

July 6, 2017

Mr. Brian Sadowski New York State Department of Environmental Conservation 270 Michigan Avenue Buffalo, New York 14203-2915

### Re: Semiannual Periodic Review Report (February 15, 2017 to June 30, 2017) Order on Consent # B9-0369-91-04, Site Code #915148 3M Tonawanda, New York Facility

Dear Mr. Sadowski:

In accordance with the referenced Order on Consent (Order) and at 3M's direction, we are submitting the semiannual periodic review report for the 3M Tonawanda, NY facility for the period extending from February 15, 2017 to June 30, 2017.

Should you have any comments or questions, please contact me at 610-701-3677.

Very truly yours,

WESTON SOLUTIONS, INC.

Thomas A. Drew, P.G. Principal Project Manager

c: G. May, NYSDEC (w/enclosure) J. Martin, 3M (w/enclosure) K. Held, 3M (w/enclosure)



## PERIODIC REVIEW REPORT

Site Name and Location:	3M Facility, Tonawanda, New York
Registry Number:	915148
Order on Consent:	B9-0369-91-04
3M Project Contacts:	Jeannie Martin (3M Corporate) Keith Held (3M Tonawanda)
NYSDEC Project Lead:	Glenn May
Reporting Period:	February 15, 2017 to June 30, 2017

### **Background**

The New York State Department of Environmental Conservation (NYSDEC) issued a Record of Decision (ROD) (Registry No. 915148) for the 3M facility in Tonawanda, New York. This ROD presents the selected remedial action for the Tonawanda facility based on the site's Administrative Record and public input. Following ROD issuance, the NYSDEC reclassified the 3M Tonawanda site from "Class 3 – Does not present a significant threat to the public health or environment – action may be deferred", to "Class 4 – Site properly closed – requires continued management."

3M is implementing the selected ROD remedy, No Further Action with Monitoring, under an Order on Consent (Index # B9-0369-91-04) (Order) according to the NYSDECapproved Operation and Maintenance Work Plan (O&M Work Plan), which was made part of the Order. The original O&M Work Plan called for:

- Filing a Declaration of Covenants and Restrictions with the property deed at the Erie County Clerk's Office. This was completed and was reported in the initial progress report for the period ending March 31, 2001.
- Performing long-term groundwater monitoring. Involved semiannual sampling of site monitoring wells MW-1, MW-2, MW-3, and MW-4 and annual sampling of the two site lysimeters, LY-1 and LY-2, with groundwater samples analyzed for carbon disulfide (CS<sub>2</sub>).
- Inspecting the completed interim remedial measures (IRMs) (includes the CS<sub>2</sub> tank system, and the catch basin and associated swale) and maintaining the integrity of the IRMs.



Semiannual periodic review reports have been submitted by 3M to NYSDEC and these reports summarize project activities that occurred in the previous reporting periods. In August 2005, the Five-Year Evaluation Report was submitted by 3M to NYSDEC and this report concluded that the selected remedy has been effective in meeting remediation goals outlined in the 1999 ROD and remains protective of human health and the environment. The aforementioned evaluation report also contained a recommended future course of action for the facility, including reductions in groundwater monitoring and reporting under the Order/O&M Plan.

By letter of May 18, 2006, NYSDEC provided comment on the Five-Year Evaluation Report. Based on the presence of  $CS_2$  in the subsurface environment, NYSDEC required continued monitoring at this facility, but required only one site monitoring well (MW-4) and one site lysimeter (LY-2) be monitored for  $CS_2$  on a semiannual basis and annual basis, respectively. According to the May 2006 NYSDEC correspondence, reporting on the maintenance of the drainage swale and associated catch basins would continue under the Order/O&M Plan; however, reporting on the continued operations, maintenance and inspection of the existing  $CS_2$  tank system could be completed by 3M under NYSDEC's Chemical Bulk Storage Program.

This periodic review report reflects the O&M monitoring and reporting modifications agreed upon with NYSDEC. Sampling of the reduced monitoring network under the modified O&M Plan was completed in April 2017. The results from this sampling event are presented herein, along with a description of any maintenance activity conducted in the swale. Also, the analytical results presented in this PRR will be uploaded into NYSDEC's EQuIS system.

