

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 11/20/2023 5:08:09 AM

JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-195190-1

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

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

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RPD

TEF

TEQ

TNTC

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	
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	0
CNF	Contains No Free Liquid	ð
DER	Duplicate Error Ratio (normalized absolute difference)	
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)	

Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-195190-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-195190-1

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 11/10/2023 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 2.7°C and 2.9°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 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

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-195190-1	TRIP BLANK_48	Water	11/08/23 00:00	11/10/23 08:00
240-195190-2	MW-202_110823	Water	11/08/23 14:45	11/10/23 08:00

Eurofins Cleveland 11/20/2023

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11/20/2023

Client Sample ID: TRIP BLANK_48

Client Sample ID: MW-202_110823

No Detections.

No Detections.

Client: ARCADIS US Inc

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK_48

Date Collected: 11/08/23 00:00 Date Received: 11/10/23 08:00

Job ID: 240-195190-1

Lab Sample ID: 240-195190-1

Matrix: Water

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/17/23 16:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/17/23 16:56	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/17/23 16:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/17/23 16:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		62 - 137			-		11/17/23 16:56	1
4-Bromofluorobenzene (Surr)	87		56 - 136					11/17/23 16:56	1
Toluene-d8 (Surr)	104		78 - 122					11/17/23 16:56	1
Dibromofluoromethane (Surr)	88		73 - 120					11/17/23 16:56	1

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Eurofins Cleveland
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Client Sample ID: MW-202_110823

Date Collected: 11/08/23 14:45 Date Received: 11/10/23 08:00

Method: SW846 8260D - Volati	le Organic Comp	ounds by G	GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/17/23 17:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/17/23 17:22	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/17/23 17:22	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/17/23 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		62 - 137			-		11/17/23 17:22	1
4-Bromofluorobenzene (Surr)	74		56 - 136					11/17/23 17:22	1
Toluene-d8 (Surr)	100		78 - 122					11/17/23 17:22	1
Dibromofluoromethane (Surr)	87		73 - 120					11/17/23 17:22	1

Matrix: Water

Lab Sample ID: 240-195190-2

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

Percent Surrogate Recovery (Acceptance Limits) BFB DCA TOL DBFM Lab Sample ID **Client Sample ID** (62-137) (56-136) (78-122) (73-120) 240-195190-1 TRIP BLANK_48 85 87 88 104 240-195190-2 MW-202_110823 83 74 100 87 240-195483-B-5 MS Matrix Spike 85 94 111 92 240-195483-B-5 MSD Matrix Spike Duplicate 82 86 104 90 LCS 240-594979/6 Lab Control Sample 81 89 108 89 MB 240-594979/10 Method Blank 84 87 104 88

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Job ID: 240-195190-1

Prep Type: Total/NA

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

Lab Sample ID: MB 240-5949	979/10								Client S	Sample ID: Metho	
Matrix: Water										Prep Type:	Total/N/
Analysis Batch: 594979											
		MB									
Analyte		Qualifier	RL		MDL	Unit			Prepared	Analyzed	Dil Fa
cis-1,2-Dichloroethene	1.0	U	1.0		0.46	ug/L				11/17/23 12:40	
trans-1,2-Dichloroethene	1.0	U	1.0		0.51	ug/L				11/17/23 12:40	
Trichloroethene	1.0	U	1.0		0.44	ug/L				11/17/23 12:40	
Vinyl chloride	1.0	U	1.0		0.45	ug/L				11/17/23 12:40	
		MB									
Surrogate	%Recovery		Limits						Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	84		62 - 137							11/17/23 12:40	1
4-Bromofluorobenzene (Surr)	87		56 - 136							11/17/23 12:40	
Toluene-d8 (Surr)	104	!	78 - 122							11/17/23 12:40	
Dibromofluoromethane (Surr)	88	}	73 - 120							11/17/23 12:40	
Lab Sample ID: LCS 240-594	979/6							Clie	nt Sample	e ID: Lab Control	Sample
Matrix: Water										Prep Type:	Total/NA
Analysis Batch: 594979											
			Spike	LCS	LCS					%Rec	
Analyte			Added	Result	Qual	ifier	Unit	D	%Rec	Limits	
cis-1,2-Dichloroethene			20.0	18.5			ug/L		93	77 - 123	
trans-1,2-Dichloroethene			20.0	18.9			ug/L		95	75 - 124	
Trichloroethene			20.0	17.8			ug/L		89	70 - 122	
Vinyl chloride			20.0	17.8			ug/L		89	60 - 144	
	LCS LCS	s									
Surrogate	%Recovery Qu	alifier	Limits								
1,2-Dichloroethane-d4 (Surr)	81		62 - 137								
4-Bromofluorobenzene (Surr)	89		56 - 136								
Toluene-d8 (Surr)	108		78 - 122								
Dibromofluoromethane (Surr)	89		73 - 120								
_ Lab Sample ID: 240-195483-	B-5 MS								Client	Sample ID: Matr	ix Spike
Matrix: Water										Prep Type:	
Analysis Batch: 594979											
	Sample Sar	nple	Spike	MS	MS					%Rec	
Analyte	Result Qua	•	Added	Result		ifier	Unit	0	%Rec	Limits	
cis-1,2-Dichloroethene	24		160	181			ug/L		98	66 - 128	
trans-1,2-Dichloroethene	8.0 U		160	156			ug/L		97	56 - 136	
Trichloroethene	8.0 U		160	145			ug/L		91	61 - 124	
Vinyl chloride	8.0 U		160	141			ug/L		88	43 - 157	
	MS MS										

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		62 - 137
4-Bromofluorobenzene (Surr)	94		56 - 136
Toluene-d8 (Surr)	111		78 - 122
Dibromofluoromethane (Surr)	92		73 - 120

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Job ID: 240-195190-1

RPD

1

1

1

6

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

Lab Sample ID: 240-195483-B-5 MSD Matrix: Water Analysis Batch: 594979 Sample Sample Spike MSD MSD %Rec Result Qualifier Result Qualifier Analyte Added Unit D %Rec Limits cis-1,2-Dichloroethene 24 160 182 ug/L 99 66 - 128 trans-1,2-Dichloroethene 8.0 U 160 158 ug/L 99 56 - 136 Trichloroethene 8.0 U 160 147 ug/L 92 61 - 124 ug/L Vinyl chloride 8.0 U 160 150 94 43 - 157

	INSD	WSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		62 - 137
4-Bromofluorobenzene (Surr)	86		56 - 136
Toluene-d8 (Surr)	104		78 - 122
Dibromofluoromethane (Surr)	90		73 - 120

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

RPD

Limit

14

15

15

24

QC Association Summary

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

Analysis Batch: 594979

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc
240-195190-1	TRIP BLANK_48	Total/NA	Water	8260D	
240-195190-2	MW-202_110823	Total/NA	Water	8260D	
MB 240-594979/10	Method Blank	Total/NA	Water	8260D	
LCS 240-594979/6	Lab Control Sample	Total/NA	Water	8260D	
240-195483-B-5 MS	Matrix Spike	Total/NA	Water	8260D	
240-195483-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

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Client Sample ID: TRIP BLANK_48 Lab Sample ID: 240-195190-1 Date Collected: 11/08/23 00:00 Matrix: Water Date Received: 11/10/23 08:00 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number Analyst Lab or Analyzed Total/NA 8260D 594979 HMB EET CLE 11/17/23 16:56 Analysis 1 Client Sample ID: MW-202_110823 Lab Sample ID: 240-195190-2 Date Collected: 11/08/23 14:45 Matrix: Water Date Received: 11/10/23 08:00 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number Analyst or Analyzed Lab 11/17/23 17:22 Total/NA 8260D 594979 HMB EET CLE Analysis 1

Laboratory References:

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

Accreditation/Certification Summary

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

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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
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23 *
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

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

Test	TestAmerica Laboratory location: Brighton	lory location: Bri	1	Chain of Custody Record 10448 Clation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	Record Brighton, MI 481	16 / 810-22	9-2763					
Client Contact	Regulato	Regulatory program:	L	NPDES	Γ RCRA	□ Other				h		
Company Name: Arcadis	Client Project N	Chent Project Manager: Kris Hinskey	ckev	Site Contact: Christina Weaver	tine Weever		ll ah Cont	ah Contact: Milka DalManico	Manico		TestAmerica L	TestAmerica Laboratories, Inc.
Address: 28550 Cabot Drive, Suite 500		07 65 700	(
City/State/Z4p: Novi, MI, 48377		0477-446		1 eleptione: 240-224-2440	0677-4		I ciepnon	1 elepaone: 3.0-49/-49/-490	390		1 Jo 1	COCs
Physics 748-094-7740	Email: kristoffe	Email: kristoffer.hinskey@arcadis.com	s.com	Analysis Lurnaround Min	round Time				Analyses		For lab use only	
Project Name: Ford LTP Off-Site	Sampley Name:	rett L	rn K	cut from t	elow 3 weeks						Walk-in client	
Project Number: 30167538.402.04	Method of Shipment/Carrier:	nent/Carrier:	,	10 day	L weeks I week	-	8			IAI IS	Lab sampling	1
PO# 30167538.402.04	Shipping/Tracking No:	ng No:			coays I day	/ Grab	8092			5 9007	Job/SDG No:	
C	Committee Commit		ther: diment wild wild wild wild wild wild wild wild	aptice (pect. aptice voltantiation of the second of the	abres abres	1-DCE 8560 ombosite=C	.sus-1'5-DCE 8	CE 85608	abinolid) lyn	8 enexoiO-4	Sample Sp Special It	Sample Specific Notes / Special Instructions:
TRIP BLANK_ 48	11/08/23		s s v T	н —	n) U	D X	d X			1 Trip Blank	YL
MW-202-110923	54171 52/52/11	1445	m	3		X DN	XX	X	X		3 VOAS TOT 6260B	2 VOAS TOT 8260B
							<u> </u>				C> 3.VOA	> 3 VON
							-					
								<u> </u>				
				240-195	240-195190 Chain of Custody	Custody						
						î -	-				MICHIC	IAN
											190	
Identification				Sample Disposal	(A fee may be a	sessed if san	IDIes are ret	ained longer	than 1 mc		_	
F Non-Hazard 「Flammable 「Skin Irritant 「Poison B Special Instructions/OC Requirements & Comments: Bemple Address: レンリリフ トップロハ	ant 「 Poison B		- Unknown	🕇 Return to Client 🖉 Disposal By Lab 🗧 Archive For 🤇 Mo	lient F Di	sposal By La	L	Archive For		Months		
Submit all results through Cadena at promaila@cadenacc Level IV Reporting requested.	o.com. Cadena #I	E203631										
Relinquished by And True	Company: A RCADIS	S	Dute/Time:/23	15:35 Recei	Received by: Colc	Storage	96	Con	Company:	ADIS	Date/Time; 11/08/23	15:35
Relifiquished by: Jennur Ku	Company:	sut	Date/Time: [1]9]23	OSSU Recei	Received by:	A	b	Con	Company:	H.H.	0	2 10/01
Relinquished by:	Company:	4	111me:	1011 S Recei	Received taborator	Men	en e	Com	Company:	TAO TAO	Date Trans.	
2000a. Tanáh manghi da paratanan ho, Ad Jihan kananad. Tanáh manghi da banagni da sa tanàh mang di Panéh manand.												

