

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 5/28/2023 8:50:13 PM

JOB DESCRIPTION

Ford LTP - Off Site

JOB NUMBER

240-185533-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203





Eurofins Cleveland

Job Notes

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Authorization

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

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TEF

TEQ

TNTC

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Project/Site: Fr	ora LTP - Off Site	
Qualifiers		3
GC/MS VOA Qualifier	Qualifier Description	4
U	Indicates the analyte was analyzed for but not detected.	
Glossary		5
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	0
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)	
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	

Job ID: 240-185533-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-185533-1

Case Narrative

Receipt

The samples were received on 5/18/2023 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 0.4° C and 0.6° C

GC/MS VOA

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

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

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

Protocol References:

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

Laboratory References:

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-185533-1	TRIP BLANK_49	Water	05/16/23 00:00	05/18/23 08:00
240-185533-2	MW-130S_051623	Water	05/16/23 12:51	05/18/23 08:00

Detection Summary

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

Client Sample ID: TRIP BLANK_49

No Detections.

Client Sample ID: MW-130S_051623 Lab Sample ID: 240-185533-2									
Analyte	Result Qualif	ifier RL	MDL L	Jnit	Dil Fac	D Method	Prep Type		
Vinyl chloride	1.8	1.0	0.45 u	ıg/L	1	8260D	Total/NA		

This Detection Summary does not include radiochemical test results.

Job ID: 240-185533-1

Lab Sample ID: 240-185533-1

Client Sample ID: TRIP BLANK_49

Date Collected: 05/16/23 00:00 Date Received: 05/18/23 08:00

 Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/26/23 01:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 01:20	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 01:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 01:20	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 01:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/23 01:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 128			-		05/26/23 01:20	1
Dibromofluoromethane (Surr)	103		77 _ 124					05/26/23 01:20	1
Toluene-d8 (Surr)	100		80 - 120					05/26/23 01:20	1
4-Bromofluorobenzene	98		76 - 120					05/26/23 01:20	1

Job ID: 240-185533-1

Lab Sample ID: 240-185533-1 Matrix: Water

5

8 9

Client Sample ID: MW-130S_051623

Date Collected: 05/16/23 12:51 Date Received: 05/18/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/22/23 22:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		75 - 133			-		05/22/23 22:07	1
Method: SW846 8260D - Volat	tile Organic Comr	oounds by (C/MS						
Analyte		t Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/26/23 03:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 03:59	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 03:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 03:59	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 03:59	1
Vinyl chloride	1.8		1.0	0.45	ug/L			05/26/23 03:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 128			-		05/26/23 03:59	1
Dibromofluoromethane (Surr)	104		77 _ 124					05/26/23 03:59	1
Toluene-d8 (Surr)	100		80 - 120					05/26/23 03:59	1
4-Bromofluorobenzene	100	,	76 - 120					05/26/23 03:59	1

Job ID: 240-185533-1

Matrix: Water

Lab Sample ID: 240-185533-2

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

Matrix: Water

Prep Type: Total/NA

				Percent Su	rogate Recovery (Acce	eptance Limits)
		DCA	DBFM	TOL	BFB	
Lab Sample ID	Client Sample ID	(70-128)	(77-124)	(80-120)	(76-120)	
240-185533-1	TRIP BLANK_49	105	103	100	98	
240-185533-2	MW-130S_051623	109	104	100	100	
LCS 460-911483/3	Lab Control Sample	101	95	103	96	
LCSD 460-911483/4	Lab Control Sample Dup	98	95	110	97	
MB 460-911483/7	Method Blank	106	102	99	98	
Surrogate Legend						
DCA = 1,2-Dichloroethan	ə-d4 (Surr)					
DBFM = Dibromofluorome	ethane (Surr)					
TOL = Toluene-d8 (Surr)						
BFB = 4-Bromofluoroben:	zene					

Lab Sample ID Client Sample ID (75-133)
240-185467-E-2 MSD Matrix Spike Duplicate 97
240-185467-F-2 MS Matrix Spike 99
240-185533-2 MW-130S_051623 94
LCS 460-910713/2 Lab Control Sample 96
MB 460-910713/8 Method Blank 96

