# 🛟 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

Eurofins TestAmerica, Canton 4101 Shuffel Street NW North Canton, OH 44720 Tel: (330)497-9396

## Laboratory Job ID: 240-150122-1

Client Project/Site: Ford LTP Off-Site

#### For:

ARCADIS U.S., Inc. 28550 Cabot Drive Suite 500 Novi, Michigan 48377

Attn: Kristoffer Hinskey

Mole Del your

Authorized for release by: 6/10/2021 1:46:35 PM

Michael DelMonico, Project Manager I (330)497-9396 Michael.DelMonico@Eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1

.....Links **Review your project** results through **Total** Access Have a Question? Ask-The Expert Visit us at: www.eurofinsus.com/Env

# **Table of Contents**

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	5
Sample Summary	6
Detection Summary	7
Client Sample Results	8
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	14
Lab Chronicle	15
Certification Summary	16
Chain of Custody	17

## Qualifiers

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	_
CNF	Contains No Free Liquid	ð
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	9
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	13
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	
INIC	loo Numerous to Count	

#### Job ID: 240-150122-1

#### Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative 240-150122-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/26/2021 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 was 0.8° C.

#### GC/MS VOA

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

#### VOA Prep

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

## **Method Summary**

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

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
5030B	Purge and Trap	SW846	TAL CAN

#### **Protocol References:**

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

#### Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

## Sample Summary

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

			<b>A</b> II <i>i</i> I	<u> </u>	
Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-150122-1	TRIP BLANK_136	Water	05/21/21 00:00	05/26/21 08:00	
240-150122-2	MW-188S_052121	Water	05/21/21 11:37	05/26/21 08:00	

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

#### Client Sample ID: TRIP BLANK\_136

No Detections.

#### Client Sample ID: MW-188S\_052121

No Detections.

Lab Sample ID: 240-150122-1

Lab Sample ID: 240-150122-2

\_

#### Client Sample ID: TRIP BLANK\_136 Date Collected: 05/21/21 00:00 Date Received: 05/26/21 08:00

Lab Sample	ID: 240-150122	-1

Matrix: Water

Job ID: 240-150122-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 18:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/03/21 18:45	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/03/21 18:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 18:45	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/03/21 18:45	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/03/21 18:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			75 - 130			-		06/03/21 18:45	1
4-Bromofluorobenzene (Surr)	89		47 - 134					06/03/21 18:45	1
Toluene-d8 (Surr)	98		69 - 122					06/03/21 18:45	1
Dibromofluoromethane (Surr)	89		78 - 129					06/03/21 18:45	1

#### Client Sample ID: MW-188S\_052121 Date Collected: 05/21/21 11:37 Date Received: 05/26/21 08:00

Job	ID: 240-150122	-1
000	10.240 100122	

#### Lab Sample ID: 240-150122-2 Matrix: Water

Water

nalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			06/03/21 17:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 133					06/03/21 17:08	1
Method: 8260B - Volatile O	rganic Compo	unds (GC/	MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 19:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/03/21 19:10	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/03/21 19:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 19:10	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/03/21 19:10	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/03/21 19:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		75 - 130					06/03/21 19:10	1
4-Bromofluorobenzene (Surr)	88		47 - 134					06/03/21 19:10	1
Toluene-d8 (Surr)	98		69 - 122					06/03/21 19:10	1
Dibromofluoromethane (Surr)	91		78 - 129					06/03/21 19:10	1

## **Surrogate Summary**

BFB

(47-134)

89

88

95

92

89

89

DCA

(75-130)

80

82

79

78

80

75

#### Method: 8260B - Volatile Organic Compounds (GC/MS) **Matrix: Water**

**Client Sample ID** 

TRIP BLANK\_136

MW-188S\_052121

Matrix Spike Duplicate

Lab Control Sample

Matrix Spike

Method Blank

				2
S)				
			Prep Type: Total/NA	
Pe	ercent Surro	ogate Recovery (A	cceptance Limits)	
	TOL	DBFM		
4)	(69-122)	(78-129)		5
	98	89		
	98	91		
	98	90		
	100	85		
	101	89		
	99	86		8
				9
<b>C</b> /	MS)			
	,		Prep Type: Total/NA	
Pe	ercent Surro	ogate Recovery (A	cceptance Limits)	
				13

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr) DBFM = Dibromofluoromethane (Surr)

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

Matrix	e W	ator
matin		αισι

Lab Sample ID

240-150122-1

240-150122-2

240-150123-O-4 MS

LCS 240-488826/4

MB 240-488826/7

240-150123-O-4 MSD

Surrogate Legend

			Percent Surrogate Recovery (Acceptance Limits)	
		DCA		
Lab Sample ID	Client Sample ID	(70-133)		
240-150122-2	MW-188S_052121	83		
240-150123-H-4 MS	Matrix Spike	83		
240-150123-M-4 MSD	Matrix Spike Duplicate	84		
LCS 240-488853/4	Lab Control Sample	82		
MB 240-488853/5	Method Blank	82		

#### Surrogate Legend

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

Job ID: 240-150122-1

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

#### Lab Sample ID: MB 240-488826/7 **Matrix: Water**

### Analysis Batch: 488826

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 14:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/03/21 14:59	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/03/21 14:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 14:59	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/03/21 14:59	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/03/21 14:59	1

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	75		75 - 130		06/03/21 14:59	1
4-Bromofluorobenzene (Surr)	89		47 - 134		06/03/21 14:59	1
Toluene-d8 (Surr)	99		69 - 122		06/03/21 14:59	1
Dibromofluoromethane (Surr)	86		78 - 129		06/03/21 14:59	1

#### Lab Sample ID: LCS 240-488826/4 Matrix: Water Analysis Batch: 488826

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	10.0	9.23		ug/L		92	73 - 129	
cis-1,2-Dichloroethene	10.0	9.06		ug/L		91	75 - 124	
Tetrachloroethene	10.0	10.9		ug/L		109	70 - 125	
trans-1,2-Dichloroethene	10.0	9.30		ug/L		93	74 - 130	
Trichloroethene	10.0	9.01		ug/L		90	71 - 121	
Vinyl chloride	10.0	12.3		ug/L		123	61 - 134	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	80		75 - 130
4-Bromofluorobenzene (Surr)	89		47 - 134
Toluene-d8 (Surr)	101		69 - 122
Dibromofluoromethane (Surr)	89		78 - 129

#### Lab Sample ID: 240-150123-O-4 MS **Matrix: Water** Analysis Batch: 488826

Toluene-d8 (Surr)

7 maryolo Batom 400020									
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	5.0	U	50.0	34.1		ug/L		68	64 - 132
cis-1,2-Dichloroethene	5.0	U	50.0	41.3		ug/L		83	68 - 121
Tetrachloroethene	5.0	U	50.0	47.6		ug/L		95	52 - 129
trans-1,2-Dichloroethene	5.0	U	50.0	39.7		ug/L		79	69 - 126
Trichloroethene	5.0	U	50.0	38.9		ug/L		78	56 - 124
Vinyl chloride	5.0	U	50.0	47.2		ug/L		94	49 - 136
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	79		75 - 130						
4-Bromofluorobenzene (Surr)	95		47 - 134						

