

# ANALYTICAL REPORT

## PREPARED FOR

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Generated 3/3/2023 5:08:02 AM

## JOB DESCRIPTION

Ford LTP - On Site

## JOB NUMBER

240-180962-1

# Eurofins Canton

## Job Notes

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## Authorization



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# Definitions/Glossary

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

Job ID: 240-180962-1

## 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: 240-180962-1

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**Job ID: 240-180962-1**

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**Laboratory: Eurofins Canton**

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**Narrative**

**Job Narrative  
240-180962-1**

**Receipt**

The samples were received on 2/25/2023 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 0.6°C

**GC/MS VOA**

Method 8260D: Method required MS/MSD was prepared and analyzed at required batch frequency for analytical batch 240-563755 however the MS/MSD could not be reported because the parent sample needed reanalysis. The following samples are affected: PW-16-02\_022323 (240-180962-4), MW-51\_022323 (240-180962-5), MW-65\_022323 (240-180962-6) and DUP-03 (240-180962-7)

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



# Method Summary

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

Job ID: 240-180962-1

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

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- 10
- 11
- 12
- 13
- 14

# Sample Summary

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

Job ID: 240-180962-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-180962-1	TRIP BLANK_152	Water	02/23/23 00:00	02/25/23 08:00
240-180962-2	MW-195S_022323	Water	02/23/23 10:50	02/25/23 08:00
240-180962-3	MW-197S_022323	Water	02/23/23 11:55	02/25/23 08:00
240-180962-4	PW-16-02_022323	Water	02/23/23 13:30	02/25/23 08:00
240-180962-5	MW-51_022323	Water	02/23/23 15:00	02/25/23 08:00
240-180962-6	MW-65_022323	Water	02/23/23 16:03	02/25/23 08:00
240-180962-7	DUP-03	Water	02/23/23 00:00	02/25/23 08:00

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- 2
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- 10
- 11
- 12
- 13
- 14

# Detection Summary

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

Job ID: 240-180962-1

## Client Sample ID: TRIP BLANK\_152

Lab Sample ID: 240-180962-1

No Detections.

## Client Sample ID: MW-195S\_022323

Lab Sample ID: 240-180962-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	110		50	23	ug/L	50		8260D	Total/NA
trans-1,2-Dichloroethene	180		50	26	ug/L	50		8260D	Total/NA
Trichloroethene	1900		50	22	ug/L	50		8260D	Total/NA

## Client Sample ID: MW-197S\_022323

Lab Sample ID: 240-180962-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	17		1.7	0.77	ug/L	1.667		8260D	Total/NA
Trichloroethene	68		1.7	0.73	ug/L	1.667		8260D	Total/NA
Vinyl chloride	1.5	J	1.7	0.75	ug/L	1.667		8260D	Total/NA

## Client Sample ID: PW-16-02\_022323

Lab Sample ID: 240-180962-4

No Detections.

## Client Sample ID: MW-51\_022323

Lab Sample ID: 240-180962-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.2	J	2.0	0.86	ug/L	1		8260D SIM	Total/NA

## Client Sample ID: MW-65\_022323

Lab Sample ID: 240-180962-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.5		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	7.8		1.0	0.45	ug/L	1		8260D	Total/NA

## Client Sample ID: DUP-03

Lab Sample ID: 240-180962-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.94	J	1.0	0.49	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	100		33	15	ug/L	33.333		8260D	Total/NA
trans-1,2-Dichloroethene	190		33	17	ug/L	33.333		8260D	Total/NA
Trichloroethene	2000		33	15	ug/L	33.333		8260D	Total/NA
Vinyl chloride	15		1.0	0.45	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: TRIP BLANK\_152**

