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#### **ANALYTICAL REPORT**

#### PREPARED FOR

Attn: Kristoffer Hinskey ARCADIS US Inc 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 5/31/2023 10:24:38 AM

#### **JOB DESCRIPTION**

Ford LTP - Off Site

#### **JOB NUMBER**

240-185645-1

Eurofins Cleveland 180 S. Van Buren Avenue Barberton OH 44203



#### **Eurofins Cleveland**

#### **Job Notes**

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

#### **Authorization**

(330)497-9396

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Client: ARCADIS US Inc Project/Site: Ford LTP - Off Site Laboratory Job ID: 240-185645-1

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#### **Definitions/Glossary**

Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

#### **Glossary**

DL

Abbreviation	These commonly used abbreviations may or may not be present in this report.
п	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

Detection Limit (DoD/DOE) DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample Decision Level Concentration (Radiochemistry) DLC

Estimated Detection Limit (Dioxin) EDL 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

Not Detected at the reporting limit (or MDL or EDL if shown) ND

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ** 

**TNTC** Too Numerous To Count

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#### **Case Narrative**

Client: ARCADIS US Inc

Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

Job ID: 240-185645-1

**Laboratory: Eurofins Cleveland** 

Narrative

Job Narrative 240-185645-1

#### Receipt

The samples were received on 5/19/2023~8:00 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  $0.8^{\circ}$ C and  $1.8^{\circ}$ C

#### GC/MS VOA

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

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#### **Method Summary**

Client: ARCADIS US Inc Job ID: 240-185645-1

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

Job ID: 240-185645-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-185645-1	TRIP BLANK_168	Water	05/17/23 00:00	05/19/23 08:00
240-185645-2	MW-165S_051723	Water	05/17/23 11:19	05/19/23 08:00

#### **Detection Summary**

Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_168

No Detections.

Lab Sample ID: 240-185645-1

No Detections.

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#### **Client Sample Results**

Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

Date Received: 05/19/23 08:00

Client Sample ID: TRIP BLANK\_168

Lab Sample ID: 240-185645-1 Date Collected: 05/17/23 00:00

Matrix: Water

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 14:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 14:48	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 14:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 14:48	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 14:48	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/23 14:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 128			-		05/26/23 14:48	1
Dibromofluoromethane (Surr)	100		77 - 124					05/26/23 14:48	1
Toluene-d8 (Surr)	104		80 - 120					05/26/23 14:48	1
4-Bromofluorobenzene	88		76 - 120					05/26/23 14:48	1

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#### **Client Sample Results**

Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

Date Received: 05/19/23 08:00

Client Sample ID: MW-165S\_051723

Date Collected: 05/17/23 11:19

Lab Sample ID: 240-185645-2

**Matrix: Water** 

Method: SW846 8260D SIM -	Volatile Organic C	ompounds							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/24/23 00:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		75 - 133					05/24/23 00:41	1
Method: SW846 8260D - Vola	tile Organic Comp	ounds by G	C/MS						
Made at OMOTO COOR Mate	411 - 0 1 - 0		0.00						
Analyte	Result	Qualifier	RL		Unit	<u>D</u> .	Prepared	Analyzed 05/26/23 18:05	Dil Fac
Analyte 1,1-Dichloroethene	Result 1.0	Qualifier U	RL	0.49	ug/L	<u>D</u> .	Prepared	05/26/23 18:05	Dil Fac
Analyte	Result	Qualifier U	RL		ug/L ug/L	<u>D</u> .	Prepared	<b>.</b>	Dil Fac 1 1
Analyte  1,1-Dichloroethene cis-1,2-Dichloroethene	Result 1.0 1.0	Qualifier U U U	1.0 1.0	0.49 0.46	ug/L ug/L ug/L	<u>D</u> .	Prepared	05/26/23 18:05 05/26/23 18:05	Dil Fac 1 1 1 1 1
Analyte 1,1-Dichloroethene cis-1,2-Dichloroethene Tetrachloroethene	Result 1.0 1.0 1.0	Qualifier U U U U	1.0 1.0 1.0 1.0	0.49 0.46 0.44 0.51	ug/L ug/L ug/L	<u>D</u> .	Prepared	05/26/23 18:05 05/26/23 18:05 05/26/23 18:05	Dil Fac 1 1 1 1 1 1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 128		05/26/23 18:05	1
Dibromofluoromethane (Surr)	97		77 - 124		05/26/23 18:05	1
Toluene-d8 (Surr)	106		80 - 120		05/26/23 18:05	1
4-Bromofluorobenzene	88		76 - 120		05/26/23 18:05	1

