

ANALYTICAL REPORT

PREPARED FOR

Attn: Kristoffer Hinskey
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

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JOB DESCRIPTION

Ford LTP - On Site

JOB NUMBER

240-180869-1

Eurofins Canton

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization



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Authorized for release by
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Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

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 U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Job ID: 240-180869-1

Laboratory: Eurofins Canton

Narrative

**Job Narrative
240-180869-1**

Receipt

The samples were received on 2/24/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.3°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 U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

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

Protocol References:

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

Laboratory References:

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

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Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-180869-1	TRIP BLANK_38	Water	02/22/23 00:00	02/24/23 08:00
240-180869-2	MW-36_022223	Water	02/22/23 10:50	02/24/23 08:00

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Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Client Sample ID: TRIP BLANK_38

Lab Sample ID: 240-180869-1

No Detections.

Client Sample ID: MW-36_022223

Lab Sample ID: 240-180869-2

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Client Sample ID: TRIP BLANK_38

Lab Sample ID: 240-180869-1

Date Collected: 02/22/23 00:00

Matrix: Water

Date Received: 02/24/23 08:00

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			02/28/23 16:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/23 16:14	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 16:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 16:14	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 16:14	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/23 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		62 - 137		02/28/23 16:14	1
4-Bromofluorobenzene (Surr)	89		56 - 136		02/28/23 16:14	1
Toluene-d8 (Surr)	94		78 - 122		02/28/23 16:14	1
Dibromofluoromethane (Surr)	108		73 - 120		02/28/23 16:14	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Client Sample ID: MW-36_022223

Lab Sample ID: 240-180869-2

Date Collected: 02/22/23 10:50

Matrix: Water

Date Received: 02/24/23 08:00

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			03/03/23 04:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		66 - 120					03/03/23 04:42	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			02/28/23 19:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/23 19:47	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 19:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 19:47	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 19:47	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/23 19:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137					02/28/23 19:47	1
4-Bromofluorobenzene (Surr)	92		56 - 136					02/28/23 19:47	1
Toluene-d8 (Surr)	95		78 - 122					02/28/23 19:47	1
Dibromofluoromethane (Surr)	113		73 - 120					02/28/23 19:47	1

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

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	BFB	TOL	DBFM
		(62-137)	(56-136)	(78-122)	(73-120)
240-180869-1	TRIP BLANK_38	99	89	94	108
240-180869-2	MW-36_022223	106	92	95	113
240-180869-2 MS	MW-36-MS_022223	91	100	98	98
240-180869-2 MSD	MW-36-MSD_022223	88	99	98	98
LCS 240-563737/5	Lab Control Sample	86	93	95	93
MB 240-563737/8	Method Blank	98	89	92	104

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

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	DCA
		(66-120)
240-180869-2	MW-36_022223	87
240-180869-2 MS	MW-36-MS_022223	86
240-180869-2 MSD	MW-36-MSD_022223	85
LCS 240-564077/4	Lab Control Sample	86
MB 240-564077/6	Method Blank	86

Surrogate Legend

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

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

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

Lab Sample ID: MB 240-563737/8

Matrix: Water

Analysis Batch: 563737

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/28/23 14:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/28/23 14:15	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 14:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/28/23 14:15	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/28/23 14:15	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/28/23 14:15	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		62 - 137		02/28/23 14:15	1
4-Bromofluorobenzene (Surr)	89		56 - 136		02/28/23 14:15	1
Toluene-d8 (Surr)	92		78 - 122		02/28/23 14:15	1
Dibromofluoromethane (Surr)	104		73 - 120		02/28/23 14:15	1

Lab Sample ID: LCS 240-563737/5

Matrix: Water

Analysis Batch: 563737

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloroethene	25.0	26.6		ug/L		106	63 - 134
cis-1,2-Dichloroethene	25.0	24.6		ug/L		98	77 - 123
Tetrachloroethene	25.0	27.4		ug/L		109	76 - 123
trans-1,2-Dichloroethene	25.0	25.3		ug/L		101	75 - 124
Trichloroethene	25.0	25.7		ug/L		103	70 - 122
Vinyl chloride	12.5	12.9		ug/L		103	60 - 144

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	86		62 - 137
4-Bromofluorobenzene (Surr)	93		56 - 136
Toluene-d8 (Surr)	95		78 - 122
Dibromofluoromethane (Surr)	93		73 - 120

