

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Megan Meckley Arcadis US Inc. 28550 Cabot Drive Suite 500 Novi, Michigan 48377 Generated 2/25/2025 10:23:42 PM

JOB DESCRIPTION

Ford LTP

JOB NUMBER

240-219214-1

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

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Authorized for release by Michael DelMonico, Project Manager I <u>Michael.DelMonico@et.eurofinsus.com</u> (330)966-9783

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(

RER

RPD

TEF

TEQ

TNTC

RL

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		5
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¢.	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	0
CNF	Contains No Free Liquid	0
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	9
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	13
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	

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Job ID: 240-219214-1

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Job Narrative 240-219214-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
 situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
 specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/20/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.1°C and 2.4°C.

GC/MS VOA

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

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

Protocol References:

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

Laboratory References:

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-219214-1	TRIP BLANK_27	Water	02/17/25 00:00	02/20/25 08:00
240-219214-2	MW-78S_021725	Water	02/17/25 11:45	02/20/25 08:00
240-219214-3	MW-78_021725	Water	02/17/25 12:45	02/20/25 08:00

Detection Sumn	nary	
Client: Arcadis US Inc. Project/Site: Ford LTP	Job ID: 240-219214-1	
Client Sample ID: TRIP BLANK_27	Lab Sample ID: 240-219214-1	
No Detections.		
Client Sample ID: MW-78S_021725	Lab Sample ID: 240-219214-2	
No Detections.		5
Client Sample ID: MW-78_021725	Lab Sample ID: 240-219214-3	
No Detections.		7
		5

Client Sample ID: TRIP BLANK_27

Date Collected: 02/17/25 00:00 Date Received: 02/20/25 08:00

Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 19:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 19:38	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 19:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 19:38	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 19:38	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	127		62 - 137			-		02/24/25 19:38	1
4-Bromofluorobenzene (Surr)	105		56 - 136					02/24/25 19:38	1
Toluene-d8 (Surr)	101		78 - 122					02/24/25 19:38	1
Dibromofluoromethane (Surr)	106		73 - 120					02/24/25 19:38	1

Job ID: 240-219214-1

Matrix: Water

Lab Sample ID: 240-219214-1

Client Sample ID: MW-78S_021725

Date Collected: 02/17/25 11:45 Date Received: 02/20/25 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			02/21/25 16:10	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	98		68 - 127			-		02/21/25 16:10	1	
Method: SW846 8260D - Volat	ile Organic Comp	ounds by G	C/MS							ŝ
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 20:01	1	Ē
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 20:01	1	
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:01	1	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 20:01	1	
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:01	1	
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 20:01	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	120		62 - 137			-		02/24/25 20:01	1	
4-Bromofluorobenzene (Surr)	104		56 - 136					02/24/25 20:01	1	
Toluene-d8 (Surr)	103		78 - 122					02/24/25 20:01	1	
Dibromofluoromethane (Surr)	104		73 - 120					02/24/25 20:01	1	÷.

2/25/2025

Job ID: 240-219214-1

Lab Sample ID: 240-219214-2 Matrix: Water

Client Sample ID: MW-78_021725

Date Collected: 02/17/25 12:45 Date Received: 02/20/25 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			02/21/25 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 127			-		02/21/25 16:34	1
Method: SW846 8260D - Volati	ile Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 20:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 20:24	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 20:24	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:24	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 20:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122		62 - 137			-		02/24/25 20:24	1
4-Bromofluorobenzene (Surr)	105		56 - 136					02/24/25 20:24	1
Toluene-d8 (Surr)	103		78 - 122					02/24/25 20:24	1
Dibromofluoromethane (Surr)	108		73 - 120					02/24/25 20:24	1

2/25/2025

Job ID: 240-219214-1

Lab Sample ID: 240-219214-3 Matrix: Water

Lab Sample ID 240-219206-E-2 MSD

240-219214-1

240-219214-2

240-219214-3

Matrix: Water

LCS 240-645817/4

MB 240-645817/7

Surrogate Legend

240-219206-G-2 MS

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

Prep Type: Total/NA Percent Surrogate Recovery (Acceptance Limits) DCA BFB TOL DBFM 5 **Client Sample ID** (62-137) (56-136) (78-122) (73-120) Matrix Spike Duplicate 114 101 106 103 Matrix Spike 118 106 105 103 TRIP BLANK_27 127 105 101 106 MW-78S_021725 104 120 104 103 MW-78_021725 122 105 103 108 Lab Control Sample 117 106 105 101 Method Blank 120 108 104 105 9 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) Prep Type: Total/NA

