

## ANALYTICAL REPORT

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Barberton, OH 44203  
Tel: (330)497-9396

Laboratory Job ID: 240-166778-1  
Client Project/Site: Ford LTP - Off Site

For:  
ARCADIS U.S., Inc.  
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Results relate only to the items tested and the sample(s) as received by the laboratory.



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Method Summary . . . . .	5
Sample Summary . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	11
QC Sample Results . . . . .	12
QC Association Summary . . . . .	16
Lab Chronicle . . . . .	17
Certification Summary . . . . .	18
Chain of Custody . . . . .	19

# Definitions/Glossary

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

Job ID: 240-166778-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## Glossary

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

# Case Narrative

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

Job ID: 240-166778-1

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## Job ID: 240-166778-1

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### Laboratory: Eurofins Canton

#### Narrative

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#### Job Narrative 240-166778-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/18/2022 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 0.1° C and 0.2° C.

#### GC/MS VOA

Method 8260D: An MS/MSD was prepared in 240-527909 however due to an auto-sampler error it was able to be analyzed within the tune time. The effected samples are TRIP BLANK\_159 (240-166778-1) and MW-83S\_051622 (240-166778-2).

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

#### VOA Prep

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



# Method Summary

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

Job ID: 240-166778-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
8260D SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396



# Sample Summary

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

Job ID: 240-166778-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166778-1	TRIP BLANK_159	Water	05/16/22 00:00	05/18/22 08:00
240-166778-2	MW-83S_051622	Water	05/16/22 11:35	05/18/22 08:00
240-166778-3	MW-83_051622	Water	05/16/22 11:41	05/18/22 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: 240-166778-1

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**Client Sample ID: TRIP BLANK\_159**

**Lab Sample ID: 240-166778-1**

No Detections.

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**Client Sample ID: MW-83S\_051622**

**Lab Sample ID: 240-166778-2**

No Detections.

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**Client Sample ID: MW-83\_051622**

**Lab Sample ID: 240-166778-3**

No Detections.

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

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 240-166778-1

**Client Sample ID: TRIP BLANK\_159**

**Lab Sample ID: 240-166778-1**

**Date Collected: 05/16/22 00:00**

**Matrix: Water**

**Date Received: 05/18/22 08:00**

**Method: 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			05/25/22 15:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/25/22 15:43	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/25/22 15:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/25/22 15:43	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/25/22 15:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/25/22 15:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		62 - 137		05/25/22 15:43	1
4-Bromofluorobenzene (Surr)	85		56 - 136		05/25/22 15:43	1
Toluene-d8 (Surr)	97		78 - 122		05/25/22 15:43	1
Dibromofluoromethane (Surr)	103		73 - 120		05/25/22 15:43	1



# Client Sample Results

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

Job ID: 240-166778-1

**Client Sample ID: MW-83S\_051622**

**Lab Sample ID: 240-166778-2**

**Date Collected: 05/16/22 11:35**

**Matrix: Water**

**Date Received: 05/18/22 08:00**

**Method: 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			05/24/22 02:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		66 - 120					05/24/22 02:44	1

**Method: 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			05/25/22 19:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/25/22 19:53	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/25/22 19:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/25/22 19:53	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/25/22 19:53	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/25/22 19:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		62 - 137					05/25/22 19:53	1
4-Bromofluorobenzene (Surr)	83		56 - 136					05/25/22 19:53	1
Toluene-d8 (Surr)	97		78 - 122					05/25/22 19:53	1
Dibromofluoromethane (Surr)	105		73 - 120					05/25/22 19:53	1

# Client Sample Results

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

Job ID: 240-166778-1

**Client Sample ID: MW-83\_051622**

**Lab Sample ID: 240-166778-3**

Date Collected: 05/16/22 11:41

Matrix: Water

Date Received: 05/18/22 08:00

**Method: 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			05/24/22 03:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		66 - 120					05/24/22 03:08	1

**Method: 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			05/26/22 17:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/22 17:58	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/22 17:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/22 17:58	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/22 17:58	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/22 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		62 - 137					05/26/22 17:58	1
4-Bromofluorobenzene (Surr)	94		56 - 136					05/26/22 17:58	1
Toluene-d8 (Surr)	99		78 - 122					05/26/22 17:58	1
Dibromofluoromethane (Surr)	99		73 - 120					05/26/22 17:58	1