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11/20/2023

Eurofins – Cleveland Sample Receipt Form/Narrative Log	gin # : 195190
Barberton Facility	
Client Arcadis Site Name	Cooler unpacked by:
Cooler Received on 11/10.23 Opened on 11/10/23	High Athilor
FedEx: 1 st Grd Exp UPS FAS (Waypoint) Client Drop Off Eurofins Courier	r Other
Receipt After-hours: Drop-off Date/Time Storage Location	
Eurofins Cooler # Eoam Box Client Cooler Box Other	
COOLANT: Wet Ice Blue Ice Dry Ice Water None	
1. Cooler temperature upon receipt See Multiple Cool	
IR GUN # 22 (CF 1 , 2 °C) Observed Cooler Temp.	C Corrected Cooler Temp.
	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)?	Yes No Receiving:
-Were tamper/custody seals intact and uncompromised?	Yes No NA VOAs
3. Shippers' packing slip attached to the cooler(s)?4. Did custody papers accompany the sample(s)?	Yes No VOAs Yes No Oil and Grease
 5. Were the custody papers relinquished & signed in the appropriate place? 	Tes No TOC
 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)?	Pes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes) No
9. For each sample, does the COC specify preservatives (Y)N), # of containers (Y)N), and	nd sample type of grab/comp(YD)?
10. Were correct bottle(s) used for the test(s) indicated?	Yes No
11. Sufficient quantity received to perform indicated analyses?	Tes No
	Yes No
If yes, Questions 13-17 have been checked at the originating laboratory.	Yes No NA pH Strip Lot# HC316719
13. Were all preserved sample(s) at the correct pH upon receipt?14. Were VOAs on the COC?	Yes No
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 # $N/ACOVUA$	Yes) No
17. Was a LL Hg or Me Hg trip blank present?	Yes No
Contacted PM Date by via Verba	al Voice Mail Other
Concerning	
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page	samples processed by:
19. SAMPLE CONDITION	11
Sample(s) were received after the recommended h	
	ived in a broken container.
Sample(s) were received with bubble >6 m	
20. SAMPLE PRESERVATION	
Sample(s) were	further preserved in the laboratory.
Sample(s)	
VOA Sample Preservation - Date/Time VOAs Frozen:	

				Eurofins - Cantor	n Sample Receipt I	Multiple Cooler Form	
C	oler D		ption	IR Gun #	Observed	Corrected	Coolant
-	(CI	rcle)		(Circle)	Temp *C	Temp *C	(Circle) (Welke) Blue ke by ke
(10)	Client	Box	Other	IR GUN 0; AZ	1.8	2.9	Higher None
(10)	Cleni	8ox	Other	IR GUN #:	1.6	2.7	(Wellice) Blue Ice By Ice
K	Clent	Box	Other	IR GUN #:			Weilice Sive Ice Bylce Water Man
к	Clent	Box	Other	IR GUN #:			Wellice Blue Ice Bylice Water Blass
к	Clent	Box	Other	IR GUN #:			Wellice Blee Ice Bylce Water Hear
К	Clent	box	Other	IR GINI #:			Wet to Non ton Nyton Water Man
RC	Clent	Bax	Other	IR GUN 6:	1	1	Wellice Neelice Bylco
BC	Cleat	ber	Other	IL OUN #:		+	Welles Nee to hybe
1 ac	Cleat	Bax	Other	IR GUN #:			Wellice Nee Ice Nyke
80	Clert	her	Other	IR CUN 6:			Wetter Ster ter beter
80	Cleat		Other	(R OUN #:			Wellto the los lyte
BC	Cleat	have	Other	R CON 0:			Wellice Shee See Bytes
80	Cleat	Jax		IR OUN 0:			Wellice Sheelice Byles
-	Chest	Bas	Other	# CUN #:			Welloo She too byte
-	Chest	-	Other	R CON #:			Wellice She fee Byles
RC RC		Ben		X OVN 6:			Wellice Shie Sce Byte
	Client	Ben.	Other	IR CON #:			Water Mann
BC III	Client	BOK	Other	IR CON #:			Wellice Blue Ice Byte
. 80	Client	Jex	Other	R GWI #:			Weller Neer Welles Sheeles Byle
R .	Clent	ben	Other	11: CUN #:			Weltco Steelco Byte
RC .	Cleat	Bex	Other	R CIN 6:		-	Weier Mane Wei ice She ice Byte
30	Clent	Bek	Other	R CIN 0:			Weller New .
80	Client	Bex	Ölher	IR GUN #:			Wolfice Shee Ico . Byle
36	Client	Ben	Ölher	X GUN #:			Weiter Hone Weiter Bive Ice Byte
and the second second	Cloint		Other				Weiter Hone Weiter Hore Day to
*	Cleat	Jex	Other	R CON #:			Water Mane
90	Client	Bex	Other	IR CUN F:			Weller Nine Weller Bloo Byte
36	Cleat	Box	. Other	R CON #:			Weller Mano Weller Mano
IC.	Client	Bex	Other	R CON #:			Stater Mann
8C	Client	ðex.	Cliber	R. 00H 0:			Well too Bloo boo Baytoo Malay Base
1C	Cleal	Bex	Other	R CON 6:			Wellize Hare has Dayles Mader Hane
BC.	Cleaf	Jex	Ölher	R CON #:			Wellice Nee Ice Bryles Waley Mane
BC.	Clent	Ben	Ölher	IR GUN #:			Wellice Blue Ice Bryles
BC	Client	Ben	Other	R GUN #:			Wellice She too Brytes
RC .	Client	Jex	Other	IR GUN #:	·		Wellice Bluelice Brylice Water Blane
						See Temp	oreture Excursion Form

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

DATA VERIFICATION REPORT



November 20, 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: 195190-1 Sample date: 2023-11-08 Report received by CADENA: 2023-11-20 Initial Data Verification completed by CADENA: 2023-11-20 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, 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.
Е	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
J-	The result is an estimated quantity, but the result may be biased low.
JB	NON-DETECT AT THE CONCENTRATION REPORTED AND ESTIMATED
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
JUB	NON-DETECT AT THE REPORTING LIMIT AND ESTIMATED
NJ	Tentatively identified compound with approximated concentration.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results.
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than $5x$ (or $10x$ for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than $10x$ the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

Analytical Results Summary

CADENA Project ID: E203631

Laboratory: Eurofins Environment Testing LLC - Cleveland Laboratory Submittal: 195190-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BLA 2401951 11/8/20	 1901 23			MW-202 2401952 11/8/20	_ 1902	3	
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC <u>OSW-8260</u>	<u>)D</u>									
	cis-1,2-Dichloroethene	156-59-2	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	



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 11/20/2023 5:08:12 AM

JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-195194-1

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

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

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Qualifiers

Qualifiers		3
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.	5
Glossary		6
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	0
CFU	Colony Forming Unit	0
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	9
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"	13
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	

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)
TNTC	Too Numerous To Count

Job ID: 240-195194-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-195194-1

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 11/10/2023 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 2.7°C and 2.9°C

GC/MS VOA

Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): MW-203 110723 (240-195194-5).

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 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 US Inc Project/Site: Ford LTP - Off Site

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-195194-1	TRIP BLANK_33	Water	11/07/23 00:00	11/10/23 08:00
240-195194-2	MW-206_110723	Water	11/07/23 11:05	11/10/23 08:00
240-195194-3	MW-206S_110723	Water	11/07/23 12:07	11/10/23 08:00
240-195194-4	MW-203S_110723	Water	11/07/23 13:50	11/10/23 08:00
240-195194-5	MW-203_110723	Water	11/07/23 14:40	11/10/23 08:00

Client Sample ID: TRIP BLANK_33

Job ID: 240-195194-1

Lab Sample ID: 240-195194-3

Lab Sample ID: 240-195194-4

Lab Sample ID: 240-195194-5

1 2 3 4 5 6 7 8 9 10 11

Lab Sample ID: 240-195194-1

No Detections.

Client Sample ID: MW-206	_110723					Lab	Sample ID:	240-195194-2
Analyte	Result (Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
cis-1,2-Dichloroethene	25 、	J	33	15	ug/L	33.3333	8260D	Total/NA
trans-1,2-Dichloroethene	70		33	17	ug/L	33.3333	8260D	Total/NA
Trichloroethene	860		33	15	ug/L	33.3333	8260D	Total/NA

Client Sample ID: MW-206S_110723

No Detections.

