample ID: 240-195678-3**

No Detections.

**Client Sample ID: MW-15-60D\_111423**

**Lab Sample ID: 240-195678-4**

No Detections.

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

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

**Client Sample ID: TRIP BLANK\_100**

**Lab Sample ID: 240-195678-1**

**Date Collected: 11/14/23 00:00**

**Matrix: Water**

**Date Received: 11/17/23 09:40**

**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			11/24/23 11:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/24/23 11:48	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 11:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/24/23 11:48	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 11:48	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/24/23 11:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		62 - 137		11/24/23 11:48	1
4-Bromofluorobenzene (Surr)	94		56 - 136		11/24/23 11:48	1
Toluene-d8 (Surr)	108		78 - 122		11/24/23 11:48	1
Dibromofluoromethane (Surr)	90		73 - 120		11/24/23 11:48	1

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

**Client Sample ID: MW-208S\_111423**

**Lab Sample ID: 240-195678-2**

**Date Collected: 11/14/23 10:15**

**Matrix: Water**

**Date Received: 11/17/23 09:40**

**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			11/27/23 20:11	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	99		66 - 120					11/27/23 20:11	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			11/24/23 12:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/24/23 12:13	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 12:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/24/23 12:13	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 12:13	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/24/23 12:13	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	93		62 - 137					11/24/23 12:13	1
4-Bromofluorobenzene (Surr)	91		56 - 136					11/24/23 12:13	1
Toluene-d8 (Surr)	101		78 - 122					11/24/23 12:13	1
Dibromofluoromethane (Surr)	86		73 - 120					11/24/23 12:13	1

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

**Client Sample ID: MW-15-61D\_111423**

**Lab Sample ID: 240-195678-3**

Date Collected: 11/14/23 12:45

Matrix: Water

Date Received: 11/17/23 09:40

**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			11/27/23 20:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		66 - 120		11/27/23 20:35	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			11/24/23 12:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/24/23 12:38	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 12:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/24/23 12:38	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 12:38	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/24/23 12:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		62 - 137		11/24/23 12:38	1
4-Bromofluorobenzene (Surr)	87		56 - 136		11/24/23 12:38	1
Toluene-d8 (Surr)	104		78 - 122		11/24/23 12:38	1
Dibromofluoromethane (Surr)	91		73 - 120		11/24/23 12:38	1

# Client Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

**Client Sample ID: MW-15-60D\_111423**

**Lab Sample ID: 240-195678-4**

**Date Collected: 11/14/23 14:53**

**Matrix: Water**

**Date Received: 11/17/23 09:40**

**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			11/27/23 20:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		66 - 120		11/27/23 20:59	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			11/24/23 13:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/24/23 13:03	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 13:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/24/23 13:03	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 13:03	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/24/23 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		62 - 137		11/24/23 13:03	1
4-Bromofluorobenzene (Surr)	96		56 - 136		11/24/23 13:03	1
Toluene-d8 (Surr)	107		78 - 122		11/24/23 13:03	1
Dibromofluoromethane (Surr)	85		73 - 120		11/24/23 13:03	1

# Surrogate Summary

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

## 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	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-195678-1	TRIP BLANK_100	93	94	108	90
240-195678-2	MW-208S_111423	93	91	101	86
240-195678-3	MW-15-61D_111423	97	87	104	91
240-195678-4	MW-15-60D_111423	94	96	107	85
240-195684-E-2 MS	Matrix Spike	90	101	110	88
240-195684-F-2 MSD	Matrix Spike Duplicate	93	104	107	89
LCS 240-595675/4	Lab Control Sample	89	98	110	92
MB 240-595675/7	Method Blank	87	96	104	81

#### 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
		(66-120)
240-195678-2	MW-208S_111423	99
240-195678-3	MW-15-61D_111423	99
240-195678-4	MW-15-60D_111423	97
240-195686-L-5 MS	Matrix Spike	94
240-195686-Q-5 MSD	Matrix Spike Duplicate	94
LCS 240-595844/4	Lab Control Sample	98
MB 240-595844/6	Method Blank	98

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

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

**Lab Sample ID: MB 240-595675/7**  
**Matrix: Water**  
**Analysis Batch: 595675**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			11/24/23 10:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/24/23 10:07	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 10:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/24/23 10:07	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/24/23 10:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/24/23 10:07	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	87		62 - 137		11/24/23 10:07	1
4-Bromofluorobenzene (Surr)	96		56 - 136		11/24/23 10:07	1
Toluene-d8 (Surr)	104		78 - 122		11/24/23 10:07	1
Dibromofluoromethane (Surr)	81		73 - 120		11/24/23 10:07	1

