

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 5/18/2023 4:09:10 PM

JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-184784-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203





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

low

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Authorized for release by Michael DelMonico, Project Manager I Michael.DelMonico@et.eurofinsus.com (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	11
QC Sample Results	12
QC Association Summary	14
Lab Chronicle	15
Certification Summary	16
Chain of Custody	17
Receipt Checklists	21

3

5

Qualifiers

Quanners	
GC/MS VOA Qualifier	Qualifier Description
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.
¤	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)
TNITO	

TNTC Too Numerous To Count

Job ID: 240-184784-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-184784-1

Receipt

The samples were received on 5/5/2023 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 1.8°C

GC/MS VOA

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

Method Summary

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
240-184784-1	TRIP BLANK_163	Water	05/03/23 00:00	05/05/23 08:00
240-184784-2	MW-170S_050323	Water	05/03/23 15:07	05/05/23 08:00

Client Sample ID: TRIP BLANK_163

No Detections.

Client Sample ID: MW-170S_050323

No Detections.

Lab Sample ID: 240-184784-1

Lab Sample ID: 240-184784-2

This Detection Summary does not include radiochemical test results.

Client Sample ID: TRIP BLANK_163 Date Collected: 05/03/23 00:00 Date Received: 05/05/23 08:00

Lab Sample ID: 240-184784-1

Matrix: Water

5

8

Method: SW846 8260D - Vo Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 14:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 14:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 14:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 14:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 14:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 128					05/12/23 14:51	1
Dibromofluoromethane (Surr)	103		77 - 124					05/12/23 14:51	1
Toluene-d8 (Surr)	103		80 - 120					05/12/23 14:51	1
4-Bromofluorobenzene	102		76 - 120					05/12/23 14:51	1

Client Sample ID: MW-170S_050323 Date Collected: 05/03/23 15:07 Date Received: 05/05/23 08:00

Lab Sample ID: 240-184784-2 Matrix: Water

5 6 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/16/23 11:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		75 - 133					05/16/23 11:52	1
Method: SW846 8260D - Vo	olatile Organic	Compound	ds bv GC/MS						
Analyte	-	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 18:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 18:09	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 18:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 18:09	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 18:09	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 18:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 128					05/12/23 18:09	1
Dibromofluoromethane (Surr)	98		77 - 124					05/12/23 18:09	1
Toluene-d8 (Surr)	101		80 - 120					05/12/23 18:09	1
4-Bromofluorobenzene	102		76 - 120					05/12/23 18:09	1

Surrogate Summary

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

Lab Control Sample Dup

Method Blank

Prep Type: Total/NA

			Pe	ercent Surro	ogate Recovery	(Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCA (70-128)	DBFM (77-124)	TOL (80-120)	BFB (76-120)		
240-184784-1	TRIP BLANK 163	99	103	103	102		
240-184784-2		97	98	101	102		
LCS 460-908741/4	_ Lab Control Sample	97	97	104	98		
LCSD 460-908741/5	Lab Control Sample Dup	101	99	105	101		
VIB 460-908741/9	Method Blank	99	98	103	94		
Surrogate Legend							
DCA = 1,2-Dichloroet	thane-d4 (Surr)						
DBFM = Dibromofluo	romethane (Surr)						
TOL = Toluene-d8 (S	urr)						
BFB = 4-Bromofluoro	benzene						
lethod: 8260D \$	SIM - Volatile Organic	Compoun	ds (GC/	MS)			
atrix: Water			-			Prep Type: Total	/NA
			Pe	ercent Surro	ogate Recovery	(Acceptance Limits)	
		BFB					
_ab Sample ID	Client Sample ID	(75-133)					
240-184784-2	MW-170S_050323	91					
LCS 460-909423/3	Lab Control Sample	96					

91

92

Surrogate Legend

LCSD 460-909423/4

MB 460-909423/7

BFB = 4-Bromofluorobenzene

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

Lab Sample ID: MB 460-908741/9 Matrix: Water

Analysis Batch: 908741

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 11:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 11:09	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 11:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 11:09	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 11:09	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 11:09	1