Client Sample ID: MW-203S_110723

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type	
cis-1,2-Dichloroethene	1.0		1.0	0.46	ug/L	1	_	8260D	Total/NA	
trans-1,2-Dichloroethene	2.8		1.0	0.51	ug/L	1		8260D	Total/NA	
Trichloroethene	51		1.0	0.44	ug/L	1		8260D	Total/NA	

Client Sample ID: MW-203_110723

<u> </u>									
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type	
cis-1,2-Dichloroethene	90		20	9.2	ug/L	20	8260D	Total/NA	
trans-1,2-Dichloroethene	230		20	10	ug/L	20	8260D	Total/NA	
Trichloroethene	1600		40	18	ug/L	40	8260D	Total/NA	

Client Sample ID: TRIP BLANK_33

Date Collected: 11/07/23 00:00 Date Received: 11/10/23 08:00

Job ID: 240-195194-1

Lab Sample ID: 240-195194-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/17/23 22:52	1	ŝ
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/17/23 22:52	1	
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/17/23 22:52	1	
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/17/23 22:52	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	115		62 - 137			-		11/17/23 22:52	1	
4-Bromofluorobenzene (Surr)	109		56 - 136					11/17/23 22:52	1	
Toluene-d8 (Surr)	109		78 - 122					11/17/23 22:52	1	
Dibromofluoromethane (Surr)	109		73 - 120					11/17/23 22:52	1	

Client Sample ID: MW-206_110723

Date Collected: 11/07/23 11:05 Date Received: 11/10/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	25	J	33	15	ug/L			11/17/23 23:40	33.3333
trans-1,2-Dichloroethene	70		33	17	ug/L			11/17/23 23:40	33.3333
Trichloroethene	860		33	15	ug/L			11/17/23 23:40	33.3333
Vinyl chloride	33	U	33	15	ug/L			11/17/23 23:40	33.3333
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137			-		11/17/23 23:40	33.3333
4-Bromofluorobenzene (Surr)	109		56 - 136					11/17/23 23:40	33.3333
Toluene-d8 (Surr)	110		78 - 122					11/17/23 23:40	33.3333
Dibromofluoromethane (Surr)	108		73 - 120					11/17/23 23:40	33.3333

Job ID: 240-195194-1

Lab Sample ID: 240-195194-2

Matrix: Water

5

8 9

Client Sample ID: MW-206S_110723

Date Collected: 11/07/23 12:07 Date Received: 11/10/23 08:00

Dibromofluoromethane (Surr)

_ Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/18/23 00:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/18/23 00:04	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/18/23 00:04	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/18/23 00:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		62 - 137			-		11/18/23 00:04	1
4-Bromofluorobenzene (Surr)	110		56 - 136					11/18/23 00:04	1
Toluene-d8 (Surr)	111		78 - 122					11/18/23 00:04	1

73 - 120

110

Job ID: 240-195194-1

Lab Sample ID: 240-195194-3

11/18/23 00:04

Matrix: Water

5

8

1

Client Sample ID: MW-203S_110723 Date Collected: 11/07/23 13:50

Date Received: 11/10/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0		1.0	0.46	ug/L			11/18/23 00:28	1
trans-1,2-Dichloroethene	2.8		1.0	0.51	ug/L			11/18/23 00:28	1
Trichloroethene	51		1.0	0.44	ug/L			11/18/23 00:28	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/18/23 00:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			62 - 137			-		11/18/23 00:28	1
4-Bromofluorobenzene (Surr)	111		56 - 136					11/18/23 00:28	1
Toluene-d8 (Surr)	111		78 - 122					11/18/23 00:28	1
Dibromofluoromethane (Surr)	110		73 - 120					11/18/23 00:28	1

Job ID: 240-195194-1

Lab Sample ID: 240-195194-4 Matrix: Water

Eurofins Cleveland

Client Sample Results

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

Client Sample ID: MW-203_110723

Date Collected: 11/07/23 14:40 Date Received: 11/10/23 08:00

Method: SW846 8260D - Volatile	e Organic Comp	ounds by G	iC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	90		20	9.2	ug/L			11/18/23 00:53	20
trans-1,2-Dichloroethene	230		20	10	ug/L			11/18/23 00:53	20
Trichloroethene	1600		40	18	ug/L			11/18/23 17:41	40
Vinyl chloride	20	U	20	9.0	ug/L			11/18/23 00:53	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		62 - 137			-		11/18/23 00:53	20
1,2-Dichloroethane-d4 (Surr)	117		62 - 137					11/18/23 17:41	40
4-Bromofluorobenzene (Surr)	107		56 - 136					11/18/23 00:53	20
4-Bromofluorobenzene (Surr)	112		56 - 136					11/18/23 17:41	40
Toluene-d8 (Surr)	107		78 - 122					11/18/23 00:53	20
Toluene-d8 (Surr)	112		78 - 122					11/18/23 17:41	40
Dibromofluoromethane (Surr)	105		73 - 120					11/18/23 00:53	20
Dibromofluoromethane (Surr)	111		73 - 120					11/18/23 17:41	40

Job ID: 240-195194-1

Lab Sample ID: 240-195194-5

Matrix: Water

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

Matrix: Water						Prep Type: Total/NA	
			ptance Limits)				
		DCA	BFB	TOL	DBFM		
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)		5
240-195156-C-52 MS	Matrix Spike	110	109	108	106		
240-195156-C-52 MSD	Matrix Spike Duplicate	109	112	108	106		6
240-195194-1	TRIP BLANK_33	115	109	109	109		
240-195194-2	MW-206_110723	114	109	110	108		
240-195194-3	MW-206S_110723	112	110	111	110		
240-195194-4	MW-203S_110723	113	111	111	110		8
240-195194-5	MW-203_110723	110	107	107	105		
240-195194-5	MW-203_110723	117	112	112	111		9
240-195197-E-4 MS	Matrix Spike	111	114	113	109		3
240-195197-H-4 MSD	Matrix Spike Duplicate	112	115	114	109		
LCS 240-595093/5	Lab Control Sample	100	106	105	99		
LCS 240-595129/5	Lab Control Sample	116	122	117	114		
MB 240-595093/8	Method Blank	106	108	107	102		
MB 240-595129/8	Method Blank	123	118	117	115		
Surrogate Legend							
DCA = 1,2-Dichloroetha	ne-d4 (Surr)						
BFB = 4-Bromofluorober							
DFD = 4-Bromotiuorobei	izene (Suir)						

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

1,2-Dichloroethane-d4 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

111

114

113

109

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

Lab Sample ID: MB 240-595	093/8								(Client S	Sample ID: Metho	
Matrix: Water											Prep Type:	Total/NA
Analysis Batch: 595093												
	MB	MB										
Analyte		Qualifier	RL		MDL	Unit			Pr	epared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0		0.46	ug/L					11/17/23 18:27	1
trans-1,2-Dichloroethene	1.0	U	1.0		0.51	ug/L					11/17/23 18:27	1
Trichloroethene	1.0	U	1.0		0.44	ug/L					11/17/23 18:27	1
Vinyl chloride	1.0	U	1.0		0.45	ug/L					11/17/23 18:27	1
	МВ	МВ										
Surrogate	%Recovery	Qualifier	Limits						Pr	epared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137								11/17/23 18:27	1
4-Bromofluorobenzene (Surr)	108		56 - 136								11/17/23 18:27	1
Toluene-d8 (Surr)	107		78 - 122								11/17/23 18:27	1
Dibromofluoromethane (Surr)	102		73 _ 120								11/17/23 18:27	1
Lab Sample ID: LCS 240-59	5093/5							Cli	ent	Sample	ID: Lab Control	Sample
Matrix: Water											Prep Type:	
Analysis Batch: 595093												
			Spike	LCS	LCS						%Rec	
Analyte			Added	Result	Qua	lifier	Unit		D	%Rec	Limits	
cis-1,2-Dichloroethene			25.0	22.9			ug/L			92	77 - 123	
trans-1,2-Dichloroethene			25.0	23.2			ug/L			93	75 - 124	
Trichloroethene			25.0	22.6			ug/L			91	70 - 122	
Vinyl chloride			12.5	10.7			ug/L			86	60 - 144	
	LCS LCS	;										
Surrogate	%Recovery Qua	lifier	Limits									
1,2-Dichloroethane-d4 (Surr)	100		62 - 137									
4-Bromofluorobenzene (Surr)	106		56 - 136									
Toluene-d8 (Surr)	105		78 - 122									
Dibromofluoromethane (Surr)	99		73 - 120									
Lab Sample ID: 240-195197-	E-4 MS									Client	Sample ID: Matr	ix Spike
Matrix: Water											Prep Type:	Total/NA
Analysis Batch: 595093												
-	Sample Sam	nple	Spike	MS	MS						%Rec	
Analyte	Result Qua	lifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits	
cis-1,2-Dichloroethene	1.0 U		25.0	21.9			ug/L			88	66 - 128	
trans-1,2-Dichloroethene	1.0 U		25.0	21.4			ug/L			86	56 - 136	
Trichloroethene	1.0 U		25.0	20.9			ug/L			83	61 - 124	
Vinyl chloride	1.0 U		12.5	10.6			ug/L			85	43 - 157	
	MS MS											
Surrogate		lifier	Limits									
1.2 Dichloroothana d4 (Surr)	111		60 107									

Eurofins Cleveland

Job ID: 240-195194-1

62 - 137

56 - 136

78 - 122

73 - 120

Dibromofluoromethane (Surr)

114

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

Lab Sample ID: 240-195197-H-4 M	ISD									Clien	t Sa	mple ID	: Matrix S	pike Du	plicate
Matrix: Water													Prep [·]	Type: To	otal/N/
Analysis Batch: 595093															
	Sample	Sam	ple	Spike		MSD	MSD)					%Rec		RP
Analyte	Result	Qua	lifier	Added		Result	Qual	lifier	Unit		D	%Rec	Limits	RPD	Lim
sis-1,2-Dichloroethene	1.0	U		25.0		21.6			ug/L			86	66 - 128	1	1
rans-1,2-Dichloroethene	1.0	U		25.0		21.7			ug/L			87	56 - 136	2	
Frichloroethene	1.0	U		25.0		20.5			ug/L			82	61 - 124	2	
/inyl chloride	1.0	U		12.5		10.3			ug/L			82	43 - 157	3	2
	MSD	MSD)												
Surrogate	%Recovery	Qua	lifier	Limits											
I,2-Dichloroethane-d4 (Surr)	112			62 - 137	-										
4-Bromofluorobenzene (Surr)	115			56 - 136											
Toluene-d8 (Surr)	114			78 - 122											
Dibromofluoromethane (Surr)	109			73 - 120											
_ab Sample ID: MB 240-595129/8												Client S	ample ID:	Method	l Blan
Matrix: Water														Type: To	
Analysis Batch: 595129															
-		МВ	MB												
nalyte	R	esult	Qualifier		RL		MDL	Unit		D	Pr	repared	Analy	zed	Dil Fa
is-1,2-Dichloroethene	_	1.0	U		1.0		0.46	ug/L					11/18/23	14:52	
ans-1,2-Dichloroethene		1.0	U		1.0		0.51	ug/L					11/18/23	14:52	
richloroethene		1.0	U		1.0		0.44	ug/L					11/18/23	14:52	
/inyl chloride		1.0	U		1.0		0.45	ug/L					11/18/23	14:52	
			МВ												
Surrogate	%Reco		Qualifier	Lim						_	Pi	repared	Analy		Dil Fa
1,2-Dichloroethane-d4 (Surr)		123			137								11/18/23		
1-Bromofluorobenzene (Surr)		118		56 -									11/18/23		
Toluene-d8 (Surr)		117		- 78									11/18/23		
Dibromofluoromethane (Surr)		115		73 -	120								11/18/23	14:52	
ab Sample ID: LCS 240-595129/	5									Cli	ent	Sample	ID: Lab C		
Matrix: Water													Prep	Туре: Т	otal/N
Analysis Batch: 595129				C miles		1.00	LCS						0/ D		
Analyte				Spike Added		Result		lificr	Unit		D	%Rec	%Rec Limits		
sis-1,2-Dichloroethene				25.0		23.5	Gudi		ug/L		_	94	77 - 123		
rans-1,2-Dichloroethene				25.0 25.0		23.5			ug/L			94 95	75 - 123		
Trichloroethene				25.0 25.0		23.7			ug/L			95 92	70 - 124 70 - 122		
/inyl chloride				12.5		10.8			ug/L			92 86	60 - 144		
				12.0		10.0			ug/L			00			
		LCS													
	%Recovery	Qua	lifier	Limits	-										
1,2-Dichloroethane-d4 (Surr)	116			62 - 137											
4-Bromofluorobenzene (Surr)	122			56 - 136											
Toluene-d8 (Surr)	117			78 - 122											

