# PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377

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# **JOB DESCRIPTION**

Ford LTP - Off Site

# **JOB NUMBER**

240-185012-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203

See page two for job notes and contact information.

# **Eurofins Cleveland**

#### **Job Notes**

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# **Authorization**

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Authorized for release by Michael DelMonico, Project Manager I <u>Michael.DelMonico@et.eurofinsus.com</u> (330)497-9396 Client: ARCADIS US Inc Project/Site: Ford LTP - Off Site Laboratory Job ID: 240-185012-1

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#### **Definitions/Glossary**

Client: ARCADIS US Inc Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

#### **Qualifiers**

G	CI	M	IS	V	Ö	A

Qualifier

S1+ Surrogate recovery exceeds control limits, high biased.
U Indicates the analyte was analyzed for but not detected.

#### Glossary

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	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)

**Qualifier Description** 

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

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5/18/2023

#### **Case Narrative**

Client: ARCADIS US Inc

Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Job ID: 240-185012-1

**Laboratory: Eurofins Cleveland** 

Narrative

Job Narrative 240-185012-1

#### Receipt

The samples were received on 5/9/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.0°C, 2.8°C, 3.3°C and 4.3°C

#### GC/MS VOA

Method 8260D: Four surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: (LCS 460-908833/3) and (LCSD 460-908833/4). The result has been reported and qualified.

Method 8260D: Surrogate recovery for the following sample was outside the upper control limit: TRIP BLANK\_103 (240-185012-1). This sample did not contain any target analytes; therefore, re-analysis was not performed.

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 US Inc
Project/Site: Ford LTP - Off Site

Job ID: 240-185012-1

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

#### Protocol References:

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

#### Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

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# **Sample Summary**

Client: ARCADIS US Inc
Project/Site: Ford LTP - Off Site

Job ID: 240-185012-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-185012-1	TRIP BLANK_103	Water	05/02/23 00:00	05/09/23 10:30
240-185012-2	MW-138S_050223	Water	05/02/23 09:15	05/09/23 10:30
240-185012-3	MW-106S_050223	Water	05/02/23 11:30	05/09/23 10:30

#### **Detection Summary**

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_103

No Detections.

Client Sample ID: MW-138S\_050223

No Detections.

Client Sample ID: MW-106S\_050223

Lab Sample ID: 240-185012-2

Lab Sample ID: 240-185012-3

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Job ID: 240-185012-1

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Client: ARCADIS US Inc

No Detections.

Client: ARCADIS US Inc Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_103

Lab Sample ID: 240-185012-1 Date Collected: 05/02/23 00:00

**Matrix: Water** 

Date Received: 05/09/23 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 23:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 23:23	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 23:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 23:23	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 23:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 23:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 128			_		05/12/23 23:23	1
Dibromofluoromethane (Surr)	98		77 - 124					05/12/23 23:23	1
Toluene-d8 (Surr)	100		80 - 120					05/12/23 23:23	1
4-Bromofluorobenzene	121	S1+	76 - 120					05/12/23 23:23	1

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Client: ARCADIS US Inc Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Client Sample ID: MW-138S\_050223

Date Collected: 05/02/23 09:15 Date Received: 05/09/23 10:30 Lab Sample ID: 240-185012-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/15/23 01:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		75 - 133			_		05/15/23 01:43	1

Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/13/23 01:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/13/23 01:17	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/13/23 01:17	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/13/23 01:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 128			-		05/13/23 01:17	1
Dibromofluoromethane (Surr)	97		77 - 124					05/13/23 01:17	1
Toluene-d8 (Surr)	101		80 - 120					05/13/23 01:17	1
4-Bromofluorobenzene	119		76 - 120					05/13/23 01:17	1

Client: ARCADIS US Inc Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Client Sample ID: MW-106S\_050223

Lab Sample ID: 240-185012-3 Date Collected: 05/02/23 11:30

Matrix: Water

05/13/23 01:39

05/13/23 01:39

Toluene-d8 (Surr)

4-Bromofluorobenzene

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/15/23 02:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		75 - 133			_		05/15/23 02:05	1

4-Bromofluorobenzene	91		75 - 133					05/15/23 02:05	1
- Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/13/23 01:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/13/23 01:39	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/13/23 01:39	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:39	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/13/23 01:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			70 - 128			_		05/13/23 01:39	1
Dibromofluoromethane (Surr)	98		77 - 124					05/13/23 01:39	1

