

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey
Arcadis U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Generated 3/19/2024 7:13:16 AM

JOB DESCRIPTION

Ford LTP - On Site

JOB NUMBER

240-200748-1

Eurofins Cleveland

Job Notes

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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



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Authorized for release by
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Definitions/Glossary

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

Job ID: 240-200748-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 240-200748-1

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Eurofins Cleveland

Job Narrative 240-200748-1

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

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

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

Receipt

The samples were received on 3/8/2024 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.3°C and 3.3°C.

GC/MS VOA

Method 8260D_SIM: An MS/MSD was prepared and analyzed with batch 240-605892, but is not reported due to the MS sample having a bad purge.

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

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Method Summary

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

Job ID: 240-200748-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

Job ID: 240-200748-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-200748-1	TRIP BLANK_17	Water	03/06/24 00:00	03/08/24 08:00
240-200748-2	MW-09_030624	Water	03/06/24 14:45	03/08/24 08:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

Job ID: 240-200748-1

Client Sample ID: TRIP BLANK_17

Lab Sample ID: 240-200748-1

No Detections.

Client Sample ID: MW-09_030624

Lab Sample ID: 240-200748-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	3.2		2.0	0.86	ug/L	1			8260D SIM	Total/NA
Vinyl chloride	0.96	J	1.0	0.45	ug/L	1			8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 240-200748-1

Client Sample ID: TRIP BLANK_17

Lab Sample ID: 240-200748-1

Date Collected: 03/06/24 00:00

Matrix: Water

Date Received: 03/08/24 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/24 14:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/24 14:41	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 14:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/24 14:41	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 14:41	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/24 14:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		62 - 137		03/15/24 14:41	1
4-Bromofluorobenzene (Surr)	91		56 - 136		03/15/24 14:41	1
Toluene-d8 (Surr)	98		78 - 122		03/15/24 14:41	1
Dibromofluoromethane (Surr)	100		73 - 120		03/15/24 14:41	1

Client Sample Results

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

Job ID: 240-200748-1

Client Sample ID: MW-09_030624

Lab Sample ID: 240-200748-2

Date Collected: 03/06/24 14:45

Matrix: Water

Date Received: 03/08/24 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.2		2.0	0.86	ug/L			03/13/24 17:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		68 - 127					03/13/24 17:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/24 19:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/24 19:15	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 19:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/24 19:15	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 19:15	1
Vinyl chloride	0.96	J	1.0	0.45	ug/L			03/15/24 19:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		62 - 137					03/15/24 19:15	1
4-Bromofluorobenzene (Surr)	92		56 - 136					03/15/24 19:15	1
Toluene-d8 (Surr)	99		78 - 122					03/15/24 19:15	1
Dibromofluoromethane (Surr)	102		73 - 120					03/15/24 19:15	1

Surrogate Summary

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

Job ID: 240-200748-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	TOL	DBFM
		(62-137)	(56-136)	(78-122)	(73-120)
240-200748-1	TRIP BLANK_17	108	91	98	100
240-200748-2	MW-09_030624	110	92	99	102
240-200774-B-6 MS	Matrix Spike	103	104	101	100
240-200774-B-6 MSD	Matrix Spike Duplicate	103	105	102	99
LCS 240-606244/5	Lab Control Sample	99	106	103	96
MB 240-606244/7	Method Blank	104	91	101	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA
		(68-127)
240-200748-2	MW-09_030624	114
LCS 240-605892/5	Lab Control Sample	109
MB 240-605892/7	Method Blank	107

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-200748-1

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

Lab Sample ID: MB 240-606244/7

Matrix: Water

Analysis Batch: 606244

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			03/15/24 12:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			03/15/24 12:36	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 12:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			03/15/24 12:36	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			03/15/24 12:36	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			03/15/24 12:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	104		62 - 137		03/15/24 12:36	1
4-Bromofluorobenzene (Surr)	91		56 - 136		03/15/24 12:36	1
Toluene-d8 (Surr)	101		78 - 122		03/15/24 12:36	1
Dibromofluoromethane (Surr)	97		73 - 120		03/15/24 12:36	1

Lab Sample ID: LCS 240-606244/5

Matrix: Water

Analysis Batch: 606244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloroethene	25.0	21.7		ug/L		87	63 - 134
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	77 - 123
Tetrachloroethene	25.0	24.2		ug/L		97	76 - 123
trans-1,2-Dichloroethene	25.0	24.1		ug/L		96	75 - 124
Trichloroethene	25.0	23.4		ug/L		94	70 - 122
Vinyl chloride	12.5	12.4		ug/L		99	60 - 144

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	103		78 - 122
Dibromofluoromethane (Surr)	96		73 - 120