# 06/03/21 14:59

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

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

Eurofins TestAmerica, Canton

69 - 122

10

12 13

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Matrix: Water Analysis Batch: 488826	23-O-4 MS										-	usin oa	mple ID: Prep Ty		
	МС	MC													
0		MS		1											
Surrogate	%Recovery	Qua	lifier	Limits											
Dibromofluoromethane (Surr)	90			78 - 129											
Lab Sample ID: 240-15012 Matrix: Water	23-O-4 MSD								Clien	t Sai	mpl	le ID: N	latrix Sp Prep Ty		
Analysis Batch: 488826															
-	Sample	Sam	ple	Spike		MSD	MSD						%Rec.		RP
Analyte	Result	Qua	lifier	Added		Result	Qualif	ier	Unit		D	%Rec	Limits	RPD	Lin
I,1-Dichloroethene	5.0	U		50.0		33.6			ug/L		_	67	64 - 132	2	;
cis-1,2-Dichloroethene	5.0	U		50.0		43.5			ug/L			87	68 - 121	5	;
Tetrachloroethene	5.0	U		50.0		47.7			ug/L			95	52 - 129	0	
rans-1,2-Dichloroethene	5.0	U		50.0		39.9			ug/L			80	69 - 126	1	
Trichloroethene	5.0			50.0		41.4			ug/L			83	56 - 124	6	
/inyl chloride	5.0			50.0		52.2			ug/L			104	49 - 136	10	
-						_			0			-		-	
	MSD														
Surrogate	·	Qua	lifier	Limits											
1,2-Dichloroethane-d4 (Surr)	78			75 - 130											
4-Bromofluorobenzene (Surr)	92			47 - 134											
Toluene-d8 (Surr)	100			69 - 122											
Dibromofluoromethane (Surr)	85			78 - 129											
lethod: 8260B SIM - V Lab Sample ID: MB 240-4 Matrix: Water		gan	ic Corr	pound	ls (G	C/M	S)				Clie	nt Sam	nple ID: N Prep Ty		
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853	88853/5	мв	МВ	pound									Prep T	уре: То	otal/N
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte	88853/5	MB	MB Qualifier	ipound	RL		MDL U			C D		nt Sam repared	Prep Ty	ype: To	otal/N
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte	88853/5	MB esult 2.0	MB Qualifier U	ipound									Prep T	ype: To	otal/N
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte I,4-Dioxane	88853/5	MB esult 2.0 MB	MB Qualifier U MB		<b>RL</b> 2.0		MDL U				Pr	epared	Prep Ty Analy 	<b>/pe: To</b> /zed 1 14:14	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte I,4-Dioxane Surrogate	88853/5	MB esult 2.0 MB very	MB Qualifier U	Lim	<b>RL</b> 2.0		MDL U				Pr		Prep Ty Analy 06/03/2 Analy	/pe: To /zed 1 14:14 /zed	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte I,4-Dioxane Surrogate I,2-Dichloroethane-d4 (Surr)	88853/5	MB esult 2.0 MB	MB Qualifier U MB		<b>RL</b> 2.0		MDL U			<b>D</b> -	Pr Pr	repared repared	Prep Ty Analy Analy 6/03/2	ype: To yzed 1 14:14 yzed 1 14:14	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte I,4-Dioxane Surrogate I,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4	88853/5	MB esult 2.0 MB very	MB Qualifier U MB	Lim	<b>RL</b> 2.0		MDL U		Cli	<b>D</b> -	Pr Pr	repared repared	Prep Ty Analy 06/03/2 Analy 06/03/2 : Lab Co	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water	88853/5	MB esult 2.0 MB very	MB Qualifier U MB	Lim	<b>RL</b> 2.0		MDL U		Cli	<b>D</b> -	Pr Pr	repared repared	Prep Ty Analy Analy 6/03/2	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water	88853/5	MB esult 2.0 MB very	MB Qualifier U MB		<b>RL</b> 2.0	I	MDL U		Cli	<b>D</b> -	Pr Pr	repared repared	Prep Ty Analy Analy 6/03/2 : Lab Co Prep Ty	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853	88853/5	MB esult 2.0 MB very	MB Qualifier U MB	<i>Lim</i> ı 70 -	RL 2.0 its 133	LCS	MDL U 0.86 u	g/L		<b>D</b> -	Pr Pr San	epared repared nple ID	Prep Ty <u>Analy</u> <u>Analy</u> <u>Analy</u> 06/03/2 : Lab Co Prep Ty %Rec.	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa Dil Fa Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte	88853/5	MB esult 2.0 MB very	MB Qualifier U MB	Limi 70 -	RL 2.0 its 133	LCS Result	MDL U	g/L	Unit	<b>D</b> -	Pr Pr	epared epared nple ID	Prep Ty Analy 06/03/2 Analy 06/03/2 Lab Co Prep Ty %Rec. Limits	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte	88853/5	MB esult 2.0 MB very	MB Qualifier U MB	<i>Lim</i> ı 70 -	RL 2.0 its 133	LCS	MDL U 0.86 u	g/L		<b>D</b> -	Pr Pr San	epared repared nple ID	Prep Ty <u>Analy</u> <u>Analy</u> <u>Analy</u> 06/03/2 : Lab Co Prep Ty %Rec.	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte	88853/5 	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier	Limi 70 -	RL 2.0 its 133	LCS Result	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	epared epared nple ID	Prep Ty Analy 06/03/2 Analy 06/03/2 Lab Co Prep Ty %Rec. Limits	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa Dil Fa Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane	88853/5 Reco 488853/4 	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier	<u>Limi</u> 70 - Spike Added 10.0	RL 2.0 its 133	LCS Result	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	epared epared nple ID	Prep Ty Analy 06/03/2 Analy 06/03/2 Lab Co Prep Ty %Rec. Limits	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa Dil Fa Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate	88853/5 Recor 488853/4 488853/4  LCS %Recovery	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier	  	RL 2.0 its 133	LCS Result	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	epared epared nple ID	Prep Ty Analy 06/03/2 Analy 06/03/2 Lab Co Prep Ty %Rec. Limits	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa Dil Fa Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate	88853/5 Reco 488853/4 	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier	<u>Limi</u> 70 - Spike Added 10.0	RL 2.0 its 133	LCS Result	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	epared epared nple ID	Prep Ty Analy 06/03/2 Analy 06/03/2 Lab Co Prep Ty %Rec. Limits	ype: To yzed 1 14:14 yzed 1 14:14 ntrol S	Dil Fa Dil Fa Dil Fa
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: 240-15012	88853/5 Recon 488853/4 488853/4  LCS %Recovery 82	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier	  	RL 2.0 its 133	LCS Result	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	repared nple ID <u>%Rec</u> 103	Prep Ty Analy 06/03/2 : Lab Co Prep Ty %Rec. Limits 80 - 135 mple ID:	ype: To /zed 1 14:14 /zed 1 14:14 ntrol S ype: To Matrix	Dil Fa Dil Fa Dil Fa amp tal/N
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: 240-15012 Matrix: Water	88853/5 Recon 488853/4 488853/4  LCS %Recovery 82	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier	  	RL 2.0 its 133	LCS Result	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	repared nple ID <u>%Rec</u> 103	Prep Ty Analy 06/03/2 Analy 06/03/2 : Lab Co Prep Ty %Rec. Limits 80 - 135	ype: To /zed 1 14:14 /zed 1 14:14 ntrol S ype: To Matrix	Dil Fa Dil Fa Dil Fa ampl tal/N
Lab Sample ID: MB 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: LCS 240-4 Matrix: Water Analysis Batch: 488853 Analyte 1,4-Dioxane Surrogate 1,2-Dichloroethane-d4 (Surr) Lab Sample ID: 240-15012 Matrix: Water	88853/5 	MB esult 2.0 MB very 82	MB Qualifier U MB Qualifier		RL 2.0 its 133	LCS Result 10.3	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	repared nple ID <u>%Rec</u> 103	Prep Ty Analy 06/03/2 Analy 06/03/2 : Lab Co Prep Ty %Rec. Limits 80 - 135 mple ID: Prep Ty	ype: To /zed 1 14:14 /zed 1 14:14 ntrol S ype: To Matrix	Dil Fa Dil Fa Dil Fa ampl tal/N
Lab Sample ID: MB 240-4	88853/5 Recon 488853/4 488853/4  LCS %Recovery 82	MB esult 2.0 MB very 82 LCS Qua	MB Qualifier U MB Qualifier	  	RL 2.0 <i>its</i> 133	LCS Result 10.3	MDL U 0.86 u	g/L	Unit	<b>D</b> -	Pr Pr San	repared nple ID <u>%Rec</u> 103	Prep Ty Analy 06/03/2 : Lab Co Prep Ty %Rec. Limits 80 - 135 mple ID:	ype: To /zed 1 14:14 /zed 1 14:14 ntrol S ype: To Matrix	Dil Fa Dil Fa Dil Fa ampl tal/N