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 128		05/12/23 11:09	1
Dibromofluoromethane (Surr)	98		77 - 124		05/12/23 11:09	1
Toluene-d8 (Surr)	103		80 - 120		05/12/23 11:09	1
4-Bromofluorobenzene	94		76 - 120		05/12/23 11:09	1

Lab Sample ID: LCS 460-908741/4 Matrix: Water Analysis Batch: 908741

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	20.0	19.6		ug/L		98	68 - 133	
cis-1,2-Dichloroethene	20.0	20.7		ug/L		104	78 - 121	
Tetrachloroethene	20.0	20.9		ug/L		104	70 - 127	
trans-1,2-Dichloroethene	20.0	19.8		ug/L		99	74 - 126	
Trichloroethene	20.0	19.3		ug/L		96	71_121	
Vinyl chloride	20.0	20.5		ug/L		102	55 - 144	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 128
Dibromofluoromethane (Surr)	97		77 - 124
Toluene-d8 (Surr)	104		80 - 120
4-Bromofluorobenzene	98		76 - 120

Lab Sample ID: LCSD 460-908741/5 Matrix: Water Analysis Batch: 908741

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	20.0	19.7		ug/L		99	68 - 133	1	30
cis-1,2-Dichloroethene	20.0	21.2		ug/L		106	78 - 121	2	30
Tetrachloroethene	20.0	21.6		ug/L		108	70 - 127	4	30
trans-1,2-Dichloroethene	20.0	20.4		ug/L		102	74 - 126	3	30
Trichloroethene	20.0	19.3		ug/L		97	71_121	0	30
Vinyl chloride	20.0	20.7		ug/L		104	55 - 144	1	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 128
Dibromofluoromethane (Surr)	99		77 - 124
Toluene-d8 (Surr)	105		80 - 120

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

Job ID: 240-184784-1

Prep Type: Total/NA

Client Sample ID: Method Blank

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

QC Sample Results

			QC Sa	mple	Resi	ults							1
Client: ARCADIS US Inc Project/Site: Ford LTP - Off S	ite									Job ID: 2	240-184	784-1	
Method: 8260D - Volati	le Organio	: Com	pounds	by GC	C/MS (Contin	ued)						
Lab Sample ID: LCSD 460 Matrix: Water Analysis Batch: 908741	-908741/5					(Client S	Sample	ID: Lat	Control Prep Ty			
Surrogate	LCSD %Recovery		r Limi	ts									5
4-Bromofluorobenzene	101		76 - 1										
Method: 8260D SIM - V	olatile Org	ganic	Compou	nds (GC/M	S)							
Lab Sample ID: MB 460-90 Matrix: Water)9423/7							Clie	ent Sam	ple ID: M Prep Ty			8
Analysis Batch: 909423		МВ МВ	ł										9
Analyte	Re	sult Qu	alifier	RL		MDL Unit		D P	repared	Analy	zed	Dil Fac	
1,4-Dioxane		2.0 U		2.0		0.86 ug/L				05/16/23	09:43	1	1
		МВ МВ											
Surrogate 4-Bromofluorobenzene	%Reco	very Qua	alifier	Limits 75 - 133				F	Prepared	Analy 		Dil Fac	
Lab Sample ID: LCS 460-9 Matrix: Water Analysis Batch: 909423	009423/3		Spi	ke	LCS	LCS	Cli	ient Sa	mple ID	: Lab Cor Prep Ty %Rec			13
Analyte			Add		-	Qualifier	Unit	D	%Rec	Limits			
1,4-Dioxane			5.	00	5.34		ug/L		107	57 - 124			
Surrogate 4-Bromofluorobenzene	LCS %Recovery 96		r <u>Limi</u> 75 - 1										
Lab Sample ID: LCSD 460 Matrix: Water	-909423/4					(Client S	Sample	ID: Lat	o Control Prep Ty			
Analysis Batch: 909423			Spi	ko		LCSD				%Rec		RPD	
Analyte			Add			Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1,4-Dioxane				00	5.66		ug/L		113	57 - 124	6	30	
Surrogate	LCSD %Recovery		r Limi	ts									
4-Bromofluorobenzene	91		75 - 1										

