

## ANALYTICAL REPORT

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

Laboratory Job ID: 240-171856-1  
Client Project/Site: Ford LTP - On Site

For:  
ARCADIS U.S., Inc.  
28550 Cabot Drive  
Suite 500  
Novi, Michigan 48377

Attn: Kristoffer Hinskey



Authorized for release by:  
9/2/2022 8:51:44 AM

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Results relate only to the items tested and the sample(s) as received by the laboratory.



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# Definitions/Glossary

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

Job ID: 240-171856-1

## 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 - On Site

Job ID: 240-171856-1

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**Job ID: 240-171856-1**

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**Laboratory: Eurofins Canton**

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**Narrative**

**Job Narrative  
240-171856-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 8/20/2022 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

**GC/MS VOA**

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

**VOA Prep**

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

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- 13
- 14

# Method Summary

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

Job ID: 240-171856-1

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

**Protocol References:**

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

**Laboratory References:**

EET 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 - On Site

Job ID: 240-171856-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171856-1	TRIP BLANK_87	Water	08/18/22 00:00	08/20/22 09:35
240-171856-2	MW-224S_081822	Water	08/18/22 11:35	08/20/22 09:35
240-171856-3	MW-07_081822	Water	08/18/22 12:45	08/20/22 09:35
240-171856-4	MW-222S_081822	Water	08/18/22 13:35	08/20/22 09:35

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- 2
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- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Detection Summary

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

Job ID: 240-171856-1

**Client Sample ID: TRIP BLANK\_87**

**Lab Sample ID: 240-171856-1**

No Detections.

**Client Sample ID: MW-224S\_081822**

**Lab Sample ID: 240-171856-2**

No Detections.

**Client Sample ID: MW-07\_081822**

**Lab Sample ID: 240-171856-3**

No Detections.

**Client Sample ID: MW-222S\_081822**

**Lab Sample ID: 240-171856-4**

No Detections.

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

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 240-171856-1

**Client Sample ID: TRIP BLANK\_87**

**Lab Sample ID: 240-171856-1**

**Date Collected: 08/18/22 00:00**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

**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			08/23/22 16:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/22 16:23	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 16:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/22 16:23	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 16:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/22 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		62 - 137		08/23/22 16:23	1
4-Bromofluorobenzene (Surr)	88		56 - 136		08/23/22 16:23	1
Toluene-d8 (Surr)	93		78 - 122		08/23/22 16:23	1
Dibromofluoromethane (Surr)	97		73 - 120		08/23/22 16:23	1



# Client Sample Results

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

Job ID: 240-171856-1

**Client Sample ID: MW-224S\_081822**

**Lab Sample ID: 240-171856-2**

Date Collected: 08/18/22 11:35

Matrix: Water

Date Received: 08/20/22 09:35

**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			08/26/22 02:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		66 - 120					08/26/22 02:02	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			08/23/22 16:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/22 16:46	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 16:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/22 16:46	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 16:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/22 16:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137					08/23/22 16:46	1
4-Bromofluorobenzene (Surr)	89		56 - 136					08/23/22 16:46	1
Toluene-d8 (Surr)	96		78 - 122					08/23/22 16:46	1
Dibromofluoromethane (Surr)	101		73 - 120					08/23/22 16:46	1

# Client Sample Results

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

Job ID: 240-171856-1

**Client Sample ID: MW-07\_081822**

**Lab Sample ID: 240-171856-3**

**Date Collected: 08/18/22 12:45**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

**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			08/26/22 19:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		66 - 120		08/26/22 19:23	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			08/23/22 17:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/22 17:56	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 17:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/22 17:56	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 17:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/22 17:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137		08/23/22 17:56	1
4-Bromofluorobenzene (Surr)	94		56 - 136		08/23/22 17:56	1
Toluene-d8 (Surr)	102		78 - 122		08/23/22 17:56	1
Dibromofluoromethane (Surr)	106		73 - 120		08/23/22 17:56	1

