

# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

Ford LTP - Off Site

## JOB NUMBER

240-200377-1

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## Job Notes

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## Authorization



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# Definitions/Glossary

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Arcadis U.S., Inc.  
Project: Ford LTP - Off Site

Job ID: 240-200377-1

**Job ID: 240-200377-1**

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## Job Narrative 240-200377-1

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 3/2/2024 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 2.4°C and 3.8°C.

### GC/MS VOA

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 U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

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

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

# Sample Summary

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-200377-1	TRIP BLANK_42	Water	02/28/24 00:00	03/02/24 08:00
240-200377-2	MW-192S_022824	Water	02/28/24 12:25	03/02/24 08:00
240-200377-3	MW-138S_022824	Water	02/28/24 13:45	03/02/24 08:00
240-200377-4	DUP-08	Water	02/28/24 00:00	03/02/24 08:00

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

# Detection Summary

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: TRIP BLANK\_42**

**Lab Sample ID: 240-200377-1**

No Detections.

**Client Sample ID: MW-192S\_022824**

**Lab Sample ID: 240-200377-2**

No Detections.

**Client Sample ID: MW-138S\_022824**

**Lab Sample ID: 240-200377-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.89	J	1.0	0.45	ug/L	1		8260D	Total/NA

**Client Sample ID: DUP-08**

**Lab Sample ID: 240-200377-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.64	J	1.0	0.45	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: Arcadis U.S., Inc.  
 Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: TRIP BLANK\_42**

**Lab Sample ID: 240-200377-1**

Date Collected: 02/28/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 18:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 18:21	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 18:21	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:21	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/11/24 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		62 - 137		03/11/24 18:21	1
4-Bromofluorobenzene (Surr)	86		56 - 136		03/11/24 18:21	1
Toluene-d8 (Surr)	97		78 - 122		03/11/24 18:21	1
Dibromofluoromethane (Surr)	105		73 - 120		03/11/24 18:21	1

# Client Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: MW-192S\_022824**

**Lab Sample ID: 240-200377-2**

Date Collected: 02/28/24 12:25

Matrix: Water

Date Received: 03/02/24 08:00

**Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 14:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		68 - 127					03/08/24 14:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/05/24 14:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/05/24 14:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 14:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/05/24 14:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 14:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/05/24 14:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		62 - 137					03/05/24 14:57	1
4-Bromofluorobenzene (Surr)	88		56 - 136					03/05/24 14:57	1
Toluene-d8 (Surr)	91		78 - 122					03/05/24 14:57	1
Dibromofluoromethane (Surr)	106		73 - 120					03/05/24 14:57	1

# Client Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: MW-138S\_022824**

**Lab Sample ID: 240-200377-3**

Date Collected: 02/28/24 13:45

Matrix: Water

Date Received: 03/02/24 08:00

**Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 18:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		68 - 127					03/08/24 18:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 18:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 18:44	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 18:44	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:44	1
<b>Vinyl chloride</b>	<b>0.89</b>	<b>J</b>	1.0	0.45	ug/L			03/11/24 18:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137					03/11/24 18:44	1
4-Bromofluorobenzene (Surr)	84		56 - 136					03/11/24 18:44	1
Toluene-d8 (Surr)	96		78 - 122					03/11/24 18:44	1
Dibromofluoromethane (Surr)	102		73 - 120					03/11/24 18:44	1

# Client Sample Results

Client: Arcadis U.S., Inc.  
 Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: DUP-08**

**Lab Sample ID: 240-200377-4**

Date Collected: 02/28/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

**Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 18:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		68 - 127					03/08/24 18:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 19:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 19:08	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 19:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 19:08	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 19:08	1
<b>Vinyl chloride</b>	<b>0.64</b>	<b>J</b>	1.0	0.45	ug/L			03/11/24 19:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		62 - 137					03/11/24 19:08	1
4-Bromofluorobenzene (Surr)	83		56 - 136					03/11/24 19:08	1
Toluene-d8 (Surr)	92		78 - 122					03/11/24 19:08	1
Dibromofluoromethane (Surr)	100		73 - 120					03/11/24 19:08	1