80 - 120

76 - 120

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#### **Surrogate Summary**

Client: ARCADIS US Inc

Project/Site: Ford LTP - Off Site

Job ID: 240-185012-1

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

Matrix: Water Prep Type: Total/NA

				Percent Su	rrogate Reco
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-128)	(77-124)	(80-120)	(76-120)
240-185012-1	TRIP BLANK_103	109	98	100	121 S1+
240-185012-2	MW-138S_050223	108	97	101	119
240-185012-3	MW-106S_050223	111	98	100	119
LCS 460-908833/3	Lab Control Sample	103	91	99	121 S1+
LCSD 460-908833/4	Lab Control Sample Dup	101	92	100	122 S1+
MB 460-908833/7	Method Blank	106	95	100	119
Currente Legend					

Surrogate Legend

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

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene

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

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)
		BFB	
Lab Sample ID	Client Sample ID	(75-133)	
240-185012-2	MW-138S_050223	92	
240-185012-3	MW-106S_050223	91	
LCS 460-909146/4	Lab Control Sample	95	
LCSD 460-909146/5	Lab Control Sample Dup	95	
MB 460-909146/9	Method Blank	92	

BFB = 4-Bromofluorobenzene

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Client: ARCADIS US Inc Job ID: 240-185012-1

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

Lab Sample ID: MB 460-908833/7

**Matrix: Water** 

Analysis Batch: 908833

Project/Site: Ford LTP - Off Site

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 20:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 20:21	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 20:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 20:21	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 20:21	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 20:21	1

MB MB Qualifier %Recovery Prepared Dil Fac Surrogate Limits Analyzed 1,2-Dichloroethane-d4 (Surr) 70 - 128 05/12/23 20:21 106 95 Dibromofluoromethane (Surr) 77 - 124 05/12/23 20:21 Toluene-d8 (Surr) 100 80 - 120 05/12/23 20:21 4-Bromofluorobenzene 119 76 - 120 05/12/23 20:21

Lab Sample ID: LCS 460-908833/3

**Matrix: Water** 

Analysis Batch: 908833

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits 98 68 - 133 1,1-Dichloroethene 20.0 19.7 ug/L 20.0 cis-1,2-Dichloroethene 19.4 ug/L 97 78 - 121 Tetrachloroethene 20.0 20.5 ug/L 103 70 - 127 74 - 126 trans-1,2-Dichloroethene 20.0 19.7 ug/L 98 Trichloroethene 20.0 98 19.6 ug/L 71 - 121 Vinyl chloride 20.0 18.3 ug/L 92 55 - 144

LCS LCS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 103 70 - 128 Dibromofluoromethane (Surr) 91 77 - 124 Toluene-d8 (Surr) 99 80 - 120 4-Bromofluorobenzene 76 - 120 121 S1+

Lab Sample ID: LCSD 460-908833/4

**Matrix: Water** 

Analysis Batch: 908833

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

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	20.0	20.4		ug/L		102	68 - 133	3	30
cis-1,2-Dichloroethene	20.0	20.1		ug/L		100	78 - 121	3	30
Tetrachloroethene	20.0	21.6		ug/L		108	70 - 127	5	30
trans-1,2-Dichloroethene	20.0	20.4		ug/L		102	74 - 126	4	30
Trichloroethene	20.0	20.1		ug/L		100	71 - 121	2	30
Vinyl chloride	20.0	19.0		ug/L		95	55 - 144	4	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 128
Dibromofluoromethane (Surr)	92		77 - 124
Toluene-d8 (Surr)	100		80 - 120

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Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Client: ARCADIS US Inc

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

LCSD LCSD

Lab Sample ID: LCSD 460-908833/4 **Matrix: Water** 

Analysis Batch: 908833

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 122 S1+ 76 - 120 Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

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

Lab Sample ID: MB 460-909146/9 **Matrix: Water** 

Analysis Batch: 909146

MB MB

Analyte Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared 2.0 1,4-Dioxane 2.0 U 0.86 ug/L 05/14/23 22:29

MB MB

Surrogate %Recovery Qualifier Limits Analyzed Dil Fac Prepared 4-Bromofluorobenzene 92 75 - 133 05/14/23 22:29

Lab Sample ID: LCS 460-909146/4 Client Sample ID: Lab Control Sample Prep Type: Total/NA

**Matrix: Water** 

Analysis Batch: 909146

Spike LCS LCS %Rec Analyte Added Result Qualifier Limits Unit D %Rec 5.00 1,4-Dioxane 4.19 57 - 124 ug/L

LCS LCS

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 95 75 - 133

Lab Sample ID: LCSD 460-909146/5

Analysis Batch: 909146

**Matrix: Water** 

Spike LCSD LCSD %Rec RPD Analyte Added Qualifier Unit %Rec Limits RPD Limit Result 1,4-Dioxane 5.00 4.28 86 57 - 124 30 ug/L

