

## ANALYTICAL REPORT

Eurofins Canton  
180 S. Van Buren Avenue  
Barberton, OH 44203  
Tel: (330)497-9396

Laboratory Job ID: 240-162960-1  
Client Project/Site: Ford LTP - On-Site

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

Attn: Kristoffer Hinskey



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Authorized for release by:  
2/28/2022 3:29:01 PM

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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: 240-162960-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
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.
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: 240-162960-1

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**Job ID: 240-162960-1**

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**Laboratory: Eurofins Canton**

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**Narrative**

**Job Narrative  
240-162960-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 2/23/2022 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 0.4° C and 4.1° 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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# Method Summary

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

Job ID: 240-162960-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
5030B	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

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# Sample Summary

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

Job ID: 240-162960-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-162960-1	TRIP BLANK_33	Water	02/15/22 00:00	02/23/22 08:00
240-162960-2	MW-44_021622	Water	02/16/22 12:00	02/23/22 08:00
240-162960-3	MW-22_021622	Water	02/16/22 14:10	02/23/22 08:00
240-162960-4	MW-51_021522	Water	02/15/22 11:50	02/23/22 08:00
240-162960-5	MW-65_021522	Water	02/15/22 15:25	02/23/22 08:00
240-162960-6	MW-66_021522	Water	02/15/22 13:30	02/23/22 08:00

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- 12
- 13
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# Detection Summary

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

Job ID: 240-162960-1

## Client Sample ID: TRIP BLANK\_33

Lab Sample ID: 240-162960-1

No Detections.

## Client Sample ID: MW-44\_021622

Lab Sample ID: 240-162960-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.5		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	170		6.7	3.0	ug/L	6.67		8260B	Total/NA

## Client Sample ID: MW-22\_021622

Lab Sample ID: 240-162960-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	57		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	1500		100	45	ug/L	100		8260B	Total/NA

## Client Sample ID: MW-51\_021522

Lab Sample ID: 240-162960-4

No Detections.

## Client Sample ID: MW-65\_021522

Lab Sample ID: 240-162960-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.1		1.0	0.46	ug/L	1		8260B	Total/NA
Vinyl chloride	5.9		1.0	0.45	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-66\_021522

Lab Sample ID: 240-162960-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.94	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	2.4		1.0	0.45	ug/L	1		8260B	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 - On-Site

Job ID: 240-162960-1

**Client Sample ID: TRIP BLANK\_33**

**Lab Sample ID: 240-162960-1**

**Date Collected: 02/15/22 00:00**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

**Method: 8260B - Volatile Organic Compounds (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			02/24/22 16:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/22 16:03	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 16:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/22 16:03	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 16:03	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/22 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		62 - 137		02/24/22 16:03	1
4-Bromofluorobenzene (Surr)	94		56 - 136		02/24/22 16:03	1
Toluene-d8 (Surr)	98		78 - 122		02/24/22 16:03	1
Dibromofluoromethane (Surr)	106		73 - 120		02/24/22 16:03	1



# Client Sample Results

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

Job ID: 240-162960-1

**Client Sample ID: MW-44\_021622**

**Lab Sample ID: 240-162960-2**

Date Collected: 02/16/22 12:00

Matrix: Water

Date Received: 02/23/22 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.5		2.0	0.86	ug/L			02/24/22 04:25	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	78		66 - 120					02/24/22 04:25	1

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	6.7	U	6.7	3.3	ug/L			02/24/22 11:19	6.67
cis-1,2-Dichloroethene	6.7	U	6.7	3.1	ug/L			02/24/22 11:19	6.67
Tetrachloroethene	6.7	U	6.7	2.9	ug/L			02/24/22 11:19	6.67
trans-1,2-Dichloroethene	6.7	U	6.7	3.4	ug/L			02/24/22 11:19	6.67
Trichloroethene	6.7	U	6.7	2.9	ug/L			02/24/22 11:19	6.67
Vinyl chloride	170		6.7	3.0	ug/L			02/24/22 11:19	6.67
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	97		62 - 137					02/24/22 11:19	6.67
4-Bromofluorobenzene (Surr)	98		56 - 136					02/24/22 11:19	6.67
Toluene-d8 (Surr)	104		78 - 122					02/24/22 11:19	6.67
Dibromofluoromethane (Surr)	113		73 - 120					02/24/22 11:19	6.67

# Client Sample Results

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

Job ID: 240-162960-1

**Client Sample ID: MW-22\_021622**

**Lab Sample ID: 240-162960-3**

Date Collected: 02/16/22 14:10

Matrix: Water

Date Received: 02/23/22 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	57		2.0	0.86	ug/L			02/24/22 04:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		66 - 120		02/24/22 04:50	1

