

## ANALYTICAL REPORT

Eurofins TestAmerica, Canton  
4101 Shuffel Street NW  
North Canton, OH 44720  
Tel: (330)497-9396

Laboratory Job ID: 240-144665-1  
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:  
3/5/2021 2:29:01 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: 240-144665-1

## 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: 240-144665-1

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## Job ID: 240-144665-1

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Laboratory: Eurofins TestAmerica, Canton

### Narrative

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Job Narrative  
240-144665-1

### Comments

No additional comments.

### Receipt

The samples were received on 2/19/2021 8:00 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 1.4° C.

### GC/MS VOA

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

### VOA Prep

No 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: 240-144665-1

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 TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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- 13
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# Sample Summary

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

Job ID: 240-144665-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-144665-1	TRIP BLANK	Water	02/17/21 00:00	02/19/21 08:00	
240-144665-2	MW-194_021721	Water	02/17/21 11:28	02/19/21 08:00	
240-144665-3	MW-194S_021721	Water	02/17/21 12:30	02/19/21 08:00	
240-144665-4	MW-196S_021721	Water	02/17/21 14:26	02/19/21 08:00	
240-144665-5	MW-196_021721	Water	02/17/21 15:20	02/19/21 08:00	

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- 12
- 13
- 14

# Detection Summary

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

Job ID: 240-144665-1

## Client Sample ID: TRIP BLANK

Lab Sample ID: 240-144665-1

No Detections.

## Client Sample ID: MW-194\_021721

Lab Sample ID: 240-144665-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.6	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA

## Client Sample ID: MW-194S\_021721

Lab Sample ID: 240-144665-3

No Detections.

## Client Sample ID: MW-196S\_021721

Lab Sample ID: 240-144665-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	64		4.0	0.64	ug/L	4		8260B	Total/NA
trans-1,2-Dichloroethene	1.3	J	4.0	0.76	ug/L	4		8260B	Total/NA
Trichloroethene	88		4.0	0.40	ug/L	4		8260B	Total/NA

## Client Sample ID: MW-196\_021721

Lab Sample ID: 240-144665-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	350		25	4.0	ug/L	25		8260B	Total/NA
trans-1,2-Dichloroethene	120		25	4.8	ug/L	25		8260B	Total/NA
Trichloroethene	470		25	2.5	ug/L	25		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

# Client Sample Results

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

Job ID: 240-144665-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-144665-1**

**Date Collected: 02/17/21 00:00**

**Matrix: Water**

**Date Received: 02/19/21 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	0.19	ug/L			02/25/21 18:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/25/21 18:58	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/25/21 18:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/25/21 18:58	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/25/21 18:58	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/25/21 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		75 - 130		02/25/21 18:58	1
4-Bromofluorobenzene (Surr)	66		47 - 134		02/25/21 18:58	1
Toluene-d8 (Surr)	80		69 - 122		02/25/21 18:58	1
Dibromofluoromethane (Surr)	110		78 - 129		02/25/21 18:58	1



# Client Sample Results

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

Job ID: 240-144665-1

**Client Sample ID: MW-194\_021721**

**Lab Sample ID: 240-144665-2**

Date Collected: 02/17/21 11:28

Matrix: Water

Date Received: 02/19/21 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.6	J	2.0	0.86	ug/L			02/25/21 18:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		70 - 133					02/25/21 18:36	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	0.19	ug/L			02/25/21 21:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/25/21 21:21	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/25/21 21:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/25/21 21:21	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/25/21 21:21	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/25/21 21:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		75 - 130					02/25/21 21:21	1
4-Bromofluorobenzene (Surr)	63		47 - 134					02/25/21 21:21	1
Toluene-d8 (Surr)	79		69 - 122					02/25/21 21:21	1
Dibromofluoromethane (Surr)	105		78 - 129					02/25/21 21:21	1

# Client Sample Results

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

Job ID: 240-144665-1

**Client Sample ID: MW-194S\_021721**

**Lab Sample ID: 240-144665-3**

**Date Collected: 02/17/21 12:30**

**Matrix: Water**

**Date Received: 02/19/21 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			02/25/21 19:01	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)	82		70 - 133					02/25/21 19:01	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	0.19	ug/L			02/25/21 21:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/25/21 21:45	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/25/21 21:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/25/21 21:45	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/25/21 21:45	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/25/21 21:45	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)	111		75 - 130					02/25/21 21:45	1
4-Bromofluorobenzene (Surr)	65		47 - 134					02/25/21 21:45	1
Toluene-d8 (Surr)	82		69 - 122					02/25/21 21:45	1
Dibromofluoromethane (Surr)	111		78 - 129					02/25/21 21:45	1