# Surrogate Summary

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

## 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)
240-200153-G-2 MS	Matrix Spike	108	97	97	101
240-200153-G-2 MSD	Matrix Spike Duplicate	103	98	93	99
240-200320-B-3 MS	Matrix Spike	100	94	96	96
240-200320-B-3 MSD	Matrix Spike Duplicate	103	92	98	97
240-200377-1	TRIP BLANK_42	112	86	97	105
240-200377-2	MW-192S_022824	110	88	91	106
240-200377-3	MW-138S_022824	114	84	96	102
240-200377-4	DUP-08	113	83	92	100
LCS 240-604963/4	Lab Control Sample	103	99	99	103
LCS 240-605581/4	Lab Control Sample	104	95	99	97
MB 240-604963/7	Method Blank	110	91	93	107
MB 240-605581/7	Method Blank	109	87	95	109

**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)
240-200377-2	MW-192S_022824	110
240-200377-3	MW-138S_022824	120
240-200377-4	DUP-08	107
240-200378-B-2 MS	Matrix Spike	112
240-200378-B-2 MSD	Matrix Spike Duplicate	123
LCS 240-605411/5	Lab Control Sample	110
MB 240-605411/7	Method Blank	111

**Surrogate Legend**

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

# QC Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

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

Lab Sample ID: MB 240-604963/7

Matrix: Water

Analysis Batch: 604963

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			03/05/24 10:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/05/24 10:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 10:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/05/24 10:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 10:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/05/24 10:57	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	110		62 - 137		03/05/24 10:57	1
4-Bromofluorobenzene (Surr)	91		56 - 136		03/05/24 10:57	1
Toluene-d8 (Surr)	93		78 - 122		03/05/24 10:57	1
Dibromofluoromethane (Surr)	107		73 - 120		03/05/24 10:57	1

Lab Sample ID: LCS 240-604963/4

Matrix: Water

Analysis Batch: 604963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	25.0	26.6		ug/L		106	77 - 123
Tetrachloroethene	25.0	27.1		ug/L		108	76 - 123
trans-1,2-Dichloroethene	25.0	28.4		ug/L		114	75 - 124
Trichloroethene	25.0	26.8		ug/L		107	70 - 122
Vinyl chloride	12.5	12.5		ug/L		100	60 - 144

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

Lab Sample ID: 240-200153-G-2 MS

Matrix: Water

Analysis Batch: 604963

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
	Result	Qualifier							
1,1-Dichloroethene	500	U	12500	11700		ug/L		93	56 - 135
cis-1,2-Dichloroethene	500	U	12500	12400		ug/L		99	66 - 128
Tetrachloroethene	500	U	12500	10600		ug/L		85	62 - 131
trans-1,2-Dichloroethene	500	U	12500	13100		ug/L		104	56 - 136
Trichloroethene	500	U	12500	11700		ug/L		93	61 - 124
Vinyl chloride	6100		6250	10600		ug/L		71	43 - 157

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	108		62 - 137
4-Bromofluorobenzene (Surr)	97		56 - 136
Toluene-d8 (Surr)	97		78 - 122

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# QC Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

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

Lab Sample ID: 240-200153-G-2 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 604963

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	101		73 - 120

Lab Sample ID: 240-200153-G-2 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 604963

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
1,1-Dichloroethene	500	U	12500	12400		ug/L		99	56 - 135	6	26
cis-1,2-Dichloroethene	500	U	12500	12600		ug/L		101	66 - 128	1	14
Tetrachloroethene	500	U	12500	10900		ug/L		87	62 - 131	3	20
trans-1,2-Dichloroethene	500	U	12500	12800		ug/L		102	56 - 136	2	15
Trichloroethene	500	U	12500	11900		ug/L		95	61 - 124	2	15
Vinyl chloride	6100		6250	11100		ug/L		79	43 - 157	5	24

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	103		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	93		78 - 122
Dibromofluoromethane (Surr)	99		73 - 120

Lab Sample ID: MB 240-605581/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605581

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		03/11/24 11:41	1	
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L		03/11/24 11:41	1	
Tetrachloroethene	1.0	U	1.0	0.44	ug/L		03/11/24 11:41	1	
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L		03/11/24 11:41	1	
Trichloroethene	1.0	U	1.0	0.44	ug/L		03/11/24 11:41	1	
Vinyl chloride	1.0	U	1.0	0.45	ug/L		03/11/24 11:41	1	

