

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey
ARCADIS US Inc
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Generated 5/21/2023 8:19:09 PM

JOB DESCRIPTION

Ford LTP - On Site

JOB NUMBER

240-185019-1

Eurofins Cleveland

Job Notes

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

Authorization



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Authorized for release by
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Table of Contents

Cover Page 1

Table of Contents 3

Definitions/Glossary 4

Case Narrative 5

Method Summary 6

Sample Summary 7

Detection Summary 8

Client Sample Results 9

Surrogate Summary 11

QC Sample Results 12

QC Association Summary 14

Lab Chronicle 15

Certification Summary 16

Chain of Custody 17

Receipt Checklists 21



Definitions/Glossary

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

Job ID: 240-185019-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

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

Job ID: 240-185019-1

Job ID: 240-185019-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-185019-1

Receipt

The samples were received on 5/9/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.0°C, 2.8°C, 3.3°C and 4.3°C

GC/MS VOA

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

Method Summary

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

Job ID: 240-185019-1

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 - On Site

Job ID: 240-185019-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-185019-1	TRIP BLANK_68	Water	05/05/23 00:00	05/09/23 10:30
240-185019-2	MW-68_050523	Water	05/05/23 09:25	05/09/23 10:30

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Detection Summary

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

Job ID: 240-185019-1

Client Sample ID: TRIP BLANK_68 Lab Sample ID: 240-185019-1

No Detections.

Client Sample ID: MW-68_050523 Lab Sample ID: 240-185019-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	4.2		1.0	0.44	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 240-185019-1

Client Sample ID: TRIP BLANK_68

Lab Sample ID: 240-185019-1

Date Collected: 05/05/23 00:00

Matrix: Water

Date Received: 05/09/23 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/16/23 20:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/16/23 20:25	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/16/23 20:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/16/23 20:25	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/16/23 20:25	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/16/23 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		70 - 128		05/16/23 20:25	1
Dibromofluoromethane (Surr)	92		77 - 124		05/16/23 20:25	1
Toluene-d8 (Surr)	86		80 - 120		05/16/23 20:25	1
4-Bromofluorobenzene	87		76 - 120		05/16/23 20:25	1

Client Sample Results

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

Job ID: 240-185019-1

Client Sample ID: MW-68_050523

Lab Sample ID: 240-185019-2

Date Collected: 05/05/23 09:25

Matrix: Water

Date Received: 05/09/23 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 23:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		75 - 133					05/19/23 23:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/16/23 23:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/16/23 23:49	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/16/23 23:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/16/23 23:49	1
Trichloroethene	4.2		1.0	0.44	ug/L			05/16/23 23:49	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/16/23 23:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 128					05/16/23 23:49	1
Dibromofluoromethane (Surr)	95		77 - 124					05/16/23 23:49	1
Toluene-d8 (Surr)	87		80 - 120					05/16/23 23:49	1
4-Bromofluorobenzene	88		76 - 120					05/16/23 23:49	1

Surrogate Summary

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

Job ID: 240-185019-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	DBFM	TOL	BFB
		(70-128)	(77-124)	(80-120)	(76-120)
240-185019-1	TRIP BLANK_68	91	92	86	87
240-185019-2	MW-68_050523	95	95	87	88
LCS 460-909502/3	Lab Control Sample	87	89	91	100
LCSD 460-909502/4	Lab Control Sample Dup	87	88	89	106
MB 460-909502/8	Method Blank	89	91	87	88

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)

Lab Sample ID	Client Sample ID	BFB
		(75-133)
240-185019-2	MW-68_050523	96
240-185150-M-5 MS	Matrix Spike	96
240-185150-M-5 MSD	Matrix Spike Duplicate	96
LCS 460-910365/4	Lab Control Sample	96
MB 460-910365/8	Method Blank	97

Surrogate Legend

BFB = 4-Bromofluorobenzene

QC Sample Results

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

Job ID: 240-185019-1

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

Lab Sample ID: MB 460-909502/8

Matrix: Water

Analysis Batch: 909502

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/16/23 19:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/16/23 19:04	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/16/23 19:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/16/23 19:04	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/16/23 19:04	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/16/23 19:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		70 - 128		05/16/23 19:04	1
Dibromofluoromethane (Surr)	91		77 - 124		05/16/23 19:04	1
Toluene-d8 (Surr)	87		80 - 120		05/16/23 19:04	1
4-Bromofluorobenzene	88		76 - 120		05/16/23 19:04	1