Eurofins TestAmerica, Canton

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

Surrogate	%Recovery	MS Qualifier	Limits									
1,2-Dichloroethane-d4 (Surr)	83		70 - 133									5
Lab Sample ID: 240-1501 Matrix: Water Analysis Batch: 488853	23-M-4 MSD					Client	Samp	le ID: N	latrix Spil Prep Ty			6
Analysis Daten. 400000	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1,4-Dioxane	4.0	U F1	20.0	21.9		ug/L		109	46 - 170	1	26	8
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									9
1,2-Dichloroethane-d4 (Surr)	84		70 - 133									

#### Analysis Batch: 488826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-150122-1	TRIP BLANK_136	Total/NA	Water	8260B	
240-150122-2	MW-188S_052121	Total/NA	Water	8260B	
MB 240-488826/7	Method Blank	Total/NA	Water	8260B	
LCS 240-488826/4	Lab Control Sample	Total/NA	Water	8260B	
240-150123-O-4 MS	Matrix Spike	Total/NA	Water	8260B	
240-150123-O-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

#### Analysis Batch: 488853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-150122-2	MW-188S_052121	Total/NA	Water	8260B SIM	- <u> </u>
MB 240-488853/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-488853/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-150123-H-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-150123-M-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Matrix: Water

Lab Sample ID: 240-150122-1

TAL CAN

#### Client Sample ID: TRIP BLANK\_136 Date Collected: 05/21/21 00:00 Beasiwad: 05/26/24 09:00

Analysis

8260B SIM

Date Receive	d: 05/26/21 0	8:00							
	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	8260B		1	488826	06/03/21 18:45	LRW	TAL CAN	
<b>Client Sam</b>	ple ID: MW	-188S_052121					Lab Sa	mple ID:	240-150122-2
Date Collecte	d: 05/21/21 1	1:37							Matrix: Water
Date Receive	d: 05/26/21 0	8:00							
Γ	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	8260B		1	488826	06/03/21 19:10	LRW	TAL CAN	

1

488853 06/03/21 17:08 CS

#### Laboratory References:

Total/NA

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Eurofins TestAmerica, Canton

Client: ARCADIS U.S., Inc. Project/Site: Ford LTP Off-Site Job ID: 240-150122-1

#### Laboratory: Eurofins TestAmerica, 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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
owa	State	421	06-01-21 *
Kansas	NELAP	E-10336	04-30-21 *
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
<i>A</i> innesota	NELAP	OH00048	12-31-21
/innesota (Petrofund)	State	3506	08-01-21
lew Jersey	NELAP	OH001	06-30-21
lew York	NELAP	10975	03-31-22
Dhio VAP	State	CL0024	12-21-23
Dregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-21
exas	NELAP	T104704517-18-10	08-31-21
JSDA	US Federal Programs	P330-18-00281	09-17-21
/irginia	NELAP	010101	09-14-21
Vashington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