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	109		62 - 137		03/11/24 11:41	1
4-Bromofluorobenzene (Surr)	87		56 - 136		03/11/24 11:41	1
Toluene-d8 (Surr)	95		78 - 122		03/11/24 11:41	1
Dibromofluoromethane (Surr)	109		73 - 120		03/11/24 11:41	1

Lab Sample ID: LCS 240-605581/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605581

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
1,1-Dichloroethene	25.0	23.9		ug/L		96	63 - 134
cis-1,2-Dichloroethene	25.0	22.6		ug/L		90	77 - 123
Tetrachloroethene	25.0	26.9		ug/L		108	76 - 123
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	75 - 124
Trichloroethene	25.0	24.5		ug/L		98	70 - 122

Eurofins Cleveland

# QC Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

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

Lab Sample ID: LCS 240-605581/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605581

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	12.5	11.5		ug/L		92	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	99		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

Lab Sample ID: 240-200320-B-3 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605581

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	10	U	250	217		ug/L		87	56 - 135
cis-1,2-Dichloroethene	390		250	643	E	ug/L		103	66 - 128
Tetrachloroethene	10	U	250	245		ug/L		98	62 - 131
trans-1,2-Dichloroethene	10	U	250	237		ug/L		95	56 - 136
Trichloroethene	10	U	250	229		ug/L		92	61 - 124
Vinyl chloride	58		125	165		ug/L		85	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	96		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

Lab Sample ID: 240-200320-B-3 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605581

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	10	U	250	230		ug/L		92	56 - 135	6	26
cis-1,2-Dichloroethene	390		250	665	E	ug/L		112	66 - 128	3	14
Tetrachloroethene	10	U	250	252		ug/L		101	62 - 131	3	20
trans-1,2-Dichloroethene	10	U	250	239		ug/L		95	56 - 136	0	15
Trichloroethene	10	U	250	233		ug/L		93	61 - 124	2	15
Vinyl chloride	58		125	175		ug/L		94	43 - 157	6	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		62 - 137
4-Bromofluorobenzene (Surr)	92		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120



# QC Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

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

**Lab Sample ID: MB 240-605411/7**  
**Matrix: Water**  
**Analysis Batch: 605411**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 11:22	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		68 - 127					03/08/24 11:22	1

**Lab Sample ID: LCS 240-605411/5**  
**Matrix: Water**  
**Analysis Batch: 605411**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	10.0	8.45		ug/L		84	75 - 121
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	110		68 - 127				

**Lab Sample ID: 240-200378-B-2 MS**  
**Matrix: Water**  
**Analysis Batch: 605411**

**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	8.46		ug/L		85	20 - 180
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	112		68 - 127						

**Lab Sample ID: 240-200378-B-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 605411**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.54		ug/L		95	20 - 180	12	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	123		68 - 127								

# QC Association Summary

Client: Arcadis U.S., Inc.  
 Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

## GC/MS VOA

### Analysis Batch: 604963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200377-2	MW-192S_022824	Total/NA	Water	8260D	
MB 240-604963/7	Method Blank	Total/NA	Water	8260D	
LCS 240-604963/4	Lab Control Sample	Total/NA	Water	8260D	
240-200153-G-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-200153-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

### Analysis Batch: 605411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200377-2	MW-192S_022824	Total/NA	Water	8260D SIM	
240-200377-3	MW-138S_022824	Total/NA	Water	8260D SIM	
240-200377-4	DUP-08	Total/NA	Water	8260D SIM	
MB 240-605411/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-605411/5	Lab Control Sample	Total/NA	Water	8260D SIM	
240-200378-B-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-200378-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

### Analysis Batch: 605581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200377-1	TRIP BLANK_42	Total/NA	Water	8260D	
240-200377-3	MW-138S_022824	Total/NA	Water	8260D	
240-200377-4	DUP-08	Total/NA	Water	8260D	
MB 240-605581/7	Method Blank	Total/NA	Water	8260D	
LCS 240-605581/4	Lab Control Sample	Total/NA	Water	8260D	
240-200320-B-3 MS	Matrix Spike	Total/NA	Water	8260D	
240-200320-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

# Lab Chronicle

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

## Client Sample ID: TRIP BLANK\_42

Lab Sample ID: 240-200377-1

Date Collected: 02/28/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605581	LEE	EET CLE	03/11/24 18:21