#### **Surrogate Summary**

Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

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

Matrix: Water Prep Type: Total/NA

				Percent Sui	rrogate Reco
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-128)	(77-124)	(80-120)	(76-120)
240-185645-1	TRIP BLANK_168	97	100	104	88
240-185645-2	MW-165S_051723	100	97	106	88
LCS 460-911610/4	Lab Control Sample	80	82	96	101
LCSD 460-911610/5	Lab Control Sample Dup	85	87	101	107
MB 460-911610/9	Method Blank	88	91	100	98
Surrogate Legend					

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

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene

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

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)
		BFB	
Lab Sample ID	Client Sample ID	(75-133)	
240-185645-2	MW-165S_051723	99	
LCS 460-910995/4	Lab Control Sample	98	
LCSD 460-910995/5	Lab Control Sample Dup	100	
MB 460-910995/8	Method Blank	99	

#### Surrogate Legend

BFB = 4-Bromofluorobenzene

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Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

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

Lab Sample ID: MB 460-911610/9

Analysis Batch: 911610

**Matrix: Water** 

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/26/23 09:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 09:17	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 09:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 09:17	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 09:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/23 09:17	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		70 - 128		05/26/23 09:17	1
Dibromofluoromethane (Surr)	91		77 - 124		05/26/23 09:17	1
Toluene-d8 (Surr)	100		80 - 120		05/26/23 09:17	1
4-Bromofluorobenzene	98		76 - 120		05/26/23 09:17	1

Lab Sample ID: LCS 460-911610/4

**Matrix: Water** 

Analysis Batch: 911610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

%Rec Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits 1,1-Dichloroethene 20.0 102 68 - 133 20.4 ug/L 20.0 cis-1,2-Dichloroethene 18.5 ug/L 93 78 - 121 Tetrachloroethene 20.0 19.8 70 - 127 ug/L 99 trans-1,2-Dichloroethene 20.0 20.5 ug/L 103 74 - 126 Trichloroethene 20.0 17.8 ug/L 89 71 - 121 Vinyl chloride 20.0 25.0 ug/L 125 55 - 144

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	80		70 - 128
Dibromofluoromethane (Surr)	82		77 - 124
Toluene-d8 (Surr)	96		80 - 120
4-Bromofluorobenzene	101		76 - 120

Lab Sample ID: LCSD 460-911610/5

**Matrix: Water** 

Analysis Batch: 911610

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1,1-Dichloroethene	20.0	23.6		ug/L		118	68 - 133	15	30	
cis-1,2-Dichloroethene	20.0	20.3		ug/L		101	78 - 121	9	30	
Tetrachloroethene	20.0	20.5		ug/L		102	70 - 127	3	30	
trans-1,2-Dichloroethene	20.0	21.6		ug/L		108	74 - 126	5	30	
Trichloroethene	20.0	19.4		ug/L		97	71 - 121	8	30	
Vinyl chloride	20.0	28.6		ug/L		143	55 - 144	14	30	

Surrogate	%Recovery Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85	70 - 128
Dibromofluoromethane (Surr)	87	77 - 124
Toluene-d8 (Surr)	101	80 - 120

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Job ID: 240-185645-1

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Method Blank

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

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

Lab Sample ID: LCSD 460-911610/5

**Matrix: Water** 

Analysis Batch: 911610

LCSD LCSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene

107 76 - 120

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

Lab Sample ID: MB 460-910995/8 **Matrix: Water** 

Analysis Batch: 910995

MB MB Analyte Result Qualifier

RL MDL Unit D Analyzed Dil Fac Prepared 2.0 1,4-Dioxane 2.0 U 0.86 ug/L 05/23/23 21:05

