REPORT

ANNUAL GROUNDWATER MONITORING REPORT YEAR 15 (MAY 2011 – MAY 2012)

AND

FIVE YEAR REVIEW REPORT

Groundwater Recovery and Treatment System

Former Miller Container Site

Volney, New York

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1.0 INTRODUCTION

On behalf of Operations & Maintenance, Inc. (OMI) and Miller Brewing Company (Miller), Golder Associates Inc. (Golder) has prepared this Five Year Review and 2012 Annual Groundwater Monitoring Report for submission to The New York State Department of Environmental Conservation (NYSDEC) for the Former Miller Container Site (NYSDEC Site #7-38-029 or Site) located in Volney, NY. The site was placed on the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites due to releases of volatile organic compounds associated with the historical operation of the former Miller Container facility. Miller conveyed title to the Site to R/M Can Company by deed dated October 29, 1993. Riccelli Fulton, LLC ("Riccelli") is the current fee owner of the Site.

As required by Order on Consent #A7-0322-9411 (effective December 11, 1995) (the "Remedial Order") between Miller and NYSDEC, OMI operates an onsite groundwater recovery and treatment systems (GRS) on-behalf of Miller including groundwater monitoring. The current GRS includes the operation of 9 recovery wells with on-site treatment of the extracted groundwater prior to discharge.

In addition, as required by Order on Consent #A702659106, effective August 12, 1991 (the "IRM Order"), Miller provides financial support to the City of Fulton for the City's operation of a treatment system for treating public water supply wells (K-1 and M-2A) (the "City Water Treatment Facility"). Miller has conducted monthly monitoring of the water quality of M-2A and K-1 under the IRM Order. That monitoring has shown that the detectable VOC contamination from M-2A has not exceeded drinking water standards since October 2000 and the water from K-1 has had no detectable VOC contamination associated with the Site since September of 2002.

Based on the result of a supplemental site investigation performed in 2008, Miller decided to implement voluntary remedial actions to accelerate remediation at the Site. In May of 2010, a Work Plan for Supplemental Site Mitigation and System Optimization was finalized. The Work Plan included the installation of a Soil Vapor Extraction (SVE) system with groundwater recovery through Dual Phase Extraction (DPE) wells at the two source areas (North and South) and upgrades to the existing GRS by replacement of recovery well RW-5 with RW-5R. These system enhancements were in place and operational for the entire 2011-2012 operational year and are evaluated below

Section 2.0 of this report summarizes the groundwater data collected by OMI during the annual reporting period of May 1, 2011 through May 1, 2012 (Annual Groundwater Monitoring Report Year 15).

Section 3.0 of this report presents a five year review of the remedial system operation. Section 4.0 of the report presents recommendations for optimizing the efficiency of the existing systems and accelerating Site remediation.

2.0 ANNUAL GROUNDWATER MONITORING REPORT YEAR 15

Periodic sampling of select groundwater monitoring wells, the groundwater recovery well network, and municipal wells is performed to evaluate the effectiveness of the GRS and the collected data is reported to the NYSDEC on a monthly basis and summarized and assessed annually in the annual report. This Section presents the data collected during the 15th year of operation for the monitoring period of May 2011 through May 2012. This section of the report is structured to be consistent with past annual monitoring reports and was developed using electronic data and tables provided by OMI.

2.1 Remedial Treatment System Operation

2.1.1 Groundwater Recovery System Operation

The GRS consists of eight of the original thirteen groundwater recovery wells (RW's) installed in 1996, one replacement recovery well (RW-5R) installed in April 2011 and eight DPE wells placed into service in January 2011 as part of the new SVE systems.

Nine of the recovery wells and the eight DPE wells were in operation for the entire reporting period with minor exceptions where the system was off for maintenance or off line due to power interruption faults.

Table 2-1 summarizes the flow rates for the operating recovery wells for the 2011-2012 operating year.

Table 2-1

Summary of 2011-2012 Recovery Well System Flow Data

Well	Total	GPD	GPM
RW-3	67,121	184	0.13
RW-4	489,702	1,342	0.93
RW-5R	1,515,326	4,152	2.88
RW-8	3,244,752	8,890	6.17
RW-9	54,551	149	0.10
RW-10	212,531	582	0.40
RW-11	353,142	968	0.67
RW-12	1,199,753	3,287	2.28
RW-13	1,248,186	3,420	2.37
Totals	**8,385,064**	**22,973**	**16.0**

Notes:
GPD – Gallons per Day
GPM – Gallons per Minute

Based on the individual recovery well totalizers, a total of 8,385,064 gallons of groundwater were recovered during the reporting period at an average flow rate of 16.0 gallons per minute to the treatment system. This represents over a 13 percent increase in total groundwater collected from the previous monitoring period. The increase is primarily attributable to the increase in recovery from a full year of RW-5R operation.

The following table represents the estimated flows from the eight DPE wells installed for groundwater suppression for the SVE systems.

Table 2-2
Summary of 2011-2012 Dual Phase Extraction Calculated Well Flow Data

DPE Well	Average Flow Rate (gpm)	Total Recovered (Gals)
DPES-1	1.3	659,740
DPES-2	0.7	418,096
DPES-3	0.8	416,134
DPEN-1	1.0	405,951
DPEN-2	1.8	719,713
DPEN-3	2.3	764,017
DPEN-4	1.2	543,139
DPEN-5	1.0	462,810
Total Flow	**10.4**	**4,389,598**

Notes:
GPM – Gallons per Minute

The flows represented in Table 2-2 above are calculated using readings from cycle counters installed on each of the DPE wells. The pumps installed in the DPE wells are pneumatic displacement pumps that remove approximately 0.25 gallons per cycle.

Summing the total flows from the RWs and DPE calculated flows, the estimated system influent total for the operating year is 12,774,662 gallons. This represents an increase of over 42% from the prior monitoring year due primarily to a full year of operation of RW-5R and the DPE wells. The flow to the Air Stripper Treatment (AST) system is also monitored using an electromechanical flow meter. This meter indicated a total of 12,981,250 gallons of water were recovered from the network of RWs and DPEs. The two flow totals values correlate within a 2% differential. The readings from the ATS influent flow meter are expected to be representative of the actual flow that passes through the treatment system. The totalizer readings from the AST flow meter are shown in Appendix A.

2.1.2 Recovery System Monitoring Results

The operating recovery wells were sampled four times during the reporting period. Samples were collected from the in-line taps and submitted for laboratory analysis in accordance with the approved site Operations Maintenance and Monitoring Plan (OMMP) (Earth Tech 1999). The results were reported to NYSDEC in the quarterly monitoring reports submitted for the Site. The following table summarizes the results of the laboratory analytical results for the RW samples collected during the monitoring events performed during this reporting period.

Table 2-3
Summary of 2011-2012 Recovery Well Analytical Results

WELL	Date	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride
RW-3	19-Jul-11	16	16	210	160	26	47	16
	28-Oct-11	1.2	16	11	24	24	3	<2
	12-Jan-12	21	17	250	170	21	68	19
	11-Apr-12	20	16	270	230	22	59	17
RW-4	19-Jul-11	75	10	15	160	21	6.7	<2
	28-Oct-11	54	10	12	150	17	5.2	<2
	12-Jan-12	40	6.6	9.1	110	12	4.2	<2
	11-Apr-12	42	7	9.6	130	14	4.2	<2
RW-5R	19-Jul-11	<50	<50	<50	1100	<50	<50	<50
	28-Oct-11	<50	38	42.0	1400	57	28	<50
	12-Jan-12	14	25	38.0	1100	40.0	30	<20
	11-Apr-12	<20	32	44.0	1800	44.0	37	<20
RW-8	19-Jul-11	9	11	69	27	10	5.0	2.7
	28-Oct-11	12	14	77	43	15	5.8	3.6
	12-Jan-12	8.2	12	66	33	10	4.9	3.4
	11-Apr-12	6.9	9.1	51	26	8.0	3.9	2.1
RW-9	19-Jul-11	13	37	22	42.0	10.0	43	11
	28-Oct-11	7.7	25	8	23.0	8.5	20	3.5
	12-Jan-12	10	38	9.2	41.0	11	31	2.2
	11-Apr-12	13	54	12	39.0	11	32	2.5
RW-10	19-Jul-11	0.50	<0.5	<0.5	3.1	1.3	<0.5	<0.5
	28-Oct-11	0.65	0.76	<0.5	4.7	1.6	<0.5	<0.5
	12-Jan-12	1.00	0.54	<0.5	3.6	1.8	<0.5	<0.5
	11-Apr-12	0.86	0.66	<0.5	4.1	1.7	<0.5	<0.5
RW-11	19-Jul-11	<0.5	<0.5	<0.5	3.0	0.77	<0.5	<0.5
	28-Oct-11	<0.5	<0.5	<0.5	3.4	0.93	<0.5	<0.5
	12-Jan-12	<0.5	<0.5	<0.5	2.5	0.72	<0.5	<0.5
	11-Apr-12	<0.5	<0.5	<0.5	2.8	0.72	<0.5	<0.5
RW-12	19-Jul-11	<0.5	<0.5	<0.5	2.6	1.1	<0.5	<0.5
	28-Oct-11	<0.5	0.77	<0.5	3.3	1.2	<0.5	<0.5
	12-Jan-12	<0.5	0.52	<0.5	2.9	0.95	<0.5	<0.5
	11-Apr-12	<0.5	0.59	<0.5	2.8	1.1	<0.5	<0.5
RW-13	19-Jul-11	7.6	4.6	1.8	8.4	5.8	6.6	<0.5
	28-Oct-11	6.5	4.4	1.5	11	5.2	6.1	<0.5
	12-Jan-12	4.4	4.1	1.8	8.9	3.6	5.4	<0.5
	11-Apr-12	4.5	4.2	1.1	12	4.0	3.4	<0.5

Notes:
1) Concentrations are presented in µg/l.
2) RW-1, RW-2, RW-6 and RW-7 were not operational.

The summary table includes all of the results for any volatile organic compound reported at or above the Method Detection Limit (MDL) in any sample.

An estimate of the mass-removal of Site related contaminants of concerns, chlorinated volatile organic compounds (CVOCs) was calculated for the reporting period by multiplying the total recovery from each well by the average concentration of each compound reported in the well. Based on the calculation method, a total of 11.19 kg (24.7 lbs.) of contaminants were removed from the groundwater collected from the recovery wells. Table 2-4 summarizes the calculations.

Table 2-4
Summary of 2011-2012 Recovery Well Estimated Mass Removal

WELL	Flow in Liters	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	Total VOC
RW-3	254,080	3.7	4.1	47.1	37.1	5.9	11.2	3.4	113
RW-4	1,853,718	97.8	15.7	21.2	254.9	29.7	9.4	1.9	430
RW-5R	5,736,115	106	172	214	7744	238	172	100	8,746
RW-8	12,282,684	111	142	808	396	132	60	36	1,685
RW-9	206,497	2.3	8.0	2.6	7.5	2.1	6.5	0.99	30
RW-10	804,515	0.6	0.4	0.2	3.1	1.3	0.2	0.2	6
RW-11	1,336,784	0.3	0.3	0.3	3.9	1.0	0.3	0.3	7
RW-12	4,541,545	1.1	2.8	1.1	13.2	4.9	1.1	1.1	25
RW-13	4,724,883	27	20	7.3	48	22	25	1.2	151
Totals	**31,740,821**	**350**	**365**	**1101**	**8507**	**437**	**286**	**146**	**11,193**

Notes:

1) Mass is presented in grams.
2) RW-1, RW-2, RW-6 and RW-7 were not operational.

Table 2-5 summarizes the results of the laboratory analytical results for the DPE samples collected during the reporting period. The shutdown of the four listed Recovery Wells was approved by the NYSDEC.

Table 2-5
Summary of 2011-2012 DPE Well Analytical Data

WELL	Date	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	Total VOC
DPES-1	6-Sep-11	3.6	0.8	13	17	1.7	1.3	NA	
	6-Dec-11	2.8	0.5	7	6.4	1.2	1.1	NA	
	11-Jan-12	3.6	0.6	7.8	10	1.8	1.7	0.25	
	Average	**3.3**	**0.6**	**9.3**	**11.1**	**1.6**	**1.4**	**0.3**	**27.6**
DPES-2	6-Sep-11	ND	ND	ND	0.6	ND	ND	NA	
	6-Dec-11	ND	ND	ND	ND	ND	ND	NA	
	11-Jan-12	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
	11-Apr-12	0.25	0.25	0.25	0.81	0.25	0.25	0.25	
	Average	**0.25**	**0.25**	**0.25**	**0.55**	**0.25**	**0.25**	**0.25**	**2.05**
DPES-3	6-Sep-11	ND	ND	ND	2.1	ND	ND	NA	
	6-Dec-11	ND	ND	ND	1	ND	ND	NA	
	11-Jan-12	0.25	0.25	0.25	1	0.25	0.25	0.25	
	Average	**0.25**	**0.25**	**0.25**	**1.37**	**0.25**	**0.25**	**0.25**	**2.87**
DPEN-1	6-Sep-11	23	22	64	100	6	10	NA	
	6-Dec-11	39	34	150	170	13	20	NA	
	11-Jan-12	55	54	240	220	17	25	4.5	
	Average	**39.0**	**36.67**	**151.33**	**163.33**	**12.00**	**18.33**	**4.50**	**425.17**
DPEN-2	6-Sep-11	1.3		30	340	8.8	12	NA	
	6-Dec-11	7	ND	36	260	5.7	14	NA	
	11-Jan-12	5.8	2.3	23	380	11	17	1	
	Average	**4.70**	**2.30**	**29.67**	**326.67**	**8.5**	**14.33**	**1.00**	**387.17**
DPEN-3	6-Sep-11		4.8	7.8	84	3.3	10	NA	
	6-Dec-11	4.4	1.4	18	140	4.9	9.2	NA	
	11-Jan-12	40	37	160	250	15	23	3.1	
	11-Apr-12	2	1	4.2	36	1	2.7	1	
	Average	**15.47**	**11.05**	**47.50**	**127.50**	**6.05**	**11.23**	**2.05**	**220.84**
DPEN-4									
	6-Dec-11	4	ND	100	40	10	9.4	NA	
	11-Jan-12	8.7	2.4	56	35	6.2	6.4	0.6	
	11-Apr-12	12	3.6	91	38	6.3	8.2	1	
	Average	**8.23**	**3.00**	**82.33**	**37.67**	**7.50**	**8.0**	**0.80**	**147.53**
DPEN-5	6-Sep-11	6.1	1.5	3.8	46	1.4	3.3	NA	
	6-Dec-11	2.9	1	3.3	34	1.2	2.1	NA	
	11-Jan-12	3.4	1.3	3.7	33	1.3	2.5	0.25	
	11-Apr-12	1.8	0.9	3.1	32	1.2	2.4	0.25	
	Average	**3.55**	**1.19**	**3.48**	**36.25**	**1.28**	**2.58**	**0.25**	**48.56**

Notes:

1) Concentrations are presented in ug/l.

2) NA = Not Analyzed

An estimate of the mass-removal of Site related contaminants of concern was calculated for the period the DPE wells were in operation by multiplying the total recovery from each well by the average concentration of each compound reported in the well. Based on the calculation method, a total of 2.8 kg

(6.2 lbs) of contaminants were removed from the groundwater by these wells. Table 2-6 summarizes the calculations.

Table 2-6
Summary of 2011-2012 DPE Well Estimated Mass Removal

WELL	Flow in Liters	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Total VOC
DPES-1	2,497,380	8.3	1.6	23.1	27.8	3.9	3.4	68.8
DPES-2	1,582,661	0.40	0.40	0.40	0.88	0.40	0.40	3.25
DPES-3	1,575,235	0.39	0.39	0.39	2.15	0.39	0.39	4.52
DPEN-1	1,536,686	59.9	56.3	232.6	251.0	18.4	28.2	653.3
DPEN-2	2,724,400	12.80	6.27	80.82	889.97	23.16	39.05	1,054.80
DPEN-3	2,892,108	44.73	31.96	137.38	368.74	17.50	32.46	638.70
DPEN-4	2,055,997	16.93	6.17	169.28	77.44	15.42	16.45	303.33
DPEN-5	1,751,919	6.22	2.08	6.09	63.51	2.23	4.51	85.07
Totals	**16,616,385**	**149.73**	**105.20**	**650.05**	**1681.49**	**81.45**	**124.85**	**2,811.83**

Notes:

1) Mass is presented in grams.

The combined estimated removal from the recovery wells and the DPE wells is 14.0 kg or approximately 30.8 lbs. This represents a nearly 100 percent increase in estimated mass removal when compared with the previous 2010-2011 monitoring period when estimated removal was 7.6 kg (17.0 lbs.).

2.1.3 Groundwater Treatment System

The groundwater treatment system processes the combined influent of the recovery wells and the DPE wells through the air stripper prior to discharge. The system was in continuous operation throughout the reporting period except for brief periods of system maintenance. Based on the in-line flow meter, a total of 12,981.250 gallons of recovered groundwater was discharged after treatment. The flow through the facility varies throughout the year from seasonal fluctuation in production and increased once the DPE wells were placed into service.

Influent and effluent samples from the Groundwater Treatment Facility (GWTF) are collected from the in-line sampling ports monthly and analyzed in accordance with the approved OMMP. The influent sample is referred to as AST INF and the effluent is referred to as the Final EFF. The results are reported to NYSDEC on a monthly basis.

No compounds were reported in any of the Final EFF samples collected during the reporting period at a concentration in excess of the method detection limit (MDL) of 1.0 µg/l.

Individual CVOCs were reported in the AST INF samples at concentrations in excess of the MDLs. The highest reported concentrations were PCE ranging from 110 µg/l to 540 µg/l and its daughter product, cis-1,2-DCE from 15 µg/l to 38 µg/l. The data indicates that the concentrations of individual and total CVOCs continue to demonstrate variability over time with an overall declining trend. The elevated PCE concentrations observed in the May and June 2011 samples are attributed to the initial pumping and high levels of contamination from the start-up of replacement recovery well RW-5R in April of 2011. Table 2-7 summarizes the results of the AST INF sampling for the GWTF.

Table 2-7
Summary of 2011-2012 AST Influent Analytical Data

DATE	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	VC	TOTAL
18-May-11	12	7.7	22	540	17	7.9	0.5	607
15-Jun-11	11.0	6.9	25	500	12	8.6	0.5	564
20-Jul-11	10.0	5.5	26	170	11	7.6	0.5	231
24-Aug-11	8.8	5.7	29	200	3.4	2.9	0.5	250
21-Sep-11	9.4	7.4	38	160	11	6.6	0.5	233
19-Oct-11	8.6	7.2	15	150	9.2	6.3	0.5	197
22-Nov-11	7.2	5.2	30	130	3.3	6.2	0.5	182
14-Dec-11	8.3	5.2	32	110	6.2	6.3	0.5	169
11-Jan-12	8.1	6.0	34	130	7.2	6.8	0.5	193
22-Feb-12	5.3	3.9	22	150	6.2	5.6	0.5	194
7-Mar-12	6.6	5.2	32	170	6.0	5.9	0.5	226
11-Apr-12	6.5	5.4	26	140	7.4	5.8	0.5	192

Notes:
1) Concentrations are presented in ug/l.

The flow data collected from the AST INF meter were used in conjunction with the analytical data above to calculate the mass of the contaminants removed from the groundwater. Table 2-8 summarizes the calculations.

Table 2-8
Summary of 2011-2012 AST Estimated Mass Removal

DATE	Flow in Liters	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	Total VOC grams
May-11	5,439,722	65.3	41.9	119.7	2,937.45	92.5	43.0	2.7	3,302.5
June-11	4,538,494	49.9	31.3	113.5	2,269.25	54.5	39.0	2.3	2,559.7
July-11	4,384,818	43.8	24.1	114.0	745.4	48.2	33.3	2.2	1,011.1
August-11	3,988,975	35.1	22.7	115.7	797.8	13.6	11.6	2.0	998.4
September-11	4,204,591	39.5	31.1	159.8	672.7	46.3	27.8	2.1	979.2
October-11	4,323,339	37.2	31.1	64.9	648.5	39.8	27.2	2.2	850.8
November-11	3,593,302	25.9	18.7	107.8	467.1	11.9	22.3	1.8	655.4
December-11	4,198,698	34.8	21.8	134.4	461.9	26.0	26.5	2.1	707.5
January-12	5,038,731	40.8	30.2	171.3	655.0	36.3	34.3	2.5	970.5
February-12	3,854,976	20.4	15.0	84.8	578.2	23.9	21.6	1.9	745.9
March-12	2,519,437	16.6	13.1	80.6	428.3	15.1	14.9	1.3	569.9
April-12	3,054,140	19.9	16.5	79.4	427.6	22.6	17.7	1.5	585.2
Total	**49,139,224**	**429.3**	**297.7**	**1,345.7**	**11,089.3**	**430.5**	**319.0**	**24.6**	**13,936.2**

Notes:

1) Mass presented in grams.

The total estimated mass removal, using the information from the AST INF sampling and flow data, is 13.9 kg (30.6 lbs.) of contaminants. This quantity compares favorably with the estimated mass removal calculation result of 14.0 kg from the Tables 2-4 and 2-6 above.

2.2 Soil Vapor Extraction

Data for the operation of the soil vapor extraction system through December 2011 is presented in the Soil Vapor Extraction System Construction Completion Report (CCR) (AECOM, September 2012). The annual report covers the period from May 1, 2011 through April 30, 2012. However, there was no sampling and analysis of SVE vapors conducted between January and April of 2012, therefore an August 2012 analytical event was included in the data analysis of the SVE system as well as March 2011 data to provide a representative data set for averaging and calculation of an estimated annual VOC mass removal rate. Table 2-9, attached, presents the analytical data for the combined vapor collected from the SVE system from March 2011 through August 2012. Using the data from these sampling events, Table 2-9 estimates the mass removal by the SVE system to be approximately 80 kg (176 lbs.) during the Year 15 monitoring period.

2.3 City of Fulton Water Treatment Facility

During the period at issue monthly sampling was performed at the City of Fulton Water Treatment Facility and the two related municipal production wells M-2A and K-1. Samples are collected from each of these wells, the combined influent to the treatment plant (WTF INF) and the effluent from the treatment plant (WTF EFF). The 2011 -2012 analytical results for K-1 confirmed another year of no VOC detections in the K-1 influent (prior to its collapse and shutdown). The reported results for M-2A confirm the long term trend of decreasing concentrations of detected constituents in M-2A and concentrations remain well below the New York State Ambient Water Quality Standard (AWQS) of 5.0 ug/l for PCE and 1,1,1-TCA.

Table 2-10
Summary of 2011-2012 Municipal Well M-2A Analytical Results

Date	18-May	16-Jun	20-Jul	24-Aug	21-Sep	19-Oct	22-Nov	14-Dec	11-Jan	22-Feb	7-Mar	11-Apr
PCE	1.2	1.3	0.96	1.3	1.2	1.1	1.1	0.9	0.97	1	1.2	0.89
1,1,1-TCA	<0.5	0.93	0.9	0.91	1.1	0.87	1	0.84	<0.5	0.72	0.86	0.8

Notes:

1) Concentrations are presented in ug/l.

2.4 Groundwater Monitoring Results

The municipal wells are sampled on a monthly basis. Groundwater monitoring wells and the active recovery wells are sampled on a quarterly basis. For evaluation of the recovery well system, the wells have historically been divided into six functional groups. They are the Northern Operable Unit (NOU) Source (NOU-S) and Plume (NOU-P) areas, the Southern Operable Unit (SOU) Source (SOU-S) and Plume (SOU-P) areas, the Taylor Property (TP), and Municipal Well Field (MWF). Table 2-11 lists the wells and their sampling frequency and functional monitoring groups.

Table 2-11
FUNCTIONAL MONITORING GROUPS

Northern Operable Unit				**Southern Operable Unit**				**Taylor Property**		**Municipal Wells**	
Source Area		**Plume Area**		**Source Area**		**Plume Area**					
Well	***f***	**Well**	***f***	**Well**	***F***	**Well**	***f***	**Well**	***f***	**Well**	***f***
MW-2S	Q	MW-8I	Q	MW-36S	Q	MW-37I	Q	MW-14D	Q	K-1	M
MW-3D	Q	MW-8D	Q			MW-54I	Q	MW-21S	Q	M-2A	M
MW-16D	Q	MW-13D	Q			RW-8	Q	MW-32D	Q	MW-28S	Q
MW-38S	Q	MW-17D	Q			RW-9	Q	MW-33S	Q	MW-28I	Q
MW-62S	Q	MW-51D	Q					MW-34D	Q		
RW-3	Q	MW-56D	Q					MW-35D	Q		

Table 2-11 (Continued)
FUNCTIONAL MONITORING GROUPS

Northern Operable Unit				Southern Operable Unit				Taylor Property		Municipal Wells	
Source Area		Plume Area		Source Area		Plume Area					
Well	***f***	**Well**	***f***	**Well**	***F***	**Well**	***f***	**Well**	***f***	**Well**	***f***
RW-5R	Q	RW-13	Q					RW-11	Q		
								RW-12	Q		

Notes:
1) *f* – frequency 2) M-Month 3) Q - Quarterly

Figure 1 presents the location of the monitoring well groups. The Taylor Property has been included in the NOU-P area.