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

0,7/0,80

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



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

				DW	V		NPD	ES	1	RC	RA	F-	Oth	er 🔽	-						$\mathbf{y}$			
CHI I DI LI																								TestAmerica Laboratories
		Hinsk	ey.			Site	Cont	act: J	fulia N	McCla	fferty				Lab (	Contac	ct: Mil	te Del	Monio	co				COC No:
Telephone: 248	-994-2240					Tel	ephon	e: 73-	4-644	-5131					Telep	hone:	330-4	97-93	96					4 -4 - 600
Email: kristoff	er.hinskey@ar	cadis.	om				Anal	ysis T	urnar	ound	Time			_	L			A	naly	ses				1 of 1 COCs For lab use only
Sampler Name				_		TA	T ir Jiff	crent fo	om belo	w	T	-												Walk-in client
7		I F	ZRO	44	-				- 3	weeks														
Method of Ship			204	,			iu da	/	- 1	week	•		0			_				Σ				Lab sampling
Shipping/Tracl	ting No:					-						X	rab		8	260E			608	0B S(				Job/SDG No:
			- 14	atela			6					ple (	C/G	808	826(	8 8			e 82	826(				100/3DG NO.
				1	1	+		amers	s & PT	eserva	aves	- San	site	826	DCE DCE	2-D	60B	60B	lorid	ane				
			ucuus diment	PI	her:	504	607		HO	on	her	Itered	odwo	õ	-1.2-	ans-1	E 82	E 82	y C	-Dio				Sample Specific Notes Special Instructions:
Sample Date	Sample Time	2	2 3	8	õ	E	Ξ	Ĭ	ZuZ	25	ō	Ē	Ŭ	-	Cis	Ť	10	2	Ś	-			_	
			X					1						X	X	X	X	X	X	X				1 Trip Blank
5121/21	1137		×					6				N	6	X	X	X	X	X	X	X	-			3 VOAs for 8260B 3 VOAs for 8260B S
						Γ																		
		+	-	+		$\vdash$	$\vdash$	-+	-+-		-	+	-	-	-		-		$\vdash$	+				
																					1	T		
		++		+		+-	$\vdash$	$\rightarrow$	+		+	+-						-		Inn		-	_	
																		1111				1		
																						N.	T	
		+		+-	+	+	$\left  \right $	+		+-	+	+		1111						11/10	11800.	/	1	
_		$\square$						_					1						Usto	Yb,				
													1				chair	or	-	1	1			
				+		+				+	+	+	+	1/10	0-15	51.22	-	. –	1	+	+			
													_						1					
ant Poiso	n B	Unkn	own												ies ar				than 1					
	Telephone: 244 Email: kristoff Sampler Name Method of Ship Shipping/Tracl Sample Date  S121/21	Telephone: 248-994-2240         Email: kristoffer.hinskey@ar         Sampler Name:         Andre w         Method of Shipment/Carrier:         Shipping/Tracking No:         Sample Date         Sample Date         Sample 1137         S121/21         Size	Telephone: 248-994-2240         Email: kristoffer.hinskey@arcadis.e         Sampler Name:         Andrew         Method of Shipment/Carrier:         Shipping/Tracking No:         Sample Date         Sample Date         Sample Time         7         5/21/21         1137	Email: kristoffer.hinskey@arcadis.com Sampler Name: Andrew Bac Method of Shipnent/Carrier: Shipping/Tracking No:  Sample Date Sample Time Sol21/21 1137 X Sl21/21 1137	Telephone: 248-994-2240         Email: kristoffer.hinskey@arcadis.com         Sampler Name:         Andrew       Barity         Method of Shipment/Carrier:         Shipping/Tracking No:         Sample Date       Sample Time         Sample Date       Sample Time         Solution       Y         Sample Date       Sample Time         Solution       Y         <	Telephone: 248-994-2240         Email: kristoffer.hinskey@arcadis.com         Sampler Name:         Andrew Barity         Matrix         Matrix         Shipping/Tracking No:         Matrix         Sample Date         Sample Date       Sample Time $\frac{100}{100}$	Telephone: 248-994-2240     Tel       Email: kristoffer.hinskey@arcadis.com     Sampler Name:     TA       Andrew Bantt     Andrew Bantt       Method of Shipment/Carrier:     Shipping/Tracking No:       Sample Date     Sample Time     To       Sample Date     Sample Time     To       Solution     To     To       Sample Date     Sample Time     To       Solution     To     To       Solution     To     To       Sample Date     Sample Time     To       Solution     To     To       Solution     To     To       Solution     To     To       Sample Date     Sample Time     To       Solution     To     To	Telephone: 248-994-2240     Telephon       Email: kristoffer.hinskey@arcadis.com     Analy       Sampler Name:     AnArcw       AnArcw     Bar.14       Method of Shipment/Carrier:     10 day       Shipping/Tracking No:     Matrix       Cont     Image: Sample Date       Sample Date     Sample Time       Image: Signature of the sample Time     Image: Signature of the sample Time       Signature of the sample Time     Image: Signature of the sample of	Telephone: 248-994-2240     Telephone: 73       Email: kristoffer.hinskey@arcadis.com     Analysis T       Sampler Name:     AnAccw Bac.H       AnAccw Bac.H     10 day       Method of Shipnent/Carrier:     Natrix       Shipping/Tracking No:     To tri different ferent	Telephone: 248-994-2240     Telephone: 734-644       Email: kristoffer.hinskey@arcadis.com     Analysis Turnai       Sampler Name:     Andrew Bar.14       Method of Shipment/Carrier:     10 day       Shipping/Tracking No:     10 day       Sample Date     Sample Time       Image: Sample Date     Sample Time       Image: Signal of the sample Time     Image: Signal of the sample of the sam	Telephone: 248-994-2240     Telephone: 734-644-5131       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround       Sampler Name:     Andrew Barth       Method of Shipment/Carrier:     TAT if different from below       Shipping/Tracking No:     TAT if different from below       Sample Date     Sample Time       Sample Date     Sample Time	Telephone: 248-994-2240     Telephone: 734-644-5131       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround Time       Sampler Name:     AnAACW BAA.44       Method of Shipnent/Carrier:     3 weeks       Shipping/Tracking No:     10 day       Sample Date     Sample Time       Reference     3 weeks       1 day     1 day       Sample Date     Sample Time       Reference     1 day       Sample Date     Sample Time       Sample Date     Sample Time       Reference     1 day       Sample Date     Sample Time       Sample Date     Sample Date       Sample Date     Sample Date	Telephone: 248-994-2240     Telephone: 734-644-\$131       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround Time       Sampler Name:     TAT if different from below       AnArcw     Ban+4       Method of Shipnent/Carrier:     3 weeks       Shipping/Tracking No:     Tat if different from below       Sample Date     Sample Time       The sample Time     Tat if different from below       Tat if different from below     3 weeks       10 day     2 weeks       2 days     1 week       2 days     1 day       Sample Date     Sample Time       Tat if different from below     1 day       Sample Date     Sample Time       Tat if different from below     1 day       Sample Date     Sample Time       Tat if different from below     1 day       Sample Date     Sample Time       Sample Date     Sample Date       Sample Date     Sample Disposal (A fee may be asset)	Telephone: 248-994-2240     Telephone: 734-644-5131       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround Time       Sampler Name:     Andrew Ban.++       Method of Shipment/Carrier:     3 weeks       Shipping/Tracking No:     10 day       Sample Date     Sample Time       Sample Date     Sample Disposal ( A fee may be assessed if	Telephone: 248-994-2240     Telephone: 734-644-5131       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround Time       Sampler Name:     AnAbcw       AnAbcw     Ban: H       10 day     2 weeks       2 days     10 day       2 days     1 day       Sample Date     Sample Time       1     1       1     1       2     1       1     1       1     1       2     1       1     1       1     1       2     1       1     1       1     1       1     1       1     1       1     1       2     1       2     1       1     1       1     1       1     1       2     1       1     1       1     1       1     1       1     1       1     1       1     1       2     1       2     1       3     1       1     1       2     1       1     1       1     1       1 <td>Telephone: 248-994-2240     Telephone: 734-644-5131     Telephone:       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround Time     9       Sampler Name:     3 weeks     10 day     2 weeks       10 day     2 days     1 day     9       Shipping/Tracking No:     1 day     9     9       Sample Date     Sample Time     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1</td> <td>Telephone: 734-644-5131       Telephone: 734-644-5131         Email: kristoffer.hinskey@arcadis.com         Sampler Name:       AnArcw Ban. + 1         AnArcw Ban. + 1       10 day       2 weeks         10 day       2 days       10 day       2 weeks         Shipping/Tracking No:       10 day       2 weeks       10 day       2 weeks         Sample Date       Sample