



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
NYSDEC - REGION 9

JUL 09 2010

FOIL
REL _____ UNREL _____

July 7, 2010

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: Periodic Review Report – January 2010 to June 2010
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 periodic review report for the 3M Tonawanda, NY facility for the period extending from January 2010 to June 2010.

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: 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)



JUL 09 2010

FOIL
____REL ____UNREL

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: Justin Pettinelli (3M Corporate)
Keith Held (3M Tonawanda)

NYSDEC Project Lead: Glenn May

Reporting Period: January 2010 to June 2010

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 (CS₂).
- Inspecting the completed interim remedial measures (IRMs) (includes the CS₂ 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 CS₂ 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 CS₂ 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 CS₂ 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 June 2010. 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 CS₂ analysis were collected from monitoring well MW-4 (primary sample and duplicate sample) and lysimeter LY-2 on June 14, 2010 in accordance with the O&M Plan modifications approved by NYSDEC. Laboratory analytical results from the June 14, 2010 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 (mg/L)

Sampling Date	Sample ID and Result		
	MW-4	MW-4 Duplicate	LY-2
6/14/10	ND	ND	290

Notes: ND - Not detected. The reporting limit for CS₂ is 5 µg/L.

As noted above, CS₂ was not detected in the groundwater samples (primary and duplicate samples) collected from monitoring well MW-4 in June 2010. Consistent with previous sampling data, CS₂ was found in the pore water sample collected from lysimeter LY-2. A copy of the analytical data package for the June 2010 sampling event is provided in Attachment A.

ATTACHMENT A
LABORATORY ANALYTICAL PACKAGE
JUNE 2010 SAMPLING EVENT

Analytical Report

Work Order: RTF0906

Project Description

3M Tonawanda, NY - Semi-Annual Monitoring

For:

Tom Drew

Weston Solutions, Inc. - West Chester, PA

1400 Weston Way

West Chester, PA 19380



Mark Nemec

Customer Service Manager

mark.nemec@testamericainc.com

Thursday, June 24, 2010

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exception to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project manager who has signed this report.

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

TestAmerica Buffalo Current Certifications

As of 04/16/2010

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
North Dakota	CWA, RCRA	R-176
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
Virginia	SDWA	278
Washington*	NELAP CWA, RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA, RCRA	252

*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.

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

CASE NARRATIVE

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. field-pH), they were not analyzed immediately, but as soon as possible after laboratory receipt.

A pertinent document is appended to this report, 1 page, is included and is an integral part of this report.

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

DATA QUALIFIERS AND DEFINITIONS

D08 Dilution required due to high concentration of target analyte(s)

NR Any inclusion of NR indicates that the project specific requirements do not require reporting estimated values below the laboratory reporting limit.

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Executive Summary - Detections

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTF0906-04 (LY-02 - Monitoring Well)						Sampled: 06/14/10 10:45		Recvd: 06/14/10 11:30		
<u>Volatile Organic Compounds by EPA 8260B</u>										
Carbon disulfide	290000	D08	8000	1600	ug/L	8000	06/22/10 17:52	LH	10F1869	8260B

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Sample Summary

Sample Identification	Lab Number	Client Matrix	Date/Time Sampled	Date/Time Received	Sample Qualifiers
MW-04	RTF0906-01	Monitoring Well	06/14/10 11:00	06/14/10 11:30	
MW-04 DUP	RTF0906-02	Monitoring Well	06/14/10 11:00	06/14/10 11:30	
FB-MW-04	RTF0906-03	Monitoring Well	06/14/10 10:30	06/14/10 11:30	
LY-02	RTF0906-04	Monitoring Well	06/14/10 10:45	06/14/10 11:30	
Trip Blank	RTF0906-05	Water	06/14/10 08:00	06/14/10 11:30	