Northern Operable Unit -Source Area

Five groundwater monitoring wells (MW-2S, MW-3D, MW-16D, MW-38S, and MW-62S) and three recovery wells (RW-3, RW-4, and RW-5R) are sampled to monitor and evaluate water quality in the Northern Operable Unit -Source (NOU-S) area or Northern Source Area. The monitoring well network was sampled four times from August 2011 through April 2012.

A review of the historical data for the past five years reported for each of these wells indicates that the total concentration of CVOCs has decreased in three of the four monitoring wells and remained constant in the fourth well (MW-3D). No site related CVOCs were detected at or above a concentration of 5 µg/l during the reporting period in any samples collected from MW-62S.

The 2011-2012 results for MW-16D confirmed that the concentration of total CVOCs in this well decreased in concentration for two consecutive years after trending upwards anomalously and reaching a peak in 2010. The replacement of RW-5 with RW-5R and the installation of the SVE systems are having a positive impact on the decreasing concentration trends observed in the NOU-S area.

The analytical results for each of the NOU-S monitoring wells are summarized in Table 2-12.

Table 2-12
Summary of 2011-2012 Analytical Results from NOU –S Area Monitoring Well Network

	Date	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	Vinyl Chloride	TOTAL CVOCs
MW-2S	10-Aug-11	13	8.4	320	99	7.5	7.1		455
	1-Nov-11	13	7.3	130	120	8.4	5.2	<5	284
	25-Jan-12	12	7.8	270	59	4.6	5.2	<2	359
	11-Apr-12	9.7	13	290	66	<5	6.1	<5	385
	Average	**11.9**	**9.1**	**253**	**86**	**6.8**	**5.9**	**<5**	**371**
MW-3D	10-Aug-11	6.2	2.4	9.0	38	27	93	<2	176
	1-Nov-11	4.6	<2	8.8	100	28	100	5.7	247
	25-Jan-12	4.2	<2	4.8	84	22	82	<2	197
	11-Apr-12	4.2	4.4	6.3	100	21	96	<2	232
	Average	**4.8**	**3.4**	**7.2**	**81**	**24.5**	**92.75**	**<1**	**213**
MW-16D	10-Aug-11	26	7.0	17	5.8	27	23.0	<1	106
	1-Nov-11	14	3.0	22	0.98	11	7.5	<1	58
	25-Jan-12	44	8.8	46	2.4	23	3.6	0.65	128
	11-Apr-12	35	4.6	29	1.2	18	10.0	<1	98
	Average	**29.8**	**5.9**	**28.5**	**3**	**19.8**	**11**	**0**	**98**
MW-38S	10-Aug-11	35	8	140	170	6.4	29	<2	388
	1-Nov-11	54	14	150	210	11.0	32	<2	471
	25-Jan-12	52	11	120	150	6.7	23	<2	363
	11-Apr-12	63	12	110	220	9.6	25	<2	440
	Average	**51**	**11**	**130**	**188**	**8.4**	**27**	**<2**	**415**

Notes:

1) Concentrations presented in ug/L

NOU-Plume Area

Seven groundwater monitoring wells (MW-8I, MW-8D, MW-13D, MW-17D, MW-51D, MW-56D, and MW-61D) and one recovery well (RW-13) are sampled periodically to monitor and evaluate water quality in the Northern Operable Unit Plume (NOU-P) area or Northern Plume area. The monitoring well network was sampled four times from August 2011 through April 2012.

PCE and/or TCA was reported in samples collected from MW-8D, MW-13D, MW-17D, MW-56D and MW-61D in one or more samples at a concentration > 5 µg/l in one or more sampling events. Table 2-13 summarizes the results for these wells.

Table 2-13
Summary of 2011-2012 Analytical Results from NOU–P Area Monitoring Well Network

		1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA	TCE	TOTAL
MW-8D	10-Aug-11	<0.5	<0.5	0.58	<0.5	<0.5	0.89	1.5
	1-Nov-11	5.9	2.5	0.77	23	6.1	6.4	45
	25-Jan-12	3.4	1.9	<0.5	17	5.4	1.6	29
	11-Apr-12	5.7	2.1	0.71	13	7.5	<0.5	29
	AVERAGE	**5.0**	**2.2**	**0.69**	**18**	**6.3**	**3.0**	**26**
MW-13D	10-Aug-11	<0.5	0.59	<0.5	<0.5	<0.5	<0.5	0.6
	1-Nov-11	<0.5	0.67	<0.5	5.3	2.7	<0.5	8.7
	25-Jan-12	<0.5	<0.5	<0.5	3.7	1.5	<0.5	5.2
	11-Apr-12	<0.5	<0.5	<0.5	2.2	0.83	<0.5	3.0
	AVERAGE	**<0.5**	**0.6**	**<0.5**	**3.7**	**1.7**	**<0.5**	**4.4**
MW-17D	10-Aug-11	1.8	2.7	<0.5	2.0	9.6	<0.5	16.1
	1-Nov-11	1.8	2.5	<0.5	2.4	8.7	<0.5	15.4
	25-Jan-12	2.1	2.7	<0.5	1.7	7.4	<0.5	13.9
	11-Apr-12	1.7	1.7	0.65	1.6	5.9	<0.5	11.55
	AVERAGE	**1.85**	**2.4**	**0.7**	**1.9**	**8**	**<0.5**	**14.2**
MW-56D	10-Aug-11	0.92	0.60	2.9	1.2	3.0	0.62	9.2
	1-Nov-11	0.68	1.00	5.3	<0.5	3.0	<0.5	10.0
	25-Jan-12	0.53	0.65	3.1	0.52	1.5	0.54	6.8
	11-Apr-12	<0.5	1.1	1.2	2.0	3.0	2.9	10.2
	AVERAGE	**0.71**	**0.8**	**3.1**	**1.2**	**2.6**	**1.4**	**9.1**
MW-61D	10-Aug-11	13	15	5.9	3.5	67	<0.5	104
	1-Nov-11	16	19	8.9	4.5	80	<0.5	128
	25-Jan-12	17	21	10	3.7	61	<0.5	113
	11-Apr-12	17	17	8.5	4.7	63	<0.5	110
	AVERAGE	**15.8**	**18.0**	**8.3**	**4.1**	**68**	**<0.5**	**114**

Notes:

1) Concentrations are presented in ug/l.

2) Results for MW-8I and MW-51D are not shown. CVOCs were non-detected or detected at a concentration below 5 µg/l during the reporting period in samples collected from MW-8I and MW-51D.

Monitoring wells, MW-8I, MW-13D, MW-17D, MW-51D and MW-56D in NOU-P continue to demonstrate variable concentrations of site related CVOCs with a slowly declining trend. MW-8D has reported levels above the AGWQS over the past several monitoring periods with a declining trend. An increasing trend continues to be noted in MW-61D, as presented in Section 3.0, as reported in the Year 14 report. MW-61D contaminant concentrations have continued the upward trend noticed in the previous two annual reports. The data suggests that concentration may have peaked and is beginning to trend downward based on the last two reported sampling events. Additional discussion on MW-61D is presented in Section 3.0.

2.5 Southern Operable Unit

SOU-Source Area

The Southern Operable Unit Source (SOU-S) area or Southern Source area is evaluated by the periodic collection of samples from monitoring well MW-36S and data collected from the southern dual phase extraction wells associated with the SVE system (DPES-1, DPES-2 and DPES-3). The analytical data for the DPES wells is presented in Table 2-5. The analytical summary of the results for MW-36S are presented in Table 2-14.

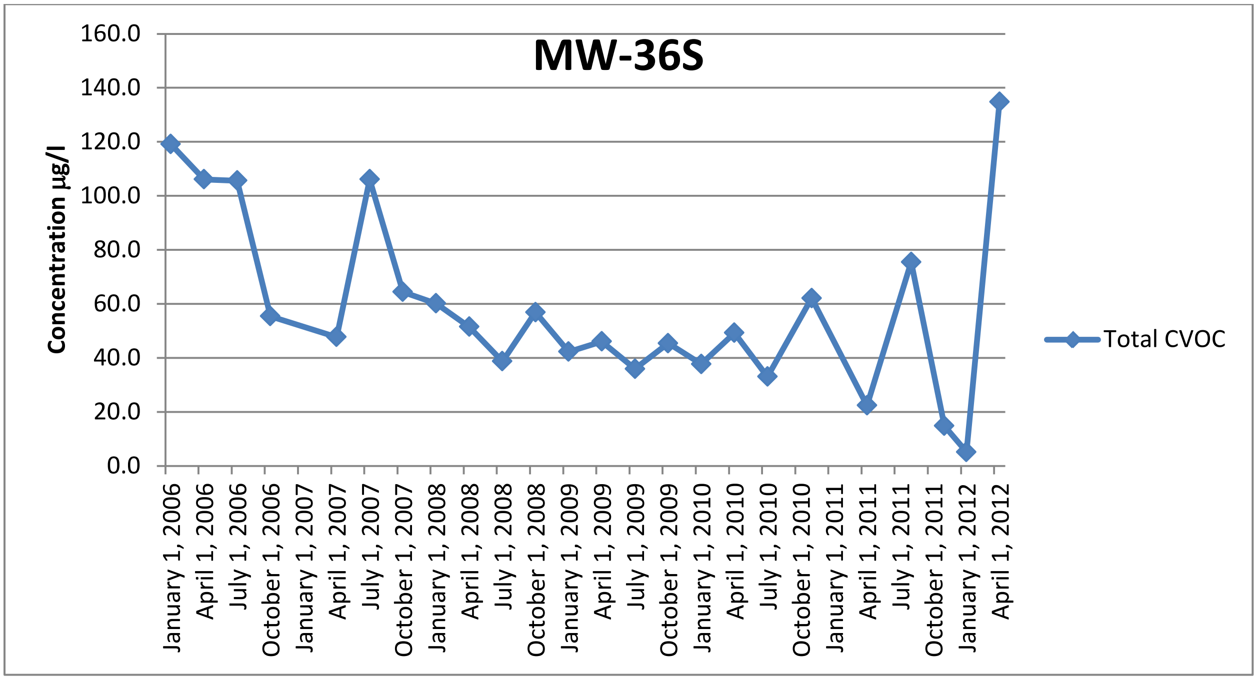
Table 2-14
Summary of 2011-2012 Analytical Results from SOU –S Area Monitoring Well Network

		1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	1,1,1 -TCA	Vinyl Chloride	TCE	TOTAL
MW-36S	10-Aug-11	5.5	<0.5	26	<0.5	<0.5	44	<0.5	76
	1-Nov-11	2.1	<0.5	2.9	<0.5	0.98	8.8	<0.5	15
	25-Jan-12	2.5	<0.5	0.92	<0.5	<0.5	1.7	<0.5	5.1
	11-Apr-12	3.8	<0.5	99	<0.5		32	<0.5	135
	Average	**3.5**	**<0.5**	**32**	**<0.5**	**1.0**	**22**		**58**

Notes:

1) Concentrations are presented in ug/l/.

A comparison of the data for the DPES wells to the MW-36S wells shows higher concentrations in MW-36S. DPES-2 and DPES-3 were reported to be less than the AWQS for the monitoring period. DPES-1, located upgradient of MW-36S, was reported to have concentrations of PCE above the AWQS, however MW-36S was reported to be non-detect for PCE. A review of the data for MW-36S for the past six (6) years indicates that the concentration of individual and total CVOCs in the groundwater at this location have fluctuated overtime. The influence of the SVE system in this area may have resulted in the recent concentration spike in April of 2012. This well will continue to be monitored.



SOU-Plume Area

The Southern Operable Unit Plume (SOU-P) area or Southern Plume area is monitored and evaluated by the periodic sampling of MW-37I, MW-54I, RW-8 and RW-9. The results for MW-37I reported one or more CVOCs on one or more sampling events at a concentration greater than 5µg/l. The results for MW-37I are summarized in Table 2-15 below.

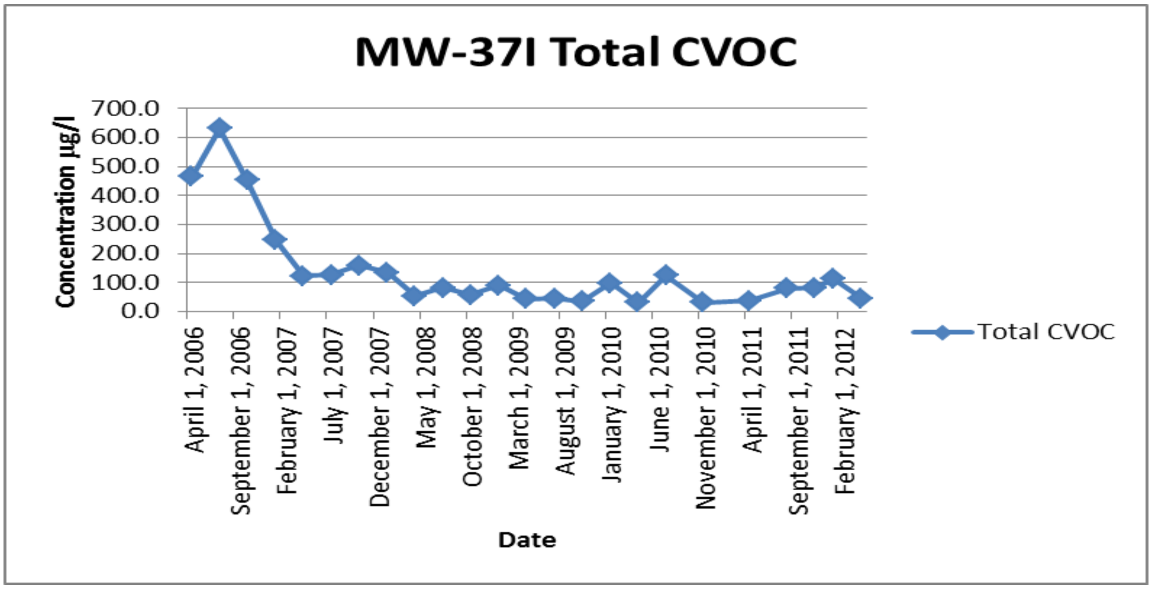
Table 2-15
Summary of 2011-2012 Analytical Results from SOU–P Area Monitoring Well Network

Well	Sample Date	1,1-DCA	1,1-DCE	c-1,2-DCE	PCE	TCE	1,1,1-TCA	Vinyl Chloride	TOTAL
MW-37I	10-Aug-11	11	1.8	52	19	1.4	4.5	<1	90
	1-Nov-11	9.7	1.5	51	19	1.3	4.4	3.8	91
	25-Jan-12	13	2.2	74	20	1.4	6.0	9.0	126
	11-Apr-12	6.3	1.1	26	11	0.66	3.1	2.3	50
	AVERAGE	**10**	**1.7**	**51**	**17**	**1.2**	**4.5**	**5.0**	**89**

Notes:

1) Concentrations are presented in ug/l/.
2) Site related CVOCs were not reported in any samples collected during the monitoring period from MW-54I at a concentration greater than 5 µg/l.

The overall trend in the graph of the concentration of total CVOCs in MW-37I for the past six (6) years indicates a declining trend. MW-37I will continue to be monitored to assess the effectiveness of the SVE systems in remediating the SOU-S and SOU-P areas.



2.6 Former Taylor Property

Groundwater quality on the Taylor Property is monitored and evaluated by the periodic collection and analysis of groundwater samples from six monitoring wells (MW-14D, MW-21S, MW-32D, MW-33S, MW-34D, and MW-35D) and three recovery wells (RW-10, RW-11, and RW-12).

No site related compounds were reported above 5.0 µg/l in any samples collected from MW-14D, MW-21S, MW-32D, MW-33S and MW-35D during this monitoring period. Monitoring well MW-34D had concentrations of 1,1-DCE ranging from 1.1 to 1.6 ug/, concentrations of PCE ranging from non-detect to 13. ug/L and concentrations of 1,1,1-TCA ranging from 2.7 to5.4 ug/L. The Taylor Property monitoring well network is directly up-gradient of the City of Fulton Municipal Well, M-2A.

Table 2-16
Summary of 2011-2012 Analytical Results from Taylor Area Monitoring Well Network

MW-34D	1,1-DCE	c-1,2-DCE	PCE	1,1,1-TCA
August 10, 2011	1.6	<0.5	<0.5	5.2
November 1, 2011	1.4	<0.5	13	5.4
January 25, 2012	1.5	<0.5	11	4.9
April 11, 2012	1.1	<0.5	6.5	2.7

Notes:

1) Concentrations are presented in ug/l/.

2) CVOCs were not reported in any samples collected from MW-14D, MW-21S, MW-32D, MW-33S and MW-35D during the monitoring period at a concentration greater than 5 µg/l.

2.7 City of Fulton Municipal Well Field

Early warning detection for the City of Fulton Well field is provided by periodic sampling of monitoring wells MW-28S and MW-28I. No compounds were reported in the sample collected from MW-28S at concentrations greater than the method detection limits of 0.5 µg/l. As presented on Table 2-17, PCE and TCA were reported in the samples collected from MW-28I at concentrations greater than the MDL of 0.5 µg/l but less than AWQS of 5.0 µg/l.

Table 2-17

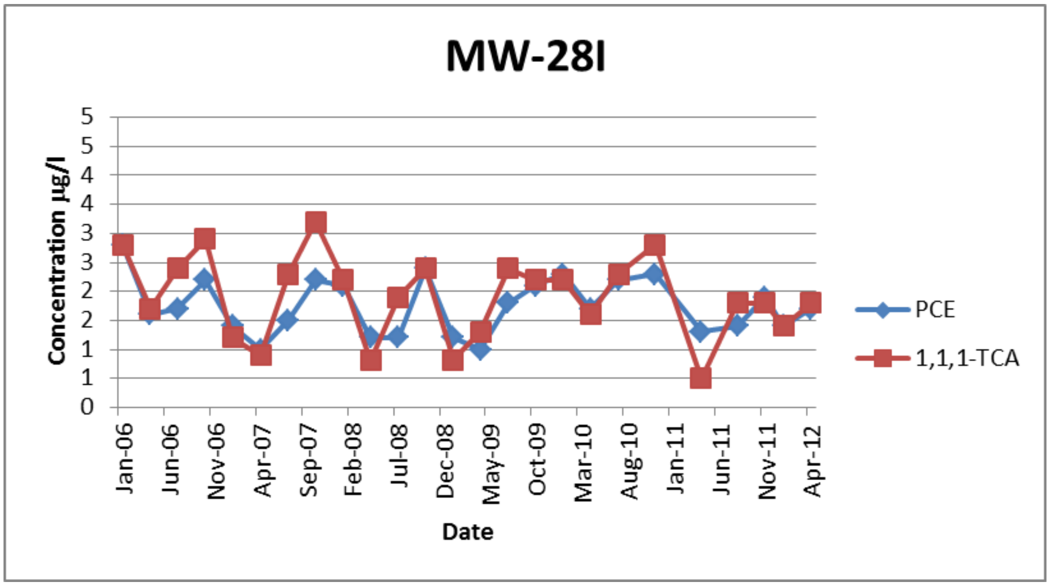
Summary of 2011-2012 Analytical Results from Municipal Well Field Monitoring Well Network

MW-28I	PCE	1,1,1-TCA
10-Aug-11	1.4	1.80
1-Nov-11	1.9	1.80
25-Jan-12	1.4	1.40
11-Apr-12	1.7	1.80
Average	**1.6**	**1.7**

Notes:

1) Concentrations are presented in ug/l/.
2) Results for MW-28S reported less than the method detection limits of 0.5 µg/

A review of the data collected from MW-28I for the past six (6) years indicates that the concentration of the two CVOCs (PCE and 1,1,1 TCA) fluctuates within a small range with an overall declining trend. A graph of the individual CVOCs for the past six years is included below. The concentrations of individual compounds have been consistently below the AWQS of 5.0 µg/l for nearly ten years (since early 2003).



3.0 FIVE YEAR REVIEW OF REMEDIAL SYSTEM PERFORMANCE

Due to significant changes and additions to the Site remedial system over the past two to three years and passage of a long interval since the previous five year system review (i.e., 2002), it was determined that a detailed evaluation of the overall performance and effectiveness of the system is warranted. This review is intended to provide a broad overview of how the system as currently configured can be optimized toward the goal of achieving the final remedial goals set forth in the March1995 Record of Decision for the Former Miller Container Site (ROD). The remedial goals as presented in Section 6 of the ROD are:

- Eliminate, to the extent practicable, the contamination present within the contaminated soils/waste (reduce soil contaminant levels to levels protective of groundwater as indicated in soil tables in Section 4.3 of the ROD). Treatment of soils to the NYSDEC Part 375.6-8(b) Protection of Groundwater standards is considered consistent with this objective.
- Eliminate the potential for direct human or animal contact with the contaminated soils on-site.
- Mitigate the impacts of contaminated groundwater to the environment. This is interpreted to include vapor intrusion pathways.
- Prevent, to the extent practicable, migration of contaminants in the source area to groundwater.
- To the extent practicable, provide for attainment of SCGs (Standards, Criteria and Guidance) for groundwater quality at the limits of the Area of Concern (AOC). The AOC for the site is the area from the spill source locations to the Fulton municipal well field. The AWQS could be considered SCGs for the area from the spill source location to the Fulton municipal well field.

In an effort to accelerate the on-site groundwater remediation, several alternative approaches to enhancing or improving the rate of VOC removal in the Northern and Southern Source areas were evaluated. In 2007, a pilot study was performed to investigate the effectiveness of enhanced in-situ biodegradation in the source areas. The results of the pilot study were reported in February of 2008 but were not reviewed as part of this 5 year review since enhanced biodegradation is not a current remedy at the Site. According to the Annual Groundwater Monitoring Report Year 11 (May 2007-May 2008) the results of the study concluded that a passive bioremediation program would not be effective. In 2008 a supplemental site investigation was performed that resulted in a recommendation for installation of a soil vapor extraction system within the Northern and Southern Source areas and improvements to the recovery well system. These improvements were completed in 2011 as summarized in the CCR.

This section summarizes the assessment of the key components of the current remediation system and provide for recommendations, where appropriate, to optimize system operation and effectiveness.

3.1 Overview of Site Geology

Geologic attributes at the Site that may affect the fate and transport of contaminant mass under the influence of aquifer pumping include a north trending ridge of till and interlayered glacial sediments with varied hydraulic properties as identified in the Remedial Investigation Report (RI) (Malcolm Pirnie, 1991). This section presents a summary of the geologic conditions beneath the Site based on boring logs and geologic descriptions from the RI and their importance in understanding the remedial systems operation. The geology underlying the site consists predominately of lodgment till, ablation till and glaciolacustrine sand and silt deposits. These are described briefly below:

- Lodgment Till - The lodgment till is composed predominantly of compacted clay and gravels emplaced at the bottom of the glacial ice as it advanced over the area of groundwater recovery. The lodgment till is very dense and serves as a hydraulic barrier to the underlying bedrock. A north trending ridge of lodgment till, shown on Figure 1, runs across the area of groundwater recovery. The ridge likely slows groundwater flow as it moves east to west, and may preferentially influence flow toward northern and southern flow paths. To the east of the ridge, a channel was formed in the lodgment till that generally parallels the ridge line further enhancing preferential flow along the ridge in a North-South direction as documented in the RI.
- Ablation Till - Overlying the lodgment till is a unit of ablation till which consist of cobble size to clay size particles deposited during the retreat of the glacier, this unit was reported in the RI to be present in each monitoring well installed during the RI. The ablation till is typically highly permeable. The original recovery wells, including RW-5, targeted pumping from the ablation till.
- Glaciolacustrine Silt and Sand - Overlying the ablation till are glaciolcutstrine (i.e. glacial lake deposits) silts and sands. These materials are permeable and transport groundwater but are less permeable then the ablation till. The RI report describes these materials as well stratified on the western side of the lodgment till ridge and un-stratified on the eastern side. The un-stratified material would be more likely to facilitate downward flow of groundwater into the ablation till while the stratified unit is likely to impeded downward flow and enhance flow parallel to the stratified units. The DPE wells and the replacement RW-5R well are screened in these un-stratified silts and sands located above the ablation till.
- To the east of the lodgment till ridge, silty clay has been described in the RI report as a horseshoe shaped deposit that may have been formed in an oxbow lake in an abandoned meandering river channel that formerly flowed through the area. The horseshoe shaped glaciolucustrine silty clay deposit was described to have been deposited contemporaneously with the glaciolacustrine silt and sand. As described in the RI report, it extends south from the eastern portion of the pond to the vicinity of MW-27D then turns northward toward the MW-56D area parallel to the lodgment till ridge. This horseshoe shaped deposit may influence groundwater flow by retarding groundwater flow in the Northern Plume area compared to groundwater flow to the south as evidenced by higher historical yields for the Southern Plume recovery wells compared to the Northern Plume recovery wells.

