

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 5/21/2023 8:20:20 PM

JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-185146-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203





Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

low

Generated 5/21/2023 8:20:20 PM

Authorized for release by Michael DelMonico, Project Manager I <u>Michael.DelMonico@et.eurofinsus.com</u> (330)497-9396

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Method Summary	6
Sample Summary	7
Detection Summary	8
Client Sample Results	9
Surrogate Summary	14
QC Sample Results	15
QC Association Summary	18
Lab Chronicle	19
Certification Summary	20
Chain of Custody	21
Receipt Checklists	25

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	4
U	Indicates the analyte was analyzed for but not detected.	
Glossary		5
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	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	Q
CNF	Contains No Free Liquid	8
DER	Duplicate Error Ratio (normalized absolute difference)	0
Dil Fac	Dilution Factor	9
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)	13
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

Job ID: 240-185146-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-185146-1

Receipt

The samples were received on 5/11/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 1.2° C

GC/MS VOA

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

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

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
240-185146-1	TRIP BLANK_140	Water	05/08/23 00:00	05/11/23 08:00	
240-185146-2	MW-86_050823	Water	05/08/23 09:55	05/11/23 08:00	
240-185146-3	MW-86S_050823	Water	05/08/23 11:25	05/11/23 08:00	
240-185146-4	MW-108S_050823	Water	05/08/23 13:05	05/11/23 08:00	
240-185146-5	MW-142S_050823	Water	05/08/23 14:35	05/11/23 08:00	

Detection Sum	mary
Client: ARCADIS US Inc Project/Site: Ford LTP - Off Site	Job ID: 240-185146-1
Client Sample ID: TRIP BLANK_140	Lab Sample ID: 240-185146-1
No Detections.	
Client Sample ID: MW-86_050823	Lab Sample ID: 240-185146-2
No Detections.	
Client Sample ID: MW-86S_050823	Lab Sample ID: 240-185146-3
No Detections.	
Client Sample ID: MW-108S_050823	Lab Sample ID: 240-185146-4
No Detections.	
Client Sample ID: MW-142S_050823	Lab Sample ID: 240-185146-5
No Detections.	

Client Sample ID: TRIP BLANK_140

Date Collected: 05/08/23 00:00 Date Received: 05/11/23 08:00

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			05/19/23 20:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 20:10	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 20:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 20:10	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 20:10	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		70 - 128			-		05/19/23 20:10	1
Dibromofluoromethane (Surr)	88		77 _ 124					05/19/23 20:10	1
Toluene-d8 (Surr)	103		80 - 120					05/19/23 20:10	1
4-Bromofluorobenzene	88		76 - 120					05/19/23 20:10	1

Job ID: 240-185146-1

Lab Sample ID: 240-185146-1

Matrix: Water

5

8 9

Eurofins Cleveland

Client Sample ID: MW-86_050823

Date Collected: 05/08/23 09:55 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 15:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		75 - 133			-		05/19/23 15:21	1
Method: SW846 8260D - Volati	ile 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			05/19/23 22:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 22:49	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 22:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 22:49	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 22:49	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 22:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		70 - 128			-		05/19/23 22:49	1
Dibromofluoromethane (Surr)	89		77 - 124					05/19/23 22:49	1
Toluene-d8 (Surr)	101		80 - 120					05/19/23 22:49	1
4-Bromofluorobenzene	95		76 - 120					05/19/23 22:49	1

5/21/2023

Job ID: 240-185146-1

Lab Sample ID: 240-185146-2 Matrix: Water

Client Sample ID: MW-86S_050823

Date Collected: 05/08/23 11:25 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 16:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		75 - 133			-		05/19/23 16:23	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			05/19/23 23:12	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 23:12	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 23:12	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:12	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 23:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		70 - 128			-		05/19/23 23:12	1
Dibromofluoromethane (Surr)	89		77 - 124					05/19/23 23:12	1
Toluene-d8 (Surr)	101		80 - 120					05/19/23 23:12	1
4-Bromofluorobenzene	93		76 - 120					05/19/23 23:12	1

5/21/2023

Job ID: 240-185146-1

Lab Sample ID: 240-185146-3 Matrix: Water

Client Sample ID: MW-108S_050823

Date Collected: 05/08/23 13:05 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 16:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		75 - 133			-		05/19/23 16:47	1
Method: SW846 8260D - Volat	tile Organic Comp	ounds by C	SC/MS						
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/19/23 23:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 23:35	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 23:35	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:35	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 23:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		70 - 128			-		05/19/23 23:35	1
Dibromofluoromethane (Surr)	88		77 _ 124					05/19/23 23:35	1
Toluene-d8 (Surr)	102		80 - 120					05/19/23 23:35	1
4-Bromofluorobenzene	94		76 - 120					05/19/23 23:35	1

5/21/2023

Lab Sample ID: 240-185146-4 Matrix: Water

Client Sample ID: MW-142S_050823

Date Collected: 05/08/23 14:35 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 17:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		75 - 133			-		05/19/23 17:30	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			05/19/23 23:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 23:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 23:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 23:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			70 - 128			-		05/19/23 23:57	1
Dibromofluoromethane (Surr)	87		77 - 124					05/19/23 23:57	1
Toluene-d8 (Surr)	100		80 - 120					05/19/23 23:57	1
4-Bromofluorobenzene	93		76 - 120					05/19/23 23:57	1