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	100	U	100	49	ug/L			02/24/22 11:43	100
cis-1,2-Dichloroethene	100	U	100	46	ug/L			02/24/22 11:43	100
Tetrachloroethene	100	U	100	44	ug/L			02/24/22 11:43	100
trans-1,2-Dichloroethene	100	U	100	51	ug/L			02/24/22 11:43	100
Trichloroethene	100	U	100	44	ug/L			02/24/22 11:43	100
Vinyl chloride	1500		100	45	ug/L			02/24/22 11:43	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		62 - 137		02/24/22 11:43	100
4-Bromofluorobenzene (Surr)	98		56 - 136		02/24/22 11:43	100
Toluene-d8 (Surr)	102		78 - 122		02/24/22 11:43	100
Dibromofluoromethane (Surr)	112		73 - 120		02/24/22 11:43	100

# Client Sample Results

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

Job ID: 240-162960-1

**Client Sample ID: MW-51\_021522**

**Lab Sample ID: 240-162960-4**

**Date Collected: 02/15/22 11:50**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

**Method: 8260B 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			02/24/22 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		66 - 120		02/24/22 05:15	1

**Method: 8260B - Volatile Organic Compounds (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			02/24/22 16:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/22 16:26	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 16:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/22 16:26	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 16:26	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/22 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		62 - 137		02/24/22 16:26	1
4-Bromofluorobenzene (Surr)	93		56 - 136		02/24/22 16:26	1
Toluene-d8 (Surr)	97		78 - 122		02/24/22 16:26	1
Dibromofluoromethane (Surr)	106		73 - 120		02/24/22 16:26	1

# Client Sample Results

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

Job ID: 240-162960-1

**Client Sample ID: MW-65\_021522**

**Lab Sample ID: 240-162960-5**

Date Collected: 02/15/22 15:25

Matrix: Water

Date Received: 02/23/22 08:00

**Method: 8260B 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			02/23/22 21:52	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	80		66 - 120					02/23/22 21:52	1

**Method: 8260B - Volatile Organic Compounds (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			02/24/22 16:50	1
<b>cis-1,2-Dichloroethene</b>	<b>5.1</b>		1.0	0.46	ug/L			02/24/22 16:50	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 16:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/22 16:50	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 16:50	1
<b>Vinyl chloride</b>	<b>5.9</b>		1.0	0.45	ug/L			02/24/22 16:50	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	91		62 - 137					02/24/22 16:50	1
4-Bromofluorobenzene (Surr)	93		56 - 136					02/24/22 16:50	1
Toluene-d8 (Surr)	97		78 - 122					02/24/22 16:50	1
Dibromofluoromethane (Surr)	105		73 - 120					02/24/22 16:50	1

# Client Sample Results

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

Job ID: 240-162960-1

**Client Sample ID: MW-66\_021522**

**Lab Sample ID: 240-162960-6**

Date Collected: 02/15/22 13:30

Matrix: Water

Date Received: 02/23/22 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.94	J	2.0	0.86	ug/L			02/23/22 22:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		66 - 120					02/23/22 22:19	1

**Method: 8260B - Volatile Organic Compounds (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			02/24/22 17:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/22 17:14	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 17:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/22 17:14	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 17:14	1
Vinyl chloride	2.4		1.0	0.45	ug/L			02/24/22 17:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		62 - 137					02/24/22 17:14	1
4-Bromofluorobenzene (Surr)	89		56 - 136					02/24/22 17:14	1
Toluene-d8 (Surr)	97		78 - 122					02/24/22 17:14	1
Dibromofluoromethane (Surr)	103		73 - 120					02/24/22 17:14	1

# Surrogate Summary

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

Job ID: 240-162960-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (62-137)	BFB (56-136)	TOL (78-122)	DBFM (73-120)
240-162960-1	TRIP BLANK_33	90	94	98	106
240-162960-2	MW-44_021622	97	98	104	113
240-162960-2 MS	MW-44_021622	95	104	102	104
240-162960-2 MSD	MW-44_021622	93	103	105	103
240-162960-3	MW-22_021622	97	98	102	112
240-162960-4	MW-51_021522	95	93	97	106
240-162960-5	MW-65_021522	91	93	97	105
240-162960-6	MW-66_021522	88	89	97	103
LCS 240-518630/5	Lab Control Sample	92	101	106	104
MB 240-518630/7	Method Blank	97	102	104	110