From a hydro-geologic perspective the ablation till is the unit with the highest permeability and is the most likely unit for contaminant migration. Results of aquifer pumping tests reported in the RI report indicate good connectivity between wells screened across the ablation till. As reported in the RI wells from 100 feet to over 200 feet from the pumping well (RW-1) indicated a good response to pumping and formed a drawdown ellipse parallel to the trend of the till ridge. Connectivity was also observed in intermediate wells believed to be screened in the silt and sands. This connectivity may explain the significant contaminate mass removal observed from the pumping of RW-5R, indicating that contaminate capture from the intermediate zone is feasible.

3.2 Ground Water Recovery System

The groundwater recovery system consists of 13 recovery wells including the replacement recovery well (RW-5R). Recovery wells RW-2 and RW-1 were permanently removed from service in April 2000 and August 2003 respectively.

Since the previous 5 year review in 2002 the following significant changes to the groundwater recovery system operation are noted:

- Pumping of RW-4, RW-6, RW-7 and RW-8 was temporarily suspended in August of 2005 as part of the in-situ biodegradation pilot test;
- Pumping of RW-4 and RW-8 was resumed in May of 2008;
- RW-5 was taken off line in October 2010;
- Eight dual phase extraction wells (DPE) were brought online in January of 2011; and
- Replacement well RW-5R was brought online in April 2011. RW-5R was positioned closer to the source area and screened within the silt and sand unit (intermediate zone) above the ablation till at 30 to 40 feet bgs.

A review of the ground water recovery system operational data was conducted to evaluate the overall effectiveness and contribution towards achieving the ROD goals and objectives. To evaluate the effectiveness of the existing system the current recovery system was compared to the 2004 – 2005 reporting period (Year 8), prior to the temporary shutdown of RW-4, RW-6, RW-7 and RW-8 for the in-situ biodegradation pilot test. This period of time was selected since it represents the operation of the recovery system as envisioned when it was designed. This comparison included a review of the following:

- Groundwater volume and VOC mass recovery rates as presented in Section 3.2.1;
- Groundwater elevations as presented in Section 3.2.2; and,
- Groundwater chemistry as presented in Section 3.2.3.

3.2.1 Review of Groundwater Recovery Rates

Table 3-1 and Table 3-2 summarize the contributions in both total flow and mass removal contributed by each of the ten recovery wells that operated during the past 5 years. As previously noted, RW-5 was replaced by RW-5R in 2011 and therefore there is overlap in their operation for a portion of the 2010-2011 reporting year. A comparison of recovery volumes and mass recovery rates during 2004-2005 to 2011–2012 is presented on Table 3-2. A review of the data shows the following:

1. The total mass recovery of 31 lbs/yr of VOCs by the system in 2011 – 2012 compared to 32 lbs/yr of VOCs in 2004-2005 was approximately the same, despite the recovery of approximately 10%

less volume of groundwater and overall declining concentrations in groundwater. Mass removal rates continuously declined on a yearly basis until the restart of RW-8 in 2008 and increased significantly in 2010 with the start-up of RW-5R;

2. Due to the improved operation of RW-5R compared to RW-5 and the addition of the DPE-N wells, greater volumes of groundwater and VOC mass is being removed from the Northern Source Area than in 2004 – 2005. As presented on Table 3-1, approximately 4-5 times as much mass and 5 times as much volume of water is being recovered from the Northern Source Area;

3. In 2004-2005 groundwater recovery from the Southern Source Area was performed by RW-6 and RW-7 which have remained off since August of 2005. Despite the removal of greater volumes of groundwater by the new DPE-S wells, compared to the operation of RW-6 and RW-7, less mass is being removed from the Southern Source Area than in 2004 – 2005. However, substantial mass is being removed from DPEN-4 which is included in the mass removal estimates for the Northern Source Area. DPEN-4 is located in close vicinity to former extraction well RW-6; and

4. Less recovery of groundwater and mass is occurring than in 2004 - 2005 from the Plume areas. Approximately 50% less groundwater is being recovered and mass removal has declined substantially from 26 lbs/yr to 4 lbs/yr. The mass decline can be attributed to an order of magnitude decline in groundwater concentration in RW-8 and 50% decline in RW-9 groundwater concentrations since 2004 – 2005, However, it is noted that declining pumping rates have occurred at RW-8 and RW-9.

In summary, mass removal from the Northern Source area has been improved. However, optimization of pumping and, as a consequence, mass removal from the Southern Source area may be possible.

3.2.2 Review of Groundwater Elevations

In support of the 5 year review site-wide groundwater elevations were collected in July of 2012. Figure 2 presents contoured groundwater elevations for the deep monitoring wells at the Site. A comparison of the deep groundwater contours and elevations presented in Figure 2 to the May of 2005 deep groundwater contours and elevations as presented in the Annual Groundwater Monitoring Report Year 8 (May 2004-May 2005) shows the following:

1. The depression of the deep groundwater elevations in the vicinity of the Northern Source area as demonstrated by groundwater contours near MW-6D and MW-16D is similar to that observed in 2004-2005. This indicates that the pumping of RW-5R from the silts and sands above the ablation till may be providing similar hydraulic control as when RW-5 was pumping from the ablation till;

2. The depression of the deep groundwater elevations in the vicinity of the Southern Source area is less pronounced than in 2004-2005 as demonstrated by groundwater contours near MW-37D and MW-39D. This change is attributed to the shutdown of RW-6 and RW-7;

3. The depression of the deep groundwater elevations in the southern portion of the Northern Plume area is less pronounced than in 2004-2005 as demonstrated by groundwater contours in the vicinity of MW-61D. This is attributed to the reduced pumping rates at RW-8 and RW-9; and,

4. The depression of the deep groundwater elevations in Southern Plume area is less pronounced as demonstrated by groundwater contours in the vicinity of MW-54D and MW-53D. This is attributed to the reduced pumping rates at RW-8 and RW-9.

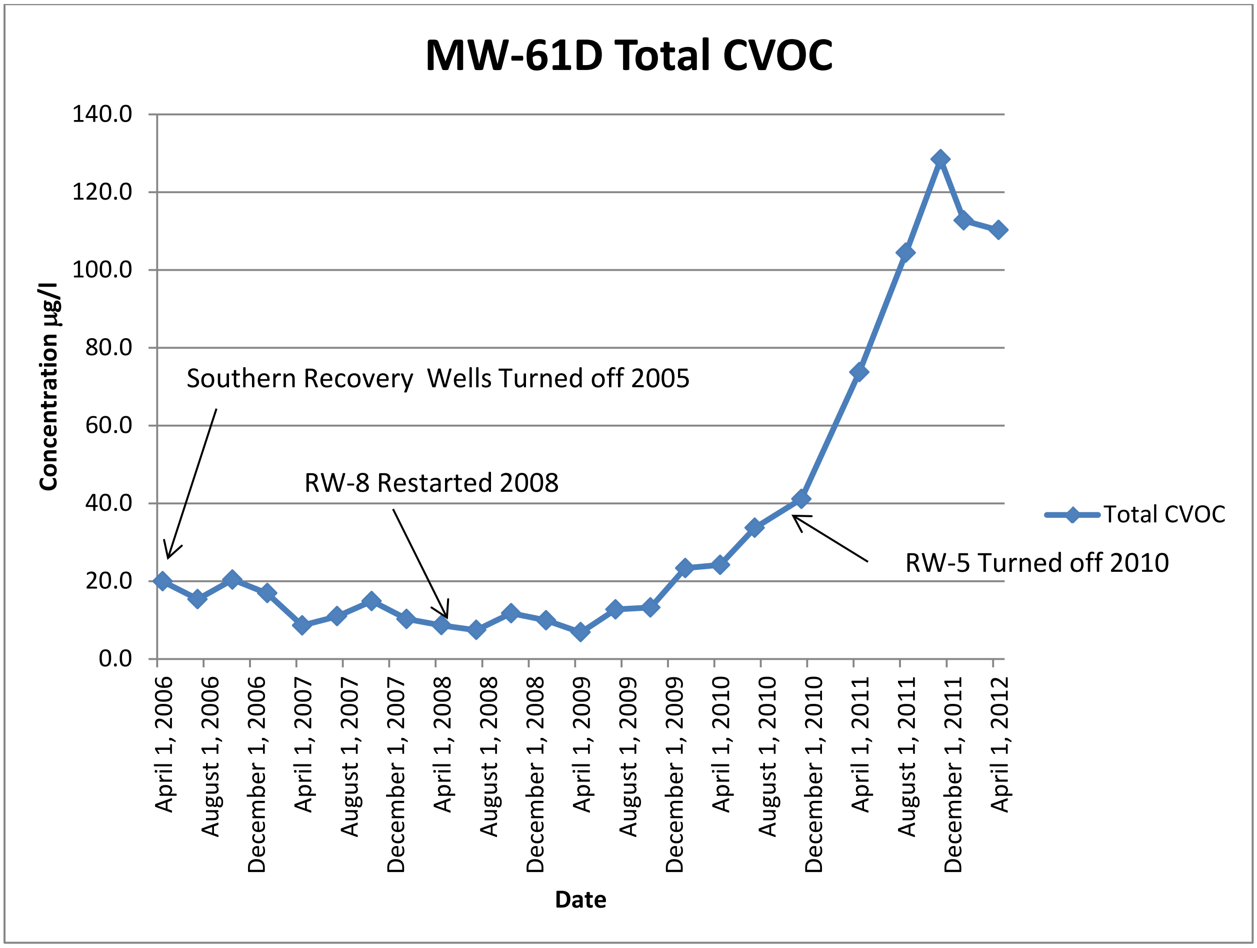
In summary, groundwater contours confirm that recovery in the vicinity of the Northern Source area appears to be performing similar to 2004-2005 even with the location of recovery well RW-5R in the intermediate zone above the ablation till and that the reduced pumping of the recovery wells, particularly Southern Plume recovery wells RW-8 and RW-9 and Southern Source wells RW-6 and RW-7, may have resulted in less effective hydraulic control in the Southern Source area.

3.2.3 Review of Groundwater Chemistry

As discussed in Section 2.0, PCE and 1,1,1-TCA are the primary constituents detected at the Site and the only VOC parameters reported to be present in samples collected from municipal pumping well M-2A. Isoconcentration contours for these compounds, comparing groundwater concentrations reported in 1998 to 2005 and 2005 to 2012 are presented on Figures 3 through 6.

A comparison of the 1998 to 2005 isoconcentration contours for both PCE and 1,1,1,-TCA shows a reduction in the extent of groundwater concentrations that exceed the 5 ug/l AWQS standard to the north and west for both parameters (Figures 3 and 5). A comparison of the 2005 to 2012 isoconcentrations shows a further reduction to the extent of groundwater concentrations that exceed the AWQS (Figures 4 and 6). As presented on Figure 4 and 6, with the exception of MW-34D, groundwater with concentrations that exceed the AWQS standards is confined to the east side of the lodgment till ridge. If groundwater containing concentrations greater than the AWQS can be contained to the east side of the lodgment till ridge by effective optimization of the hydraulic capture of the source and plume recovery wells then the Taylor Property recovery wells (RW-10, RW-11 and RW-12) could be shutdown. As presented in Section 3.0, a ROD goal is to meet AWQS standards within the AOC. The confinement of onsite groundwater contamination to the east of the lodgment till allowing for shutdown of the Taylor recovery wells and subsequent confinement of groundwater contamination to the source area allowing for shutdown of the Plume recovery are considered interim objectives towards meeting this ROD goal. As discussed in this 5-year review, improved capture closer to the source area may allow for achievement of one or more of these interim objectives within the near term and possibly within the next 5-year review period.

A comparison of the 1998 and 2005 isoconcentration contours for 1,1,1-TCA show significant declines in contaminant concentrations in the Northern Source area but increasing concentrations in RW-9 and MW-37I located to the south (Figure 5). 1,1,1-TCA concentration trends for RW-9 and MW-37I have shown a declining trend since the 2001-2002 timeframe. This indicates that active pumping of the recovery system previously provided hydraulic control by drawing groundwater south towards the southern recovery wells (RW-6, RW-7, RW-8 and RW-9). This southerly groundwater flow pattern may have been partially induced by the shutdown of recovery wells RW-1 and RW-2 during this time period. A comparison of the 2005 to 2012 isoconcentration contours shows that concentrations of 1,1,1-TCA along the northern portion of the east boundary of the lodgment till ridge remained relatively unchanged as demonstrated by concentrations MW-17D and MW-8D (Figure 6). Concentrations in MW-61D, also located on the east boundary of the lodgment till ridge but further south of MW-17D and MW-8D showed an increase in concentrations of 1,1,1-TCA from 2005 to 2012. These concentration trends maybe attributed to the decline in pumping rates from the southern recovery wells including the temporary shutdown of the Southern Source area recovery wells RW-6 and RW-7, temporary shutdown of Southern Plume recovery well RW-8 and reduced pumping from RW-9 coupled with the previous shutdown of the Northern Plume recovery wells RW-1 and RW-2. The reduced pumping capacity from RW-9 could be a result of the EISB study or the partial installation of a slurry wall. As presented in the RI, hydraulic gradients in this portion of the Site are estimated to be 80 feet per year without active pumping. In 2005 the highest reported concentrations of 1,1,1 –TCA were reported in RW-9 and MW-37I which is located near the source areas. The distance from the source area to MW-61D is approximately 700 feet and the distance between RW-9 to MW-61D is approximately 350 feet. The expected travel time to MW-61D for contaminates from RW-9 would be approximately 4.5 years without hydraulic control and from the source area would be 8.0 years. This is consistent with an observed increase in concentrations at MW-61D starting in 2010, approximately 5 years after the temporary shutdown of the southern recovery wells as shown in the following trend. Miller plans to supplement a future groundwater monitoring event with sampling of deep and intermediate wells in the vicinity of MW-61D, RW-9 and MW-37I not currently included in the groundwater monitoring plan. This will include onetime sampling and groundwater level collection from MW-2D, MW-4D, MW-6D, MW-7D, MW-11D, MW-10, MW-39D, MW-12D, MW-19D, MW-22D, MW-37D, MW-53D, MW-53I, MW-54D and MW-63.



3.2.4 *Summary of Review of the Groundwater Recovery System*

The recovery system as currently configured is providing contaminate capture and minimizing the migration of contaminates to the municipal supply wells. RW-5R and the new Northern DPE wells are providing enhanced mass removal from the North Source area compared to 2005. The new Southern DPE wells are providing minimal mass removal and less mass removal compared to the previous Southern Plume Recovery wells RW-6 and RW-7.

Confinement of groundwater contamination to the east side of the lodgment till and eventually the source area are considered interim objectives towards meeting ROD goals. Historic declines in concentrations at the Taylor recovery wells and nearby monitoring wells suggest that operation of the Taylor recovery wells will not be needed in the future to capture contaminate migration. Further understanding of the hydro-geologic conditions leading to the increased 1,1,1-TCA concentrations in the vicinity of MW-61D between 2005 and 2012 and the hydraulic influence of the current recovery system is important for the purpose of evaluating options for improvement of hydraulic capture using plume and source recovery wells. As described in Section 3.2.3, Miller plans to collect additional groundwater analytical data and water levels from intermediate and deep monitoring wells to further characterize concentrations of 1,1,1-TCA in the vicinity of MW-61D. Depending on the results of this sampling event, options for improvement of hydraulic control on the east side of the lodgment till using the plume and source recovery well network maybe evaluated. These evaluations would consider hydro-geologic data for the Site that was collected as part of the ROD and current pumping system configuration influences including the new pumping well RW-5R. The options would consider ways to confine contaminate recovery to the source area and improved mass recovery from the Southern plume area.

3.3 Dual Phase Extraction/Soil Vapor Extraction System

A total of 22 vapor recovery wells were installed at the Site as part of the Supplemental Site Mitigation System. Eight (8) of the vapor recovery wells are Dual Phase Extraction (DPE) wells equipped with dedicated groundwater extraction pumps and vapor extraction piping. The DPE wells were placed into service in January of 2011. Fourteen (14) SVE wells were installed in August 2010 and placed into operational service in February 2011 to target and remediation of the vadose zone beneath a portion of the Former Miller Container Facility and an area to the south of the building. The objective of the DPE wells is to provide drawdown of the water table within the source areas to allow for remediation of the smear zone identified during a membrane interface probe (MIP) study conducted prior to the design of the SVE system. These systems, with minor exceptions for maintenance, were fully operational during Year 15. The review presented here is based on the data presented in the CCR which includes a complete description of the installation, start-up and demonstration testing from March 2011 through December of 2011. The CCR also summarizes data collected by OMI during operation of the SVE and DPE systems from January of 2011 through December of 2011 (previously presented in Section 2.0 of this Report). The locations of the DPE and SVE wells are presented on Figure 1.

As previously discussed, the installation of the SVE system was a voluntary remedial action implemented to accelerate remediation at the Site and is not a requirement of the ROD. However, the SVE system is envisioned to provide support in attaining the following ROD goals:

- Elimination, to the extent practicable, of the contamination present in soils to a level protective of groundwater. Treatment of overburden soils to Protection of Groundwater standards is considered consistent with this ROD goal; and,
- Mitigate the impacts of contaminated groundwater to the environment. Treatment of overburden soils and groundwater to meet NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (SVI guidance concentrations) would be considered consistent with this ROD goal.

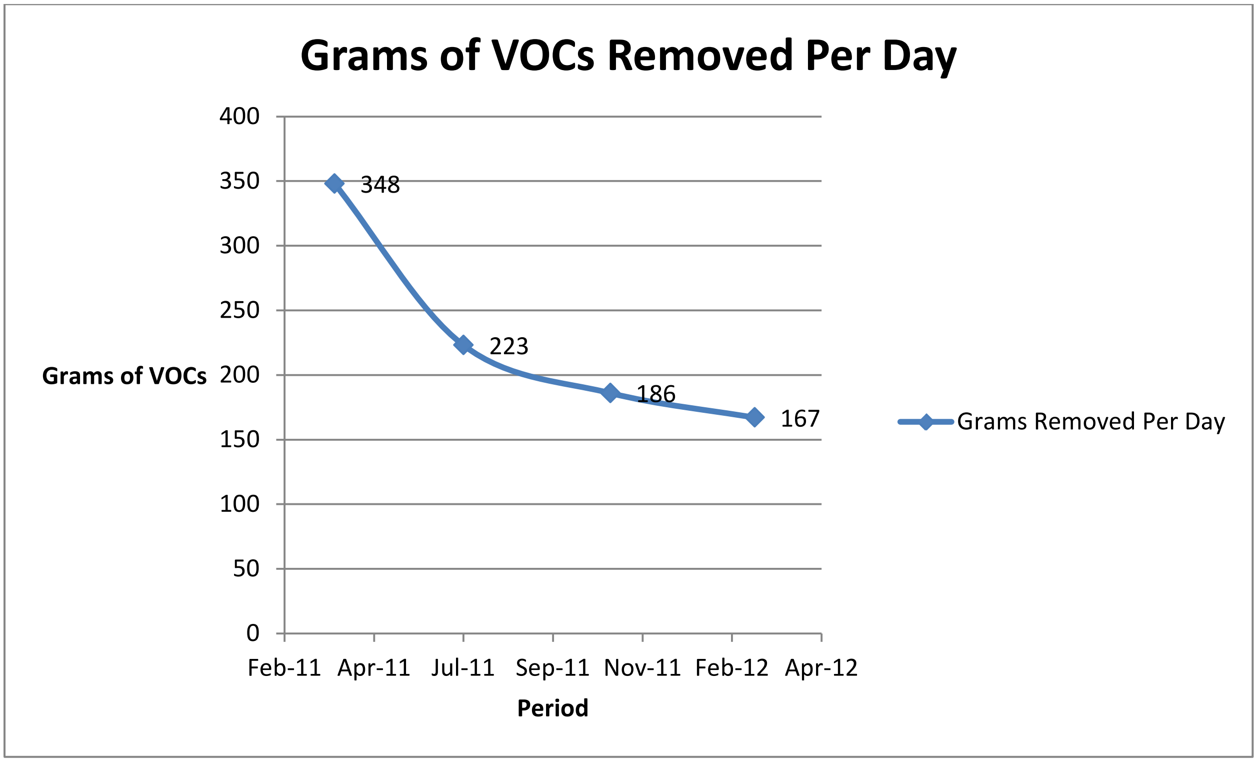
The following presents a summary of information presented in the CCR compared to these ROD goals at the start of SVE system operations:

- Soil samples were collected from overburden soils at the location of each of the 22 vapor recovery wells during installation. With the exception of a duplicate sample collected from SVE well SVEN-9, the reported soil sample results for the Site COCs were less than the NYSDEC Part 375.6-8(b) Protection of Groundwater standards. The reported results for the duplicate sample from SVEN-9 was above the Protection of Groundwater Standard for only one COC,1,1-DCA. These results indicate that limited remediation of overburden soils in the Southern Source Area is required to meet the ROD goals of treating soils for protection of groundwater; and
- Vapor samples were collected from within the building and beneath the slab of the North and South portion of the building prior to operation of the SVE system in February of 2011 and during SVE operation in December of 2011. The reported results were compared to the SVI guidance concentrations as follows:
  - Analytical results from February 2011 show that indoor air concentrations were less than the SVI guidance concentrations without operation of the SVE system;
  - Analytical results from February 2011 show that sub-slab vapor concentrations in the South portion of the building were less than the SVI guidance without operation of the SVE system;
  - Analytical results indicate that in February 2011 sub-slab vapor concentrations in the North portion of the building exceeded the SVI guidance for PCE and TCE without operation of the SVE system. Analytical results from December 2011 show that during operation of SVE system sub-slab vapor concentrations in the North portion of the building are less than the SVI guidance concentrations; and,
  - Based on these vapor sample results, additional treatment of subsurface soil and/or groundwater in the North portion of the building may not be required to meet SVI guidance.

In summary, based on the information presented in the CCR it appears that limited operation of the SVE system is required to meet ROD goals and that operation of the SVE system should be directed to maximize mass removal from the smear zone. When extracted soil vapor concentrations indicate that the SVE system is no longer effectively removing contaminates from the smear zone consideration should be given to discontinuing its operation.

A review of the vacuum data presented in the CCR shows that the SVE wells typically operate at a vacuum of 5” to 6” hg (inches of mercury) and with the exception of periodic fluctuations of vacuum loss at TS-1 the vacuum influence extends to the vapor monitoring points. The periodic loss of vacuum at TS-1 is attributed to the well’s location within a swale that is known to periodically fill with water and submerge the well. In summary, the SVE system is capable of providing vacuum influence over the intended areas.

Figure 7 presents vapor isoconcentration contours for the SVE and DPE wells for average PCE and 1,1,1-TCA concentrations for samples collected in 2011. A review of the individual sample data presented in Table 2-9 indicates that vapor concentrations are continuing to decline and that asymptotic concentrations consistent with vapor equilibrium with groundwater concentrations have not been reached as presented in the following graph:



In general, the DPE wells are observed to be removing higher concentrations of vapors than the SVE wells. This is likely a result of drawdown of the water table in the vicinity of the DPE wells and greater exposure of the smear zone compared to the SVE wells. The highest vapor concentrations were reported for DPE wells DPEN-2 and DPEN-4 which are located at the edge of the Northern area. While this could indicate that contamination extends beyond the influence of the Northern SVE systems it is more likely an indication that the high operating vacuums and number of SVE wells with overlapping vacuum influence are mounding groundwater in Northern area thus limiting their ability to effectively remove contaminates from the smear zone. Figure 8 presents shallow groundwater contours for the source areas based on limited groundwater elevations. Groundwater could potentially mound 1.1 feet for each inch of Hg vacuum maintained within the source area.

A review of data for the December 2011 sampling event in the vicinity of DPEN-4 supports the concept that effective remediation of the smear zone may not be occurring within the interior of the SVE well network. A vapor concentration in equilibrium with groundwater can be calculated using Henry's law and groundwater concentrations. A vapor concentration in equilibrium with groundwater for 1,1,1-TCA at DPEN-4 was calculated based on the reported groundwater concentration of 10 ug/l and compared to vapor concentrations reported in December of 2011:

1,1,1-Trichlorethane Results Near DPEN-4

DPEN-4 Groundwater Vapor Equilibrium Groundwater Concentration of 10 ug/l	7,050 ug/m^3
DPEN-4 Sample Vapor Concentration:	23,000 ug/m^3
SVEN-8 Sample Vapor Concentration:	1,500 ug/m^3
SVEN-11 Sample Vapor Concentration:	1,500 ug/m^3

As shown, the reported vapor concentrations for the DPEN-4 sample are approximately four times greater than the groundwater equilibrium vapor concentration indicating that 1,1,1-TCA is being removed from sources, likely the smear zone, other than groundwater. The vapor concentrations reported for vapors at neighboring wells SVEN-8 and SVEN-11 are approximately five times less than the groundwater equilibrium vapor concentration for DPEN-4 indicating that 1,1,1-TCA removal at these wells maybe predominately associated with groundwater volatilization and that limited mass removal from other sources is occurring. It is recommended that options to improve mass recovery in the vicinity of SVEN-8 and SVEN-11 be evaluated including operation of the SVE system in a pulsed manner and the use of off wells as air inlet wells where feasible. These operating scenarios should introduce additional vapors to the subsurface allowing for higher vapor recovery rates at lower vacuums and correspondingly less potential for groundwater mounding and greater access to the smear zone.