Eurofins Cleveland

73 - 120

Prep Type: Total/NA

Client Sample ID: Matrix Spike

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

106

Matrix: Water

Analysis Batch: 595129										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
cis-1,2-Dichloroethene	2400		2500	4550		ug/L		86	66 - 128	
trans-1,2-Dichloroethene	100	U	2500	2240		ug/L		90	56 - 136	
Trichloroethene	440		2500	2480		ug/L		82	61 - 124	
Vinyl chloride	50	J	1250	1060		ug/L		81	43 - 157	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	110		62 - 137							
4-Bromofluorobenzene (Surr)	109		56 - 136							
Toluene-d8 (Surr)	108		78 - 122							

73 - 120

Lab Sample ID: 240-195156-C-52 MSD

Matrix: Water Analysis Batch: 595129

Dibromofluoromethane (Surr)

		Sample	Sample	Spike	MSD	MSD				%Rec		RPD	I
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
	cis-1,2-Dichloroethene	2400		2500	4500		ug/L		84	66 - 128	1	14	
	trans-1,2-Dichloroethene	100	U	2500	2160		ug/L		87	56 - 136	4	15	
	Trichloroethene	440		2500	2390		ug/L		78	61 - 124	4	15	
l	Vinyl chloride	50	J	1250	1050		ug/L		80	43 - 157	1	24	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		62 - 137
4-Bromofluorobenzene (Surr)	112		56 - 136
Toluene-d8 (Surr)	108		78 - 122
Dibromofluoromethane (Surr)	106		73 - 120

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

QC Association Summary

GC/MS VOA

Analysis Batch: 595093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-195194-1	TRIP BLANK_33	Total/NA	Water	8260D	
240-195194-2	MW-206_110723	Total/NA	Water	8260D	
240-195194-3	MW-206S_110723	Total/NA	Water	8260D	
240-195194-4	MW-203S_110723	Total/NA	Water	8260D	
240-195194-5	MW-203_110723	Total/NA	Water	8260D	
MB 240-595093/8	Method Blank	Total/NA	Water	8260D	
_CS 240-595093/5	Lab Control Sample	Total/NA	Water	8260D	
240-195197-E-4 MS	Matrix Spike	Total/NA	Water	8260D	
240-195197-H-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	
nalysis Batch: 595129)				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
240-195194-5	MW-203_110723	Total/NA	Water	8260D	
MB 240-595129/8	Method Blank	Total/NA	Water	8260D	
_CS 240-595129/5	Lab Control Sample	Total/NA	Water	8260D	
240-195156-C-52 MS	Matrix Spike	Total/NA	Water	8260D	
240-195156-C-52 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

Project/Site: For		-							
Client Sampl	e ID: TRIP E	3LANK 33						Lab Sample ID:	240-195194-1
Date Collected:									Matrix: Water
Date Received:		-							
_		<u>-</u>							
	Batch	Batch		Dilution	Batch			Prepared	
Ргер Туре	Туре	Method	Run	Factor		Analyst	Lab	or Analyzed	
Total/NA	Analysis	8260D		1	595093	CDG	EET CLE	11/17/23 22:52	
Client Sampl	e ID: MW-20	06_110723						Lab Sample ID:	240-195194-2
Date Collected:	: 11/07/23 11:0	5						-	Matrix: Water
Date Received:	11/10/23 08:00	0							
_	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor		Analyst	Lab	or Analyzed	
Total/NA	Analysis	8260D		33.3333	595093		EET CLE	11/17/23 23:40	
_							-		
Client Sampl	e ID: MW-20)6S_110723						Lab Sample ID:	240-195194-3
								Lab Sample ID.	240-130134-0
Date Collected:	: 11/07/23 12:0							Lab Sample ID.	Matrix: Water
		7							
		7		Dilution	Batch			Prepared	
	11/10/23 08:00	7	Run	Dilution Factor		Analyst	Lab		
Date Received:	11/10/23 08:00 Batch	7 0 Batch	Run				- Lab EET CLE	Prepared	
Date Received: Prep Type Total/NA	11/10/23 08:00 Batch Type Analysis	7 0 Batch <u>Method</u> 8260D	Run	Factor	Number			Prepared or Analyzed 11/18/23 00:04	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl	11/10/23 08:00 Batch Type Analysis	7 0 Batch <u>Method</u> 8260D 03S_110723	Run	Factor	Number			Prepared or Analyzed	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected:	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50	7 0 Batch Method 8260D 03S_110723 0	Run	Factor	Number			Prepared or Analyzed 11/18/23 00:04	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected:	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00	7 0 Batch Method 8260D 0 3S_110723 0 0	Run	1	Number 595093			Prepared or Analyzed 11/18/23 00:04 Lab Sample ID:	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received:	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch	7 0 Batch <u>Method</u> 8260D 03S_110723 0 0 Batch		- Factor1	Number 595093 Batch	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received: Prep Type	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 11/07/23 13:50 11/10/23 08:00 Batch Type	7 0 Batch Method 8260D 0 0 0 Batch Method	Run	1	Number 595093 Batch Number	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared or Analyzed	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received:	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch	7 0 Batch <u>Method</u> 8260D 03S_110723 0 0 Batch		- Factor1	Number 595093 Batch	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared	Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch Type Analysis	7 0 Batch Method 8260D 0 0 0 Batch Method 8260D		1	Number 595093 Batch Number	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared or Analyzed	Matrix: Water 240-195194-4 Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Client Sampl	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch Type Analysis Ie ID: MW-20	7 0 Batch Method 8260D 0 3S_110723 0 0 Batch Method 8260D 0 3_110723		1	Number 595093 Batch Number	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared or Analyzed 11/18/23 00:28	Matrix: Water 240-195194-4 Matrix: Water
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Client Sampl Date Collected:	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch Type Analysis	7 0 Batch Method 8260D 0 0 0 Batch Batch 8260D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1	Number 595093 Batch Number	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared or Analyzed 11/18/23 00:28	Matrix: Water 240-195194-4 Matrix: Water 240-195194-5
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received: Prep Type	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch Type Analysis	7 0 Batch Method 8260D 0 0 0 Batch Batch 8260D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1	Number 595093 Batch Number	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared or Analyzed 11/18/23 00:28 Lab Sample ID:	Matrix: Water 240-195194-4 Matrix: Water 240-195194-5
Date Received: Prep Type Total/NA Client Sampl Date Collected: Date Received: Prep Type Total/NA Client Sampl Date Collected:	11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 Batch Type Analysis Ie ID: MW-20 : 11/07/23 13:50 11/10/23 08:00 E ID: MW-20 : 11/07/23 14:40 11/10/23 08:00	7 0 Batch Method 8260D 0 0 0 Batch Method 8260D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1 	Number 595093 Batch Number 595093 Batch	CDG	EET CLE	Prepared or Analyzed 11/18/23 00:04 Lab Sample ID: Prepared or Analyzed 11/18/23 00:28	Matrix: Water 240-195194-4 Matrix: Water 240-195194-5

40

595129 CDG

EET CLE

11/18/23 17:41

Laboratory References:

Total/NA

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

8260D

Analysis

Accreditation/Certification Summary

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

Laboratory: Eurofins Cleveland

aboratory: Eurofins Clev I accreditations/certifications held by t		ions/certifications are applicable to this report	t	
Authority	Program	Identification Number	Expiration Date	
California	State	2927	02-27-24	
Georgia	State	4062	02-27-24	
Illinois	NELAP	200004	07-31-24	
lowa	State	421	06-01-25	
Kentucky (UST)	State	112225	02-28-24	
Kentucky (WW)	State	KY98016	12-31-23	
Michigan	State	9135	02-27-24	
Minnesota	NELAP	039-999-348	12-31-23	
Minnesota (Petrofund)	State	3506	08-01-23 *	
New Jersey	NELAP	OH001	07-01-24	
New York	NELAP	10975	04-02-24	
Ohio	State	8303	02-27-24	
Ohio VAP	State	ORELAP 4062	02-27-24	
Oregon	NELAP	4062	02-27-24	
Pennsylvania	NELAP	68-00340	08-31-24	
Texas	NELAP	T104704517-22-19	08-31-24	
Virginia	NELAP	460175	09-14-24	
West Virginia DEP	State	210	12-31-23	

