

# ANALYTICAL REPORT

## PREPARED FOR

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Novi, Michigan 48377

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## JOB DESCRIPTION

Ford LTP

## JOB NUMBER

240-231300-1

# Eurofins Cleveland

## Job Notes

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## Authorization



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## Definitions/Glossary

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

Job ID: 240-231300-1

### 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: 240-231300-1

**Job ID: 240-231300-1**

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## Job Narrative 240-231300-1

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\_6 (240-231300-1) and (240-231293-B-4).

Method 8260D: Batch 240-668993 is reported without a matrix spike/matrix spike duplicate (MS/MSD). The batch MS/MSD was originally performed on another client's sample, and this test was put on hold at client request. This MS/MSD result does not have immediate bearing on any samples except for the actual sample spiked. The associated laboratory control sample (LCS) met acceptance criteria and provides long-term precision and accuracy for this batch. The samples affected are MW-214S\_081925 (240-231300-2).

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: 240-231300-1

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: 240-231300-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-231300-1	TRIP BLANK_6	Water	08/19/25 00:00	08/21/25 08:00	Michigan
240-231300-2	MW-214S_081925	Water	08/19/25 14:35	08/21/25 08:00	Michigan

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- 9
- 10
- 11
- 12
- 13
- 14

## Detection Summary

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

Job ID: 240-231300-1

**Client Sample ID: TRIP BLANK\_6**

**Lab Sample ID: 240-231300-1**

No Detections.

**Client Sample ID: MW-214S\_081925**

**Lab Sample ID: 240-231300-2**

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: 240-231300-1

Client Sample ID: TRIP BLANK\_6

Lab Sample ID: 240-231300-1

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 15:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 15:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 15:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 15:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 15:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		62 - 137		08/22/25 15:32	1
4-Bromofluorobenzene (Surr)	96		56 - 136		08/22/25 15:32	1
Toluene-d8 (Surr)	101		78 - 122		08/22/25 15:32	1
Dibromofluoromethane (Surr)	105		73 - 120		08/22/25 15:32	1

# Client Sample Results

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

Job ID: 240-231300-1

Client Sample ID: MW-214S\_081925

Lab Sample ID: 240-231300-2

Date Collected: 08/19/25 14:35

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	2.0	U	2.0	0.86	ug/L			08/25/25 18:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	77		68 - 127					08/25/25 18:13	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			08/23/25 12:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/25 12:43	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/25 12:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/25 12:43	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/25 12:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/25 12:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137					08/23/25 12:43	1
4-Bromofluorobenzene (Surr)	98		56 - 136					08/23/25 12:43	1
Toluene-d8 (Surr)	100		78 - 122					08/23/25 12:43	1
Dibromofluoromethane (Surr)	100		73 - 120					08/23/25 12:43	1

# Surrogate Summary

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

Job ID: 240-231300-1

## 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)
240-231293-B-4 MS	Matrix Spike	113	102	104	102
240-231293-B-4 MSD	Matrix Spike Duplicate	113	100	102	101
240-231300-1	TRIP BLANK_6	118	96	101	105
240-231300-2	MW-214S_081925	106	98	100	100
LCS 240-668844/5	Lab Control Sample	110	99	101	101
LCS 240-668993/5	Lab Control Sample	100	104	104	100
MB 240-668844/10	Method Blank	114	97	103	102
MB 240-668993/9	Method Blank	106	101	102	101

### 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)			
240-231300-2	MW-214S_081925	77			
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			
MB 240-669181/7	Method Blank	81			

### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-231300-1

## 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-B-4 MS

Matrix: Water

Analysis Batch: 668844

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	1.0	U	20.0	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: 240-231300-1

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

Lab Sample ID: 240-231293-B-4 MS

Matrix: Water

Analysis Batch: 668844

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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

Lab Sample ID: 240-231293-B-4 MSD

Matrix: Water

Analysis Batch: 668844

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	20.0	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

Lab Sample ID: MB 240-668993/9

Matrix: Water

Analysis Batch: 668993

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			08/23/25 11:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/25 11:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/25 11:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/25 11:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/25 11:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/25 11:32	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137		08/23/25 11:32	1
4-Bromofluorobenzene (Surr)	101		56 - 136		08/23/25 11:32	1
Toluene-d8 (Surr)	102		78 - 122		08/23/25 11:32	1
Dibromofluoromethane (Surr)	101		73 - 120		08/23/25 11:32	1