**Lab Sample ID: 240-180962-1**

Date Collected: 02/23/23 00:00

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/28/23 18:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/23 18:02	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 18:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 18:02	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 18:02	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/23 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137		02/28/23 18:02	1
4-Bromofluorobenzene (Surr)	88		56 - 136		02/28/23 18:02	1
Toluene-d8 (Surr)	93		78 - 122		02/28/23 18:02	1
Dibromofluoromethane (Surr)	99		73 - 120		02/28/23 18:02	1

# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: MW-195S\_022323**

**Lab Sample ID: 240-180962-2**

Date Collected: 02/23/23 10:50

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/01/23 14:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		66 - 120					03/01/23 14:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	50	U	50	25	ug/L			03/01/23 21:49	50
<b>cis-1,2-Dichloroethene</b>	<b>110</b>		50	23	ug/L			03/01/23 21:49	50
Tetrachloroethene	50	U	50	22	ug/L			03/01/23 21:49	50
<b>trans-1,2-Dichloroethene</b>	<b>180</b>		50	26	ug/L			03/01/23 21:49	50
<b>Trichloroethene</b>	<b>1900</b>		50	22	ug/L			03/01/23 21:49	50
Vinyl chloride	50	U	50	23	ug/L			03/01/23 21:49	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		62 - 137					03/01/23 21:49	50
4-Bromofluorobenzene (Surr)	84		56 - 136					03/01/23 21:49	50
Toluene-d8 (Surr)	87		78 - 122					03/01/23 21:49	50
Dibromofluoromethane (Surr)	98		73 - 120					03/01/23 21:49	50

# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: MW-197S\_022323**

**Lab Sample ID: 240-180962-3**

Date Collected: 02/23/23 11:55

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/01/23 14:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		66 - 120					03/01/23 14:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.7	U	1.7	0.82	ug/L			03/01/23 20:59	1.667
<b>cis-1,2-Dichloroethene</b>	<b>17</b>		1.7	0.77	ug/L			03/01/23 20:59	1.667
Tetrachloroethene	1.7	U	1.7	0.73	ug/L			03/01/23 20:59	1.667
trans-1,2-Dichloroethene	1.7	U	1.7	0.85	ug/L			03/01/23 20:59	1.667
<b>Trichloroethene</b>	<b>68</b>		1.7	0.73	ug/L			03/01/23 20:59	1.667
<b>Vinyl chloride</b>	<b>1.5 J</b>		1.7	0.75	ug/L			03/01/23 20:59	1.667
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		62 - 137					03/01/23 20:59	1.667
4-Bromofluorobenzene (Surr)	83		56 - 136					03/01/23 20:59	1.667
Toluene-d8 (Surr)	91		78 - 122					03/01/23 20:59	1.667
Dibromofluoromethane (Surr)	94		73 - 120					03/01/23 20:59	1.667

# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: PW-16-02\_022323**

**Lab Sample ID: 240-180962-4**

Date Collected: 02/23/23 13:30

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/01/23 14:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		66 - 120					03/01/23 14:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/01/23 19:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/01/23 19:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/01/23 19:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/01/23 19:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/01/23 19:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/01/23 19:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		62 - 137					03/01/23 19:32	1
4-Bromofluorobenzene (Surr)	87		56 - 136					03/01/23 19:32	1
Toluene-d8 (Surr)	93		78 - 122					03/01/23 19:32	1
Dibromofluoromethane (Surr)	95		73 - 120					03/01/23 19:32	1

# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: MW-51\_022323**

**Lab Sample ID: 240-180962-5**

Date Collected: 02/23/23 15:00

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.2	J	2.0	0.86	ug/L			03/01/23 15:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		66 - 120					03/01/23 15:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/28/23 20:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/23 20:58	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 20:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 20:58	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 20:58	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/23 20:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		62 - 137					02/28/23 20:58	1
4-Bromofluorobenzene (Surr)	89		56 - 136					02/28/23 20:58	1
Toluene-d8 (Surr)	91		78 - 122					02/28/23 20:58	1
Dibromofluoromethane (Surr)	95		73 - 120					02/28/23 20:58	1

# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: MW-65\_022323**

**Lab Sample ID: 240-180962-6**

Date Collected: 02/23/23 16:03

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/01/23 15:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		66 - 120					03/01/23 15:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/28/23 21:23	1
<b>cis-1,2-Dichloroethene</b>	<b>3.5</b>		1.0	0.46	ug/L			02/28/23 21:23	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 21:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 21:23	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 21:23	1
<b>Vinyl chloride</b>	<b>7.8</b>		1.0	0.45	ug/L			02/28/23 21:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137					02/28/23 21:23	1
4-Bromofluorobenzene (Surr)	89		56 - 136					02/28/23 21:23	1
Toluene-d8 (Surr)	89		78 - 122					02/28/23 21:23	1
Dibromofluoromethane (Surr)	100		73 - 120					02/28/23 21:23	1

# Client Sample Results

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

Job ID: 240-180962-1

**Client Sample ID: DUP-03**

**Lab Sample ID: 240-180962-7**

Date Collected: 02/23/23 00:00

Matrix: Water

Date Received: 02/25/23 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/01/23 16:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		66 - 120					03/01/23 16:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.94	J	1.0	0.49	ug/L			02/28/23 21:48	1
cis-1,2-Dichloroethene	100		33	15	ug/L			03/01/23 21:24	33.333
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 21:48	1
trans-1,2-Dichloroethene	190		33	17	ug/L			03/01/23 21:24	33.333
Trichloroethene	2000		33	15	ug/L			03/01/23 21:24	33.333
Vinyl chloride	15		1.0	0.45	ug/L			02/28/23 21:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137					02/28/23 21:48	1
1,2-Dichloroethane-d4 (Surr)	111		62 - 137					03/01/23 21:24	33.333
4-Bromofluorobenzene (Surr)	85		56 - 136					02/28/23 21:48	1
4-Bromofluorobenzene (Surr)	88		56 - 136					03/01/23 21:24	33.333
Toluene-d8 (Surr)	91		78 - 122					02/28/23 21:48	1
Toluene-d8 (Surr)	93		78 - 122					03/01/23 21:24	33.333
Dibromofluoromethane (Surr)	94		73 - 120					02/28/23 21:48	1
Dibromofluoromethane (Surr)	102		73 - 120					03/01/23 21:24	33.333

# Surrogate Summary

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

Job ID: 240-180962-1

## 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)
240-180962-1	TRIP BLANK_152	105	88	93	99
240-180962-2	MW-195S_022323	107	84	87	98
240-180962-3	MW-197S_022323	109	83	91	94
240-180962-4	PW-16-02_022323	109	87	93	95
240-180962-5	MW-51_022323	105	89	91	95
240-180962-6	MW-65_022323	103	89	89	100
240-180962-7	DUP-03	101	85	91	94
240-180962-7	DUP-03	111	88	93	102
240-180985-F-8 MS	Matrix Spike	106	91	93	98
240-180985-I-8 MSD	Matrix Spike Duplicate	104	90	93	98
LCS 240-563755/5	Lab Control Sample	98	92	92	98
LCS 240-563897/5	Lab Control Sample	110	93	92	99
MB 240-563755/8	Method Blank	105	90	92	98
MB 240-563897/8	Method Blank	108	87	90	97

**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)
240-180962-2	MW-195S_022323	90
240-180962-3	MW-197S_022323	89
240-180962-4	PW-16-02_022323	91
240-180962-5	MW-51_022323	86
240-180962-6	MW-65_022323	84
240-180962-7	DUP-03	86
240-180977-E-2 MS	Matrix Spike	84
240-180977-K-2 MSD	Matrix Spike Duplicate	83
LCS 240-563886/4	Lab Control Sample	87
MB 240-563886/6	Method Blank	95