GC/MS VOA

Analysis Batch: 908741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184784-1	TRIP BLANK_163	Total/NA	Water	8260D	
240-184784-2	MW-170S_050323	Total/NA	Water	8260D	
MB 460-908741/9	Method Blank	Total/NA	Water	8260D	
LCS 460-908741/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 460-908741/5	Lab Control Sample Dup	Total/NA	Water	8260D	
Analysis Batch: 909	9423				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-184784-2	MW-170S_050323	Total/NA	Water	8260D SIM	<u>.</u>
MB 460-909423/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 460-909423/3	Lab Control Sample	Total/NA	Water	8260D SIM	
LCSD 460-909423/4	Lab Control Sample Dup	Total/NA	Water	8260D SIM	

Job ID: 240-184784-1

Matrix: Water

Lab Sample ID: 240-184784-1

Client Sample ID: TRIP BLANK_163 Date Collected: 05/03/23 00:00 Date Received: 05/05/23 08:00

	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	8260D		1	908741	MZS	EET EDI	05/12/23 14:51	
lient Sam	ple ID: MW	-170S_05032	3				Lab	Sample ID: 240-1847	84-2
ate Collecte	d: 05/03/23 1	5:07						Matrix:	Wate
ate Receive	d: 05/05/23 0	8:00							

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	908741	MZS	EET EDI	05/12/23 18:09
Total/NA	Analysis	8260D SIM		1	909423	SZD	EET EDI	05/16/23 11:52

Laboratory References:

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

Client: ARCADIS US Inc Project/Site: Ford LTP - Off Site Job ID: 240-184784-1

Laboratory: Eurofins Edison

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

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

Test	TestAmerica Laboratory location; Brighton 10448 Cliati	Citatin OL CUSTORY ACCOLU 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	9-2763	
Client Contact	Regulatory program:	E NPDES F RCRA F Other		
Company Name: Arcadis	Client Project Manager: Kris Hinskey	Site Contact: Christina Weaver	l ah Contact: Miko DalMazizo.	TestAmerica Laboratories, Inc.
Address: 28550 Cabot Drive, Suite 500				
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.hinskey(g/arcadis.com		Analyses	For lab use only
Project Name: Ford LTP Off-Site	sampler Name, u. terroin	TAT if different from helow 3 weeks 10 date 2 weeks		Walk-in client
Project Number: 30167538.402.04	Method of Shipnent/Carrier:	1 week X)		Lab sampling
PO#30167538.402.04	Shipping/Tracking No:	/ Crab	8560B 8560B 8560 560B	Job/SDG No:
	Matrix	Containers & Preservativ	oxsue 8: 2410ride 12608 -1,2-DCE 2-DCE 25-DCE 25-DCE	Commits Consisting Notes
Sample Identification	Sample Date Sample Time A Sodime Solid	Comp	Cis-1.	Special Instructions:
TRIP BLANK_ [63	02/23/23 1			1 Trip Blank
MW-1705_05023	estantia 1507 la	× 94		3 VOAs for 8260B 3 VOAs for 8260B SIM
		240-184784 Chain of Custody		MICHIGAN 190
Possible Hazard Identification	lant Poison B Unknown	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month Return to Client — Discoved by Lab	ples are retained longer than 1 month)	
Special Instructions/OC Requirements & Comments: Sample Address: ス4991 めとんいいん イ Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631 Level IV Reporting requested.			Archive For the Months	
Relinquestrol by Relinquestrol by Anno Center M	Company Conference Date Type: Company Date Time:	16:30 Received by UN Cold	Stores Company and	Date/Time: 05/63/23 /6: Date/Time: Date/Time: Date/Time: Date/Time:
Relinquistical by: Marken	Date/Time: 514/23	Received in Laboratory b	Company of the second	m
coops Teadymens Lacensers, Nr. Algols rescval Lectores & David V. at Jaconski, d'Indoneca Lacendres, Inc.				

