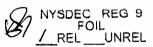


Weston Solutions, Inc.
1400 Weston Way
P.O. Box 2653
West Chester, Pennsylvania 19380
610-701-3000 • Fax 610-701-3186
www.westonsolutions.com

### RECEIVED

JAN 1 4 2009



January 13, 2009

Mr. Glenn May
Division of Environmental Remediation
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

W.O. No. 02181.086.017

Re: Progress Report – July 2008 to December 2008

3M Tonawanda, New York Facility

Order on Consent # B9-0369-91-04, Site Code #915148

Dear Mr. May:

In accordance with the referenced Order on Consent (Order) and at 3M's direction, we are submitting the progress report for the 3M Tonawanda, NY facility for the period extending from July 2008 to December 2008.

Should you have any comments or questions, please contact me at 610-701-7302.

Very truly yours,

WESTON SOLUTIONS, INC.

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

c: Division of Environmental Remediation, Albany (w/o enclosure)

Director, Bureau of Environmental Exposure Investigation, Troy (w/o enclosure)

Division of Environmental Enforcement, Buffalo (w/o enclosure)

C. O'Connor - New York State Department of Health, Buffalo (w/enclosure)

J. Pettinelli, 3M (w/ enclosure)

K. Held, 3M (w/enclosure)



#### **PROGRESS REPORT**

Site Name and Location: 3M Facility, Tonawanda, New York

Registry Number: 915148

**Order on Consent:** B9-0369-91-04

**3M Project Contacts:** Justin Pettinelli (3M Corporate)

Keith Held (3M Tonawanda)

**NYSDEC Project Lead:** Glenn May

**Reporting Period:** July 2008 to December 2008

#### **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 NYSDEC-approved 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 monitor 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 progress 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> tank system could be completed by 3M under NYSDEC's Chemical Bulk Storage Program.

This progress 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 November 2008. The results from this sampling event are presented herein, along with a description of any maintenance activity conducted in the swale.

#### **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) in November 2008 in accordance with the O&M Plan modifications approved by NYSDEC. Laboratory analytical results from the November 2008 sampling event are provided in this report.
- Annual inspection of the subject drainage swale was performed by facility personnel on November 18, 2008. During the inspection, the drainage swale was found to be well maintained. Vegetation and grading in the drainage swale area was in good condition. No maintenance activity was conducted in the swale during the reporting period.

#### **Groundwater Monitoring Results**

#### Summary of Carbon Disulfide Water Analytical Results (mg/L)

	Sample ID	and Result
Sampling Date	MW-4	MW-4 Duplicate
11/24/08	ND	ND

Notes: ND - Not detected. The reporting limit for  $CS_2$  is 5  $\mu$ g/L.



As noted above, CS<sub>2</sub> was not detected in the groundwater samples (primary and duplicate samples) collected from monitoring well MW-4 in November 2008. This result is consistent with previous sampling data from June 2008. A copy of the analytical data package for the November 2008 sampling event is provided in Attachment A.



# ATTACHMENT A LABORATORY ANALYTICAL PACKAGE NOVEMBER 2008 SAMPLING EVENT



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Job#: <u>A08-F009</u>

Project#: NY1A8679

Site Name: <u>3M Tonawanda</u>, <u>NY - Semi-Anual Monitoring</u>
Task: <u>3M Tonawanda</u>, <u>NY - Semi-Annual Monitoring</u>

Mr. Tom Drew Roy F. Weston, Inc. 1400 Weston Way West Chester, PA 19380

TestAmerica Laboratories Inc.

Mark A. Nemec Project Manager

12/10/2008



## **TestAmerica Buffalo Current Certifications**

#### As of 11/3/2008

STATE	Program	Cert # / Lab ID
Arkansas	CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA,NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP,SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA,CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	NELAP CWA,RCRA	68-00281
Tennessee	SDWA	02970
Texas*	NELAP CWA, RCRA	T104704412-08-TX
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington*	NELAP CWA,RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA,RCRA	252

<sup>\*</sup>As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

3/14

#### SAMPLE SUMMARY

			SAMPI	LED	RECEIVE	ED
LAB SAMPLE ID	CLIENT SAMPLE ID	<u>MATRIX</u>	DATE	TIME	DATE	TIME
A8F00903	FB-MW-04	WATER	11/24/2008	11:25	11/24/2008	12:48
A8F00901	MW-04	GW	11/24/2008	12:20	11/24/2008	12:48
A8F00902	MW-04 DUP	GW	11/24/2008	12:20	11/24/2008	12:48
A8F00904	TRIP BLANK	WATER	11/24/2008	11:00	11/24/2008	12:48