## Client Sample ID: MW-192S\_022824

Lab Sample ID: 240-200377-2

Date Collected: 02/28/24 12:25

Matrix: Water

Date Received: 03/02/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	604963	LEE	EET CLE	03/05/24 14:57
Total/NA	Analysis	8260D SIM		1	605411	MDH	EET CLE	03/08/24 14:56

## Client Sample ID: MW-138S\_022824

Lab Sample ID: 240-200377-3

Date Collected: 02/28/24 13:45

Matrix: Water

Date Received: 03/02/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605581	LEE	EET CLE	03/11/24 18:44
Total/NA	Analysis	8260D SIM		1	605411	MDH	EET CLE	03/08/24 18:31

## Client Sample ID: DUP-08

Lab Sample ID: 240-200377-4

Date Collected: 02/28/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605581	LEE	EET CLE	03/11/24 19:08
Total/NA	Analysis	8260D SIM		1	605411	MDH	EET CLE	03/08/24 18:54

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

## Laboratory: Eurofins Cleveland

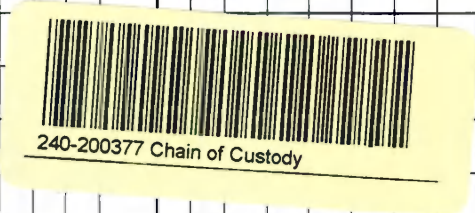
All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-24 *
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-01-24
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

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

TestAmerica Laboratory location: Brighton --- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

Client Contact		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other		TestAmerica Laboratories, Inc.													
Company Name: Arcadis		Client Project Manager: Kris Hlaskey			Site Contact: Christina Weaver			Lab Contact: Mike DeMonico				COC No: _____					
Address: 28550 Cabot Drive, Suite 500		Telephone: 248-994-2240			Telephone: 248-994-2240			Telephone: 330-497-9390				1 of 1 COCs					
City/State/Zip: Novi, MI, 48377		Email: kristoffer.hlaskey@arcadis.com			Analysis Turnaround Time			Analyses				For lab use only					
Phone: 248-994-2240		Sampler Name: <b>Alaina Pitera</b>			TAT if different from below 10 day <input checked="" type="checkbox"/> 3 weeks <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day							Walk-in client					
Project Name: Ford LTP Off-Site		Method of Shipment/Carrier:										Lab sampling					
Project Number: 30167538.402.04		Shipping/Tracking No:										Job/SDG No:					
PO # 30167538.402.04																	
Sample Identification		Sample Date	Sample Time	Matrix					Containers & Preservatives					Sample Specific Notes / Special Instructions:			
				Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc		NaOH	Urapies	Other:
<del>TRIP BLANK</del> Trip Blank 42		---	---	1							1						1 Trip Blank
MW-1925_022824		2/28/24	1225														3 VOAs for 8260D 3 VOAs for 8260D SIM
MW-1385_022824		2/28/24	1345														* 1 broken vial
DUP-08		2/28/24	---														
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown										<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Special Instructions/QC Requirements & Comments:																	
Sample Address: <b>Beacon Row + Brewster Row (SS)</b>																	
Submit all results through Cadena at <a href="mailto:jtomalia@cadenaco.com">jtomalia@cadenaco.com</a> . Cadena #E203631																	
Level IV Reporting requested.																	
Relinquished by: <i>Alaina Pitera</i>		Company: Arcadis		Date/Time: 2/29/24 1530		Received by: <i>Novi Cold Storage</i>		Company: Arcadis		Date/Time: 2/29/24 1530							
Relinquished by: <i>Samuel Soper</i>		Company: Arcadis		Date/Time: 3/1/24 1500		Received by: <i>[Signature]</i>		Company: <i>[Signature]</i>		Date/Time: 3/1/24 1500							
Relinquished by: <i>[Signature]</i>		Company: <i>[Signature]</i>		Date/Time: 3/2/24 1530		Received in Laboratory by:		Company:		Date/Time:							



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Eurofins - Cleveland Sample Receipt Form/Narrative Login # \_\_\_\_\_

Barberton Facility Cooler unpacked by: M. Kroll

Client ARRADIS Site Name \_\_\_\_\_

Cooler Received on 5.2.24 Opened on 5.2.24

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 # 22 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 # 17 (CE 4) °C Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

2 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity Yes No 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 (LIHg/MeHg)? Yes No NA