# Client Sample Results

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

Job ID: 240-144665-1

**Client Sample ID: MW-196S\_021721**

**Lab Sample ID: 240-144665-4**

Date Collected: 02/17/21 14:26

Matrix: Water

Date Received: 02/19/21 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			02/25/21 19:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		70 - 133		02/25/21 19:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	4.0	U	4.0	0.76	ug/L			02/25/21 22:09	4
<b>cis-1,2-Dichloroethene</b>	<b>64</b>		4.0	0.64	ug/L			02/25/21 22:09	4
Tetrachloroethene	4.0	U	4.0	0.60	ug/L			02/25/21 22:09	4
<b>trans-1,2-Dichloroethene</b>	<b>1.3</b>	<b>J</b>	4.0	0.76	ug/L			02/25/21 22:09	4
<b>Trichloroethene</b>	<b>88</b>		4.0	0.40	ug/L			02/25/21 22:09	4
Vinyl chloride	4.0	U	4.0	0.80	ug/L			02/25/21 22:09	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		02/25/21 22:09	4
4-Bromofluorobenzene (Surr)	64		47 - 134		02/25/21 22:09	4
Toluene-d8 (Surr)	79		69 - 122		02/25/21 22:09	4
Dibromofluoromethane (Surr)	111		78 - 129		02/25/21 22:09	4

# Client Sample Results

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

Job ID: 240-144665-1

**Client Sample ID: MW-196\_021721**

**Lab Sample ID: 240-144665-5**

Date Collected: 02/17/21 15:20

Matrix: Water

Date Received: 02/19/21 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			02/25/21 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		70 - 133		02/25/21 19:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	25	U	25	4.8	ug/L			02/25/21 22:32	25
<b>cis-1,2-Dichloroethene</b>	<b>350</b>		25	4.0	ug/L			02/25/21 22:32	25
Tetrachloroethene	25	U	25	3.8	ug/L			02/25/21 22:32	25
<b>trans-1,2-Dichloroethene</b>	<b>120</b>		25	4.8	ug/L			02/25/21 22:32	25
<b>Trichloroethene</b>	<b>470</b>		25	2.5	ug/L			02/25/21 22:32	25
Vinyl chloride	25	U	25	5.0	ug/L			02/25/21 22:32	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 130		02/25/21 22:32	25
4-Bromofluorobenzene (Surr)	66		47 - 134		02/25/21 22:32	25
Toluene-d8 (Surr)	83		69 - 122		02/25/21 22:32	25
Dibromofluoromethane (Surr)	113		78 - 129		02/25/21 22:32	25

# Surrogate Summary

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

Job ID: 240-144665-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-144665-1	TRIP BLANK	109	66	80	110
240-144665-2	MW-194_021721	106	63	79	105
240-144665-3	MW-194S_021721	111	65	82	111
240-144665-4	MW-196S_021721	108	64	79	111
240-144665-5	MW-196_021721	108	66	83	113
240-144711-E-2 MS	Matrix Spike	93	88	91	94
240-144711-F-2 MSD	Matrix Spike Duplicate	91	92	91	92
LCS 240-474507/4	Lab Control Sample	88	88	88	91
MB 240-474507/7	Method Blank	102	68	80	101

**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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (70-133)
240-144568-J-3 MS	Matrix Spike	79
240-144568-J-3 MSD	Matrix Spike Duplicate	83
240-144665-2	MW-194_021721	81
240-144665-3	MW-194S_021721	82
240-144665-4	MW-196S_021721	82
240-144665-5	MW-196_021721	80
LCS 240-474490/4	Lab Control Sample	79
MB 240-474490/5	Method Blank	81

**Surrogate Legend**

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

# QC Sample Results

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

Job ID: 240-144665-1

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

**Lab Sample ID: MB 240-474507/7**  
**Matrix: Water**  
**Analysis Batch: 474507**

**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	0.19	ug/L			02/25/21 17:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			02/25/21 17:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			02/25/21 17:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			02/25/21 17:22	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			02/25/21 17:22	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			02/25/21 17:22	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	102		75 - 130		02/25/21 17:22	1
4-Bromofluorobenzene (Surr)	68		47 - 134		02/25/21 17:22	1
Toluene-d8 (Surr)	80		69 - 122		02/25/21 17:22	1
Dibromofluoromethane (Surr)	101		78 - 129		02/25/21 17:22	1