LCSD LCSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 95 75 - 133

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# **QC Association Summary**

Client: ARCADIS US Inc
Project/Site: Ford LTP - Off Site

Job ID: 240-185012-1

#### **GC/MS VOA**

#### Analysis Batch: 908833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185012-1	TRIP BLANK_103	Total/NA	Water	8260D	
240-185012-2	MW-138S_050223	Total/NA	Water	8260D	
240-185012-3	MW-106S_050223	Total/NA	Water	8260D	
MB 460-908833/7	Method Blank	Total/NA	Water	8260D	
LCS 460-908833/3	Lab Control Sample	Total/NA	Water	8260D	
LCSD 460-908833/4	Lab Control Sample Dup	Total/NA	Water	8260D	

#### Analysis Batch: 909146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185012-2	MW-138S_050223	Total/NA	Water	8260D SIM	
240-185012-3	MW-106S_050223	Total/NA	Water	8260D SIM	
MB 460-909146/9	Method Blank	Total/NA	Water	8260D SIM	
LCS 460-909146/4	Lab Control Sample	Total/NA	Water	8260D SIM	
LCSD 460-909146/5	Lab Control Sample Dup	Total/NA	Water	8260D SIM	

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#### **Lab Chronicle**

Client: ARCADIS US Inc Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_103

Lab Sample ID: 240-185012-1 Date Collected: 05/02/23 00:00

Matrix: Water

Date Received: 05/09/23 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	908833	SZD	EET EDI	05/12/23 23:23

Client Sample ID: MW-138S\_050223 Lab Sample ID: 240-185012-2

Date Collected: 05/02/23 09:15 Matrix: Water

Date Received: 05/09/23 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	908833	SZD	EET EDI	05/13/23 01:17
Total/NA	Analysis	8260D SIM		1	909146	SZD	EET EDI	05/15/23 01:43

Client Sample ID: MW-106S\_050223 Lab Sample ID: 240-185012-3

Date Collected: 05/02/23 11:30 Matrix: Water

Date Received: 05/09/23 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	908833	SZD	EET EDI	05/13/23 01:39
Total/NA	Analysis	8260D SIM		1	909146	SZD	EET EDI	05/15/23 02:05

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

# **Accreditation/Certification Summary**

Client: ARCADIS US Inc
Project/Site: Ford LTP - Off Site

Job ID: 240-185012-1

**Laboratory: Eurofins Edison** 

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

Authority	Program	Identification Number	Expiration Date	
Connecticut	State	PH-0818	01-30-24	
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-01-24	
Georgia	State	12028 (NJ)	06-30-23	
Massachusetts	State	M-NJ312	06-30-23	
New Jersey	NELAP	12028	06-30-23	
New York	NELAP	11452	04-01-24	
Pennsylvania	NELAP	68-00522	03-01-24	
Rhode Island	State	LAO00376	12-30-23	
USDA	US Federal Programs	P330-20-00244	11-03-23	