### Summary of Activities Performed During the Reporting Period

The following is a summary of activities performed by 3M during the reporting period:

- Groundwater samples for CS<sub>2</sub> analysis were collected from monitoring well MW-4 (primary sample and duplicate sample) and lysimeter LY-02 on April 18, 2017 in accordance with the O&M Plan modifications approved by NYSDEC. Laboratory analytical results from the April 2017 sampling event are provided in this report.
- No maintenance activity was conducted in the subject drainage swale during the reporting period. Vegetation and grading in this swale are in good condition.



### **Groundwater Monitoring Results**

### Summary of Carbon Disulfide Water Analytical Results

	Sample ID and Result							
Sampling	<b>MW-4</b>	<b>MW-4 Duplicate</b>	LY-02					
Date	(µg/L)	(µg/L)	(mg/L)					
4/18/2017	0.34 J	0.24 J	260					

Notes: J - Result is less than the reporting limit of 5  $\mu$ g/L but greater than or equal to the method detection limit of 0.19  $\mu$ g/L and the concentration is an approximate value.

As noted above,  $CS_2$  was not detected above the reporting limit in the groundwater samples (primary and duplicate samples) collected from monitoring well MW-4 in April 2017.  $CS_2$  was detected at a concentration of 260 mg/L in the pore water sample collected from lysimeter LY-02. This finding is consistent with previous sample results. A copy of the analytical data package and completed well purging/sampling form for the April 2017 sampling event is provided in Attachment A.



## ATTACHMENT A WELL PURGING/SAMPLING FORM AND LABORATORY ANALYTICAL PACKAGE APRIL 2017 SAMPLING EVENT



# Well Evacuation/Sampling Form

SITE INFORMATION	- onau	und o			_		Ĺ	the	17	T
Well No.: MW-Q4				Weather: Sunny Cloudy Rain Temp: 58						1
				Sampler's	Sampler's Signature:					
WELL INFORMATION				·		$\overline{\Lambda}$		~		1
Protective Casing: Intact / Damaged					Concrete Base: (Intact / Damaged					
Locked: YES	Locked: YES NO				ieter: 2-I	NCH) 4-	NCH 6-IN	СН		
WELL EVACUATION INF	ORMAT	ION								
A. Total Depth (Top of Casing = TC	DC):	7	09,6	Well Evac	uation Met	hod		6		1
B. Depth to Water (DTW) (TOC): -31, 64					BAILER 2-Inch Gr	undfos				
			1,26	( )	Peristaltic	Pump				
D Durga Factor			0.16		Other (S	specify)				
E. One Well Volume:			2.6							
F. Three Well Volumes (gallons):				TOTAL VOLUME PURGED: <u>१९, श्</u> र						
INDICATOR PARAMETEI	RS									
Time	1351	1405	1415	1425		ſ				
Purge Rate (gal. per minute)			1							
Total Gallons Purged		1								
Temperature (°C):	14,9	12.0		<u> </u>		 				1
Specific Conductivity (s):		13.9	13.2	13.0					_	
pH:	437.7	2764	3490	3529						
SECONDARY PARAMETERS	8.89	11.88	11.31	9.21						
ORP (mV):	3164	32.01	32.11	32.10						
Dissolved Oxygen (mg/L):								7		
Turbidity:										
NAPL Observed: YES / (NO)	51.3	83.7	57.6	66.7 Well Pum	ned Drave	YES	/ (NO	<u> </u>		
ODOR: YES / NO				Other:	peu Dry.	115		)		
Odor Type: ( ) Solvent ( ) S	eptic ()	Other								
SAMPLE COLLECTION I	NFORM	ATION			SAMPL	E DATE	:Ч	18/17	7	
Sample No.			Time		S	ample N	0.		Time	
Media Sample ID: Muo-	24		1430	Rinsate Blank VESNO FR-MW-Ø4 1345						
Duplicate (YES/NO NW - ØY	Dun		1430	Field Blan						
Parameters: ()) 200 VOC CS 2	-	Fluorides		MW-Ø1 30,73 WATER MW-Ø2 32,00 LEVEL					R	
	) LY A) Non-filte	red		M	101 - 1	* - *	20113	*		<u> </u>
<ul> <li>( ) Metals (Total RCRA) Non-filtered</li> <li>( ) Metals (Total RCRA) Filtered</li> </ul>						12	25.00		LEVE	KS
				M	$\omega - \varphi$	83	33,60	4		
	<u></u>		СОММ	ENTS				-		
C.S. (End)				W	ell Pumpe	d Dry:	YES /	NO		
CS2 (5pp)	2)			$\mathbf{V}$	olume Pur	ged: 2	0			
	/			W	ell Requir	es Mainten	ance? Y	ÆS /	NO	
				A	ccess Requ	ires Mainte	enance?	YES /	NO	