Surrogate Legend

BFB = 4-Bromofluorobenzene

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

Matrix: Water Analysis Batch: 911483

MB	МВ							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1.0	U	1.0	0.49	ug/L			05/26/23 00:57	1
1.0	U	1.0	0.46	ug/L			05/26/23 00:57	1
1.0	U	1.0	0.44	ug/L			05/26/23 00:57	1
1.0	U	1.0	0.51	ug/L			05/26/23 00:57	1
1.0	U	1.0	0.44	ug/L			05/26/23 00:57	1
1.0	U	1.0	0.45	ug/L			05/26/23 00:57	1
	Result 1.0 1.0 1.0 1.0 1.0	MB MB Result Qualifier 1.0 U 1.0 U	Result Qualifier RL 1.0 U 1.0 1.0 U 1.0	Result Qualifier RL MDL 1.0 U 1.0 0.49 1.0 U 1.0 0.46 1.0 U 1.0 0.44 1.0 U 1.0 0.51 1.0 U 1.0 0.44	Result Qualifier RL MDL Unit 1.0 U 1.0 0.49 ug/L 1.0 U 1.0 0.46 ug/L 1.0 U 1.0 0.44 ug/L 1.0 U 1.0 0.51 ug/L 1.0 U 1.0 0.44 ug/L	Result Qualifier RL MDL Unit D 1.0 U 1.0 0.49 ug/L - 1.0 U 1.0 0.49 ug/L - 1.0 U 1.0 0.44 ug/L - 1.0 U 1.0 0.51 ug/L - 1.0 U 1.0 0.44 ug/L -	Result Qualifier RL MDL Unit D Prepared 1.0 U 1.0 0.49 ug/L ug	Result Qualifier RL MDL Unit D Prepared Analyzed 1.0 U 1.0 0.49 ug/L 05/26/23 00:57 1.0 U 1.0 0.44 ug/L 05/26/23 00:57 1.0 U 1.0 0.44 ug/L 05/26/23 00:57 1.0 U 1.0 0.44 ug/L 05/26/23 00:57 1.0 U 1.0 0.51 ug/L 05/26/23 00:57 1.0 U 1.0 0.51 ug/L 05/26/23 00:57 1.0 U 1.0 0.44 ug/L 05/26/23 00:57

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 128		05/26/23 00:57	1
Dibromofluoromethane (Surr)	102		77 - 124		05/26/23 00:57	1
Toluene-d8 (Surr)	99		80 - 120		05/26/23 00:57	1
4-Bromofluorobenzene	98		76 - 120		05/26/23 00:57	1

Lab Sample ID: LCS 460-911483/3 Matrix: Water Analysis Batch: 911483

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	20.0	19.2		ug/L		96	68 - 133	
cis-1,2-Dichloroethene	20.0	19.3		ug/L		96	78 - 121	
Tetrachloroethene	20.0	19.7		ug/L		99	70 - 127	
trans-1,2-Dichloroethene	20.0	18.8		ug/L		94	74 - 126	
Trichloroethene	20.0	21.6		ug/L		108	71 - 121	
Vinyl chloride	20.0	20.1		ug/L		101	55 - 144	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 128
Dibromofluoromethane (Surr)	95		77 - 124
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene	96		76 - 120

Lab Sample ID: LCSD 460-911483/4 Matrix: Water Analysis Batch: 911483

Spike LCSD LCSD %Rec RPD Added Limit Analyte **Result Qualifier** %Rec Limits RPD Unit D 20.0 20.5 30 1,1-Dichloroethene ug/L 102 68 - 133 7 cis-1,2-Dichloroethene 20.0 20.2 101 78 - 121 ug/L 5 30 Tetrachloroethene 20.0 22.0 ug/L 110 70 - 127 11 30 trans-1,2-Dichloroethene 20.0 20.0 ug/L 100 74 - 126 6 30 Trichloroethene 20.0 21.8 ug/L 109 71 - 121 30 1 Vinyl chloride 20.0 21.3 ug/L 107 55 - 144 30 6