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Company Name (Academy Company Name (Academ	190	TestAmerica Laboratory location: Brighton 10448 Cite	10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	9-2763	THE LEADER IN ENVIRONMENTAL TESTING
	Client Contact	_	RCRA		
Tree   Part	Address: 2866 Caba Drive Suite 600	Client Project Manager: Kris Hinskey	Site Contact: Christina Weaver	Lab Contact: Mike Del Monico	COC No:
The Electric control of the property   The Electric control of the Electric control o	City/State/Zio: Novi: NII -48377	Telephone: 248-994-2240	Telephone: 248-994-2240	Telephone: 330-497-9396	
Table Hazed desiring	Physics 748, 994, 7740	Email: kristoffer.hinskey@arcadis.com	Analysis Turnaround Time	Analyses	
TRIP BLANK   Local State   Sumple Trained Wiley   Trained Wi	Project Name: Ford LTP Off-Site		TAT if different from below  3 weeks  3 weeks		Walk-in client
No.   1265   Ober 2014   No.	Project Number: 30167538,402.04		I week	1	Lab sampling
Simple   Description	PO# 30167538.402.04	Shipping/Tracking No:	le (Y /	85e0B	Job/SDG No:
TRIP BLANK   ( ) 3		Matrix	J==8	B B DCE	
TRIP BLANK	Sample Identification	Sample Time Air Aqueous Sediment	HI/O3 HI/O3 HI/O3 HI/O3 HI/O3 HI/O3	DG-2,1-2-DC Trans-1,2- PCE 8260 TCE 8260	Sample Specific Notes / Special Instructions:
WWV-1385_050233   130   26   86   86   W 6 X X X X X X X   3 3 VOA6 for 88   W 6 X X X X X X X X X X X X X X X X X X	TRIP BLAN		0 Z	× × ×	1 Trip Blank
W W -   O65_05033   1 30   5   5   5   5   5   5   5   5   5	1	915	N 6	X X X	3 VOAs for 8260B 3 VOAs for 8260B SIM
Possibe Hazard Identification  is North Hazard  is North Hazard Identification  is North Hazard Identification  is North Hazard  is North Haz	- 1	1130	92	× × ×	-
Possible Hoard Identification  ** Nove-lizated Possible Heard Identification  ** Nove-lizated Possible Identification  ** Nove-lizated Possible Heard Identification  ** Nove-lizated Possible Heard Identification  ** Nove-lizated Possible Heard Identification  ** STARK R. R. O. W.  ** STARK R. R. O. W.  ** Afficient Received Properties Transported Properties Identification  ** Afficient Heard Institute Heard Institute Institute Heard Institute Institu	nge 1				
Possible Hazard Identification  To Novilla Hazard Identification  To Novillation of Custody  To Novill	g of				
Date-Time:   Dat	22				
Date/Time:   Dat			240-185012 Chain o		
Date/Time:   Sample Disposal (Afer may be assessed if samples are retained longer than I month)   Received by:   Dotte/Time:   Date/Time:   Date/T				Appren	
Date/Time:   Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)   Recurved by:   Date/Time:   Date/T					
Date/Timp:   Dat	Possible Hazard Identification  Non-Hazard Flammable	Poison B	Sample Disposal (A fee may be assessed if sam Return to Client  Disposal By Lab	aples are retained longer than 1 month)	
Company: Com	Special Instructions/OC Requirements & Comments: Sample Address: PRO COM ROW Submit all results through Cadena at Itomalia@c Level IV Reporting requested.				
Company: Company: Date/Lime: S/8/23 / OSO Received by: Company: Company: Date/Lime: S/8/23 / OSO Received in Laboratory by: Company: Company: Date/Lime: D	Relinquished by:	Date/Time: 6/4/2	Received by: Cold	Company:	20
Company: Date Time: Received in Laboratory &: Date Time: Date Time	Relinquishey by:	Date/Time	Received by:	Company:	1
	Relinquished by:	Date/Line	Received in Laborator	Company	20

			16611	2
Eurofins - Canton Sample Receipt Form/Narrative Barberton Facility	Logii	n#:	18501	<i>F</i>
Client Accades Site Nan	ne		Cooler un	packed by:
	on 05-09-23		Leal-	M. Smith
FedEx: 1st Grd Exp UPS FAS Clipper Client Dre		Other		
Receipt After-hours: Drop-off Date/Time	Storage Locat	tion	· <u>- · · · · · · · · · · · · · · · · · ·</u>	
Eurofins Cooler # E C Foam Box Client Coo	1 D O.1			
Packing material used: Bubble Wrap Foam Pla  COOLANT: Wet Ice Blue Ice Dry Ice  1. Cooler temperature upon receipt  IR GUN # (CF + O C) Observ		oler Form	rected Cool	ler Temp°C
<ol> <li>Were tamper/custody seals on the outside of the cooler(         -Were the seals on the outside of the cooler(s) signed         -Were tamper/custody seals on the bottle(s) or bottle is         -Were tamper/custody seals intact and uncompromises.</li> <li>Shippers' packing slip attached to the cooler(s)?</li> <li>Did custody papers accompany the sample(s)?</li> <li>Were the custody papers relinquished &amp; signed in the aptential of the cooler of the custody papers relinquished and in the aptential of the cooler of the custody papers relinquished and in the aptential of the cooler of the coo</li></ol>	& dated?  kits (LLHg/MeHg)?  d?  propriate place?  ly identified on the COC?  h the COC?  N), # of containers (Y)N), and the containers (Y)N), and the containers (Y)N).  Larger than this.	Yes of Ye	No NA No NA No	Tests that are not checked for pH by Receiving:  VOAs Oil and Grease TOC  grab/comp(N)?
Contacted PM Date b	y via Ver	bal Voic	e Mail Ot	her
Concerning				
18. CHAIN OF CUSTODY & SAMPLE DISCREPANC	IES 🛘 additional next pa	age S	Samples pro	ocessed by:
19. SAMPLE CONDITION Sample(s)were rece		l holding	time had e	expired.
Sample(s)			a broken o	
Sample(s)w	ere received with bubble >6	mm in d	liameter. (1	Notify PM)
20. SAMPLE PRESERVATION				
Sample(s)	we	ere furthe	er preserve	d in the laboratory.
Sample(s)Preservative(s) added/Lot n	umber(s):			
VOA Sample Preservation - Date/Time VOAs Frozen:				-