**Surrogate Legend**

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



# QC Sample Results

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

Job ID: 240-180962-1

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

Lab Sample ID: MB 240-563755/8

Matrix: Water

Analysis Batch: 563755

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/28/23 15:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/23 15:32	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 15:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 15:32	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 15:32	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/23 15:32	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	105		62 - 137		02/28/23 15:32	1
4-Bromofluorobenzene (Surr)	90		56 - 136		02/28/23 15:32	1
Toluene-d8 (Surr)	92		78 - 122		02/28/23 15:32	1
Dibromofluoromethane (Surr)	98		73 - 120		02/28/23 15:32	1

Lab Sample ID: LCS 240-563755/5

Matrix: Water

Analysis Batch: 563755

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	20.0	17.3		ug/L		86	63 - 134
cis-1,2-Dichloroethene	20.0	18.1		ug/L		91	77 - 123
Tetrachloroethene	20.0	20.1		ug/L		100	76 - 123
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	75 - 124
Trichloroethene	20.0	18.8		ug/L		94	70 - 122
Vinyl chloride	20.0	19.7		ug/L		99	60 - 144

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

Lab Sample ID: MB 240-563897/8

Matrix: Water

Analysis Batch: 563897

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/01/23 15:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/01/23 15:46	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/01/23 15:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/01/23 15:46	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/01/23 15:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/01/23 15:46	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	108		62 - 137		03/01/23 15:46	1
4-Bromofluorobenzene (Surr)	87		56 - 136		03/01/23 15:46	1
Toluene-d8 (Surr)	90		78 - 122		03/01/23 15:46	1

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# QC Sample Results

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

Job ID: 240-180962-1

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

**Lab Sample ID: MB 240-563897/8**  
**Matrix: Water**  
**Analysis Batch: 563897**

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	97		73 - 120		03/01/23 15:46	1

**Lab Sample ID: LCS 240-563897/5**  
**Matrix: Water**  
**Analysis Batch: 563897**

**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	20.0	16.3		ug/L		82	63 - 134
cis-1,2-Dichloroethene	20.0	18.1		ug/L		90	77 - 123
Tetrachloroethene	20.0	19.1		ug/L		95	76 - 123
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	75 - 124
Trichloroethene	20.0	19.2		ug/L		96	70 - 122
Vinyl chloride	20.0	20.7		ug/L		103	60 - 144

  

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	110		62 - 137
4-Bromofluorobenzene (Surr)	93		56 - 136
Toluene-d8 (Surr)	92		78 - 122
Dibromofluoromethane (Surr)	99		73 - 120

**Lab Sample ID: 240-180985-F-8 MS**  
**Matrix: Water**  
**Analysis Batch: 563897**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
1,1-Dichloroethene	1.0	U	20.0	16.2		ug/L		81	56 - 135
cis-1,2-Dichloroethene	1.0	U	20.0	16.8		ug/L		84	66 - 128
Tetrachloroethene	1.0	U	20.0	17.4		ug/L		87	62 - 131
trans-1,2-Dichloroethene	1.0	U	20.0	17.9		ug/L		89	56 - 136
Trichloroethene	1.0	U	20.0	17.3		ug/L		87	61 - 124
Vinyl chloride	1.0	U	20.0	20.5		ug/L		103	43 - 157

  

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	106		62 - 137
4-Bromofluorobenzene (Surr)	91		56 - 136
Toluene-d8 (Surr)	93		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

**Lab Sample ID: 240-180985-I-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 563897**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
1,1-Dichloroethene	1.0	U	20.0	16.0		ug/L		80	56 - 135	1	26
cis-1,2-Dichloroethene	1.0	U	20.0	17.2		ug/L		86	66 - 128	3	14
Tetrachloroethene	1.0	U	20.0	18.2		ug/L		91	62 - 131	5	20
trans-1,2-Dichloroethene	1.0	U	20.0	18.0		ug/L		90	56 - 136	1	15
Trichloroethene	1.0	U	20.0	17.7		ug/L		88	61 - 124	2	15