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

Increase Registery preprint Data Web/Ansatz Data Transmission Data		TestAmerica Laboratory location: Brighton 10448 Citatio	448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	229-2763	
International Control fragment international Fragment international </th <th>Client Contact</th> <th></th> <th>RCRA</th> <th></th> <th></th>	Client Contact		RCRA		
Number Implement (Market) Implement (Market)<	Company Name: Arcadis	Client Project Manager: Kris Hinskey	Site Contact: Christina Weaver	Lab Contact: Mike DelMonico	
Понитисти Понитист	Address: 28550 Cabot Drive, Suite 500	Telenheimer 248-004-7240	1. releations 248-004-234()	Telenhone: 330-407-0306	
Полити	City/State/Zip: Novi, MI, 48377		Analveis Turnaround Time	Angless	
Multitution Control Currect Link Total and multiplication Currect Link	Phone: 248-994-2240	E-mail: kristolier.ninskey@arcadis.com	THE A PRIMA PART IN A SECTIONAL		For lab use only
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04 Support Franken, in the state 147 14	Project Number: 30167538 .401.05 402.04 569	Method of Shipment/Carrier:	1 week X)	E	cao samping
Manufacturin Sample Tare And Specific E Control Contro Contro Control </td <td>No 2</td> <td></td> <td>(X) əlqr</td> <td>IF 8560 CE 856 8560B</td> <td>Job/SDG No:</td>	No 2		(X) əlqr	IF 8560 CE 856 8560B	Job/SDG No:
3 1 1 NGC X <th< td=""><td>Sample Identification</td><td>X Annole Sectiment Sectiment Sectiment Alternation Sectiment Secti</td><td>Piltered San</td><td>cis-1,2-DCE Trans-1,2-DC PCE 82608 TCE 82608 Vinyl Chlorid</td><td>Sample Specific Notes / Special Instructions:</td></th<>	Sample Identification	X Annole Sectiment Sectiment Sectiment Alternation Sectiment Secti	Piltered San	cis-1,2-DCE Trans-1,2-DC PCE 82608 TCE 82608 Vinyl Chlorid	Sample Specific Notes / Special Instructions:
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10723 10723 10720 3 1350 3 1350 3 100723 100723 10720 3 100720 3 100723	MW-2065_110723	1207	N		3 mauleous, HEL UDAS
110723 W/07/2013 [WUO 3 B 3 MG X X X X X X MGHGAN MICHIGAN and all and all all all all all and all all all all all all all all all al	2F011-	1350	2	××	
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240-195194 Chain of Custody MICHIGAN 240-195194 Chain of Custody 240-195194 Chain of Custody Sample Disposal (A fer may be assessed if samples are retained longer than 1 month) 1000000000000000000000000000000000000					
Pare/Inner 240-195194 Chain of Custody Inhuwn 240-195194 Chain of Custody Inhuwn Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Inhuwn Return to Cliont Pate/Time: Date/Time: Date/Time: Date/Time: Received by Company: Ut/9723 Date/Time: Received in Algoratory by: Date/Time: Received in Algoratory by:					MICHIGAN
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 Date Jime: 2 15:35 Received by Jon', Cal Startage Company. 11/07/23 15:35 Received by Jon', Cal Startage Company. Date Time: 11/9/23 0850 Received by Jone Company. Date Time: Received in Approactory by: Addute Company. 	ammable	Poison B	Sample Disposal (A fee may be assessed if Return to Client Disposal By	amples are retained longer than 1 month)	
A RCADIS Parcifine: 255 Received by Cold Storage Company, MRCADIS 17/187/23 15 A RCADIS 17/187/23 15.35 Received by Cold Storage ARCADIS 17/187/23 15 Ammolded Company Company Company, Company, Date Time, Date	Special Instructions/OC Requirements & Comments: ちんかんし なんしどをらく、1244イーした Submit all results through Cadena at jtomalia@cader Level IV Reporting requested.				
Relinquished by Comment and Company Company Date Time.	all t	4015 Date Time: 2	S Received by Novi) Storing	23 15 3
Reinquission of the company: Company: Date Time. Date Time. Date Time. Date Time. 23	D	2025 Date (Time 3	850 Received by:		2
		7A 11/9/23	S Received in Valuatory	Company:	10, /0,
	20				

)23

Eurofins - Cleveland Sample Receipt Form/Narrative Login # : 195194
Barberton Facility
Client Arcadis Site Name Cooler unpacked by:
Cooler Received on 11/10/23 Align Athilon
FedEx: 1 st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other
Receipt After-hours: Drop-off Date/Time Storage Location
Eurofins Cooler # Eoam 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 # d^2 (CF + 1, 1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity c. (Yes) No
-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)? Yes No Receiving: -Were tamper/custody seals intact and uncompromised? Yes No NA
 3. Shippers' packing slip attached to the cooler(s)? 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
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)?
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?
10. Were correct bottle(s) used for the test(s) indicated?
11. Sufficient quantity received to perform indicated analyses? Ver No
12. Are these work share samples and all listed on the COC? Yes Xo
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# HC316719
14. Were VOAs on the COC? 15. 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 # N/ACUVE(aves) No
17. Was a LL Hg or Me Hg trip blank present?Yes (No)
Contacted PM Date by via Verbal Voice Mail Other
Contacted FM Date by via verbal voice Mail Other
Concerning
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES U 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:

W]-NC-099 11/20/2023

		Sample Receipt Mu		Coolant
Cooler Descriptic	n IR Gun # (Circle)	Observed Temp *C	Corrected Temp *C	(Circle)
EC Client Box Of	her IR GUN #;	1.8	2.9	Welke Blue Ice D
(EC Client Box Of	her IR GUN #:	1.0	2.7	Welles Blue Ice B
IC Client Box Of	IR GUN #:			Welice Sive ice in Weler Nese
EC Clent Box Of	IR GUN #:			Wellice Blue ice In Minist
EC Client Box Of	IR GUN #:			Wetter New Ice In
EC Client Box Of	IR GUN #:			Wellice Nee Ice by
SC Client Box Of	W IR CUN 4:			Wellice She Ice by
BC Clent Jax Of	IR GUN #:			Wettes the tes by
tC Clent Bex Of	IR GUN #:			Welles Nos Ico In
SC Client Best Of				Wolks She he by
BC Clent Jax Of	In called 5-		*	Wellice Blue les by
IC Cleat Las Of				Wet Ice Shee Sao By
BC Clent Ben Of				Welles Nes No by
IC Clent Jes Of	P CIN A			Welles the too by
IC Client Jax Of				Wet too Blue too by
BC Client Ben Of				Walter Sheeter By
IC Client Bex Of				Wettes She tes By
BC Client Bes Of				Wallice Shee San By
BC Clout Box Of				Wellice She lee Byl
SC Cleat Sex Of				Wet too She too By
BC Clent Bet Of				Welles Mestes By
BC Client Box Oli				Wallow Stee See Byl
BC Client Ben Ol	er IR GUN #:			Wof too Shee See Burk
BC Client Box Oli			,	Wellice She Sce Byte
BC Client Best Oli				Wellice Sheelice Byla
SC Clent Bex Oli				Huttee Meetee Byte
BC Client Bex Oth				Wellie the lee byte
BC Cleat Bax Oli				Wet too Shee New Byte
BC Client Jex Oth				Wet ice Shire ice Bry ice
PC Cleal Bax Oh	the company			Wet ice Shee ice Brytes
BC Clent Box Olle				Weller Manne Weller Also Rep Bryles
BC Clent Bex Oth				Wet Ice Blue Ice Bryles
SC Client Sex Othe				Wellice She tee Bryles
EC Client Lex Oliv	in control de			Wellice Nee Eco Brylco
			E See Temper	rature Excursion Form

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

DATA VERIFICATION REPORT



November 20, 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: 195194-1 Sample date: 2023-11-07 Report received by CADENA: 2023-11-20 Initial Data Verification completed by CADENA: 2023-11-20 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.

The following minor QC exceptions or missing information were noted:

SRN - Sample Receipt Non-conformance(headspace) - Sample -005 results for GCMS VOC should be considered to be estimated and qualified with UJ flags if non-detect due to sample receipt non-conformance that affects the integrity of the sample. See laboratory submittal sample receipt forms for details.

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Inc, 1099 Highland Drive, Suite E, Ann Arbor, MI 48108 517-819-0356

CADENA Valid Qualifiers

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

Qualified Results Summary

CADENA Project ID: E203631 Laboratory: Eurofins Environment Testing LLC - Cleveland Laboratory Submittal: 195194-1

		Sample Name: Lab Sample ID: Sample Date:	MW-203 2401952 11/7/20	_ 1945	3	Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier
GC/MS VOC						
<u>OSW-8260</u>	<u>DD</u>					
	cis-1,2-Dichloroethene	156-59-2	90	20	ug/l	UJ
	trans-1,2-Dichloroethene	156-60-5	230	20	ug/l	UJ
	Trichloroethene	79-01-6	1600	40	ug/l	UJ
	Vinyl chloride	75-01-4	ND	20	ug/l	UJ

Analytical Results Summary

CADENA Project ID: E203631 Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 195194-1

		Sample Name: Lab Sample ID: Sample Date:		1941			MW-200 2401953 11/7/20		3		MW-20 240195: 11/7/20	 1943	23		MW-20 240195 11/7/20	 1944	23		MW-203 2401951 11/7/202	945	3	
				Report		Valid		Report		Valid		Report		Valid		Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC																						
<u>OSW-8260</u>	D																					
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l		25	33	ug/l	J	ND	1.0	ug/l		1.0	1.0	ug/l		90	20	ug/l	
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l		70	33	ug/l		ND	1.0	ug/l		2.8	1.0	ug/l		230	20	ug/l	
	Trichloroethene	79-01-6	ND	1.0	ug/l		860	33	ug/l		ND	1.0	ug/l		51	1.0	ug/l		1600	40	ug/l	
	Vinyl chloride	75-01-4	ND	1.0	ug/l		ND	33	ug/l		ND	1.0	ug/l		ND	1.0	ug/l		ND	20	ug/l	



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 11/21/2023 5:30:06 AM

JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-195294-1

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

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

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3 4

Qualifiers

GC/MS VOA	
Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

Glossary

4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
_	applicable.	5
E	Result exceeded calibration range.	
U	Indicates the analyte was analyzed for but not detected.	6
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	ð
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	9
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	10
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	11
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)	12
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	13
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	11
MDA	Minimum Detectable Activity (Radiochemistry)	14
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: 240-195294-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-195294-1

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 11/11/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°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 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

Eurofins Cleveland

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-195294-1	TRIP BLANK_36	Water	11/09/23 00:00	11/11/23 08:00
240-195294-2	MW-202S_110923	Water	11/09/23 10:05	11/11/23 08:00

Eurofins Cleveland 11/21/2023

Client Sample ID: TRIP BLANK_36

No Detections.

Client Sample ID: MW-202S_110923

No Detections.