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 128
Dibromofluoromethane (Surr)	95		77 - 124
Toluene-d8 (Surr)	110		80 - 120

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Job ID: 240-185533-1

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

Client Sample ID: Lab Control Samp	е
Prep Type: Total/N	Α

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

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

Lab Sample ID: LCSD 460-91	1483/4							CI	lient S	Sam	ple ID:	Lab Contro		
Matrix: Water												Prep	Type: T	otal/N
Analysis Batch: 911483														
	LCSD	LCSD)											
Surrogate	%Recovery	Quali	fier	Limits										
4-Bromofluorobenzene	97			76 - 120										
lethod: 8260D SIM - Vola	tile Organic	: Coi	mpoun	ds (GC/MS	;)									
Lab Sample ID: MB 460-9107 Matrix: Water	13/8										Client S	ample ID:	Methoo Type: T	
Analysis Batch: 910713												Tieb	Type. T	otain
		мв	мв											
Analyte	D,		Qualifier	P	۲L	MDL	Unit		D	Б	repared	Analy	zod	Dil Fa
1,4-Dioxane			U		.0	0.86			<u> </u>		repareu	05/22/23		
.,		2.0	-	2		0.00	~g/ L					00/22/20		
		MB	ΜΒ											
Surrogate	%Reco	very	Qualifier	Limits					_	P	repared	Analy	zed	Dil Fa
4-Bromofluorobenzene		96		75 - 133								05/22/23	18:52	
														_
Lab Sample ID: LCS 460-9107	(13/2								Cli	ent	Sample	ID: Lab C		
Matrix: Water												Prep	Туре: Т	otal/N
Analysis Batch: 910713				o "								a/ B		
A				Spike		LCS		11		_	0/ D	%Rec		
Analyte				Added	Result	Quai	ifier	Unit		<u>D</u>	%Rec	Limits		
1,4-Dioxane				5.00	4.27			ug/L			85	57 - 124		
	LCS	LCS												
Surrogate	%Recovery	Quali	fier	Limits										
4-Bromofluorobenzene	96			75 - 133										
Lab Sample ID: 240-185467-E	-2 MSD								Client	t Sa	ample IC	: Matrix S		-
Matrix: Water												Prep	Туре: Т	otal/N
Analysis Batch: 910713														
	Sample	-		Spike		MSD						%Rec		RP
Analyte	Result	Quali	fier	Added	Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	
1,4-Dioxane	2.3			5.00	6.68			ug/L			88	57 - 124	0	3
	MSD	MSD												
Surrogate	%Recovery	Quali	fier	Limits										
4-Bromofluorobenzene	97			75 - 133										
Lab Sample ID: 240-185467-F	-2 MS										Client	Sample ID	: Matri	x Spik
Matrix: Water												Prep	Type: T	otal/N
Analysis Batch: 910713														
	Sample	Samp	ole	Spike	MS	MS						%Rec		
Analyte	Result	Quali	fier	Added	Result	Qual	ifier	Unit		D	%Rec	Limits		
1,4-Dioxane	2.3			5.00	6.71			ug/L			89	57 _ 124		
	Me	MS												
Surrogate	MS %Recovery		fior	Limits										

GC/MS VOA

Analysis Batch: 910713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185533-2	MW-130S_051623	Total/NA	Water	8260D SIM	
MB 460-910713/8	Method Blank	Total/NA	Water	8260D SIM	
LCS 460-910713/2	Lab Control Sample	Total/NA	Water	8260D SIM	
240-185467-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	
240-185467-F-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
nalysis Batch: 91148	3				
		Bron Tuno	Mośniy	Mothod	Drop Potok
nalysis Batch: 91148 Lab Sample ID 240-185533-1	3 Client Sample ID TRIP BLANK 49	Prep Type Total/NA	Matrix Water	Method	Prep Batch
Lab Sample ID	Client Sample ID				Prep Batch
Lab Sample ID 240-185533-1 240-185533-2	Client Sample ID TRIP BLANK_49	Total/NA	Water	8260D	Prep Batcl
Lab Sample ID 240-185533-1	Client Sample ID TRIP BLANK_49 MW-130S_051623	Total/NA Total/NA	Water Water	8260D 8260D	Prep Batch