#### Surrogate Legend

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

## Method: 8260B 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)
240-162960-2	MW-44_021622	78
240-162960-3	MW-22_021622	80
240-162960-4	MW-51_021522	79
240-162960-5	MW-65_021522	80
240-162960-6	MW-66_021522	80
240-162970-G-3 MS	Matrix Spike	81
240-162970-H-4 MS	Matrix Spike	79
240-162970-M-3 MSD	Matrix Spike Duplicate	80
240-162970-N-4 MSD	Matrix Spike Duplicate	79
LCS 240-518602/3	Lab Control Sample	79
LCS 240-518603/4	Lab Control Sample	79
MB 240-518602/4	Method Blank	79
MB 240-518603/5	Method Blank	78

#### Surrogate Legend

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

# QC Sample Results

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

Job ID: 240-162960-1

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

**Lab Sample ID: MB 240-518630/7**  
**Matrix: Water**  
**Analysis Batch: 518630**

**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			02/24/22 10:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/22 10:55	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 10:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/22 10:55	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/22 10:55	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/22 10:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		62 - 137		02/24/22 10:55	1
4-Bromofluorobenzene (Surr)	102		56 - 136		02/24/22 10:55	1
Toluene-d8 (Surr)	104		78 - 122		02/24/22 10:55	1
Dibromofluoromethane (Surr)	110		73 - 120		02/24/22 10:55	1

**Lab Sample ID: LCS 240-518630/5**  
**Matrix: Water**  
**Analysis Batch: 518630**

**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	24.2		ug/L		97	63 - 134
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	77 - 123
Tetrachloroethene	25.0	25.8		ug/L		103	76 - 123
trans-1,2-Dichloroethene	25.0	24.3		ug/L		97	75 - 124
Trichloroethene	25.0	24.4		ug/L		98	70 - 122
Vinyl chloride	25.0	23.2		ug/L		93	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	106		78 - 122
Dibromofluoromethane (Surr)	104		73 - 120

**Lab Sample ID: 240-162960-2 MS**  
**Matrix: Water**  
**Analysis Batch: 518630**

**Client Sample ID: MW-44\_021622**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	6.7	U	167	131		ug/L		78	56 - 135
cis-1,2-Dichloroethene	6.7	U	167	147		ug/L		88	66 - 128
Tetrachloroethene	6.7	U	167	140		ug/L		84	62 - 131
trans-1,2-Dichloroethene	6.7	U	167	132		ug/L		79	56 - 136
Trichloroethene	6.7	U	167	133		ug/L		79	61 - 124
Vinyl chloride	170		167	258		ug/L		52	43 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	102		78 - 122

# QC Sample Results

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

Job ID: 240-162960-1

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

Lab Sample ID: 240-162960-2 MS  
Matrix: Water  
Analysis Batch: 518630

Client Sample ID: MW-44\_021622  
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	104		73 - 120

Lab Sample ID: 240-162960-2 MSD  
Matrix: Water  
Analysis Batch: 518630

Client Sample ID: MW-44\_021622  
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	6.7	U	167	130		ug/L		78	56 - 135	1	26
cis-1,2-Dichloroethene	6.7	U	167	138		ug/L		83	66 - 128	6	14
Tetrachloroethene	6.7	U	167	144		ug/L		86	62 - 131	3	20
trans-1,2-Dichloroethene	6.7	U	167	135		ug/L		81	56 - 136	3	15
Trichloroethene	6.7	U	167	133		ug/L		80	61 - 124	1	15
Vinyl chloride	170		167	264		ug/L		56	43 - 157	2	24

  

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		62 - 137
4-Bromofluorobenzene (Surr)	103		56 - 136
Toluene-d8 (Surr)	105		78 - 122
Dibromofluoromethane (Surr)	103		73 - 120

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

Lab Sample ID: MB 240-518602/4  
Matrix: Water  
Analysis Batch: 518602

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			02/23/22 19:41	1

  

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		66 - 120		02/23/22 19:41	1

Lab Sample ID: LCS 240-518602/3  
Matrix: Water  
Analysis Batch: 518602

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	9.02		ug/L		90	80 - 122

  

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		66 - 120

Lab Sample ID: 240-162970-G-3 MS  
Matrix: Water  
Analysis Batch: 518602

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	10.5		ug/L		105	51 - 153

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# QC Sample Results

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

Job ID: 240-162960-1

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

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		66 - 120

Lab Sample ID: 240-162970-M-3 MSD  
Matrix: Water  
Analysis Batch: 518602

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	10.2		ug/L		102	51 - 153	3	16

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	80		66 - 120

Lab Sample ID: MB 240-518603/5  
Matrix: Water  
Analysis Batch: 518603

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			02/23/22 20:58	1

	MB	MB		Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits			
1,2-Dichloroethane-d4 (Surr)	78		66 - 120		02/23/22 20:58	1

