

# ANALYTICAL REPORT

## PREPARED FOR

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Generated 3/11/2024 5:53:16 AM

## JOB DESCRIPTION

Ford LTP - On Site

## JOB NUMBER

240-200200-1

# Eurofins Cleveland

## 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: 240-200200-1

## 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: Ford LTP - On Site

Job ID: 240-200200-1

**Job ID: 240-200200-1**

**Eurofins Cleveland**

## Job Narrative 240-200200-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

### Receipt

The samples were received on 2/29/2024 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 1.2°C and 2.8°C.

### GC/MS VOA

Method 8260D: The matrix spike/matrix spike duplicate (MS/MSD) for samples TRIP BLANK\_102 (240-200200-1), MW-54\_022724 (240-200200-2), MW-53\_022724 (240-200200-3), MW-54S\_022724 (240-200200-4) and MW-57\_022724 (240-200200-5) was not reported, because the analyte list for these samples did not match the analyte list for the MS/MSD parent sample.

Method 8260D\_SIM: The following sample was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: MW-53\_022724 (240-200200-3).

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

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# Method Summary

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

Job ID: 240-200200-1

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

**Protocol References:**

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

**Laboratory References:**

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

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

# Sample Summary

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

Job ID: 240-200200-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-200200-1	TRIP BLANK_102	Water	02/27/24 00:00	02/29/24 08:00
240-200200-2	MW-54_022724	Water	02/27/24 10:35	02/29/24 08:00
240-200200-3	MW-53_022724	Water	02/27/24 11:50	02/29/24 08:00
240-200200-4	MW-54S_022724	Water	02/27/24 12:15	02/29/24 08:00
240-200200-5	MW-57_022724	Water	02/27/24 13:55	02/29/24 08:00
240-200200-6	MW-69_022724	Water	02/27/24 15:25	02/29/24 08:00

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- 5
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- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Detection Summary

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

Job ID: 240-200200-1

## Client Sample ID: TRIP BLANK\_102

Lab Sample ID: 240-200200-1

No Detections.

## Client Sample ID: MW-54\_022724

Lab Sample ID: 240-200200-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.8	J	2.0	0.86	ug/L	1		8260D SIM	Total/NA
Vinyl chloride	1.3		1.0	0.45	ug/L	1		8260D	Total/NA

## Client Sample ID: MW-53\_022724

Lab Sample ID: 240-200200-3

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
Vinyl chloride	0.77	J	1.0	0.45	ug/L	1		8260D	Total/NA

## Client Sample ID: MW-54S\_022724

Lab Sample ID: 240-200200-4

No Detections.

## Client Sample ID: MW-57\_022724

Lab Sample ID: 240-200200-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.7		2.0	0.86	ug/L	1		8260D SIM	Total/NA
Vinyl chloride	0.67	J	1.0	0.45	ug/L	1		8260D	Total/NA

## Client Sample ID: MW-69\_022724

Lab Sample ID: 240-200200-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.0		2.0	0.86	ug/L	1		8260D SIM	Total/NA
Vinyl chloride	1.7		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: 240-200200-1

**Client Sample ID: TRIP BLANK\_102**

**Lab Sample ID: 240-200200-1**

Date Collected: 02/27/24 00:00

Matrix: Water

Date Received: 02/29/24 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			03/05/24 20:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/05/24 20:34	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 20:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/05/24 20:34	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 20:34	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/05/24 20:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		03/05/24 20:34	1
4-Bromofluorobenzene (Surr)	84		56 - 136		03/05/24 20:34	1
Toluene-d8 (Surr)	100		78 - 122		03/05/24 20:34	1
Dibromofluoromethane (Surr)	98		73 - 120		03/05/24 20:34	1

# Client Sample Results

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

Job ID: 240-200200-1

**Client Sample ID: MW-54\_022724**

**Lab Sample ID: 240-200200-2**

Date Collected: 02/27/24 10:35

Matrix: Water

Date Received: 02/29/24 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	1.8	J	2.0	0.86	ug/L			03/05/24 19:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		68 - 127					03/05/24 19:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/06/24 01:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/06/24 01:59	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 01:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/06/24 01:59	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 01:59	1
Vinyl chloride	1.3		1.0	0.45	ug/L			03/06/24 01:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137					03/06/24 01:59	1
4-Bromofluorobenzene (Surr)	85		56 - 136					03/06/24 01:59	1
Toluene-d8 (Surr)	97		78 - 122					03/06/24 01:59	1
Dibromofluoromethane (Surr)	98		73 - 120					03/06/24 01:59	1