Matrix: Water

Matrix: Water

Lab Sample ID: 240-185533-1

Lab Sample ID: 240-185533-2

Client Sample ID: TRIP BLANK_49

Date Collected:	05/16/23 00:00
Date Received:	05/18/23 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	911483	SZD	EET EDI	05/26/23 01:20

Client Sample ID: MW-130S_051623 Date Collected: 05/16/23 12:51

Date Received: 05/18/23 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	911483	SZD	EET EDI	05/26/23 03:59
Total/NA	Analysis	8260D SIM		1	910713	SZD	EET EDI	05/22/23 22:07

Laboratory References:

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

Accreditation/Certification Summary

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

Laboratory: Eurofins Edison

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

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

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Construction Compare 1.84 million Compore 1.84 million Compare 1.84 mil	Constrained Temperature Constrained Temperature	company vank, Arcaus Address 18550 Cabud Iniva Suita 500		-	ib Contact: Mike DelMonico	COC No:
Поли советства Дала и поли советства Д	Image: 100-100 Image:	Viui 53, 2000 Caulot Jarve, 200 City/State/Zin: Novi, All 48377			clephone: 330-497-9396	-
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by/lu/b3 1 1 NG X <td< td=""><td>EX/Le/C3 11 11 N G X X X X X X X X X X X N G X X X X X X X N G X X X X X X X N G X X X X X X X N G X X X X X X X X N G X X X X X X X X X N G X X X X X X X X X X N G X X X X X X X X X X X X X X X X X X</td><td>Sample Identification</td><td>H52O4 H52O4 20114 20114 Vdnconz Vdnconz Vjt Vjt</td><td>Filtered Sar</td><td>Trans-1,2-0 PCE 8260B TCE 8260B Vinyl Chlorid</td><td>Sample Specific Notes / Special Instructions:</td></td<>	EX/Le/C3 11 11 N G X X X X X X X X X X X N G X X X X X X X N G X X X X X X X N G X X X X X X X N G X X X X X X X X N G X X X X X X X X X N G X X X X X X X X X X N G X X X X X X X X X X X X X X X X X X	Sample Identification	H52O4 H52O4 20114 20114 Vdnconz Vdnconz Vjt Vjt	Filtered Sar	Trans-1,2-0 PCE 8260B TCE 8260B Vinyl Chlorid	Sample Specific Notes / Special Instructions:
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15/17/12/12/12/12/12/12/12/12/12/12/12/12/12/	15/17/23 45 00 BEACON 3 46 00 BEACON 3 strough Gadena at joomalia@cadenaco.com. Cadena #E203631 19 requested. 3 requested.	Possible Hazard Identification		ple Disposal (A fee may be assessed if sample Return to Client 🖉 Disposal By Lab	are retained longer than 1 month)	
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ThULT Company: Company: Company: Date/Time: Date/Time: Accived by Halo Company: Date/Time: Date/Tim	Thursday Company Company Bechurs Bate/Time.		A Preadis Paretine 15 25 25	5 Received by 1 Cold S	Company A	1 52/9
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	166622
Eurofins - Canton Sample Receipt Form/Narrative Login #	
Barberton Facility	Cooler unpacked by:
Client Arcadis Site Name	PIMATH
Cooler Received on $05-18-23$ Opened on $05-18-23$	Leah M. Omun
	ther
Receipt After-hours: Drop-off Date/Time Storage Location Eurofins Cooler # E C Foam Box Client Cooler Box Other	
COOLANT: Wetlee Blue Ice Dry Ice Water None	
1. Cooler temperature upon receipt See Multiple Cooler Fo	
IR GUN # <u>22</u> (CF $\uparrow O$, O °C) Observed Cooler Temp. °C	Corrected Cooler Temp°C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	
	D No NA lests that are not
	s S Receiving:
	s No NA
	vOAs
4. Did custody papers accompany the sample(s)?	I TOC I
5. Were the custody papers relinquished & signed in the appropriate place?	No
	S No
	s No s No
9. For each sample, does the COC specify preservatives (Y/N) , # of containers (Y/N) , and s	
	No
11. Sufficient quantity received to perform indicated analyses?	No
12. Are these work share samples and all listed on the COC? Ye	s No
If yes, Questions 13-17 have been checked at the originating laboratory.	
13. Were all preserved sample(s) at the correct pH upon receipt? Ye 14. Were VOAs on the COC? Ye	s No (NA) pH Strip Lot# HC208070 s No
15. Were air bubbles >6 mm in any VOA vials? Larger than this.	\sim
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 62112	s) No
17. Was a LL Hg or Me Hg trip blank present?Ye	s (No)
Contacted PM Date by via Verbal V	Voice Mail Other
Concerning	
0	
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page	Samples processed by:
19. SAMPLE CONDITION	
Sample(s) were received after the recommended hold	ling time had expired.
	d in a broken container.
Sample(s) were received with bubble >6 mm	in diameter. (Notify PM)
20. SAMPLE PRESERVATION	
Sample(s) were fu	rther preserved in the laboratory.
Sample(s) were fu Time preserved: Preservative(s) added/Lot number(s):	
VOA Sample Preservation - Date/Time VOAs Frozen:	