**Lab Sample ID: LCS 240-474507/4**  
**Matrix: Water**  
**Analysis Batch: 474507**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	10.0	9.27		ug/L		93	73 - 129
cis-1,2-Dichloroethene	10.0	9.22		ug/L		92	75 - 124
Tetrachloroethene	10.0	11.5		ug/L		115	70 - 125
trans-1,2-Dichloroethene	10.0	9.77		ug/L		98	74 - 130
Trichloroethene	10.0	9.71		ug/L		97	71 - 121
Vinyl chloride	10.0	8.03		ug/L		80	61 - 134

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	88		75 - 130
4-Bromofluorobenzene (Surr)	88		47 - 134
Toluene-d8 (Surr)	88		69 - 122
Dibromofluoromethane (Surr)	91		78 - 129

**Lab Sample ID: 240-144711-E-2 MS**  
**Matrix: Water**  
**Analysis Batch: 474507**

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

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	1.0	U	10.0	8.83		ug/L		88	64 - 132
cis-1,2-Dichloroethene	1.0	U	10.0	8.92		ug/L		89	68 - 121
Tetrachloroethene	1.0	U	10.0	11.2		ug/L		112	52 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	9.58		ug/L		96	69 - 126
Trichloroethene	1.0	U	10.0	9.00		ug/L		90	56 - 124
Vinyl chloride	1.0	U	10.0	8.39		ug/L		84	49 - 136

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		75 - 130
4-Bromofluorobenzene (Surr)	88		47 - 134
Toluene-d8 (Surr)	91		69 - 122

# QC Sample Results

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

Job ID: 240-144665-1

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

Lab Sample ID: 240-144711-E-2 MS  
Matrix: Water  
Analysis Batch: 474507

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	94		78 - 129

Lab Sample ID: 240-144711-F-2 MSD  
Matrix: Water  
Analysis Batch: 474507

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	1.0	U	10.0	9.03		ug/L		90	64 - 132	2	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.44		ug/L		94	68 - 121	6	35
Tetrachloroethene	1.0	U	10.0	11.3		ug/L		113	52 - 129	1	35
trans-1,2-Dichloroethene	1.0	U	10.0	9.55		ug/L		96	69 - 126	0	35
Trichloroethene	1.0	U	10.0	9.26		ug/L		93	56 - 124	3	35
Vinyl chloride	1.0	U	10.0	8.55		ug/L		86	49 - 136	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		75 - 130
4-Bromofluorobenzene (Surr)	92		47 - 134
Toluene-d8 (Surr)	91		69 - 122
Dibromofluoromethane (Surr)	92		78 - 129

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

Lab Sample ID: MB 240-474490/5  
Matrix: Water  
Analysis Batch: 474490

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			02/25/21 12:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		70 - 133		02/25/21 12:43	1

Lab Sample ID: LCS 240-474490/4  
Matrix: Water  
Analysis Batch: 474490

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	10.7		ug/L		107	80 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		70 - 133

Lab Sample ID: 240-144568-J-3 MS  
Matrix: Water  
Analysis Batch: 474490

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	10.2		ug/L		102	46 - 170

Eurofins TestAmerica, Canton

# QC Sample Results

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

Job ID: 240-144665-1

## Method: 8260B 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)	79		70 - 133

**Lab Sample ID: 240-144568-J-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 474490**

**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	10.2		ug/L		102	46 - 170	0	26

<i>Surrogate</i>	<i>MSD</i> <i>%Recovery</i>	<i>MSD</i> <i>Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	83		70 - 133

- 1
- 2
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- 12
- 13
- 14



# QC Association Summary

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

Job ID: 240-144665-1

## GC/MS VOA

### Analysis Batch: 474490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144665-2	MW-194_021721	Total/NA	Water	8260B SIM	
240-144665-3	MW-194S_021721	Total/NA	Water	8260B SIM	
240-144665-4	MW-196S_021721	Total/NA	Water	8260B SIM	
240-144665-5	MW-196_021721	Total/NA	Water	8260B SIM	
MB 240-474490/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-474490/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-144568-J-3 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-144568-J-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

### Analysis Batch: 474507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-144665-1	TRIP BLANK	Total/NA	Water	8260B	
240-144665-2	MW-194_021721	Total/NA	Water	8260B	
240-144665-3	MW-194S_021721	Total/NA	Water	8260B	
240-144665-4	MW-196S_021721	Total/NA	Water	8260B	
240-144665-5	MW-196_021721	Total/NA	Water	8260B	
MB 240-474507/7	Method Blank	Total/NA	Water	8260B	
LCS 240-474507/4	Lab Control Sample	Total/NA	Water	8260B	
240-144711-E-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-144711-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