5/21/2023

Lab Sample ID: 240-185146-5 Matrix: Water

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

Percent Surrogate Recovery (Acceptance Limits) DCA DBFM TOL BFB **Client Sample ID** (70-128) (77-124) (80-120) (76-120) Lab Sample ID TRIP BLANK_140 240-185146-1 119 88 88 103 MW-86_050823 240-185146-2 121 89 101 95 240-185146-3 MW-86S_050823 123 89 101 93 MW-108S_050823 240-185146-4 88 94 119 102 240-185146-5 MW-142S 050823 119 87 100 93 240-185147-M-2 MS Matrix Spike 114 81 105 95 240-185147-P-2 MSD Matrix Spike Duplicate 111 82 103 98 LCS 460-910294/3 Lab Control Sample 84 87 111 105 MB 460-910294/8 Method Blank 119 90 104 87

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

			Percent Surrogate Recovery (Acceptance Limits)
		BFB	
Sample ID	Client Sample ID	(75-133)	
35146-2	MW-86_050823	92	
85146-3	MW-86S_050823	100	
85146-4	MW-108S_050823	95	
5146-5	MW-142S_050823	94	
0-910164/2	Lab Control Sample	98	
460-910164/3	Lab Control Sample Dup	97	
60-910164/6	Method Blank	95	

BFB = 4-Bromofluorobenzene

Job ID: 240-185146-1

Prep Type: Total/NA

Prep Type: Total/NA

5

9

Eurofins Cleveland

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

Matrix: Water Analysis Batch: 910294

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/19/23 19:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 19:25	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 19:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 19:25	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 19:25	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 19:25	1

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		70 - 128		05/19/23 19:25	1
Dibromofluoromethane (Surr)	90		77 - 124		05/19/23 19:25	1
Toluene-d8 (Surr)	104		80 - 120		05/19/23 19:25	1
4-Bromofluorobenzene	87		76 - 120		05/19/23 19:25	1

Lab Sample ID: LCS 460-910294/3 Matrix: Water Analysis Batch: 910294

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	20.0	19.9		ug/L		99	68 - 133	
cis-1,2-Dichloroethene	20.0	19.6		ug/L		98	78 - 121	
Tetrachloroethene	20.0	17.4		ug/L		87	70 - 127	
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	74 - 126	
Trichloroethene	20.0	20.0		ug/L		100	71 - 121	
Vinyl chloride	20.0	23.3		ug/L		116	55 - 144	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)			70 - 128
Dibromofluoromethane (Surr)	84		77 - 124
Toluene-d8 (Surr)	105		80 - 120
4-Bromofluorobenzene	87		76 - 120

Lab Sample ID: 240-185147-M-2 MS Matrix: Water Analysis Batch: 910294

·····,	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.0	U	20.0	18.9		ug/L		95	68 - 133	
cis-1,2-Dichloroethene	1.0	U	20.0	18.7		ug/L		93	78 _ 121	
Tetrachloroethene	1.0	U	20.0	17.5		ug/L		87	70 _ 127	
trans-1,2-Dichloroethene	1.0	U	20.0	18.4		ug/L		92	74 - 126	
Trichloroethene	1.0	U	20.0	17.5		ug/L		88	71 - 121	
Vinyl chloride	1.0	U	20.0	24.0		ug/L		120	55 - 144	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		70 - 128
Dibromofluoromethane (Surr)	81		77 - 124
Toluene-d8 (Surr)	105		80 - 120

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

					'		`		-		•							

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

Eurofins Cleveland

5/21/2023

Job ID: 240-185146-1

Matrix: Water

Analysis Batch: 910294

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued) Lab Sample ID: 240-185147-M-2 MS **Client Sample ID: Matrix Spike** Prep Type: Total/NA

	MSN	NS	
Surrogate	%Recovery 0	Qualifier	Limits
4-Bromofluorobenzene	95		76 - 120

Lab Sample ID: 240-185147-P-2 MSD Matrix: Water Analysis Batch: 910294

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	1.0	U	20.0	19.4		ug/L		97	68 - 133	2	30
cis-1,2-Dichloroethene	1.0	U	20.0	19.5		ug/L		97	78 - 121	4	30
Tetrachloroethene	1.0	U	20.0	17.8		ug/L		89	70 - 127	2	30
trans-1,2-Dichloroethene	1.0	U	20.0	19.2		ug/L		96	74 - 126	4	30
Trichloroethene	1.0	U	20.0	18.4		ug/L		92	71 _ 121	5	30
Vinyl chloride	1.0	U	20.0	24.5		ug/L		123	55 - 144	2	30
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	111		70 - 128								
Dibromofluoromethane (Surr)	82		77 - 124								
Toluene-d8 (Surr)	103		80 - 120								
4-Bromofluorobenzene	98		76 - 120								

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

Lab Sample ID: MB 460-910164/6										onent a	Sample ID: Me		
Matrix: Water											Prep Typ	e: To	tal/NA
Analysis Batch: 910164													
			MB										
Analyte	R		Qualifier	RL		MDL U	-	D	P	repared	Analyzed		Dil Fa
1,4-Dioxane		2.0	U	2.0		0.86 ug	/L				05/19/23 08:	52	
		MB	МВ										
Surrogate	%Reco	overy	Qualifier	Limits					P	repared	Analyzed		Dil Fac
4-Bromofluorobenzene		95		75 - 133							05/19/23 08:	52	
Lab Sample ID: LCS 460-910164/2									Client	Sample	e ID: Lab Cont	rol S	ample
Matrix: Water									chem	Sample	Prep Typ		
											Prep typ	e. 10	
Analysis Batch: 910164				Spike	LCS	LCS					%Rec		
Analyte				Added		Qualifie	r Un	it	D	%Rec	Limits		
1,4-Dioxane				5.00	5.04		ug	/L		101	57 _ 124		
	1.05	LCS											
Surrogate %	Recovery			Limits									
4-Bromofluorobenzene	98			75 - 133									
-													
Lab Sample ID: LCSD 460-910164	3							Clien	t Sam	ple ID:	Lab Control S		
Matrix: Water											Prep Typ	e: To	tal/NA
Analysis Batch: 910164													
				Spike		LCSD					%Rec		RPD
				Added	Docult	Qualifie	r Un	it	D	%Rec	Limits	RPD	Limi
Analyte				Audeu	Result	Quanne		iii.		/01/00			