5/18/2023

Eurofins - Canton Sample Receipt Form/Narrative	Login # : 184784
Barberton Facility	
Client Arcadis Site Name	Cooler unpacked by:
Cooler Received on 5.5.23 Opened on 5.5.23	Manaluly Bl
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Co	
Receipt After-hours: Drop-off Date/Time Storage	Location
	ner
Packing material used: Bubble Wrap Foam Plastic Bag None	Other
COOLANT: Wertce Blue Ice Dry Ice Water None 1. Cooler temperature upon receipt See Multi	iple Cooler Form
IR GUN # (CF°C) Observed Cooler Temp.	
	0
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	Yes No Tests that are not
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA checked for pH by
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? -Were tamper/custody seals intact and uncompromised?	Yes the Receiving:
 Shippers' packing slip attached to the cooler(s)? 	Yes No VOAs
4. Did custody papers accompany the sample(s)?	Yes No Oil and Grease
5. Were the custody papers relinquished & signed in the appropriate place?	Yes No TOC
6. Was/were the person(s) who collected the samples clearly identified on the CC	DC? Yes No
7. Did all bottles arrive in good condition (Unbroken)?	No No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	No No
9. For each sample, does the COC specify preservatives (YN), # of containers ((Yes No
10. Were correct bottle(s) used for the test(s) indicated?11. Sufficient quantity received to perform indicated analyses?	Yes No
12. Are these work share samples and all listed on the COC?	Yes No
If yes, Questions 13-17 have been checked at the originating laboratory.	
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# HC208070
14. Were VOAs on the COC?	(Ves Ng
15. Were air bubbles >6 mm in any VOA vials? Larger than this.	Yes (No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Ves No Yes No
17. Was a LL Hg or Me Hg trip blank present?	
Contacted PM Date by vi	ia Verbal Voice Mail Other
Concerning	
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional m	next page Samples processed by:
19. SAMPLE CONDITION	
Sample(s) were received after the recomm	ended holding time had expired.
Sample(s) we	ere received in a broken container.
Sample(s) were received with bubb	ole >6 mm in diameter. (Notify PM)
20. SAMPLE PRESERVATION	
Sample(s)	were further preserved in the laboratory.
Sample(s) Preservative(s) added/Lot number(s):	were further preserved in the fubblatory.
VOA Sample Preservation - Date/Time VOAs Frozen:	

5

14

Cooler F	escription	IR Gun #	Sample Receipt Mu Observed	Corrected	Coolant
	ircle)		Temp °C	Temp °C	(Circle)
EC Client	Box Other	(Circle) IR GUN #: 22	1.0	1.0	Wet ice Blue ice Dry I
EC) Client	Box Other	IR GUN #: 22			Water None (Wet ice) Blue ice Dry I
/		IR GUN #:	1. 7	<u> </u>	Water None Wetice Blue ice Dry i
EC Client	Box Other	IR GUN #:			Water None Wet ice Blue ice Dry i
EC Client	Box Other				Water None
EC Client	Box Other	IR GUN #:		· • · · · · · · · · · · · · · · · · · ·	Wet Ice Blue Ice Dry I Water None
EC Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry Is Water None
EC Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry is Water None
EC Client	Box Other	IR GUN #:		-	Wet ice Blue ice Dry k Water None
EC Client	Box Other	IR GUN #:			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
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry k
EC Client	Box Other				Water None Wet ice Blue ice Dry k
EC Client	Box Other	IR GUN #:			Water None
EC Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry k Water None
EC Client	Box Other	IR GUN #:			Wet ice Blue ice Dry k Water None
EC Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry lo Water None
EC Client	Box Other	IR GUN #:			Wet ice Sive ice Dry k
EC Client	Box Other	IR GUN #:		· · · · · · · · · · · · · · · · · · ·	Water None Wet ice Sive ice Dry ic
EC Client		IR GUN #:			Water None Wet Ice Blue Ice Dry k
	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ic
EC Client	Box Other	IR GUN #:			Water None Wet ice Blue ice Dry ic
EC Client	Box Other				Water None
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	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
Carrie	BUA Umer				Water None