# Client Sample Results

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

Job ID: 240-200200-1

**Client Sample ID: MW-53\_022724**

**Lab Sample ID: 240-200200-3**

Date Collected: 02/27/24 11:50

Matrix: Water

Date Received: 02/29/24 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			03/05/24 19:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		68 - 127					03/05/24 19:50	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			03/06/24 02:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/06/24 02:24	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 02:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/06/24 02:24	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 02:24	1
Vinyl chloride	0.77	J	1.0	0.45	ug/L			03/06/24 02:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137					03/06/24 02:24	1
4-Bromofluorobenzene (Surr)	86		56 - 136					03/06/24 02:24	1
Toluene-d8 (Surr)	98		78 - 122					03/06/24 02:24	1
Dibromofluoromethane (Surr)	99		73 - 120					03/06/24 02:24	1

# Client Sample Results

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

Job ID: 240-200200-1

**Client Sample ID: MW-54S\_022724**

**Lab Sample ID: 240-200200-4**

Date Collected: 02/27/24 12:15

Matrix: Water

Date Received: 02/29/24 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			03/05/24 21:02	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)	107		68 - 127					03/05/24 21:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/06/24 02:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/06/24 02:49	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 02:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/06/24 02:49	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 02:49	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/06/24 02:49	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)	103		62 - 137					03/06/24 02:49	1
4-Bromofluorobenzene (Surr)	87		56 - 136					03/06/24 02:49	1
Toluene-d8 (Surr)	98		78 - 122					03/06/24 02:49	1
Dibromofluoromethane (Surr)	99		73 - 120					03/06/24 02:49	1

# Client Sample Results

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

Job ID: 240-200200-1

**Client Sample ID: MW-57\_022724**

**Lab Sample ID: 240-200200-5**

Date Collected: 02/27/24 13:55

Matrix: Water

Date Received: 02/29/24 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	2.7		2.0	0.86	ug/L			03/05/24 21:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		68 - 127					03/05/24 21:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/06/24 03:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/06/24 03:14	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 03:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/06/24 03:14	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/06/24 03:14	1
Vinyl chloride	0.67	J	1.0	0.45	ug/L			03/06/24 03:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137					03/06/24 03:14	1
4-Bromofluorobenzene (Surr)	86		56 - 136					03/06/24 03:14	1
Toluene-d8 (Surr)	99		78 - 122					03/06/24 03:14	1
Dibromofluoromethane (Surr)	100		73 - 120					03/06/24 03:14	1

# Client Sample Results

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

Job ID: 240-200200-1

**Client Sample ID: MW-69\_022724**

**Lab Sample ID: 240-200200-6**

Date Collected: 02/27/24 15:25

Matrix: Water

Date Received: 02/29/24 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	4.0		2.0	0.86	ug/L			03/05/24 21:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		68 - 127					03/05/24 21:50	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			03/07/24 22:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/07/24 22:22	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/07/24 22:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/07/24 22:22	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/07/24 22:22	1
Vinyl chloride	1.7		1.0	0.45	ug/L			03/07/24 22:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		62 - 137					03/07/24 22:22	1
4-Bromofluorobenzene (Surr)	83		56 - 136					03/07/24 22:22	1
Toluene-d8 (Surr)	102		78 - 122					03/07/24 22:22	1
Dibromofluoromethane (Surr)	97		73 - 120					03/07/24 22:22	1

# Surrogate Summary

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

Job ID: 240-200200-1

## 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)
240-200200-1	TRIP BLANK_102	103	84	100	98
240-200200-2	MW-54_022724	103	85	97	98
240-200200-3	MW-53_022724	104	86	98	99
240-200200-4	MW-54S_022724	103	87	98	99
240-200200-5	MW-57_022724	104	86	99	100
240-200200-6	MW-69_022724	104	83	102	97
240-200286-D-5 MS	Matrix Spike	98	105	105	97
240-200286-D-5 MSD	Matrix Spike Duplicate	97	103	103	95
LCS 240-605058/4	Lab Control Sample	95	104	103	98
LCS 240-605359/4	Lab Control Sample	97	101	105	96
MB 240-605058/6	Method Blank	103	88	103	98
MB 240-605359/6	Method Blank	104	86	102	95