Job ID: 240-195294-1

Lab Sample ID: 240-195294-1

Lab Sample ID: 240-195294-2

Client Sample ID: TRIP BLANK_36 Date Collected: 11/09/23 00:00

Date Received: 11/11/23 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			11/19/23 21:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/19/23 21:07	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 21:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/19/23 21:07	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 21:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/19/23 21:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137			-		11/19/23 21:07	1
4-Bromofluorobenzene (Surr)	96		56 - 136					11/19/23 21:07	1
Toluene-d8 (Surr)	100		78 - 122					11/19/23 21:07	1
Dibromofluoromethane (Surr)	94		73 - 120					11/19/23 21:07	1

5

8 9

Matrix: Water

Eurofins Cleveland

Client Sample ID: MW-202S_110923

Date Collected: 11/09/23 10:05 Date Received: 11/11/23 08:00

Lab Sample	ID:	240-195294-2

Matrix: Water

Job ID: 240-195294-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
is-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/19/23 21:31	1
rans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/19/23 21:31	1
Frichloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 21:31	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/19/23 21:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			62 - 137			-		11/19/23 21:31	1
4-Bromofluorobenzene (Surr)	97		56 - 136					11/19/23 21:31	1
Toluene-d8 (Surr)	98		78 - 122					11/19/23 21:31	1
Dibromofluoromethane (Surr)	96		73 - 120					11/19/23 21:31	1

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

Percent Surrogate Recovery (Acceptance Limits) BFB DCA TOL DBFM Lab Sample ID **Client Sample ID** (62-137) (56-136) (78-122) (73-120) 240-195260-A-5 MS Matrix Spike 106 100 100 103 240-195260-B-5 MSD Matrix Spike Duplicate 107 101 98 103 240-195294-1 TRIP BLANK_36 103 96 100 94 MW-202S_110923 240-195294-2 106 97 98 96 LCS 240-595149/4 Lab Control Sample 103 98 97 101 MB 240-595149/7 Method Blank 103 95 99 96

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Job ID: 240-195294-1

Prep Type: Total/NA

Eurofins Cleveland

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

Matrix: Water Analysis Batch: 595149

	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			11/19/23 14:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/19/23 14:57	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 14:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/19/23 14:57	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 14:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/19/23 14:57	1

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		11/19/23 14:57	1
4-Bromofluorobenzene (Surr)	95		56 - 136		11/19/23 14:57	1
Toluene-d8 (Surr)	99		78 - 122		11/19/23 14:57	1
Dibromofluoromethane (Surr)	96		73 - 120		11/19/23 14:57	1

Lab Sample ID: LCS 240-595149/4 Matrix: Water Analysis Batch: 595149

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	25.0	25.7		ug/L		103	63 - 134	
cis-1,2-Dichloroethene	25.0	25.4		ug/L		102	77 - 123	
Tetrachloroethene	25.0	24.1		ug/L		96	76 - 123	
trans-1,2-Dichloroethene	25.0	25.1		ug/L		100	75 - 124	
Trichloroethene	25.0	25.4		ug/L		102	70 - 122	
Vinyl chloride	12.5	10.2		ug/L		81	60 - 144	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)			62 - 137
4-Bromofluorobenzene (Surr)	98		56 - 136
Toluene-d8 (Surr)	97		78 - 122
Dibromofluoromethane (Surr)	101		73 - 120

100

103

Lab Sample ID: 240-195260-A-5 MS Matrix: Water

Analysis Batch: 595149

Toluene-d8 (Surr)

Dibromofluoromethane (Surr)

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	0.74	J	25.0	22.2		ug/L		86	56 - 135	
cis-1,2-Dichloroethene	120	E	25.0	143	E 4	ug/L		98	66 - 128	
trans-1,2-Dichloroethene	4.0		25.0	26.6		ug/L		90	56 - 136	
Trichloroethene	41		25.0	61.4		ug/L		81	61 - 124	
Vinyl chloride	1.3		12.5	10.4		ug/L		73	43 _ 157	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	106		62 - 137							
4-Bromofluorobenzene (Surr)	100		56 - 136							

Eurofins Cleveland

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

78 - 122

73 - 120

10

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

Lab Sample ID: 240-195260-B-5 MSD

Matrix: Water Analysis Batch: 595149

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

Analysis Batch: 595149											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.74	J	25.0	24.7		ug/L		96	56 - 135	11	26
cis-1,2-Dichloroethene	120	E	25.0	145	E 4	ug/L		105	66 - 128	1	14
trans-1,2-Dichloroethene	4.0		25.0	27.6		ug/L		94	56 - 136	4	15
Trichloroethene	41		25.0	63.4	E	ug/L		88	61 - 124	3	15
Vinyl chloride	1.3		12.5	12.1		ug/L		86	43 - 157	15	24
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	107		62 - 137								
4-Bromofluorobenzene (Surr)	101		56 _ 136								
Toluene-d8 (Surr)	98		78 - 122								
Dibromofluoromethane (Surr)	103		73 _ 120								

QC Association Summary

Analysis Batch: 595149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
240-195294-1	TRIP BLANK_36	Total/NA	Water	8260D	
240-195294-2	MW-202S_110923	Total/NA	Water	8260D	
MB 240-595149/7	Method Blank	Total/NA	Water	8260D	
LCS 240-595149/4	Lab Control Sample	Total/NA	Water	8260D	
240-195260-A-5 MS	Matrix Spike	Total/NA	Water	8260D	
240-195260-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D	

12

Client Sample ID: TRIP BLANK_36 Lab Sample ID: 240-195294-1 Date Collected: 11/09/23 00:00 Matrix: Water Date Received: 11/11/23 08:00 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number Analyst Lab or Analyzed Total/NA 8260D 595149 LEE EET CLE 11/19/23 21:07 Analysis 1 Client Sample ID: MW-202S_110923 Lab Sample ID: 240-195294-2 Date Collected: 11/09/23 10:05 Matrix: Water Date Received: 11/11/23 08:00 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number Analyst or Analyzed Lab Total/NA 8260D 595149 LEE EET CLE 11/19/23 21:31 Analysis 1

Laboratory References:

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

Eurofins Cleveland

Accreditation/Certification Summary

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

Laboratory: Eurofins Cleveland

aboratory: Eurofins Cle I accreditations/certifications held by t		ions/certifications are applicable to this report	t	
Authority	Program	Identification Number	Expiration Date	
California	State	2927	02-27-24	
Georgia	State	4062	02-27-24	
Illinois	NELAP	200004	07-31-24	
lowa	State	421	06-01-25	
Kentucky (UST)	State	112225	02-28-24	
Kentucky (WW)	State	KY98016	12-31-23	
Michigan	State	9135	02-27-24	
Minnesota	NELAP	039-999-348	12-31-23	
Minnesota (Petrofund)	State	3506	08-01-23 *	
New Jersey	NELAP	OH001	07-01-24	
New York	NELAP	10975	04-02-24	
Ohio	State	8303	02-27-24	
Ohio VAP	State	ORELAP 4062	02-27-24	
Oregon	NELAP	4062	02-27-24	
Pennsylvania	NELAP	68-00340	08-31-24	
Texas	NELAP	T104704517-22-19	08-31-24	
Virginia	NELAP	460175	09-14-24	
West Virginia DEP	State	210	12-31-23	

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

Client Contact Company Name: Arcadis		I ESIAMETICA LADORATORY IOCATION: DINUMATING CONTRACTOR DIVER, SURE 2007 DINUMATING A 10 / 010-229-2/03			201			THE LEV	
Company rame: Arcaus	Regulatory program:	: DW	L NPDES L RCRA	Other					
Address Social Dates Catal Colo	Client Project Manager: Kris Hins	Hinskey	Site Contact: Christina Weaver		Lab Contact: Mike DelMonico	Mike DelMo	nico		TestAmerica Laboratories, Inc. COC No:
Address: 26550 Cabot Drive, Suite Suu	Telephone: 248-994-2240		Telephone: 248-994-2240		Telephone: 330-497-9396	-497-9396			
City/State/Zip: Novi, MI, 48377	Email: kristoffer.hinskev@arcadis	cadis.com	Analysis Turnaround Time			Ana	Analyses		of COCs For labure only
Phone: 248-994-2248			TAT I VIE						
Project Name: Ford LTP On the offsite	Sampler Name: Garrett	H Link	1.A.L. II diliterent from below						Waik-in client
Project Number: 30167538.481-85 462.04	Method of Shipment/Carrier:		Li	_	8				Lab sampling
PO# 30167538.401.07 . UO2 . CH	Shipping/Tracking No:		l day	Grab		10968			Job/SDG No:
		Matrix	Containers & Preservatives) June	-DCE	80			
Sample Identification	Sample Date Sample Time	Air Sediment Sediment Sediment Selid Solid Solid	Other: Other: Other Zand NaOH HCI HCI HSOO	Filtered S Composite A	PCE 8260 Trans-1,2-D0	TCE 8260	Vinyl Chick a chioxa		Sample Specific Notes / Special Instructions:
TRIP BLANK_ 3C	11/en/23	1		X S Z	× × ×	×	×		1 Trip Blank
M.J-20125 110923	2011 22/68/11	1	3	Y DN	XX	××			3 V/OAE for 9260B
	+	t		70	5				
								_	- 2 VUNS
					_				
	240-1	240-195294 Chain of Custody	, , , , , , , , , , , , , , , , , , ,						
					-				
Possible Hazard Identification	cin Irritant Poison B	I I I I I	Sumple Disposal (A fee may be assessed if samples are retained longer than 1 month) Beturns to Cliner & Disposal but a k = A archive Gore to the total of the second processes of the second proceses of the second processes	assessed if sample	s are retained	fonger than	1 month)		
VOC Requirements & Comment VL addUreSS : 1.2.4 through Cadena at Jomaila B requested.		амоции		Disposal By Lab	Arch	Archive For 1	Months		
Relinquished by	Company: AIZCADIS	1 52	5: QQ Received by:	Storaye		Company	CADIS		Date Time, 11/09/23 15: 20
Keinquisned by Semmer Buy	Preade s	0 23	1335 Received m.	Ň	I	Company	A		Date Time: 11/10/25 [355
Relinquished by: LOCH	Company	VILL6123 1	1340 Received in Laboratory by:	tory by:	0	Company:	ETNC		Date/Time: 23 0800

> >

11/21/2023

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13 14

Cooler unpacked by: Alissa Althysos ner rected Cooler Temp. <u>3-3</u> °C No Tests that are not
rected Cooler Temp. <u>3-3</u> °C
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rected Cooler Temp. <u>3-3</u> °C
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DATA VERIFICATION REPORT



November 21, 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: 195294-1 Sample date: 2023-11-09 Report received by CADENA: 2023-11-21 Initial Data Verification completed by CADENA: 2023-11-21 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.

The following minor QC exceptions or missing information were noted:

GCMS VOC QC batch MS/MSD recovery outliers were not determined using a client sample so qualification was not required based on these sample-specific QC outliers.

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.

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 Inc, 1099 Highland Drive, Suite E, Ann Arbor, MI 48108 517-819-0356

CADENA Valid Qualifiers

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

Analytical Results Summary

CADENA Project ID: E203631

Laboratory: Eurofins Environment Testing LLC - Cleveland Laboratory Submittal: 195294-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BLA 2401952 11/9/20				MW-202S_110923 2401952942 11/9/2023			
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier
GC/MS VOC OSW-826	<u>0D</u>									
	1,1-Dichloroethene cis-1,2-Dichloroethene	75-35-4 156-59-2	ND ND	1.0 1.0	ug/l ug/l		ND	1.0	ug/l	
	Tetrachloroethene	127-18-4	ND	1.0	ug/l				-	
	trans-1,2-Dichloroethene Trichloroethene	156-60-5 79-01-6	ND ND	1.0 1.0	ug/l ug/l		ND ND	1.0 1.0	ug/l ug/l	
	Vinyl chloride	75-01-4	ND	1.0	ug/l		ND	1.0	ug/l	



Ford Motor Company – Livonia Transmission Project

Data Review

Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-195190-1 CADENA Verification Report: 2023-11-20

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 52119R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-195190-1 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 ID	Lab ID	Matrix	Sample	Parent Sample	Analysis
Sample ID	Labib	INIALITA	Collection Date		VOC
TRIP BLANK_48	240-195190-1	Water	11/08/2023		Х
MW-202_110823	240-195190-2	Water	11/08/2023		Х

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

	Items Reviewed	Rep	orted		mance otable	Not Required
		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		X	
5.	Reporting limits		Х		Х	
6.	Sample collection date		Х		Х	
7.	Laboratory sample received date		Х		X	
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. 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	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 continuing calibrations were within the specified control limits.