#### METHODS SUMMARY

Job#: <u>A08-F009</u>

Project#: NY1A8679

Site Name: 3M Tonawanda, NY - Semi-Anual Monitoring

ANALYTICAL

PARAMETER METHOD METHOD 8260 - Carbon Disulfide SW8463 8260

#### References:

"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96. SW8463

#### SDG NARRATIVE

Job#: A08-F009

Project#: NY1A8679

Site Name: 3M Tonawanda, NY - Semi-Anual Monitoring

#### General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

#### Sample Receipt Comments

#### A08-F009

Sample Cooler(s) were received at the following temperature(s);  $15.6\,^{\circ}$ C Samples were received at a temperature of  $15.6\,^{\circ}$ C. However, ice was present in the cooler and as the samples were collected the same day, it was not possible for the samples to cool to  $4\,^{\circ}$ C prior to receipt. There is no impact on the data.

#### GC/MS Volatile Data

No deviations from protocol were encountered during the analytical procedures.

#### \*\*\*\*\*

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.



#### DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

#### **ORGANIC DATA QUALIFIERS**

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank, as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
- P This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- Indicates coelution.
- \* Indicates analysis is not within the quality control limits.

#### **INORGANIC DATA QUALIFIERS**

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- E Indicates a value estimated or not reported due to the presence of interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- G Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
- \* Indicates the spike or duplicate analysis is not within the quality control limits.
- Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

= Not Detected
8
Applicable
= Not
ΑN

Client ID Job No Lab ID Sample Date		FB-MW-04 A08-F009 11/24/2008	A8F00903	MW-04 A08-F009 11/24/2008	A8F00901	MW-04 DUP A08-F009 11/24/2008	A8F00902		
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Carbon Disulfide	UG/L	ND	5.0	ND	5.0	ND	5.0	NA	
Chlorobenzene-D5	%	87	50-200	87	50-200	85	50-200	NA	
1,4-Difluorobenzene	*	92	20-200	92	20-200	96	20-200	NA	
1,4-Dichlorobenzene-D4	*	98	20-200	87	20-200	88	20-200	NA	
Toluene-D8	*	101	71-126	102	71-126	66	71-126	NA	
p-Bromofluorobenzene	*	93	73-120	76	73-120	93	73-120	NA	
1,2-Dichloroethane-D4	*	96	66-137	76	66-137	96	66-137	NA	
					_				

Rept: AN1246

3M Tonawanda, NY - Semi-Anual Monitoring 3M Tonawanda, NY - Semi-Annual Monitoring METHOD 8260 - CARBON DISULFIDE

Date: 12/10/2008 Time: 11:38:59

Chronology and QC Summary Package

Client ID Job No Lab ID Sample Date		VBLK62 A08-F009	A8B2719902						
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Carbon Disulfide	] 7/9n]	ND	5.0	NA		NA		NA	
Chlorobenzene-D5	.%	93	50-200	NA		AN		NA	
1,4-Difluorobenzene	%	96	20-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	35	20-500	AN		NA		AN	
Toluene-D8	*	101	71-126	AN		NA		NA	
p-Bromofluorobenzene	%	76	73-120	NA		NA		NA	
1,2-Dichloroethane-D4	*	76	66-137	NA		NA		NA	

Rept: AN1246

3M Tonawanda, NY - Semi-Anual Monitoring 3M Tonawanda, NY - Semi-Annual Monitoring METHOD 8260 - CARBON DISULFIDE

Date: 12/10/2008 Time: 11:39:13

	Reporting Limit						
	Sample Value	NA	NA	A N	AN	NA	NA
	Reporting Limit						
	Sample Value	NA	NA	A A	AN	NA	NA
	Reporting Limit						
	Sample. Value	NA	NA	A A	ΝΑ	NA	NA
A8F00904	Reporting Limit	5.0	50-200	50-200	71-126	73-120	66-137
TRIP BLANK A08-F009 11/24/2008	Sample Value	ND	85	88 8	86	93	76
	Units	ne/r	*	* *	* *	*	*
client ID Job No Sample Date	Analyte	Carbon Disulfide	Chlorobenzene-D5	1,4-Difluorobenzene	Toluene-D8	p-Bromofluorobenzene	1,2-Dichloroethane-D4