Lab Sample ID: LCS 460-909502/3

Matrix: Water

Analysis Batch: 909502

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	20.0	16.3		ug/L		82	68 - 133
cis-1,2-Dichloroethene	20.0	18.2		ug/L		91	78 - 121
Tetrachloroethene	20.0	20.5		ug/L		102	70 - 127
trans-1,2-Dichloroethene	20.0	17.9		ug/L		89	74 - 126
Trichloroethene	20.0	18.6		ug/L		93	71 - 121
Vinyl chloride	20.0	18.5		ug/L		92	55 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		70 - 128
Dibromofluoromethane (Surr)	89		77 - 124
Toluene-d8 (Surr)	91		80 - 120
4-Bromofluorobenzene	100		76 - 120

Lab Sample ID: LCSD 460-909502/4

Matrix: Water

Analysis Batch: 909502

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	20.0	17.5		ug/L		88	68 - 133	7	30
cis-1,2-Dichloroethene	20.0	17.5		ug/L		88	78 - 121	3	30
Tetrachloroethene	20.0	20.5		ug/L		103	70 - 127	0	30
trans-1,2-Dichloroethene	20.0	17.6		ug/L		88	74 - 126	2	30
Trichloroethene	20.0	18.5		ug/L		92	71 - 121	1	30
Vinyl chloride	20.0	19.0		ug/L		95	55 - 144	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		70 - 128
Dibromofluoromethane (Surr)	88		77 - 124
Toluene-d8 (Surr)	89		80 - 120

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QC Sample Results

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

Job ID: 240-185019-1

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

Lab Sample ID: LCSD 460-909502/4

Matrix: Water

Analysis Batch: 909502

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	106		76 - 120

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

Lab Sample ID: MB 460-910365/8

Matrix: Water

Analysis Batch: 910365

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB								
	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/19/23 22:45	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene	97		75 - 133					05/19/23 22:45	1	

Lab Sample ID: LCS 460-910365/4

Matrix: Water

Analysis Batch: 910365

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike	LCS	LCS				%Rec	
			Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dioxane			5.00	5.43		ug/L		109	57 - 124	
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene	96		75 - 133							

Lab Sample ID: 240-185150-M-5 MS

Matrix: Water

Analysis Batch: 910365

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS				%Rec	
	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dioxane	2.0	U	5.00	5.61		ug/L		112	57 - 124	
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene	96		75 - 133							

Lab Sample ID: 240-185150-M-5 MSD

Matrix: Water

Analysis Batch: 910365

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1,4-Dioxane	2.0	U	5.00	5.65		ug/L		113	57 - 124	1	30	
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene	96		75 - 133									

Eurofins Cleveland

QC Association Summary

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

Job ID: 240-185019-1

GC/MS VOA

Analysis Batch: 909502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185019-1	TRIP BLANK_68	Total/NA	Water	8260D	
240-185019-2	MW-68_050523	Total/NA	Water	8260D	
MB 460-909502/8	Method Blank	Total/NA	Water	8260D	
LCS 460-909502/3	Lab Control Sample	Total/NA	Water	8260D	
LCSD 460-909502/4	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 910365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-185019-2	MW-68_050523	Total/NA	Water	8260D SIM	
MB 460-910365/8	Method Blank	Total/NA	Water	8260D SIM	
LCS 460-910365/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-185150-M-5 MS	Matrix Spike	Total/NA	Water	8260D SIM	
240-185150-M-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	

Lab Chronicle

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

Job ID: 240-185019-1

Client Sample ID: TRIP BLANK_68
Date Collected: 05/05/23 00:00
Date Received: 05/09/23 10:30

Lab Sample ID: 240-185019-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	909502	SZD	EET EDI	05/16/23 20:25

Client Sample ID: MW-68_050523
Date Collected: 05/05/23 09:25
Date Received: 05/09/23 10:30