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

Chain of Custody Record



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Barberton, OH 44203 Phone: 330-497-9396 Fax: 330-497-0772)))		5							Environment Testing
Client Information (Sub Contract Lab)	Sampler:			Lab PM: DelMoni	Lab PM: DelMonico, Michael	-		Carrier Tracking No(s)	ing No(s):	COC No: 240-167789.1	789.1	
Client Contact: Shipping/Receiving	Phone:			E-Mail: Michael.	DelMonico	o@et.eurof	E-Mail: Michael. DelMonico@et.eurofinsus.com	State of Origin: Michigan	:u	Page: Page 1 of 1	of 1	
Company: Eurofins Environment Testing Northeast,				Acc	editations R	Accreditations Required (See note):	note):			Job #: 240-184784-1	784-1	
Address: 777 New Durtham Road, ,	Due Date Requested: 5/18/2023					٩	Analysis Requested	equested		Preservat	8	is: M - Hexane
City: Edison	TAT Requested (days):	;;		-	100					B - NaOH C - Zn Ace		N - None 0 - AsNaO2 D - Na2O4S
State, Zip: NJ, 08817					a					D - Nitric Acid E - NaHSO4		r - Ma2043 Q - Na2SO3 R - Na2S2O3
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			(0	ist)					G - Amchic G - Amchic H - Ascorb		- H2SO4 - TSP Dodecahydrate
Email:	;# OM			e ol v								U - Acetone V - MCAA W/ - oH 4-5
Project Name: Ford LTP - Off Site	Project #: 24015353			9 () 9	_					K - EDTA L - EDA	N X	Y - Trizma Z - other (specify)
Site:	SSOW#:			durs	00) 10					of cor		
Sample Identification - Client ID (Lab ID)	Samole Date	Sample (0	Sample Type (C=comp, G=grab)	Marrix (Warwater, Secold, BT-Tissuo, BT-Tissuo,	1260D/2030C (W	2560D_SIMIS_030				Total Number	ocial Instru	Snarial Instructions (Note:
-	X		Preservation Code:									
TRIP BLANK_163 (240-184784-1)	5/3/23	Eastern		Water	×					-		
MW-170S_050323 (240-184784-2)	5/3/23	15:07 Fastern		Water	×	×				9		
		2								535		
										233		
										-		
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Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank:	le Rank: 2			Special In	structions/	Special Instructions/QC Requirements	nents:				
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Custody Seals Intact: Custody Seal No.:		t	ć	,	Cooler -	Temperature(Cooler Temperature(s) °C and Other Remarks.	Remarks:				
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					4	3		9 0	3	6	4 5	

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Login Number: 184784 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	

List Source: Eurofins Edison

List Creation: 05/09/23 01:20 PM

DATA VERIFICATION REPORT



May 19, 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: 184784-1 Sample date: 2023-05-03 Report received by CADENA: 2023-05-18 Initial Data Verification completed by CADENA: 2023-05-19 Number of Samples:2 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: 184784-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BLA 2401847 5/3/202	_ 7841			MW-170 2401847 5/3/202	_ 7842	23	
				Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC										
<u>OSW-8260</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		ND	1.0	ug/l	
<u>OSW-8260</u>	DSIM									
	1,4-Dioxane	123-91-1					ND	2.0	ug/l	



Ford Motor Company – Livonia Transmission Project

Data Review

Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-184784-1 CADENA Verification Report: 2023-05-19

Analyses Performed By: Eurofins North Canton, Ohio

Report # 49783R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-184784-1 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_163	240-184784-1	Water	05/03/23		х	
MW-170S_050323	240-184784-2	Water	05/03/23		Х	Х

DATA REVIEW

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	

DATA REVIEW

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 HCI

All samples were analyzed within the specified holding time criteria.

2. Mass Spectrometer Tuning

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

System performance and column resolution were acceptable.

3. Calibration

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

3.1 Initial Calibration

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

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

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

3.2 Continuing Calibration

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

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

4. Internal Standard Performance

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

All internal standard responses were within control limits.