**Lab Sample ID: LCS 240-595675/4**  
**Matrix: Water**  
**Analysis Batch: 595675**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloroethene	25.0	26.7		ug/L		107	63 - 134
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	77 - 123
Tetrachloroethene	25.0	28.9		ug/L		116	76 - 123
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	75 - 124
Trichloroethene	25.0	24.3		ug/L		97	70 - 122
Vinyl chloride	12.5	13.4		ug/L		107	60 - 144

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	89		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	110		78 - 122
Dibromofluoromethane (Surr)	92		73 - 120

**Lab Sample ID: 240-195684-E-2 MS**  
**Matrix: Water**  
**Analysis Batch: 595675**

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

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	1.0	U	25.0	25.6		ug/L		102	56 - 135
cis-1,2-Dichloroethene	1.0	U	25.0	25.9		ug/L		104	66 - 128
Tetrachloroethene	1.0	U	25.0	23.4		ug/L		94	62 - 131
trans-1,2-Dichloroethene	1.0	U	25.0	25.1		ug/L		101	56 - 136
Trichloroethene	1.0	U	25.0	23.9		ug/L		96	61 - 124
Vinyl chloride	0.93	J	12.5	13.8		ug/L		103	43 - 157

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	90		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	110		78 - 122

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# QC Sample Results

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

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

**Lab Sample ID: 240-195684-E-2 MS**  
**Matrix: Water**  
**Analysis Batch: 595675**

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

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	88		73 - 120

**Lab Sample ID: 240-195684-F-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 595675**

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

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits	RPD		
1,1-Dichloroethene	1.0	U	25.0	27.5		ug/L		110	56 - 135	7	26	
cis-1,2-Dichloroethene	1.0	U	25.0	26.5		ug/L		106	66 - 128	2	14	
Tetrachloroethene	1.0	U	25.0	27.0		ug/L		108	62 - 131	14	20	
trans-1,2-Dichloroethene	1.0	U	25.0	23.0		ug/L		92	56 - 136	9	15	
Trichloroethene	1.0	U	25.0	24.3		ug/L		97	61 - 124	2	15	
Vinyl chloride	0.93	J	12.5	15.0		ug/L		113	43 - 157	8	24	

  

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	107		78 - 122
Dibromofluoromethane (Surr)	89		73 - 120

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

**Lab Sample ID: MB 240-595844/6**  
**Matrix: Water**  
**Analysis Batch: 595844**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			11/27/23 17:47	1

  

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		66 - 120		11/27/23 17:47	1

**Lab Sample ID: LCS 240-595844/4**  
**Matrix: Water**  
**Analysis Batch: 595844**

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

Analyte	Spike	LCS		Unit	D	%Rec	%Rec
		Result	Qualifier				
1,4-Dioxane	10.0	10.2		ug/L		102	80 - 122

  

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		66 - 120

**Lab Sample ID: 240-195686-L-5 MS**  
**Matrix: Water**  
**Analysis Batch: 595844**

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

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				
1,4-Dioxane	2.0	U	10.0	11.1		ug/L		111	51 - 153

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# QC Sample Results

Client: ARCADIS US Inc  
 Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	94		66 - 120

Lab Sample ID: 240-195686-Q-5 MSD  
 Matrix: Water  
 Analysis Batch: 595844

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

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
1,4-Dioxane	2.0	U	10.0	10.8		ug/L		108	51 - 153	3	16

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	94		66 - 120

- 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 - On Site

Job ID: 240-195678-1

## GC/MS VOA

### Analysis Batch: 595675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195678-1	TRIP BLANK_100	Total/NA	Water	8260D	
240-195678-2	MW-208S_111423	Total/NA	Water	8260D	
240-195678-3	MW-15-61D_111423	Total/NA	Water	8260D	
240-195678-4	MW-15-60D_111423	Total/NA	Water	8260D	
MB 240-595675/7	Method Blank	Total/NA	Water	8260D	
LCS 240-595675/4	Lab Control Sample	Total/NA	Water	8260D	
240-195684-E-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-195684-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