# Surrogate Summary

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

Job ID: 240-166778-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-166778-1	TRIP BLANK_159	100	85	97	103
240-166778-2	MW-83S_051622	102	83	97	105
240-166778-3	MW-83_051622	93	94	99	99
240-166933-D-2 MS	Matrix Spike	92	101	102	98
240-166933-G-2 MSD	Matrix Spike Duplicate	90	102	103	98
LCS 240-527909/4	Lab Control Sample	98	99	99	107
LCS 240-528104/5	Lab Control Sample	87	98	101	94
MB 240-527909/6	Method Blank	101	87	98	103
MB 240-528104/7	Method Blank	93	94	100	100

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
TOL = Toluene-d8 (Surr)  
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (66-120)
240-166740-B-2 MS	Matrix Spike	83
240-166740-B-2 MSD	Matrix Spike Duplicate	81
240-166778-2	MW-83S_051622	80
240-166778-3	MW-83_051622	83
LCS 240-527590/3	Lab Control Sample	82
MB 240-527590/4	Method Blank	82

#### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-166778-1

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

**Lab Sample ID: MB 240-527909/6**  
**Matrix: Water**  
**Analysis Batch: 527909**

**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			05/25/22 12:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/25/22 12:47	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/25/22 12:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/25/22 12:47	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/25/22 12:47	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/25/22 12:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		05/25/22 12:47	1
4-Bromofluorobenzene (Surr)	87		56 - 136		05/25/22 12:47	1
Toluene-d8 (Surr)	98		78 - 122		05/25/22 12:47	1
Dibromofluoromethane (Surr)	103		73 - 120		05/25/22 12:47	1

**Lab Sample ID: LCS 240-527909/4**  
**Matrix: Water**  
**Analysis Batch: 527909**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	25.0	25.5		ug/L		102	63 - 134
cis-1,2-Dichloroethene	25.0	27.2		ug/L		109	77 - 123
Tetrachloroethene	25.0	26.2		ug/L		105	76 - 123
trans-1,2-Dichloroethene	25.0	28.1		ug/L		113	75 - 124
Trichloroethene	25.0	26.4		ug/L		106	70 - 122
Vinyl chloride	12.5	11.1		ug/L		89	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	99		78 - 122
Dibromofluoromethane (Surr)	107		73 - 120

**Lab Sample ID: MB 240-528104/7**  
**Matrix: Water**  
**Analysis Batch: 528104**

**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			05/26/22 14:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/22 14:00	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/22 14:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/22 14:00	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/22 14:00	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/22 14:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		62 - 137		05/26/22 14:00	1
4-Bromofluorobenzene (Surr)	94		56 - 136		05/26/22 14:00	1
Toluene-d8 (Surr)	100		78 - 122		05/26/22 14:00	1

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# QC Sample Results

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

Job ID: 240-166778-1

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

**Lab Sample ID: MB 240-528104/7**  
**Matrix: Water**  
**Analysis Batch: 528104**

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	100		73 - 120		05/26/22 14:00	1

**Lab Sample ID: LCS 240-528104/5**  
**Matrix: Water**  
**Analysis Batch: 528104**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1,1-Dichloroethene	25.0	25.0		ug/L		100	63 - 134	
cis-1,2-Dichloroethene	25.0	23.7		ug/L		95	77 - 123	
Tetrachloroethene	25.0	25.8		ug/L		103	76 - 123	
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	75 - 124	
Trichloroethene	25.0	25.3		ug/L		101	70 - 122	
Vinyl chloride	25.0	22.9		ug/L		91	60 - 144	

  

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	87		62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	101		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120

**Lab Sample ID: 240-166933-D-2 MS**  
**Matrix: Water**  
**Analysis Batch: 528104**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
1,1-Dichloroethene	1.0	U	25.0	24.7		ug/L		99	56 - 135	
cis-1,2-Dichloroethene	1.0	U	25.0	23.3		ug/L		93	66 - 128	
Tetrachloroethene	1.0	U	25.0	24.1		ug/L		96	62 - 131	
trans-1,2-Dichloroethene	1.0	U	25.0	23.3		ug/L		93	56 - 136	
Trichloroethene	1.0	U	25.0	24.2		ug/L		97	61 - 124	
Vinyl chloride	1.0	U	25.0	22.4		ug/L		90	43 - 157	