4. Internal Standard Performance

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

All internal standard responses were within control limits.

5. Field Duplicate Analysis

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

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

6. Compound Identification

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

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 VALIDATION CHECKLIST FOR VOCs

VOCs: 8260D	Rep	orted		rmance eptable	Not Required
	No	Yes	No	Yes	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GO	C/MS)		Ċ		
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	
Ion 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		X	
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

BASh_MB
December 14, 2023

PEER REVIEW: Andrew Korycinski

DATE: December 15, 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	:		DW	٢	NP	DES		r RC	RA	Γ.	Other										TestAmerica Laboratories, Inc	
• •	Client Project	lanager: Kris	Hinskey			Sit	e Con	tact: (Chris	tina W	eaver			h	ab Co	ontact	Mik	e Dell	Aonico)		-	COC No:	
Address: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240				Te	lepho	ne: 24	8-994	1-2240					eleph	one: .	30-49	7-939	6					
City/State/Zip: Novi, MI, 48377	Email: kristoff	er.hinskev@a	cadis.co			+	Analysis Furnisround Fine			Analyses					1 of 1 COCs For lab use only									
Phone: 248-994-2240											1			T	T	T			1			1		
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			Air Aqueous	Matr	Solid XI	H2SOM	Т	Π	_	HON	Other:	red Sar	Composite	1.1-DCE 8260B	cis-1,2-DCE 8	Trans-1,2-DCE	PCE 8260B	TCE 8260B	Vinyl Chloride 8260B	1,4-Dioxane 8260B SIM			Sample Specific Notes / Special Instructions:	
Sample Identification	Sample Date	Sample Time			ŝō	Ê	Ē	Ē	Z	12 5	ŏ			· +	ŝ	Ĕ	8	6	ş			-		
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Bample Address: 12447 LeVan Submit all results through Cadena at itomalia@cadena	co.com. Cadena #	E203631																						
Level IV Reporting requested. Relinquished by	Company		ID.	4. T.					0															
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Relinquished by:			Da	te/Time				1	Recei	Vedin	Ma	tory by	th	NK.	7			Comp	any:	-Tak)		Date Tine: 11.10.23 0800	

1 2008. TetlAmerica Laboratorias, Inc. Al rights reserved. Neuronal Construction & Design ^{the} are trademarks of TeelAmerica Laboratories, Inc.

Client Sample ID: TRIP BLANK_48

Date Collected: 11/08/23 00:00

Date Received: 11/10/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/17/23 16:56
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/17/23 16:56
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/17/23 16:56
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/17/23 16:56
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed
1,2-Dichloroethane-d4 (Surr)	85		62 - 137					11/17/23 16:56
4-Bromofluorobenzene (Surr)	87		56 - 136					11/17/23 16:56
Toluene-d8 (Surr)	104		78 - 122					11/17/23 16:56
Dibromofluoromethane (Surr)	88		73 - 120					11/17/23 16:56

Client Sample ID: MW-202_110823

Date Collected: 11/08/23 14:45 Date Received: 11/10/23 08:00

Lab Sample ID: 240-195190-2

Matrix: Water

Dil Fac

Dil Fac

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Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/17/23 17:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/17/23 17:22	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/17/23 17:22	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/17/23 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		62 - 137					11/17/23 17:22	1
4-Bromofluorobenzene (Surr)	74		56 - 136					11/17/23 17:22	1
Toluene-d8 (Surr)	100		78 - 122					11/17/23 17:22	1
Dibromofluoromethane (Surr)	87		73 - 120					11/17/23 17:22	1

Job ID: 240-195190-1

Lab Sample ID: 240-195190-1 Matrix: Water



Ford Motor Company – Livonia Transmission Project

Data Review

Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-195194-1 CADENA Verification Report: 2023-11-20

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 52121R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-195194-1 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 ID	Lab ID	Matrix	Sample	Parent Sample	Analysis
Sample ID		INIGUIX	Collection Date	Parent Sample	VOC
TRIP BLANK_33	240-195194-1	Water	11/07/2023		Х
MW-206_110723	240-195194-2	Water	11/07/2023		Х
MW-206S_110723	240-195194-3	Water	11/07/2023		Х
MW-203S_110723	240-195194-4	Water	11/07/2023		Х
MW-203_110723	240-195194-5	Water	11/07/2023		Х

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

	Items Reviewed	Rep	orted	Perfori Accep		Not Required
		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. 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	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. Sample Receipt Condition

The laboratory received VOC vials with significant headspace for sample MW-203_110723 (240-195194-5). In case of any deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
Bubbles in VOC vials < 6 mm	Non-detect	No Action
Bubbles in VOC Viais < 6 mm	Detect	No Action
Bubbles in VOC vials > 6 mm	Non-detect	UJ
Bubbles in VOC Viais > 6 mm	Detect	J

3. 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.

4. 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.

4.1 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.

4.2 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 continuing calibrations were within the specified control limits.

5. 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.

6. 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.

7. Compound Identification

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

All identified compounds met the specified criteria.

8. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR VOCs

Yes X X X X X X X X	X	Yes X X X	Required
X X X X	X	X	
X X X X	X	X	
X X X X	X	X	
X X		X	
X X		X	
X			
		X	
Х			
		Х	
Х		Х	
Х		Х	
			Х
Х		Х	
Х		Х	
X		X	
Х		X	
Х		Х	
Х		Х	
-	X X X X X	X X X X X X X	X X X X X X X X X X X X X X X X X X

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY:	Bindu Sree M B
SIGNATURE:	BASHMB
DATE:	December 07, 2023

PEER REVIEW: Andrew Korycinski

DATE: December 7, 2023

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	Regulat	ory program:		∏ D'	W	N	PDES		RC	RA	∏ C	Other										TestAmerica Laboratories, Inc.
	Client Project N	Manager: Kris	Hinskey	-		Site C	ontact:	Christ	tina W	eaver			I.ab	Contac	et: Mil	ke Del	Monic	0	_			COC No:
ldress: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240				Telep	Telephone: 248-994-2240				Telephone: 330-497-9396					-						
ty/State/Zip: Novi, M1, 48377	Email: kristoff	er.hinskey@arc	cadis.com			A	nalysis	Turnai	round	ime				-			nalys	es	_		_	of COCs For lab use only
ione: 248-994-2240						TAT				T												
oject Name: Ford LTP-On-Stre Offsite	Sampler Name:	Gurre	++	(:	nK		fdifferent	3	weeks	L												Walk-in client
5G oject Number: 30167538 .401.03 402,04	Method of Ship					10	day		weeks? week			9						SIM				Lab sampling
56)# 30167538 :401:03 -402.04	Shipping/Track	ing No:				-			days day		6	4 1	B	8260B			608	OB SI				Job/SDG No:
50	Subburg, truck			Matrix			Containe			lavos	aple	C/Grab	8260B	CE 8			le 82	8260B				100/00/01/10.
									reservat	ives	1 2 1	E 82	DCE	1,2-D	8260B	260B	hlorid	xane			ł	
Sample Identification	Sample Date	Sample Time	Air Aqueous	Sediment	Other:	H2SO4	HV03 HCI	NaOH ZaAc/	Vapres	Other:	Filtere	Composite=C/ 1,1-DCE 8260B	cis-1,2-DCE	Trans-1,2-DCE	PCE 82	TCE 8260B	Vinyl Chloride 8260B	1.4-Dioxane				Sample Specific Notes / Special Instructions:
TRIP BLANK_ 33			1				1				N	G X	X	X	x	X	Х					1 Trip Blank
MW-206_110723	1/07/2023	1105	6				6				NO	ß	X	X		X	Х					- 3 VOAs for 8260B - 56 7 - 3 VOAs for 8260B SIM
M.1-70805 1105703	11/107/2023	1207	3KC	is-			36	GL			NU	3	X	X		X	Х					3 MAUROUS, HEL VOAS
W LOUS-110 FZ					+				+			+	X			V	$\overline{\mathbf{v}}$		+			Rough Entronze Con
1W-2035_110+25	11/07/2023		3				3		_		N	7		X		X	X				_	
1W-203-110723	11/07/2023	1440	3				3				NO	Ä	X	X		Х	Х					
MW-2065_110723 MW-2035_110723 NW-203_110723																						
) He dide i	T BRI	1						
																				N	11	CHIGAN
							2	40-19	95194	Chain						-						190
	_				-				1	-	or Cu	stody				-						
Possible Hazard Identification	nt Poiso	l	Jnknowi			Sa		sposal rn to C		may be a							nan 1		1			
recial Instructions/QC Requirements & Comments: Sumple address', 12441 Lev Jobmit all results through Cadena at jtomalia@cadenaco vel IV Reporting requested.	an		JIKIOWI			<u> </u>	Kelu		nem		Disposa	i By La			rchive	ror i		Month	<u> </u>			
Inquisited by	Company:		Date	e/Time:	;			Receiv	ved by:					/		Com	any:		_			Date/Time.
linguished by:	Company: ARCA	DIS	/	W7		15		0		Noi	1. (cle) S	0140	32		R	AD	15			11/107/23 15 35
(Jonnelle)	Hycad	LS	11		3	088	50		ved by:	M	let	ŧt	70		-	Com	E	ECI	2			Date/Time: 1119/23 10:0
elinquished by:	Commany		Date	e/Time:				Recei	ved in]	aborate	and have		/			Com	-	-				Date Time:

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Client Sample ID: TRIP BLANK_33

Date Collected: 11/07/23 00:00

Date Received: 11/10/23 08:00

Mothody SW046 9260D Valatila O	annia Compoundo by CC/MS
Method: SW846 8260D - Volatile Or	game compounds by Germo

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/17/23 22:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/17/23 22:52	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/17/23 22:52	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/17/23 22:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate 1,2-Dichloroethane-d4 (Surr)	%Recovery 115	Qualifier	Limits 62 - 137				Prepared	Analyzed 11/17/23 22:52	Dil Fac
		Qualifier					Prepared		Dil Fac 1 1
1,2-Dichloroethane-d4 (Surr)		Qualifier	62 - 137				Prepared	11/17/23 22:52	Dil Fac 1 1 1