	DCA	
	DCA	
nt Sample ID	(68-127)	
78S_021725	98	
78_021725	95	
ix Spike Duplicate	98	
ix Spike	96	
Control Sample	95	
iod Blank	98	
i	78S_021725 78_021725 x Spike Duplicate x Spike Control Sample	78S_021725 98 78S_021725 95 x Spike Duplicate 98 x Spike 96 Control Sample 95

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

2/25/2025

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

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 12:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 12:46	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 12:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 12:46	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 12:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 12:46	1

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		62 - 137		02/24/25 12:46	1
4-Bromofluorobenzene (Surr)	108		56 - 136		02/24/25 12:46	1
Toluene-d8 (Surr)	104		78 - 122		02/24/25 12:46	1
Dibromofluoromethane (Surr)	105		73 - 120		02/24/25 12:46	1

Lab Sample ID: LCS 240-645817/4 Matrix: Water Analysis Batch: 645817

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	25.0	24.3		ug/L		97	63 - 134	
cis-1,2-Dichloroethene	25.0	23.5		ug/L		94	77 - 123	
Tetrachloroethene	25.0	23.7		ug/L		95	76 - 123	
trans-1,2-Dichloroethene	25.0	23.0		ug/L		92	75 - 124	
Trichloroethene	25.0	22.6		ug/L		91	70 - 122	
Vinyl chloride	12.5	12.4		ug/L		99	60 - 144	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)			62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	105		78 - 122
Dibromofluoromethane (Surr)	101		73 - 120

Lab Sample ID: 240-219206-E-2 MSD Matrix: Water Analysis Batch: 645817

· · ·	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	1.0	U	25.0	22.6		ug/L		90	56 - 135	4	26
cis-1,2-Dichloroethene	1.0	U	25.0	22.5		ug/L		90	66 - 128	3	14
Tetrachloroethene	1.0	U	25.0	19.8		ug/L		79	62 - 131	5	20
trans-1,2-Dichloroethene	1.0	U	25.0	20.8		ug/L		83	56 - 136	5	15
Trichloroethene	1.0	U	25.0	20.3		ug/L		81	61 - 124	2	15
Vinyl chloride	1.0	U	12.5	11.2		ug/L		89	43 - 157	3	24

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	114		62 - 137
4-Bromofluorobenzene (Surr)	106		56 - 136
Toluene-d8 (Surr)	103		78 - 122