  

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	92		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	102		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

**Lab Sample ID: 240-166933-G-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 528104**

**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 Limit	
1,1-Dichloroethene	1.0	U	25.0	23.8		ug/L		95	56 - 135	4	26	
cis-1,2-Dichloroethene	1.0	U	25.0	23.2		ug/L		93	66 - 128	0	14	
Tetrachloroethene	1.0	U	25.0	23.2		ug/L		93	62 - 131	4	20	
trans-1,2-Dichloroethene	1.0	U	25.0	22.8		ug/L		91	56 - 136	2	15	
Trichloroethene	1.0	U	25.0	23.6		ug/L		94	61 - 124	3	15	

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# QC Sample Results

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

Job ID: 240-166778-1

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

**Lab Sample ID: 240-166933-G-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 528104**

**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
Vinyl chloride	1.0	U	25.0	22.2		ug/L		89	43 - 157	1	24
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>MSD Limits</b>								
1,2-Dichloroethane-d4 (Surr)	90		62 - 137								
4-Bromofluorobenzene (Surr)	102		56 - 136								
Toluene-d8 (Surr)	103		78 - 122								
Dibromofluoromethane (Surr)	98		73 - 120								

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

**Lab Sample ID: MB 240-527590/4**  
**Matrix: Water**  
**Analysis Batch: 527590**

**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			05/23/22 20:08	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>MB Limits</b>						
1,2-Dichloroethane-d4 (Surr)	82		66 - 120						
				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>			
					05/23/22 20:08	1			

**Lab Sample ID: LCS 240-527590/3**  
**Matrix: Water**  
**Analysis Batch: 527590**

**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	11.6		ug/L		116	80 - 122
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>LCS Limits</b>				
1,2-Dichloroethane-d4 (Surr)	82		66 - 120				

**Lab Sample ID: 240-166740-B-2 MS**  
**Matrix: Water**  
**Analysis Batch: 527590**

**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	11.3		ug/L		113	51 - 153
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>MS Limits</b>						
1,2-Dichloroethane-d4 (Surr)	83		66 - 120						

**Lab Sample ID: 240-166740-B-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 527590**

**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	11.2		ug/L		112	51 - 153	1	16

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# QC Sample Results

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

Job ID: 240-166778-1

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

Lab Sample ID: 240-166740-B-2 MSD  
Matrix: Water  
Analysis Batch: 527590

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

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	81		66 - 120

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

# QC Association Summary

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

Job ID: 240-166778-1

## GC/MS VOA

### Analysis Batch: 527590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166778-2	MW-83S_051622	Total/NA	Water	8260D SIM	
240-166778-3	MW-83_051622	Total/NA	Water	8260D SIM	
MB 240-527590/4	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-527590/3	Lab Control Sample	Total/NA	Water	8260D SIM	
240-166740-B-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-166740-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

### Analysis Batch: 527909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166778-1	TRIP BLANK_159	Total/NA	Water	8260D	
240-166778-2	MW-83S_051622	Total/NA	Water	8260D	
MB 240-527909/6	Method Blank	Total/NA	Water	8260D	
LCS 240-527909/4	Lab Control Sample	Total/NA	Water	8260D	

### Analysis Batch: 528104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166778-3	MW-83_051622	Total/NA	Water	8260D	
MB 240-528104/7	Method Blank	Total/NA	Water	8260D	
LCS 240-528104/5	Lab Control Sample	Total/NA	Water	8260D	
240-166933-D-2 MS	Matrix Spike	Total/NA	Water	8260D	
240-166933-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	