5. Field Duplicate Analysis

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

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

DATA REVIEW

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	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (G	C/MS)				
Tier II Validation					
Holding times/Preservation		Х		X	
Tier III Validation					
System performance and column resolution		Х		X	
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

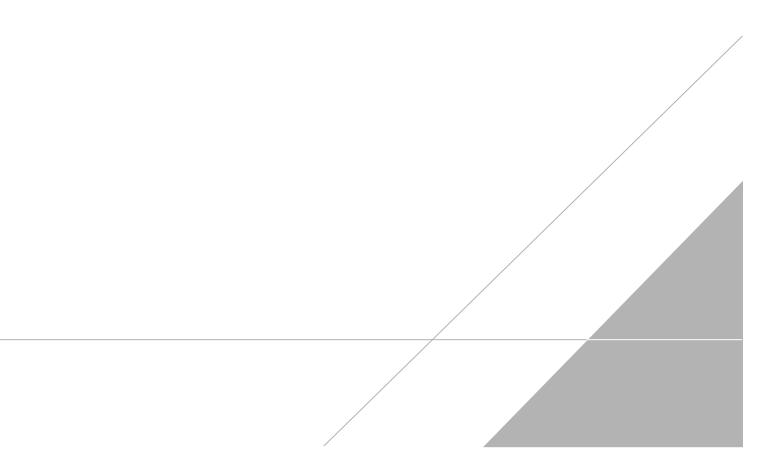
- RPD Relative percent difference
- %D Percent difference

VALIDATION PERFORMED BY:	Dilip Kumar
SIGNATURE:	Pinter
DATE:	June 12, 2023

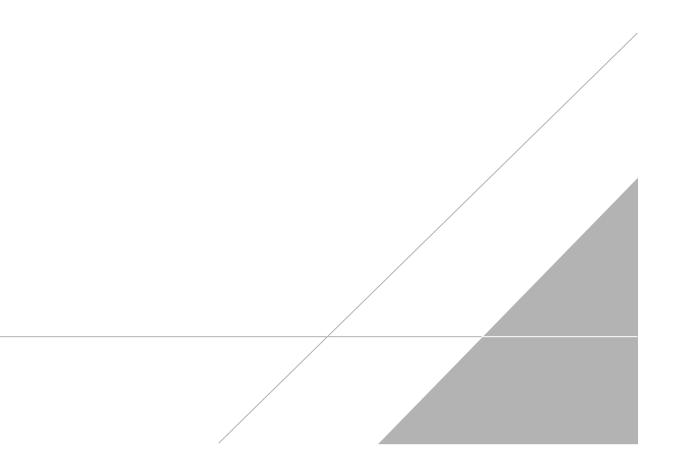
PEER REVIEW: Andrew Korycinski

DATE: June 21, 2023

NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS



CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS



Chain of Custody Record



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

Client Contact mpany Name: Arcadis	Regula	tory program	:	Г	DW	F	NPD	DES	Г	RCRA		Oth	ier 🗌												
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dress: 28550 Cabot Drive, Suite 500	Telephone: 248	2-994-7740				Tel	enhor	10: 7.18	-994-22	240				Talar	ohone:	220	107 01	04					<u> </u>		
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TRIP BLANK_ 163	05/03/23			1				1			1	۷G	X	X	Х	X	X	X				1	1 Trip	Blank	
NW-1705_050323	05/03/23	1507		6				1				PG	X	V	X	X	K	X	X				3 VO	s for 8260	0B
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b5/18/2023