Eurofins Cleveland

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

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	97		75 - 133

Eurofins Cleveland

GC/MS VOA

Analysis Batch: 910164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185146-2	MW-86_050823	Total/NA	Water	8260D SIM	
240-185146-3	MW-86S_050823	Total/NA	Water	8260D SIM	
240-185146-4	MW-108S_050823	Total/NA	Water	8260D SIM	
240-185146-5	MW-142S_050823	Total/NA	Water	8260D SIM	
MB 460-910164/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 460-910164/2	Lab Control Sample	Total/NA	Water	8260D SIM	
LCSD 460-910164/3	Lab Control Sample Dup	Total/NA	Water	8260D SIM	
nalysis Batch: 91029	94				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-185146-1	TRIP BLANK_140	Total/NA	Water	8260D	
240-185146-2	MW-86_050823	Total/NA	Water	8260D	
240-185146-3	MW-86S 050823	Total/NA	Water	8260D	

240-185146-4	MW-108S 050823	Total/NA	Water	8260D
240-185146-5	 MW-142S_050823	Total/NA	Water	8260D
MB 460-910294/8	Method Blank	Total/NA	Water	8260D
LCS 460-910294/3	Lab Control Sample	Total/NA	Water	8260D
240-185147-M-2 MS	Matrix Spike	Total/NA	Water	8260D
240-185147-P-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D

				Lab Chro	nicle				
lient: ARCADI	-	-						Job I	D: 240-185146-1
roject/Site: Fo	rd LTP - Off Site	e							
Client Samp								Lab Sample ID:	
Date Collected									Matrix: Water
Date Received:	05/11/23 08:00	0							
_	Batch	Batch		Dilution	Batch			Prepared	
Ргер Туре	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	8260D		1	910294	SZD	EET EDI	05/19/23 20:10	
Client Samp	e ID: MW-86	5_050823						Lab Sample ID:	240-185146-2
Date Collected	05/08/23 09:5	5							Matrix: Water
Date Received:	05/11/23 08:00	0							
-	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	8260D		1	910294	SZD	EET EDI	05/19/23 22:49	
Total/NA	Analysis	8260D SIM		1	910164	SZD	EET EDI	05/19/23 15:21	
 Client Samp		S 050823						Lab Sample ID:	240-185146-3
Date Collected:								Las Gampio 12.	Matrix: Water
Date Received:									
_	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	8260D			910294		EET EDI	05/19/23 23:12	
Total/NA	Analysis	8260D SIM		1	910164	SZD	EET EDI	05/19/23 16:23	
_ Client Samn									
	e ID· MW-1()8S 050823						Lab Sample ID:	240-185146-4
	le ID: MW-10							Lab Sample ID:	
Date Collected	: 05/08/23 13:0	5						Lab Sample ID:	240-185146-4 Matrix: Water
Date Collected	: 05/08/23 13:0 05/11/23 08:00	5 0		Dilution	Batch				
Date Collected Date Received:	: 05/08/23 13:0 05/11/23 08:00 Batch	5 0 Batch	Run	Dilution Factor	Batch	Analyst	Lab	Prepared	
Date Collected	: 05/08/23 13:0 05/11/23 08:00 Batch Type	5 0	Run	Dilution Factor		Analyst SZD	_ Lab EET EDI		
Date Collected Date Received Prep Type	: 05/08/23 13:0 05/11/23 08:00 Batch	5 0 Batch Method	Run	Factor	Number	SZD		Prepared or Analyzed	
Date Collected Date Received: Prep Type Total/NA Total/NA	: 05/08/23 13:0 05/11/23 08:00 Batch Type Analysis Analysis	5 0 Batch Method 8260D 8260D SIM	Run	Factor1	Number 910294	SZD	EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47	Matrix: Water
Date Collected Date Received: Prep Type Total/NA Total/NA Client Samp	E 05/08/23 13:0 05/11/23 08:00 Batch Type Analysis Analysis le ID: MW-14	5 0 Batch Method 8260D 8260D SIM 42S_050823	Run	Factor1	Number 910294	SZD	EET EDI	Prepared or Analyzed 05/19/23 23:35	Matrix: Water 240-185146-5
Date Collected Date Received: Prep Type Total/NA Total/NA Client Samp Date Collected	E 05/08/23 13:0 05/11/23 08:00 Batch Type Analysis Analysis Analysis E ID: MW-14 5 05/08/23 14:3	5 0 Batch Method 8260D 8260D SIM 42S_050823 5	Run	Factor1	Number 910294	SZD	EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47	Matrix: Water
Date Collected Date Received: Prep Type Total/NA Total/NA Client Samp Date Collected	Batch Type Analysis Analysis Te ID: MW-14 505/08/23 14:3 05/11/23 08:00	5 0 Batch Method 8260D 8260D SIM 42S_050823 5 0	Run	Factor 1 1	Number 910294 910164	SZD	EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47 Lab Sample ID:	Matrix: Water 240-185146-5
Date Collected Date Received: Prep Type Total/NA Total/NA Client Samp Date Collected: Date Received:	Batch Type Analysis Analysis Te ID: MW-14 05/08/23 14:3 05/08/23 08:00 Batch	5 0 Batch Method 8260D 8260D SIM 42S_050823 5 0 Batch		Factor 1	Number 910294 910164 Batch	SZD SZD	EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47 Lab Sample ID: Prepared	Matrix: Water 240-185146-5
Date Collected Date Received: Prep Type Total/NA Total/NA Client Samp Date Collected Date Received: Prep Type	Copyright Systems 2 (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	5 0 Batch Method 8260D 8260D SIM 42S_050823 5 0 Batch Method	Run	Factor 1 1 Dilution Factor	Number 910294 910164 Batch Number	SZD SZD Analyst	EET EDI EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47 Lab Sample ID: Prepared or Analyzed	Matrix: Water 240-185146-5
Date Collected Date Received Prep Type Total/NA Total/NA Client Samp Date Collected Date Received: Prep Type Total/NA	Batch Type Analysis Colored Colored	5 0 Batch Method 8260D 8260D SIM 42S_050823 5 0 Batch Method 8260D		Factor 1	Number 910294 910164 Batch Number 910294	SZD SZD Analyst SZD	EET EDI EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47 Lab Sample ID: Prepared or Analyzed 05/19/23 23:57	Matrix: Water 240-185146-5
Prep Type Total/NA Total/NA Client Samp Date Collected Date Received: Prep Type	Copyright Systems 2 (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	5 0 Batch 8260D 8260D SIM 42S_050823 5 0 Batch Method		Factor 1 1 Dilution Factor	Number 910294 910164 Batch Number	SZD SZD Analyst SZD	EET EDI EET EDI	Prepared or Analyzed 05/19/23 23:35 05/19/23 16:47 Lab Sample ID: Prepared or Analyzed	Matrix: Water 240-185146-5