Login #: 185533

Cooler Desert 4	Eurofins - Canton	Observed	C 4 - 1	Coolant
Cooler Description	IR Gun #	Observed	Corrected	(Circle)
(Circle)	(Circle)	Temp °C	Temp °C	Wellde Blue Ice Dry
EC Client Box Other		0.4	0.4	Water None
EC Client Box Other		0.6	0.6	Wet ice' Blue ice Dry i Water None
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WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

		COC No: COC No:		For lab use only	Walk-in client	Lao samping	Job/SDG No:	Sample Specific Notes / Special Instructions:	1 Trip Blank	3 VOAs for 8260B				525152J92446021 5	Date Time: 05-18-23 800	
		Lab Contact: Mike DelMonico	Telephone: 330-497-9396	Analyses		808	e 8260	Trans-1,2-DC PCE 8260B Vinyl Chloride 3,4-Dioxane 8		<u>d</u>	240-185533 Chain of Custody	The statistic for the month of the statistic for the statistic for the statistic statistic statistics of the sta		Hovery Company Area du	Company:	
Chain of Custody Record 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763	NPDES RCRA Other	Site Contact: Christina Weaver [Lab	Telephone: 248-994-2240 Tele	Analysis Turnaround Time	FAT if different from below 3 weeks 10 deu v 2 weeks	1 week 2 days / N)	OB C / CLU	Composite Composite		NC X X	amb c Dictorad (f cammies a	Externation of the second of t		1535 RECEIVED DVI COLD SPOT	5	
Chain of TestAmerica Laboratory location: Brighton 10448 Citation Driv	1	Client Project Manager: Kris Hinskey	Telephone: 248-994-2240 Tele	Email: kristoffer.hinskey@arcadis.com	teneira	rier:		H2SO4 Agertix Seelinceri Alir Alir Alir Alir	3 1 1	0 1251 6		C Unknown	a#E203631	Arcadis Date/Line/6/23	AUES 5/17/23 9	
190 TestAmerica Labo	Client Contact Regul				it-site Sampler NAME:		Shipping/Tracking No:	Sample Identification Sample Date		-05/1623 05/1423	cation	□ Flammable □ Skin Irritant □ Po quirements & Comments:	Sample Address: 34600 GEA COV Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203631 Level IV Reporting requested.	Company Company	Сотралу	of testAmerica Laboratories. Inc
	Client (Commany Name: Accadis	Address: 28550 Cabot Drive. Suite 500	City/State/Zin: Navi MI 48377	Phinie 748-004-2240	Project Name: Ford LTP Off-Site	Project Number: 30167538.402.04	PO#30167538.402.04	Sample Ide	Ø TRIP BLANK_ (6 MW-1305-0511	Page 20 of 22	K Non-Hazard	Sample Address: 346 Submit all results through Ca Level IV Reporting requested.	Relinquished by: Relinquished by: Relinquished to		1928/