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring

Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTF0906-01 (MW-04 - Monitoring Well)						Sampled: 06/14/10 11:00		Recvd: 06/14/10 11:30		
<u>Volatile Organic Compounds by EPA 8260B</u>										
Carbon disulfide	ND		5.0	0.19	ug/L	1.00	06/22/10 16:44	LH	10F1869	8260B
1,2-Dichloroethane-d4	108 %		Surr Limits: (66-137%)				06/22/10 16:44	LH	10F1869	8260B
4-Bromofluorobenzene	94 %		Surr Limits: (73-120%)				06/22/10 16:44	LH	10F1869	8260B
Toluene-d8	121 %		Surr Limits: (71-126%)				06/22/10 16:44	LH	10F1869	8260B

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring

Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTF0906-02 (MW-04 DUP - Monitoring Well)						Sampled: 06/14/10 11:00		Recvd: 06/14/10 11:30		
<u>Volatile Organic Compounds by EPA 8260B</u>										
Carbon disulfide	ND		5.0	0.19	ug/L	1.00	06/22/10 17:06	LH	10F1869	8260B
1,2-Dichloroethane-d4	109 %		Surr Limits: (66-137%)				06/22/10 17:06	LH	10F1869	8260B
4-Bromofluorobenzene	95 %		Surr Limits: (73-120%)				06/22/10 17:06	LH	10F1869	8260B
Toluene-d8	122 %		Surr Limits: (71-126%)				06/22/10 17:06	LH	10F1869	8260B

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTF0906-03 (FB-MW-04 - Monitoring Well)						Sampled: 06/14/10 10:30		Recvd: 06/14/10 11:30		
<u>Volatile Organic Compounds by EPA 8260B</u>										
Carbon disulfide	ND		5.0	0.19	ug/L	1.00	06/22/10 17:29	LH	10F1869	8260B
1,2-Dichloroethane-d4	107 %		Surr Limits: (66-137%)				06/22/10 17:29	LH	10F1869	8260B
4-Bromofluorobenzene	95 %		Surr Limits: (73-120%)				06/22/10 17:29	LH	10F1869	8260B
Toluene-d8	122 %		Surr Limits: (71-126%)				06/22/10 17:29	LH	10F1869	8260B

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTF0906-04 (LY-02 - Monitoring Well)					Sampled: 06/14/10 10:45			Recvd: 06/14/10 11:30		
<u>Volatile Organic Compounds by EPA 8260B</u>										
Carbon disulfide	290000	D08	8000	1600	ug/L	8000	06/22/10 17:52	LH	10F1869	8260B
1,2-Dichloroethane-d4	106 %	D08	Surr Limits: (66-137%)				06/22/10 17:52	LH	10F1869	8260B
4-Bromofluorobenzene	93 %	D08	Surr Limits: (73-120%)				06/22/10 17:52	LH	10F1869	8260B
Toluene-d8	120 %	D08	Surr Limits: (71-126%)				06/22/10 17:52	LH	10F1869	8260B

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

Analytical Report

Analyte	Sample Result	Data Qualifiers	RL	MDL	Units	Dil Fac	Date Analyzed	Lab Tech	Batch	Method
Sample ID: RTF0906-05 (Trip Blank - Water)						Sampled: 06/14/10 08:00		Recvd: 06/14/10 11:30		
<u>Volatile Organic Compounds by EPA 8260B</u>										
Carbon disulfide	ND		5.0	0.19	ug/L	1.00	06/22/10 18:15	LH	10F1869	8260B
1,2-Dichloroethane-d4	108 %		Surr Limits: (66-137%)				06/22/10 18:15	LH	10F1869	8260B
4-Bromofluorobenzene	95 %		Surr Limits: (73-120%)				06/22/10 18:15	LH	10F1869	8260B
Toluene-d8	121 %		Surr Limits: (71-126%)				06/22/10 18:15	LH	10F1869	8260B

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracte	Units	Extract Volume	Units	Date Prepared	Lab Tech	Extraction Method
Volatile Organic Compounds by EPA 8260B									
8260B	10F1869	RTF0906-01	5.00	mL	5.00	mL	06/22/10 10:18	LCH	5030B MS
8260B	10F1869	RTF0906-02	5.00	mL	5.00	mL	06/22/10 10:18	LCH	5030B MS
8260B	10F1869	RTF0906-03	5.00	mL	5.00	mL	06/22/10 10:18	LCH	5030B MS
8260B	10F1869	RTF0906-04	5.00	mL	5.00	mL	06/22/10 10:18	LCH	5030B MS
8260B	10F1869	RTF0906-05	5.00	mL	5.00	mL	06/22/10 10:18	LCH	5030B MS