# Client Sample Results

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

Job ID: 240-171856-1

**Client Sample ID: MW-222S\_081822**

**Lab Sample ID: 240-171856-4**

**Date Collected: 08/18/22 13:35**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

**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			08/26/22 02:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		66 - 120					08/26/22 02:27	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			08/23/22 18:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/22 18:20	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 18:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/22 18:20	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 18:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/22 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		62 - 137					08/23/22 18:20	1
4-Bromofluorobenzene (Surr)	86		56 - 136					08/23/22 18:20	1
Toluene-d8 (Surr)	94		78 - 122					08/23/22 18:20	1
Dibromofluoromethane (Surr)	99		73 - 120					08/23/22 18:20	1

# Surrogate Summary

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

Job ID: 240-171856-1

## 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)
240-171856-1	TRIP BLANK_87	100	88	93	97
240-171856-2	MW-224S_081822	105	89	96	101
240-171856-3	MW-07_081822	107	94	102	106
240-171856-3 MS	MW-07-MS_081822	96	91	94	94
240-171856-3 MSD	MW-07-MSD_081822	100	95	98	98
240-171856-4	MW-222S_081822	102	86	94	99
LCS 240-539824/5	Lab Control Sample	100	94	99	99
MB 240-539824/12	Method Blank	99	84	93	96

**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 (66-120)
240-171824-G-2 MS	Matrix Spike	90
240-171824-M-2 MSD	Matrix Spike Duplicate	90
240-171856-2	MW-224S_081822	89
240-171856-3	MW-07_081822	91
240-171856-3 MS	MW-07-MS_081822	91
240-171856-3 MSD	MW-07-MSD_081822	90
240-171856-4	MW-222S_081822	86
LCS 240-540264/3	Lab Control Sample	90
LCS 240-540388/3	Lab Control Sample	92
MB 240-540264/4	Method Blank	92
MB 240-540388/4	Method Blank	92

**Surrogate Legend**

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

# QC Sample Results

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

Job ID: 240-171856-1

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

**Lab Sample ID: MB 240-539824/12**  
**Matrix: Water**  
**Analysis Batch: 539824**

**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			08/23/22 14:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			08/23/22 14:26	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 14:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			08/23/22 14:26	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			08/23/22 14:26	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/22 14:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		62 - 137		08/23/22 14:26	1
4-Bromofluorobenzene (Surr)	84		56 - 136		08/23/22 14:26	1
Toluene-d8 (Surr)	93		78 - 122		08/23/22 14:26	1
Dibromofluoromethane (Surr)	96		73 - 120		08/23/22 14:26	1

**Lab Sample ID: LCS 240-539824/5**  
**Matrix: Water**  
**Analysis Batch: 539824**

**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	18.2		ug/L		91	63 - 134
cis-1,2-Dichloroethene	20.0	18.3		ug/L		92	77 - 123
Tetrachloroethene	20.0	20.4		ug/L		102	76 - 123
trans-1,2-Dichloroethene	20.0	17.1		ug/L		86	75 - 124
Trichloroethene	20.0	18.8		ug/L		94	70 - 122
Vinyl chloride	20.0	17.1		ug/L		86	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	99		78 - 122
Dibromofluoromethane (Surr)	99		73 - 120

**Lab Sample ID: 240-171856-3 MS**  
**Matrix: Water**  
**Analysis Batch: 539824**

**Client Sample ID: MW-07-MS\_081822**  
**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	18.9		ug/L		94	56 - 135
cis-1,2-Dichloroethene	1.0	U	20.0	17.8		ug/L		89	66 - 128
Tetrachloroethene	1.0	U	20.0	19.6		ug/L		98	62 - 131
trans-1,2-Dichloroethene	1.0	U	20.0	16.8		ug/L		84	56 - 136
Trichloroethene	1.0	U	20.0	17.8		ug/L		89	61 - 124
Vinyl chloride	1.0	U	20.0	16.1		ug/L		81	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		62 - 137
4-Bromofluorobenzene (Surr)	91		56 - 136
Toluene-d8 (Surr)	94		78 - 122