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

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

Job ID: 240-219214-1

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

Matrix: Water	-E-2 MSD						Client S	Sample IE	: Matrix Spike I Prep Type:	-
Analysis Batch: 645817										
	MSD MS	SD								
Surrogate	%Recovery Qu	alifier	Limits							
Dibromofluoromethane (Surr)	101		73 - 120							
Lab Sample ID: 240-219206 Matrix: Water	-G-2 MS							Client	Sample ID: Mat Prep Type:	
Analysis Batch: 645817									1100 1300.	Totalin
,,	Sample Sa	mple	Spike	MS	MS				%Rec	
Analyte	Result Qu	alifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	1.0 U		25.0	21.7		ug/L		87	56 - 135	
cis-1,2-Dichloroethene	1.0 U		25.0	23.2		ug/L		93	66 - 128	
Fetrachloroethene	1.0 U		25.0	20.8		ug/L		83	62 - 131	
trans-1,2-Dichloroethene	1.0 U		25.0	21.8		ug/L		87	56 - 136	
Trichloroethene	1.0 U		25.0	20.8		ug/L		83	61 - 124	
Vinyl chloride	1.0 U		12.5	11.6		ug/L		92	43 - 157	
	MS MS	:								
Surrogate		, alifier	Limits							
1,2-Dichloroethane-d4 (Surr)			62 - 137							
4-Bromofluorobenzene (Surr)	106		56 - 136							
Toluene-d8 (Surr)	105		78 - 122							
Dibromofluoromethane (Surr)	103		73 - 120							
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645		ompour	ds (GC/MS)					Client S	ample ID: Meth	
ethod: 8260D SIM - Vo _ab Sample ID: MB 240-645 Matrix: Water	5674/6		ids (GC/MS)					Client S	ample ID: Meth Prep Type:	
ethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674	5674/6 M	3 MB			MDI Unit				Prep Type:	Total/I
ethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte	5674/6 M Resu	3 MB It Qualifier	RL		MDL Unit		D	Client S	Prep Type: Analyzed	Total/N
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte	5674/6 M Resu	3 MB			MDL Unit 0.86 ug/L		D		Prep Type:	Total/N
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte	5674/6 M <u>Resu</u> 2.	3 MB It Qualifier	RL				D		Prep Type: Analyzed	Total/N
ethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane	5674/6 	B MB It Qualifier	RL						Prep Type: Analyzed	Total/N
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate	5674/6 	B MB L Qualifier U B MB Y Qualifier						Prepared	Analyzed 02/21/25 11:52	Total/N
ethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water	5674/6 M Resu 2. <i>M</i> % <i>Recover</i> 9	B MB L Qualifier U B MB Y Qualifier						Prepared Prepared	Analyzed 02/21/25 11:52 Analyzed	Total/I I Samp
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water	5674/6 M Resu 2. <i>M</i> % <i>Recover</i> 9	B MB L Qualifier U B MB Y Qualifier	RL 2.0 68 - 127		0.86 ug/L			Prepared Prepared	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 02/21/25 11:52 01D: Lab Contro Prep Type:	Total/N Dil F Dil F
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674	5674/6 M Resu 2. <i>M</i> % <i>Recover</i> 9	B MB L Qualifier U B MB Y Qualifier	RL 2.0 <i>Limits</i> 68 - 127 Spike	LCS	0.86 ug/L	lleit	Clier	Prepared Prepared nt Sample	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec	Total/N Dil F Dil F
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analyte	5674/6 M Resu 2. <i>M</i> % <i>Recover</i> 9	B MB L Qualifier U B MB Y Qualifier	RL 2.0 2.0 68 - 127 68 - 127 Spike Added	LCS Result	0.86 ug/L	Unit		Prepared Prepared nt Sample	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits	Total/N Dil F Dil F
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analyte	5674/6 M Resu 2. <i>M</i> % <i>Recover</i> 9	B MB L Qualifier U B MB Y Qualifier	RL 2.0 <i>Limits</i> 68 - 127 Spike	LCS	0.86 ug/L	Unit ug/L	Clier	Prepared Prepared nt Sample	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec	Total/N Dil F Dil F Dil F
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analyte	5674/6 M Resu 2. M %Recover 9 5674/4 LCS LC	3 MB 1 Qualifier 0 U 3 MB 9 Qualifier 8	RL 2.0 2.0 68 - 127 68 - 127 Spike Added	LCS Result	0.86 ug/L		Clier	Prepared Prepared nt Sample	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits	Total/N Dil F Dil F Dil F
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane	5674/6 M Resu 2. M %Recover 9 5674/4	3 MB 1 Qualifier 0 U 3 MB 9 Qualifier 8	RL 2.0 	LCS Result	0.86 ug/L		Clier	Prepared Prepared nt Sample	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits	Total/N Dil F Dil F Dil F
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate	5674/6 M Resu 2. M %Recover 9 5674/4 LCS LC	3 MB 1 Qualifier 0 U 3 MB 9 Qualifier 8	RL 2.0 2.0 68 - 127 68 - 127 4dded 10.0	LCS Result	0.86 ug/L		Clier	Prepared Prepared nt Sample	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits	Total/N
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr)	5674/6 M Resu 2. M %Recover 9 5674/4 LCS LC %Recovery Qu 95	3 MB 1 Qualifier 0 U 3 MB 9 Qualifier 8	RL 2.0 	LCS Result	0.86 ug/L		Clier	Prepared Prepared nt Sample %Rec 92	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits 75 - 121	Total/N I Samp Total/N
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: 240-219215	5674/6 M Resu 2. M %Recover 9 5674/4 LCS LC %Recovery Qu 95	3 MB 1 Qualifier 0 U 3 MB 9 Qualifier 8	RL 2.0 	LCS Result	0.86 ug/L		Clier	Prepared Prepared nt Sample %Rec 92	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits 75 - 121 O: Matrix Spike I	Total/N Dil F Dil F I Samp Total/N
lethod: 8260D SIM - Vo Lab Sample ID: MB 240-645 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-64 Matrix: Water Analysis Batch: 645674 Analyte 1,4-Dioxane <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: 240-219215 Matrix: Water	5674/6 M Resu 2. M %Recover 9 5674/4 LCS LC %Recovery Qu 95	3 MB 1 Qualifier 0 U 3 MB 9 Qualifier 8	RL 2.0 	LCS Result	0.86 ug/L		Clier	Prepared Prepared nt Sample %Rec 92	Analyzed 02/21/25 11:52 Analyzed 02/21/25 11:52 ID: Lab Contro Prep Type: %Rec Limits 75 - 121	Total/N Dil F Dil F I Samp Total/N
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Job ID: 240-219214-1