3.4 Future Considerations for Remediation

The current remedial systems are providing contaminate migration control and source mass removal. As discussed above the combined GRS and SVE systems are removing approximately 95 kgs (209 lbs) of mass per year, a substantial increase from historical operation of the GRS only. As described above, optimization of the hydraulic control is recommended to reduce the AOC and limit the extent of groundwater contamination to the source areas. As remedial progress continues, passive remedial alternatives or contaminate fate determination may be considered.

3.5 Effluent pipe extension

The GWTF discharges under substantive SPDES requirements as shown in Appendix C. In December of 2010 Miller made a proposal to modify the monitoring requirement of the discharge and requested to extend the permit term an additional 5 years. The proposal was met with some resistance at the Department as concern was raised over the levels of Total Dissolved Solids (TDS), Sodium and Chloride related to the current site owner Riccelli Fulton LLC pending issues with the storage of road salt in the main parking lot area. The water being recovered by the on-site recovery well network was demonstrating elevated levels of these compounds. The department performed an evaluation of the receiving waters where the effluent from the GWTF was being discharged and determined that these levels were too high to be introduced into the “tributary” and the effluent pipe would need to be extended out into the Oswego River to provide for greater dilution. The services of a licensed Professional Engineer were solicited and a design was proposed to extend the pipe through an existing 60-inch culvert into the River. The design was approved by the DEC Department of Water and the proper permitting was initiated. After several months, all of the required permits were approved and the pipe was installed. The US Army Corp of Engineers performed an inspection of the installation and concluded that the pipe was installed according to the approved plan. In addition to the installation of the effluent pipe extension Miller was required to monitor the influent and effluent to the GWTF weekly for a period of time then monthly thereafter. All additional work and expense associated with this project have been provided by Miller.

3.6 Supplemental Soil Investigation

During remedial efforts being performed by Riccelli Futon, LLC in relation to the storage of road salt the engineering firm overseeing the activities (Spectra) noted elevated PID reading on a portion of the soil removed from a small area near the northeast corner of the parking lot. The soil was segregated and sampling was performed. The analytical indicated elevated levels of PCE and Acetone. The Department required Miller to investigate this area further as the levels reported were above the acceptable levels defined in the Record of Decision. A work plan was developed to utilize direct push drilling technology and field screening to delineate the vertical and horizontal extent of the suspected contaminants. The approved work plan was implemented on August 6, 2012. One sample was collected from each location and sent to an approved laboratory for analysis. The analytical results indicated that all of the contaminants detected were below the acceptable levels as defined in the ROD and the more stringent levels set forth in the DEC regulations (6 NYCRR Part 375 6.8(b) for the protection of groundwater for all locations.

A copy of the Soil Investigation Report for the Former Drum Handling Area Evaluation prepared by GeoLogic NY, Inc. (September 2012) summarizing the activities described above is provided in Appendix D.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The volume of groundwater recovered from the ablation till has decreased substantially since 2005 due to the reduction in pumping rates associated with the Southern recovery wells and shutdown of RW-5, replacement well RW-5R is located above the ablation till. A cursory review of the deep groundwater elevations in the vicinity of the replacement recovery well RW-5R suggest that the screening of this well is providing similar hydraulic influence within the North Plume and North Source areas as the previous RW-5 well. A review of the groundwater chemistry and geology indicates that exceedances of the AWQS west of the lodgment till are limited. A ROD goal is to meet AWQS standards within the AOC. The confinement of onsite groundwater contamination to the east of the lodgment till allowing for shutdown of the Taylor recovery wells would be considered an interim objective of this ROD goal. Current trends for MW-61D indicate that concentrations to the east of the lodgment till have increased since 2010 which is possibly as a result of reduced pumping rates within the plume and source areas. As described in Section 3.0, Miller will sample intermediate and deep groundwater monitoring wells in the vicinity of MW-61D to further characterize the plume. Pending the results of this additional sampling, Miller may evaluate options for improvement of hydraulic control on the east side of the lodgment till using the existing plume and source recovery well network.

The analytical testing of soil, performed during the installation of the DPE and SVE systems did not identify a significant source of mass within the source area overburden that requires remediation. These results are consistent with the MIP study completed prior to the design of the SVE systems. Therefore the objective of the SVE system should be to effectively remove mass from the smear zone. The SVE system is currently removing significant volumes of mass but a review of vapor concentrations indicate that mass removal from within the center of the Northern Source area maybe limited due to groundwater mounding. It is recommended that options to improve mass recovery be evaluated including operation of the SVE system in a pulsed manner and the use of off wells as air inlet wells where feasible.

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5.0 REFERENCES

1. Soil Vapor Extraction Construction Completion Report, Supplemental Site Mitigation Program, Former Miller Container Site, Fulton, New York, August 16, 2012, AECOM Technical Service NE.

2. Correspondence to Mr. John Grathwol, NYSDEC, Re: Former Miller Container Site, Remedial Program Order and IRM Program Order, Fulton, New York, June 27, 2012. Stephen Rogers, VP and General Counsel, Miller Brewing Co.

TABLES

Table 2-9
Miller Brewing Co.
Former Miller Container Site
Volney, New York

SVE Vapor Mass Removal Estimates

	March 2011 to April 2011 (Period 1)				April 2011 to September 2011 (Period 2)			September 2011 to December 2011 (Period 3)			December 2011 to May 2012 (Period 4)		
Analyte	**March 24, 2011**	**April 19, 2011**	**Average Concentration**	**grams removed**	**September 6, 2011**	**Average Concentration**	**grams removed for period**	**December 13, 2011**	**Average Concentration**	**grams removed for period**	**August 28, 2012**	**Average Concentration**	**grams removed for period**
1,1,1-Trichloroethane	4,500	2,100	3,300	1,522	2,200	2,150	5,579	1,100	1,650	3,043	3,300	2,200	11,061
1,1-Dichloroethane	1,600	540	1,070	494	190	365	947	130	160	295	150	140	704
1,1-Dichloroethene	520	100	310	143	56	78	202	33	45	82	51	42	211
1,4-Dioxane											1,100		
Chloroethane											5		
1,2-Dichloroethane	U	24	24	11	32	28	73	12	22	41			
Benzene	U	19	19	9	26	23	58	10	18	33			
Chloroform	U	29	29	13	39	34	88	15	27	50			
cis-1,2-Dichloroethene	3,600	U	3,600		U	U		U	U		1,100	1,100	5,530
Ethylbenzene	U	26	26	12	35	31	79	13	24	44			
Methylene Chloride	U	63	63	29	1,500	782	2,028	30	765	1,411	26	28	141
Tetrachloroethene	23,000	5,600	14,300	6,596	7,600	6,600	17,126	3,000	5,300	9,775	7,200	5,100	25,641
Toluene	U	71	71	33	3,400	1,736	4,503	12	1,706	3,147	4	8	40
Trichloroethene	510	150	330	152	130	140	363	71	101	185	110	91	455
Vinyl chloride	120	16	68	31	20	18	47	16	18	33	12	14	70
Xylenes, Total	U	26	26	12	35	31	79	13	24	44			
TOTAL	**33,850**	**8,764**	**23,236**	**9,057**	**15,263**	**12,014**	**31,174**	**4,455**	**9,859**	**18,184**	**13,058**	**8,722**	**43,853**
Flow Rate (SCFM)	420	450	435		459	455		464	462		488	476	
Days of Operation			26			140			98			259	
Grams Mass Removed Per Day				***348***			***223***			***186***			***169***

Estimated Grams Removed for Reporting Period Year 15

Period	**Grams Mass Removed Per Day (Note 3)**	**No. of Days**	**Grams of Mass Removed**
May 1, 2011 to September 1, 2011	286	123	35,117
September 1, 2011 to December 1, 2011	204	91	18,574
December 1, 2011 to May 1, 2012	177	152	26,970
Total Period		**366**	**80,661**

1) Data are reported in micrograms per cubic meter. U indicates compound was not detected
2) December 2011 flow data not available, used October 2011.
3) May 1, 2011 to September 1, 2011 is average of period 1 and 2; September 1, 2011 to December 1, 2011 is average of Period 2 and 3; December 1, 2011 to May 1, 2012 is average of Period 3 and 4.

Golder Associates

TABLE 3-1
Miller Brewing Co.
Former Miller Container Site - Volney, New York

Summary of Groundwater Recovery and Treatment System Data - Gallons VOCS Recovered

MAY 2006 - MAY 2011

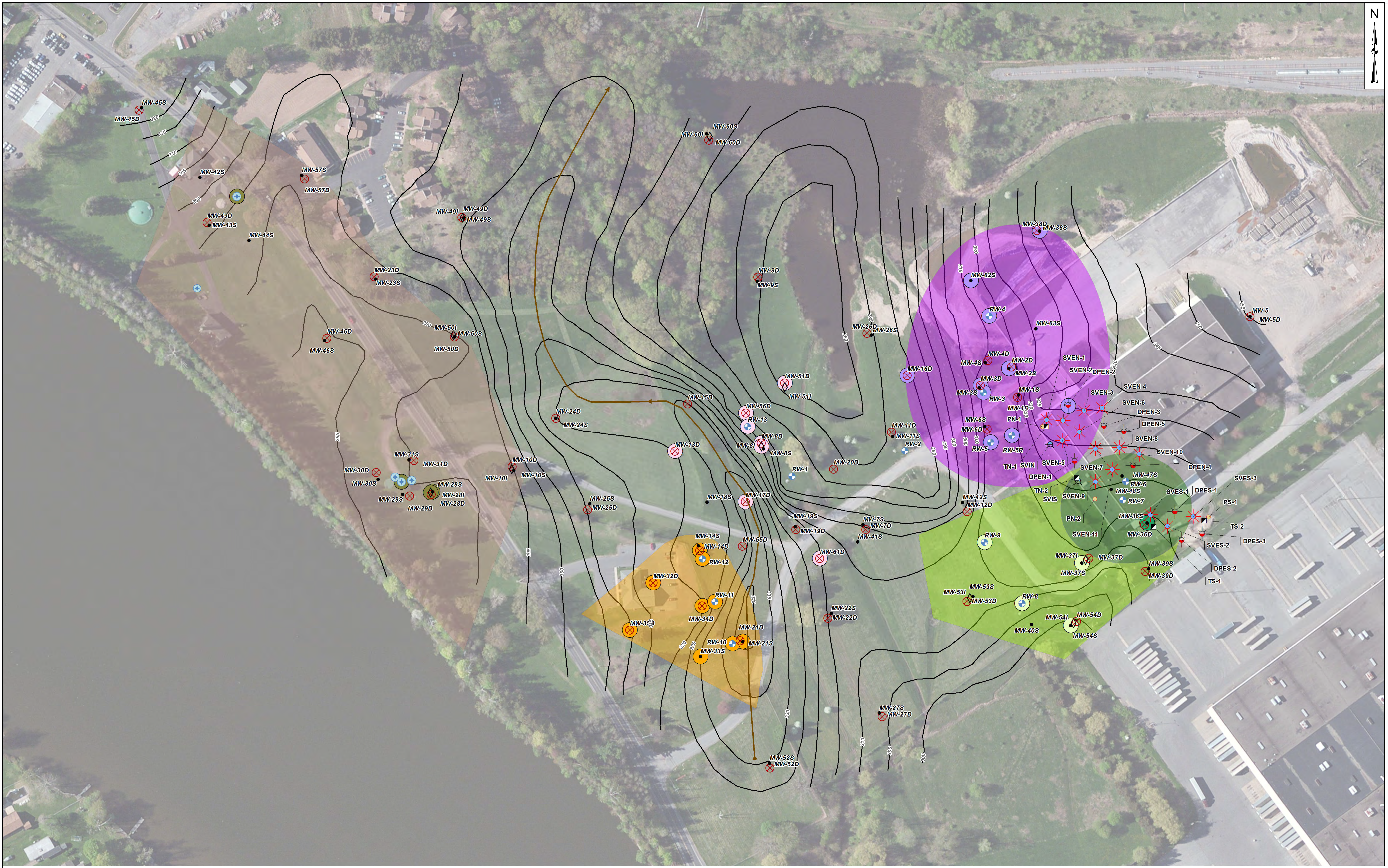
Well ID	Location Description	Year 10		Year 11		Year 12		Year 13		Year 14		Totals	
		2006 - 2007		2007 - 2008		2008 - 2009		2009 - 2010		2010 - 2011			
		Total Recovery (Gal)	Total VOCs (lbs)	Total Recovery (Gal)	Total VOCs (lbs)	Total Recovery (Gal)	Total VOCs (lbs)	Total Recovery (Gal)	Total VOCs (lbs)	Total Recovery (Gal)	Total VOCs (lbs)	Gallons	VOCs (lbs)
RW-3	NOU-S	170,903	1.208	91,163		58,801	0.229	56,087		69,786	0.14	**446,740**	**1.58**
RW-4	NOU-S					647,103	0.487	293,653		544,924	1.718	**1,485,680**	**2.21**
RW-5	NOU-S	260,059	1.063	136,775		112,729	0.09	111,169		58,117	0.034	**678,849**	**1.19**
RW-5R	NOU-S									114,629	4.472	**114,629**	**4.47**
RW-8	SOU-P					6,495,110	5.399	3,661,057		3,122,601	5.028	**13,278,768**	**10.43**
RW-9	SOU-P	115,922	0.776	34,512		15,506	0.015	12,263		39,977	0.061	**218,180**	**0.85**
RW-10	Taylor Prop	368,474	0.028	312,915		282,254	0.018	218,162		239,943	0.018	**1,421,748**	**0.06**
RW-11	Taylor Prop	1,335,441	0.093	1,204,801		1,137,215	0.044	911,655		533,320	0.027	**5,122,432**	**0.16**
RW-12	Taylor Prop	1,515,437	0.088	1,490,609		1,399,569	0.066	1,200,584		1,187,561	0.072	**6,793,760**	**0.23**
RW-13	NOU-P	1,462,401	0.425	1,714,001		1,560,945	0.494	1,597,546		1,478,239	0.487	**7,813,132**	**1.41**
DPES-1										377,532	0.172	**377,532**	**0.17**
DPES-2										88,469	0.017	**88,469**	**0.02**
DPES-3										192,003	0	**192,003**	**0.00**
DPEN-1										182,704	0.64	**182,704**	**0.64**
DPEN-2										219,718	3.407	**219,718**	**3.41**
DPEN-3										226,435	0.338	**226,435**	**0.34**
DPEN-4										157,761	0.132	**157,761**	**0.13**
DPEN-5										134,728	0.215	**134,728**	**0.22**
Totals		**5,228,637**	**3.681**	**4,984,776**	**3.5**	**11,709,232**	**6.842**	**8,062,176**	**7.9**	**8,968,447**	**16.978**	**38,953,268**	**27.50**

TABLE 3-2
Miller Brewing Co.
Former Miller Container Site - Volney, New York

Comparison of Groundwater Recovery 2004-2005 to 2011-2012

Well ID	**Location Description**	**Year 8 2004-2005**		**Year 15 2011 - 2012**		**Difference**	
		Recovery Gallons	**Lbs VOCs Recovered**	**Recovery Gallons**	**Lbs VOCs Recovered**	**Gallons**	**Lbs**
North Source Recovery Wells							
RW-3	NOU-S	194,095	1.71	67,121	0.25	-126,974	-1.46
RW-4	NOU-S	463,431	0.50	489,702	0.95	26,271	0.44
RW-5	NOU-S	363,006	2.78	0		-363,006	-2.78
RW-5R	NOU-S		0.00	1,515,326	19.24	1,515,326	19.24
DPEN-1	NOU-S	0	0.00	405,951	1.44	405,951	1.44
DPEN-2	NOU-S	0	0.00	719,713	2.32	719,713	2.32
DPEN-3	NOU-S	0	0.00	764,017	1.41	764,017	1.41
DPEN-4	NOU-S	0	0.00	543,139	0.67	543,139	0.67
DPEN-5	NOU-S	0	0.00	462,810	0.19	462,810	0.19
Sub-Total	*NOU-S*	*1,020,532*	*5.00*	*4,967,779*	*26.45*	*3,947,247*	21.46
South Source Recovery Wells							
RW-6	SOU-S	218,386	0.56			-218,386	-0.56
RW-7	SOU-S	797,686	0.59			-797,686	-0.59
DPES-1	SOU-S	0	0.00	659,740	0.15	659,740	0.15
DPES-2	SOU-S	0	0.00	418,096	0.01	418,096	0.01
DPES-3	SOU-S	0	0.00	416,134	0.01	416,134	0.01
Sub-Total	*SOU-S*	*1,016,072*	*1.15*	*1,493,970*	*0.17*	*477,898*	-0.98
Total Source Volume		**2,036,604**	**6**	**6,461,749**	**27**	**4,425,145**	20.47
Plume Wells							
RW-8	SOU-P	7,257,523	20.31	3,244,752	3.71	-4,012,771	-16.60
RW-9	SOU-P	181,405	5.22	54,551	0.07	-126,854	-5.16
RW-10	Taylor Prop	411,377	0.04	212,531	0.01	-198,846	-0.02
RW-11	Taylor Prop	1,537,380	0.12	353,142	0.01	-1,184,238	-0.10
RW-12	Taylor Prop	1,792,801	0.13	1,199,753	0.06	-593,048	-0.08
RW-13	NOU-P	1,413,476	0.49	1,248,186	0.33	-165,290	-0.15
Total Plume Volumes		**12,593,962**	**26.31**	**6,312,915**	**4.19**	**-6,281,047**	**-22.12**
Total Recovery System		**14,630,566**	**32.46**	**12,774,664**	**30.81**	**-1,855,902**	**-1.65**

FIGURES



CONTRACTOR FIRM ID

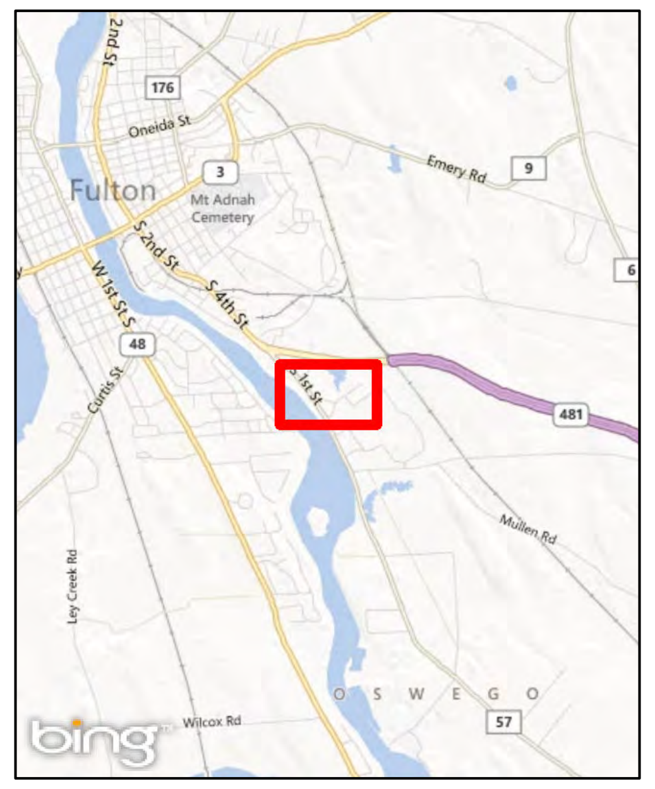
Golder Associates
GREENSBORO, NC

CONTRACTOR PROJECT No.: 12389445

Designed By: CGP
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
Site Plan with Lodgment Till Contours

FIGURE: 1

Drawing Number: **NA**
Rev: **A**

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet
Projection: Transverse Mercator
Datum: North American 1983

SVE well locations and RW-5R location obtained from client supplied survey data (AECOM) and drawings.

NOTES

LEGEND

Site Wells

- ● Shallow Monitoring Well
- ◊ Intermediate Monitoring Well
- ⊗ Deep Monitoring Well
- ◕ Recovery Well
- ✦ Municipal Groundwater Supply Well

SVE System Wells

- Dual Phase Extraction Well
- Piezometer
- Soil Vapor Extraction Well
- Soil Vapor Intrusion Monitoring Point
- ◩ Vacuum Gauge

Elevation Contours for Top of Lodgment Till

- 5 foot Contour interval
- Trace of Lodgment Till Ridgeline

Functional Monitoring Groups

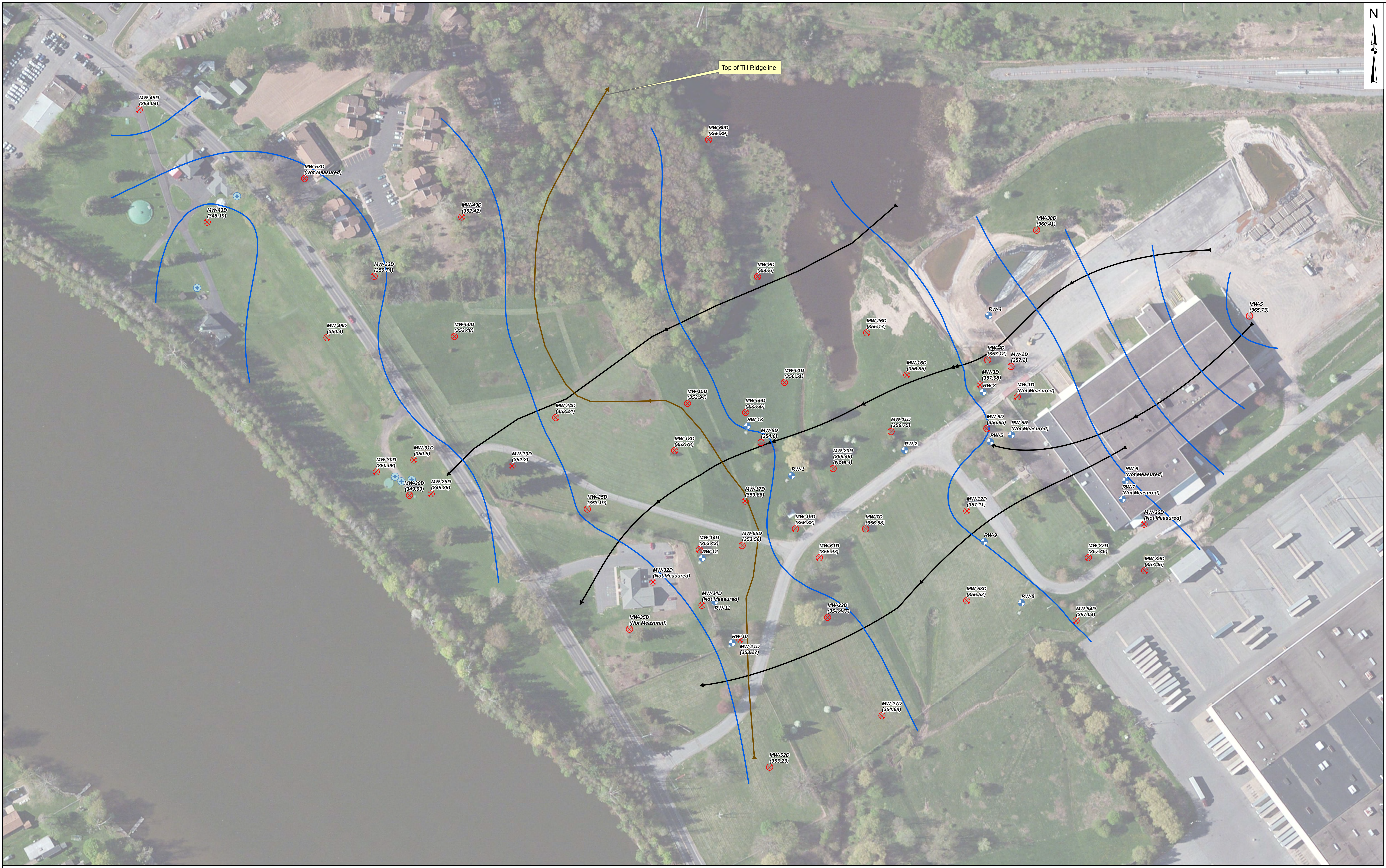
- 🟧 Taylor Property
- ▨ Municipal Wells
- 🟪 Northern Operable Unit - Source Area
- ▨ Northern Operable Unit - Plume Area
- 🟩 Southern Operable Unit - Source Area
- 🟩 Southern Operable Unit - Plume Area

Monitoring Network Functional Group Well Identifier

- ● Municipal Well
- ○ SOU- Plume
- ○ NOU-Plume
- ● SOU-Source
- ● NOU-Source
- ● Taylor Property

200 150 100 50 0 200
Feet

Map Document: W:\Projects\Miller-Coors\MXD\Final Figures\12389445F01_Site_Plan130220.mxd | Last Saved: 2/20/2013 10:34:54 AM | By: cpippin



CONTRACTOR FIRM ID

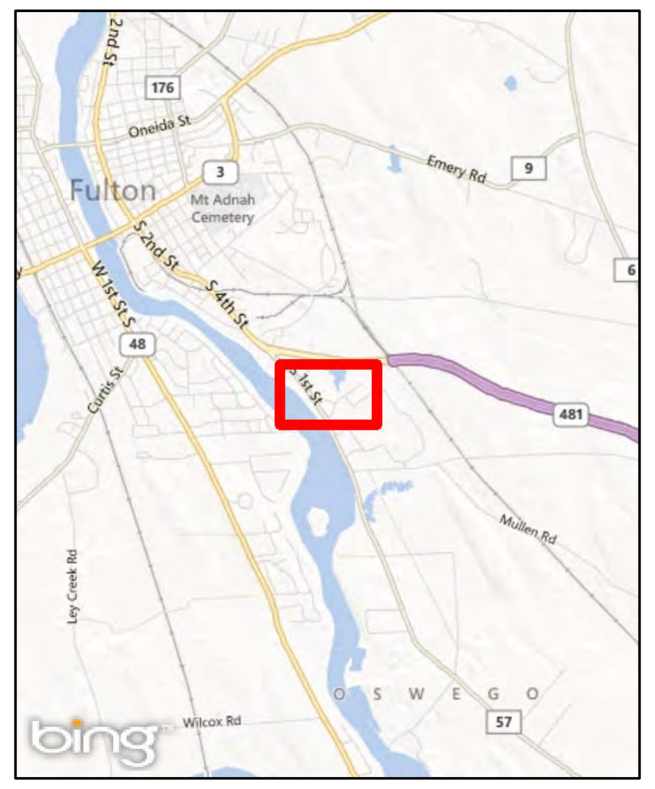
Golder Associates
GREENSBORO, NC

CONTRACTOR PROJECT No.: 12389445

Designed By: CGP
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
POTENTIOMETRIC SURFACE BASED ON DEEP MONITORING WELL DATA

FIGURE: 2

Drawing Number: **NA**
Rev: **A**

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet

NOTES

1. Groundwater elevation data provided by client and represents data obtained from the AECOM July 2012 field event.
2. Groundwater contours were constructed using contouring software and adjusted by hand where appropriate.
3. Recovery well data was not used in developing the contours for the potentiometric surface.
4. Monitoring well MW-20D groundwater elevation data was not used in developing the contours for the potentiometric surface due to anomalous elevation.