# Lab Chronicle

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

Job ID: 240-166778-1

**Client Sample ID: TRIP BLANK\_159**

**Lab Sample ID: 240-166778-1**

**Date Collected: 05/16/22 00:00**

**Matrix: Water**

**Date Received: 05/18/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527909	05/25/22 15:43	SAM	TAL CAN

**Client Sample ID: MW-83S\_051622**

**Lab Sample ID: 240-166778-2**

**Date Collected: 05/16/22 11:35**

**Matrix: Water**

**Date Received: 05/18/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	527909	05/25/22 19:53	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	527590	05/24/22 02:44	CS	TAL CAN

**Client Sample ID: MW-83\_051622**

**Lab Sample ID: 240-166778-3**

**Date Collected: 05/16/22 11:41**

**Matrix: Water**

**Date Received: 05/18/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528104	05/26/22 17:58	SAM	TAL CAN
Total/NA	Analysis	8260D SIM		1	527590	05/24/22 03:08	CS	TAL CAN

**Laboratory References:**

TAL CAN = Eurofins Canton, 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: 240-166778-1

## Laboratory: Eurofins Canton

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	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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

Eurofins Canton

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

Regulatory program:  DW  NPDES  RCRA  Other

Client Contact: Arcadis  
Company Name: Arcadis  
Address: 28550 Cabot Drive, Suite 500  
City/State/Zip: Novi, MI, 48377  
Phone: 248-994-2240  
Project Name: Ford LTP Off-Site  
Project Number: 30080642.402.04  
PO # 30080642.402.04

Client Project Manager: Kris Hinskey  
Site Contact: Christina Weaver  
Telephone: 269-832-7478  
Email: Kristoffer.Hinskey@arcadis.com  
Telephone: 248-994-2329

Sampler Name: CHRISTIAN GARRIDO  
Method of Shipment/Carrier:  
Shipping/Tracking No:

Analysis Turnaround Time  
TAT, if different from below:  
10 day  3 weeks  
 2 weeks  
 1 week  
 2 days  
 1 day

Containers & Preservatives  
Matrix:  Solid  Sediment  Aqueous  Air  
Other:  HCl  NaOH  Unpres  Other:

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

Sample Identification  
Sample Date Sample Time  
5/16/22 ---  
5/16/22 1135  
5/16/22 1141

Sample Specific Notes / Special Instructions:  
1 Trip Blank  
3 VOAs for 8260D  
3 VOAs for 8260D SIM

Sample Identification	Sample Date	Sample Time	Matrix	Containers & Preservatives	Filtered Sample (Y/N)	Composite C / Grab G	1,1-DCE 8260D	cis-1,2-DCE 8260D	Trans-1,2-DCE 8260D	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM	Analyses	For lab use only	COCs
TRIP BLANK_159	5/16/22	---	---	---	N	G	X	X	X	X	X	X	X		1 of 1	
MW-83S_051622	5/16/22	1135	---	---	N	G	X	X	X	X	X	X	X			
MW-83_051622	5/16/22	1141	---	---	N	G	X	X	X	X	X	X	X			



Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Unknown

Special Instructions/QC Requirements & Comments:  
Sample Address: RIGHT OF WAY STARK  
Submit all results through Cadena at jtomalia@cadenaco.com, Cadena #E203631  
Level IV Reporting requested.

Relinquished by: CHRISTIAN GARRIDO / [Signature]  
Relinquished by: [Signature]  
Relinquished by: [Signature]

Company: ARCADIS  
Company: ARCADIS  
Company: FEVA

Date/Time: 5/16/22 1245  
Date/Time: 5/17/22 1100  
Date/Time: 5/17/22 1130

Received by: MONI COLO STORAGE  
Received in Laboratory by: [Signature]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Disposal By Lab  Archive For \_\_\_ Months

**Eurofins TestAmerica Canton Sample Receipt Form/Narrative**  
**Canton Facility**

Login # : 166778

Client ArCADIS Site Name Ford LTP

Cooler unpacked by: (Signature)

Cooler Received on 5-18-22 Opened on 5-18-22

FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other \_\_\_\_\_

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

TestAmerica Cooler # TA 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# IR-13 (CF 0.0 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN #IR-15 (CF -0.7°C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No  
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA  
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No  
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC157842
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes ← Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 01042016 Yes No
17. Was a LL Hg or Me Hg trip blank present? Yes No

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

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: \_\_\_\_\_