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# QC Sample Results

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

Job ID: 240-180962-1

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

Lab Sample ID: 240-180985-I-8 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 563897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	1.0	U	20.0	20.6		ug/L		103	43 - 157	1	24
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	104		62 - 137								
4-Bromofluorobenzene (Surr)	90		56 - 136								
Toluene-d8 (Surr)	93		78 - 122								
Dibromofluoromethane (Surr)	98		73 - 120								

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

Lab Sample ID: MB 240-563886/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 563886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/01/23 13:13	1
<b>MB MB</b>									
<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)	95		66 - 120					03/01/23 13:13	1

Lab Sample ID: LCS 240-563886/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 563886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	10.0	9.85		ug/L		98	80 - 122
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	87		66 - 120				

Lab Sample ID: 240-180977-E-2 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 563886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	2.0	U	10.0	10.3		ug/L		103	51 - 153
<b>MS MS</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	84		66 - 120						

Lab Sample ID: 240-180977-K-2 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 563886

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	1	16

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# QC Sample Results

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

Job ID: 240-180962-1

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

Lab Sample ID: 240-180977-K-2 MSD

Matrix: Water

Analysis Batch: 563886

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)	83		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: 240-180962-1

## GC/MS VOA

### Analysis Batch: 563755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180962-1	TRIP BLANK_152	Total/NA	Water	8260D	
240-180962-5	MW-51_022323	Total/NA	Water	8260D	
240-180962-6	MW-65_022323	Total/NA	Water	8260D	
240-180962-7	DUP-03	Total/NA	Water	8260D	
MB 240-563755/8	Method Blank	Total/NA	Water	8260D	
LCS 240-563755/5	Lab Control Sample	Total/NA	Water	8260D	

### Analysis Batch: 563886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180962-2	MW-195S_022323	Total/NA	Water	8260D SIM	
240-180962-3	MW-197S_022323	Total/NA	Water	8260D SIM	
240-180962-4	PW-16-02_022323	Total/NA	Water	8260D SIM	
240-180962-5	MW-51_022323	Total/NA	Water	8260D SIM	
240-180962-6	MW-65_022323	Total/NA	Water	8260D SIM	
240-180962-7	DUP-03	Total/NA	Water	8260D SIM	
MB 240-563886/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-563886/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-180977-E-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-180977-K-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

### Analysis Batch: 563897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180962-2	MW-195S_022323	Total/NA	Water	8260D	
240-180962-3	MW-197S_022323	Total/NA	Water	8260D	
240-180962-4	PW-16-02_022323	Total/NA	Water	8260D	
240-180962-7	DUP-03	Total/NA	Water	8260D	
MB 240-563897/8	Method Blank	Total/NA	Water	8260D	
LCS 240-563897/5	Lab Control Sample	Total/NA	Water	8260D	
240-180985-F-8 MS	Matrix Spike	Total/NA	Water	8260D	
240-180985-I-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

# Lab Chronicle

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

Job ID: 240-180962-1

**Client Sample ID: TRIP BLANK\_152**

**Lab Sample ID: 240-180962-1**

Date Collected: 02/23/23 00:00

Matrix: Water

Date Received: 02/25/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	563755	TES	EET CAN	02/28/23 18:02

**Client Sample ID: MW-195S\_022323**

**Lab Sample ID: 240-180962-2**

Date Collected: 02/23/23 10:50

Matrix: Water

Date Received: 02/25/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		50	563897	TES	EET CAN	03/01/23 21:49
Total/NA	Analysis	8260D SIM		1	563886	BAJ	EET CAN	03/01/23 14:02

**Client Sample ID: MW-197S\_022323**

**Lab Sample ID: 240-180962-3**

Date Collected: 02/23/23 11:55

Matrix: Water

Date Received: 02/25/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1.667	563897	TES	EET CAN	03/01/23 20:59
Total/NA	Analysis	8260D SIM		1	563886	BAJ	EET CAN	03/01/23 14:26