LEGEND

⊗ Deep Monitoring Well
◐ Recovery Well
⊕ Municipal Well

July 2012 Potentiometric Surface from Deep Monitoring Wells (Recovery Wells and MW-20D Excluded)

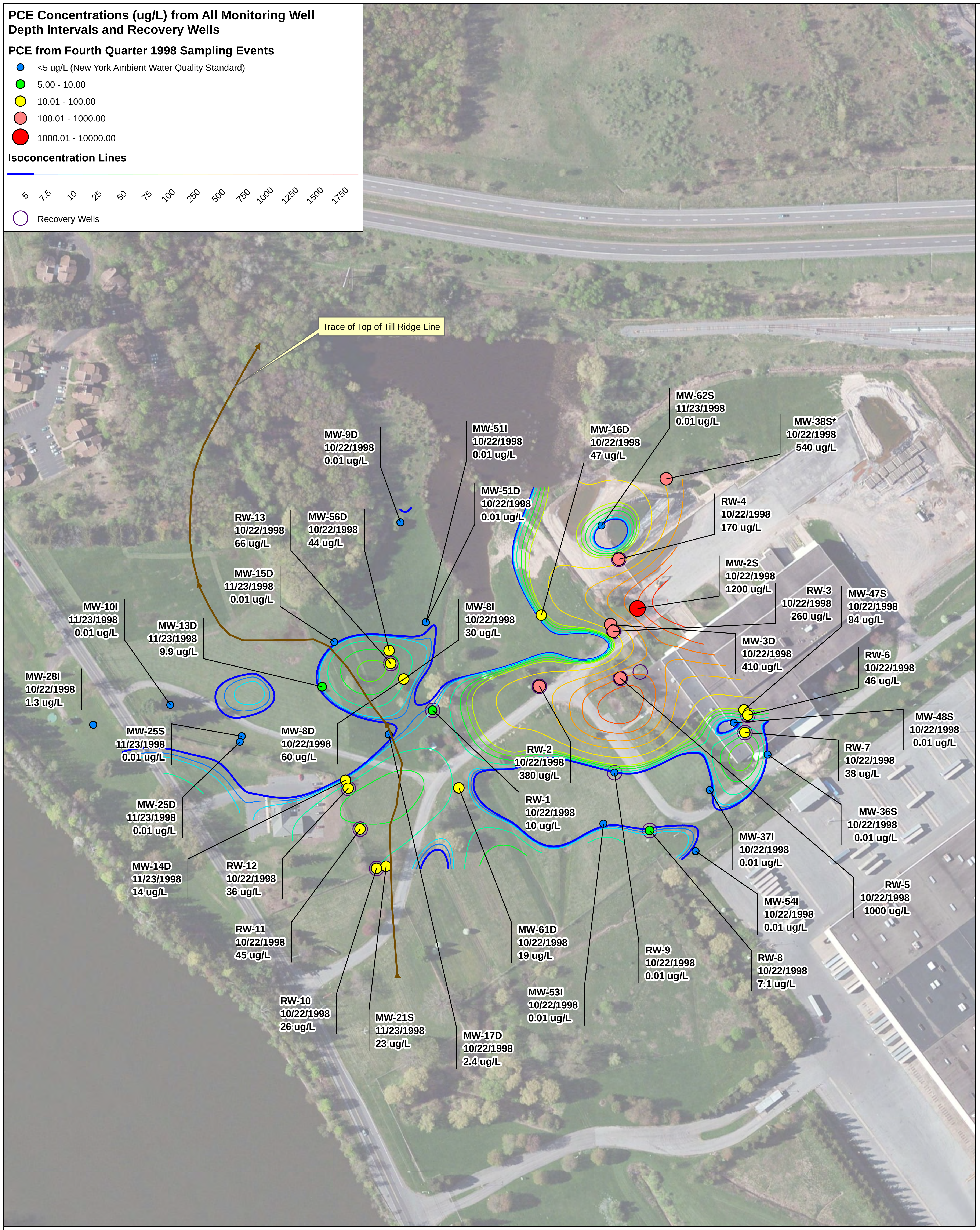
— 2 foot Contour Intervals

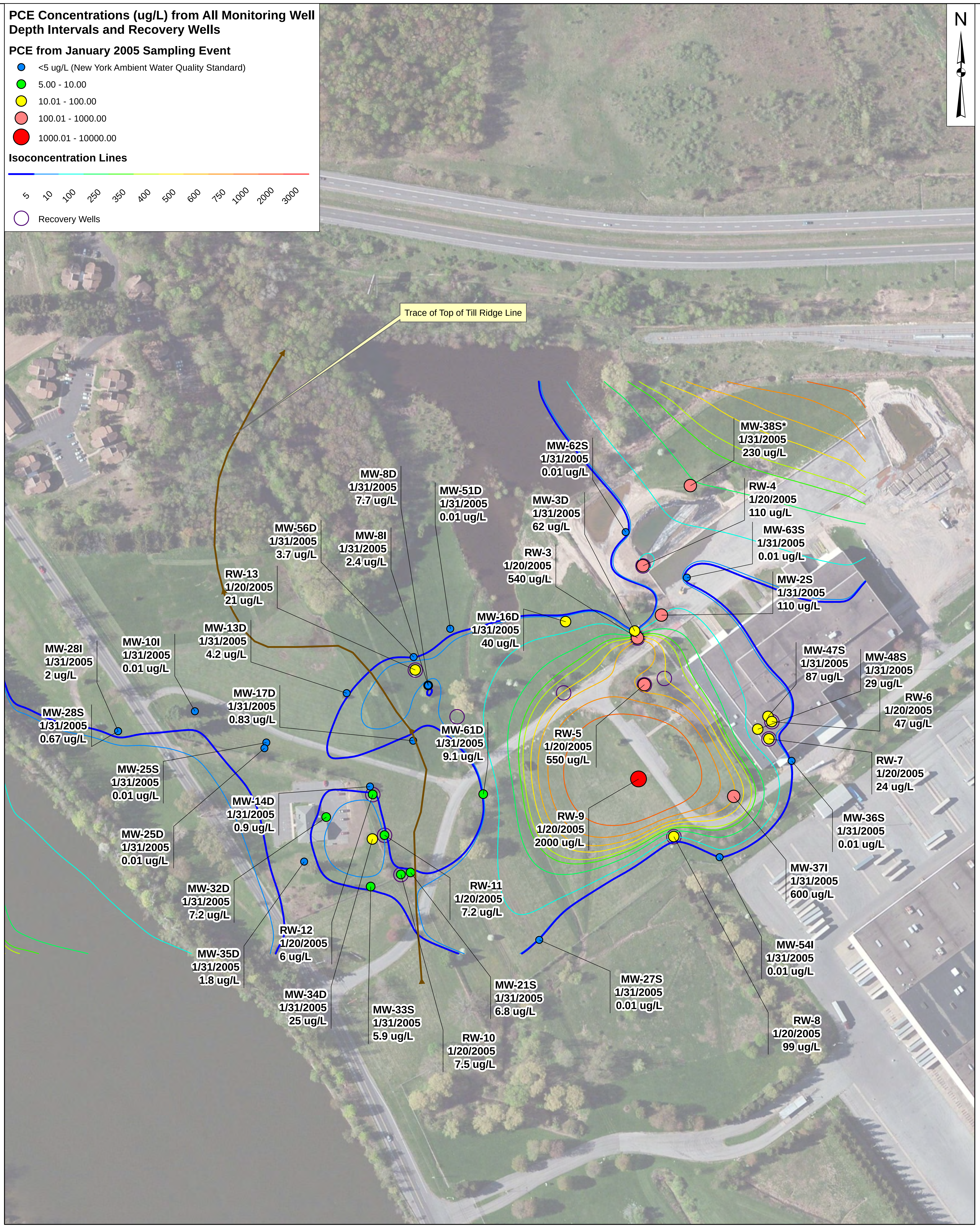
Groundwater Flow Lines for Deep Groundwater Potentiometric Surface

→

200 150 100 50 0 200
Feet

Map Document: W:\Projects\Miller-Coors\MXD\Final Figures\12389445F02_Deep_Pot_Map130220.mxd | Last Saved: 2/20/2013 10:52:03 AM | By: cpippin





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CONTRACTOR PROJECT No.: 12389445

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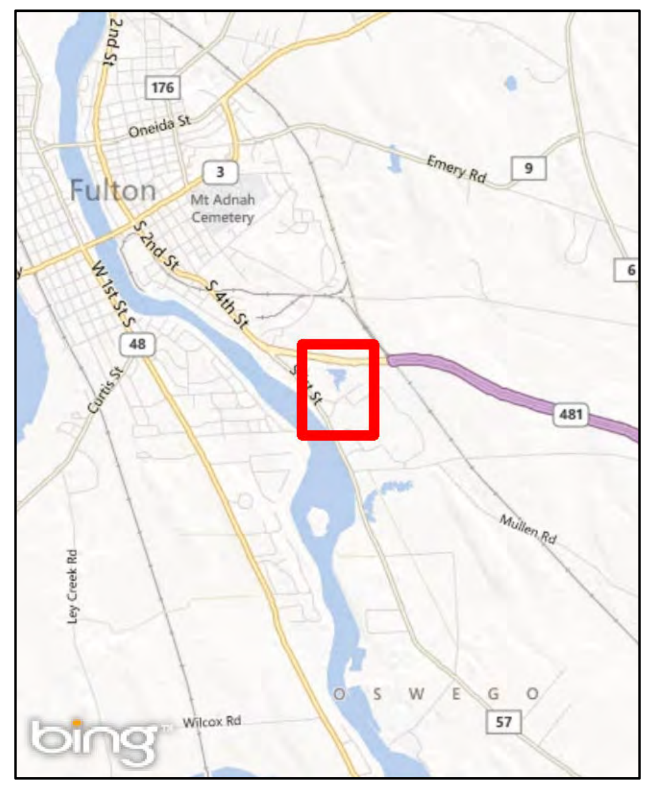
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
PCE Isconcentrations from 1998 and 2005

FIGURE: 3

Drawing Number: **NA**
Rev: **A**

REFERENCES

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Source: © 2010 NAVTEQ © AND © 2013 Microsoft Corporation
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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet
Projection: Transverse Mercator

NOTES

1. Isoconcentration groundwater contours were constructed with contouring software using a Minimum Curvature data interpolator. Minimum Curvature generates the smoothest possible surface while attempting to honor the data as closely as possible; however, Minimum Curvature is not an exact interpolator.

LEGEND

200 150 100 50 0 200
Feet

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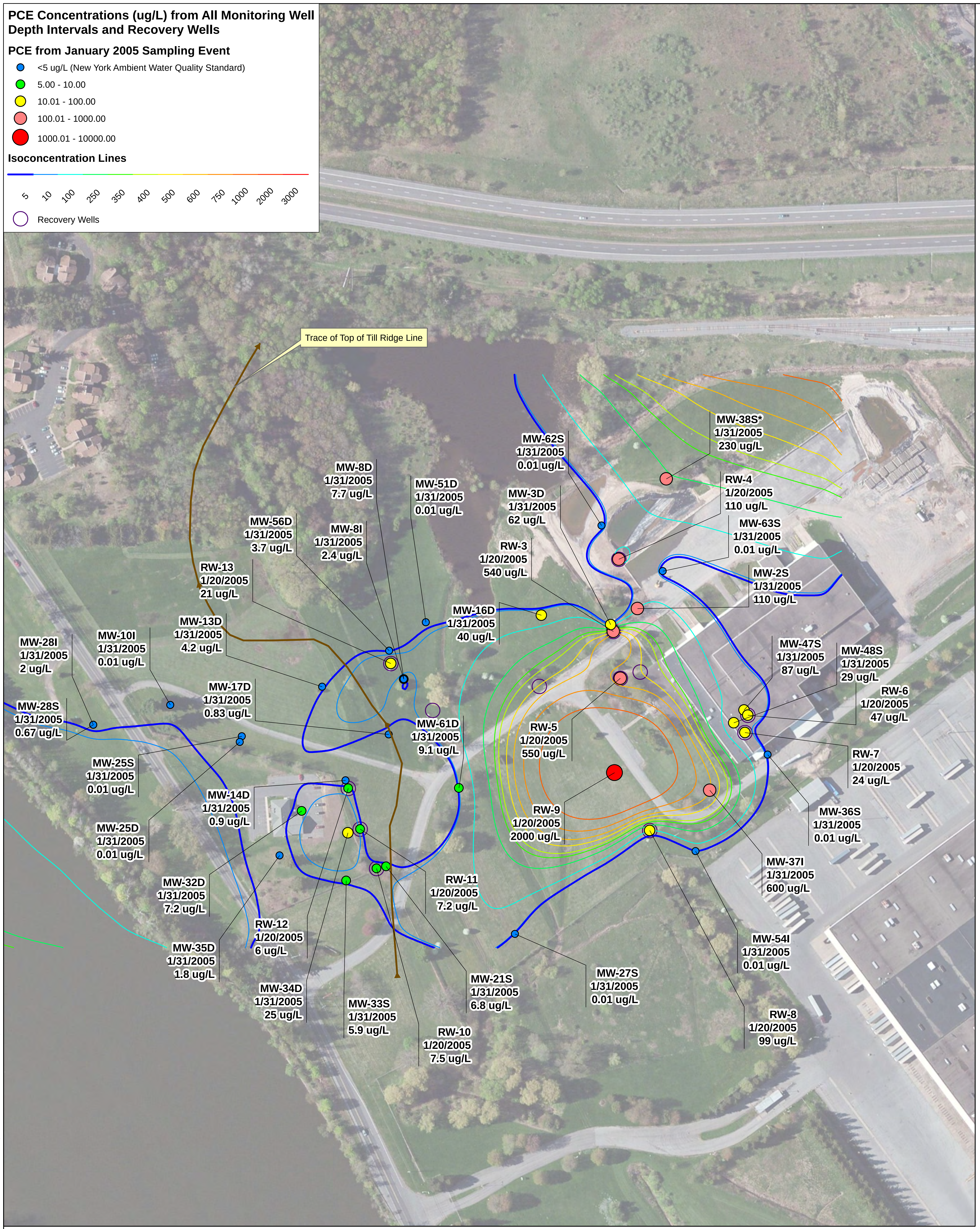

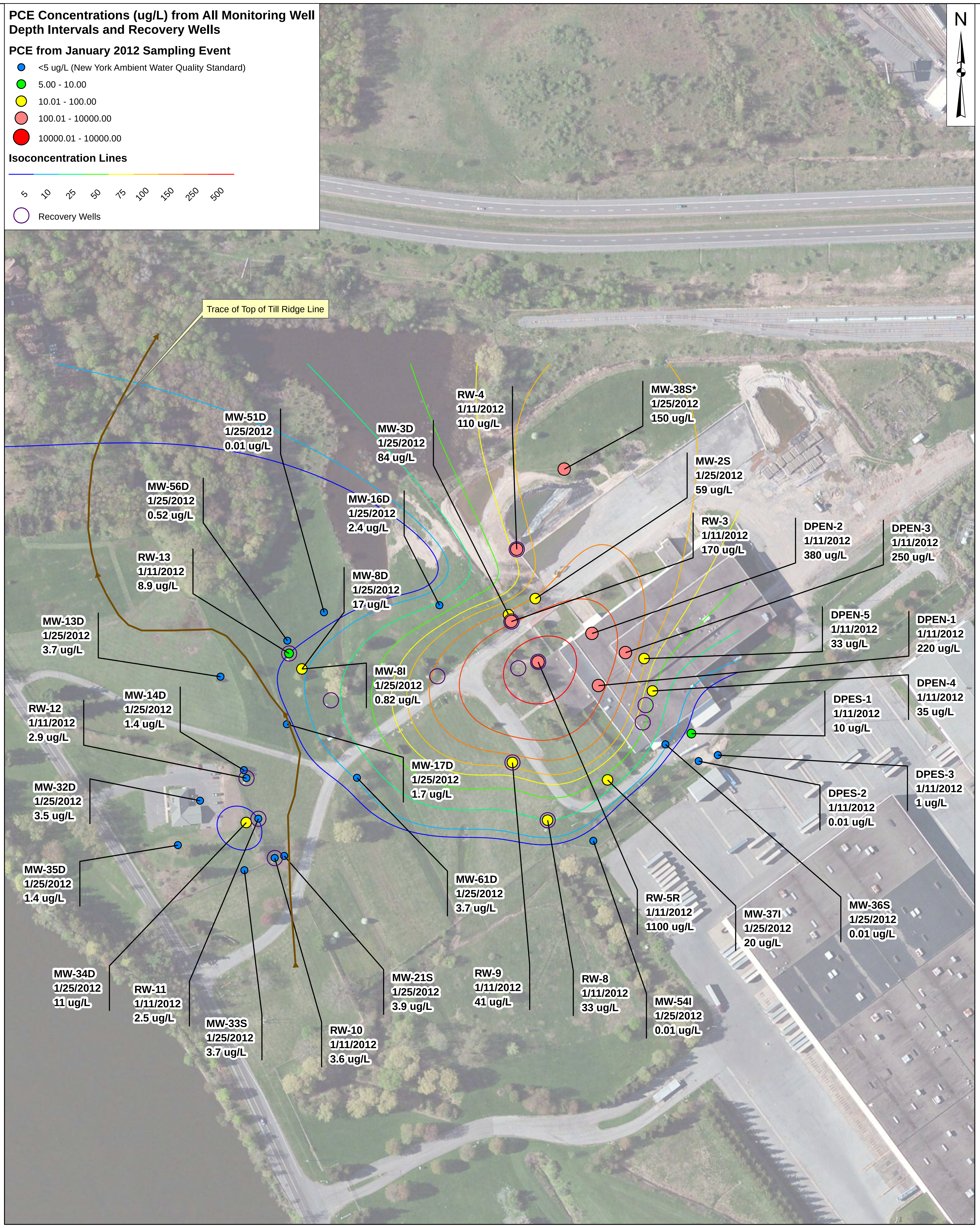

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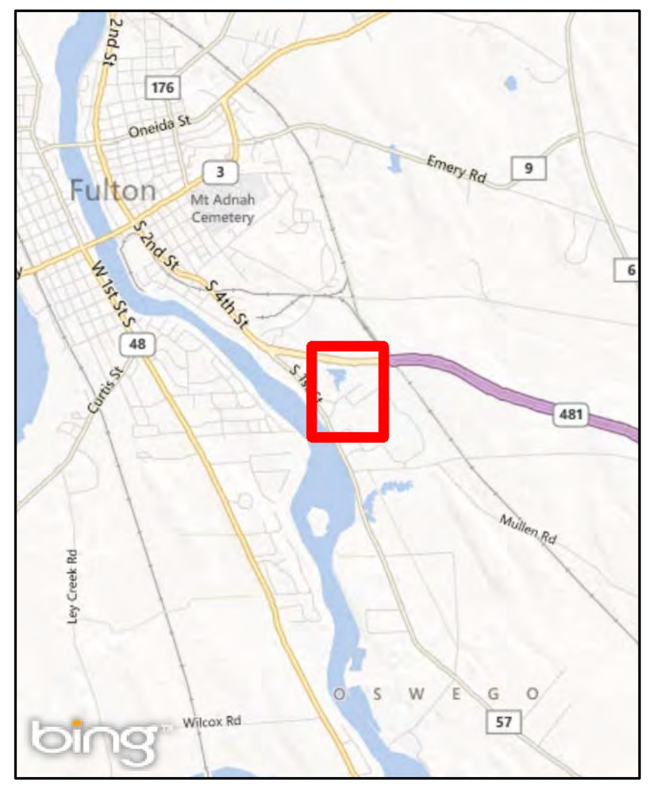
CONTRACTOR PROJECT No.: 12389445

Designed By: CGP
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Fromer Miller Container Site, New York
Scale: AS SHOWN

Title:
PCE Isconcentrations for 2005 and 2012

FIGURE: 4

Drawing Number:	Rev:
NA	**A**

200 150 100 50 0 200
Feet

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet

NOTES

1. Isoconcentration groundwater contours were constructed with contouring software using a Minimum Curvature data interpolator. Minimum Curvature generates the smoothest possible surface while attempting to honor the data as closely as possible; however, Minimum Curvature is not an exact interpolator.