Lab Sample ID: 240-180869-2 MS

Matrix: Water

Analysis Batch: 563737

Client Sample ID: MW-36-MS_022223

Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
1,1-Dichloroethene	1.0	U	25.0	24.6		ug/L		99	56 - 135
cis-1,2-Dichloroethene	1.0	U	25.0	23.5		ug/L		94	66 - 128
Tetrachloroethene	1.0	U	25.0	24.7		ug/L		99	62 - 131
trans-1,2-Dichloroethene	1.0	U	25.0	23.6		ug/L		94	56 - 136
Trichloroethene	1.0	U	25.0	23.2		ug/L		93	61 - 124
Vinyl chloride	1.0	U	12.5	12.4		ug/L		99	43 - 157

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	91		62 - 137
4-Bromofluorobenzene (Surr)	100		56 - 136
Toluene-d8 (Surr)	98		78 - 122

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

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

Lab Sample ID: 240-180869-2 MS
Matrix: Water
Analysis Batch: 563737

Client Sample ID: MW-36-MS_022223
Prep Type: Total/NA

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	98		73 - 120

Lab Sample ID: 240-180869-2 MSD
Matrix: Water
Analysis Batch: 563737

Client Sample ID: MW-36-MSD_022223
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
1,1-Dichloroethene	1.0	U	25.0	23.0		ug/L		92	56 - 135	7	26
cis-1,2-Dichloroethene	1.0	U	25.0	22.5		ug/L		90	66 - 128	4	14
Tetrachloroethene	1.0	U	25.0	23.0		ug/L		92	62 - 131	7	20
trans-1,2-Dichloroethene	1.0	U	25.0	22.1		ug/L		89	56 - 136	6	15
Trichloroethene	1.0	U	25.0	22.0		ug/L		88	61 - 124	5	15
Vinyl chloride	1.0	U	12.5	11.9		ug/L		95	43 - 157	5	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		62 - 137
4-Bromofluorobenzene (Surr)	99		56 - 136
Toluene-d8 (Surr)	98		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120

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

Lab Sample ID: MB 240-564077/6
Matrix: Water
Analysis Batch: 564077

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/03/23 03:29	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	86		66 - 120		03/03/23 03:29	1			

Lab Sample ID: LCS 240-564077/4
Matrix: Water
Analysis Batch: 564077

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
1,4-Dioxane	10.0	9.38		ug/L		94	80 - 122

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		66 - 120

Lab Sample ID: 240-180869-2 MS
Matrix: Water
Analysis Batch: 564077

Client Sample ID: MW-36-MS_022223
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				Limits
1,4-Dioxane	2.0	U	10.0	11.4		ug/L		114	51 - 153

Eurofins Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	86		66 - 120

Lab Sample ID: 240-180869-2 MSD
 Matrix: Water
 Analysis Batch: 564077

Client Sample ID: MW-36-MSD_022223
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	10.7		ug/L		107	51 - 153	7	16

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	85		66 - 120

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QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

GC/MS VOA

Analysis Batch: 563737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180869-1	TRIP BLANK_38	Total/NA	Water	8260D	
240-180869-2	MW-36_022223	Total/NA	Water	8260D	
MB 240-563737/8	Method Blank	Total/NA	Water	8260D	
LCS 240-563737/5	Lab Control Sample	Total/NA	Water	8260D	
240-180869-2 MS	MW-36-MS_022223	Total/NA	Water	8260D	
240-180869-2 MSD	MW-36-MSD_022223	Total/NA	Water	8260D	

Analysis Batch: 564077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180869-2	MW-36_022223	Total/NA	Water	8260D SIM	
MB 240-564077/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-564077/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-180869-2 MS	MW-36-MS_022223	Total/NA	Water	8260D SIM	
240-180869-2 MSD	MW-36-MSD_022223	Total/NA	Water	8260D SIM	

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Client Sample ID: TRIP BLANK_38

Lab Sample ID: 240-180869-1

Date Collected: 02/22/23 00:00

Matrix: Water

Date Received: 02/24/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	563737	SAM	EET CAN	02/28/23 16:14

Client Sample ID: MW-36_022223

Lab Sample ID: 240-180869-2

Date Collected: 02/22/23 10:50

Matrix: Water

Date Received: 02/24/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	563737	SAM	EET CAN	02/28/23 19:47
Total/NA	Analysis	8260D SIM		1	564077	BAJ	EET CAN	03/03/23 04:42