**Client Sample ID: PW-16-02\_022323**

**Lab Sample ID: 240-180962-4**

Date Collected: 02/23/23 13:30

Matrix: Water

Date Received: 02/25/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	563897	TES	EET CAN	03/01/23 19:32
Total/NA	Analysis	8260D SIM		1	563886	BAJ	EET CAN	03/01/23 14:50

**Client Sample ID: MW-51\_022323**

**Lab Sample ID: 240-180962-5**

Date Collected: 02/23/23 15:00

Matrix: Water

Date Received: 02/25/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	563755	TES	EET CAN	02/28/23 20:58
Total/NA	Analysis	8260D SIM		1	563886	BAJ	EET CAN	03/01/23 15:15

**Client Sample ID: MW-65\_022323**

**Lab Sample ID: 240-180962-6**

Date Collected: 02/23/23 16:03

Matrix: Water

Date Received: 02/25/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	563755	TES	EET CAN	02/28/23 21:23
Total/NA	Analysis	8260D SIM		1	563886	BAJ	EET CAN	03/01/23 15:39

# Lab Chronicle

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

Job ID: 240-180962-1

**Client Sample ID: DUP-03**

**Lab Sample ID: 240-180962-7**

**Date Collected: 02/23/23 00:00**

**Matrix: Water**

**Date Received: 02/25/23 08:00**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Analysis	8260D		1	563755	TES	EET CAN	02/28/23 21:48
Total/NA	Analysis	8260D		33.333	563897	TES	EET CAN	03/01/23 21:24
Total/NA	Analysis	8260D SIM		1	563886	BAJ	EET CAN	03/01/23 16:04

**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: 240-180962-1

### 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	12-31-23
Michigan	State	9135	02-27-23 *
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23 *
Ohio VAP	State	CL0024	02-27-23 *
Oregon	NELAP	4062	02-28-24
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

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





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

Regulatory program:  DW  NPDES  RCRA  Other

Client Contact: Arcadis  
Address: 28550 Cabot Drive, Suite 500  
City/State/Zip: Novi, MI, 48377  
Phone: 248-994-2240

Project Name: Ford I, TP On-Site  
Project Number: 30167538-401.03  
PO # 30167538-401.03

Client Project Manager: Kris Hinskey  
Telephone: 248-994-2240  
Email: kristoffer.hinskey@arcadis.com

Site Contact: Christina Weaver  
Telephone: 248-994-2240

Sampler Name: Sommer Guy  
Method of Shipment/Carrier:  
Shipping/Tracking No:

Sample Identification	Sample Date	Sample Time	Matrix				Containers & Preservatives							Filtered Sample (Y/N)	Composite C/Grab	Analyses					Sample Specific Notes / Special Instructions:				
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Tapres			Other:	1,1-DCE 8260B	Cis-1,2-DCE 8260B	Trans-1,2-DCE 8260B	PCE 8260B		TCE 8260B	Vinyl Chloride 8260B	1,4-Dioxane 8260B SIM	
TRIP BLANK_152	---	---	1																						1 Trip Blank
MW-195S-022323	2/23/23	1050	6																						3 VOAs for 8260B 3 VOAs for 8260B SIM
MW-197S-022323	2/23/23	1155	6																						
PW-10-02-022323	2/23/23	1330	6																						
MW-51-022323	2/23/23	1500	6																						
MW-65-022323	2/23/23	1603	6																						
DUP-03	2/23/23	---	6																						

Possible Hazard Identification  
 Non-Hazard  Flammable  Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments:  
 Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728  
 Level IV Reporting requested.