Rept: AN1246

3M Tonawanda, NY - Semi-Anual Monitoring 3M Tonawanda, NY - Semi-Annual Monitoring METHOD 8260 - CARBON DISULFIDE

Date: 12/10/2008 Time: 11:39:13

Date: 12/10/2008 Time: 11:39:45		WESTON SAMI	WESTON SOLUTIONS, INC. SAMPLE CHRONOLOGY	Rept: AN1248 Page: 1
METHOD 8260 - CARBON DISULFIDE	FIDE			
Client Sample ID Job No & Lab Sample ID	FB-MW-04 A08-F009 A8F00903	MW-04 A08-F009 A8F00901	MW-04 DUP A08-F009 A8F00902	
Sample Date	11/24/2008 11:25	11/24/2008 12:20	11/24/2008 12:20	
Received Date	11/24/2008 12:48		11/24/2008 12:48	
Extraction Date				
Analysis Date	12/05/2008 00:39	12/04/2008 23:44	12/05/2008 00:12	
Extraction HT Met?	1	•	•	
Analytical HT Met?	YES	YES	YES	
Sample Matrix	WATER	M9	MS	
Dilution Factor	1.0	1.0	1.0	
Sample wt/vol	0.005 LITERS	0.005 LITERS	0.005 LITERS	
% Dry				

Rept: AN' Page:			
WESTON SOLUTIONS, INC. QC SAMPLE CHRONOLOGY			
N SOLUTION			
WESTON QC SA			
		04	11:00 12:48 01:07 LITERS
		NK A8F0090	11/24/2008 11:00 11/24/2008 12:48 12/05/2008 01:07 - YES WATER 1.0 0.005 LITERS
	FIDE	TRIP BLANK A08-F009 A8F00904	11/1
	METHOD 8260 - CARBON DISULFIDE	mple ID	
/10/2008 :39:45	260 - CAR	Client Sample ID Job No & Lab Sample ID	te Date Date Date TH Met? LHT Met? Frix Factor
Date: 12/10/2008 Time: 11:39:45	METHOD 8.	oN dot	Sample Date Received Date Extraction Date Analysis Date Extraction HT Met? Analytical HT Met? Sample Matrix Dilution Factor Sample wt/vol % Dry

Date: 12/10/2008 Time: 11:39:45		WESTON SOLUTIONS, INC. QC SAMPLE CHRONOLOGY	Rept: AN1248 Page: 3
METHOD 8260 - CARBON DISULFIDE	FIDE		
Client Sample ID Job No & Lab Sample ID	Client Sample ID VBLK62 8 Lab Sample ID A08-F009 A8B2719902		
Sample Date			
Received Date			
Extraction Date			
Analysis Date	12/04/2008 22:06		
Extraction HT Met?			
Analytical HT Met?			
Sample Matrix	WATER		
Dilution Factor	1.0		
Sample wt/vol	0.005 LITERS		
% Dry			

Chain of Custody Record

Temperature on Receipt

Drinking Water? Yes□ No□ THE

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

						フ.	)				<b>&gt;</b>			14/	14				
Chain of Custody Number	Page of		Special Instructions/	Conditions of Receipt		CS, ON	)	*500b			10000	N-00107		(A fee may be assessed if samples are retained longer than 1 month)		Date 11/24/68 Time 48	Date	Date	
Date 11/08	Lab Number	Analysis (Attach list if more space is needed)												Months		Arg.			15.6"
	19)Fax Number	Lab Contact May L	J	Containers & Preservatives	NªOH NªOH HCI HNO3 HSO¢									nt Disposal By Lab Archive For	QC Requirements (Specify)	1. Received By	2. Received By	3. Received By	
Project Manager	Telephone Number (Area Code)/Fax Number	Site Contact	Carrier/Waybill Number	Matrix	TIA SubsupA INS	1720	1220	1125	1100					Sample Disposal  Unknown	Other	Date Time	TIMe	Date Time	A Chair Junio
	3	Zip Code	_		Date	21 80 42/11	1 12	211	" —					□ Poison B	14 Days   21 Days				The state of the s
Client Col., Hor. C. 1., Hor. c.	Address Woo Wester Way	124.7	Por	ase Order/Quote No.	Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Mw-04	MW-ON Due	) - (	Trib Blank					Possible Hazard Identification  Non-Hazard	Tum Around Time Required  24 Hours	1. Relinquished By	2. Relinquished By	3. Relinquished By	Comments  Section 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1