-Were tamper/custody seals intact and uncompromised? Yes No NA

3 Shippers' packing slip attached to the cooler(s)? Yes No NA

4 Did custody papers accompany the sample(s)? Yes No NA

5 Were the custody papers relinquished & signed in the appropriate place? Yes No NA

6 Was/were the person(s) who collected the samples clearly identified on the COC? Yes No NA

7 Did all bottles arrive in good condition (Unbroken)? Yes No NA

8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No NA

9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No NA

10 Were correct bottle(s) used for the test(s) indicated? Yes No NA

11 Sufficient quantity received to perform indicated analyses? Yes No NA

12 Are these work share samples and all listed on the COC? Yes No NA

If yes, Questions 13-17 have been checked at the originating laboratory

13 Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC316719

14 Were VOAs on the COC? Yes No NA

15 Were air bubbles > 6 mm in any VOA vials? Yes No NA Larger than this.

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

17 Was a LL Hg or Me Hg trip blank present? Yes No NA

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_

Concerning \_\_\_\_\_

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES  additional next page Samples processed by: \_\_\_\_\_

19 SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired

Sample(s) \_\_\_\_\_ were received in a broken container

Sample(s) \_\_\_\_\_ were received with bubble > 6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) \_\_\_\_\_ were further preserved in the laboratory

Time preserved \_\_\_\_\_ Preservative(s) added/Lot number(s) \_\_\_\_\_

VOA Sample Preservation Date/Time VOAs Frozen \_\_\_\_\_

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

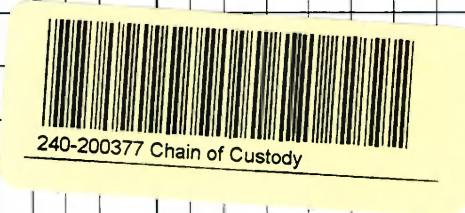
Login #: \_\_\_\_\_

Cooler Description (Circle)			IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC	Client	Box Other	IR GUN #: 17	3.8	3.8	Wet Ice None
EC	Client	Box Other	IR GUN #: 17	2.4	2.4	Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
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EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None
EC	Client	Box Other	IR GUN #:			Wet Ice None

See Temperature Excursion Form

TestAmerica Laboratory location: Brighton -- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

<b>Client Contact</b>		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other										TestAmerica Laboratories, Inc.																	
Company Name: Arcadis		Client Project Manager: Kris Hinskey				Site Contact: Christina Weaver				Lab Contact: Mike DeMonico				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		Em ail: kristoffer.hinskey@arcadis.com				<b>Analysis Turnaround Time</b>				<b>Analyses</b>				For lab use only															
Phone: 248-994-2240		Sampler Name: <b>Alaina Pitera</b>				TAT if different from below 10 day <input checked="" type="checkbox"/> 3 weeks <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day								Walk-in client															
Project Name: Ford LTP Off-Site		Method of Shipment/Carrier:				Filtered Sample (Y/N)								Lab sampling															
Project Number: 30167538.402.04		Shipping/Tracking No:				Composite=C / Grab=G								Job/SDG No:															
PO # 30167538.402.04																													
<b>Sample Identification</b>		<b>Sample Date</b>		<b>Sample Time</b>		<b>Matrix</b>					<b>Containers &amp; Preservatives</b>					<b>Sample Specific Notes / Special Instructions:</b>													
						All	Aqueous	Sediment	Soil	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH	Upties	Other:	Filtered	Composite	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		
<del>TRIP BLANK</del> Trip Blank 42		---		---		1					1								NG	X	X	X	X	X	X			1 Trip Blank	
MW-1925_022824		2/28/24		1225		1					1								NG	X	X	X	X	X	X			3 VOAs for 8260D 3 VOAs for 8260D SIM	
MW-1385_022824		2/28/24		1345		1					1								NG	X	X	X	X	X	X			* 1 broken vial (SS)	
DUP-08		2/28/24		---		1					1								NG	X	X	X	X	X	X			↓ (SS)	
<b>Possible Hazard Identification</b>		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown										<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>																	
												<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																	
<b>Special Instructions/QC Requirements &amp; Comments:</b>																													
Sample Address: <b>Beacon Row + Brewster Row (SS)</b>																													
Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631																													
Level IV Reporting requested.																													
Relinquished by: <b>Alaina Pitera</b>		Company: <b>Arcadis</b>		Date/Time: <b>2/29/24 1530</b>		Received by: <b>Novi Cold Storage</b>		Company: <b>Arcadis</b>		Date/Time: <b>2/29/24 1530</b>																			
Relinquished by: <b>Samir Singh</b>		Company: <b>Arcadis</b>		Date/Time: <b>3/1/24 1500</b>		Received by: <b>[Signature]</b>		Company: <b>[Signature]</b>		Date/Time: <b>3/1/24 1500</b>																			
Relinquished by: <b>[Signature]</b>		Company: <b>[Signature]</b>		Date/Time: <b>3/2/24 1530</b>		Received by: <b>[Signature]</b>		Company: <b>[Signature]</b>		Date/Time: <b>3/2/24 PM</b>																			