LEGEND

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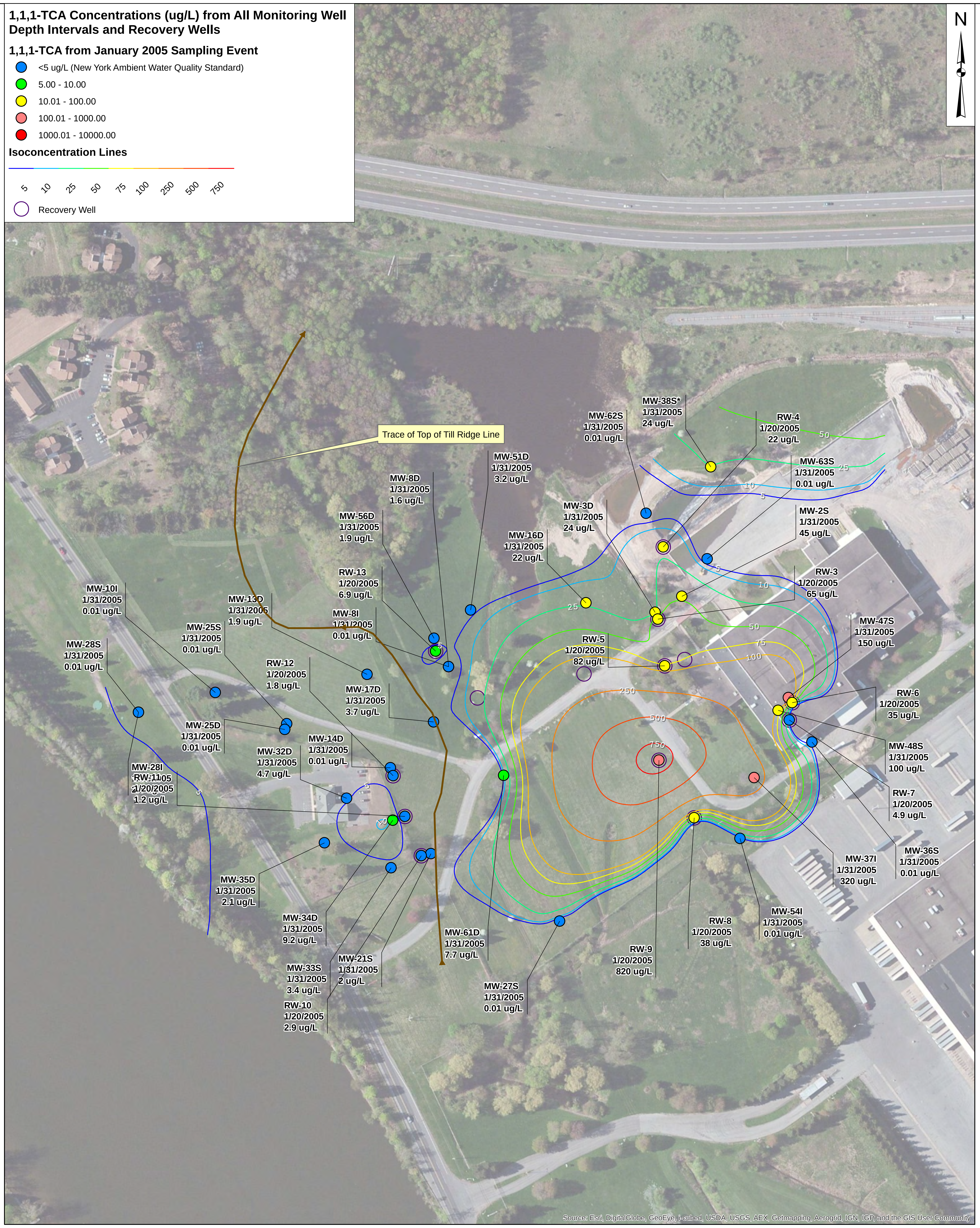

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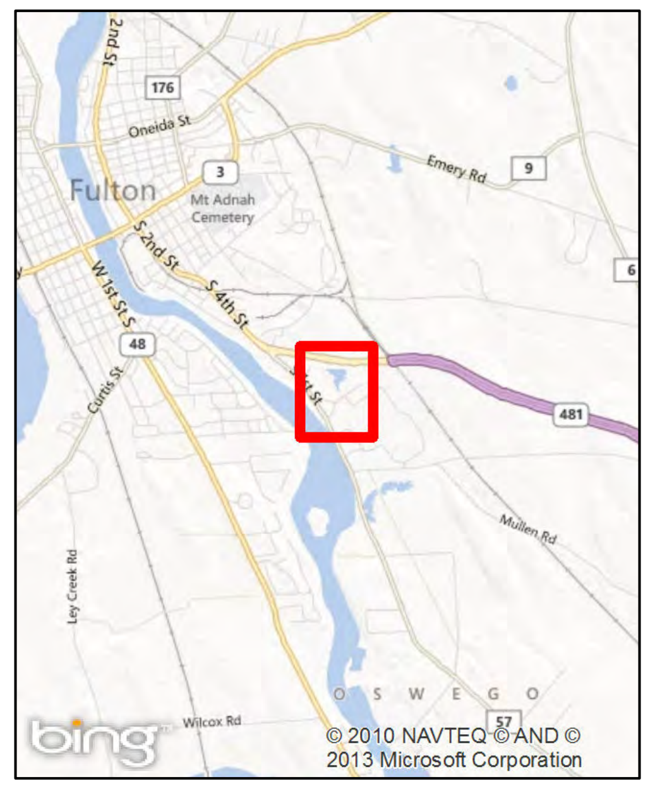
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



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CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
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Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
1,1,1-TCA Isoconcentrations
from 1998 and 2005

FIGURE: 5

Drawing Number:
NA
Rev:

200 150 100 50 0 200
Feet

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet

NOTES

1. Isoconcentration groundwater contours were constructed with contouring software using a Minimum Curvature data interpolator. Minimum Curvature generates the smoothest possible surface while attempting to honor the data as closely as possible; however, Minimum Curvature is not an exact interpolator.

LEGEND

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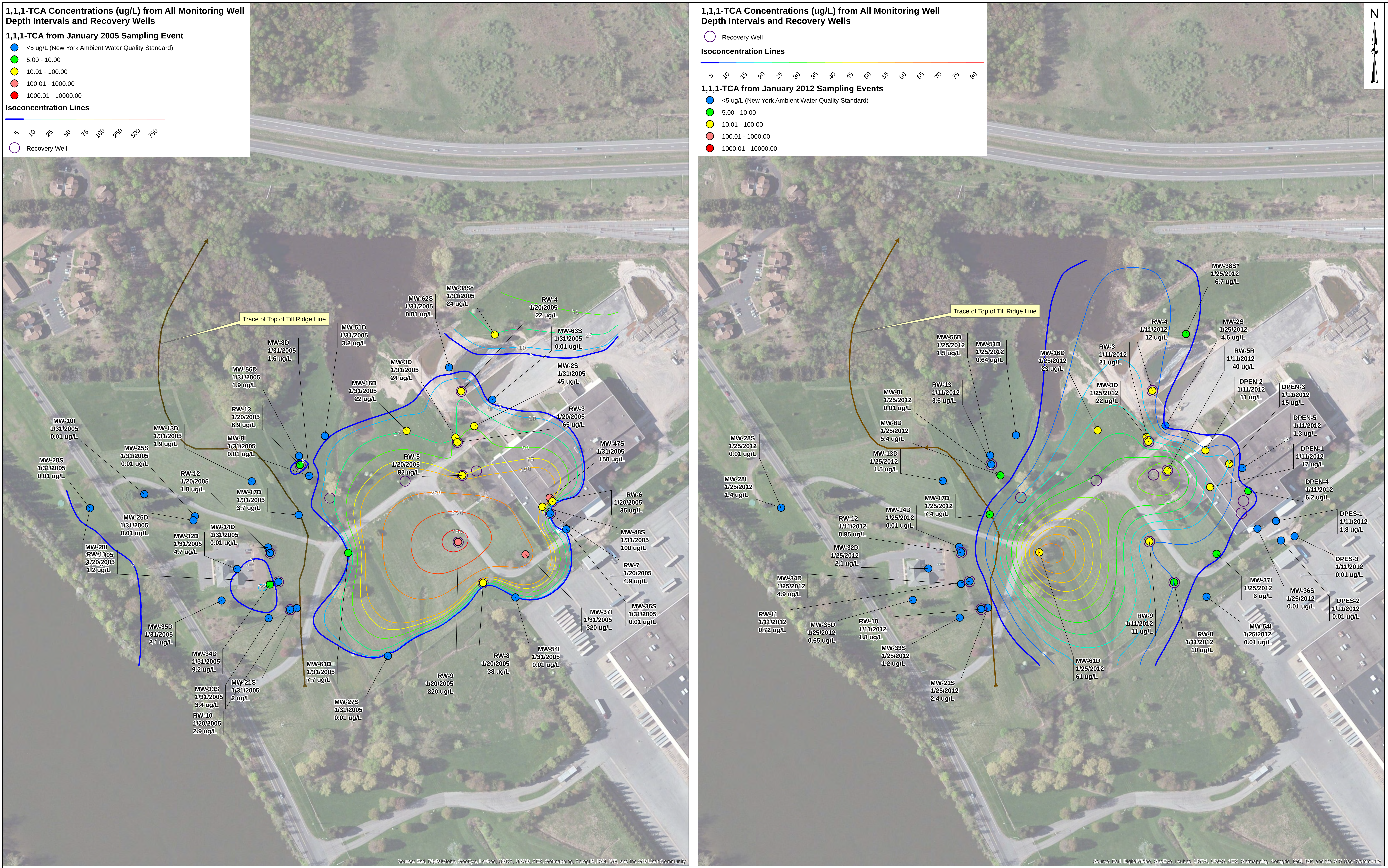

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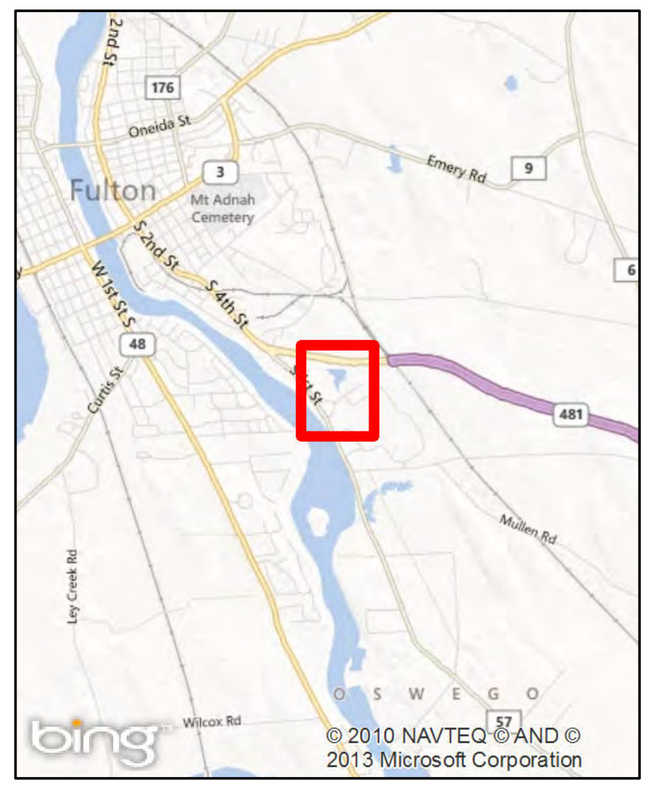
CONTRACTOR PROJECT No.: 12389445

Designed By: CGP
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



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CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
1,1,1-TCA Isoconcentrations
from 2005 and 2012

FIGURE: 6

Drawing Number: **NA**
Rev:

200 150 100 50 0 200
Feet

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet
Projection: Transverse Mercator

NOTES

1. Isoconcentration groundwater contours were constructed with contouring software using a Minimum Curvature data interpolator. Minimum Curvature generates the smoothest possible surface while attempting to honor the data as closely as possible; however, Minimum Curvature is not an exact interpolator.

LEGEND

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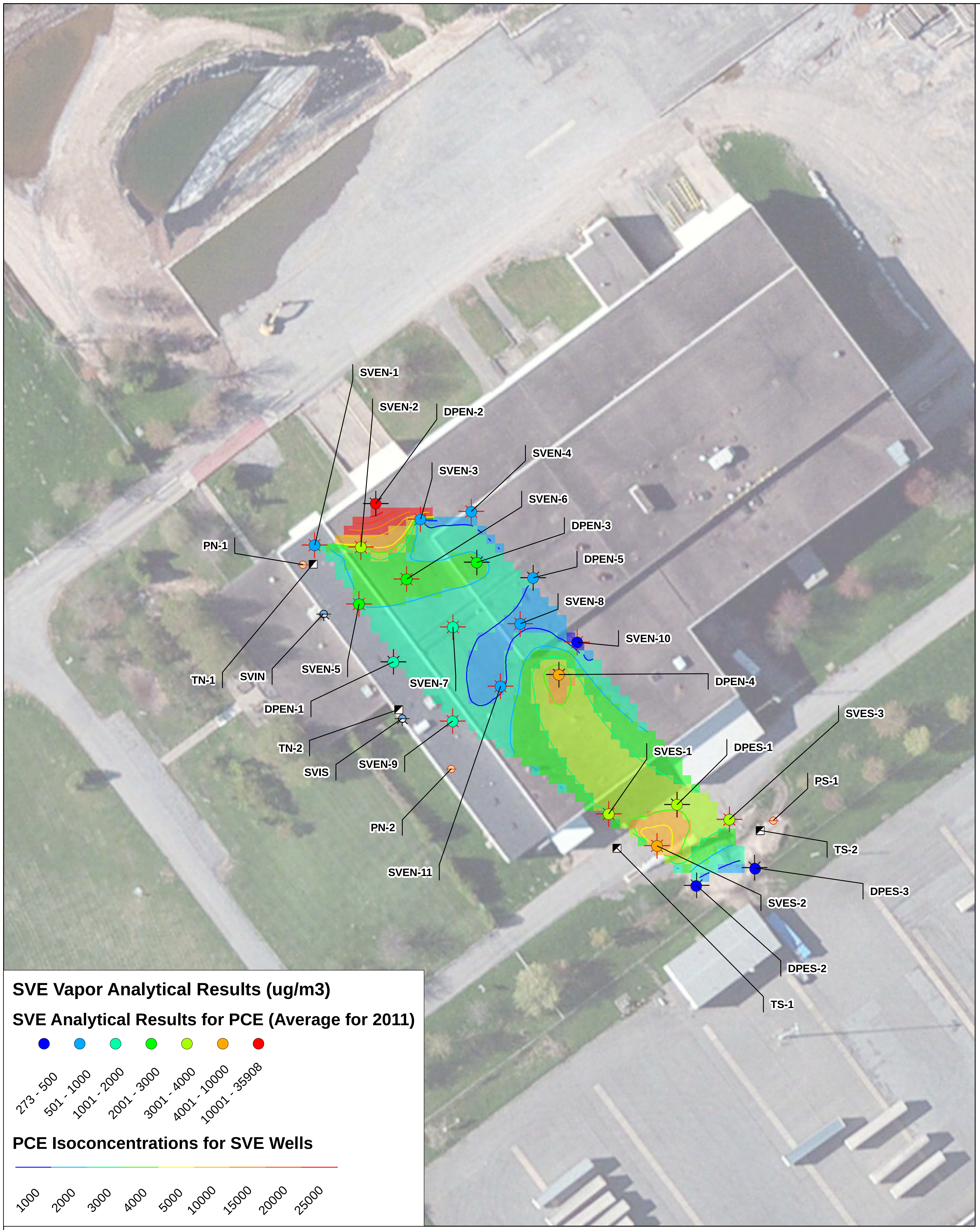

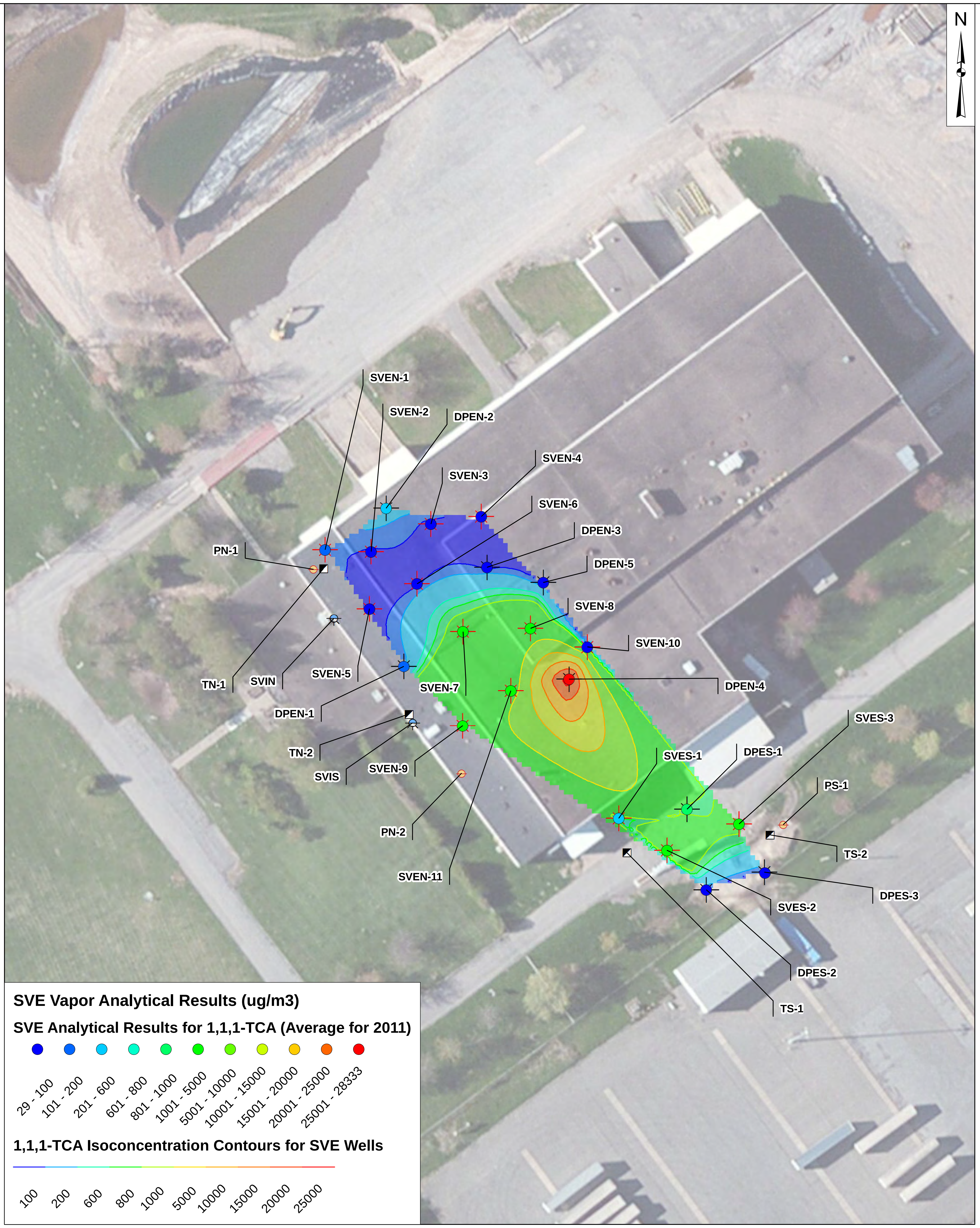

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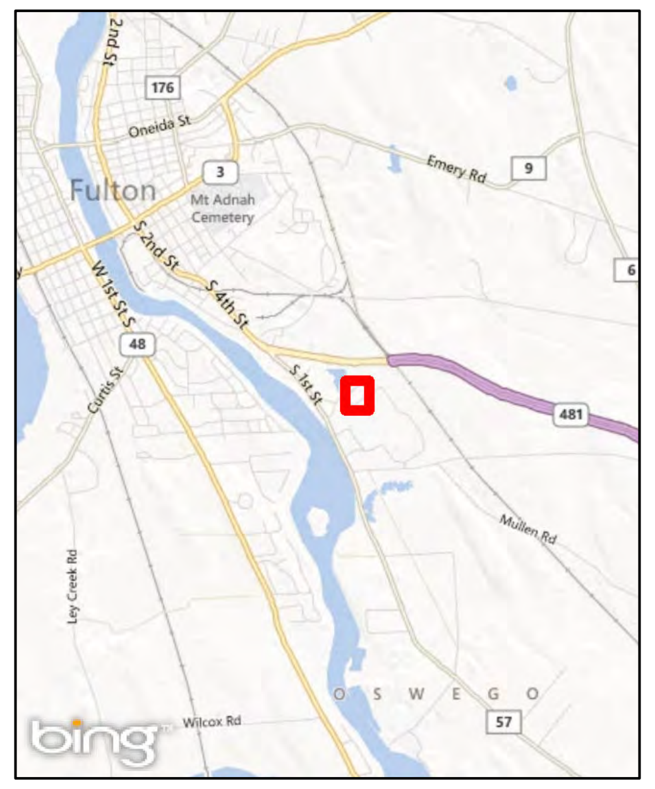
GREENSBORO, NC

CONTRACTOR PROJECT No.: 12389445

Designed By: CGP
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
2011 Average SVE Vapor Isoconcentrations for PCE and 1,1,1-TCE

FIGURE: 7

Drawing Number:	Rev:
NA	

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet
Projection: Transverse Mercator
Datum: North American 1983

SVE well locations and RW-5R location obtained from client supplied survey data (AECOM) and drawings.

NOTES

1. Concentrations shown for 2011 and 2012 included non-detect values. The non-detect values have been substituted with the value of 0.01 to allow for graphical representation of data.

2. Isoconcentration contours were constructed with contouring software using a Minimum Curvature data interpolator. Minimum Curvature generates the smoothest possible surface while attempting to honor the data as closely as possible; however, Minimum Curvature is not an exact interpolator.

LEGEND

SVE System Wells
Symbols for Soil Vapor Extraction and Dual Phase Wells covered by concentration dot

Dual Phase (Vapor and Groundwater) Extraction Well	Soil Vapor Intrusion (SVI) Monitoring Point
Soil Vapor Extraction Well	Vacuum Gauge
Piezometer	

200 150 100 50 0 200
Feet

Map Document: W:\Projects\Miller-Coors\MXD\Final Figures\12389445F07_PCE_TCA_SVE_CHEM130220.mxd | Last Saved: 2/20/2013 11:20:34 AM | By: cpippin

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Golder Associates
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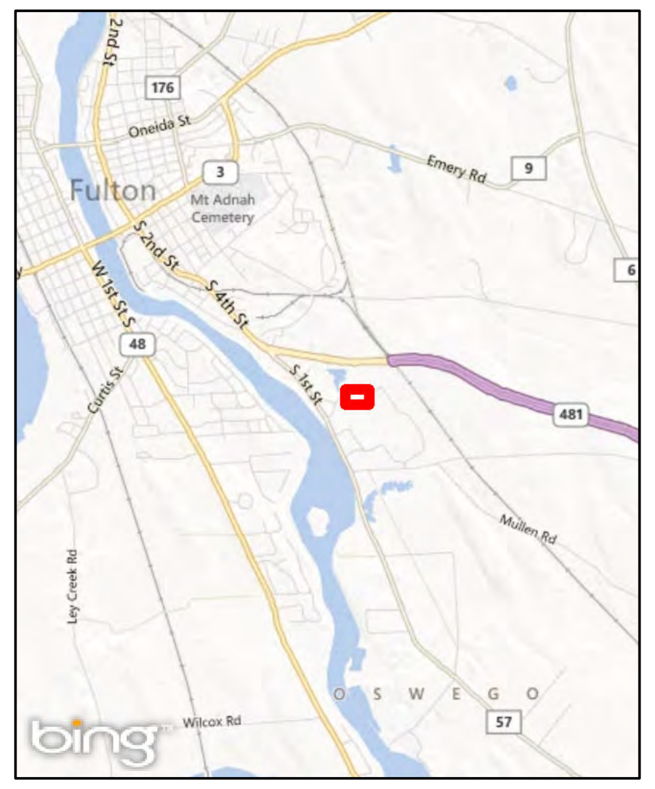
CONTRACTOR PROJECT No.: 12389445

Designed By: CGP
Drawn By: CGP
Checked By: BJE
Project Manager: PTM

5-Year Review Report
(Former Miller Container Site)

Date: 2/20/2013



CRITICAL DRAWING APPROVALS

DEPARTMENT	APPROVAL	DATE
QA		
Engineering		
Validation		

No.	REVISION DESCRIPTION	Date

GIS: CGP
Site: Former Miller Container Site, New York
Scale: AS SHOWN

Title:
SHALLOW GROUNDWATER ELEVATION CONTOURS (JULY 2011) NEAR SOURCE AREA

FIGURE: 8

Drawing Number:
NA
Rev:

REFERENCES

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Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet
Projection: Transverse Mercator
Datum: North American 1983

SVE well locations and RW-5R location obtained from client supplied survey data (AECOM) and drawings.