MB MB

Surrogate %Recovery Qualifier Limits Dil Fac Prepared Analyzed 4-Bromofluorobenzene 99 75 - 133 05/23/23 21:05

Lab Sample ID: LCS 460-910995/4 Client Sample ID: Lab Control Sample Prep Type: Total/NA

**Matrix: Water** 

Analysis Batch: 910995

Spike LCS LCS %Rec Analyte Added Result Qualifier Limits Unit D %Rec 1,4-Dioxane 5.00 5.25 105 57 - 124 ug/L

LCS LCS

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 75 - 133 98

Lab Sample ID: LCSD 460-910995/5

**Matrix: Water** 

Analysis Batch: 910995

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit 1,4-Dioxane 5.00 5.02 100 57 - 124 30 ug/L

LCSD LCSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 100 75 - 133

#### **QC Association Summary**

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

Job ID: 240-185645-1

#### GC/MS VOA

#### Analysis Batch: 910995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch	ı
240-185645-2	MW-165S_051723	Total/NA	Water	8260D SIM	
MB 460-910995/8	Method Blank	Total/NA	Water	8260D SIM	
LCS 460-910995/4	Lab Control Sample	Total/NA	Water	8260D SIM	
LCSD 460-910995/5	Lab Control Sample Dup	Total/NA	Water	8260D SIM	

#### Analysis Batch: 911610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185645-1	TRIP BLANK_168	Total/NA	Water	8260D	
240-185645-2	MW-165S_051723	Total/NA	Water	8260D	
MB 460-911610/9	Method Blank	Total/NA	Water	8260D	
LCS 460-911610/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 460-911610/5	Lab Control Sample Dup	Total/NA	Water	8260D	

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#### **Lab Chronicle**

Client: ARCADIS US Inc Job ID: 240-185645-1

Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_168

Lab Sample ID: 240-185645-1 Date Collected: 05/17/23 00:00

Matrix: Water

Date Received: 05/19/23 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	911610	CJM	EET EDI	05/26/23 14:48

**Client Sample ID: MW-165S\_051723** Lab Sample ID: 240-185645-2

Date Collected: 05/17/23 11:19 Matrix: Water

Date Received: 05/19/23 08:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	911610	CJM	EET EDI	05/26/23 18:05
Total/NA	Analysis	8260D SIM		1	910995	KLB	EET EDI	05/24/23 00:41

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

Job ID: 240-185645-1

#### **Laboratory: Eurofins Edison**

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

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

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Client Contact	Regulatory program: DW	NPDES RCRA Other		
Company Name: Arcadis			-	TestAmerica Laboratories, Inc.
Address: 28550 Cabot Drive. Suite 500	Client Project Manager: Kris Hinskey	Site Contact: Christina Weaver	Lab Contact: Mike DelMonico	COC No:
City/State/Zin: Novi MI 48377	Telephone: 248-994-2240	Telephone: 248-994-2240	Telephone: 330-497-9396	
	Email: kristoffer.hinskey@arcadis.com	Analysis Turnsround Time	Analyses	For lab use only
Phone: 248-994-2240		10 X 40		
Project Name: Ford LTP Off-Site	Sampler Name: - A Terrela	TAT if different from below  3 weeks  10 day  2 weeks		Walk-in client
Project Number: 30167538.402.04	Method of Shipment/Carrier:	1 week	E	gd.
PO # 30167538,402.04	Shipping/Tracking No:	/ X) ગા	8560B E 8260B	Job/SDG No:
	Matrix		98 -DCE 2E 83	
Sample Identification	Sample Date Sample Time Air Aqueous Sodimen	Composite Pintered Sach Pach Pach Pach Pach Pach Pach Pach P	7,1-DCE 6  Trans-1,2-DC 7  PCE 8260  Vinyl Chlo  True 1,4-Dioxa	Sample Specific Notes / Special Instructions:
TRIP BLANK_ (68	1 1 27/1/30		× × × × × ×	1 Trip Blank
0 MW-1658_051723	1119	5)2	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3 VOAs for 8260B
P				3 VOAs for 8260B SIM
age 17				
of 21				
		040		MICHIGAN
		Costo Chain of Custody	of Custody	190
Possible Hazard Identification  Non-Hazard	Skin Irritant Poison B Unknown	Sample Disposal (A fee may be assessed if samples are retained longer than I month) Return to Client   Disposal By Lab Archive For Mon	Lab Archive For Months	
Somments 2 (LLC) omalia@				
Retinguished by: + PM PM	Tadas Bate/Time:	23 1400 Received by Cald S	TOWN COMPANY.	Date/Time:
Relinquishey 69.	Company Company Date (13)	1245 Received by:	Company	18/2/
Relinquished-65.	Date Time	Received in Laboratory by:	Company	Date/Time: / S SOP
100122		TRANSPORT		1