**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 (68-127)
240-200200-2	MW-54_022724	108
240-200200-3	MW-53_022724	108
240-200200-3 MS	MW-53_022724	109
240-200200-3 MSD	MW-53_022724	110
240-200200-4	MW-54S_022724	107
240-200200-5	MW-57_022724	108
240-200200-6	MW-69_022724	109
LCS 240-605061/4	Lab Control Sample	106
MB 240-605061/6	Method Blank	105

**Surrogate Legend**

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

# QC Sample Results

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

Job ID: 240-200200-1

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

**Lab Sample ID: MB 240-605058/6**

**Matrix: Water**

**Analysis Batch: 605058**

**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			03/05/24 18:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/05/24 18:56	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 18:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/05/24 18:56	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/05/24 18:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/05/24 18:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		03/05/24 18:56	1
4-Bromofluorobenzene (Surr)	88		56 - 136		03/05/24 18:56	1
Toluene-d8 (Surr)	103		78 - 122		03/05/24 18:56	1
Dibromofluoromethane (Surr)	98		73 - 120		03/05/24 18:56	1

**Lab Sample ID: LCS 240-605058/4**

**Matrix: Water**

**Analysis Batch: 605058**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	25.0	25.5		ug/L		102	77 - 123
Tetrachloroethene	25.0	23.8		ug/L		95	76 - 123
trans-1,2-Dichloroethene	25.0	25.3		ug/L		101	75 - 124
Trichloroethene	25.0	23.8		ug/L		95	70 - 122
Vinyl chloride	12.5	9.81		ug/L		78	60 - 144

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

**Lab Sample ID: MB 240-605359/6**

**Matrix: Water**

**Analysis Batch: 605359**

**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			03/07/24 18:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/07/24 18:10	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/07/24 18:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/07/24 18:10	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/07/24 18:10	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/07/24 18:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	104		62 - 137		03/07/24 18:10	1
4-Bromofluorobenzene (Surr)	86		56 - 136		03/07/24 18:10	1
Toluene-d8 (Surr)	102		78 - 122		03/07/24 18:10	1

Eurofins Cleveland



# QC Sample Results

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

Job ID: 240-200200-1

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

**Lab Sample ID: MB 240-605359/6**  
**Matrix: Water**  
**Analysis Batch: 605359**

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	95		73 - 120		03/07/24 18:10	1

**Lab Sample ID: LCS 240-605359/4**  
**Matrix: Water**  
**Analysis Batch: 605359**

**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	25.0	23.7		ug/L		95	63 - 134
cis-1,2-Dichloroethene	25.0	25.6		ug/L		103	77 - 123
Tetrachloroethene	25.0	24.3		ug/L		97	76 - 123
trans-1,2-Dichloroethene	25.0	25.3		ug/L		101	75 - 124
Trichloroethene	25.0	23.7		ug/L		95	70 - 122
Vinyl chloride	12.5	9.51		ug/L		76	60 - 144

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		62 - 137
4-Bromofluorobenzene (Surr)	101		56 - 136
Toluene-d8 (Surr)	105		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

**Lab Sample ID: 240-200286-D-5 MS**  
**Matrix: Water**  
**Analysis Batch: 605359**

**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	200	U	5000	5170		ug/L		103	56 - 135
cis-1,2-Dichloroethene	5800		5000	10300		ug/L		90	66 - 128
Tetrachloroethene	200	U	5000	4740		ug/L		95	62 - 131
trans-1,2-Dichloroethene	180	J	5000	5140		ug/L		99	56 - 136
Trichloroethene	350		5000	4950		ug/L		92	61 - 124
Vinyl chloride	2300		2500	3470		ug/L		45	43 - 157

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		62 - 137
4-Bromofluorobenzene (Surr)	105		56 - 136
Toluene-d8 (Surr)	105		78 - 122
Dibromofluoromethane (Surr)	97		73 - 120