Purge Factors: 1" (0.04); 2" (0.16); 3" (0.37); 4" (0.65); 6" (1.47); 8" (2.61); 10" (4.08)



THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

# TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

# TestAmerica Job ID: 480-116462-1

Client Project/Site: 3M Tonawanda Sampling Event: 3M Tonawanda, NY - Semi-Annual Monit.

# For:

Weston Solutions, Inc. 1400 Weston Way PO BOX 2653 West Chester, Pennsylvania 19380

Attn: Mr. Tom Drew

Joeph V. Giacomayje

Authorized for release by: 5/1/2017 9:39:46 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

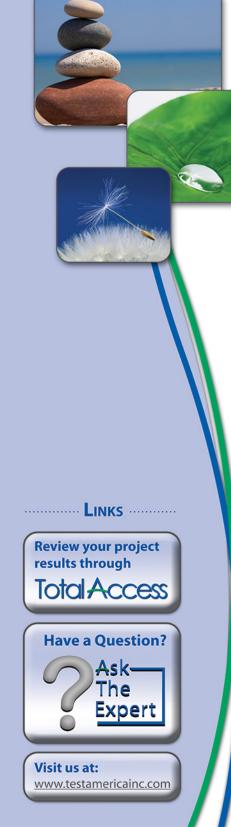
Designee for

Judy Stone, Senior Project Manager (484)685-0868 judy.stone@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.



# **Table of Contents**

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	10
Lab Chronicle	11
Certification Summary	12
Method Summary	13
Sample Summary	14
Chain of Custody	15
Receipt Checklists	16

3

5

### Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# Glossary

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	8
CFL	Contains Free Liquid	
CNF	Contains no Free Liquid	9
DER	Duplicate error ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision level concentration	
MDA	Minimum detectable activity	
EDL	Estimated Detection Limit	
MDC	Minimum detectable concentration	
MDL	Method Detection Limit	44
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
QC	Quality Control	
RER	Relative error ratio	
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)	

### Job ID: 480-116462-1

### Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-116462-1

### Receipt

The samples were received on 4/18/2017 3:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

### GC/MS VOA

Method(s) 8260C: Surrogate recovery for the following sample was outside the upper control limit: Trip Blank (480-116462-1) and MW-04 (480-116462-3). The samples did not contain any target analytes above the reporting limit (RL); therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The surrogate recovery for the blank associated with analytical batch 480-354700 was outside the upper control limits. The following sample was impacted: Trip Blank (480-116462-1) and MW-04 (480-116462-3).

Method(s) 8260C: Surrogate recovery for the following samples was outside the upper control limit: LY-02 (480-116462-5). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: LY-02 (480-116462-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The surrogate recovery for the blank associated with analytical batch 480-354813 was outside the upper control limits.

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

TestAmerica Job ID: 480-116462-1

Lab Sample ID: 480-116462-1

# 2 3 4 5 6 7 8 9 10 11 12

Client Sample ID: Trip Blank

No Detections.