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

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

Eurofins Cleveland

Test	TestAmerica Laboratory location: Brighton 10448 Citat	10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763		THE LEADER IN ENVIRONMENTAL TESTING
Client Contact	Regulatory program:	NPDES RCRA Cther		
Company Name: Arcadis	Client Project Manager: Kris Hinskey	Site Contact: Christina Weaver	.ah Contact: Mike DelMonico	TestAmerica Laboratories, Inc. ICOC No:
Address: 28550 Cabot Drive, Suite 500				
City/State/Zip: Novi, MI, 48377	l elephone: 248-994-2240		Telephone: 330-497-9396	1 of 1 COCs
Phone: 248-994-2240	Email: kristoffer.hinskey@arcadis.com		Analyses	For lab use only
Project Name: Ford LTP Off-Site	Sampler Name: Port Varia	cut from b		Walk-in client
Project Number: 30167538.402.04	Method of Shipnent/Carrier:	(N		Lab sampling
PO#30167538.402.04	Shipping/Tracking No:	B \ Crap:	80928	Job/SDG No:
Sample Identification	Anthe Control of the	сis-1,2-DCE 8 сis-1,2-DCE 8 Сотрозівенс Пірега Samp Пірега Samp Пірега Samp Парега Сотрозівенс Парега Віренс Парега Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс Віренс	Trans-1, 2-DCl PCE 82608 Vinyl Chloride 7,4-Dioxane 8	Sample Specific Notes / Special Instructions:
	5/8/23 1		× × × × ×	1 Trip Blank
* MW - D6-050823	5/5/23 0955 6	6 NGXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	3 VOAs for 8260B 3 VOAs for 8260B SIM
MU-UM	5/8/23 1125 6		X X X X	
all INSTOSOFIZ	5/5/23 1305 6	10 NCX X	XXXXX	
- ani	5/8/23 1435 6	8 X X	X XX X X	1
25				
			240-185146 Chain of Custody	
Possible Hazard Identification	tant E Poison B E Unknown	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return to Chient P Disposal BVI ab	retained longer than 1 month) Archive For 1 Monthe	
ard rammapre ions/OC Requirements & Comment ss: WHLOS WWRTH F utts through Cadena at fromatiag ting requested.		I Kotum to Chont 🔗 Disposal By Lab	Archive For I Months	
Relinquiphy by: Relinquished by: Relinquished by:		1550	age company. EEM	Date/Timy 2 155
Kelinquished by: MM Mr	Company: EEM DateTrific.	3 Archyddin Laborardyr by: Pary Q	Company	Date/Time: S-((-)3 &UD
2008: Taukhumura I. Bushinan of Paulymena a taoman of Paulymena Laoradores. Inc. Regolimenca I. Bushinan of Paulymena of Paulymena Laoradores. Inc. 2/51/502				
2				

5/21/2023

icr ulla
Eurofins - Canton Sample Receipt Form/Narrative Login # : 185144
Client Arcadis Site Name Cooler unpacked by
Cooler Received on 5-11-23 Opened on 5-11-23 Jam Koyk
FedEx: 1 st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other
Receipt After-hours: Drop-off Date/Time Storage Location
Eurofins Cooler # Foam Box Client Cooler Box Other
Packing material used Bubble Wrap Foam Plastic Bag None Other
COOLANT: Wet Ice Blue Ice Dry Ice Water None
1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN # (CF 10.0 °C) Observed Cooler Temp °C Corrected Cooler Temp °C
 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity Cody Yes No -Were the seals on the outside of the cooler(s) signed & dated? -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? -Were tamper/custody seals intact and uncompromised? Shippers' packing slip attached to the cooler(s)? Did custody papers accompany the sample(s)? Were the custody papers relinquished & signed in the appropriate place? Was/were the person(s) who collected the samples clearly identified on the COC? Did all bottles arrive in good condition (Unbroken)? Could all bottle labels (ID/Date/Time) be reconciled with the COC? For each sample, does the COC specify preservatives (N(N), # of containers (Y/N), and sample type of grab/comp(Y/N)? Were correct bottle(s) used for the test(s) indicated? Yes No Sufficient quantity received to perform indicated analyses? Are these work share samples and all listed on the COC? Were all preserved sample(s) at the correct pH upon receipt? Were air bubbles >6 mm in any VOA vials? Larger than this.
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # COvered Yes No.
17. Was a LL Hg or Me Hg trip blank present?Yes (No)
Contacted PM Date by via Verbal Voice Mail Other
Concerning
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)
Sample(s)
VOA Sample Preservation - Date/Time VOAs Frozen:

Cooler [ption	IR Gun #	Observed	Corrected	Coolant
) (C	ircle)		(Circle)	Temp °C	Temp °C	(Circle)
EC) Client	Box	Other		1.0	1.0	Wet Ice Blue Ice Dry I Water None
EC) Client	Box	Other	IR GUN #:	1.2	1.2	Wet Ice Blue Ice Dry I Water None
EC Client	Box	Other	IR GUN #:			Wet ice Slue ice Dry is Water None
EC Client	Box	Other	IR GUN #:	and a second		Wet Ice Blue Ice Dry Is
EC Client	Box	Other	IR GUN #:			Water None Wet Ice Blue Ice Dry k
EC Client	Box	Other	IR GUN #:		The real processing of the second second	Water None Wet ice Blue ice Dry k
EC Client	Box	Other	IR GUN #:			Water None Wet ice Blue ice Dry k
			IR GUN #:			Water None Wet ice Sive ice Dry k
	Box	Other	IR GUN #:			Water None Wet ice Blue ice Dry k
EC Client	Box	Other	IR GUN #:			Water None Wetice Blue Ice Dry ic
EC Client	Box	Other	IR GUN #:			Water None Wet ice Sive ice Dry ic
EC Client	Box	Other				Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Box	Other	IR GUN #:			Wefice Blue ice Dry ic Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Box	Other	IR GUN 0:			Wetice Blue Ice Dry Ic Water None
EC Client	Sox	Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ice
EC Client	Box	Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
EC Client	-		IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
EC Client	-		IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
EC Client			IR GUN #:			Water None Wet ice Blue ice Dry ice
	-	-	IR GUN #:			Water None Wet ice Blue ice Dry ice
EC Client	-	Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
EC Client	-	Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
EC Client	-	Other	IR GUN #:			Water None Wet ice Blue ice Dry ice
EC Client		Other				Water None
EC Client	Box	Other	IR GUN #:			Wet Ico Blue Ico Dry Ico Water None
EC Client	Box	Other	IR GUN #:			Wellice Blue Ice Dry Ice Water None
EC Client	Box	Other	IR GUN #:			Wet ice Blue ice Dry ice Water None
EC Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client	Box	Other	IR GUN #:			Wet ice Blue ice Dry ice Water None

urofins Cleveland	180 S. Van Buren Avenue	
Ē	180	1

Chain of Custody Record



🔅 eurofins | Environment

Barberton, UH 44203 Phone: 330-497-9396 Fax: 330-497-0772				•					KI.			Enviro	Environment Testing
Client Information (Sub Contract Lab)	Sampler:			Lab PM: DelMoi	Lab PM: DelMonico, Michael	ael		Carrie	Carrier Tracking No(s)	:(8	COC No: 240-167972.1	2.1	
Client Contact: Shipping/Receiving	Phone:			E-Mail: Michae	I.DelMoni	co@et.ei	E-Mail: Michael.DelMonico@et.eurofinsus.com		State of Origin: Michigan		Page: Page 1 of 1	-	
Company: Eurofins Environment Testing Northeast,				Ac	Accreditations Required (See note):	Required (;	see note):				Job #: 240-185146-1	6-1	
Address: 777 New Durham Road,	Due Date Requested: 5/24/2023						Analysis	is Requested	bed		Preservation Codes	ĕ	e
City: Edison	TAT Requested (days):	(8):			110-00 10001-00 10-1155						B - Noch C - Zn Acetate		N - None O - AsNaO2 P - Na2O4S
State, Zip: NJ, 08817										_	D - Nitric Aci E - NaHSO4		203
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	HO #:			(0	53						G - Amchlor H - Ascorbic Acid	τ)4 Dodecahydrate
Email:	# OM			E OF N	(ON							V - MCAA	eu
Project Name: Ford LTP - Off Site	Project #: 24015353										K - EDTA L - EDA	Y - Trizma Z - other (s	v - pri +-3 Y - Trizma Z - other (specify)
Site:	SSOW#:				V) as	00					of cor		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wewatar, Secolid, Orwastarioil, BT-Tasue, A-AH)	8560D/5030C (M	8260D_SIM/5030					rotal Number	Soocial Instructions Note.	Noto:
	X		Preservation Code:	ion Code: X	X								
TRIP BLANK_140 (240-185146-1)	5/8/23	Eastern		Water	×						-		
MW-86_050823 (240-185146-2)	5/8/23	09:55 Fastern		Water	×	×	-				9		
MW-86S_050823 (240-185146-3)	5/8/23	11:25 Eastern		Water	×	×					9		
MW-108S_050823 (240-185146-4)	5/8/23	13:05 Eastern		Water	×	×					Q		
MW-142S_050823 (240-185146-5)	5/8/23	14:35 Eastern		Water	×	×					Q		
						_							
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyle & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-oustody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC atterior for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC atterior for formative LLC atterior of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC atterior formation immediately. If all requested accreditations are should be brough to Eurofins Environment Testing North Central, LLC atterior formation immediately. If all requested accreditations are subourd be brough to Eurofins Environment Testing North Central, LLC atterior formation immediately. If all requested accreditations are surred to have attervary and the Eurofins Environment Testing North Central, LLC atterviton immediately. If all requested accreditations are surred to have attervary or other instructions will be provided. Any charges to accreditation status should be brough to Eurofins Environment Testing North Central, LLC atterviton immediately. If all requested accreditations are surred to have attervitor accurate to the Eurofins Environment Testing.	Interfection of the second of	II, LLC places 1 matrix being ar mediately. If al	the ownership nalyzed, the si requested ac	of method, analy amples must be s conditations are c	e & accredit hipped back	ation compl to the Euro e. return th	iance upon c fins Environr	ur subcontract la nent Testing Nor	boratories. Th h Central, LLC esting to said c	is sample sh laboratory o	ipment is forwarded r other instructions	t under chain-of-c will be provided.	istody. If the Vny changes to
Possible Hazard Identification					Sample	le Disposal (A 1	(A fee m	ay be asses	sed if samp	les are re	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	than 1 month	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rar	ble Rank: 2			Special I	Special Instructions/QC	nerit s/QC Rec	Requirements:	uisposai by Lao ents:		Archive For	Montins	su
Empty Kit Reinquished by:		Date:		E	Time:				Method of Shipment:	T	010		T
Company of the second se				Company Company		Received by:	A mild		↓ <u>D</u> at		TAR	Company	
Relinduished by:	Date/Time:			Company	1	Received by:			Dat	1	5	Company	
	Date/Time:			Company	Recei	Received by:			Dat	Date/Time:		Company	
Custody Seals Intact: Custody Seal No.: △ Yes △ No					Coole	r Temperatu	ire(s) °C and	Cooler Temperature(s) °C and Other Remarks: ブロゴロ(たてごし)	· .)				
					14	13			9	7	5 6		