Eurofins Cleveland		1	•				20	煭			sts eurofins	ofins	
rou 3. van Buten Avenue Barberton, OH 44203 Phone: 330-497-9396 Fax: 330-497-0772	Chain of Cu	n of Custody Kecord	scord				Χ.	871)			, ,		Environment Test ng
Clinut Literanding (S.it. Contended Lab.)	Sampler	Lab PM: DelMo	Lab PM: DelMonico Michael	jaci			Carri	Carrier Tracking No(s)	No(s):		COC No: 240-168292.1	292.1	
Client Contact:	Phone:	E-Mail:		į.			State	of Origin:			Page:		
Shipping/Receiving		Micha	Michael.DelMonico@et.eurofinsus.com	ico@et.e	eurofinsi	IS.COM	Mic	Michigan			Page 1 of 1	of 1	
Company: Eurofins Environment Testing Northeast,		<u>×</u>	Accreditations Required (See note)	: Required	(See note						Jee ₩ 240-185533-1	533-1	
	Due Date Requested: 5/31/2023				Ana	Analysis R	Requested	ted			Preserva A HCI	Preservation Codes	**
	TAT Requested (days):							-					
State. Zp: NJ, 08817	Ţ										D Nitric Acid FE NaHSO4 FF MeOH		Q Na2SO3 R Na2S2O3
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #			poų								Ŗ	5 H2SO4 F TSP Dodecahydrate
Email:	#OM		(on	teM leo									V MCAA V pH4-5
Project Name: Ford LTP - Off Site	Project #: 24015353		10 89	юл (ac							د ک		<pre>r Trizma c other (specify)</pre>
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Sample Identification - Client ID (Lab ID)	-	A=Air) tion Code:	ea X	826		1100 1000	Alterna de la composición de	And a				pecial Inst	Special Instructions/Note:
TRIP BLANK 49 (240-185533-1)		Water											
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							+						
							-+	_	_+	1			
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting North Central, LLC attention will be provided.	ant Testing North Central, LLC places the owner bowe for analysis/tests/matrix being analyzed, it entral, LLC attention immediately. If all request	ship of method, anai te samples must be a d accreditations are	yte & accred shipped bacl current to di	itation corr c to the Eu ite, return	pliance up rofins Env the signed	ion our su fronment 7 Chain of 6	bcontract esting No Custody a	laboratorie rth Centra ttesting to	s. This s: , LLC lab. said comp	ample ship pratory or pliance to	ment is forwar other instructio Eurofins Enviro	ded under ch ns will be pro onment Testi	tain-of-custody. If the wided. Any changes to ng North Central, LLC.
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Client: ARCADIS US Inc

Login Number: 185533 List Number: 2

Creator: Armbruster, Chris

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

List Source: Eurofins Edison

List Creation: 05/19/23 12:22 PM

DATA VERIFICATION REPORT



May 31, 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: 185533-1 Sample date: 2023-05-16 Report received by CADENA: 2023-05-31 Initial Data Verification completed by CADENA: 2023-05-31 Number of Samples:2 Sample Matrices:Water Test Categories:GCMS VOC Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

There were no significant QC anomalies or exceptions to report.

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

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

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

Analytical Results Summary

CADENA Project ID: E203631

Laboratory: Eurofins Environment Testing LLC - Cleveland Laboratory Submittal: 185533-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BL/ 2401855 5/16/20	5331			MW-130 2401855 5/16/20	5332	23	
		.		Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC										
<u>OSW-826</u>	<u> </u>									
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l		ND	1.0	ug/l	
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l		ND	1.0	ug/l	
	Tetrachloroethene	127-18-4	ND	1.0	ug/l		ND	1.0	ug/l	
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l		ND	1.0	ug/l	
	Trichloroethene	79-01-6	ND	1.0	ug/l		ND	1.0	ug/l	
	Vinyl chloride	75-01-4	ND	1.0	ug/l		1.8	1.0	ug/l	
<u>OSW-826</u>	DDSIM									
	1,4-Dioxane	123-91-1					ND	2.0	ug/l	