Relinquished by: Sommer Guy Date/Time: 2/23/23 10:45 Company: ARCADIS  
 Relinquished by: Christina Weaver Date/Time: 2/24/23 10:13 Company: ARCADIS  
 Relinquished by: Christina Weaver Date/Time: 2/24/23 10:45 Company: ARCADIS

Received by: NOVI gold storage Date/Time: 2/23/23 10:45 Company: ARCADIS  
 Received by: Christina Weaver Date/Time: 2/24/23 10:13 Company: ARCADIS  
 Received in Laboratory by: Christina Weaver Date/Time: 2/24/23 10:45 Company: ARCADIS



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Barberton Facility

Client Arca di S Site Name \_\_\_\_\_  
Cooler Received on 2-25-23 Opened on 2-27-23  
FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Cooler unpacked by: Nancy Beyer

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

Eurofins Cooler # ES ~~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 -0.2 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
IR GUN # IR-16 (CF -0.1 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
IR GUN # IR-17 (CF -0.3 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity leach  
-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# HC203864  
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 # 62070 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: \_\_\_\_\_

**Eurofins - Canton Sample Receipt Multiple Cooler Form**

Cooler Description (Circle)				IR Gun # (Circle)			Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
<input checked="" type="radio"/> EC	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-13	<input type="radio"/> IR-16	<input type="radio"/> IR-17	0.6	0.4	<input checked="" type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
<input checked="" type="radio"/> EC	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-13	<input type="radio"/> IR-16	<input type="radio"/> IR-17	0.8	0.6	<input checked="" type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
<input type="radio"/> EC	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input type="radio"/> IR-13	<input type="radio"/> IR-16	<input type="radio"/> IR-17			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
<input type="radio"/> EC	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input type="radio"/> IR-13	<input type="radio"/> IR-16	<input type="radio"/> IR-17			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
<input type="radio"/> EC	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input type="radio"/> IR-13	<input type="radio"/> IR-16	<input type="radio"/> IR-17			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
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See Temperature Excursion Form

# DATA VERIFICATION REPORT



March 06, 2023

Kris Hinskey  
Arcadis of Michigan  
28550 Cabot Drive  
Suite 500  
Novi, MI US 48377

CADENA project ID: E203728  
Project: Ford Livonia Transmission Plant - ON-SITE -Soil Gas, Ground water and Soil  
Project number: 30146655.401.03- onsite groundwater  
Event Specific Scope of Work References: Sample COC  
Laboratory: Eurofins Environment Testing LLC - Barberton  
Laboratory submittal: 180962-1  
Sample date: 2023-02-23  
Report received by CADENA: 2023-03-03  
Initial Data Verification completed by CADENA: 2023-03-06  
Number of Samples:7  
Sample Matrices:Water  
Test Categories:GCMS VOC  
**Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.**

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch MS/MSD issues as noted in the laboratory submittal case narrative were not used to qualify client sample results as part of this level 2 data package verification review.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the CADENA Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

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

## CADENA Valid Qualifiers

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

## Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Barberton

Laboratory Submittal: 180962-1

Analyte	Cas No.	Sample Name: TRIP BLANK_152			MW-195S_022323			MW-197S_022323			PW-16-02_022323			MW-51_022323			MW-65_022323			DUP-03									
		Result	Limit	Units	Result	Limit	Units	Result	Limit	Units	Result	Limit	Units	Result	Limit	Units	Result	Limit	Units	Result	Limit	Units							
<b>GC/MS VOC</b>																													
<u>OSW-8260D</u>																													
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	50	ug/l	---	ND	1.7	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	0.94	1.0	ug/l	J
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	110	50	ug/l	---	17	1.7	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	3.5	1.0	ug/l	---	100	33	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	50	ug/l	---	ND	1.7	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	180	50	ug/l	---	ND	1.7	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	190	33	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	1900	50	ug/l	---	68	1.7	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	2000	33	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	50	ug/l	---	1.5	1.7	ug/l	J	ND	1.0	ug/l	---	ND	1.0	ug/l	---	7.8	1.0	ug/l	---	15	1.0	ug/l	---
<u>OSW-8260DSIM</u>																													
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	ND	2.0	ug/l	---	ND	2.0	ug/l	---	1.2	2.0	ug/l	J	ND	2.0	ug/l	---	ND	2.0	ug/l	---