**Lab Sample ID: 240-200286-D-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 605359**

**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	200	U	5000	4890		ug/L		98	56 - 135	6	26
cis-1,2-Dichloroethene	5800		5000	10600		ug/L		95	66 - 128	3	14
Tetrachloroethene	200	U	5000	4910		ug/L		98	62 - 131	3	20
trans-1,2-Dichloroethene	180	J	5000	5310		ug/L		102	56 - 136	3	15
Trichloroethene	350		5000	5080		ug/L		95	61 - 124	3	15

Eurofins Cleveland

# QC Sample Results

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

Job ID: 240-200200-1

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

Lab Sample ID: 240-200286-D-5 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605359

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	2300		2500	4250		ug/L		76	43 - 157	20	24
<b>Surrogate</b>											
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1,2-Dichloroethane-d4 (Surr)	97		62 - 137								
4-Bromofluorobenzene (Surr)	103		56 - 136								
Toluene-d8 (Surr)	103		78 - 122								
Dibromofluoromethane (Surr)	95		73 - 120								

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

Lab Sample ID: MB 240-605061/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605061

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			03/05/24 18:14	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)	105		68 - 127					03/05/24 18:14	1

Lab Sample ID: LCS 240-605061/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605061

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	10.0	10.8		ug/L		108	75 - 121
<b>Surrogate</b>							
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
1,2-Dichloroethane-d4 (Surr)	106		68 - 127				

Lab Sample ID: 240-200200-3 MS

Client Sample ID: MW-53\_022724

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605061

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	1.2	J	10.0	12.3		ug/L		111	20 - 180
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	109		68 - 127						

Lab Sample ID: 240-200200-3 MSD

Client Sample ID: MW-53\_022724

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605061

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	1.2	J	10.0	12.0		ug/L		108	20 - 180	2	20

Eurofins Cleveland

# QC Sample Results

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

Job ID: 240-200200-1

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

Lab Sample ID: 240-200200-3 MSD

Matrix: Water

Analysis Batch: 605061

Client Sample ID: MW-53\_022724

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)	110		68 - 127

- 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: 240-200200-1

## GC/MS VOA

### Analysis Batch: 605058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200200-1	TRIP BLANK_102	Total/NA	Water	8260D	
240-200200-2	MW-54_022724	Total/NA	Water	8260D	
240-200200-3	MW-53_022724	Total/NA	Water	8260D	
240-200200-4	MW-54S_022724	Total/NA	Water	8260D	
240-200200-5	MW-57_022724	Total/NA	Water	8260D	
MB 240-605058/6	Method Blank	Total/NA	Water	8260D	
LCS 240-605058/4	Lab Control Sample	Total/NA	Water	8260D	

### Analysis Batch: 605061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200200-2	MW-54_022724	Total/NA	Water	8260D SIM	
240-200200-3	MW-53_022724	Total/NA	Water	8260D SIM	
240-200200-4	MW-54S_022724	Total/NA	Water	8260D SIM	
240-200200-5	MW-57_022724	Total/NA	Water	8260D SIM	
240-200200-6	MW-69_022724	Total/NA	Water	8260D SIM	
MB 240-605061/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-605061/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-200200-3 MS	MW-53_022724	Total/NA	Water	8260D SIM	
240-200200-3 MSD	MW-53_022724	Total/NA	Water	8260D SIM	

### Analysis Batch: 605359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200200-6	MW-69_022724	Total/NA	Water	8260D	
MB 240-605359/6	Method Blank	Total/NA	Water	8260D	
LCS 240-605359/4	Lab Control Sample	Total/NA	Water	8260D	
240-200286-D-5 MS	Matrix Spike	Total/NA	Water	8260D	
240-200286-D-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	



# Lab Chronicle

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

Job ID: 240-200200-1

**Client Sample ID: TRIP BLANK\_102**

**Lab Sample ID: 240-200200-1**

Date Collected: 02/27/24 00:00

Matrix: Water

Date Received: 02/29/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605058	CDG	EET CLE	03/05/24 20:34