### Analysis Batch: 595844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195678-2	MW-208S_111423	Total/NA	Water	8260D SIM	
240-195678-3	MW-15-61D_111423	Total/NA	Water	8260D SIM	
240-195678-4	MW-15-60D_111423	Total/NA	Water	8260D SIM	
MB 240-595844/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-595844/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-195686-L-5 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-195686-Q-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

# Lab Chronicle

Client: ARCADIS US Inc  
Project/Site: Ford LTP - On Site

Job ID: 240-195678-1

**Client Sample ID: TRIP BLANK\_100**

**Lab Sample ID: 240-195678-1**

Date Collected: 11/14/23 00:00

Matrix: Water

Date Received: 11/17/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	595675	LEE	EET CLE	11/24/23 11:48

**Client Sample ID: MW-208S\_111423**

**Lab Sample ID: 240-195678-2**

Date Collected: 11/14/23 10:15

Matrix: Water

Date Received: 11/17/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	595675	LEE	EET CLE	11/24/23 12:13
Total/NA	Analysis	8260D SIM		1	595844	CS	EET CLE	11/27/23 20:11

**Client Sample ID: MW-15-61D\_111423**

**Lab Sample ID: 240-195678-3**

Date Collected: 11/14/23 12:45

Matrix: Water

Date Received: 11/17/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	595675	LEE	EET CLE	11/24/23 12:38
Total/NA	Analysis	8260D SIM		1	595844	CS	EET CLE	11/27/23 20:35

**Client Sample ID: MW-15-60D\_111423**

**Lab Sample ID: 240-195678-4**

Date Collected: 11/14/23 14:53

Matrix: Water

Date Received: 11/17/23 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	595675	LEE	EET CLE	11/24/23 13:03
Total/NA	Analysis	8260D SIM		1	595844	CS	EET CLE	11/27/23 20:59

**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 - On Site

Job ID: 240-195678-1

## 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
California	State	2927	02-27-24
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23 *
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Eurofins - Cleveland Sample Receipt Form/Narrative  
Barberton Facility

Login #: 195678

Client Arcadis

Site Name \_\_\_\_\_

Cooler unpacked by: [Signature]

Cooler Received on 11-17-23

Opened on 11-17-23

FedEx: 1<sup>st</sup> Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time \_\_\_\_\_

Storage Location \_\_\_\_\_

Eurofins Cooler # EC Foam Box Client Cooler Box Other \_\_\_\_\_

Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

See Multiple Cooler Form

IR GUN # 21 (CF 70.2 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 3

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

-Were tamper/custody seals intact and uncompromised?

Yes  No

3. Shippers' packing slip attached to the cooler(s)?

Yes  No

4. Did custody papers accompany the sample(s)?

Yes  No

5. Were the custody papers relinquished & signed in the appropriate place?

Yes  No

6. Was/were the person(s) who collected the samples clearly identified on the COC?

Yes  No

7. Did all bottles arrive in good condition (Unbroken)?

Yes  No

8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?

Yes  No

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

10. Were correct bottle(s) used for the test(s) indicated?

Yes  No

11. Sufficient quantity received to perform indicated analyses?

Yes  No

12. Are these work share samples and all listed on the COC?

Yes  No

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# HC316719

14. Were VOAs on the COC?

Yes  No

15. Were air bubbles >6 mm in any VOA vials?  Larger than this.

Yes  No  NA

16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_

Yes  No

17. Was a LL Hg or Me Hg trip blank present? \_\_\_\_\_

Yes  No

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: \_\_\_\_\_





# DATA VERIFICATION REPORT



December 05, 2023

Kris Hinskey  
Arcadis of Michigan  
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: 30167538.401.03- onsite groundwater  
Event Specific Scope of Work References: Sample COC  
Laboratory: Eurofins Environment Testing LLC - Cleveland  
Laboratory submittal: 195678-1  
Sample date: 2023-11-14  
Report received by CADENA: 2023-12-05  
Initial Data Verification completed by CADENA: 2023-12-05  
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.**

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.

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 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: 195678-1

Analyte	Cas No.	Sample Name: TRIP BLANK_100				MW-208S_111423				MW-15-61D_111423				MW-15-60D_111423			
		Result	Limit	Units	Valid Qualifier	Result	Limit	Units	Valid Qualifier	Result	Limit	Units	Valid Qualifier	Result	Limit	Units	Valid Qualifier
		2401956781				2401956782				2401956783				2401956784			
		11/14/2023				11/14/2023				11/14/2023				11/14/2023			

### 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					ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---
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