5/21/2023

Client: ARCADIS US Inc

Login Number: 185146 List Number: 2

Creator: Armbruster, Chris

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	

Job Number: 240-185146-1

DATA VERIFICATION REPORT



May 25, 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: 185146-1 Sample date: 2023-05-08 Report received by CADENA: 2023-05-25 Initial Data Verification completed by CADENA: 2023-05-25 Number of Samples:5 Sample Matrices:Water Test Categories:GCMS VOC Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

There were no significant QC anomalies or exceptions to report.

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 <u>http://clms.cadenaco.com/index.cfm</u>.

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.
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 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: 185146-1

		Sample Name: Lab Sample ID: Sample Date:		 1461 !3)		MW-86_ 2401851 5/8/202	3			MW-86 240185 5/8/202		3		MW-10 240185 5/8/202	3	23		MW-142 2401852 5/8/202	 1465	23	
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC OSW-8260	·																					
0511 0200	1,1-Dichloroethene cis-1,2-Dichloroethene	75-35-4 156-59-2	ND ND	1.0 1.0	ug/l ug/l		ND ND	1.0 1.0	ug/l ug/l		ND ND	1.0 1.0	ug/l ug/l		ND ND	1.0 1.0	ug/l ug/l		ND ND	1.0 1.0	ug/l ug/l	
	Tetrachloroethene trans-1,2-Dichloroethene	127-18-4 156-60-5	ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l	
	Trichloroethene Vinyl chloride	79-01-6 75-01-4	ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l		ND ND	1.0 1.0 1.0	ug/l ug/l	
<u>OSW-8260</u>	,	123-91-1	ND	1.0	ug/1		ND	2.0	ug/l		ND	2.0	ug/I		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 # 240-185146-1 CADENA Verification Report: 2023-05-25

Analyses Performed By: Eurofins North Canton, Ohio

Report # 49932R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-185146-1 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_140	240-185146-1	Water	05/08/23		Х	
MW-86_050823	240-185146-2	Water	05/08/23		Х	Х
MW-86S_050823	240-185146-3	Water	05/08/23		Х	X
MW-108S_050823	240-185146-4	Water	05/08/23		Х	Х
MW-142S_050823	240-185146-5	Water	05/08/23		Х	Х

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

	Items Reviewed	Rep	orted		mance ptable	Not
		No	Yes	No	Yes	Required
1.	Sample receipt condition		Х		Х	
2.	Requested analyses and sample results		Х		Х	
3.	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	
9.	Sample preparation/extraction/analysis dates		Х		Х	
10.	Fully executed Chain-of-Custody (COC) form		Х		Х	
11.	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

DATA REVIEW

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.

No compounds were detected in the samples within this SDG.

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 REVIEW

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 8260D/8260D-SIM	Rep	orted		rmance ptable	Not Required
	No	Yes	No	Yes	Requireu
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (G	C/MS)				
Tier II Validation					
Holding times/Preservation		Х		X	
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:	Pertmit
DATE:	June 16, 2023