10

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

	MSD	MSD							
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	98		68 - 127						
- Lab Sample ID: 240-219215-	C-2 MS							Client	Sample ID: Matrix Spik
Matrix: Water									Prep Type: Total/N
Analysis Batch: 645674									
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	2.0	U	10.0	9.56		ug/L		96	20 - 180
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	96		68 - 127						

GC/MS VOA

Analysis Batch: 645674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-219214-2	MW-78S_021725	Total/NA	Water	8260D SIM	
240-219214-3	MW-78_021725	Total/NA	Water	8260D SIM	
MB 240-645674/6	Method Blank	Total/NA	Water	8260D SIM	
LCS 240-645674/4	Lab Control Sample	Total/NA	Water	8260D SIM	
240-219215-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260D SIM	
240-219215-C-2 MS	Matrix Spike	Total/NA	Water	8260D SIM	
Analysis Batch: 645817 -	/				
-					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
Lab Sample ID		Prep Type Total/NA	Matrix Water	Method 8260D	Prep Batch
-	Client Sample ID				Prep Batch
Lab Sample ID 240-219214-1	Client Sample ID TRIP BLANK_27	Total/NA	Water	8260D	Prep Batch
Lab Sample ID 240-219214-1 240-219214-2	Client Sample ID TRIP BLANK_27 MW-78S_021725	Total/NA Total/NA	Water Water	8260D 8260D	Prep Batch
Lab Sample ID 240-219214-1 240-219214-2 240-219214-3	Client Sample ID TRIP BLANK_27 MW-78S_021725 MW-78_021725	Total/NA Total/NA Total/NA	Water Water Water	8260D 8260D 8260D	_ Prep Batch
Lab Sample ID 240-219214-1 240-219214-2 240-219214-3 MB 240-645817/7	Client Sample ID TRIP BLANK_27 MW-78S_021725 MW-78_021725 Method Blank	Total/NA Total/NA Total/NA Total/NA	Water Water Water Water	8260D 8260D 8260D 8260D	Prep Batch

02/21/25 16:34

EET CLE

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Client Sample ID: TRIP BLANK_27 Lab Sample ID: 240-219214-1 Date Collected: 02/17/25 00:00 Matrix: Water Date Received: 02/20/25 08:00 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number Analyst Lab or Analyzed 8260D EET CLE 02/24/25 19:38 Total/NA Analysis 645817 LEE 1 Client Sample ID: MW-78S_021725 Lab Sample ID: 240-219214-2 Date Collected: 02/17/25 11:45 Matrix: Water Date Received: 02/20/25 08:00 Batch Batch Dilution Batch Prepared Prep Type Method Run Factor Number Analyst or Analyzed Туре Lab Total/NA 8260D 645817 LEE EET CLE 02/24/25 20:01 Analysis 1 Total/NA Analysis 8260D SIM 645674 R5XG EET CLE 02/21/25 16:10 1 Client Sample ID: MW-78_021725 Lab Sample ID: 240-219214-3 Date Collected: 02/17/25 12:45 Matrix: Water Date Received: 02/20/25 08:00 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number Analyst or Analyzed Lab 02/24/25 20:24 Total/NA 8260D 645817 EET CLE Analysis 1 LEE

1

645674 R5XG

Laboratory References:

Total/NA

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

8260D SIM

Analysis

Accreditation/Certification Summary

Client: Arcadis US Inc. Project/Site: Ford LTP

Laboratory: Eurofins Cleveland

aboratory: Eurofins Cle	y this laboratory are listed. Not all accreditations/cer	ertifications are applicable to this repo	rt.	
Authority	Program	Identification Number	Expiration Date	
California	State	2927	02-28-25	
Connecticut	State	PH-0806	12-31-26	
Georgia	State	4062	02-27-25	
Illinois	NELAP	200004	08-31-25	
lowa	State	421	06-01-25	
Kansas	NELAP	E-10336	01-31-26	
Kentucky (UST)	State	112225	02-27-25	
Kentucky (WW)	State	KY98016	12-31-25	
Minnesota	NELAP	039-999-348	12-31-25	
New Hampshire	NELAP	225024	09-30-25	
New Jersey	NELAP	OH001	07-03-25	
New York	NELAP	10975	04-02-25	
Ohio	State	8303	11-04-25	
Ohio VAP	State	ORELAP 4062	02-27-25	
Oregon	NELAP	4062	02-27-25	
Pennsylvania	NELAP	68-00340	08-31-25	
Texas	NELAP	T104704517-22-19	08-31-25	
USDA	US Federal Programs	P330-18-00281	01-05-27	I
Virginia	NELAP	460175	09-14-25	
West Virginia DEP	State	210	12-31-25	
Wisconsin	State	399167560	08-31-25	

MICHIGAN 190

Chain of Custody Record



TestAmerica Laboratory location: Farmington Hills - 38855 Hills Tech Drive, Suite 600, Farmington Hills 48331

Client Contact ompany Name: Arcadis	Regular	tory program:	:		DV	v	⊂ N	PDES	ſ	RCR	Α	0	her								TestAmerica Laboratories.
	Client Project	Manager: Meg	an Me	ckley			Site Co	ntact: S	Saman	tha Szp	aichler			Lab	Conta	ct: Mi	ke Del	Monio	:0		COC No:
ddress: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240					Teleph	one: 24	8-994-	2240			-	Teler	ohone:	330-4	97-93	96			1
ity/State/Zip: Novi, MI, 48377										ound In	me I	_	-				Á	nalys	ex		1 of 1 COCs For lab use only
hone: 248-994-2240	Email: kristoff	er.hinskey@ar	cadis.	com			740						F	T						—	For tab use only
roject Name: Ford LTP	Sampler Name	:					TAT	different fr		weeks	_										Walk-in client
		UMY	Ny	4D			10 0	day	- 2	weeks											Lab sampling
roject Number: 30206169.0401.03	Method of Ship	ment/Carrier:								week days		R U			8260D			9	SIN		
O # US3460021848	Shipping/Track	king No:					1		Γι.	day		Gra V	9	260D	E 826			8260	2600		Job/SDG Na
				N	Astrix		C	ontainer	s & Pri	servativ	8		8260	CE 8	-DC	9	8	oride	B B		
Sample Identification	Sample Date	Sample Time	Air	Aquenus	Sediment	Other:	H2SO4	HC	NaOH ZaAci	Unpres	Other:	Filtered Sample (Y / N) Composite=C / Grah=G	1.1-DCE 8260D	cis-1,2-DCE 8260D	Trans-1,2-DCE	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM		Sample Specific Notes / Special Instructions:
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Possible Hazard Identification	int TPoise	n B í	Jnk	nown	-		San	ple Dis Retur	posal (n to Cl	A fee m ient	ay be as	sessed sposal l	if sam By Lab	ples ar	e retai	ined lo Archive	nger t For f	han 1	month) Months		
pecial Instructions/QC Requirements & Comments: ပြ ر ubmit all results through Cadena at jtomalia@cadenace evel IV Reporting requested.	Con Str D.com. Cadena #E	(rt 1	でど																		
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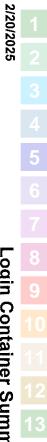
Sample(s)	18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES I additional next page Samples processed by:
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	Eurofins - Cleveland Sample Receipt Multiple Cooler Form	nd Sample Receipt I	Eurofins Clevela			

H1-NC-099 Cooler Receipt Form Poge 2 - Multiple Coolers



2/25/2025

Temperature readings

			I
	Voa Vial 40ml - Hydrochloric Acid	240-219214-G-3	MW-78 021725
	Voa Vial 40ml - Hydrochlorıc Acıd	240-219214-E-3	MW-78_021725
And a second	Voa Vial 40ml - Hydrochloric Acid	240-219214-D-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-C-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-B-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-A-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-G-2	MW-78S_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-E-2	MW-78S_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-D-2	MW-78S_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-C-2	MW-78S_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-B-2	MW-78S_021725
ta manana and a mana	Voa Vial 40ml - Hydrochloric Acıd	240-219214-A-2	MW-78S_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-A-1	TRIP BLANK_27
<u>Container</u> Preservation Preservation pH Temp Added Lot Number	Container Type	<u>Lab ID</u>	<u>Client Sample ID</u>

MICHIGAN 190



Chain of Custody Record

TestAmerica Laboratory location: Farmington Hills - 38855 Hills Tech Drive, Suite 600, Farmington Hills 48331