Lab Sample ID: LCS 240-518603/4  
Matrix: Water  
Analysis Batch: 518603

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	10.6		ug/L		106	80 - 122

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		66 - 120

Lab Sample ID: 240-162970-H-4 MS  
Matrix: Water  
Analysis Batch: 518603

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	11.0		ug/L		110	51 - 153

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		66 - 120

Lab Sample ID: 240-162970-N-4 MSD  
Matrix: Water  
Analysis Batch: 518603

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	10.7		ug/L		107	51 - 153	3	16

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# QC Sample Results

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

Job ID: 240-162960-1

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

Lab Sample ID: 240-162970-N-4 MSD  
Matrix: Water  
Analysis Batch: 518603

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

<i>Surrogate</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
1,2-Dichloroethane-d4 (Surr)	79		66 - 120

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# QC Association Summary

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

Job ID: 240-162960-1

## GC/MS VOA

### Analysis Batch: 518602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-162960-2	MW-44_021622	Total/NA	Water	8260B SIM	
240-162960-3	MW-22_021622	Total/NA	Water	8260B SIM	
240-162960-4	MW-51_021522	Total/NA	Water	8260B SIM	
MB 240-518602/4	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-518602/3	Lab Control Sample	Total/NA	Water	8260B SIM	
240-162970-G-3 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-162970-M-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 518603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-162960-5	MW-65_021522	Total/NA	Water	8260B SIM	
240-162960-6	MW-66_021522	Total/NA	Water	8260B SIM	
MB 240-518603/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-518603/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-162970-H-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-162970-N-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 518630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-162960-1	TRIP BLANK_33	Total/NA	Water	8260B	
240-162960-2	MW-44_021622	Total/NA	Water	8260B	
240-162960-3	MW-22_021622	Total/NA	Water	8260B	
240-162960-4	MW-51_021522	Total/NA	Water	8260B	
240-162960-5	MW-65_021522	Total/NA	Water	8260B	
240-162960-6	MW-66_021522	Total/NA	Water	8260B	
MB 240-518630/7	Method Blank	Total/NA	Water	8260B	
LCS 240-518630/5	Lab Control Sample	Total/NA	Water	8260B	
240-162960-2 MS	MW-44_021622	Total/NA	Water	8260B	
240-162960-2 MSD	MW-44_021622	Total/NA	Water	8260B	

# Lab Chronicle

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

Job ID: 240-162960-1

**Client Sample ID: TRIP BLANK\_33**

**Lab Sample ID: 240-162960-1**

**Date Collected: 02/15/22 00:00**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	518630	02/24/22 16:03	LEE	TAL CAN

**Client Sample ID: MW-44\_021622**

**Lab Sample ID: 240-162960-2**

**Date Collected: 02/16/22 12:00**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.67	518630	02/24/22 11:19	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	518602	02/24/22 04:25	CS	TAL CAN

**Client Sample ID: MW-22\_021622**

**Lab Sample ID: 240-162960-3**

**Date Collected: 02/16/22 14:10**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	518630	02/24/22 11:43	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	518602	02/24/22 04:50	CS	TAL CAN

**Client Sample ID: MW-51\_021522**

**Lab Sample ID: 240-162960-4**

**Date Collected: 02/15/22 11:50**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	518630	02/24/22 16:26	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	518602	02/24/22 05:15	CS	TAL CAN

**Client Sample ID: MW-65\_021522**

**Lab Sample ID: 240-162960-5**

**Date Collected: 02/15/22 15:25**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	518630	02/24/22 16:50	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	518603	02/23/22 21:52	CS	TAL CAN

**Client Sample ID: MW-66\_021522**

**Lab Sample ID: 240-162960-6**

**Date Collected: 02/15/22 13:30**

**Matrix: Water**

**Date Received: 02/23/22 08:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	518630	02/24/22 17:14	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	518603	02/23/22 22:19	CS	TAL CAN

**Laboratory References:**

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

Eurofins Canton

# Accreditation/Certification Summary

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

Job ID: 240-162960-1

## 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	02-23-22 *
Connecticut	State	PH-0590	12-31-21 *
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22 *
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	11-06-22
New York	NELAP	10975	03-31-22
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	12-21-23
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-21-14	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.





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**Eurofins TestAmerica Canton Sample Receipt Form/Narrative** Login # : 162960  
**Canton Facility**

Client Ford LTP Site Name \_\_\_\_\_ Cooler unpacked by: JME  
Cooler Received on 2/23/22 Opened on 2/23/22  
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-14 (CF -0.2°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  
-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 NA  
-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# HC157842  
14. Were VOAs on the COC? Yes No  
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. Yes No NA  
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 01042016 Yes No  
17. Was a LL Hg or Me Hg trip blank present? Yes No

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

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

**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: \_\_\_\_\_