NOTES

1. Groundwater elevation data provided by client and represents data obtained from the AECOM July 2012 field event.

2. Groundwater contours were constructed using contouring software and adjusted by hand where appropriate.

LEGEND

SVE System Wells

⊕ Dual Phase (Vapor and Groundwater) Extraction Well

✳ Soil Vapor Extraction Well

⊼ Soil Vapor Intrusion (SVI) Monitoring Point

◪ Vacuum Gauge

⊖ Piezometer (Showing Groundwater Elevation and Depth to Groundwater)

◕ Groundwater Recovery Well

⊕ Shallow Monitoring Well (Showing Groundwater Elevation and Depth to Groundwater)

July 2012 Potentiometric Surface from Shallow Monitoring Wells

— 2 foot Contour Intervals

50 37.5 25 12.5 0 50
Feet

Map Document: W:\Projects\Miller-Coors\MXD\Final Figures\12389445F08_SVE_WaterTable_Analaysis_130220.mxd | Last Saved: 2/20/2013 11:34:51 AM | By: cpippin

APPENDIX A

MILLER BREWING SITE REMEDIATION
GWTF TOTALIZER READINGS

MAY 1, 2010 through May 1, 2011

May-11

		Daily Gallons
1	55418676	51764
2	55470440	47241
3	55517681	53125
4	55570806	41837
5	55612643	54406
6	55667049	50201
7	55717250	50948
8	55768198	45815
9	55814013	50880
10	55864893	49664
11	55914557	51552
12	55966109	48444
13	56014553	50011
14	56064564	48279
15	56112843	47303
16	56160146	47908
17	56208054	49506
18	56257560	54751
19	56312311	48867
20	56361178	48050
21	56409228	48214
22	56457442	39336
23	56496778	56860
24	56553638	43930
25	56597568	50821
26	56648389	40173
27	56688562	44207
28	56732769	40023
29	56772792	39784
30	56812576	43127
31	56855703	44631
Total for Month	1437027	
Daily Average	46355.71	
Average GPM	32.19	

Jun-11

		Daily Gallons
1	56900334	44308
2	56944642	39709
3	56984351	43851
4	57028202	43782
5	57071984	44654
6	57116638	41713
7	57158351	41998
8	57200349	39465
9	57239814	39651
10	57279465	39849
11	57319314	34642
12	57353956	8291
13	57362247	42599
14	57404846	39760
15	57444606	43650
16	57488256	39078
17	57527334	41825
18	57569159	40735
19	57609894	43456
20	57653350	38548
21	57691898	48036
22	57739934	37473
23	57777407	41859
24	57819266	41075
25	57860341	37834
26	57898175	38233
27	57936408	41445
28	57977853	38371
29	58016224	38426
30	58054650	36540
Total for Month	1198947	
Daily Average	39964.90	
Average GPM	27.75	

MILLER BREWING SITE REMEDIATION
GWTF TOTALIZER READINGS

MAY 1, 2010 through May 1, 2011

Jul-11		Daily Gallons
1	58091190	37039
2	58128229	37800
3	58166029	37606
4	58203635	36947
5	58240582	35974
6	58276556	37026
7	58313582	28105
8	58341687	37317
9	58379004	36890
10	58415894	37407
11	58453301	36180
12	58489481	36661
13	58526142	38205
14	58564347	37689
15	58602036	42404
16	58644440	42336
17	58686776	37425
18	58724201	38269
19	58762470	41403
20	58803873	37024
21	58840897	29323
22	58870220	40056
23	58910276	36802
24	58947078	37904
25	58984982	40645
26	59025627	37251
27	59062878	37847
28	59100725	41208
29	59141933	37198
30	59179131	33869
31	59213000	36208
Total for Month	1158350	
Daily Average	37366.13	
Average GPM	25.95	

Aug-11		Daily Gallons
1	59249208	36921
2	59286129	36927
3	59323056	34292
4	59357348	38849
5	59396197	37944
6	59434141	37011
7	59471152	35938
8	59507090	33555
9	59540645	35632
10	59576277	36408
11	59612685	32342
12	59645027	36332
13	59681359	15946
14	59697305	36268
15	59733573	31747
16	59765320	36340
17	59801660	31671
18	59833331	47079
19	59880410	32374
20	59912784	31936
21	59944720	32543
22	59977263	29539
23	60006802	32708
24	60039510	32033
25	60071543	39406
26	60110949	31948
27	60142897	41403
28	60184300	22758
29	60207058	30990
30	60238048	28731
31	60266779	36028
Total for Month	1053779	
Daily Average	33992.87	
Average GPM	23.61	

MILLER BREWING SITE REMEDIATION
GWTF TOTALIZER READINGS

MAY 1, 2010 through May 1, 2011

Sep-11		Daily Gallons
1	60302807	30994
2	60333801	36373
3	60370174	34958
4	60405132	36482
5	60441614	36738
6	60478352	34479
7	60512831	35841
8	60548672	44226
9	60592898	35370
10	60628268	35950
11	60664218	35954
12	60700172	37375
13	60737547	34080
14	60771627	40053
15	60811680	36691
16	60848371	38750
17	60887121	38447
18	60925568	38384
19	60963952	37608
20	61001560	38408
21	61039968	37994
22	61077962	35209
23	61113171	36859
24	61150030	36895
25	61186925	39169
26	61226094	36102
27	61262196	38493
28	61300689	36225
29	61336914	40604
30	61377518	38674
Total for Month	1110739	
Daily Average	37024.63	
Average GPM	25.71	

Oct-11		Daily Gallons
1	61416192	38960
2	61455152	38740
3	61493892	39103
4	61532995	39902
5	61572897	41636
6	61614533	39563
7	61654096	42065
8	61696161	39759
9	61735920	41067
10	61776987	40073
11	61817060	11755
12	61828815	37894
13	61866709	37220
14	61903929	39013
15	61942942	39361
16	61982303	37731
17	62020034	36051
18	62056085	38884
19	62094969	37764
20	62132733	37252
21	62169985	38828
22	62208813	13700
23	62222513	5029
24	62227542	42176
25	62269718	44316
26	62314034	41824
27	62355858	44034
28	62399892	39402
29	62439294	39090
30	62478384	41243
31	62519627	42081
Total for Month	1142109	
Daily Average	36842.23	
Average GPM	25.58	

MILLER BREWING SITE REMEDIATION
GWTF TOTALIZER READINGS

MAY 1, 2010 through May 1, 2011

Nov-11		Daily Gallons
1	62561708	37467
2	62599175	41634
3	62640809	38378
4	62679187	38276
5	62717463	36660
6	62754123	39158
7	62793281	13860
8	62807141	32681
9	62839822	41516
10	62881338	36660
11	62917998	39158
12	62957156	13860
13	62971016	55851
14	63026867	4048
15	63030915	0
16	63030915	0
17	63030915	22482
18	63053397	42434
19	63095831	42866
20	63138697	46885
21	63185582	45102
22	63230684	39430
23	63270114	44478
24	63314592	31390
25	63345982	28526
26	63374508	28831
27	63403339	28840
28	63432179	7904
29	63440083	28797
30	63468880	28773
Total for Month	949253	
Daily Average	31641.77	
Average GPM	21.97	

Dec-11		Daily Gallons
1	63497653	20548
2	63518201	16214
3	63534415	16257
4	63550672	16247
5	63566919	16346
6	63583265	16310
7	63599575	19700
8	63619275	38707
9	63657982	45036
10	63703018	45274
11	63748292	37976
12	63786268	45963
13	63832231	45500
14	63877731	42140
15	63919871	44924
16	63964795	44203
17	64008998	39887
18	64048885	43729
19	64092614	40045
20	64132659	43638
21	64176297	39492
22	64215789	40065
23	64255854	41380
24	64297234	38833
25	64336067	39887
26	64375954	41439
27	64417393	39017
28	64456410	38816
29	64495226	41150
30	64536376	41686
31	64578062	43997
Total for Month	1109182	
Daily Average	35780.06	
Average GPM	24.85	

MILLER BREWING SITE REMEDIATION
GWTF TOTALIZER READINGS

MAY 1, 2010 through May 1, 2011

Jan-12

		Daily Gallons
1	64622059	39963
2	64662022	45220
3	64707242	40653
4	64747895	38607
5	64786502	39022
6	64825524	50701
7	64876225	36685
8	64912910	37797
9	64950707	40255
10	64990962	40157
11	65031119	40097
12	65071216	41788
13	65113004	44117
14	65157121	42915
15	65200036	46051
16	65246087	46859
17	65292946	45701
18	65338647	40306
19	65378953	46208
20	65425161	41539
21	65466700	45330
22	65512030	41205
23	65553235	46127
24	65599362	41640
25	65641002	46106
26	65687108	47368
27	65734476	42295
28	65776771	45944
29	65822715	32915
30	65855630	53528
31	65909158	43038

Total for Month	1331096
Daily Average	42938.58
Average GPM	29.82

Feb-12

		Daily Gallons
1	65952196	46151
2	65998347	45388
3	66043735	42403
4	66086138	44345
5	66130483	44922
6	66175405	40941
7	66216346	40384
8	66256730	15960
9	66272690	45061
10	66317751	43791
11	66361542	36948
12	66398490	4893
13	66403383	35245
14	66438628	38896
15	66477524	39154
16	66516678	40242
17	66556920	41836
18	66598756	41627
19	66640383	39937
20	66680320	19327
21	66699647	42489
22	66742136	45279
23	66787415	40313
24	66827728	41004
25	66868732	2908
26	66871640	0
27	66871640	36585
28	66908225	19313
29	66927538	0

Total for Month	1018380
Daily Average	35116.55
Average GPM	24.39

MILLER BREWING SITE REMEDIATION
GWTF TOTALIZER READINGS

MAY 1, 2010 through May 1, 2011

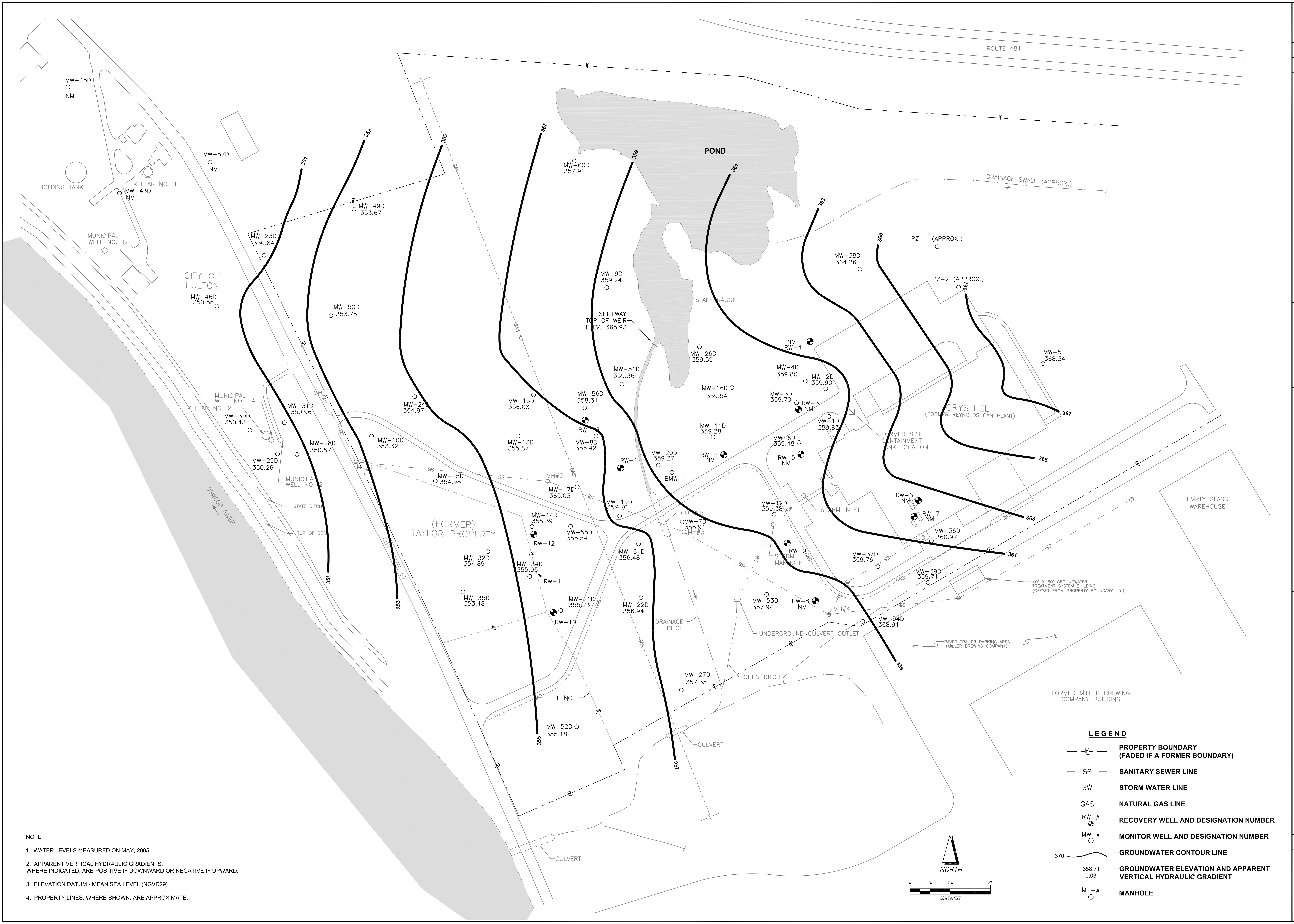
Mar-12

		Daily Gallons
1	66927538	29345
2	66956883	43156
3	67000039	41828
4	67041867	37797
5	67079664	41069
6	67120733	38866
7	67159599	40616
8	67200215	38155
9	67238370	42494
10	67280864	38863
11	67319727	39195
12	67358922	0
13	67358922	0
14	67358922	37193
15	67396115	36854
16	67432969	35950
17	67468919	36422
18	67505341	35143
19	67540484	9416
20	67549900	0
21	67549900	0
22	67549900	0
23	67549900	0
24	67549900	0
25	67549900	0
26	67549900	0
27	67549900	0
28	67549900	0
29	67549900	2048
30	67551948	21844
31	67573792	25605
Total for Month	665567	
Daily Average	21469.90	
Average GPM	14.91	

Apr-12

			Daily Gallons
	1	67599397	25897
	2	67625294	18377
	3	67643671	3823
	4	67647494	26089
	5	67673583	26412
	6	67699995	30684
	7	67730679	29943
	8	67760622	27102
	9	67787724	33336
	10	67821060	31194
	11	67852254	30502
	12	67882756	30515
	13	67913271	23093
	14	67936364	25811
	15	67962175	25937
	16	67988112	25935
	17	68014047	22067
	18	68036114	25967
	19	68062081	31831
	20	68093912	31302
	21	68125214	33521
	22	68158735	31878
	23	68190613	31155
	24	68221768	32441
	25	68254209	29866
	26	68284075	29496
	27	68313571	32224
	28	68345795	20266
	29	68366061	14552
	30	68380613	35035
May-12	1	68415648	
Total for Month		806821	
Daily Average		26894.03	
Average GPM		18.68	

APPENDIX B



NOTE

1. WATER LEVELS MEASURED ON MAY, 2005.

2. APPARENT VERTICAL HYDRAULIC GRADIENTS, WHERE INDICATED, ARE POSITIVE IF DOWNWARD OR NEGATIVE IF UPWARD.

3. ELEVATION DATUM - MEAN SEA LEVEL (NGVD29).

4. PROPERTY LINES, WHERE SHOWN, ARE APPROXIMATE.

LEGEND

— P —	**PROPERTY BOUNDARY (FADED IF A FORMER BOUNDARY)**
— SS —	**SANITARY SEWER LINE**
···· SW ····	**STORM WATER LINE**
— GAS —	**NATURAL GAS LINE**
RW-# ●	**RECOVERY WELL AND DESIGNATION NUMBER**
MW-# ○	**MONITOR WELL AND DESIGNATION NUMBER**
370 ~	**GROUNDWATER CONTOUR LINE**
358.71 0.03	**GROUNDWATER ELEVATION AND APPARENT VERTICAL HYDRAULIC GRADIENT**
MH-# ○	**MANHOLE**

CAD FILE NAME: L:\WORK\78999\CADD\MILLER-WATER-TABLE-2005.DWG

NO	REVISIONS	DRN	CHK	DATE

LATHAM, N.Y.

DRN –
DES –
CHK –
APP –

E A R T H T E C H
A tyco Infrastructure Services Company

FORMER MILLER BREWING COMPANY
FULTON, NY
2003-2004 (YEAR 7) ANNUAL MONITORING REPORT

WATER TABLE ELEVATION CONTOUR MAP
MAY 2005 - DEEP MONITORING WELLS

DATE AUGUST 2005
PROJECT NO 19525
FILENAME 19525_APRIL_2003
SHEET NO 4 of 4
FIGURE NO 3-4

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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Fax: (716) 204-5878

Golder Associates

RECEIVED 4/28/06

Via Email from John Grathwol NYS DEC

Sent to Bedley FP Miller 4/27/06 Via E-mail cc Mike Kelly Randy Moore

Site Number 7-38-029
Page 1 of 2

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning May , 2006

and lasting until May , 2011

the discharges from the treatment facility to the **Oswego River**, Water Index Number **Ont-66**, and **Class B**, RECEIVING WATER, shall be limited and monitored by the operator as specified below:

Outfall Number and Parameter 001	Discharge Limitations			Units	Minimum Monitoring Requirements	
	Daily Average	Daily Maximum			Measurement Frequency	Sample Type
		mg/l	lbs/day			
Outfall 001 - Treated Groundwater Remediation Discharge:						
Flow[a]	Monitor	Monitor		GPD	Continuous	Meter
pH (range)	6.5 to 8.5			SU	Weekly	Grab
Oil & Grease	Monitor	15		mg/l	Weekly	Grab
Methylene Chloride	Monitor	0.03	0.00396[b]	mg/l, lb/day	Weekly	Grab
1,1-Dichloroethylene	Monitor	0.01	0.00132[b]	mg/l, lb/day	Weekly	Grab
1,1-Dicholoroethane	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
1,1,1-Trichloroethane	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Trichloroethylene	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
1,2-cis-Dichloroethylene	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
1,2-trans-Dichloroethylene	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Toluene	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Ethylbenzene	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Xylenes, Total	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Carbon Tetrachloride	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Dibromochloromethane	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Acetone	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Methyl Isobutyl ketone (MIBK)	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab

Methyl Ethyl Ketone (MEK)	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Chloroform	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Vinyl Chloride	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Dichlorodifluoromethane	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
1,1,2-Trichloroethane	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Benzene	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
Bromodichloromethane	Monitor	0.01	0.00132	mg/l, lb/day	Weekly	Grab
1,2-Dichloroethane	Monitor	0.03	0.00396	mg/l, lb/day	Weekly	Grab

Special Conditions:

(1) Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Mr. Jack Aversa
Division of Environmental Remediation
NYSDEC, 625 Broadway, Albany, New York 12233-7016; Phone No. 518-402-9775

With a copy sent to:

Regional Water Engineer, NYSDEC Region 7 (currently Steve Eidt, P. E.)
615 Erie Blvd. West
Syracuse, NY 13204; Phone No. 315-426-7500

(2) Only site generated wastewater is authorized for treatment and discharge.

(3) Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.

(4) Samples and measurements to comply with the monitoring requirements as specified above shall be taken from effluent from the activated carbon filter polishing unit, before the effluent is discharged into the Oswego River, Class B.

(5) Except for flow, the minimum frequency for measuring effluent parameters shall be Monthly, after completion of 24 consecutive weeks of sampling without any exceedance of the stated effluent discharge limits. If any parameter limit is exceeded during this period, weekly sampling shall be resumed, until 8 consecutive sampling events are completed. If there are no exceedances during these 8 events, monthly monitoring may resume.

Notes:

(a) The flow of pumped groundwater for treatment by the enhanced bioremediation system has been reduced from its original quantity of 220 GPM, to 11.0 GPM, or 15,840 GPD.

(b) Parameter limits in lbs/day have been derived using the new flow value of 11 GPM or 0.01584 MGD.

GeoLogic

GeoLogic NY, Inc. P.O. Box 350 • 37 Copeland Ave. • Homer, NY 13077 • 607.749.5000 • Fax: 607.749.5063

October 16, 2012

Mr. Steve Rogers
Miller Brewing Co.
c/o
Operations & Maintenance, Inc.
Miller Brewing GWTF
1850 Rt. 57 Riverview Business Park
Fulton, New York 13069

Reference: Supplemental Soil Investigation
Former Miller Container Site
NYSDEC Site # 7-38-029
Fulton, New York

Dear Mr. Rogers:

This letter report documents the findings from the direct push sampling conducted on August 6, 2012 in the northeast corner of the main parking lot at the above referenced site.

The work was undertaken in response to the discovery of soil contaminated with chlorinated compounds (particularly tetrachloroethene-PCE) during an unrelated soil removal activity at the site by Riccelli Fulton, LLC (Riccelli).

The area of concern is shown on the attached Boring Location Plan and is labeled "*Approximate VOC-Impacted Area*." The area nominally measures 40 feet by 20 feet and is immediately adjacent to the paved parking lot on the north side of the facility.

Background

It is reported by Spectra Engineering in January 2012 that during removal of soil in the impacted area photoionization detector (PID) readings indicative of the presence of volatile compounds were recorded. The suspect soil was stockpiled and sampled. The analytical results (copy attached) indicated the presence of PCE at concentrations ranging from 1,300 ug/Kg to 33,000 ug/Kg (the results are qualified with the notation "Outlying QC recoveries were associated with this parameter."). Methylene chloride was also reported present at concentrations of up to 4,300 ug/Kg.

There is an existing network of groundwater monitoring wells at the site. The closest down or cross gradient monitoring well to the impacted area is MW-38S. The presence of chlorinated compounds in the groundwater in this area of the Site has been known since at least 1997 (see previously submitted historic results from monitoring well MW-38S).

PCE concentrations in the range of 600 ug/L to 670 ug/L were reported in the groundwater samples collected from MW-38S in 1997. Since 1997, the concentration of PCE reported in the samples from MW-38S has declined to a range of 150 ug/L to 230 ug/L over the last four years of monitoring.

The historic presence of chlorinated compounds in this area of the Site is further evidenced by the results from the soil gas survey conducted in 1990 and the membrane interface probe (MIP) survey conducted in

2008 - both of which indicated the presence of chlorinated compounds, however not at levels that warranted additional investigation or remediation.

In response to the discovery of chlorinated compounds in the groundwater at the Site, a series of groundwater recovery wells were installed in 1996 as required under the Record of Decision (ROD) and made operational in 1997. The closest recovery wells are RW-2, RW-3 and RW-4, located southwest of the area of concern. A review of capture zone analyses computed by Earth Tech Engineers of New York, P.C. in the Final Engineering Report dated November 1997, indicates that the impacted area and monitoring well MW-38S are within the capture zones of the recovery wells.

Based on the boring log for MW-38S, the soils in the impacted area are predominately fine sand with some silt and clay. The depth to groundwater as reported in MW-38S varies seasonally and is generally 10 to 15 feet below the ground surface.

Scope of Work

The following scope of work was initiated to investigate and better define the lateral and vertical extent of the chlorinated compounds in the soil in the impacted area.

> A series of direct push (Geoprobe Model 6620DT) sample probes were advanced in and around the area where the chlorinated compounds were reported to have been discovered.
>
> Continuous soil samples were obtained at each location using a macro-core sampler. The sampler was equipped with single use acetate liners for sample retrieval. The sampling terminated at the water table.
>
> A representative soil sample from each interval was placed in a zip closing plastic bag. At the completion of the sampling at each location, the “bagged samples” were allowed to warm and off-gas for a minimum of 15 minutes. The samples were then screened with a PID (MiniREA2000 equipped with a 10.6 eV lamp) for the possible presence of volatile compounds. The PID readings were recorded on the Subsurface Log maintained for each location.
>
> The soil sample from each location exhibiting the highest PID reading was submitted for analysis for the presence of volatile organic compounds using EPA Method 8260.
>
> Consistent with the Work Plan dated May 8, 2012, the first five sampling probes were located at the center of and on each side of the impacted area (see Drawing No. 1).
>
> Since possible evidence of contamination was detected in the 4 to 8 ft. sample from DP-12-4 (PID = 22.1 ppm) located on the northwest side of the area of concern, additional sample probes were advanced in that direction in accordance with the Work Plan.
>
> Generally, the sample probes were advanced to depths of 12 feet below the ground surface. DP-12-1 was advanced to a depth of 16 feet in order to gauge the depth to groundwater at the time the work was completed and DP-12-12 and DP-12-13 were terminated at depths of 4 feet each for reasons outlined in subsequent sections below.

All laboratory samples were analyzed by Life Science Laboratories, Inc. using normal QA/QC protocols. As stated in the Work Plan, Category B deliverables and a Data Usability Summary Report were not provided.

Field equipment was decontaminated using a tap water/Liquinox wash/tap water rinse.

The sample locations were established relative to the existing site features.

Findings

The field work was conducted on August 6, 2012. Personnel on site were Joseph Menzel and Forrest Earl of GeoLogic NY, Inc. and Gary Mullen, Jr. of Operations & Maintenance, Inc.

The soils encountered consisted of a brown silt, sand and gravel fill (in the area previously excavated by Riccelli) overlying a brown fine sand and silt unit (native soils). The fill ranged in depth from 4 to 7 ft. The soil at DP-12-1 became saturated at a depth of 12 feet. The depth to water in piezometer PZ-2 located just northeast of the impacted area was 11.97 feet from the top of the PVC well pipe. Based on the observed moisture content in the soil samples from DP-12-1 and the depth to water measurement in PZ-2, a termination depth of 12 feet was established for the remaining sample locations.

The first five sample locations were at the center (DP-12-1) and on each side of the area of concern (Drawing No. 1). The highest PID reading from each location was:

DP-12-1 – 4.5 ppm (12-16 ft. sample)
DP-12-2 – 6.3 ppm (4-8 ft. sample)
DP-12-3 – 5.4 ppm (0-4 ft. sample, fill)
DP-12-4 – 22.1 ppm (4-8 ft. sample)
DP-12-5 – 16.1 ppm (0-4 ft. sample, fill)

After reviewing the field screening results, it was agreed that additional sample probes should be advanced to the northwest of the area of concern as a result of the PID reading from the 4-8 ft. sample from DP-12-4 (22.1 ppm). Thus, eight additional sample probes were advanced to the north and northwest of the area of concern. The highest PID reading from each of the additional locations was:

DP-12-6 – 9.7 ppm (4-8 ft. sample)
DP-12-7 – 11.6 ppm (8-12 ft. sample)
DP-12-8 – 5.4 ppm (8-12 ft. sample)
DP-12-9 – 6.6 ppm (0-4 ft. sample, fill)
DP-12-10 – 6.0 ppm (0-4 ft. sample)
DP-12-11 – 6.6 ppm (0-4 ft. sample, fill)
DP-12-12 – 2.3 ppm (0-4 ft. sample, only sample taken)
DP-12-13 – 17.1 ppm (0-4 ft. sample, only sample taken)

After reviewing the field screening results, it was concluded that no additional sampling would be conducted pending the completion of the laboratory analyses. This was concluded based on the fact that no apparent trends in the field screening were observed either vertically or horizontally, nor between native soils versus fill soils and that, the highest PID reading was only 22.1 ppm. The lack of correlation spatially and between soil samples suggested that the field screening method might not be suitable to distinguish the apparent degree of contamination.