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:				PM: IMon	ico, l	Mich	ael					ſ	Carrie	Track	king No	o(s):				OC No: 40-167789.1		- Hexane - None - None - AsNaO2 - Na2O4S - Na2SO3 - Na2SO3 - H2SO4 - TSP Dodecahydrate - Acetone - MCAA - pH 4-5 - Trizma - other (specify) - uctions/Note: - difference - difference
Client Contact: Shipping/Receiving	Phone:		<u>,,, , ,,,</u> ,,	E-M Mic		.Dell	Moni	co@e	et.eu	rofin	sus.c	com		State o Michi	of Orig	in:					age: age 1 of 1		
Company: Eurofins Environment Testing Northeast,								Requir					_		<u> </u>					Jo	b #: 40-184784-1		
Address: 777 New Durham Road.	Due Date Request 5/18/2023	ed:			\uparrow					Δn	alve	sis R	2001		her					P	reservation Cod		
City:	TAT Requested (d	ays):					Т		Т						eu	Т		Т	1	В	- HCL - NaOH	N - None	
Edison State, Zip: NJ, 08817						100 100 100														D	- Zn Acetate - Nitric Acid - NaHSO4	P - Na2O Q - Na2S	4S 03
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:						List)													G	- MeOH - Amchlor I - Ascorbic Acid	S - H2SO)4
Email:	WO #:				s or No)	(ON	hort												2	i J	- Ice - DI Water	U - Acetor V - MCAA	4
Project Name: Ford LTP - Off Site	Project #: 24015353				le (Ye	ō	(MOD) VOCs (Short												ntaine		- EDTA - EDA	Y - Trizma	а
Site:	SSOW#:				Samp	WS/MSD (Ver	V (ao	ç											of co	0	ther:		
		Sample	Sample Type (C=comp,	Watrix (w=water, S=solid, O=waste/oil, BT=Tissue,	eld Filtered	Nom WS/	8260D/5030C (A	8260D_SIM/5030C											Total Number				
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab) Preserva	A=Air) tion Code:	EX	X	83	83											X		Special In	struction	ns/Note:
TRIP BLANK_163 (240-184784-1)	5/3/23	Eastern		Water	Ê		x												1				
MW-170S_050323 (240-184784-2)	5/3/23	15:07 Eastern		Water	Ħ		x	х									T		6	5.			
D					П														100				
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Note: Since laboratory accreditations are subject to change, Eurofins Envin laboratory does not currently maintain accreditation in the State of Origin lis accreditation status should be brought to Eurofins Environment Testing No	sted above for analysis/test	s/matrix being	analyzed, the s	amples must	be sh	bedgi	back	to the	Eurof	fins En	viron	ment 1	Festin	a Nor	h Cen	tral. LL	LC lab	oratory	or oth	her i	nstructions will be	provided A	Any channes to
Possible Hazard Identification						San	nple	Disp	osal	(A 1	fee n	nay L							1		longer than t	1 month)	<u> </u>
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2					ə <i>turn</i> İnstru				auire			al By	/ Lab			Arc	chiv	e For	Mont	ths
Empty Kit Relinquished by:		Date:	_		Tir	ne:									Vetho	d of Sh	nipmen	nt: '/	20				
Relinguated by:	18-72	I	33		τ. <i>μ</i>		Recei	vedby	°) .		,		,				ate/Ti	me:	C	~	lev	Company	/
Belinquished by:	Date/Time:			Company		-	Recei	ved by	20	le	عرز	S	1		-	D	ate/Ti		2.~	2	10:30	Company	/
to Belinquished by:	Date/Time:			Company			Recei	ved by	r:							D	ate/Ti	me:				Company	/
Custody Seals Intact: Custody Seal No.:	<u> </u>							r Temp	peratu	ure(s) '	°C and	d Othe	er Rer	narks:								<u> </u>	
		1	Rig	2.10		2	-+	è															

Client Sample ID: TRIP BLANK_163

Date Collected: 05/03/23 00:00

Date Received: 05/05/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/12/23 14:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/12/23 14:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 14:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/12/23 14:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/12/23 14:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/12/23 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil
1,2-Dichloroethane-d4 (Surr)	99		70 - 128		05/12/23 14:51	
Dibromofluoromethane (Surr)	103		77 - 124		05/12/23 14:51	
Toluene-d8 (Surr)	103		80 - 120		05/12/23 14:51	
4-Bromofluorobenzene	102		76 - 120		05/12/23 14:51	

Client Sample ID: MW-170S_050323 Date Collected: 05/03/23 15:07 Date Received: 05/05/23 08:00

Lab Sample ID: 240-184784-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/16/23 11:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		75 - 133					05/16/23 11:52	1

Surrogate	%Recoverv	Qualifier	l imits			Prenared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L		05/12/23 18:09	1
Trichloroethene	1.0	U	1.0	0.44	ug/L		05/12/23 18:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L		05/12/23 18:09	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L		05/12/23 18:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L		05/12/23 18:09	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L		05/12/23 18:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 128		05/12/23 18:09	1
Dibromofluoromethane (Surr)	98		77 - 124		05/12/23 18:09	1
Toluene-d8 (Surr)	101		80 - 120		05/12/23 18:09	1
4-Bromofluorobenzene	102		76 - 120		05/12/23 18:09	1

Lab Sample ID: 240-184784-1 Matrix: Water