**Client Sample ID: MW-54\_022724**

**Lab Sample ID: 240-200200-2**

Date Collected: 02/27/24 10:35

Matrix: Water

Date Received: 02/29/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605058	CDG	EET CLE	03/06/24 01:59
Total/NA	Analysis	8260D SIM		1	605061	MDH	EET CLE	03/05/24 19:26

**Client Sample ID: MW-53\_022724**

**Lab Sample ID: 240-200200-3**

Date Collected: 02/27/24 11:50

Matrix: Water

Date Received: 02/29/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605058	CDG	EET CLE	03/06/24 02:24
Total/NA	Analysis	8260D SIM		1	605061	MDH	EET CLE	03/05/24 19:50

**Client Sample ID: MW-54S\_022724**

**Lab Sample ID: 240-200200-4**

Date Collected: 02/27/24 12:15

Matrix: Water

Date Received: 02/29/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605058	CDG	EET CLE	03/06/24 02:49
Total/NA	Analysis	8260D SIM		1	605061	MDH	EET CLE	03/05/24 21:02

**Client Sample ID: MW-57\_022724**

**Lab Sample ID: 240-200200-5**

Date Collected: 02/27/24 13:55

Matrix: Water

Date Received: 02/29/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605058	CDG	EET CLE	03/06/24 03:14
Total/NA	Analysis	8260D SIM		1	605061	MDH	EET CLE	03/05/24 21:26

**Client Sample ID: MW-69\_022724**

**Lab Sample ID: 240-200200-6**

Date Collected: 02/27/24 15:25

Matrix: Water

Date Received: 02/29/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	605359	CDG	EET CLE	03/07/24 22:22
Total/NA	Analysis	8260D SIM		1	605061	MDH	EET CLE	03/05/24 21:50

**Laboratory References:**

EET CLE = Eurofins Cleveland, 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: 240-200200-1

## Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

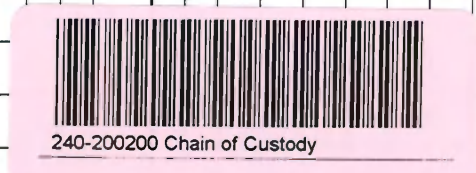
Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-24 *
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-01-24
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

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

### Chain of Custody Record

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

<b>Client Contact</b>		<b>Regulatory program:</b> <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other										<b>TestAmerica Laboratories, Inc.</b>							
Company Name: Arcadis		Client Project Manager: Kris Hinsky				Site Contact: Christina Weaver				Lab Contact: Mike DeMocio				COC No:					
Address: 28550 Cabot Drive, Suite 500		Telephone: 248-994-2240				Telephone: 248-994-2240				Telephone: 330-497-9396				1 of 1 COCs					
City/State/Zip: Novi, MI, 48377		Email: kristoffer.hinsky@arcadis.com				<b>Analysis Turnaround Time</b>				<b>Analyses</b>				For lab use only					
Phone: 248-994-2240		Sampler Name: <i>Garrett Link</i>				TAT if different from below 10 day <input checked="" type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day				Filtered Sample (Y/N) Composite=C / Grab=G 1,1-DCE 82600 cis-1,2-DCE 82600 Trans-1,2-DCE 82600 PCE 82600 TCE 82600 Vinyl Chloride 82600 1,4-Dioxane 82600 SIM				Walk-in client					
Project Name: Ford LTP On-Site		Method of Shipment/Carrier:				Shipping/Tracking No:								Lab sampling					
Project Number: 30167538.401.03		Sample Identification				Sample Date		Sample Time		Matrix		Containers & Preservatives		Sample Specific Notes / Special Instructions:					
PO # 30167538.401.03						Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl					NaOH	ZnAc
✓ TRIP BLANK_102		---	---	X					1				NG	X	X	X	X	X	1 Trip Blank
✓ MW-54_022724		2/27/24	1035	G					G				NG	X	X	X	X	X	3 VOAs for 8260D 3 VOAs for 8260D SIM
✓ MW-53_022724		2/27/24	1150	G					G				NG	X	X	X	X	X	↓ <b>MICHIGAN 190</b>
✓ MW-54s_022724		2/27/24	1215	G					G				NG	X	X	X	X	X	
✓ MW-57_022724		2/27/24	1355	G					G				NG	X	X	X	X	X	
✓ MW-69_022724		2/27/24	1525	G					G				NG	X	X	X	X	X	