Lab Sample ID: 240-185019-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	909502	SZD	EET EDI	05/16/23 23:49
Total/NA	Analysis	8260D SIM		1	910365	KLB	EET EDI	05/19/23 23:07

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 - On Site

Job ID: 240-185019-1

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

Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other		Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LIP On-Site Project Number: 30167538.401.03 PO # 30167538.401.03		Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: krisstoffer.hinskey@arcadis.com Sample Name: <i>Seth Turner</i> Method of Shipment/Carrier: Shipping/Tracking No:		Site Contact: Christina Weaver Telephone: 248-994-2240 Lab Contact: Mike DelMonico Telephone: 330-497-9396 COC No:		TestAmerica Laboratories, Inc.											
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritant <input type="checkbox"/> Flammable <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Identification TRIP BLANK-68 MW-68-050523		Sample Date 5/5/23 5/5/23		Sample Time --- 925		Matrix Air Aqueous Sediment Solid Other:		Containers & Preservatives H2SO4 HNO3 HCl NaOH NaAc Lupes Other:		Filtered Sample (Y/N) NG NG		Composite C / Grab-G 1,1-DCE 8260B cis-1,2-DCE 8260B Trans-1,2-DCE 8260B PCE 8260B TCE 8260B Vinyl Chloride 8260B 1,4-Dioxane 8260B SIM		Analyses		For lab use only Walk-in client Lab sampling Job/SDG No: Sample Specific Notes / Special Instructions:	
Special Instructions/OC Requirements & Comments: Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728 Level IV Reporting requested.		Relinquished by: <i>Seth Turner</i> Relinquished by: <i>Christina Weaver</i> Relinquished by: <i>John M. Smith</i>		Company: Arcadis Company: Arcadis Company: EET		Date/Time: 5/5/23 Date/Time: 5/8/23 Date/Time: 5/6/23		Received by: <i>Noni Cold Storage</i> Received by: <i>Seth</i> Received in Laboratory by: <i>John M. Smith</i>		Company: Arcadis Company: EET Company: EET		Date/Time: 5/5/23 Date/Time: 5/8/23 Date/Time: 05-04-23		1005 1050 1030					

Eurofins - Canton Sample Receipt Form/Narrative Login # : 185019
Barberton Facility


Client Arcadis Site Name _____ Cooler unpacked by: Leah M. Smith
Cooler Received on 05-09-23 Opened on 05-09-23
FedEx: 1st Grd ☒ UPS FAS Clipper Client Drop Off Eurofins Courier Other _____
Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None _____

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
IR GUN # 17 (CF 10.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
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)? Yes 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 sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC208070
14. Were VOAs on the COC? 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 # 62112 Yes No
17. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page Samples processed by: _____

19. SAMPLE CONDITION
Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION
Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____
VOA Sample Preservation - Date/Time VOAs Frozen: _____

[illegible]

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

Phone: 330-497-9396 Fax: 330-497-0772



Environment Testing

26 65

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 240-185019-1

Login Number: 185019

List Number: 2

Creator: Armbruster, Chris

List Source: Eurofins Edison

List Creation: 05/11/23 01:12 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VERIFICATION REPORT



May 24, 2023

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

CADENA project ID: E203728

Project: Ford Livonia Transmission Plant - ON-SITE -Soil Gas, Ground water and Soil

Project number: 30167538.401.03- onsite groundwater

Event Specific Scope of Work References: Sample COC

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory submittal: 185019-1

Sample date: 2023-05-05

Report received by CADENA: 2023-05-23

Initial Data Verification completed by CADENA: 2023-05-24

Number of Samples:2

Sample Matrices:Water and trip blank

Test Categories:GCMS VOC

Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

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.

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

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

Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland

Laboratory Submittal: 185019-1

Sample Name: TRIP BLANK_68

MW-68_050523

Lab Sample ID: 2401850191

2401850192

Sample Date: 5/5/2023

5/5/2023

Analyte	Cas No.	Report		Units	Valid Qualifier	Report		Units	Valid Qualifier
		Result	Limit			Result	Limit		

GC/MS VOC

OSW-8260D

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	---	4.2	1.0	ug/l	---
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---

OSW-8260DSIM

1,4-Dioxane	123-91-1					ND	2.0	ug/l	---
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