#### Client Sample ID: FB-MW-04 Lab Sample ID: 480-116462-2 No Detections. Client Sample ID: MW-04 Lab Sample ID: 480-116462-3 Analyte Result Qualifier RL MDL Unit Dil Fac D Method Prep Type Carbon disulfide 0.34 J 5.0 0.19 ug/L 8260C Total/NA 1 Client Sample ID: MW-04 DUP Lab Sample ID: 480-116462-4 Analyte Result Qualifier MDL Unit Dil Fac D Method RL Prep Type Carbon disulfide 0.24 J 5.0 0.19 ug/L 1 8260C Total/NA Lab Sample ID: 480-116462-5 Client Sample ID: LY-02 Analyte Dil Fac D Method Result Qualifier RL MDL Unit Prep Type 260000 40000 8000 8260C Carbon disulfide 1500 ug/L Total/NA

6

#### **Client Sample ID: Trip Blank** Lab Sample ID: 480-116462-1 Date Collected: 04/18/17 13:00 Matrix: Water Date Received: 04/18/17 15:35 Method: 8260C - Volatile Organic Compounds by GC/MS Analyte **Result Qualifier** RL MDL Unit D Prepared Analyzed Dil Fac Carbon disulfide ND 5.0 0.19 ug/L 04/29/17 01:22 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 124 X 77 - 120 04/29/17 01:22 1 Toluene-d8 (Surr) 98 80 - 120 04/29/17 01:22 1 4-Bromofluorobenzene (Surr) 113 73 - 120 04/29/17 01:22 1 Client Sample ID: FB-MW-04 Lab Sample ID: 480-116462-2 Date Collected: 04/18/17 13:45 Matrix: Monitor Well Date Received: 04/18/17 15:35 Method: 8260C - Volatile Organic Compounds by GC/MS RL Analyte Result Qualifier MDL Unit D Prepared Analyzed Dil Fac 04/29/17 01:49 Carbon disulfide ND 5.0 0.19 ug/L 1 %Recovery Qualifier Dil Fac Surrogate Limits Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 118 77 - 120 04/29/17 01:49 97 Toluene-d8 (Surr) 80 - 120 04/29/17 01:49 1 4-Bromofluorobenzene (Surr) 114 73 - 120 04/29/17 01:49 1 Client Sample ID: MW-04 Lab Sample ID: 480-116462-3 Date Collected: 04/18/17 14:30 Matrix: Monitor Well Date Received: 04/18/17 15:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	0.34	J	5.0	0.19	ug/L			04/29/17 02:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	126	x	77 _ 120			-		04/29/17 02:16	1
Toluene-d8 (Surr)	96		80 - 120					04/29/17 02:16	1
4-Bromofluorobenzene (Surr)	109		73 - 120					04/29/17 02:16	1

## Client Sample ID: MW-04 DUP

### Date Collected: 04/18/17 14:30

Date Received: 04/18/17 15:35

Method: 8260C - Volatile Organic	Compounds	by GC/MS							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	0.24	J	5.0	0.19	ug/L			04/29/17 02:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		77 - 120			-		04/29/17 02:43	1
Toluene-d8 (Surr)	96		80 - 120					04/29/17 02:43	1
4-Bromofluorobenzene (Surr)	108		73 - 120					04/29/17 02:43	1

TestAmerica Buffalo

Lab Sample ID: 480-116462-4

**Matrix: Monitor Well** 

### Client Sample ID: LY-02 Date Collected: 04/18/17 15:10 Date Received: 04/18/17 15:35

### Lab Sample ID: 480-116462-5 Matrix: Monitor Well

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	260000		40000	1500	ug/L			04/30/17 00:48	8000
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	129	X	77 - 120			-		04/30/17 00:48	8000
Toluene-d8 (Surr)	99		80 - 120					04/30/17 00:48	8000
4-Bromofluorobenzene (Surr)	113		73 - 120					04/30/17 00:48	8000

TestAmerica Buffalo

# 1 2 3 4 5 6 7 8 9 10 11 12

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

Matrix: Monitor Wel	1				Prep Type: Total/NA
-				Percent Surrogate	e Recovery (Acceptance Limits)
		12DCE	TOL	BFB	
Lab Sample ID	Client Sample ID	(77-120)	(80-120)	(73-120)	
480-116462-2	FB-MW-04	118	97	114	
480-116462-3	MW-04	126 X	96	109	
480-116462-4	MW-04 DUP	119	96	108	
480-116462-5	LY-02	129 X	99	113	
Surrogate Legend					
12DCE = 1,2-Dichlo	roethane-d4 (Surr)				
TOL = Toluene-d8 (	Surr)				

BFB = 4-Bromofluorobenzene (Surr)