Login #: 185012

			Coolant
			(Circle)
IR GUN #:			Wet Ice Blue Ice Dry I
IR GUN #:	3.2		Water None
IR GUN #:	1.9		Wet Ice Blue Ice Dry I
IR GUN #:	4.2		Wet Ice Blue Ice Dry I Water None
IR GUN #:			Wet ice Blue ice Dry is Water None
IR GUN #:			Wet Ice Stue Ice Dry Is Water None
IR GUN #:			Wet Ice Blue Ice Dry I
1R GUN #:	-		Wet ice Blue ice Dry I Water None
IR GUN #:			Wet Ice Blue Ice Dry I Water None
IR GUN #:			Wet Ice Blue Ice Dry I Water None
IR GUN #:		792	Wet ice Blue ice Dry I Water None
IR GUN #:			Wet ice Blue ice Dry I Water None
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			Wet ice Blue ice Dry ic Water None
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			Wet ice Blue ice Dry ice Water None
			Wet ice Stue ice Dry ice Water None
IR GUN #:			Wet ice Blue ice Dry ice Water None
	IR Gun #	IR Gun # (Circle)   Temp °C     IR Gun #:	Circle   Temp °C   Temp °C   Temp °C   R GUN #:

WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

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Chain of Custody Record

Phone: 330-497-9396 Fax: 330-497-0772

Barberton, OH 44203

**Eurofins Cleveland** 180 S. Van Buren Avenue

**Environment Testing** 

eurofins ...

T - TSP Dodecahydrate Special Instructions/Note: Z - other (specify) 0 - Asna02 P - Na204S Q - Na2S03 R - Na2S203 S - H2S04 U - Acetone V - MCAA W - pH 4-5 Y - Trizma Preservation Codes: H - Ascorbic Acid COC No: 240-167888.1 240-185012-1 C - Zn Acetate D - Nitric Acid E - NaHSO4 Page 1 of 1 I - Ice J - DI Water K - EDTA L - EDA G - Amchlor A - HCL B - NaOH F - MeOH Total Number of containers 9 9 Carrier Tracking No(s): State of Origin: Michigan **Analysis Requested** Michael.DelMonico@et.eurofinsus.com Accreditations Required (See note) × × Lab PM: DelMonico, Michael 8560D\_SIM/5030C × × × 3560D/5030C (MOD) VOCs (Short List) (off to set) GSM/SM michief Fleid Fittered Sample (Yes or No) Preservation Code: (Wewater, Sesolid, Oewasta/oll, BT=Tissue, Water Water Water A=Air) Type (C=comp, Sample G=grab) Eastern 11:30 Eastern Sample Eastern 09:15 (days) Due Date Requested: 5/22/2023 Sample Date 5/2/23 5/2/23 5/2/23 Project #: 24015353 SSOW# Phone: ₩O# PO # Client Information (Sub Contract Lab) Sample Identification - Client ID (Lab ID) Eurofins Environment Testing Northeast, 732-549-3900(Tel) 732-549-3679(Fax) AW-138S 050223 (240-185012-2) WW-106S\_050223 (240-185012-3) 'RIP BLANK\_103 (240-185012-1) 777 New Durham Road, Shipping/Receiving Project Name: Ford LTP - Off Site Client Contact: State, Zip: NJ, 08817 Edison

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyse & accreditation compliance upon our subcontract laboratory or other instructions will be provided. Any changes to laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/lests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditations status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Mont Possible Hazard Identification

Months

Special Instructions/QC Requirements:

Primary Deliverable Rank: 2

Deliverable Requested: I, II, III, IV, Other (specify)

Unconfirmed

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
plinous replinous replinou	SIS ETGING	Company	Received by:	1,2 FQ/E BASTIMPS 1030 CEPTEL	30 Company 576 (1)
kelinqulahed by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Custody Seal No.: 7C	53		Cooler Temperature(s) °C and Other Remarks:	1.4. 2.7/2.7° E.M.	Paz 1. F.5/

Job Number: 240-185012-1

Login Number: 185012 List Source: Eurofins Edison

List Creation: 05/11/23 01:12 PM

Creator: Armbruster, Chris

List Number: 2

Client: ARCADIS US Inc

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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#### DATA VERIFICATION REPORT



May 24, 2023

Kris Hinskey Arcadis Inc 10559 Citation Ave Suite 100 Brighton, MI 48116

CADENA project ID: E203631

Project: Ford Livonia Transmission Project - OFF-SITE - Soil Gas and Groundwater

Project number: 30167538.402.04 off-site

Event Specific Scope of Work References: Sample COC Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 185012-1 Sample date: 2023-05-02

Report received by CADENA: 2023-05-23

Initial Data Verification completed by CADENA: 2023-05-24

Number of Samples:3

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:

SURROGATE recoveries were outside of laboratory control limits biased HIGH for at least 1 surrogates in the tests/samples noted. Associated results were non-detect or QC samples so were not affected by the high bias and qualification of results was not required. GCMS VOC sample -001 and QC batch 908833 LCS and LCSD.