Time       1 day       1 day       1 day       1 day           X       1       X       X X       X         Sample Date       Sample Time       1 day       1 day       X X       X           X       1       X X       X       X         Sample Date       Sample Time       1 day       1 day       X X       X           X       1 day       1 day       X X X       X         S121/21       1137       X       6 day       X day       20 1000       20 100       20 100            X       1 day       1 day       2 day&lt;</td> <td>Telephone: 248-994-2240     Telephone: 734-644-5131     Telephone: 330-4       Email: kristoffer.hinskey@arcadis.com     Analysis Ternaround Time     0       Sampler Name:     Analysis Ternaround Time     0       Analysis Ternaround Time     3 weeks     0       Sampler Name:     TAT if different from below     0       Sampler Name:     TAT if different from below     0       Sample Date     Sample Tracking No:     Total from the from below     0       Sample Date     Sample Time     Natrix     Containers &amp; Preservatives     0000 007 (1 stress)       Sample Date     Sample Time     1     X     X     X       Sample Date     Sample Time     1     X     X     X       Sample Date     Sample Time     1     X     X     X       Size / 21     1137     X     6     N     6     X       Size / 21     1137     X     6     N     6     X     X       Size / 21     1137     X     6     N     6     X     X       Sample Date     Sample Disposal (A fee may be assessed if     mes are retained to</td> <td>Telephone: 248-994-2240         Telephone: 734-644-5131         Telephone: 330-497-92           Email: kristoffer.hinskey@arcadis.com         Analysis Ternaround Time         Analysis           Sampler Name:         Analysis         TAT if different from below         3 weeks           Method of Shipment/Carrier:         10 day         2 weeks         90000 20 C-7 i-9000000000000000000000000000000000000</td> <td>Telephone:         248-994-2240         Telephone:         734-644-5131         Telephone:         330-497-9396           Email:         kristoffer.hinskey@arcadis.com         Analysis Ternaround Time         Analysis           Sampler Name:         Analysis         TAT if different fem kelow         Image: Sampler Name:         Analysis           Method of Shipnert/Carrier:         3 wecks         1 weck         3 wecks         9002 gr gr</td> <td>Telephone: 248-994-2240     Telephone: 734-644-5131     Telephone: 330-497-9396       Email: kristoffer,hinskey@arcadis.com     Xaalysis Ternaround Time     Analyses       Sampler Name:     Analyses     Nethod of Shipnen/Carrier:     Nethod o</td> <td>Telephone: 248-994-2240       Email: kristoffer.hinskey@arcadis.com     Analysis Ternaround Time       Sampler Name:     Analysis Ternaround Time       Analysis Ternaround Time     Analysis       Sampler Name:     Analysis Ternaround Time       Analysis Ternaround Time     Analysis       Sampler Name:     Analysis Ternaround Time       Analysis Ternaround Time     Analysis       Sampler Name:     Analysis Ternaround Time       Method of Shipment/Carrier:     I weeks       Shipping/Tracking No:     I week       Sample Date     Sample Time # ##################################</td> <td>Telephone:     244-994-2240     Telephone:     734-644-5131     Telephone:     330-497-9396       Email:     kristoffer.hinskey@arcadis.com     Analysis Ternaround Time     Analysis     Analysis       Sampler Name:     Analysis     TAT if different tool below     B     B       Nethod of Shipment/Carrier:     10 day     2 weeks     B     B     B       Shipping/Tracking No:     Matrix     Constances &amp; Preservatives     B</td> <td>Telephone:         248-994-2240         Telephone:         734-644-5131         Telephone:         30-497-39%           Email:         kristoffer.hinskey@arcadis.com         Analysis furmaround fine         Analysis         Analysis         Analysis           Sampler Name:         Analysis furmaround fine         3 weeks         9<!--</td--></td>	Telephone: 248-994-2240     Telephone: 734-644-5131     Telephone:       Email: kristoffer.hinskey@arcadis.com     Analysis Turnaround Time     9       Sampler Name:     3 weeks     10 day     2 weeks       10 day     2 days     1 day     9       Shipping/Tracking No:     1 day     9     9       Sample Date     Sample Time     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1	Telephone: 734-644-5131       Telephone: 734-644-5131         Email: kristoffer.hinskey@arcadis.com         Sampler Name:       AnArcw Ban. + 1         AnArcw Ban. + 1       10 day       2 weeks         10 day       2 days       10 day       2 weeks         Shipping/Tracking No:       10 day       2 weeks       10 day       2 weeks         Sample Date       Sample Time       1 day       1 day       1 day       1 day           X       1       X       X X       X         Sample Date       Sample Time       1 day       1 day       X X       X           X       1       X X       X       X         Sample Date       Sample Time       1 day       1 day       X X       X           X       1 day       1 day       X X X       X         S121/21       1137       X       6 day       X day       20 1000       20 100       20 100            X       1 day       1 day       2 day<	Telephone: 248-994-2240     Telephone: 734-644-5131     Telephone: 330-4       Email: kristoffer.hinskey@arcadis.com     Analysis Ternaround Time     0       Sampler Name:     Analysis Ternaround Time     0       Analysis Ternaround Time     3 weeks     0       Sampler Name:     TAT if different from below     0       Sampler Name:     TAT if different from below     0       Sample Date     Sample Tracking No:     Total from the from below     0       Sample Date     Sample Time     Natrix     Containers & Preservatives     0000 007 (1 stress)       Sample Date     Sample Time     1     X     X     X       Sample Date     Sample Time     1     X     X     X       Sample Date     Sample Time     1     X     X     X       Size / 21     1137     X     6     N     6     X       Size / 21     1137     X     6     N     6     X     X       Size / 21     1137     X     6     N     6     X     X       Sample Date     Sample Disposal (A fee may be assessed if     mes are retained to	Telephone: 248-994-2240         Telephone: 734-644-5131         Telephone: 330-497-92           Email: kristoffer.hinskey@arcadis.com         Analysis Ternaround Time         Analysis           Sampler Name:         Analysis         TAT if different from below         3 weeks           Method of Shipment/Carrier:         10 day         2 weeks         90000 20 C-7 i-9000000000000000000000000000000000000	Telephone:         248-994-2240         Telephone:         734-644-5131         Telephone:         330-497-9396           Email:         kristoffer.hinskey@arcadis.com         Analysis Ternaround Time         Analysis           Sampler Name:         Analysis         TAT if different fem kelow         Image: Sampler Name:         Analysis           Method of Shipnert/Carrier:         3 wecks         1 weck         3 wecks         9002 gr	Telephone: 248-994-2240     Telephone: 734-644-5131     Telephone: 330-497-9396       Email: kristoffer,hinskey@arcadis.com     Xaalysis Ternaround Time     Analyses       Sampler Name:     Analyses     Nethod of Shipnen/Carrier:     Nethod o	Telephone: 248-994-2240       Email: kristoffer.hinskey@arcadis.com     Analysis Ternaround Time       Sampler Name:     Analysis Ternaround Time       Analysis Ternaround Time     Analysis       Sampler Name:     Analysis Ternaround Time       Analysis Ternaround Time     Analysis       Sampler Name:     Analysis Ternaround Time       Analysis Ternaround Time     Analysis       Sampler Name:     Analysis Ternaround Time       Method of Shipment/Carrier:     I weeks       Shipping/Tracking No:     I week       Sample Date     Sample Time # ##################################	Telephone:     244-994-2240     Telephone:     734-644-5131     Telephone:     330-497-9396       Email:     kristoffer.hinskey@arcadis.com     Analysis Ternaround Time     Analysis     Analysis       Sampler Name:     Analysis     TAT if different tool below     B     B       Nethod of Shipment/Carrier:     10 day     2 weeks     B     B     B       Shipping/Tracking No:     Matrix     Constances & Preservatives     B	Telephone:         248-994-2240         Telephone:         734-644-5131         Telephone:         30-497-39%           Email:         kristoffer.hinskey@arcadis.com         Analysis furmaround fine         Analysis         Analysis         Analysis           Sampler Name:         Analysis furmaround fine         3 weeks         9 </td