Lab Sample ID: LCS 240-668993/5

Matrix: Water

Analysis Batch: 668993

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	26.1		ug/L		105	63 - 134
cis-1,2-Dichloroethene	25.0	24.7		ug/L		99	77 - 123
Tetrachloroethene	25.0	23.6		ug/L		94	76 - 123
trans-1,2-Dichloroethene	25.0	24.7		ug/L		99	75 - 124
Trichloroethene	25.0	23.7		ug/L		95	70 - 122

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# QC Sample Results

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

Job ID: 240-231300-1

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

Lab Sample ID: LCS 240-668993/5

Matrix: Water

Analysis Batch: 668993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	25.0	22.4		ug/L		89	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	104		78 - 122
Dibromofluoromethane (Surr)	100		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

Surrogate	MB %Recovery	MB 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

Surrogate	LCS %Recovery	LCS 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

Surrogate	MS %Recovery	MS 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

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QC Sample Results

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

Job ID: 240-231300-1

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

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

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

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

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## QC Association Summary

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

Job ID: 240-231300-1

### GC/MS VOA

#### Analysis Batch: 668844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-231300-1	TRIP BLANK_6	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-B-4 MS	Matrix Spike	Total/NA	Water	8260D	
240-231293-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

#### Analysis Batch: 668993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-231300-2	MW-214S_081925	Total/NA	Water	8260D	
MB 240-668993/9	Method Blank	Total/NA	Water	8260D	
LCS 240-668993/5	Lab Control Sample	Total/NA	Water	8260D	

#### Analysis Batch: 669181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-231300-2	MW-214S_081925	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	



Lab Chronicle

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

Job ID: 240-231300-1

Client Sample ID: TRIP BLANK\_6  
Date Collected: 08/19/25 00:00  
Date Received: 08/21/25 08:00

Lab Sample ID: 240-231300-1  
Matrix: Water

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 15:32

Client Sample ID: MW-214S\_081925  
Date Collected: 08/19/25 14:35  
Date Received: 08/21/25 08:00

Lab Sample ID: 240-231300-2  
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	668993	SAM	EET CLE	08/23/25 12:43
Total/NA	Analysis	8260D SIM		1	669181	R5XG	EET CLE	08/25/25 18:13

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: 240-231300-1

### 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

Client Contact						Regulatory program:								TestAmerica Laboratories, Inc.																							
Company Name: Arcadis						Client Project Manager: Megan Meckley				Site Contact: Samantha Szaichler				Lab Contact: Mike DelMonico			COC No:																				
Address: 28550 Cabot Drive, Suite 500						Telephone: 248-994-2240				Telephone: 248-994-2240				Telephone: 330-497-9396			1 of 1 COCs																				
City/State/Zip: Novi, MI, 48377						Email: megan.meckley@arcadis.com				Analyses Turnaround Time				Analyses							For lab use only																
Phone: 248-994-2240						Sampler Name: Amina Torres				TAT if different from below 10 day <input type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day											Walk-in client																
Project Name: Ford LTP						Method of Shipment/Carrier:															Lab sampling																
Project Number: 30251157.401.04						Shipping/Tracking No:															Job/SDG No:																
PO # US3460025888																																					
Sample Identification						Sample Date		Sample Time		Matrix					Containers & Preservatives					Filtered Sample (V/N)		Composite-C / Grab-G		Analyses							Sample Specific Notes / Special Instructions:						
						Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc	NH4OH	Unpres	Other:			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										
TRIP BLANK_ 6														1						NG	X	X	X	X	X			1 Trip Blank									
MW-24S-081925						8/19/25	18:35							6						NG	X	X	X	X	X			3 VOAs for 8260D 3 VOAs for 8260D SIM									
<div style="text-align: center;">A 8/19/25</div>																																					
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose By Lab <input type="checkbox"/> Archive For _____ Months																															
Special Instructions/QC Requirements & Comments: Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728 Level IV Reporting requested. 12400 Beldon Ct.																																					
Relinquished by: [Signature]						Company: Arcadis				Date/Time: 8/19/25 15:20				Received by: Novi Cold Storage				Company: Arcadis				Date/Time: 08/19/25 18:15															
Relinquished by: [Signature]						Company: Arcadis				Date/Time: 8/20/25 11:20				Received by: [Signature]				Company: EETA				Date/Time: 8/20/25 11:20															
Relinquished by: [Signature]						Company: EETA				Date/Time: 8/20/25 11:20				Received in Laboratory by: [Signature]				Company: EURO				Date/Time: 8/21/25 08:00															