Sample/MS/MSD Surrogate Recovery, Blank/LCS Surrogate Recovery, LCS/LCD Recovery, LCS/LCD 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.

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 <a href="http://clms.cadenaco.com/index.cfm">http://clms.cadenaco.com/index.cfm</a>.

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

**Project Scientist** 

# **CADENA Valid Qualifiers**

Valid Qualifiers	Description
<	Less than the reported concentration.
>	Greater than the reported concentration.
В	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 contaminates) 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.
Е	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 contaminates) 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:** E203631

**Laboratory:** Eurofins Environment Testing LLC - Cleveland

**Laboratory Submittal:** 185012-1

		Sample Name:	TRIP BLA	NK_103	3		MW-138	BS_0502	23		MW-106	S_0502	23	
		Lab Sample ID:	2401850	0121			2401850	0122			2401850	)123		
		Sample Date:	5/2/202	3			5/2/202	.3			5/2/202	3		
				Report		Valid		Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC														
OSW-8260	<u>)D</u>													
	1,1-Dichloroethene	75-35-4	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	
	Tetrachloroethene	127-18-4	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	
	Trichloroethene	79-01-6	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		ND	1.0	ug/l		ND	1.0	ug/l	
OSW-8260	<u>DDSIM</u>													
	1,4-Dioxane	123-91-1					ND	2.0	ug/l		ND	2.0	ug/l	



# Ford Motor Company – Livonia Transmission Project

# **Data Review**

# Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-185012-1

CADENA Verification Report: 2023-05-24

Analyses Performed By: Eurofins North Canton, Ohio

Report # 49927R Review Level: Tier III Project: 30167538.402.02

#### **SUMMARY**

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-185012-1 for samples collected in association with the Ford – Livonia, Michigan site. The review was conducted as a Tier III validation in addition to a verification/Tier II validation review performed by CADENA Inc. and included review of level IV laboratory data package completeness. Only elements of a Tier III validation effort (Tier III) include a detailed review of laboratory raw data to check for errors in calculation, calibration review, internal standard review and compound identification) and omitted deviations from the CADENA verification/Tier II report are documented in this report. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

			Sample Collection		Ana	lysis
Sample ID	Lab ID	Matrix Date		Parent Sample	voc	VOC SIM
TRIP BLANK_103	240-185012-1	Water	05/02/23		Х	
MW-138S_050223	240-185012-2	Water	05/02/23		Х	Х
MW-106S_050223	240-185012-3	Water	05/02/23		Х	X

#### **ANALYTICAL DATA PACKAGE DOCUMENTATION**

The table below is the evaluation of the data package completeness.

Items Reviewed	Repo	orted		mance ptable	Not
	No	Yes	No	Yes	Required
Sample receipt condition		Х		Х	
2. Requested analyses and sample results		Х		Х	
Master tracking list		Х		Х	
4. Methods of analysis		Х		Х	
5. Reporting limits		Х		Х	
6. Sample collection date		Х		Х	
7. Laboratory sample received date		Х		Х	
8. Sample preservation verification (as applicable)		Х		Х	
Sample preparation/extraction/analysis dates		Х		X	
10. Fully executed Chain-of-Custody (COC) form		Х		X	
Narrative summary of Quality Assurance or sample problems provided		Х		Х	
12. Data Package Completeness and Compliance		Х		Х	

#### ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260D and 8260D SIM. Data were reviewed in accordance with USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005, November 2020 (with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999), as appropriate.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
  - UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
  - UB Analyte considered non-detect at the listed value due to associated blank contamination.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

#### **VOLATILE ORGANIC COMPOUND (VOC) ANALYSES**

#### 1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260D/8260D-SIM	Water	14 days from collection to analysis	Cool to < 6 °C; pH < 2 with HCl

All samples were analyzed within the specified holding time criteria.

#### 2. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

#### 3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

#### 3.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All compounds associated with the initial calibrations were within the specified control limits.