Ford Motor Company – Livonia Transmission Project

Data Review

Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-185533-1 CADENA Verification Report: 2023-05-31

Analyses Performed By: Eurofins North Canton, Ohio

Report # 49948R Review Level: Tier III Project: 30167538.402.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-185533-1 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:

Semale ID	Lab ID	Matrix	Sample	Derent Comple	Ana	lysis
Sample ID	Lab ID	Matrix	Collection Date	Parent Sample	VOC	VOC SIM
TRIP BLANK_49	240-185533-1	Water	05/16/23		Х	
MW-130S_051623	240-185533-2	Water	05/16/23		Х	Х

DATA REVIEW

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	

DATA REVIEW

ORGANIC ANALYSIS INTRODUCTION

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

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

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

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

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

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

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

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

All samples were analyzed within the specified holding time criteria.

2. Mass Spectrometer Tuning

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

System performance and column resolution were acceptable.

3. Calibration

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

3.1 Initial Calibration

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

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

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

3.2 Continuing Calibration

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

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample ID	Initial / Continuing	Compound	Criteria
MW-130S_051623	Initial Calibration Verification %D	1,4-Dioxane	+28.1%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
	RRF <0.05	Non-detect	R
	KKF <0.05	Detect	J
Initial and Continuing	RRF <0.01 ¹	Non-detect	R
Calibration	RRF <0.01	Detect	J
	RRF >0.05 or RRF >0.01 ¹	Non-detect	No Action
		Detect	NO ACION

DATA REVIEW

Initial/Continuing	Criteria	Sample Result	Qualification
		Non-detect	UJ
Initial Calibratian	%RSD > 20% or a correlation coefficient <0.99	Detect	J
Initial Calibration		Non-detect	R
	%RSD > 90%	Detect	J
		Non-detect	UJ
	%D >20% (increase in sensitivity)	Detect	J
		Non-detect	UJ
Continuing Calibration	%D >20% (decrease in sensitivity)	Detect	J
		Non-detect	R
	%D > 90% (increase/decrease in sensitivity)	Detect	J

Note:

¹RRF of 0.01 only applies to compounds which are typically poor responding compounds

4. Internal Standard Performance

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

All internal standard responses were within control limits.

5. Field Duplicate Analysis

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

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

6. Compound Identification

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

All identified compounds met the specified criteria.

7. System Performance and Overall Assessment

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

DATA REVIEW

DATA VALIDATION CHECKLIST FOR VOCs

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

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

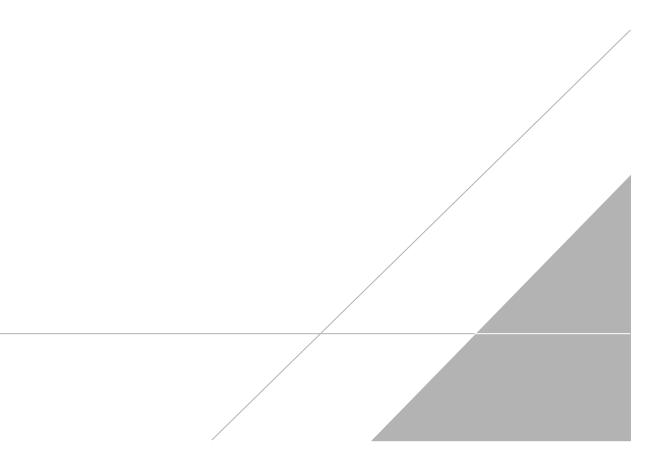
VALIDATION PERFORMED BY:	Hrishikesh Upadhyaya
SIGNATURE:	Curindialucid