PEER REVIEW: Andrew Korycinski

DATE: June 19, 2023

NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS



CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS



Chain of Custody Record



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

Client Contact Company Name: Arcadis	Regulat	ory program:	:	F	DW	- 11	NPD	DES	ſ	R	CRA		0	ther							-						
	Client Project N	fanager: Kris	Hinsk	ey		Site	Cont	act: C	hrist	ina V	Veaver	r			Lab	Cont	act: N	like De	elMon	ico					oc No:	ca Labo	ratories,
Address: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240				Tel	ephor	ie: 248	8-994-	2240					Tel	phon	e: 330	-497-9	396					-+-	_		
City/State/Zip: Novi, MI, 48377	Email: kristoff	er.hinskev@ar	rcadis.	COM		+-	Anal	ysis Ti	urnar	ound	Time		T	-		_		_	Analy	/ses		—		- F	1 of or lab use		COCs
Phone: 248-994-2240							F				_			F	Τ	T	T	T	1	T	T				Creation	1212	
Project Name: Ford LTP Off-Site	Sampler Name	ent k	las	000	_		10 da		om belo I 3 I 2	week															alk-in clie ab samplin		A DOWN
Project Number: 30167538.402.04	Method of Ship	ment/Carrier:	1			1				week days		1	24	2		0				SIM				Ĭ	Caro sampring		
PO # 30167538.402.04	Shipping/Track	ing No:				1			E Î.	-		121	Crah=C	260B	8260B	E 8260B			8260B	2608				Jo	b/SDG N):	
	Matrix		Þ	Containers & Preservatives			CE 8		8	8	9	00															
Sample Identification	Sample Date	Sample Time	Air	Aqueous Sediment	Solid Other:	H2SOM	HN03	HCI NaOH HCI NaOH Filtered San Filtered San Gomposited Composited Cis-1,2-DCE	rans-1,2-DCE	PCE 8260B	TCE 8260B		4-Dioxane						le Specific ial Instru								
TRIP BLANK_ 14D	5/8/23		T	1		T		1				-	VC	- ·	Ť	+	1	1	-	-	+			+	1 Trip	Blank	
MN -86-050823	5/8/23		F	6				6				1	VC	1		λ	X	\rangle		X	1					s for 826 s for 826	
	5/8/23	1123		6				6				A	JQ	àX	X	$\left \right\rangle$	X	X	X	X							
MN 1085=050823	5/8/23	1305	1	4				6					UE	2 x	X		X	X	X	X							
MU - 865-05082) MU - 1085-050823 MU - 1425-050823	5/8/22	1435	5	4		╞		6	-	+	+	Ň	06	zχ	×	×		$\frac{1}{2}$	x	X	-					-	
																	240	-1851	146 (Chain	of Cu	istody					
																	1		1	1	1			1			
Possible Hazard Identification V Non-Hazard Flammable Skin Irritan	nt 🗆 Poiso	n B	Unkr	iown				e Disp Return				be ass Disp						longer /e For		_	th) Aonths						
Special Instructions/QC Requirements & Comments: Sample Address: WADS WORTH AND Re Submit all results through Cadena at jtomalia@cadenaco. Level IV Reporting requested. Relinquished by:	com. Cadena #	E203631		Date/Tin	8/23	1	55		Receive	_		C	ale		, St	10	G1	Con	npany.	2100	di	5		D	ate/Time 5/8	1/23	15
Relinquished by:	Company: ARC Company:	ADIS		Date/Tin			159	50	Receiv		l	<i>W</i> ratery	by:	N	2				npany:	E	561	A	-		ate/Time: 5/10 ate/Time:	123	[55 C1-
C2008, TellAmerica Leiszratornes, Inc. All rights medical advantaries. Inc.	LK	EN		5	10/23					1	ge	~	X	V	2	g	-		t			-			5-1	172	50

5/21/2023



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 Dei		co. M	ichae					Carrie	er Track	ing No(s	s):		COC 240	No: -167972.1	1		
	Client Contact: Shipping/Receiving	Phone:			E-Ma	ail:								of Origi	n:	·		Page	э:			
	Company:				IMIC		_		-	eurofin (See no		om	MIC	nigan				Pag Job #	ge 1 of 1 #:			
	Eurofins Environment Testing Northeast,																	240	-185146-1			
	^{lddress:} 777 New Durham Road, ,	Due Date Request 5/24/2023	əd:							An	alysi	is Re	ques	ted				Pres A - H	servation (s: VI - Hexane	Э
	Sity: Edison	TAT Requested (da	ays):				172											B-1	NaOH Zn Acetate		N - None D - AsNaO	2
	State, Zip:	1					and a										1	D-1	Nitric Acid NaHSO4		P - Na2O4 Q - Na2SO	
	NJ, 08817	PO #:																F-N	MeOH Amchlor		R - Na2S20 5 - H2SO4	
	/32-549-3900(Tel) 732-549-3679(Fax)	WO #:				Ŷ												H-/	Ascorbic Aci		- TSP Do J - Acetone	odecahydrati e
		WO #.				s or N	Nol 10										2		DI Water		/ - MCAA // - pH 4-5	
	Project Name: Ford LTP - Off Site	Project #: 24015353					(Vel OI NO)	2									taine	L-E	EDTA EDA	١	r - Trizma Z - other (s	
	Site:	SSOW#:				Sample											con	Othe	ar:		01101 (3	pecity
					Matrix	A S	Partorni S/MSD (SIM/5030C									er of	-				
				Sample	(W=water, S=solid,			SIM/5									Mumb					
			Sample	Type (C=comp,	O=waste/oil, BT=Tissue,	ald Fil	TOT	8260D \$									NIE					
ק	Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab)	A=Air)			826				_					Total	-	Special	l Inst	ructions	s/Note:
Page				Preserva	tion Code:	¥4	X					-					X		Service Barrier		(Panes	
24	FRIP BLANK_140 (240-185146-1)	5/8/23	Eastern		Water	Ц	,	×									1					
24 of 25	MW-86_050823 (240-185146-2)	5/8/23	09:55 Eastern		Water);	x x									6					
25	MW-86S_050823 (240-185146-3)	5/8/23	11:25 Eastern		Water	П);	x x	(6					
	MW-108S_050823 (240-185146-4)	5/8/23	13:05 Eastern		Water	Π	,	x x	(6					
	/W-142S_050823 (240-185146-5)	5/8/23	14:35 Eastern		Water	П	,	x x	(6					
			Lastern			Ħ	1	+	+				+		+	+						
						H	+	+	+	+	-	-	+		+	+						
						H	-	+	+	+	-+-	+	+		+-	+	-	-				
						H	+	+	+	$\left \right $	_		+		+	+	_	-		_		
						Ц																
	lote: Since laboratory accreditations are subject to change, Eurofins Environme aboratory does not currently maintain accreditation in the State of Origin listed a	bove for analysis/tests	s/matrix being :	analyzed the s	amples must t	ne shir	ned ha	ack to t	the Fu	mfine Fr	aviron m	nont Too	ting No.	th Cont	ral LLC	Inhorato	or or oth	or inch	nuctions will I	-	unided Am	
	accreditation status should be brought to Eurofins Environment Testing North Ce	entral, LLC attention in	nmediately. If	all requested a	ccreditations a	re cur	rent to	date,	return 1	he sign	ed Cha	in of Cu	stody al	testing	to said o	compliance	e to Eur	rofins E	Environment	t Testir	ng North C	entral, LLC.
	Possible Hazard Identification					1	Samp	ole Di	spos	al (A	fee m	ay be	asses	sed if	samp	les are	retair	ned lo	onger tha	n 1 n	nonth)	
	Jnconfirmed	D : D :								Client				sal By	Lab	L	Arc	hive I	=or		Month	s
	Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2			Speci	al Ins	tructio	ons/Q0	C Req	luirem	ents:									
	Empty Kit Reinquished by:		Date:			Tim	e:							Method	of Ship	ment:	1-0	215	24			
	Companion of the second s	Pater Times	<u> </u>	7115	Company EFST	11	Re	eceiveo	i by:	١.		cf .			Dat	e/Time:	22	i			Company	
গ	Relinquished by:	Date/Time:	<u> </u>		Company	UC	Re	ceived		N/C	2/2/1	ar	an		Dat	e/Time:	120		10.30		Company	
5/21/2023	Relinquished by:	Date/Time:			Company		Re	ceiveo	d by:						Dat	e/Time:					Company	
20					, ,				-,.												Jonipany	
ω	Custody Seals Intact: Custody Seal No.:											Other F	Remarks	:								
	•					_	-	\mathcal{O}	1 0	1 6	C	C		50								