# 6/10/2021

Client       Arcan Facility         Client       Arcan facility         Cooler Received on 5-2L-21       Opened on 5-2L-21         FedEx:1*       Grant Strange Location         Receipt After-bours: Drop-off Date/Time       Storage Location         TestAmerica Cooler #       The write         Packing material used: Bubble Wrap       Foam Box         COLANT:       Water         None       Other         1.       Cooler temperature upon receipt         1.       Storage Location         1.       Cooler temperature upon receipt         2.       Were tamper/custody seals on the outside of the cooler(3) signed & dated?         -Were tamper/custody seals intact and uncompromised?       No         3.       Shippers' packing slip attached to the cooler(s)?       Yes No         4.       Did custody papers accompany the sample(s)?       Yes No <t< th=""></t<>
Cooler Received on 5-24-21       Opened on 5-24-21       Trent         FedEx: 1 <sup>st</sup> Grd Exp       UPS FAS Copper Client Drop Off TestAmerica Courier       Other         Receipt After-hours: Drop-off Date/Time       Storage Location         TestAmerica Cooler #
FedEx: 1st Grd Exp       UPS       FAS       Clippe       Client Drop Off       TestAmerica Courier       Other         Receipt After-hours: Drop-off Date/Time       Storage Location
TestAmerica Cooler #       Foam Box       Client Cooler.       Box       Other
Packing material used:       Bubble Wrap       Foam       Plastic Pag       None       Other         COOLANT:       Wetels       Blue Ice       Dry Ice       Water       None         I       Cooler temperature upon receipt       Image: See Mutiple Cooler Form       Image: See Mutiple Cooler Form       Image: See Mutiple Cooler Form         IR GUN# IR-11 (CF +0.1 °C)       Observed Cooler Temp.       °C       °C       °C         2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity       Vere No       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?       Were No       No       NA         -Were tamper/custody seals intact and uncompromised?       Were No       No       NA         3. Shippers' packing slip attached to the cooler(s)?       Yes       No       NA         6. Was/were the person(s) who collected the samples clearly identified on the COC?       No       No       No         7. Did custody papers relinquished & signed in the appropriate place?       No       No       No       No         8. Could all bottle labels (ID/Dater/Time) be reconciled with the COC?       No       No       No       No         9. For each sample, does t
COOLANT:       Get Law       Blue Ice       Dry Ice       Water       None         1.       Cooler temperature upon receipt       See Multiple Cooler Form       See Multiple Cooler Form       See Multiple Cooler Temp.       See Corrected Cooler Temp.       See No         -Were tamper/custody seals on the outside of the cooler(s)?       If were tamper/custody seals intact and uncompromised?       No       NA       NA         3.       Shippers' packing slip attached to the cooler(s)?       Yes No       NA       VOAs       Oil and Grease       Oil and Grease       Oil and Grease       No       NA         4.       Did custody papers accompany the samples (slearly identified on the COC?       No       No       No       No       No       No       No       No
IR GUN# IR-11 (CF +0.1 °C) Observed Cooler Temp. 2.7 °C Corrected Cooler Temp. 6.8 °C IR GUN #IR-12 (CF +0.2 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity / ·Were the seals on the outside of the cooler(s) signed & dated? ·Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? ·Were tamper/custody seals intact and uncompromised? 3. Shippers' packing slip attached to the cooler(s)? 5. Were the custody papers accompany the sample(s)? 5. Were the custody papers relinquished & signed in the appropriate place? 6. Was/were the person(s) who collected the samples clearly identified on the COC? 7. Did all bottle labels (ID/Date/Time) be reconciled with the COC? 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? 9. For each sample, does the COC specify preservatives (2/N), # of containers (2/N), and sample type of grab/comp(2/N)? 10. Were correct bottle(s) used for the test(s) indicated? 11. Sufficient quantity received to perform indicated analyses? 12. Are these work share samples and all listed on the COC? 13. Were all preserved sample(s) at the correct pH upon receipt? 14. Were VOAs on the COC? 15. Were air bubbles >6 mm in any VOA vials? 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>Cove(co</u> 17. Was a LL Hg or Me Hg trip blank present? 17. Was a LL Hg or Me Hg trip blank present? 17. Was a LL Hg or Me Hg trip blank present? 18. Were VOAs on the COC? 19. Was a LL Hg or Me Hg trip blank present? 19. Were all preserved in the cooler(s)? Trip Blank Lot # <u>Cove(co</u> 10. Was a LL Hg or Me Hg trip blank present? 10. Was a LL Hg or Me Hg trip blank present? 10. Were VOAs on the CoC? 11. Sufficient quantity received to perform indicated and VA vials? 12. Was a LL Hg or Me Hg trip blank present? 13. Were all preserved in the cooler(s)? Trip Blank Lot # <u>Cove(co</u> 14. Were VOAs on the CoC? 15. Were all preserved in the cooler(s)? Trip Blank Lot # <u>Cove(c</u>
<ul> <li>Were the seals on the outside of the cooler(s) signed &amp; dated?</li> <li>Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?</li> <li>Were tamper/custody seals intact and uncompromised?</li> <li>Shippers' packing slip attached to the cooler(s)?</li> <li>Did custody papers accompany the sample(s)?</li> <li>Were the custody papers relinquished &amp; signed in the appropriate place?</li> <li>Was/were the person(s) who collected the samples clearly identified on the COC?</li> <li>Did all bottle labels (ID/Date/Time) be reconciled with the COC?</li> <li>For each sample, does the COC specify preservatives (P/N), # of containers (NN), and sample type of grab/comp(DN)?</li> <li>Were correct bottle(s) used for the test(s) indicated?</li> <li>Sufficient quantity received to perform indicated analyses?</li> <li>Are these work share samples and all listed on the COC?</li> <li>Were all preserved sample(s) at the correct pH upon receipt?</li> <li>Were VOAs on the COC?</li> <li>Were air bubbles &gt;6 mm in any VOA vials?</li> <li>Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>Cover(co)</u></li> <li>Was a LL Hg or Me Hg trip blank present?</li> </ul>
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)
20. SAMPLE PRESERVATION
Sample(s) were further preserved in the laboratory.
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**



June 10, 2021

Kris Hinskey Arcadis Inc 10559 Citation Ave Suite 100 Brighton, MI 48116

CADENA project ID: E203631 Project: Ford Livonia Transmission Project - OFF-SITE - Soil Gas and Groundwater Project number: 30080642.402.04\_W01 OFF-SITE GW Event Specific Scope of Work References: Sample COC Laboratory: TestAmerica - North Canton Laboratory submittal: 150122-1 Sample date: 2021-05-21 Report received by CADENA: 2021-06-10 Initial Data Verification completed by CADENA: 2021-06-10 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, Blank Contamination and Hold Time Exception were reviewed as part of our verification.