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

Matrix: Water					Prep Type: Total/NA	
_				Percent Surrog	gate Recovery (Acceptance Limits)	
		12DCE	TOL	BFB		
Lab Sample ID	Client Sample ID	(77-120)	(80-120)	(73-120)		1
480-116462-1	Trip Blank	124 X	98	113		
LCS 480-354700/4	Lab Control Sample	113	100	115		- 2
LCS 480-354813/4	Lab Control Sample	117	97	118		
MB 480-354700/6	Method Blank	115	98	112		
MB 480-354813/6	Method Blank	132 X	100	110		

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 480-354700/6	5										Client S	Sample ID: Metho	od Blank
Matrix: Water												Prep Type: 1	Fotal/NA
Analysis Batch: 354700													
		MB	MB										
Analyte	Re		Qualifier	RL		MDL U			D	Pr	epared	Analyzed	Dil Fac
Carbon disulfide		ND		5.0		0.19 u	g/L					04/28/17 23:26	1
		ΜВ	МВ										
Surrogate			Qualifier	Limits						Pr	epared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)		115		77 _ 120								04/28/17 23:26	
Toluene-d8 (Surr)		98		80 - 120								04/28/17 23:26	1
4-Bromofluorobenzene (Surr)		112		73 - 120								04/28/17 23:26	-
Lab Sample ID: LCS 480-354700/	4								Clie	ent	Sample	ID: Lab Control	Sample
Matrix: Water												Prep Type: 1	Total/NA
Analysis Batch: 354700													
-				Spike	LCS	LCS						%Rec.	
Analyte				Added	Result	Qualifie	ər	Unit	I	D	%Rec	Limits	
Carbon disulfide				25.0	23.7			ug/L			95	59 - 134	
	LCS	LCS											
Surrogate	%Recovery	Qual	ifier	Limits									
1,2-Dichloroethane-d4 (Surr)	113			77 _ 120									
Toluene-d8 (Surr)	100			80 - 120									
4-Bromofluorobenzene (Surr)	115			73 - 120									
				73 - 120							Client	ample ID: Metho	d Blank
Lab Sample ID: MB 480-354813/6				73 - 120							Client S	Sample ID: Metho	
Lab Sample ID: MB 480-354813/6 Matrix: Water				73 - 120							Client S	Sample ID: Metho Prep Type: 1	
Lab Sample ID: MB 480-354813/6		мв	мв	73 - 120							Client S		
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813	<b>i</b>					MDL U	nit		D			Prep Type: 1	Fotal/N#
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte	<b>i</b>		MB Qualifier	73 - 120 		<b>MDL</b> <u>U</u>			<u>D</u>		Client S		Dil Fa
Lab Sample ID: MB 480-354813/6 Matrix: Water	<b>i</b>	esult ND	Qualifier	RL					<u>D</u>			Prep Type: 1 Analyzed	Dil Fa
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte	Re	ND MB		RL					<u>D</u>	Pr		Prep Type: 1 Analyzed	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate	Reco	ND MB	Qualifier MB Qualifier						D	Pr	epared	Analyzed	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate 1,2-Dichloroethane-d4 (Surr)	Reco	MB very	Qualifier MB Qualifier						D	Pr	epared	Analyzed 04/30/17 00:20 Analyzed	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide	Re %Reco	esult ND MB very 132	Qualifier MB Qualifier						D	Pr	epared	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr)	Re	ND MB very 132 100	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120						Pr Pr	epared	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20	Dil Fa
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/	Re	ND MB very 132 100	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120						Pr Pr	epared	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20           01/30/17 00:20           01/30/17 00:20           01/30/17 00:20           01/30/17 00:20           01/30/17 00:20           01/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water	Re	ND MB very 132 100	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120						Pr Pr	epared	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20           04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/	Re	ND MB very 132 100	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120	LCS					Pr Pr	epared	Prep Type: 7 Analyzed 04/30/17 00:20 Analyzed 04/30/17 00:20 04/30/17 00:20 04/30/17 00:20 04/30/17 00:20 04/30/17 00:20 04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water Analysis Batch: 354813 Analyte	Re	ND MB very 132 100	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120           73 - 120           Spike           Added	Result	0.19 u	g/L	Unit	Clie	Pr Pr	epared epared Sample	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water Analysis Batch: 354813	Re	ND MB very 132 100	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120           73 - 120           Spike		0.19 u	g/L	Unit ug/L	Clie	Pr Pr	epared epared Sample	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water Analysis Batch: 354813 Analyte	Re	MB           very           132           100           110	Qualifier MB Qualifier	RL           5.0           Limits           77 - 120           80 - 120           73 - 120           Spike           Added	Result	0.19 u	g/L		Clie	Pr Pr	epared epared Sample	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water Analysis Batch: 354813 Analyte	 %Recon	esult         ND           MB         wery           132         100           110         110	Qualifier MB Qualifier X	RL           5.0           Limits           77 - 120           80 - 120           73 - 120           Spike           Added	Result	0.19 u	g/L		Clie	Pr Pr	epared epared Sample	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide	   4   LCS	esult         ND           MB         wery           132         100           110         110	Qualifier MB Qualifier X	Limits           77 - 120           80 - 120           73 - 120           Spike           Added           25.0	Result	0.19 u	g/L		Clie	Pr Pr	epared epared Sample	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac Dil Fac Dil Fac
Lab Sample ID: MB 480-354813/6 Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide <i>Surrogate</i> 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) Lab Sample ID: LCS 480-354813/ Matrix: Water Analysis Batch: 354813 Analyte Carbon disulfide Surrogate	Re %Recon	esult         ND           MB         wery           132         100           110         110	Qualifier MB Qualifier X	Limits           77 - 120           80 - 120           73 - 120           Spike           Added           25.0           Limits	Result	0.19 u	g/L		Clie	Pr Pr	epared epared Sample	Analyzed           04/30/17 00:20           Analyzed           04/30/17 00:20	Dil Fac Dil Fac Dil Fac