Laboratory References:

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

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Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-180869-1

Laboratory: Eurofins Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23 *
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23 *
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23 *
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-23 *
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23 *
Ohio VAP	State	CL0024	02-27-23 *
Oregon	NELAP	4062	02-28-24
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

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



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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP On-Site Project Number: 30167538-401.03 PO # 30167538-401.03		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hlinsky Telephone: 248-994-2240 Email: kristoffer.hlinsky@arcadis.com		Lab Contact: Mike DeMonic Telephone: 330-497-9396	
Sampler Name: Samantha Spigacher Method of Shipment/Carrier: Shipping/Tracking No:		Analysis Turnaround Time TAT if different from below: <input checked="" type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day 10 day	
Sample Identification TRIP BLANK_38 MW-36-MS-022223 MW-36-MS-022223 MW-36-MSD-022223		Containers & Preservatives H2SO4 HNO3 HCl NaOH NaCl Laps Other:	
Matrix Solid Sediment Aqueous Air		Filtered Sample (Y/N) Composite=C/Grab=C	
Sample Date 2/22/23 2/22/23 2/22/23 2/22/23		Sample Time --- 10:50 10:50 10:50	
Analyses 1,4-Dioxane 8260B SIM Vinyl Chloride 8260B TCE 8260B PCE 8260B Trans-1,2-DCE 8260B Cis-1,2-DCE 8260B 1,1-DCE 8260B		Sample Specific Notes / Special Instructions: 1 Trip Blank 3 VOAs for 8260B 3 VOAs for 8260B SIM Run MS/MSD Run MS/MSD	



Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Dispose By Lab <input type="checkbox"/> Archive For _____ Months	
Special Instructions/QC Requirements & Comments: Submit all results through Cadena at jtomalia@cadenaco.com. Cadena #E203728 Level IV Reporting requested.			
Relinquished by: Samantha Spigacher	Company: ARCADIS	Date/Time: 2/22/23 12:10	Received by: NONI COLDSIDEA
Relinquished by: [Signature]	Company: ARCADIS	Date/Time: 2/23/23 11:20	Received by: [Signature]
Relinquished by: [Signature]	Company: EETA	Date/Time: 2/22/23 11:20	Received in Laboratory by: [Signature]

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Eurofins - Canton Sample Receipt Form/Narrative
Barberton Facility

Login # : 180869

Client Arcadis Site Name Ford-Livonia

Cooler unpacked by:

Cooler Received on 2-24-23 Opened on 2-24-23

Paul

FedEx: 1st Grd Exp 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 # IR-13 (CF -0.2 °C) Observed Cooler Temp. 0.2 °C Corrected Cooler Temp. _____ °C
 IR GUN # IR-16 (CF -0.1 °C) Observed Cooler Temp. 0.4 °C Corrected Cooler Temp. 0.3 °C
 IR GUN # IR-17 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

- 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity L 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
 -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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

- 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# HC203864
- 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 # Covered 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: _____

DATA VERIFICATION REPORT



March 06, 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: 30146655.401.03- onsite groundwater
Event Specific Scope of Work References: Sample COC
Laboratory: Eurofins Environment Testing LLC - Barberton
Laboratory submittal: 180869-1
Sample date: 2023-02-22
Report received by CADENA: 2023-03-03
Initial Data Verification completed by CADENA: 2023-03-06
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, MS/MSD Recovery, MS/MSD 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 <http://clms.cadenaco.com/index.cfm>.

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.
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 - Barberton

Laboratory Submittal: 180869-1

Sample Name: TRIP BLANK_38 MW-36_022223
 Lab Sample ID: 2401808691 2401808692
 Sample Date: 2/22/2023 2/22/2023

Analyte	Cas No.	Report		Units	Valid		Report		Valid	
		Result	Limit		Qualifier	Result	Limit	Units	Qualifier	
GC/MS VOC										
<u>OSW-8260D</u>										
1,1-Dichloroethene	75-35-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
cis-1,2-Dichloroethene	156-59-2	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
Tetrachloroethene	127-18-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
trans-1,2-Dichloroethene	156-60-5	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
Trichloroethene	79-01-6	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
Vinyl chloride	75-01-4	ND	1.0	ug/l	---	ND	1.0	ug/l	---	
<u>OSW-8260DSIM</u>										
1,4-Dioxane	123-91-1					ND	2.0	ug/l	---	