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

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

Please contact me if you have any questions.

Sincerely,

Jim Tomalia

Project Scientist

# **CADENA Valid Qualifiers**

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

# Analytical Results Summary

**Reportable Results Only** 

CADENA Project ID: E203631

Laboratory: TestAmerica - North Canton Laboratory Submittal: 150122-1

		Sample Name: Lab Sample ID: Sample Date:	TRIP BLA 2401502 5/21/20	1221	5		MW-188 240150 5/21/20	1222	21	
				Report		Valid		Report		Valid
	Analyte	Cas No.	Result	Limit	Units	Qualifier	Result	Limit	Units	Qualifier
GC/MS VOC										
<u>OSW-826</u>	<u>0B</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-826</u>	<u>OBBSim</u>									
	1,4-Dioxane	123-91-1					ND	2.0	ug/l	



# Ford Motor Company – Livonia Transmission Project

# **DATA REVIEW**

# Livonia, Michigan

Volatile Organic Compounds (VOC) Analysis

SDG # 240-150122-1 CADENA Verification Report: 2021-06-10

Analyses Performed By: TestAmerica North Canton, Ohio

Report # 41891R Review Level: Tier III Project: 30080642.402.04

# **SUMMARY**

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 240-150122-1 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) includes 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 Collection		Ana	lysis
Sample ID	Lab ID	Matrix	Date	Parent Sample	voc	VOC SIM
TRIP BLANK_136	240-150122-1	Water	05/21/21		Х	
MW-188S_052121	240-150122-2	Water	05/21/21		Х	Х

#### ANALYTICAL DATA PACKAGE DOCUMENTATION

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

Items Reviewed	Rep	orted		mance ptable	Not
	No	Yes	No	Yes	Required
1. Sample receipt condition		Х		Х	
2. Requested analyses and sample results		Х		Х	
3. Master tracking list		Х		Х	
4. Methods of analysis		Х		Х	
5. Reporting limits		Х		Х	
6. Sample collection date		Х		Х	
7. Laboratory sample received date		Х		Х	
8. Sample preservation verification (as applicable)		Х		Х	
9. Sample preparation/extraction/analysis dates		Х		Х	
10. Fully executed Chain-of-Custody (COC) form		Х		Х	
11. Narrative summary of Quality Assurance or sample problems provided		х		Х	
12. Data Package Completeness and Compliance		Х		Х	

#### **ORGANIC ANALYSIS INTRODUCTION**

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B and 8260B SIM. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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.
  - J+ The result is an estimated quantity, but the result may be biased high.
  - J- The result is an estimated quantity, but the result may be biased low.
  - UB Analyte considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - 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 8260B/8260B-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 calibrations were within the specified control limits.

#### 4. Internal Standard Performance

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

All internal standard responses were within control limits.

#### 5. Field Duplicate Analysis

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

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

#### 6. Compound Identification

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

No compounds were detected in the samples within this SDG.

#### 7. System Performance and Overall Assessment

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

#### DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 8260B/8260B-SIM	Rep	orted	Perfo Acce	Not	
	No	Yes	No	Yes	Required
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (G	C/MS)				
Tier II Validation					
Holding times/Preservation		Х		Х	
Tier III Validation					1
System performance and column resolution		Х		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		Х	
E. Reporting limits adjusted to reflect sample dilutions		Х		Х	
Notes:					

<u>Notes:</u>

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

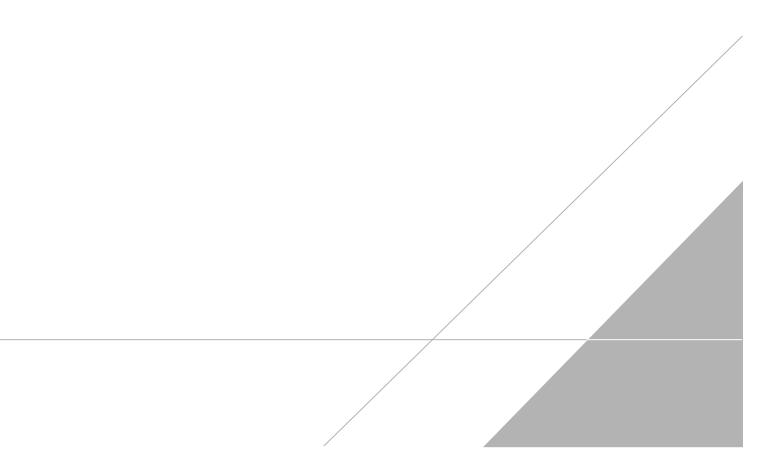
%D Percent difference

VALIDATION PERFORMED BY:	Hrishikesh Upadhyaya
SIGNATURE:	Curindialuced (
DATE:	June 25, 2021
PEER REVIEW:	Andrew Korycinski