Lab Sample ID: 240-200774-B-6 MS

Matrix: Water

Analysis Batch: 606244

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
cis-1,2-Dichloroethene	1.0	U	25.0	24.1		ug/L		97	66 - 128
Tetrachloroethene	1.0	U	25.0	23.5		ug/L		94	62 - 131
Trichloroethene	1.0	U	25.0	23.1		ug/L		92	61 - 124
Vinyl chloride	1.9		12.5	11.8		ug/L		79	43 - 157

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	103		62 - 137
4-Bromofluorobenzene (Surr)	104		56 - 136
Toluene-d8 (Surr)	101		78 - 122
Dibromofluoromethane (Surr)	100		73 - 120

QC Sample Results

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

Job ID: 240-200748-1

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

Lab Sample ID: 240-200774-B-6 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 606244

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
cis-1,2-Dichloroethene	1.0	U	25.0	23.8		ug/L		95	66 - 128	1	14
Tetrachloroethene	1.0	U	25.0	22.7		ug/L		91	62 - 131	4	20
Trichloroethene	1.0	U	25.0	22.3		ug/L		89	61 - 124	3	15
Vinyl chloride	1.9		12.5	14.7		ug/L		102	43 - 157	22	24
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	103		62 - 137								
4-Bromofluorobenzene (Surr)	105		56 - 136								
Toluene-d8 (Surr)	102		78 - 122								
Dibromofluoromethane (Surr)	99		73 - 120								

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

Lab Sample ID: MB 240-605892/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605892

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/13/24 10:20	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	107		68 - 127						

Lab Sample ID: LCS 240-605892/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 605892

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
1,4-Dioxane	10.0	8.28		ug/L		83	75 - 121
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	109		68 - 127				

QC Association Summary

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

Job ID: 240-200748-1

GC/MS VOA

Analysis Batch: 605892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200748-2	MW-09_030624	Total/NA	Water	8260D SIM	
MB 240-605892/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-605892/5	Lab Control Sample	Total/NA	Water	8260D SIM	

Analysis Batch: 606244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-200748-1	TRIP BLANK_17	Total/NA	Water	8260D	
240-200748-2	MW-09_030624	Total/NA	Water	8260D	
MB 240-606244/7	Method Blank	Total/NA	Water	8260D	
LCS 240-606244/5	Lab Control Sample	Total/NA	Water	8260D	
240-200774-B-6 MS	Matrix Spike	Total/NA	Water	8260D	
240-200774-B-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Lab Chronicle

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

Job ID: 240-200748-1

Client Sample ID: TRIP BLANK_17

Lab Sample ID: 240-200748-1

Date Collected: 03/06/24 00:00

Matrix: Water

Date Received: 03/08/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	606244	CDG	EET CLE	03/15/24 14:41

Client Sample ID: MW-09_030624

Lab Sample ID: 240-200748-2

Date Collected: 03/06/24 14:45

Matrix: Water

Date Received: 03/08/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	606244	CDG	EET CLE	03/15/24 19:15
Total/NA	Analysis	8260D SIM		1	605892	MDH	EET CLE	03/13/24 17:53

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 240-200748-1

Laboratory: Eurofins Cleveland

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

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

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

Chain of Custody Record



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

Client Contact		Regulatory program:		Matrix								Containers & Preservatives								Analyses												Sample Specific Notes / Special Instructions:																								
Company Name: Arcadis		Client Project Manager: Kris Hinsky		DW				NPDES				RCRA				Other				Filtered Sample (Y/N)				Composite=C / Grab=G				I,1-DCE 82600				cis-1,2-DCE 82600				Trans-1,2-DCE 82600				PCE 82600				TCE 82600				Vinyl Chloride 82600				1,4-Dioxane 82600 SIM				Walk-in client
Address: 28550 Cabot Drive, Suite 500		Site Contact: Christina Weaver				Lab Contact: Mike DeMonico																																COC No:																		
City/State/Zip: Novi, MI, 48377		Telephone: 248-994-2240				Telephone: 248-994-2240				Telephone: 330-497-9396																												1 of 1 COCs																		
Phone: 248-994-2240		Email: kristoffer.hinsky@arcadis.com				Analysis Turnaround Time				TAT if different from below				10 day				3 weeks				2 weeks				1 week				2 days				1 day				For lab use only																		
Project Name: Ford LTP On-Site		Sampler Name: Maryam Hanani				Method of Shipment/Carrier:				Shipping/Tracking No:																												Lab sampling																		
Project Number: 30167538.401.03																																						Job/SDG No:																		
PO # 30167538.401.03																																																								
Sample Identification		Sample Date	Sample Time	Alk	Agates	Sediment	Soils	Other:	H2SO4	HNO3	HCl	NaOH	Zn-As	HNO3	Urges	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	I,1-DCE 82600	cis-1,2-DCE 82600	Trans-1,2-DCE 82600	PCE 82600	TCE 82600	Vinyl Chloride 82600	1,4-Dioxane 82600 SIM	Sample Specific Notes / Special Instructions:																														
TRIP BLANK_ 17		---	---	X							1						NG	X	X	X	X	X	X	X	X	1 Trip Blank																														
MW-09-030624		3/6/24	1445	X							6						NG	X	X	X	X	X	X	X	3 VOAs for 8260D 3 VOAs for 8260D SIM																															