Client Contact	Regulat	tory program		ſ	DW		NP	DES		RC	RA	(Ot	her								-			
Company Name: Arcadis	Client Project	Manager: Meg	an Me	ckley		5	ite Co	ntact:	Sama	ntha Sz	paichle	r		Lab	Contac	t: Mil	ce Del!	Ionico				America	Laboratorie	es, Inc
Address: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240	_				elepho	one: 24	18-994	-2240				Teler	hone:	330-4	97-939	6						
City/State/Zip: Novi, MI, 48377						_				round 7	1000							nalyse	· · · · · ·		-	1 of 1 ab use only		:
Phone: 248-994-2240	Email: kristoff	er.hinskey@ar	cadis.	com				liysts /	100.031	round	aux.		H	T	<u> </u>			lalyse	<u>, </u>		Por	ab use only	-	
Project Name: Ford LTP	Sampler Name		. /			n	AT ind	ifferent f		low 8 weeks											Wal	k-in client	2	
		ilmy	My	215			10 d	lay	P 2	2 weeks											Lab	sampling	14	-
Project Number: 30206169.0401.03	Method of Ship	ment/Carrier:	L							l week 2 days		2 Y	2		8				Nis		60			
O # US3460021848	Shipping/Track	cing No:							Γ1			Filtered Sample (Y / N) Commute=C / Grah=G		cis-1,2-DCE 8260D	Trans-1,2-DCE 8260D			Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM		Job/	SDG No:		
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Sample Identification	Sample Date	Sample Time	ξ	Aqueous Sediment	Solid		HN03	Ð	NaOH	HO.	Other:	Com	9	is-1.	rans	CE	Э	Ivi	-4- D-				Instructions:	
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Non-Hazard Identification	nt 🗆 Poisc	on B f	Jnk	nown				Retu				Disposal 1				rchive			Months					
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WI-MC-099 Cooler Receipt Form Poge 2 -- Multiple Coolers



Temperature readings

	Voa Vial 40ml - Hydrochloric Acid	240-219214-G-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-E-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-D-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-C-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-B-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-A-3	MW-78_021725
	Voa Vial 40ml - Hydrochloric Acid	240-219214-G-2	MW-78S_021725
	Voa Vial 40ml - Hydrochlorıc Acıd	240-219214-E-2	MW-78S_021725
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	Voa Vial 40ml - Hydrochlorıc Acıd	240-219214-A-2	MW-78S_021725
	Voa Vial 40ml - Hydrochloric Acıd	240-219214-A-1	TRIP BLANK_27
Container Preservation Preservation pH Temp Added Lot Number	Container Type	<u>Lab ID</u>	<u>Client Sample ID</u>

DATA VERIFICATION REPORT



February 26, 2025

Megan Meckley Arcadis 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: 30251157.401.04 (vapor 301.04) 30206169.0401.04 Event Specific Scope of Work References: Sample COC Laboratory: Eurofins Environment Testing LLC - Cleveland Laboratory submittal: 219214-1 Sample date: 2025-02-17 Report received by CADENA: 2025-02-25 Initial Data Verification completed by CADENA: 2025-02-26 Number of Samples:3 Sample Matrices:Water Test Categories:GCMS VOC Please see attached criteria report or sample result/qualified analytical result summary for qualifier flags assigned to sample data.

There were no significant QC anomalies or exceptions to report.

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

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

CADENA Valid Qualifiers

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

Analytical Results Summary

CADENA Project ID: E203728

Laboratory: Eurofins Environment Testing LLC - Cleveland Laboratory Submittal: 219214-1

		Sample Name: Lab Sample ID: Sample Date:	2/17/20	2141 25			MW-78 240219 2/17/20)25	5		MW-78_ 240219 2/17/20	2143 25		
	Analyte	Cas No.	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit	Units	Valid Qualifier	Result	Report Limit		Valid Qualifier
GC/MS VOC														
<u>OSW-8260</u>	<u>)D</u>													
	1,1-Dichloroethene	75-35-4	ND	1.0	ug/l		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		ND	1.0	ug/l	
	Tetrachloroethene	127-18-4	ND	1.0	ug/l		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		ND	1.0	ug/l	
	Trichloroethene	79-01-6	ND	1.0	ug/l		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		ND	1.0	ug/l	
<u>OSW-8260</u>	DSIM													
	1,4-Dioxane	123-91-1					ND	2.0	ug/l		ND	2.0	ug/l	