Eurofins - Cleveland Sample Receipt Form/Narrative		Login # _____	
Barberton Facility			
Client <u>Arcadis</u>	Site Name _____	Cooler unpacked by: <u>JPM/LES</u>	
Cooler Received on <u>8/20/25</u>	Opened on <u>8/21/25</u>		
FedEx, 1 <sup>st</sup> Grd Exp _____	UPS FAS <u>Waypoint</u>	Client Drop Off _____	Eurofins Courier _____ Other _____
Receipt After-hours Drop-off Date/Time _____		Storage Location _____	
Eurofins Cooler # <u>EC</u>	Foam Box _____	Client Cooler _____	Box _____ Other _____
Packing material used: <u>Bubble Wrap</u> <u>Wet Ice</u> <u>Blue Ice</u> <u>Dry Ice</u> <u>Water</u> <u>None</u>			
1 Cooler temperature upon receipt <u>See Multiple Cooler Form</u>			
IR GUN # <u>13</u>	(CF + <u>2</u> °C)	Observed Cooler Temp _____ °C	Corrected Cooler Temp _____ °C
2 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> -Were the seals on the outside of the cooler(s) signed & dated? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> -Were tamper/custody seals intact and uncompromised? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 3 Shippers' packing slip attached to the cooler(s)? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 4 Did custody papers accompany the sample(s)? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 5 Were the custody papers relinquished & signed in the appropriate place? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 6 Was/were the person(s) who collected the samples clearly identified on the COC? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 7 Did all bottles arrive in good condition (Unbroken)? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 9 For each sample, does the COC specify preservatives <u>(Y/N)</u> , # of containers <u>(Y/N)</u> , and sample type of grab/cont <u>(Y/N)</u> ? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 10 Were correct bottle(s) used for the test(s) indicated? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 11 Sufficient quantity received to perform indicated analyses? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 12 Are these work share samples and all listed on the COC? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> If yes, Questions 13-17 have been checked at the originating laboratory 13 Were all preserved sample(s) at the correct pH upon receipt? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> pH Strip Lot# HC463162 14 Were VOAAs on the COC? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 15 Were air bubbles >6 mm in any VOA vials? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> <span style="float:right">Larger than this.</span> 16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span> 17 Was a LL Hg or Me Hg trip blank present? <span style="float:right"><input checked="" type="radio"/> Yes <input type="radio"/> No</span>			
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		Concerning _____	
18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES <input type="checkbox"/> 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 _____			

Tests that are not checked for pH by Receiving:  
 VOAs  
 Oil and Grease  
 TOC



8/21/2025

Login Container Summary Report

240-231300

8/26/2025

Temperature readings

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>	<u>Preservation</u>	<u>Preservation</u>
			pH	Temp	Added Lot Number
TRIP BLANK_6	240 231300-A-1	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-214S_081925	240-231300-A-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-214S_081925	240-231300-B 2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-214S_081925	240-231300-C-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-214S_081925	240-231300-D-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-214S_081925	240-231300-E-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____
MW-214S_081925	240-231300-F-2	Voa Vial 40ml - Hydrochloric Acid	_____	_____	_____



# DATA VERIFICATION REPORT



August 27, 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: 231300-1

Sample date: 2025-08-19

Report received by CADENA: 2025-08-27

Initial Data Verification completed by CADENA: 2025-08-27

Number of Samples:2

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, 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:** 231300-1

**Sample Name:** TRIP BLANK\_6

MW-214S\_081925

**Lab Sample ID:** 2402313001

2402313002

**Sample Date:** 8/19/2025

8/19/2025

Analyte	Cas No.	Result	Report		Units	Valid		Report		Valid	
			Limit			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	---		
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---		
Tetrachloroethene	127-18-4	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	---		
Trichloroethene	79-01-6	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	---		
OSW-8260DSIM											
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---		

# Ford Motor Company – Livonia Transmission Project

## Data Review

### Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-231300-1

CADENA Verification Report: 2025-08-27

Analyses Performed By:  
Eurofins Cleveland  
Barberton, Ohio

Report # 60806R  
Review Level: Tier III  
Project: 30251157.401.02

## DATA REVIEW

### SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-231300-1 for samples collected in association with the Ford – Livonia, Michigan site. The review was conducted as a Tier III validation in addition to a verification/Tier II validation review performed by CADENA Inc. and included review of level IV laboratory data package completeness. Only elements of a Tier III validation effort (Tier III) include a detailed review of laboratory raw data to check for errors in calculation, calibration review, internal standard review and compound identification) and omitted deviations from the CADENA verification/Tier II report are documented in this report. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis	
					VOC	VOC SIM
TRIP BLANK_6	240-231300-1	Water	08/19/2025		X	
MW-214S_081925	240-231300-2	Water	08/19/2025		X	X