<u>TestAmerica</u>

Chain of Custody Record

Eurofins - Canton Sample Receipt Form/Narrative Login # :	185645
Barberton Facility	
Client A Cadis Site Name	Cooler unpacked by:
Cooler Received on 05-14-23 Opened on 05-14-23	Leah M. Smith
FedEx: 1st Grd Exp UPS FAS Chipper Client Drop Off Eurofins Courier Oth	ner
Receipt After-hours: Drop-off Date/Time Storage Location	
Eurofins Cooler # E C Foam Box Client Cooler Box Other	
Packing material used: Subble Wrap Foam Plastic Bag None Other COOLANT: Wet Lee Blue Ice Dry Ice Water None	
1. Cooler temperature upon receipt	rm
IR GUN # (CF°C) Observed Cooler Temp°C C	Corrected Cooler Temp°C
-Were tamper/custody seals intact and uncompromised?  3. Shippers' packing slip attached to the cooler(s)?  4. Did custody papers accompany the sample(s)?  5. Were the custody papers relinquished & signed in the appropriate place?  6. Was/were the person(s) who collected the samples clearly identified on the COC?  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 sa 10. Were correct bottle(s) used for the test(s) indicated?  11. Sufficient quantity received to perform indicated analyses?  12. Are these work share samples and all listed on the COC?  13. Were all preserved sample(s) at the correct pH upon receipt?  14. Were VOAs on the COC?  15. Were air bubbles >6 mm in any VOA vials?  16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	No NA Checked for pH by Receiving:  VOAs Oil and Grease TOC
Contacted PM Date by via Verbal V	oice Mail Other
Concerning	
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	Samples processed by:
19. SAMPLE CONDITION Sample(s) were received after the recommended hold	ing time had expired
	l in a broken container.
Sample(s) were received with bubble >6 mm is	
20. SAMPLE PRESERVATION	
Sample(c)	rther preserved in the laboratory.
Sample(s) were fur Time preserved: Preservative(s) added/Lot number(s):	ther preserved in the fauoratory.
Trees value (5) added not manifest (5).	
VOA Sample Preservation - Date/Time VOAs Frozen:	

Login #: 185645

and the second second			Sample Receipt Mult		
	escription	IR Gun#	Observed	Corrected	Coolant
C	ircle)	(Circle)	Temp °C	Temp °C	(Circle)
EC Client	Box Other	IR GUN #:	0.8,	0.8	Wet ice Blue ice Dry Noter None
EC Client	Box Other	IR GUN #:	1.8	1. 8	Wet ice Blue Ice Dry Water None
EC Client	Sox Other	IR GUN #:			Wet ice Blue ice Dry Water None
EC Client	Box Other	IR GUN #:			Wet ice Sive ice Dry
EC Client	Box Other	IR GUN #:			Wet ice Blue ice Dry i
EC Client	Sox Other	IR GUN #:			Water None Wet ice Blue ice Dry i
EC Client	Box Other	IR GUN 6:			Water None Wet Ice Blue Ice Dry I
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry I
EC Client	Box Other	IR GUN #:			Wet ice Blue Ice Dry i
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry i
EC Client	Box Other	IR GUN 6:			Wel ice Blue ice Dry i
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ic
EC Client	Box Other	IR GUN #:			Water None Wet ice Blue ice Dry is
EC Client	Box Other	IR GUN #:			Water None Wet ice Blue ice Dry i
EC Client	Box Other	IR GUN #:			Water None Water None
EC Client	Box Other	IR GUN #:			Wet ice Sive ice Dry i
&C Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry I Water Mone
EC Clent	Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ic
EC Client	Box Other	IR GUN #:		<u></u>	Wet ice Blue ice Dry is Water None
EC Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ic Water None
EC Client	Sox Other	IR GUN #:			Wet ice Blue ice Dry is Water None
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EC Client	Box Other	IR GUN #:			Wefice Blue Ice Dry ic
EC Client	Box Other	IR GUN #:			Water Name Wet Ice Blue Ice Dry Ic
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ic
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ic
EC Client	Box Other	IR GUN #:			Water Mone Wet Ice Blue Ice Dry Ice
EC Client	Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice
EC Client	Box Other	IR GUN #:			Wet ice Blue ice Dry ice
EC Client	Box Other	IR GUN #:			Water None Wet Ice Blue Ice Dry Ice
EC Client	Box Other	IR GUN #:			Water None Wet Ice Dive Ice Dry Ice
CHOIN				See Tem	Water None perature Excursion Form