Ford Motor Company – Livonia Transmission Project

Data Review

Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-219214-1 CADENA Verification Report: 2025-02-26

Analyses Performed By: Eurofins Cleveland Barberton, Ohio

Report # 58428R Review Level: Tier III Project: 30206169.0401.02

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-219214-1 for samples collected in association with the Ford – Livonia, Michigan site. The review was conducted as a Tier III validation in addition to a verification/Tier II validation review performed by CADENA Inc. and included review of level IV laboratory data package completeness. Only elements of a Tier III validation effort (Tier III) include a detailed review of laboratory raw data to check for errors in calculation, calibration review, internal standard review and compound identification) and omitted deviations from the CADENA verification/Tier II report are documented in this report. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample	Parent Sample	Ana	lysis
Sample ib		Maura	Collection Date		voc	VOC SIM
TRIP BLANK_27	240-219214-1	Water	02/17/2025		Х	
MW-78S_021725	240-219214-2	Water	02/17/2025		Х	Х
MW-78_021725	240-219214-3	Water	02/17/2025		Х	Х

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

	Items Reviewed	Rep	orted	Perfor Accep		Not
		No	Yes	No	Yes	Required
1. Sa	ample receipt condition		Х		Х	
2. Re	equested analyses and sample results		Х		Х	
3. Ma	aster tracking list		Х		Х	
4. Me	ethods of analysis		Х		Х	
5. Re	eporting limits		Х		Х	
6. Sa	ample collection date		Х		Х	
7. La	aboratory sample received date		Х		Х	
8. Sa	ample preservation verification (as applicable)		Х		Х	
9. Sa	ample preparation/extraction/analysis dates		Х		Х	
10. Fu	ully executed Chain-of-Custody (COC) form		Х		Х	
	arrative summary of Quality Assurance or sample oblems provided		Х		х	
12. Da	ata 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.

DATA REVIEW

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 REVIEW

DATA VALIDATION CHECKLIST FOR VOCs

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

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Febin J S

SIGNATURE:

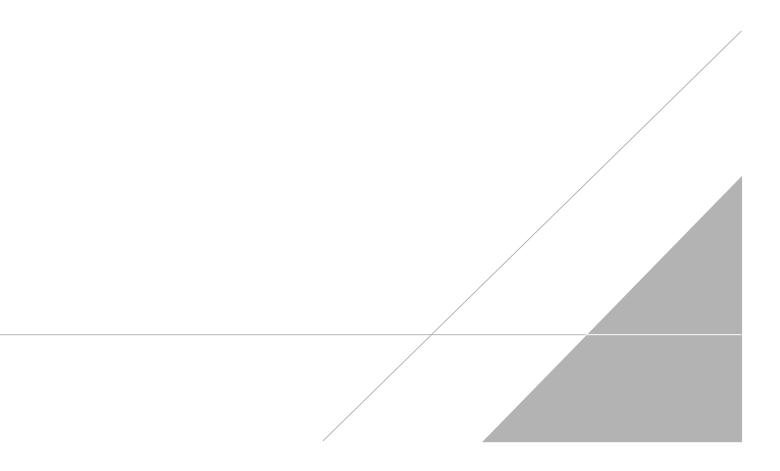
Pails

DATE: March 20, 2025

PEER REVIEW: Andrew Korycinski

DATE: March 26, 2025

NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS



MICHIGAN 190

Chain of Custody Record



TestAmerica Laboratory location: Farmington Hills - 38855 Hills Tech Drive, Suite 600, Farmington Hills 48331