Client Sample ID: MW-206_110723 Date Collected: 11/07/23 11:05

Date Received: 11/10/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	25	J	33	15	ug/L			11/17/23 23:40	33.3333
trans-1,2-Dichloroethene	70		33	17	ug/L			11/17/23 23:40	33.3333
Trichloroethene	860		33	15	ug/L			11/17/23 23:40	33.3333
Vinyl chloride	33	U	33	15	ug/L			11/17/23 23:40	33.3333

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		62 - 137	1	1/17/23 23:40	33.3333
4-Bromofluorobenzene (Surr)	109		56 - 136	1	1/17/23 23:40	33.3333
Toluene-d8 (Surr)	110		78 - 122	1	1/17/23 23:40	33.3333
Dibromofluoromethane (Surr)	108		73 - 120	1	1/17/23 23:40	33.3333

Client Sample ID: MW-206S_110723 Date Collected: 11/07/23 12:07 Date Received: 11/10/23 08:00

Method: SW846 8260D - Vo	latile Organic	Compounds	by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/18/23 00:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/18/23 00:04	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/18/23 00:04	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/18/23 00:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		62 - 137		11/18/23 00:04	1
4-Bromofluorobenzene (Surr)	110		56 - 136		11/18/23 00:04	1
Toluene-d8 (Surr)	111		78 - 122		11/18/23 00:04	1
Dibromofluoromethane (Surr)	110		73 - 120		11/18/23 00:04	1

Client Sample ID: MW-203S_110723

Date Collected: 11/07/23 13:50

Date	Received:	11/10/23	08:00

Method: SW846 8260D - Volat	ile Organic	Compounds	by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0		1.0	0.46	ug/L			11/18/23 00:28	1

Eurofins Cleveland

Matrix: Water

Lab Sample ID: 240-195194-1 Matrix: Water

Lab Sample ID: 240-195194-2

Matrix: Water

Lab Sample ID: 240-195194-3 Matrix: Water

Lab Sample ID: 240-195194-4

Client Sample ID: MW-203S_110723 Date Collected: 11/07/23 13:50 Date Received: 11/10/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	2.8		1.0	0.51	ug/L			11/18/23 00:28	1
Trichloroethene	51		1.0	0.44	ug/L			11/18/23 00:28	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/18/23 00:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			62 - 137					11/18/23 00:28	1
4-Bromofluorobenzene (Surr)	111		56 - 136					11/18/23 00:28	1
Toluene-d8 (Surr)	111		78-122					11/18/23 00:28	1

73-120

Client Sample ID: MW-203_110723

Date Collected: 11/07/23 14:40 Date Received: 11/10/23 08:00

Dibromofluoromethane (Surr)

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	90	J	20	9.2	ug/L			11/18/23 00:53	20
trans-1,2-Dichloroethene	230	J	20	10	ug/L			11/18/23 00:53	20
Trichloroethene	1600	J	40	18	ug/L			11/18/23 17:41	40
Vinyl chloride	20	X UJ	20	9.0	ug/L			11/18/23 00:53	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		62 - 137					11/18/23 00:53	20
1,2-Dichloroethane-d4 (Surr)	117		62 - 137					11/18/23 17:41	40
4-Bromofluorobenzene (Surr)	107		56 - 136					11/18/23 00:53	20
4-Bromofluorobenzene (Surr)	112		56 - 136					11/18/23 17:41	40
Toluene-d8 (Surr)	107		78 - 122					11/18/23 00:53	20
Toluene-d8 (Surr)	112		78 - 122					11/18/23 17:41	40
Dibromofluoromethane (Surr)	105		73 - 120					11/18/23 00:53	20
Dibromofluoromethane (Surr)	111		73 - 120					11/18/23 17:41	40

110

Job ID: 240-195194-1

Lab Sample ID: 240-195194-4 Matrix: Water

11/18/23 00:28

Lab Sample ID: 240-195194-5

1

Matrix: Water



Ford Motor Company – Livonia Transmission Project

Data Review

Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-195294-1 CADENA Verification Report: 2023-11-21

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 52131R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-195294-1 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:

Somalo ID	Lab ID	Matrix	Sample	Barant Sampla	Ana	ysis
Sample ID		Matrix	Collection Date	Parent Sample	VOC	VOC SIM
TRIP BLANK_36	240-195294-1	Water	11/09/2023		Х	
MW-202S_110923	240-195294-2	Water	11/09/2023		Х	Х

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

Items Reviewed		Rep	orted		mance otable	Not Required
		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		X	
5.	Reporting limits		Х		Х	
6.	Sample collection date		Х		Х	
7.	Laboratory sample received date		Х		X	
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. 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	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 continuing calibrations were within the specified control limits.

4. Internal Standard Performance

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

All internal standard responses were within control limits.

5. Field Duplicate Analysis

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

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

6. Compound Identification

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

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 VALIDATION CHECKLIST FOR VOCs

VOCs: 8260D		orted		rmance ptable	Not Required
	No	Yes	No	Yes	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC	C/MS)		Ċ		
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	
Ion 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:	Bindu Sree M B
SIGNATURE:	BASHMB
DATE:	December 15, 2023

PEER REVIEW: Andrew Korycinski

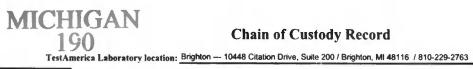
DATE: December 15, 2023

NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS



CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS







WENTAL TESTING

Client Contact	Regulat	ory program	:		T D	w	r i	NPDE	s		RC	RA	1-	Othe	er [-								
Company Name: Arcadis	Client Project 3	Manager: Kris	Hins	kev			Site	Conta	ct: Cl	hristir	w.We	aver		_	-	Lab	Conta	ct: Mi	ke De	Moni	<u>co</u>			TestAmerica Laboratories, In ICOC No:
Address: 28550 Cabot Drive, Suite 500				,											_									
City/State/Zip: Novi, MI, 48377	Telephone: 248	-994-2240						phone:								Teleş	ohone	330-4	97-93	96				of COCs
Phone: 248-994-2240	Email: kristoff	er.hinskey@ar	rcadis	.com				Analys	is Tu	rnaro	und 1	ime			_	_	1	1	A	naly	ses	1 1		For lab use only
	Sampler Name	-					TAT	if differe				L												Walk-in client
Project Name: Ford LTP On-Site offsite		Garro	:++	6	~ 5	NK	1	0 dav		3 w														Lab sampling
Project Number: 30167538.401.03 402.04	Method of Ship	ment/Carrier:					1 "	,		1 w 2 d			î	Ŷ			8			-	SIM			Cao samping
PO# 30167538.401.05 402.04	Shipping/Track	ing No:	-				1			- 1 d			mple (Y / N)	C / Grab	~	82608	8260B			8260B	82608			Job/SDG No:
· · · · · · · · · · · · · · · · · · ·					Matri	x		Conta	Liers .	& Prei	ervali	ives	Idam		2605	E 82	DOE			ride	1e 82			
Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid Other:	H2S04	HN03	NaOH	ZaAc/	Unpres	Other:	Filtered Ss	Composite	1,1-DCE 8260B	cis-1,2-DCE	Trans-1,2-DCE	PCE 82608	TCE 8260B	Vinyl Chloride	1.4-Dioxane			Sample Specific Notes / Special Instructions:
TRIP BLANK_ 36	11/00/23		Γ	1			Π	1					Ν	G	Х	х	x	x	X	X				1 Trip Blank
MW-2025_110923	11/09/23	1005		3				1	3				N	G	X	X	X	X	x	X				3.VOAc for 8260B
		100-	+		+	+	+	+	+	+-	+		1.0	-1	GL.		-	inc	\vdash	1/.	+	++		2 VOAs for 8260B CIM
																								Roush Enterplish
			+		+		++	-+-			'		\vdash	$\left \right $	-	-	-	+		\vdash	+		\vdash	
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		240-1	952	,40																				
		Γ	L	11	T		Π														\uparrow			
			+		+		+	+	+	+	+			\vdash	_		-	-	-	-	-	+		
Possible Hazard Identification	rritant 🗆 Poiso	n B	Jnk	nown			Sa			to Clic		may be a						ned lo Archive		han 1		h) fonths		
Special Instructions/QC Requirements & Comments:	142400						-																	
Sample address: 12447 Submit all results through Cadena at Itomaila@caden	aco.com. Cadena #E	203728																						
Level IV Reporting requested.					_																			
Relinquished by:	Company: ARCA	DIS		ule	Time:		5; a	Ø				010	51	Foro	ige				A	pany: RC	AL	015		Date/Time: 11/09/23 15:00
Relinquished by Jon Mel Duy	Company: Avcal	tis		Date/	Time:	23	133	35	Ro	eccive	d'hy?	A	R	-					Com	pany:	T			Date/Time:
Relinquished by:	Company	t		Date	Time	72 /	340	-	R	eceive	d in L	aborate		r: /		-		-	Com	pany:	~~	NC		Date/Time:
Lage	PV	1		rH	100	10 1	040	/		6	lus	14		Re	10	3			1	E	5 /	NC		11.11.23 0800

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Client Sample ID: TRIP BLANK_36

Date Collected: 11/09/23 00:00

Date Received: 11/11/23 08:00

Method: SW846 8260D - Volatile Or	rganic Compounds by GC/MS
Welliou. 30040 0200D - Volalie O	game compounds by Germo

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			11/19/23 21:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/19/23 21:07	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 21:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/19/23 21:07	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 21:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/19/23 21:07	1
Surrogato	% Pacavary	0	Limite				Proparad	Analyzod	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	103		62 - 137		11/19/23 21:07	1	
4-Bromofluorobenzene (Surr)	96		56 - 136		11/19/23 21:07	1	
Toluene-d8 (Surr)	100		78 - 122		11/19/23 21:07	1	
Dibromofluoromethane (Surr)	94		73 - 120		11/19/23 21:07	1	

Client Sample ID: MW-202S_110923 Date Collected: 11/09/23 10:05 Date Received: 11/11/23 08:00

Lab Sample ID: 240-195294-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			11/19/23 21:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			11/19/23 21:31	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			11/19/23 21:31	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			11/19/23 21:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137			-		11/19/23 21:31	1
4-Bromofluorobenzene (Surr)	97		56 - 136					11/19/23 21:31	1
Toluene-d8 (Surr)	98		78 - 122					11/19/23 21:31	1
Dibromofluoromethane (Surr)	96		73 - 120					11/19/23 21:31	1

Lab Sample ID: 240-195294-1 Matrix: Water