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

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Barberton, OH 44203 Phone: 330-497-9396 Fax: 330-497-0772

**Eurofins Cleveland** 180 S. Van Buren Avenue

# Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)				DelM	DelMonico, Michael	hael								240-16	240-168358.1		
Client Contact: Shipping/Recelving	Phone:			E-Mail: Micha	E-Mail: Michael DelMonico@et.eurofinsus.com	nico@e	t.eurofi	nsus.co		State of Origin: Michigan	Origin;			Page: Page 1 of 1	of 1		_
Company: Eurofins Environment Testing Northeast.					Accreditations Required (See note):	s Requir	od (See n	ote):						Job # 240-18	Job #: 240-185645-1		
Address:	Due Date Requester	<u>.</u>												Preser	Preservation Codes	les:	
777 New Durham Road,	6/1/2023						₹	alysi	s Red	Analysis Requested		-	ľ			M Hexane	
City. Edison	TAT Requested (days):	3):		_						<del></del>					NaOH Zn Acetate		
State, Zip: NJ, 08817	<b>T</b>				il i										Nitric Acid NaHSO4 MeOH	Q Na2SO3 R Na2S2O3	
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	# #					роц							and the second	G Amchlor H Ascorbic	Amchlor Ascorbic Acid		drate
Email:	₩O#;				(on	eal Me								:	ater		
Project Name: Ford LTP Off Site	Project #: 24015353				10 BD/	о <b>т</b> (ас								and the second second	<b>(</b>		
Site:	SSOW#:				) as	OC (W											
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample (wewser, Smold, Cacomp, Garab)		Field Filtered Perform Maik Baseobisoace (w	9560D_SIM/503								edmuN istoī	pecial In	Special Instructions/Note:	
	$\sqrt{}$	X	Preservat	ion Code:	X							<u> </u>			er, MacChillian er	A CONTRACTOR OF THE CONTRACTOR	
TRIP BLANK_168 (240-185645-1)	5/17/23	Eastern		Water	×		_							<b>,</b>			
MW 165S_051723 (240-185645-2)	5/17/23	11-19 Eastern		Water	×	×								9			
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													أعدد	P-20-102			
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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 laboratorys. 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 aboratory 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 to said compliance to Eurofins Environment Testing North Central, LLC.	nt Testing North Centra bove for analysis/tests/ entral, LLC attention im	il, LLC places matrix being a nediately. If a	the ownership nalyzed, the si ill requested ac	of method, anal amples must be conditations are	yte & accre shipped bar current to o	ditation cock to the I	empliance Eurofins for In the sign	upon ou invironme sed Chair	r subcon ant Testir 1 of Cust	ract labo ig North ( ody attest	ratories. Sentral, L ing to sa	This san LC labora d complik	iple shipn atory or of ance to E	nent is forw: ther instruct urofins Envi	arded under ions will be ronment Te	This sample shipment is forwarded under chain-of-custody. If the LC (aboratory or other instructions will be provided. Any changes t id compliance to Eurofins Environment Testing North Central, LLC.	the ss to
Possible Hazard Identification					Sampl	e Disp	sal (A	fee m	y be a	ssess	d if sa	səldu	re reta	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	er than	( month)	
Unconfirmed					<u>ן</u>	Return To Client	To Cifer	Ę		Disposal By Lab	ByLal		₹	Archive For		Months	T
Deliverable Requested: I, II, III, IV Other (specify)	Primary Deliverable Rank: 2	ble Rank: 2			Specia	Special Instructions/QC Requirements:	tions/C	C Requ	iremer	ıts:							
ह्रितिकारोभूरा Relinquished by		Date:	,		Time:					Me	hod of S	Method of Shipment:					
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1 1	Date/Time:			Company	Rec	Received by:	4			١		Date/Time:	8			Company	
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#### **Login Sample Receipt Checklist**