# QC Sample Results

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

Job ID: 240-171856-1

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

**Lab Sample ID: 240-171856-3 MS**  
**Matrix: Water**  
**Analysis Batch: 539824**

**Client Sample ID: MW-07-MS\_081822**  
**Prep Type: Total/NA**

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	94		73 - 120

**Lab Sample ID: 240-171856-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 539824**

**Client Sample ID: MW-07-MSD\_081822**  
**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	20.3		ug/L		101	56 - 135	7	26
cis-1,2-Dichloroethene	1.0	U	20.0	19.2		ug/L		96	66 - 128	8	14
Tetrachloroethene	1.0	U	20.0	20.9		ug/L		104	62 - 131	6	20
trans-1,2-Dichloroethene	1.0	U	20.0	18.3		ug/L		92	56 - 136	9	15
Trichloroethene	1.0	U	20.0	19.0		ug/L		95	61 - 124	7	15
Vinyl chloride	1.0	U	20.0	17.7		ug/L		89	43 - 157	10	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		62 - 137
4-Bromofluorobenzene (Surr)	95		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

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

**Lab Sample ID: MB 240-540264/4**  
**Matrix: Water**  
**Analysis Batch: 540264**

**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			08/25/22 19:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		66 - 120		08/25/22 19:43	1

**Lab Sample ID: LCS 240-540264/3**  
**Matrix: Water**  
**Analysis Batch: 540264**

**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	10.3		ug/L		103	80 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		66 - 120

**Lab Sample ID: 240-171824-G-2 MS**  
**Matrix: Water**  
**Analysis Batch: 540264**

**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	11.4		ug/L		114	51 - 153

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# QC Sample Results

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

Job ID: 240-171856-1

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

<i>Surrogate</i>	<i>MS</i> <i>%Recovery</i>	<i>MS</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	90		66 - 120

**Lab Sample ID: 240-171824-M-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 540264**

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

<i>Analyte</i>	<i>Sample</i> <i>Result</i>	<i>Sample</i> <i>Qualifier</i>	<i>Spike</i> <i>Added</i>	<i>MSD</i> <i>Result</i>	<i>MSD</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>	<i>RPD</i>	<i>RPD</i> <i>Limit</i>
1,4-Dioxane	2.0	U	10.0	11.2		ug/L		112	51 - 153	1	16

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	90		66 - 120

**Lab Sample ID: MB 240-540388/4**  
**Matrix: Water**  
**Analysis Batch: 540388**

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

<i>Analyte</i>	<i>MB</i> <i>Result</i>	<i>MB</i> <i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			08/26/22 18:32	1

<i>Surrogate</i>	<i>MB</i> <i>%Recovery</i>	<i>MB</i> <i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	92		66 - 120		08/26/22 18:32	1

**Lab Sample ID: LCS 240-540388/3**  
**Matrix: Water**  
**Analysis Batch: 540388**

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

<i>Analyte</i>	<i>Spike</i> <i>Added</i>	<i>LCS</i> <i>Result</i>	<i>LCS</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>
1,4-Dioxane	10.0	11.0		ug/L		110	80 - 122

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	92		66 - 120

**Lab Sample ID: 240-171856-3 MS**  
**Matrix: Water**  
**Analysis Batch: 540388**

**Client Sample ID: MW-07-MS\_081822**  
**Prep Type: Total/NA**

<i>Analyte</i>	<i>Sample</i> <i>Result</i>	<i>Sample</i> <i>Qualifier</i>	<i>Spike</i> <i>Added</i>	<i>MS</i> <i>Result</i>	<i>MS</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>
1,4-Dioxane	2.0	U	10.0	11.7		ug/L		117	51 - 153

<i>Surrogate</i>	<i>MS</i> <i>%Recovery</i>	<i>MS</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	91		66 - 120

**Lab Sample ID: 240-171856-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 540388**

**Client Sample ID: MW-07-MSD\_081822**  
**Prep Type: Total/NA**

<i>Analyte</i>	<i>Sample</i> <i>Result</i>	<i>Sample</i> <i>Qualifier</i>	<i>Spike</i> <i>Added</i>	<i>MSD</i> <i>Result</i>	<i>MSD</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>	<i>RPD</i>	<i>RPD</i> <i>Limit</i>
1,4-Dioxane	2.0	U	10.0	11.1		ug/L		111	51 - 153	5	16