Weston Solutions, Inc. - West Chester, PA
1400 Weston Way
West Chester, PA 19380

Work Order: RTF0906

Project: 3M Tonawanda, NY - Semi-Annual Monitoring
Project Number: RFW

Received: 06/14/10

Reported: 06/24/10 11:34

LABORATORY QC DATA

Analyte	Source Result	Spike Level	RL	MDL	Units	Result	% REC	% REC Limits	% RPD	RPD Limit	Data Qualifiers
<u>Volatile Organic Compounds by EPA 8260B</u>											
Blank Analyzed: 06/22/10 (Lab Number:10F1869-BLK1, Batch: 10F1869)											
Carbon disulfide			5.0	0.19	ug/L	ND					
Surrogate:					ug/L		107	66-137			
1,2-Dichloroethane-d4											
Surrogate:					ug/L		95	73-120			
4-Bromofluorobenzene											
Surrogate: Toluene-d8					ug/L		124	71-126			
LCS Analyzed: 06/22/10 (Lab Number:10F1869-BS1, Batch: 10F1869)											
Carbon disulfide			1.0	0.19	ug/L	ND		59-134			
Surrogate:					ug/L		105	66-137			
1,2-Dichloroethane-d4											
Surrogate:					ug/L		97	73-120			
4-Bromofluorobenzene											
Surrogate: Toluene-d8					ug/L		118	71-126			

TestAmerica

Client Information		Lab P/N:		Lab Name:		Lab Address:		Lab Phone:		Lab Fax:		Lab Email:		Lab Website:		Lab URL:		Lab Filing No.		Lab Page:		Lab Job #:	
Weston Solutions, Inc. - West Chester, PA		1400 Weston Way		West Chester		PA, 19380		(610) 701-7302		T Drew@WestonSolutions.com		Project Name:		3M Tonawanda, NY - Semi-Annual Monitoring - NY1A96		Site:		3M Tonawanda, NY - Semi-Annual Monitoring - NY1A867		GOC No:		06042010 13 55_1	
Due Date Requested:		TAT Requested (Business Days)		PO #		WO #		RTF0506		Project #		3M Tonawanda, NY - Semi-Annual Monitoring		SSOWs									
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=Water, S=solid, O=Other)		Preserv-Conc Code		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Vials		Total Number of Containers		Special Instructions/Notes			
MW-04	6/14/10	1100	G	W																			
MW-04 DUP	6/14/10	1100	G	W																			
FB-MW-04	6/14/10	1030	G	W																			
LY-02	6/14/10	1045	G	W																			
Trip Blank	6/14/10	800	G	W																			
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input checked="" type="checkbox"/> Flammable		<input type="checkbox"/> Solid Inert		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (Specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		<input type="checkbox"/> Return To Client		<input type="checkbox"/> Dispose By Lab		Archive For _____ Months	
Empty Kit Requisitioned by:		Date Rec'd:		Date Time:		Company:		Received by:		Date Time:		Company:		Method of Storage:		Special Instructions/QC Requirements							
Requester's Signature:		6/14/10		6/14/10		Company:		Received by:		Date Time:		Company:		Method of Storage:		Special Instructions/QC Requirements							
Requester's Name:		6/14/10		6/14/10		Company:		Received by:		Date Time:		Company:		Method of Storage:		Special Instructions/QC Requirements							
Requester's Title:		6/14/10		6/14/10		Company:		Received by:		Date Time:		Company:		Method of Storage:		Special Instructions/QC Requirements							
Custody Seal No.:		A Yes A No		Custody Seal No.:		A Yes A No		Custody Seal No.:		A Yes A No		Custody Seal No.:		A Yes A No		Custody Seal No.:							