#### 3.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

#### 4. Internal Standard Performance

Internal standard performance criteria ensure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

#### 5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate sample was not collected for samples from this SDG.

#### 6. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

#### 7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

#### **DATA VALIDATION CHECKLIST FOR VOCs**

VOCs: 8260D/8260D-SIM	Rep	orted		rmance eptable	Not
	No	Yes	No	Yes	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (G	C/MS)				
Tier II Validation					
Holding times/Preservation		Х		Х	
Tier III Validation					-
System performance and column resolution		Х		Х	
Initial calibration %RSDs		Х		Х	
Continuing calibration RRFs		Х		Х	
Continuing calibration %Ds		Х		Х	
Instrument tune and performance check		Х		Х	
lon abundance criteria for each instrument used		Х		Х	
Field Duplicate RPD	Х				Х
Internal standard		Х		Х	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		Х		Х	
B. Quantitation Reports		Х		Х	
C. RT of sample compounds within the established RT windows		Х		Х	
D. Transcription/calculation errors present		Х		Х	
E. Reporting limits adjusted to reflect sample dilutions		Х		Х	

#### Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Dilip Kumar

SIGNATURE:

DATE: June 19, 2023

PEER REVIEW: Andrew Korycinski

DATE: June 21, 2023

# NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS

# CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

# **MICHIGAN**

#### Chain of Custody Record



TestAmerica Laboratory location: Brighton --- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763 Client Contact Regulatory program: NPDES RCRA Other Company Name: Arcadis TestAmerica Laboratories, Inc. Client Project Manager: Kris Hinskey Site Contact: Christina Weaver Lab Contact: Mike DelMonico Address: 28550 Cabot Drive, Suite 500 Telephone: 248-994-2240 Telephone: 248-994-2240 Telephone: 330-497-9396 City/State/Zip: Novi, MI, 48377 1 of 1 COCs Analysis Turnaround Time Email: kristoffer.hinskey@arcadis.com Analyses For lab use only Phone: 248-994-2240 TAT if different from below Walk-in client Project Name: Ford LTP Off-Site Seth Turner 3 weeks 2 weeks Lab sampling Project Number: 30167538.402.04 1 week 8260B SIM -C/Grab-G 2 days Vinyl Chloride 8260B □ I day PO # 30167538.402.04 Shipping/Tracking No: Job/SDG No: Matrix Sample Specific Notes / NaOH Special Instructions: Sample Date | Sample Time Sample Identification TRIP BLANK\_ (03 G X X X 1 Trip Blank 6 8 MW-1385\_050223 3 VOAs for 8260B 915 3 VOAs for 8260B SIM 6 6 mw-1065\_050223 으 Possible Hazard Identification Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Non-Hazard Flammable Skin Irritant Poison B Unknown Return to Client Disposal By Lab Archive For Special Instructions/QC Requirements & Comments: Sample Address: Blacon Row STARK ROW Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631 Level IV Reporting requested. Relinquished by: 1500 Relinquished by Chinquished by Received in Laboratory by