Eurofins - Cleveland Sample Receipt Form/Narrative Login # \_\_\_\_\_  
 Barberton Facility

Client ARLADDS Site Name \_\_\_\_\_ Cooler unpacked by M. Kroll  
 Cooler Received on 5-24-20 opened on 5-24-20  
 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 # CE Foam Box Client Cooler Box Other \_\_\_\_\_  
 Packing material used Bubble Wrap Foamn Plastic Bag None Other \_\_\_\_\_  
 COOLANT: Wet Ice Blue Ice Dry Ice Water None \_\_\_\_\_  
 1 Cooler temperature upon receipt \_\_\_\_\_ °C Corrected Cooler Temp \_\_\_\_\_ °C  
 IR GUN # 17 (CE ~~1~~) Observed Cooler Temp \_\_\_\_\_ °C

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

- 2 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity Yes No 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 (LIHg/MeHg)? Yes No NA  
 -Were tamper/custody seals intact and uncompromised? Yes No NA
  - 3 Shippers' packing slip attached to the cooler(s)? Yes No NA
  - 4 Did custody papers accompany the sample(s)? Yes No NA
  - 5 Were the custody papers relinquished & signed in the appropriate place? Yes No NA
  - 6 Was/were the person(s) who collected the samples clearly identified on the COC? Yes No NA
  - 7 Did all bottles arrive in good condition (Unbroken)? Yes No NA
  - 8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No NA
  - 9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No NA
  - 10 Were correct bottle(s) used for the test(s) indicated? Yes No NA
  - 11 Sufficient quantity received to perform indicated analyses? Yes No NA
  - 12 Are these work share samples and all listed on the COC? Yes No NA
- If yes, Questions 13-17 have been checked at the originating laboratory
- 13 Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC316719
  - 14 Were VOAs on the COC? Yes No NA
  - 15 Were air bubbles >6 mm in any VOA vials? Yes Larger than this NA
  - 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_ Yes No NA
  - 17 Was a LL Hg or Me Hg trip blank present? Yes No NA

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_  
 Concerning \_\_\_\_\_

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES  additional next page Samples processed by: \_\_\_\_\_

19 SAMPLE CONDITION  
 Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired  
 Sample(s) \_\_\_\_\_ were received in a broken container  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION  
 Sample(s) \_\_\_\_\_ were further preserved in the laboratory  
 Time preserved \_\_\_\_\_ Preservative(s) added/Lot number(s) \_\_\_\_\_  
 VOA Sample Preservation Date/Type VOAs Frozen \_\_\_\_\_



# DATA VERIFICATION REPORT



March 13, 2024

Kris Hinskey  
Arcadis Inc  
10559 Citation Ave  
Suite 100  
Brighton, MI 48116

CADENA project ID: E203631  
Project: Ford Livonia Transmission Project - OFF-SITE - Soil Gas and Groundwater  
Project number: 30167538.402.04  
Event Specific Scope of Work References: Sample COC  
Laboratory: Eurofins Environment Testing LLC - Cleveland  
Laboratory submittal: 200377-1  
Sample date: 2024-02-28  
Report received by CADENA: 2024-03-13  
Initial Data Verification completed by CADENA: 2024-03-13  
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.