240-200748 Chain of Custody

Possible Hazard Identification: Non-Hazard Flammable Irritant Poison B Unknown

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

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

Relinquished by: <i>Maryam Hanani</i>	Company: Arcadis	Date/Time: 3/6/24 1630	Received by: Noui Cold Storage	Company: Arcadis	Date/Time: 3/6/24 1630
Relinquished by: <i>[Signature]</i>	Company: Arcadis	Date/Time: 3/7/24 1530	Received by: <i>[Signature]</i>	Company: EPA	Date/Time: 3/7/24 1530
Relinquished by: <i>[Signature]</i>	Company: EPA	Date/Time: 3/7/24 1600	Received in Laboratory by: <i>[Signature]</i>	Company: EETNC	Date/Time: 3/8/24 8:00



Enrofin's - Cleveland Sample Receipt Form/Narrative
 Barberign Facility

Login # _____

Client Arad's

Site Name _____

Cooler unpacked by: [Signature]

Cooler Received on 3/8/24

Opened on 3/8/24

FedEx 1st Grd Exp UPS

FAS Waypoint

Client Drop Off _____

Enrofin's Courier _____

Other _____

Receipt After-hours Drop-off Date/Time _____

Storage Location _____

Enrofin's Cooler # EC 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

See Multiple Cooler Form

1 Cooler temperature upon receipt _____ °C Corrected Cooler Temp _____ °C
 IR GUN # 22 (CP 0.0 °C) Observed Cooler Temp _____ °C

2 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kts (LlHg/MeHg)? Yes NO
 -Were tamper/custody seals intact and uncompromised? Yes No NO
 3 Shippers' packing slip attached to the cooler(s)? Yes NO
 4 Did custody papers accompany the sample(s)? Yes No NO
 5 Were the custody papers relinquished & signed in the appropriate place? Yes No NO
 6 Was/were the person(s) who collected the samples clearly identified on the COC? Yes NO
 7 Did all bottles arrive in good condition (Unbroken)? Yes No NO
 8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No NO
 9 For each sample, does the COC specify preservatives (N), # of containers (N), and sample type of grab/comp (N)? Yes No NO
 10 Were correct bottle(s) used for the test(s) indicated? Yes No NO
 11 Sufficient quantity received to perform indicated analyses? Yes No NO
 12 Are these work share samples and all listed on the COC? Yes No NO

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

13 Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC316719
 14 Were VOAs on the COC? Yes No NA HC 329089
 15 Were air bubbles >6 mm in any VOA vials? Yes NO Larger than this
 16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 623024
 17 Was a Ll. Hg or Me Hg trip blank present? Yes No 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) _____ were further preserved in the laboratory
 Time preserved _____ Preservative(s) added/Lot number(s) _____
 VOA Sample Preservation - Date/Time VOAs Frozen _____

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Login #: _____

Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
FC Cheml box Other	IR GUN # 22	3.3	3.3	Water / Blue Ice / None
FC Cheml box Other	IR GUN # 22	2.3	2.3	Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
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FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None
FC Cheml box Other	IR GUN # _____			Water / Blue Ice / None

See Temperature Excursion Form

DATA VERIFICATION REPORT



March 19, 2024

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

CADENA project ID: E203728
Project: Ford Livonia Transmission Plant - ON-SITE -Soil Gas, Ground water and Soil
Project number: 30167538.401.03
Event Specific Scope of Work References: Sample COC
Laboratory: Eurofins Environment Testing LLC - Cleveland
Laboratory submittal: 200748-1
Sample date: 2024-03-06
Report received by CADENA: 2024-03-19
Initial Data Verification completed by CADENA: 2024-03-19
Number of Samples:2
Sample Matrices: Water and trip blank
Test Categories: GCMS VOC
Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

The following minor QC exceptions or missing information were noted:

GCMS VOC-SIM QC batch 605892 did not include MS/MSD analysis results due to a bad purge on the instrument according to the laboratory submittal case narrative.

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

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

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

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

Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 200748-1

Sample Name:	TRIP BLANK_17	MW-09_030624
Lab Sample ID:	2402007481	2402007482
Sample Date:	3/6/2024	3/6/2024

Analyte	Cas No.	Report		Units	Valid Qualifier	Report		Units	Valid Qualifier	
		Result	Limit			Result	Limit			
GC/MS VOC										
<u>OSW-8260D</u>										
1,1-Dichloroethene	75-35-4	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	---	
Tetrachloroethene	127-18-4	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	---	
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	0.96	1.0	ug/l	J	
<u>OSW-8260DSIM</u>										
1,4-Dioxane	123-91-1					3.2	2.0	ug/l	---	