Client Contact	Regular	tory program:			DV	v	⊂ N	PDES		RCI	KA	ſ (Juner	[TestAmerica Laboratories.
	Client Project I	Client Project Manager: Megan Meckley					Site Co	ntact: S	Samar	tha Sz	paichler	,		Lai	Lab Contact: Mike DelMonico					COC No:	
ddress: 28550 Cabot Drive, Suite 500	Telephone: 248	-994-2240					Telephone: 248-994-2240 7 Analysis Turnaround Time				Tel	Telephone: 330-497-9396 Analyses				_	1 of 1 COCs				
ity/State/Zip: Novi, MI, 48377																					
hone: 248-994-2240	Email: kristoff	er.hinskey@ar	cadis.	com									1		(naty:		1	For lab use only			
	Sampler Name	Sampler Name: Jelumy Myz13				TAT	different fr			L		2								Walk-in client	
roject Name: Ford LTP) je					10	dav		weeks weeks											Lab sampling	
roject Number: 30206169.0401.03	Method of Ship	Method of Shipment/Carrier:			1			week days		E	ę						M S		Card to the Card		
O # US3460021848	Shipping/Track					1		Г I			e (V /	Grab	260D	8260D			8260	260D		Job/SDG Na	
				N	latrix		0	ontainer	s & Pr	eservati	ves			10 Z ON	DCE			ride	92 100		
Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment Solid	Other:	H2SO4	HCI	NaOH ZaAci	NaOH Unpres	Other:	Filtered Sample (Y / N)	Composite=C/Grab-	1.1-UUE 9280U cis-1.2-DCE 8260D	Trans-1.2-DCE	PCE 8260D	TCE 8260D	Vinyl Chloride 8260D	1,4-Dioxane 8260D SIM		Sample Specific Notes / Special Instructions:
TRIP BLANK_シテ 27			Π	1			T	1				N	G)	x x		X	X	X			1 Trip Blank
MW-785 021725	02/17/25	11:45	[G		1		Ć,				N	G	X A		-	X	X	X		3 VOAs for 8260D 3 VOAs for 8260D SIM
MW-785.021725 MW-78.021725	02/17/25	12:45	·	G	-			G				1 ¹¹ -+-	(V	(X	Ý	Y	X	X	XII		
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Possible Hazard Identification	ant T Poisc	n B í	Jnk	nown	-1		San	ple Dis Retur	n to C	A fee i	may be a	assesse Disposa	d if sa I By L	mples a ab	re ret	ained l Archiv	e For	than 1	month) Months		
pecial Instructions/QC Requirements & Comments: Gubmit all results through Cadena at jtomalia@cadenac evel IV Reporting requested.	1 Con Str co.com. Cadena #E	(1) 203728	(d'~)																		
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telinquished by:	Company:	cis		Date/	lime 8/2	5	170		Receiv	ed by:	(Ŵ	g R	10	~				pany E	ENA		Date/Time: 15 170
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TEQ

TNTC

Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	-
Glossary		5
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¢	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	Q
CNF	Contains No Free Liquid	0
DER	Duplicate Error Ratio (normalized absolute difference)	0
Dil Fac	Dilution Factor	9
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	13
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	

Client Sample ID: TRIP BLANK_27

Date Collected: 02/17/25 00:00 Date Received: 02/20/25 08:00

Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 19:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 19:38	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 19:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 19:38	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 19:38	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 19:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	127		62 - 137			-		02/24/25 19:38	1
4-Bromofluorobenzene (Surr)	105		56 - 136					02/24/25 19:38	1
Toluene-d8 (Surr)	101		78 - 122					02/24/25 19:38	1
Dibromofluoromethane (Surr)	106		73 - 120					02/24/25 19:38	1

Job ID: 240-219214-1

Matrix: Water

Lab Sample ID: 240-219214-1

Client Sample ID: MW-78S_021725

Date Collected: 02/17/25 11:45 Date Received: 02/20/25 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			02/21/25 16:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		68 - 127			-		02/21/25 16:10	1
Method: SW846 8260D - Volati	ile Organic Comp	ounds by G	C/MS						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 20:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 20:01	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:01	1
rans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 20:01	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:01	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 20:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		62 - 137			-		02/24/25 20:01	1
4-Bromofluorobenzene (Surr)	104		56 - 136					02/24/25 20:01	1
Toluene-d8 (Surr)	103		78 - 122					02/24/25 20:01	1
Dibromofluoromethane (Surr)	104		73 - 120					02/24/25 20:01	1

Job ID: 240-219214-1

Lab Sample ID: 240-219214-2 Matrix: Water

2/25/2025

Client Sample ID: MW-78_021725

Date Collected: 02/17/25 12:45 Date Received: 02/20/25 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			02/21/25 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 127			-		02/21/25 16:34	1
Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			02/24/25 20:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			02/24/25 20:24	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			02/24/25 20:24	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			02/24/25 20:24	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/24/25 20:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122		62 - 137			-		02/24/25 20:24	1
4-Bromofluorobenzene (Surr)	105		56 - 136					02/24/25 20:24	1
Toluene-d8 (Surr)	103		78 - 122					02/24/25 20:24	1
Dibromofluoromethane (Surr)	108		73 - 120					02/24/25 20:24	1

2/25/2025

Job ID: 240-219214-1

Lab Sample ID: 240-219214-3 Matrix: Water