#### **Eurofins Cleveland**

180 S. Van Buren Avenue

Barberton, OH 44203 Phone: 330-497-9396 Fax: 330-497-0772

# **Chain of Custody Record**



eurofins

**Environment Testing** 

Client Information (Sub Contract Lab)	Sampler:			Lab F	PM: Monic	o Mic	chael				Carr	ier Track	ing No	(s):		COC No: 240-167888.	1		
Client Contact:	Phone:			E-Ma	il:						Stat	e of Orig	in:			Page:			
Shipping/Receiving Company:				Mich			_	et.euro	ofinsus.	com	Mic	higan				Page 1 of 1			
Eurofins Environment Testing Northeast,					Accie	ruitatioi	is Requ	uneu (Se	e note).							240-185012-	1		
Address: 777 New Durham Road, ,	Due Date Requeste 5/22/2023	ed:							Analys	sis R	leque	sted				Preservation		Hexane	
City: Edison	TAT Requested (da	rys):							T		Ť	П				A - HCL B - NaOH C - Zn Acetate	0 -	None AsNaO2	
State, Zip: NJ, 08817																D - Nitric Acid E - NaHSO4	Q-	Na2O4S Na2SO3 Na2S2O3	
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:				9	8										F - MeOH G - Amchlor H - Ascorbic Ac	S - 1	H2SO4 TSP Dodecal	hydrate
Email:	WO #:				or No	hort LI									20	I - Ice J - DI Water	V - I	Acetone MCAA	
Project Name: Ford LTP - Off Site	Project #: 24015353				S	(MOD) VOCs (Short List)									taine	K - EDTA L - EDA	Y -	pH 4-5 Trizma other (specify	<sub>(</sub> )
Site:	SSOW#:				Sampl	on (ao	٥								of cor	Other:		,	
		Sample	Sample (v	=water, =solid, waste/oil, =Tissue,	of Filtered	8260D/5030C (M	8260D_SIM/5030C								al Number				
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab)	A=Air)		828	828								Total	Specia	Instru	ctions/No	te:
age	$\gg <$	> <	Preservation	Code:	X			25 9							$\rightarrow$				
TRIP BLANK_103 (240-185012-1)	5/2/23	Eastern	V	Vater		X									1				
MV-138S_050223 (240-185012-2)	5/2/23	09:15 Eastern	V	Vater	П	X	×								6	3			
MW-106S_050223 (240-185012-3)	5/2/23	11:30 Eastern	V	Vater	Ц	X	X								6	3			
					Ш	1	-		$\perp$					$\perp$					
					Н	$\perp$	1	$\sqcup$	+	_		$\sqcup$	$\perp$	$\perp$					
					$oldsymbol{+}$	_	1		+	1		$\sqcup$	_	++					
					H	+	-	$\vdash$	+	$\dashv$	+	$\vdash$	+	++					
					Н	+	+	$\vdash$	++	+	+	++	+	++					
Note: Since laboratory accreditations are subject to change, Eurofins Environmen laboratory does not currently maintain accreditation in the State of Origin listed al accreditation status should be brought to Eurofins Environment Testing North Ce	ove for analysis/tests	s/matrix being	analyzed, the samp	es must b	e shipi	ped ba	ck to th	e Eurofin	s Environ	ment 1	Testina N	orth Cen	tral. LL	C laborato	rv or otl	her instructions will	be provid	led. Any cha	nges to
Possible Hazard Identification Unconfirmed					s			<b>posal (</b> n To Cli		nay b	$\neg$			ples are	$\neg$	ined longer tha chive For			
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2		s			_	/QC Re	quire		osal By	Lau		Arc	Snive For		Months	
Empty Kit Relinquished by:		Date:			Time	B:						Method	d of Sh	ipment:					
Riumquisheduy:	300	<i>S</i> C	15 E	oany ET	X	Red	ceived	by:		l, i	c P	9/	D:	5/1	12.	3 103	Cor	E TE	=Q'
Empty Kit Relinquished by:  Remodushed by:  Remodushed by:  Salinquished by:	Date/Time:			oany		Red	ceived I	by:					Da	ate/Time:			Cor	mpany	
	Date/Time:		Com	oany		Red	ceived t	by:						ate/Time:				mpany	
Custody Seals Intact: Custody Seal No.:	45					Co	oler Ter	mperature	e(s) °C an	d Othe	r Remarl	ks: /	. 4	1.4	,	2-7/	7.7	(I	24

Client: ARCADIS US Inc Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_103 Lab Sample ID: 240-185012-1

Date Collected: 05/02/23 00:00 Matrix: Water Date Received: 05/09/23 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 23:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 23:23	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 23:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 23:23	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 23:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 23:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 128			-		05/12/23 23:23	1
Dibromofluoromethane (Surr)	98		77 - 124					05/12/23 23:23	1
Toluene-d8 (Surr)	100		80 - 120					05/12/23 23:23	1
4-Bromofluorobenzene	121	S1+	76 - 120					05/12/23 23:23	1

Date Collected: 05/02/23 09:15 Date Received: 05/09/23 10:30

Method: SW846 8260D S	IM - Volatile Orga	anic Comp	ounds (GC/N	<b>1S</b> )					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/15/23 01:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		75 - 133			-		05/15/23 01:43	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/13/23 01:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/13/23 01:17	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/13/23 01:17	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/13/23 01:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 128		5/13/23 01:17	1
Dibromofluoromethane (Surr)	97		77 - 124	0	5/13/23 01:17	1
Toluene-d8 (Surr)	101		80 - 120	0	5/13/23 01:17	1
4-Bromofluorobenzene	119		76 - 120	0.	5/13/23 01:17	1

Date Collected: 05/02/23 11:30 Date Received: 05/09/23 10:30

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			05/15/23 02:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorober	nzene 91		75 - 133			_		05/15/23 02:05	1

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**Matrix: Water** 

**Matrix: Water** 

Client: ARCADIS US Inc

Job ID: 240-185012-1

Project/Site: Ford LTP - Off Site

Date Collected: 05/02/23 11:30 Matrix: Water Date Received: 05/09/23 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/13/23 01:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/13/23 01:39	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/13/23 01:39	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/13/23 01:39	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/13/23 01:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		70 - 128					05/13/23 01:39	1
Dibromofluoromethane (Surr)	98		77 - 124					05/13/23 01:39	1
Toluene-d8 (Surr)	100		80 - 120					05/13/23 01:39	1
4-Bromofluorobenzene	119		76 - 120					05/13/23 01:39	1

PM