MICHIGAN 190

**Possible Hazard Identification**  
 Non-Hazard  Irritable  Inert  Poison B  Unknown

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

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

Relinquished by: <i>[Signature]</i>	Company: ARCADIS	Date/Time: 2/27/24 16:20	Received by: Novi Cold Storage	Company: ARCADIS	Date/Time: 2/27/24 16:20
Relinquished by: <i>[Signature]</i>	Company: Arcadis	Date/Time: 2/28/24 09:30	Received by: <i>[Signature]</i>	Company: EETA	Date/Time: 2/28/24 10:00
Relinquished by: <i>[Signature]</i>	Company: EETA	Date/Time: 2/28/24 10:00	Received in Laboratory by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: 2/28/24 10:00

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Eurofins - Cleveland Sample Receipt Form/Narrative Login # \_\_\_\_\_

Barberon Facility Cooler unpacked by M. H. Ock

Client HTKODS Site Name \_\_\_\_\_

Cooler Received on 2-29-24 Opened on 2-29-24

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

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

Eurofins Cooler # 22 Foam-Bag  Client Cooler \_\_\_\_\_ Box \_\_\_\_\_ Other \_\_\_\_\_

Packing material used: Bottle Wrap  Foam Plastic Bag  None  Other \_\_\_\_\_

COOLANT Wet Ice  Blue Ice  Dry Ice  Water  None  Other \_\_\_\_\_

1 Cooler temperature upon receipt \_\_\_\_\_  Use Multiple Cooler Form

IR GUN # 22 (CF D) °C Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity \_\_\_\_\_ 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  NA

-Were tamper/custody seals intact and uncompromised?  Yes  No  NA

3 Shippers' packing slip attached to the cooler(s)?  Yes  No  NA

4 Did custody papers accompany the sample(s)?  Yes  No  NA

5 Were the custody papers relinquished & signed in the appropriate place?  Yes  No  NA

6 Was/were the person(s) who collected the samples clearly identified on the COC?  Yes  No  NA

7 Did all bottles arrive in good condition (Unbroken)?  Yes  No  NA

8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?  Yes  No  NA

9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?  Yes  No  NA

10 Were correct bottle(s) used for the test(s) indicated?  Yes  No  NA

11 Sufficient quantity received to perform indicated analyses?  Yes  No  NA

12. Are these work share samples and all listed on the COC?  Yes  No  NA

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

14. Were VOAs on the COC?  Yes  No  NA

15 Were air bubbles >6 mm in any VOA vials?  Yes  No  NA

16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_  Yes  No  NA

17 Was a LL Hg or Me Hg trip blank present?  Yes  No  NA

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 \_\_\_\_\_

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





# DATA VERIFICATION REPORT



March 11, 2024

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: 30167538.401.03

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 200200-1

Sample date: 2024-02-27

Report received by CADENA: 2024-03-11

Initial Data Verification completed by CADENA: 2024-03-11

Number of Samples:6

Sample Matrices:Water and trip blank

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 preservation was outside of referenced criteria (pH greater than 2) for the following client water matrix samples. VOC GCMS analyses for these samples were analyzed within the holding time for unpreserved GCMS VOC water samples (7 days) so qualification was not required based on this preservation outlier. GCMS-SIM VOC sample -03.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, MS/MSD Recovery, MS/MSD RPD, 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 - Cleveland

Laboratory Submittal: 200200-1

Analyte	Cas No.	Sample Name: TRIP BLANK_102				MW-54_022724				MW-53_022724				MW-54S_022724				MW-57_022724				MW-69_022724			
		Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
<b>GC/MS VOC</b>																									
<u>OSW-8260D</u>																									
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	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	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---	ND	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	1.3	1.0	ug/l	---	0.77	1.0	ug/l	J	ND	1.0	ug/l	---	0.67	1.0	ug/l	J	1.7	1.0	ug/l	---
<u>OSW-8260DSIM</u>																									
1,4-Dioxane	123-91-1					1.8	2.0	ug/l	J	1.2	2.0	ug/l	J	ND	2.0	ug/l	---	2.7	2.0	ug/l	---	4.0	2.0	ug/l	---