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

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

## CADENA Valid Qualifiers

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

# Analytical Results Summary

CADENA Project ID: E203631

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 200377-1

<b>Sample Name:</b> TRIP BLANK_42	MW-192S_022824	MW-138S_022824	DUP-08
<b>Lab Sample ID:</b> 2402003771	2402003772	2402003773	2402003774
<b>Sample Date:</b> 2/28/2024	2/28/2024	2/28/2024	2/28/2024

Analyte	Cas No.	Report		Units	Valid Qualifier	Report		Units	Valid Qualifier	Report		Units	Valid Qualifier	Report		Units	Valid Qualifier
		Result	Limit			Result	Limit			Result	Limit			Result	Limit		
<b>GC/MS VOC</b>																	
<u>OSW-8260D</u>																	
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
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	---	0.89	1.0	ug/l	J	0.64	1.0	ug/l	J
<u>OSW-8260DSIM</u>																	
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---

# Ford Motor Company – Livonia Transmission Project

## Data Review

### Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-200377-1

CADENA Verification Report: 2024-03-13

Analyses Performed By:  
Eurofins Cleveland  
Barberton, Ohio

Report # 53406R  
Review Level: Tier III  
Project: 30167538.402.02

## DATA REVIEW

### SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-200377-1 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_42	240-200377-1	Water	02/28/2024		X	
MW-192S_022824	240-200377-2	Water	02/28/2024		X	X
MW-138S_022824	240-200377-3	Water	02/28/2024		X	X
DUP-08	240-200377-4	Water	02/28/2024	MW-138S_022824	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 continuing calibrations were within the specified control limits.

#### 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.

Results for duplicate samples are summarized in the following table.

## DATA REVIEW

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-138S_022824 / DUP-08	Vinyl chloride	0.89 J	0.64 J	AC

Note:

AC = Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

### 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: Dilip Kumar

SIGNATURE: 

DATE: March 24, 2024

PEER REVIEW: Andrew Korycinski

DATE: April 3, 2024

# **NO CORRECTIONS/QUALIFIERS ADDED TO SAMPLE ANALYSIS DATA SHEETS**

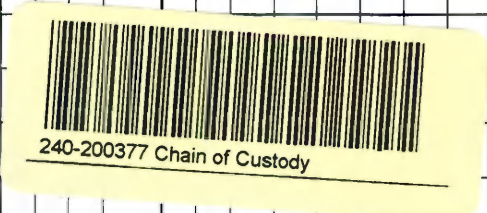


**CHAIN OF CUSTODY  
CORRECTED SAMPLE ANALYSIS DATA  
SHEETS**





TestAmerica Laboratory location: Brighton -- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

<b>Client Contact</b>		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other										TestAmerica Laboratories, Inc.							
Company Name: Arcadis		Client Project Manager: Kris Hinskey				Site Contact: Christina Weaver				Lab Contact: Mike DeMonico				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: kristoffer.hinskey@arcadis.com				<b>Analysis Turnaround Time</b>				<b>Analyses</b>				For lab use only					
Phone: 248-994-2240		Sampler Name: <b>Alaina Pitera</b>				TAT if different from below 10 day <input checked="" type="checkbox"/> 3 weeks 2 weeks 1 week 2 days 1 day				Filtered Sample (Y/N) Composite=C / Grab=G 1,1-DCE 8260D cis-1,2-DCE 8260D Trans-1,2-DCE 8260D PCE 8260D TCE 8260D Vinyl Chloride 8260D 1,4-Dioxane 8260D SIM				Walk-in client					
Project Name: Ford LTP Off-Site														Method of Shipment/Carrier:		Lab sampling			
Project Number: 30167538.402.04														Shipping/Tracking No:		Job/SDG No:			
PO # 30167538.402.04																			
<b>Sample Identification</b>		Sample Date		Sample Time		<b>Matrix</b>					<b>Containers &amp; Preservatives</b>					<b>Sample Specific Notes / Special Instructions:</b>			
						Air	Aqueous	Substrate	Soil	Other:	H2SO4	HNO3	HCl	NaOH	Zinc/ACOR	Uppies	Other:		
TRIP BLANK Trip Blank 412		---		---		1												1 Trip Blank ✓	
MW-1925_022824		2/28/24		1225														3 VOAs for 8260D ✓ 3 VOAs for 8260D SIM ✓	
MW-1385_022824		2/28/24		1345														* 1 broken vial (SS) ✓	
DUP-08		2/28/24		---														(SS) ✓	
																			