# Lab Chronicle

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

Job ID: 240-144665-1

## Client Sample ID: TRIP BLANK

Lab Sample ID: 240-144665-1

Date Collected: 02/17/21 00:00

Matrix: Water

Date Received: 02/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474507	02/25/21 18:58	LRW	TAL CAN

## Client Sample ID: MW-194\_021721

Lab Sample ID: 240-144665-2

Date Collected: 02/17/21 11:28

Matrix: Water

Date Received: 02/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474507	02/25/21 21:21	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474490	02/25/21 18:36	SAM	TAL CAN

## Client Sample ID: MW-194S\_021721

Lab Sample ID: 240-144665-3

Date Collected: 02/17/21 12:30

Matrix: Water

Date Received: 02/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	474507	02/25/21 21:45	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474490	02/25/21 19:01	SAM	TAL CAN

## Client Sample ID: MW-196S\_021721

Lab Sample ID: 240-144665-4

Date Collected: 02/17/21 14:26

Matrix: Water

Date Received: 02/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		4	474507	02/25/21 22:09	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474490	02/25/21 19:26	SAM	TAL CAN

## Client Sample ID: MW-196\_021721

Lab Sample ID: 240-144665-5

Date Collected: 02/17/21 15:20

Matrix: Water

Date Received: 02/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	474507	02/25/21 22:32	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	474490	02/25/21 19:51	SAM	TAL CAN

### Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

# Accreditation/Certification Summary

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

Job ID: 240-144665-1

## Laboratory: Eurofins TestAmerica, 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	02-23-21 *
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21 *
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21 *
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

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



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

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Regulatory program:  DW  NPDES  RCRA  Other

TestAmerica Laboratories, Inc.  
 COC No:

Lab Contact: Mike DeMonico  
 Telephone: 330-497-9396

Site Contact: Julia McClafferty  
 Telephone: 734-644-5131

Client Project Manager: Kris Hinsky  
 Telephone: 248-994-2240  
 Email: krisoffier.hinsky@arcadis.com

Sampler Name: Xena Chen  
 Method of Shipment/Carrier:  
 Shipping/Tracking No:

Analysises

For lab use only

Walk-in client

Lab sampling

Job/SDG No:

Sample Specific Notes / Special Instructions:

1 Trip Blank

3 vials for 8260B

3 vials for 8260B SIM

1

1

1,1-DCE 8260B

Composite C / Grab G

Filtered Sample (Y / N)

1,1-DCE 8260B

cs-1,2-DCE 8260B

Trans-1,2-DCE 8260B

PCE 8260B

TCE 8260B

Vinyl Chloride 8260B

1,4-Dioxane 8260B SIM

Analysis Turnaround Time

TAT if different from below

10 day

Containers & Preservatives

Matrix

Sample Date

Sample Time

Air

Aqueous

Sediment

Solid

Other:

H2SO4

HNO3

HCl

NaOH

ZnOH

Other:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client

Disposal By Lab

Archive For

Months

Possible Hazard Identification

Non-Hazard

Flammable

Corrosive

Toxic

Explosive

Other

Special Instructions/QC Requirements & Comments:

Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728

Level IV Reporting requested.

Relinquished by: [Signature]

Company: Arcadis

Date/Time: 2/19/21 17:00

Relinquished by: [Signature]

Company: Arcadis

Date/Time: 2/18/2021

Relinquished by: [Signature]

Company: ETA

Date/Time: 2/18/21 11:38

Relinquished by: [Signature]

Company: ETA

Date/Time: 2/17/21 18:00

Relinquished by: [Signature]

Company: Arcadis

Date/Time: 2/17/21 10:18

Relinquished by: [Signature]

Company: TA

Date/Time: 2-19-21 8:00



240-144665 Chain of Custody

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

Login # : 149665

Client Arcadis Site Name \_\_\_\_\_

Cooler unpacked by: \_\_\_\_\_

Cooler Received on 2-19-21 Opened on 2-19-21

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-11 (CF +0.1 °C) Observed Cooler Temp. 1.3 °C Corrected Cooler Temp. 1.4 °C  
 IR GUN #IR-12 (CF +0.2°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

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# HC907861

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 # \_\_\_\_\_ 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: Ryan C

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