Client: ARCADIS US Inc Job Number: 240-185645-1

List Source: Eurofins Edison
List Number: 2
List Creation: 05/23/23 06:33 PM

Creator: Armbruster, Chris

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	
ls 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 <a href="https://example.com/scape-com/">https://example.com/</a> .	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

N/A

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Residual Chlorine Checked.

#### 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: 185645-1 Sample date: 2023-05-17

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 <a href="http://clms.cadenaco.com/index.cfm">http://clms.cadenaco.com/index.cfm</a>.

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:** 185645-1

		Sample Name: Lab Sample ID: Sample Date:	<del>-</del>				MW-165S_051723 2401856452 5/17/2023				
			Report		Valid		Report		Valid		
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier	
GC/MS VOC											
OSW-8260											
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l		ND	1.0	ug/l		
	cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l		ND	1.0	ug/l		
	Tetrachloroethene	127-18-4	ND	1.0	ug/l		ND	1.0	ug/l		
	trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l		ND	1.0	ug/l		
	Trichloroethene	79-01-6	ND	1.0	ug/l		ND	1.0	ug/l		
	Vinyl chloride	75-01-4	ND	1.0	ug/l		ND	1.0	ug/l		
OSW-8260	<u>DDSIM</u>										
	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 # 240-185645-1

CADENA Verification Report: 2023-05-31

Analyses Performed By: Eurofins North Canton, Ohio

Report # 49963R Review Level: Tier III Project: 30167538.402.02

#### **SUMMARY**

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-185645-1 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	Parant Sample	Analysis		
Sample ID	Labib	Matrix	Collection Date	Parent Sample	VOC	VOC SIM	
TRIP BLANK_168	240-185645-1	Water	05/17/23		X		
MW-165S_051723	240-185645-2	Water	05/17/23		Х	Х	

#### **ANALYTICAL DATA PACKAGE DOCUMENTATION**

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

Items Reviewed	Rep	orted	Performance Acceptable		Not
	No	Yes	No	Yes	Required
Sample receipt condition		Χ		X	
2. Requested analyses and sample results		Χ		Х	
Master tracking list		Χ		X	
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	
Sample preparation/extraction/analysis dates		Х		Х	
10. Fully executed Chain-of-Custody (COC) form		Х		Х	
Narrative summary of Quality Assurance or sample problems provided		Х		Х	
12. Data Package Completeness and Compliance		Х		Х	

#### ORGANIC ANALYSIS INTRODUCTION

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

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

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

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

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

#### **VOLATILE ORGANIC COMPOUND (VOC) ANALYSES**

#### 1. Holding Times

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

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

All samples were analyzed within the specified holding time criteria.

#### 2. Mass Spectrometer Tuning

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

System performance and column resolution were acceptable.