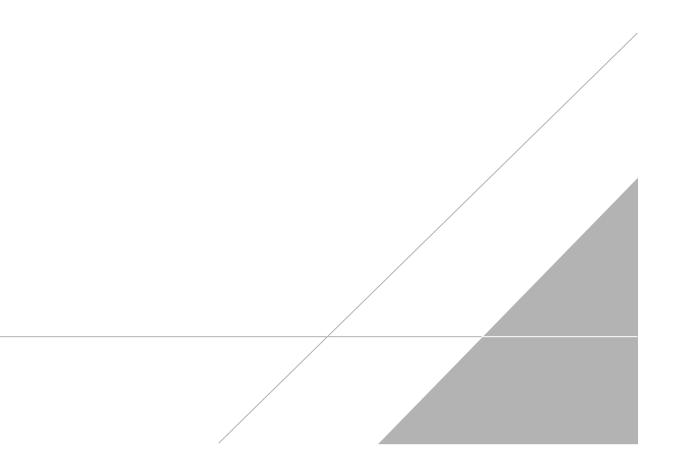
DATE: June 25, 2021

arcadis.com

# NO CORRECTIONS/QUALIFERS ADDED TO SAMPLE ANALYSIS DATA SHEETS



# CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS



0	7	10	<i>R</i> S	
0	1-1	V -		

1

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



100

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

Client Contact	Regula	tory program	:		DW		NP	DES		RCRA		- Ot	her [							90			
Company Name: Arcadis																							TestAmerica Laboratories,
Address: 28550 Cabot Drive, Suite 500	Client Project	Manager: Kris	Hinsk	tey		Site	Cor	itact: .	Julia	McClafferty	y			Lab	Conta	ct: Mi	ke Del	Monic	0				COC No:
	Telephone: 248	-994-2240				Tel	epho	ne: 73	4-644	4-5131				Tele	ррове	: 330-4	97-93	96					
City/State/Zip: Novi, MI, 48377													_										1 of 1 COCs
Phone: 248-994-2240	Email: kristofi	fer.hinskey@ar	cadis.	com		$\vdash$	ADS	ilysis I	urna	round Time	-		-	T			A	nalys	es	T T			For lab use only
	Sampler Name	:				TA	Ť ir di	fferent fi	rom bel	low	-												Walk-in client
Project Name: Ford LTP Off-Site		Andrew	11	Ra	0.44					weeks													
Project Number: 30080642.402.04	Method of Ship	ment/Carrier:		20-	4-11		10 d	ay		2 weeks   week			1						5				Lab sampling
									- 2	days ?		Filtered Sample (Y / N) Composite=C / Grab#G			S0B			8	1,4-Dioxane 8260B SIM				
PO # 30080642.402.04	Shipping/Track	ting No:							1	day		ۊٳػ		cis-1,2-DCE 8260B	Trans-1,2-DCE 8260B			Vinyt Chloride 8260B	E0E				Job/SDG No:
		1			Matrix		Co	ntainer	's & P	reservatives			1.1-DCE 8260B	8	l B	l _	_	de	e 83				
					_		T					d Sa	ω ω	Q	1,2-[	PCE 8260B	TCE 8260B	hlor	xan				
			1.1	Aqueuus	Sediment Solid Other:	H2SO4	HN03	_	HOP	Unpres Other		Filtered Composi	- A	12	-su	8	83	N N	ä				Sample Specific Notes /
Sample Identification	Sample Date	Sample Time	À.	νbγ	Sedim Solid Other	Ë	H	E	Na		1	ĒŰ	=	cis-	Tra	DO 0	10	Nu N	1.4				Special Instructions:
Trip Blank_ 136				x				1					X	X	X	X	X	X	X		T		1 Trip Blank
Mar 1985 000 01		1					-	0		-+ +-	-+-			+		<u> </u>				<b>├</b> +		+-	
MW-1885_052121	5121/21	1137		×				6				NG	5 X	X	X	X	X	X	X				3 VOAs for 8260B 3 VOAs for 8260B SIM
							1										-	F					
				_			1																
μ 						-+		+	-+-		-	-									+		
																				100	1		
Page 3.51						-			-			+	+	+	+	-		In			-		+
л Э																	11111						
														1	1111						A	1	
	+		+				-			-+	-	- 1	1110000							In us.	/		
												1						11111	N	-	1		
								+	+		-					MILLIN.	ofC	USIC		1-+			+
	_										_	1			0122	Char		1					
													2	40-15	20		1						
Possible Hazard Identification							Samn	le Dis	posal	( A fee may	he ass	essed		ries ar				1					
Non-Hazard Sammable in Irrita:	nt Poisc	on B	Unk	nown				Retur			Disp					Archive		nan i		onths			
Special Instructions/QC Requirements & Comments:																							
Submit all results through Cadena at jtomalia@cadenac	o.com. Cadena #	E203631																					
Level IV Reporting requested.																							
Relinquished by:	Company:	1015		Date/	Time:		22 (		Receiv	ved by:	~	0	. 1		1		Com	nany:	٨		/	_	Date/Time:
Relinquished by: 0 A mich M	Company: A	cadis	_	Dista	5/21/2	112	7 >		-		II /	4	10,	SI	ora	<u>36</u>			AC	cadi	5		5/21/21 1245
a littletty	An	adis		Date	1/25/2	1 10	31		Regen	yd by:	1.0	K	H	th	V	1	Com	Dany:	24	-			Date/Time:
Relinquished by	Company:	71		Date/		1 10	2	1	Reici	ved in Labo	TRIOL	by:	M	/		(	Com	panv:	V.I				Date/Time:
6 Martin Ballion Stand	1E/1	7		51	4SP	10	D	N		ane		M	X	-		/		F	TA	t			5-26-21 080
20008. Test-Imperial Laboratories, Inc. All rights reserved.				1				1	1				/										
SessAmerica & Dewign 1 <sup>er</sup> pre trademarks of TestAmerica Laboratones, Inc.								0															
21																							

#### Client Sample ID: TRIP BLANK\_136 Date Collected: 05/21/21 00:00

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

#### Lab Sample ID: 240-150122-1 **Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 18:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			06/03/21 18:45	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			06/03/21 18:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 18:45	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			06/03/21 18:45	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			06/03/21 18:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		75 - 130			-		06/03/21 18:45	1
4-Bromofluorobenzene (Surr)	89		47 - 134					06/03/21 18:45	1
Toluene-d8 (Surr)	98		69 - 122					06/03/21 18:45	1
Dibromofluoromethane (Surr)	89		78 - 129					06/03/21 18:45	1

#### Client Sample ID: MW-188S\_052121 Date Collected: 05/21/21 11:37 Date Received: 05/26/21 08:00

### Lab Sample ID: 240-150122-2

Matrix: Water

Method: 8260B SIM - Volat Analyte		Qualifier	(GC/IVIS) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			06/03/21 17:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 133					06/03/21 17:08	1
Method: 8260B - Volatile O	rganic Compo	unds (GC/	MS)						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			06/03/21 19:10	1

Surrogate	%Recovery Qual	ifior Limits		Propared Analyzed	Dil Fac
Vinyl chloride	1.0 U	1.0	0.20 ug/L	06/03/21 19:10	) 1
Trichloroethene	1.0 U	1.0	0.10 ug/L	06/03/21 19:10	) 1
trans-1,2-Dichloroethene	1.0 U	1.0	0.19 ug/L	06/03/21 19:10	) 1
Tetrachloroethene	1.0 U	1.0	0.15 ug/L	06/03/21 19:10	) 1
cis-1,2-Dichloroethene	1.0 U	1.0	0.16 ug/L	06/03/21 19:10	) 1
1,1-Dichloroethene	1.0 U	1.0	0.19 ug/L	06/03/21 19:10	) 1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		75 - 130		06/03/21 19:10	1
4-Bromofluorobenzene (Surr)	88		47 - 134		06/03/21 19:10	1
Toluene-d8 (Surr)	98		69 - 122		06/03/21 19:10	1
Dibromofluoromethane (Surr)	91		78 - 129		06/03/21 19:10	1