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>																	
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																	
<b>Special Instructions/QC Requirements &amp; Comments:</b>																			
Sample Address: <b>Beacon Row + Brewster Row (SS)</b> Submit all results through Cadena at jtomalia@cadenco.com. Cadena #E203631 Level IV Reporting requested.																			
Relinquished by: <i>Alaina Pitera</i>		Company: <b>Arcadis</b>		Date/Time: <b>2/29/24 1530</b>		Received by: <b>Novi Cold Storage</b>		Company: <b>Arcadis</b>		Date/Time: <b>2/29/24 1530</b>		Relinquished by: <i>Samuel Soper</i>		Company: <b>Arcadis</b>		Date/Time: <b>3/1/24 1500</b>			
Relinquished by: <i>Samuel Soper</i>		Company: <b>Arcadis</b>		Date/Time: <b>3/1/24 1500</b>		Received by: <i>[Signature]</i>		Company: <b>Arcadis</b>		Date/Time: <b>3/1/24 1500</b>		Relinquished by: <i>[Signature]</i>		Company: <b>Arcadis</b>		Date/Time: <b>3/1/24 1500</b>			
Relinquished by: <i>[Signature]</i>		Company: <b>Arcadis</b>		Date/Time: <b>3/1/24 1530</b>		Received in Laboratory by:		Company: <b>Arcadis</b>		Date/Time:		Relinquished by:		Company: <b>Arcadis</b>		Date/Time:			

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# Client Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: TRIP BLANK\_42**

**Lab Sample ID: 240-200377-1**

Date Collected: 02/28/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 18:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 18:21	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 18:21	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:21	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/11/24 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		62 - 137		03/11/24 18:21	1
4-Bromofluorobenzene (Surr)	86		56 - 136		03/11/24 18:21	1
Toluene-d8 (Surr)	97		78 - 122		03/11/24 18:21	1
Dibromofluoromethane (Surr)	105		73 - 120		03/11/24 18:21	1

**Client Sample ID: MW-192S\_022824**

**Lab Sample ID: 240-200377-2**

Date Collected: 02/28/24 12:25

Matrix: Water

Date Received: 03/02/24 08:00

**Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		68 - 127		03/08/24 14:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/05/24 14:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/05/24 14:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 14:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/05/24 14:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 14:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/05/24 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		62 - 137		03/05/24 14:57	1
4-Bromofluorobenzene (Surr)	88		56 - 136		03/05/24 14:57	1
Toluene-d8 (Surr)	91		78 - 122		03/05/24 14:57	1
Dibromofluoromethane (Surr)	106		73 - 120		03/05/24 14:57	1

**Client Sample ID: MW-138S\_022824**

**Lab Sample ID: 240-200377-3**

Date Collected: 02/28/24 13:45

Matrix: Water

Date Received: 03/02/24 08:00

**Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		68 - 127		03/08/24 18:31	1

# Client Sample Results

Client: Arcadis U.S., Inc.  
Project/Site: Ford LTP - Off Site

Job ID: 240-200377-1

**Client Sample ID: MW-138S\_022824**

**Lab Sample ID: 240-200377-3**

Date Collected: 02/28/24 13:45

Matrix: Water

Date Received: 03/02/24 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 18:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 18:44	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 18:44	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 18:44	1
<b>Vinyl chloride</b>	<b>0.89</b>	<b>J</b>	1.0	0.45	ug/L			03/11/24 18:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137		03/11/24 18:44	1
4-Bromofluorobenzene (Surr)	84		56 - 136		03/11/24 18:44	1
Toluene-d8 (Surr)	96		78 - 122		03/11/24 18:44	1
Dibromofluoromethane (Surr)	102		73 - 120		03/11/24 18:44	1

**Client Sample ID: DUP-08**

**Lab Sample ID: 240-200377-4**

Date Collected: 02/28/24 00:00

Matrix: Water

Date Received: 03/02/24 08:00

**Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/24 18:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		68 - 127		03/08/24 18:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/11/24 19:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/11/24 19:08	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 19:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/11/24 19:08	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/11/24 19:08	1
<b>Vinyl chloride</b>	<b>0.64</b>	<b>J</b>	1.0	0.45	ug/L			03/11/24 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		62 - 137		03/11/24 19:08	1
4-Bromofluorobenzene (Surr)	83		56 - 136		03/11/24 19:08	1
Toluene-d8 (Surr)	92		78 - 122		03/11/24 19:08	1
Dibromofluoromethane (Surr)	100		73 - 120		03/11/24 19:08	1