## DATA REVIEW

### ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of Quality Assurance or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

## DATA REVIEW

### ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260D and 8260D SIM. Data were reviewed in accordance with USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005, November 2020 (with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999), as appropriate.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U    The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
  - B    The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E    The compound was quantitated above the calibration range.
  - D    Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J    The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
  - UJ   The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
  - UB   Analyte considered non-detect at the listed value due to associated blank contamination.
  - R    The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

## DATA REVIEW

### VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

#### 1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260D/8260D-SIM	Water	14 days from collection to analysis	Cool to < 6 °C; pH < 2 with HCl

All samples were analyzed within the specified holding time criteria.

#### 2. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

#### 3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

##### 3.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All compounds associated with the initial calibrations were within the specified control limits.

##### 3.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample ID	Initial / Continuing	Compound	Criteria
TRIP BLANK_6	Continuing Calibration Verification %D	1,1-Dichloroethene	+33.5%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01 <sup>1</sup>	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01 <sup>1</sup>	Non-detect	No Action
		Detect	

## DATA REVIEW

Initial/Continuing	Criteria	Sample Result	Qualification
Initial Calibration	%RSD > 20% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD > 90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	UJ
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D > 90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

Note:

<sup>1</sup>RRF of 0.01 only applies to compounds which are typically poor responding compounds

### 4. Internal Standard Performance

Internal standard performance criteria ensure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

### 5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate sample was not collected for samples from this SDG.

### 6. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

No compounds were detected in the samples within this SDG.

### 7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.



## DATA REVIEW

### DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 8260D/8260D-SIM	Reported		Performance Acceptable		Not Required	
	No	Yes	No	Yes		
<b>GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)</b>						
<b>Tier II Validation</b>						
Holding times/Preservation		X		X		
<b>Tier III Validation</b>						
System performance and column resolution		X		X		
Initial calibration %RSDs		X		X		
Continuing calibration RRFs		X		X		
Continuing calibration %Ds		X	X			
Instrument tune and performance check		X		X		
Ion abundance criteria for each instrument used		X		X		
Field Duplicate RPD	X				X	
Internal standard		X		X		
Compound identification and quantitation						
A. Reconstructed ion chromatograms		X		X		
B. Quantitation Reports		X		X		
C. RT of sample compounds within the established RT windows		X		X		
D. Transcription/calculation errors present		X		X		
E. Reporting limits adjusted to reflect sample dilutions		X		X		

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

## DATA REVIEW

VALIDATION PERFORMED BY: Bindu Sree M B

SIGNATURE: 

DATE: September 04, 2025

PEER REVIEW: Andrew Korycinski

DATE: September 8, 2025

# CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS



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## Definitions/Glossary

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

Job ID: 240-231300-1

### 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

# Client Sample Results

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

Job ID: 240-231300-1

Client Sample ID: TRIP BLANK\_6

Lab Sample ID: 240-231300-1

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	UU	1.0	0.49	ug/L			08/22/25 15:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/22/25 15:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 15:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/22/25 15:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/22/25 15:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/25 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		62 - 137		08/22/25 15:32	1
4-Bromofluorobenzene (Surr)	96		56 - 136		08/22/25 15:32	1
Toluene-d8 (Surr)	101		78 - 122		08/22/25 15:32	1
Dibromofluoromethane (Surr)	105		73 - 120		08/22/25 15:32	1

Client Sample ID: MW-214S\_081925

Lab Sample ID: 240-231300-2

Date Collected: 08/19/25 14:35

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	2.0	U	2.0	0.86	ug/L			08/25/25 18:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	77		68 - 127		08/25/25 18:13	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			08/23/25 12:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/25 12:43	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/25 12:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/25 12:43	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/25 12:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/25 12:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137		08/23/25 12:43	1
4-Bromofluorobenzene (Surr)	98		56 - 136		08/23/25 12:43	1
Toluene-d8 (Surr)	100		78 - 122		08/23/25 12:43	1
Dibromofluoromethane (Surr)	100		73 - 120		08/23/25 12:43	1