### **GC/MS VOA**

### Analysis Batch: 354700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-116462-1	Trip Blank	Total/NA	Water	8260C	
480-116462-2	FB-MW-04	Total/NA	Monitor Well	8260C	
480-116462-3	MW-04	Total/NA	Monitor Well	8260C	
480-116462-4	MW-04 DUP	Total/NA	Monitor Well	8260C	
MB 480-354700/6	Method Blank	Total/NA	Water	8260C	
LCS 480-354700/4	Lab Control Sample	Total/NA	Water	8260C	
nalysis Batch: 3548 <sup>.</sup>	13				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
480-116462-5	LY-02	Total/NA	Monitor Well	8260C	
MB 480-354813/6	Method Blank	Total/NA	Water	8260C	
LCS 480-354813/4	Lab Control Sample	Total/NA	Water	8260C	

ſ

	le ID: Trip B						Lal	b Sample	D: 480-116462-1
	: 04/18/17 13:0 : 04/18/17 15:3								Matrix: Water
_	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	8260C		1	354700	04/29/17 01:22	ARS	TAL BUF	
Client Samp	le ID: FB-MV	V-04					Lal	b Sample	e ID: 480-116462-2
Date Collected	: 04/18/17 13:4	5							Matrix: Monitor Well
Date Received	: 04/18/17 15:3	5							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	8260C		1	354700	04/29/17 01:49	ARS	TAL BUF	
Client Samp	le ID: MW-04	L					Lal	b Sample	e ID: 480-116462-3
Date Collected	: 04/18/17 14:3	0						-	Matrix: Monitor Well
Date Received	: 04/18/17 15:3	5							
-	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	8260C		1	354700	04/29/17 02:16	ARS	TAL BUF	
Client Samp	le ID: MW-04	I DUP					Lal	b Sample	e ID: 480-116462-4
	: 04/18/17 14:3							-	Matrix: Monitor Well
Date Received	: 04/18/17 15:3	5							
_	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	8260C		1	354700	04/29/17 02:43	ARS	TAL BUF	
Client Samp	le ID: LY-02						Lal	b Sample	e ID: 480-116462-5
	: 04/18/17 15:1	0						-	Matrix: Monitor Well
Date Received	: 04/18/17 15:3	5							
_	Batch	Batch		Dilution	Batch	Prepared			
	_		-	Fastan			A	1	
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Client: Weston Solutions, Inc. Project/Site: 3M Tonawanda

### Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18

TestAmerica Buffalo

### Client: Weston Solutions, Inc. Project/Site: 3M Tonawanda

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF

### Protocol References:

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

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

# Sample Summary

Client: Weston Solu Project/Site: 3M To			TestAmerica Job ID:	480-116462-1
				3
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-116462-1	Trip Blank	Water	04/18/17 13:00	04/18/17 15:35
480-116462-2	FB-MW-04	Monitor Well	04/18/17 13:45	04/18/17 15:35
480-116462-3	MW-04	Monitor Well	04/18/17 14:30	04/18/17 15:35 5
480-116462-4	MW-04 DUP	Monitor Well	04/18/17 14:30	04/18/17 15:35
480-116462-5	LY-02	Monitor Well	04/18/17 15:10	04/18/17 15:35
				8
				9
				1
				1:
				1

Call-all	84 194
00 - (_) - (_)	
	e I Hoo
B	な影響を
Automienten	95999 145 8 1

g
$\bigcirc$
~~~ <u>}</u>
S
00
4

s that the stature is the subscription of the subscription of the subscription of the		Chain o	Chain of Custody Record	T824T0	TestAmerica
Amierst, WY 14228 Plone: 716.691.2600 Fax: 716.691.7991	16			65.000M	Tet America I aborationiae Inc
	Regulatory Program:		CRA Other:		
Client Contact	Project Manager: / OM De	S S	X:	Date	COC No:
Company Name: Wester Solutions	701.3		Lab Contact: Indu Stre	Carrier Carrier Carrier	of / cocs
- C.S.	Analysis Turnaround				Sampler.
City/State/Zip: U. Charle DA 19380	CALENDAR DAYS	WORKING DAYS			For Lab Use Only:
8:610.701.0583	TAT if different from Below	-			Walk-in Client:
l	2 weeks		/ / /		Lab Sampling:
S.		(	( ) ()		
PO# 1 during of 1 N /	1 day	oluu	<u>()</u>		
Sample Identification	Sample         Sample           Date         Time         G=Grab)	# of # of # ef # ef # ef # ef # ef # ef	Perfo		Sample Specific Notes:
Trio Black	11	- 3			
FB-1MW-04	-	M			S. O.
Ma1-04	1430	m			
MA	1/1/30	. m			1 SDDA
3		n 			- LLO
4					Defertion
of					
16					1 1
Preservation Used: 1= Ice, 2= HCP, 3= H2SO4; 4=HNO3, 5=NaOH, 6= Other	S=NaOH; 6= Other	「「「「「「」」」」			
	Please List any EPA Waste Codes for the sample in the	le sample in the	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	assessed if samples are retain	ed longer than 1 month)
Comments Section if the lab is to dispose of the sample.					
Non-Hazard Elammable Skin Irritant	Duknown	'n	Return to Client     Di	Disposal by Lab	Months
Special Instructions/QC Requirements & Comments:					
Austody Seals Intag:	Custody Seal No.:		Cooler Temp. (°C): Obs'd		Therm ID No.:
Revenduishedby, II	Company: 1 [1	Date/Time: 4/10/17	Received by Caref	Company:	Date/Time: ダイダーフ / 5 35-
Amiluquis (eduby)		Date/Time: 535	Recisived by:	Company:	Date/Time:
Binfuished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
7				,	

14

Client: Weston Solutions, Inc.

### Login Number: 116462 List Number: 1

Creator: Williams, Christopher S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below ackground	True	
he cooler's custody seal, if present, is intact.	True	
he cooler or samples do not appear to have been compromised or ampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
here are no discrepancies between the sample IDs on the containers and ne COC.	True	
Samples are received within Holding Time (Excluding tests with immediate ITs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
ppropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
here is sufficient vol. for all requested analyses, incl. any requested /IS/MSDs	True	
/OA sample vials do not have headspace or bubble is <6mm (1/4") in liameter.	True	
i necessary, staff have been informed of any short hold time or quick TAT needs	True	
<i>Iultiphasic samples are not present.</i>	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	WESTON
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

List Source: TestAmerica Buffalo