#### 3. Calibration

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

#### 3.1 Initial Calibration

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

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

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

#### 3.2 Continuing Calibration

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

All compounds associated with the 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/8260D-SIM		orted		rmance ptable	Not Required
	No	Yes	No	Yes	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (G	C/MS)				
Tier II Validation					
Holding times/Preservation		Х		Х	
Tier III Validation		1			
System performance and column resolution		Х		Х	
Initial calibration %RSDs		Х		Х	
Continuing calibration RRFs		Х		Х	
Continuing calibration %Ds		Х		Х	
Instrument tune and performance check		Х		Х	
lon abundance criteria for each instrument used		Х		Х	
Field Duplicate RPD	Х				Х
Internal standard		Х		Х	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		Х		Х	
B. Quantitation Reports		Х		Х	
C. RT of sample compounds within the established RT windows		Х		Х	
D. Transcription/calculation errors present		Х		Х	
E. Reporting limits adjusted to reflect sample dilutions		Х		Х	

#### Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Hrishikesh Upadhyaya

SIGNATURE: Cuindinlund

DATE: June 19, 2023

PEER REVIEW: Andrew Korycinski

DATE: June 21, 2023

### NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS

## CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

#### **Chain of Custody Record**

<u>TestAmerica</u>

TestAmerica Laboratory location: Brighton --- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763 Client Contact Regulatory program: ■ NPDES RCRA Cther | Company Name: Arcadis TestAmerica Laboratories, Inc. Client Project Manager: Kris Hinskey Site Contact: Christina Weaver Lab Contact: Mike DelMonico 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 Analysis Turnaround Time Email: kristoffer.hinskey@arcadis.com Analyses For lab use only Phone: 248-994-2240 TAT if different from below Walk-in client Project Name: Ford LTP Off-Site le hua terreim 3 weeks 2 weeks Lab sampling Project Number: 30167538.402.04 Method of Shipment/Carrier: 1 week SIM osite-C / Grab=G 2 days PO # 30167538.402.04 1,4-Dioxane 8260B Shipping/Tracking No: I day Job/SDG No: Chloride 8 Matrix Containers & Preservatives TCE 8260B Sample Specific Notes / HN03 /inyl Special Instructions: Sample Date | Sample Time Sample Identification TRIP BLANK G X X 1 Trip Blank MW-1658\_051723 3 VOAs for 8260B 6 3 VOAs for 8260B SIM Page 627 으 Possible Hazard Identification Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Non-Hazard Flammable Skin Irritant Poison B Unknown Return to Client Disposal By Lab Archive For Special Instructions/QC Requirements & Comments: Sample Address: 34664 Republic St. Submit all results through Cadena at itomalia@cadenaco.com. Cadena #E203631 Level IV Reporting requested. Relinquished by: Relinquished by Relinquished

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#### **Client Sample Results**

Client: ARCADIS US Inc Job ID: 240-185645-1 Project/Site: Ford LTP - Off Site

Client Sample ID: TRIP BLANK\_168

Lab Sample ID: 240-185645-1 Date Collected: 05/17/23 00:00 **Matrix: Water** 

Date Received: 05/19/23 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 14:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 14:48	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 14:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 14:48	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 14:48	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/23 14:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 128					05/26/23 14:48	1
Dibromofluoromethane (Surr)	100		77 - 124					05/26/23 14:48	1
Toluene-d8 (Surr)	104		80 - 120					05/26/23 14:48	1
4-Bromofluorobenzene	88		76 - 120					05/26/23 14:48	1

**Client Sample ID: MW-165S\_051723** 

Date Collected: 05/17/23 11:19

Date Received: 05/19/23 08:00

Method: SW846 8260D SI	M - Volatile Orga	anic Comp	ounds (GC/N	IS)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L	<del></del> <del>_</del> -		05/24/23 00:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		75 - 133			-		05/24/23 00:41	1

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 18:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/26/23 18:05	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 18:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/26/23 18:05	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/26/23 18:05	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/23 18:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 128					05/26/23 18:05	1

Surrogate	/ortecovery	Quaimei	Liiiii		rrepareu	Allalyzeu	Diriac	
1,2-Dichloroethane-d4 (Surr)	100		70 - 128	_		05/26/23 18:05	1	
Dibromofluoromethane (Surr)	97		77 - 124			05/26/23 18:05	1	
Toluene-d8 (Surr)	106		80 - 120			05/26/23 18:05	1	
4-Bromofluorobenzene	88		76 - 120			05/26/23 18:05	1	

Lab Sample ID: 240-185645-2

**Matrix: Water**