# QC Sample Results

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

Job ID: 240-171856-1

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

Lab Sample ID: 240-171856-3 MSD  
Matrix: Water  
Analysis Batch: 540388

Client Sample ID: MW-07-MSD\_081822  
Prep Type: Total/NA

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	90		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 - On Site

Job ID: 240-171856-1

## GC/MS VOA

### Analysis Batch: 539824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171856-1	TRIP BLANK_87	Total/NA	Water	8260D	
240-171856-2	MW-224S_081822	Total/NA	Water	8260D	
240-171856-3	MW-07_081822	Total/NA	Water	8260D	
240-171856-4	MW-222S_081822	Total/NA	Water	8260D	
MB 240-539824/12	Method Blank	Total/NA	Water	8260D	
LCS 240-539824/5	Lab Control Sample	Total/NA	Water	8260D	
240-171856-3 MS	MW-07-MS_081822	Total/NA	Water	8260D	
240-171856-3 MSD	MW-07-MSD_081822	Total/NA	Water	8260D	

### Analysis Batch: 540264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171856-2	MW-224S_081822	Total/NA	Water	8260D SIM	
240-171856-4	MW-222S_081822	Total/NA	Water	8260D SIM	
MB 240-540264/4	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-540264/3	Lab Control Sample	Total/NA	Water	8260D SIM	
240-171824-G-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-171824-M-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

### Analysis Batch: 540388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171856-3	MW-07_081822	Total/NA	Water	8260D SIM	
MB 240-540388/4	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-540388/3	Lab Control Sample	Total/NA	Water	8260D SIM	
240-171856-3 MS	MW-07-MS_081822	Total/NA	Water	8260D SIM	
240-171856-3 MSD	MW-07-MSD_081822	Total/NA	Water	8260D SIM	

# Lab Chronicle

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

Job ID: 240-171856-1

**Client Sample ID: TRIP BLANK\_87**

**Lab Sample ID: 240-171856-1**

**Date Collected: 08/18/22 00:00**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	539824	AJS	EET CAN	08/23/22 16:23

**Client Sample ID: MW-224S\_081822**

**Lab Sample ID: 240-171856-2**

**Date Collected: 08/18/22 11:35**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	539824	AJS	EET CAN	08/23/22 16:46
Total/NA	Analysis	8260D SIM		1	540264	CS	EET CAN	08/26/22 02:02

**Client Sample ID: MW-07\_081822**

**Lab Sample ID: 240-171856-3**

**Date Collected: 08/18/22 12:45**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	539824	AJS	EET CAN	08/23/22 17:56
Total/NA	Analysis	8260D SIM		1	540388	CS	EET CAN	08/26/22 19:23

**Client Sample ID: MW-222S\_081822**

**Lab Sample ID: 240-171856-4**

**Date Collected: 08/18/22 13:35**

**Matrix: Water**

**Date Received: 08/20/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	539824	AJS	EET CAN	08/23/22 18:20
Total/NA	Analysis	8260D SIM		1	540264	CS	EET CAN	08/26/22 02:27

**Laboratory References:**

EET 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 - On Site

Job ID: 240-171856-1

## 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	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
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	06-30-23
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	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22




Eurofins - Canton Sample Receipt Form/Narrative  
Barberton Facility

Login # : 171856

Client Arcadis Site Name Livonia LTP Cooler unpacked by: JME  
Cooler Received on 8-20-22 Opened on 8-20-22  
FedEx: 1<sup>st</sup> Grd  UPS FAS Clipper Client Drop Off Eurofins Courier Other

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

Eurofins 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 +0.7 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp. 2.8 °C Corrected Cooler Temp. 2.8 °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  
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# HC286797
14. Were VOAs on the COC?  Yes  No
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 # 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: \_\_\_\_\_