Client Sample ID: TRIP BLANK_140

Date Collected: 05/08/23 00:00 Date Received: 05/11/23 08:00

	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			05/19/23 20:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 20:10	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 20:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 20:10	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 20:10	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		70 - 128			-		05/19/23 20:10	1
Dibromofluoromethane (Surr)	88		77 _ 124					05/19/23 20:10	1
Toluene-d8 (Surr)	103		80 - 120					05/19/23 20:10	1
4-Bromofluorobenzene	88		76 - 120					05/19/23 20:10	1

Job ID: 240-185146-1

Lab Sample ID: 240-185146-1

Matrix: Water

5

8 9

Eurofins Cleveland

Client Sample ID: MW-86_050823

Date Collected: 05/08/23 09:55 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 15:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		75 - 133			-		05/19/23 15:21	1
Method: SW846 8260D - Volati	ile 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			05/19/23 22:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 22:49	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 22:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 22:49	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 22:49	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 22:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		70 - 128			-		05/19/23 22:49	1
Dibromofluoromethane (Surr)	89		77 - 124					05/19/23 22:49	1
Toluene-d8 (Surr)	101		80 - 120					05/19/23 22:49	1
4-Bromofluorobenzene	95		76 - 120					05/19/23 22:49	1

5/21/2023

Job ID: 240-185146-1

Lab Sample ID: 240-185146-2 Matrix: Water

Client Sample ID: MW-86S_050823

Date Collected: 05/08/23 11:25 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 16:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		75 - 133			-		05/19/23 16:23	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			05/19/23 23:12	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 23:12	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 23:12	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:12	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 23:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		70 - 128			-		05/19/23 23:12	1
Dibromofluoromethane (Surr)	89		77 - 124					05/19/23 23:12	1
Toluene-d8 (Surr)	101		80 - 120					05/19/23 23:12	1
4-Bromofluorobenzene	93		76 - 120					05/19/23 23:12	1

5/21/2023

5 6 7

Lab Sample ID: 240-185146-3 Matrix: Water

Client Sample ID: MW-108S_050823

Date Collected: 05/08/23 13:05 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 16:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		75 - 133			-		05/19/23 16:47	1
Method: SW846 8260D - Volat	tile Organic Comp	ounds by C	SC/MS						
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/19/23 23:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 23:35	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 23:35	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:35	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 23:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		70 - 128			-		05/19/23 23:35	1
Dibromofluoromethane (Surr)	88		77 _ 124					05/19/23 23:35	1
Toluene-d8 (Surr)	102		80 - 120					05/19/23 23:35	1
4-Bromofluorobenzene	94		76 - 120					05/19/23 23:35	1

5/21/2023

Lab Sample ID: 240-185146-4 Matrix: Water

Client Sample ID: MW-142S_050823

Date Collected: 05/08/23 14:35 Date Received: 05/11/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 17:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		75 - 133			-		05/19/23 17:30	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			05/19/23 23:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/19/23 23:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/19/23 23:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/19/23 23:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/19/23 23:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			70 - 128			-		05/19/23 23:57	1
Dibromofluoromethane (Surr)	87		77 - 124					05/19/23 23:57	1
Toluene-d8 (Surr)	100		80 - 120					05/19/23 23:57	1
4-Bromofluorobenzene	93		76 - 120					05/19/23 23:57	1

5/21/2023

Lab Sample ID: 240-185146-5 Matrix: Water