DATE: June 16, 2023

PEER REVIEW: Andrew Korycinski

DATE: June 21, 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	Regulatory prog	ram: 🔽 DW	NPDES RCRA	Contract Other		
Company Name: Arcadis	Client Project Manager:	Kris Hinskey	Site Contact: Christina Weaver		Lab Contact: Mike DelMonico	TestAmerica Laboratories, Inc COC No:
Address: 28550 Cabot Drive, Suite 500	Telephone: 248-994-2240	•	Telephone: 248-994-2240		Telephone: 330-497-9396	
City/State/Zip: Novi, MI, 48377						1 of 1 COCs
Phone: 248-994-2240	Email: kristoffer.hinskey		Analysis Turnaround Time	- -	Analyses	For lab use only
Project Name: Ford LTP Off-Site	Sampler Name:	Ferrein	TAT if different from below 3 weeks 10 day 2 weeks			Walk-in client
Project Number: 30167538.402.04	Method of Shipment/Cari	rier:	1 week	2 9	≥	Lab sampling
P() # 30167538.402.04	Shipping/Tracking No:		2 days	mple (Y / N) -C / Grab-G 260B	8260B 8260B 8260B 8260B 8260B 8260B 8260B	Job/SDG No:
		Matrix	Containers & Preservatives	Sample ite=C / 6	e 826 82 6 82 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
	Sample Date Sample 1	Air Aqucous Sodiment Other:	H2SO4 HNO3 HCI NaOH ZaAci NaOII Unpres Other:	Filtered Sa Composite	cis-1.2-DCE 82608 Trans-1.2-DCE 82608 PCE 82608 TCE 82608 Vinyi Chloride 82608 1.4-Dioxane 82608 Sli	Sample Specific Notes / Special Instructions:
Sample Identification	05/16/23			NGX		1 Trip Blank
MW-1305_051623				11.10 1/		3 VOAs for 8260B
, 100 1003 201 10 2 3	05/1423 125			n x		3 VOAs for 8260B SIM
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<u>q</u>					T TRACTOR THE STATE OF THE CASE OF THE REAL PLANE AND A DESCRIPTION OF THE REAL PLANE AND THE PLANE	1
5						
<u></u>				+++		
					240-185533 Chain of Custody	
						1
				+++		
Possible Hazard Identification	in Irritant Poison B	Unknown		assessed if sam Disposal By Lab	nples are retained longer than 1 month) b Archive For Months	
Special Instructions/QC Requirements & Comments: Sample Address: 34 6 00 8EA Submit all results through Cadena at jtomalia@ca					Months	
Level IV Reporting requested.					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Relingpished by: Ferrelm		cadis Date/Time 6/2		Cold S	Storay Company Arcadis	105116/23 153
Relinquished by	Company: ARCAU	DIS 5/17/23	0935 Received by	Had	Company:	Date/Time: 5/17/23/0935
Relinquished by:	Company:	Date/Ilime: 5/17/23	935 Received in Laborate	ory by	the Company: EETNC	Date/Time: 05-18-23 800
Jer fille				0	Les part 1	

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Client Sample ID: TRIP BLANK_49

Date Collected: 05/16/23 00:00

Date Received: 05/18/23 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/26/23 01:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 01:20	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 01:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 01:20	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 01:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/23 01:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared A	nalyzed
1,2-Dichloroethane-d4 (Surr)	105	70 - 128	05/2	6/23 01:20
Dibromofluoromethane (Surr)	103	77 - 124	05/2	6/23 01:20
Toluene-d8 (Surr)	100	80 - 120	05/2	6/23 01:20
4-Bromofluorobenzene	98	76 - 120	05/2	6/23 01:20

Client Sample ID: MW-130S_051623 Date Collected: 05/16/23 12:51 Date Received: 05/18/23 08:00

4-Bromofluorobenzene

Lab Sample ID: 240-185533-2 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	d n	2.0	0.86	ug/L			05/22/23 22:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		75 - 133					05/22/23 22:07	1

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

100

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/26/23 03:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 03:59	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 03:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 03:59	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 03:59	1
Vinyl chloride	1.8		1.0	0.45	ug/L			05/26/23 03:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 128			-		05/26/23 03:59	1
Dibromofluoromethane (Surr)	104		77 - 124					05/26/23 03:59	1
Toluene-d8 (Surr)	100		80 - 120					05/26/23 03:59	1

76 - 120

1

1

1

1

1

Lab Sample ID: 240-185533-1 Matrix: Water

05/26/23 03:59