All of the samples noted above were submitted for analysis with the exception of DP-12-11. Since the 0-4 ft. sample from DP-12-11 appeared to be fill, and the 4-8 ft. sample exhibited a similar PID reading (5.1 ppm) the 4-8 ft. sample was submitted for analysis in an effort to better compare the field screen results with the laboratory results. Additionally, the samples from DP-12-5, 4-8 ft. and DP-12-9, 8-12 ft. were also submitted for analysis in an attempt to better correlate the PID readings with the laboratory results.

The samples were analyzed by Life Science Laboratories, Inc. using EPA Method 8260B for Target Compound List Volatiles. The results are attached and summarized on Table No. 1. The total reported volatile concentrations for each sample versus the field screening PID readings are presented on Table No. 2.

Note: The tetrachloroethene (PCE) concentration reported in sample DP-12-7, 8-12 ft. is qualified as *"E = this result should be considered an estimate because the concentration exceeded the linear range of the instrument."* David Pritchard of Life Science Laboratories was contacted regarding the qualifier. Mr. Pritchard stated that the upper end of the linear range was 400 ug/Kg. Because the estimated concentration is within 10% of the upper end of the linear response (estimated concentration of 430 ug/Kg versus upper end response of 400 ug/Kg), laboratory protocol does not require re-analysis of the sample. Mr. Pritchard further stated that in his professional opinion, the estimated concentration is "very accurate."

While volatile organic compounds (VOCs) were reported in many of the samples analyzed, only Acetone in the 0-4 ft. sample from DP-12-5 (130 ug/Kg) exceeded the Soil Clean-up Objective (SCO), 50 ug/Kg for Restricted Use (see 6 NYCRR Part 375 6.8(b)). (Note: the Site specific soil clean-up levels cited in the ROD for the Northern Unit are considerably higher (see page 6 of the ROD).

Furthermore, given that the Acetone was found in the 0 to 4 ft. interval in an area that was said to have been excavated to a depth of five feet and restored as part of the chloride remedial activities, the presence of Acetone would not be attributed to operations associated with Miller Brewing Company, which ceased manufacturing operations at the Site almost 20 years ago. Information provided by John Ciampa of Spectra Engineering (attached) indicates that the location of boring DP-12-5 falls within the area excavated to a depth of five feet.

Although the presence of PCE was reported in the soils excavated by Riccelli, none of the samples analyzed as part of this evaluation had PCE concentrations above the most conservative SCO (see 6 NYCRR Part 375 6.8(b), Protection of Groundwater). The SCO is 1,300 ug/Kg, while the highest concentrations reported in the samples were 430 ug/Kg (E) in the 8 to 12 ft. sample from DP-12-7 and 450 ug/Kg in the 12 to 16 ft. sample from DP-12-1.

A review of Table No. 2 comparing the field screening PID readings versus the total volatile concentrations reported in the laboratory samples indicates there is no direct correlation between the readings. The maximum PID reading of 22.1 ppm yielded a total volatile concentration of 152 ppb, while the highest total volatile concentration of 521 ppb corresponded to a PID reading of 4.5 ppm. The lack of correlation between the field screening readings and the analytical results likely is a product of the relatively low concentrations of volatiles present in the samples (less than 0.5 ppm), the response range of the field instrument (the maximum PID reading recorded was in the lowest 1% of the range of the instrument), the potential influence of moisture in the samples on the response of the field instrument, and the inherent variability associated with the field screening methodology.

Conclusions & Recommendations

The analytical results provided by Spectra Engineering for the three samples obtained in "VOC-Impacted Area" indicate that the concentrations of tetrachloroethene and methylene chloride exceeded both the site specific Northern Unit Soil Clean-up Levels and the Part 375-6.8(b) SCOs (Protection of Groundwater). None of the samples analyzed as part of this evaluation exceeded either set of criteria. This supports the view that any VOC impacted soils of concern have already been removed.

It is our professional opinion that the data does not warrant the collection and analysis of additional samples. Thirteen sample probes were advanced in and around the "approximate VOC-impacted area" as identified by Spectra Engineering. The highest field screening result was 22.1 ppm and none of the 15 samples submitted for laboratory analysis exceeded the soil clean-up criteria for tetrachloroethene or methylene chloride.

If you have any questions, or need any additional information, please do not hesitate to contact us.

Sincerely;

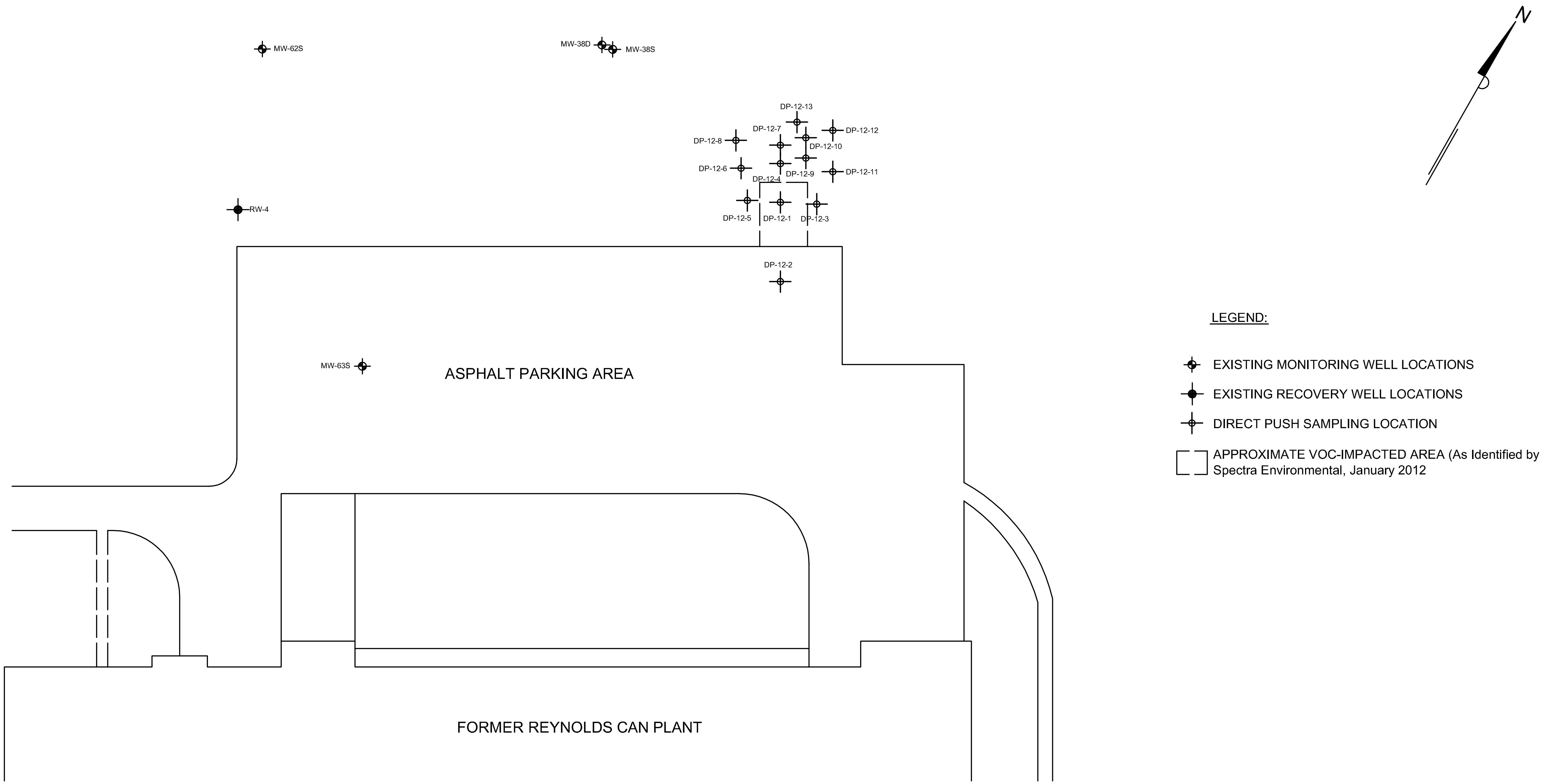
GeoLogic NY, Inc.

Forrest Earl

Forrest Earl
President/Principal Hydrogeologist

Enc.: Boring Location Plan, Subsurface Logs, Table No. 1, Table No. 2, Analytical Results, Spectra Engineering Documents

cc: File 212046\Report\Report



LEGEND:

⌖ EXISTING MONITORING WELL LOCATIONS

● EXISTING RECOVERY WELL LOCATIONS

⌖ DIRECT PUSH SAMPLING LOCATION

▭ APPROXIMATE VOC-IMPACTED AREA (As Identified by Spectra Environmental, January 2012

NOTE: DRAWING BASED ON MILLER BREWING COMPANY, FULTON, NY, REYNOLDS CAN PLANT REMEDIATION, SITE PLAN, PREPARED BY EARTH TECH, DATED SEPTEMBER 1995.

THIS PLAN DOES NOT CONSTITUTE A SURVEY AND IS INTENDED TO CONVEY APPROXIMATE SAMPLE LOCATIONS AND SITE FEATURES.

APPROXIMATE SCALE:

0' 30' 60' 120'

\..\212046\TECH\BORING LOCATION PLAN 08-07-12.DWG

GeoLogic

GeoLogic NY, Inc., Homer, New York

BORING LOCATION PLAN
MILLER BREWING COMPANY
REYNOLDS CAN PLANT REMEDIATION
FULTON, NEW YORK

DRAWN BY: FCE/SDW	SCALE: AS SHOWN	PROJECT NO.: 212046
REVIEWED BY:	DATE: AUG. 2012	DRAWING NO.: 1

GeoLogic NY, Inc.
P.O. Box 350
Homer, New York 13077
(607) 749-5000

KEY TO SUBSURFACE LOG

Boring No.: B-1
Project No.: 209001
Date Started: 1/31/09
Date Completed: 1/31/09

Sheet 1 of 1

Project:
Location:

Reference Elevation: 100.0

Depth (ft.)	Sample No.	Type	SPT Blows	N-Value	Recovery (ft.)	PID Reading (ppm)	MATERIAL DESCRIPTION	REMARKS
0							Ground Surface	Water level at 2.0' with augers at 7.5'.
1	1	ss	1 2 2 1	4	2.0	32	Brown SILT, Some fine-coarse Sand, trace clay, moist-loose	At completion water level at 2.2' with augers at 10.0'.
2	2						Gray SHALE, medium hard weathered, thin bedded, some fractures	Run #1: 3.0'-5.0' 95% Recovery, 50% RQD

1 2 3 4 5 6 7 8 9 10

TABLE I

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine-grained soils also on basis of plasticity.

Soil Type		Soil Particle	
Boulder		> 12"	
Cobble		12" - 3"	
Gravel	- Coarse	3" - 3/4"	Coarse Grained
	- Fine	3/4" - #4	(Granular)
Sand	- Coarse	#4 - #10	
	- Medium	#10 - #40	
	- Fine	#40 - #200	
Silt-Non Plastic (Granular)		< #200	Fine Grained
Clay-Plastic (Cohesive)			

TABLE II

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.

Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	1 - 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE III

The relative compactness or consistency is described in accordance with the following terms.

Granular Soils		Cohesive Soils	
Term	**Blows per Foot, N**	**Term**	**Blows per Foot, N**
Loose	< 11	Very Soft	< 2
Firm	11 - 30	Soft	2 - 4
Compact	31 - 50	Medium	4 - 8
Very Compact	> 51	Stiff	8 - 15
		Very Stiff	15 - 30
		Hard	>30

(Large particles in the soils will often significantly influence the blows per foot recorded during the Penetration Test.)

TABLE IV

Stratified Soils

Descriptive Term	Thickness
Parting	- 0" - 1/16"
Seam	- 1/16" - 1/2"
Layer	- 1/2" - 12"
Stratum	- >12"
Varved Clay	- Alternating seams or layers of sand, silt & clay
Pocket	- small, erratic deposit, usually <12"
Lens	- lenticular deposit
Occasional	- one or less per foot of thickness
Frequent	- more than one per foot of thickness

TABLE V

Rock Classification Terms

Term		Meaning	
Hardness	Soft	Scratched by fingernail	
	Medium Hard	Scratched easily by penknife	
	Hard	Scratched with difficulty by penknife	
	Very Hard	Cannot be scratched by penknife	
Weathering	Very Weathered	Judged from the relative amounts of disintegration,	
	Weathered	iron staining, core recovery, clay seams, etc.	
	Sound		
Bedding	Laminated	Natural breaks in Rock Layers	<1"
	Thin bedded		1"-4"
	Bedded		4"-12"
	Thick bedded		12"-36"
	Massive		>36"
(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers.)			

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The information presented in the following defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered.

1. The figures in the Depth column define the scale of the Subsurface Log.
2. The Sample No. is used for identification on sample containers.
3. The sample column shows, graphically, the depth range from which a sample was recovered. (ss – split spoon; core – rock core; st – shelby tube; dp – direct push). If not shown as a separate column, the sample type should be referenced in the Remark column or in the footnote.
4. Blows on Sampler - shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches of penetration is recorded. The first 6 inches of penetration is considered to be a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N. The outside diameter of the sampler, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log.
5. Recovery shows the length of the recovered soil sample for the sample device noted.
6. All recovered soil samples are reviewed in the office by an experienced technical specialist or geologist, unless noted otherwise. The visual descriptions are made on the basis of a combination of the field descriptions and observations and the sample as received in the office. The method of visual classification is based primarily on the Unified Soil Classification (ASTM D 2487-83) with regard to the particle size and plasticity. (See Table I). Additionally, the relative portion, by weight, of two or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister, ASTM Special Technical Publication 479, June 1970. (See Table II) The description of the relative soil density or consistency is based upon the penetration records as defined on Table No. III. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as damp, moist, wet and saturated. Water introduced in the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe materials in greater detail; several such terms are listed in Table IV. When sampling gravelly soils with a standard two-inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing/hollow stem augers and samplers blows or through the "action" of the drill rig.
7. The description of the rock shown is based on the recovered rock core and the field observations. The terms frequently used in the description are included in Table V.
8. The stratification lines represent the approximate boundary between soil types, and the actual transition may be gradual.
9. Miscellaneous observations and procedures noted in the field are shown in this column, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that drill water used to advance the boring may have influenced the observations. The groundwater level typically will fluctuate seasonally. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or monitoring wells.
10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total pieces of NX core exceeding 4 inches in length divided by the core run. The size of the core barrel used is also noted at the bottom of the subsurface log.

The Subsurface Logs attached to this report present the observations and mechanical data collected at the site, supplemented by classification of material removed from the borings as determined through visual identification. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between the sampled intervals. The data presented on the Subsurface Logs together with the recovered samples will provide a basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their significance relative to each other. Often analyses of boring data indicate the need for additional testing or sampling procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and the recovered samples must be performed by knowledgeable Professionals.

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SUBSURFACE LOG - DIRECT PUSH

(Page 1 of 1)

Miller / OMI

Fulton, New York

Boring No: : DP-12-1
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				FILL: Brown SAND, SILT and GRAVEL	
	1	3.0	0		
4					
	2	3.5	1.2		
				Brown fine SAND, Some Silt, little clay, moist	
8					
	3	4.0	0		
12				saturated at 12.0'	
	4	4.0	4.5		
16				BORING TERMINATED AT 16.0'	
20					

Visually Classified by: Geologist

File: 212046/tech/DP-12-1

10-16-2012 P:\PROJECTS\2012\212046 - OMI - Miller Brewing\TECH\DP-12-1.bor

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Miller / OMI

Fulton, New York

Boring No: : DP-12-2
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				FILL: Brown SAND, SILT and GRAVEL	
	1	3.0	2.0		
4					
				Brown fine SAND and SILT, little to trace clay	
	2	3.5	6.3		
8					
	3	3.0	5.2		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-2

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Fulton, New York

Boring No: : DP-12-3
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0	1	4.0	5.4	FILL: Brown SAND, SILT and GRAVEL	
4	2	4.0	1.6	Brown fine SAND and SILT, trace clay, moist	
8	3	4.0	0.9		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-3

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Fulton, New York

Boring No: : DP-12-4
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0	1	4.0	0.8	FILL: Brown SAND, SILT and GRAVEL	
4	2	4.0	22.1	Brown fine SAND and SILT, little to trace clay, moist	
8	3	4.0	13.5		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-4

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SUBSURFACE LOG - DIRECT PUSH

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Fulton, New York

Boring No: : DP-12-5
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				FILL: Brown SAND, SILT and GRAVEL	
	1	3.5	16.1		
4				Brown fine SAND and SILT, little to trace clay, moist	
	2	3.0	10.1		
8					
	3	3.5	3.2		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-5

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SUBSURFACE LOG - DIRECT PUSH

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Fulton, New York

Boring No: : DP-12-6
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0	1	3.0	3.9	FILL: Brown SAND, SILT and GRAVEL	
4	2	3.5	9.7	Brown fine SAND and SILT, little to trace clay, moist	
8	3	4.0	6.0		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-6

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Fulton, New York

Boring No: : DP-12-7
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				FILL: Brown SAND, SILT and GRAVEL	
	1	4.0	0.8		
4				Brown fine SAND and SILT, little to trace clay, moist	
	2	4.0	4.7		
8					
	3	4.0	11.6		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

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Fulton, New York

Boring No: : DP-12-8
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				FILL: Brown SAND, SILT and GRAVEL	
	1	4.0	3.4		
4				Brown fine SAND and SILT, little to trace clay, moist	
	2	4.0	4.7		
8					
	3	4.0	5.4		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-8

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Fulton, New York

Boring No: : DP-12-9
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				FILL: Brown SAND, SILT and GRAVEL	
	1	3.5	6.6		
4				Brown fine SAND and SILT, little to trace clay, moist	
	2	3.0	5.1		
8					
	3	4.0	3.7		
12				BORING TERMINATED AT 12.0'	
16					

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Fulton, New York

Boring No: : DP-12-10
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0	1	3.5	6.0	Topsoil 0.5' Brown fine SAND and SILT, little to trace clay	
4	2	3.5	2.5		
8	3	4.0	4.8		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-10

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Fulton, New York

Boring No: : DP-12-11
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0	1	2.5	6.6	FILL: Brown SAND, SILT and GRAVEL	
4	2	3.5	5.1	Brown fine SAND and SILT, little to trace clay, moist	
8	3	4.0	3.7		
12				BORING TERMINATED AT 12.0'	
16					

Visually Classified by: Geologist

File: 212046/tech/DP-12-11

10-16-2012 P:\PROJECTS\2012\212046 - OMI - Miller Brewing\TECH\DP-12-11.bor

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Miller / OMI

Fulton, New York

Boring No: : DP-12-12
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				Topsoil 0.5' Brown fine SAND and SILT, little to trace clay, damp	
	1	4.0	2.3		
4				BORING TERMINATED AT 4.0'	

Visually Classified by: Geologist

File: 212046/tech/DP-12-12

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Fulton, New York

Boring No: : DP-12-13
Project No.: : 212046
Date Started: : 08/06/12
Date Completed: : 08/06/12

Depth (ft)	Sample No.	Recovery (ft)	PID Reading (ppm)	DESCRIPTION	REMARKS
0				Topsoil 0.5' Brown fine SAND and SILT, trace clay	
	1	4.0	17.1		
4				BORING TERMINATED AT 4.0'	

Visually Classified by: Geologist

File: 212046/tech/DP-12-13

Former Miller Container

TABLE 1

SUPPLEMENTAL SOIL INVESTIGATION
SOIL DATA SUMMARY
AUGUST 2012
NYSDEC Site No. 7-38-029

Sample Location	6NYCRR	ROD	DP-12-1	DP-12-2	DP-12-3	DP-12-4	DP-12-5	DP-12-5	DP-12-6	DP-12-7	DP-12-8	DP-12-9	DP-12-9	DP-12-10	DP-12-11	DP-12-12	DP-12-13
	Part 375 SCO	Mar-95	12-16'	4-8'	0-4	4-8'	0-4'	4-8'	4-8'	8-12'	8-12'	0-4'	8-12'	0-4'	8-12'	0-4'	0-4'
Parameter	Restricted		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
EPA 8260B TCL	ug/Kg	ug/Kg															
1,1,1-Trichloroethane	680	800	7.4	ND	ND	18.0	ND	ND	4.8	48.0	ND	ND	4.3	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	270		15.0	ND	ND	8.0	ND	ND	7.2	18.0	9.4	ND	7.8	ND	ND	ND	ND
1,1-Dichloroethene	330	400	7.6	ND	ND	4.9	ND	ND	ND	33.0	7.7	ND	13.0	ND	ND	ND	ND
1,2,3-Trichlorobenzene	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromomethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	20		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-trimethylbenzene	8,400		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2,400		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	120		ND	ND	ND	ND	45.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	253	ND	ND	ND	ND	130.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	60		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	760		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1,100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	370		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1,000	5,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon-113	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes - Mixed	1600	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl acetate	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methyl tert-butyl ether	930		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	12,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	3,900		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	11,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1,300	2,366	450.0	30.0	ND	34.0	ND	24.0	39.0	*430 E	36.0	ND	170.0	ND	9.1	ND	7.6
Toluene	700	1500	7.1	ND	ND	ND	91.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	470	700	14.0	ND	ND	ND	ND	ND	7.1	9.6	ND	ND	9.4	ND	ND	ND	ND

Former Miller Container

TABLE 1

SUPPLEMENTAL SOIL INVESTIGATION
SOIL DATA SUMMARY
AUGUST 2012
NYSDEC Site No. 7-38-029

Sample Location	**6NYCRR**	**ROD**	DP-12-1	DP-12-2	DP-12-3	DP-12-4	DP-12-5	DP-12-5	DP-12-6	DP-12-7	DP-12-8	DP-12-9	DP-12-9	DP-12-10	DP-12-11	DP-12-12	DP-12-13
	Part 375 SCO	**Mar-95**	12-16'	4-8'	0-4	4-8'	0-4'	4-8'	4-8'	8-12'	8-12'	0-4'	8-12'	0-4'	8-12'	0-4'	0-4'
Parameter	**Restricted**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
EPA 8260B TCL	**ug/Kg**	**ug/Kg**															
Trichlorofluoromethane	100,000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	20		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene, Total	cis-250, trans-190	300	20.0	31.0	ND	87.0	ND	24.0	62.0	37.0	6.7	ND	8.6	ND	ND	ND	ND

Notes:

Highlighted value exceeds site specific Northern Unit Soil Clean-up Level or
6NYCRR Part 375 6.8(b) Soil Cleanup Objective (SCO) for Restricted Use/Protection of Groundwater

*E = Result should be considered an estimate because the concentration exceeded the linear range of the instrument

FORMER MILLER CONTAINER
TABLE 2
SUPPLEMENTAL SOIL INVESTIGATION
FIELD SCREENING VS. LABORATORY RESULTS
AUGUST 2012
NYSDEC SITE NO. 7-38-029

Sample	**PID (ppm)**	**Total Vols (ug/Kg)**	**Highest Individual Concentration**
DP-12-4, 4-8 ft	22.1	152	87 - 1,2 Dichloroethene
DP-12-13, 0-4 ft	17.1	7	7 - Tetrachloroethene
DP-12-5, 0-4 ft	16.1	265	130 - Acetone
DP-12-7, 8-12 ft	11.6	576	430(E) - Tetrachloroethene
DP-12-5, 4-8 ft	10.1	48	24 - 1,2 Dichloroethene & 24 - Tetrachloroethene
DP-12-6, 4-8 ft	9.7	120	62 - 1,2 Dichloroethene
DP-12-9, 0-4 ft	6.6	ND	
DP-12-2, 4-8 ft	6.3	61	31 - 1,2 Dichloroethene
DP-12-10, 0-4 ft	6.0	ND	
DP-12-3, 0-4 ft	5.4	ND	
DP-12-8, 8-12 ft	5.4	60	36 - Tetrachloroethene
DP-12-1, 12-16 ft	4.5	521	450 - Tetrachloroethene
DP-12-9, 8-12 ft	3.7	213	170 - Tetrachloroethene
DP-12-11, 8-12 ft	3.7	9	9 - Tetrachloroethene
DP-12-12, 0-4 ft	2.3	ND	

LSL

Gary Mullen, Jr.
Operations & Maintenance, Inc.
7 Barton Rd.
Pennellville, NY 13132 USA

Phone: (315) 598-5396

Laboratory Analysis Report
For
Operations & Maintenance, Inc.

LSL Project ID: **1212760**
Receive Date/Time: 08/07/12 16:38
Project Received by: RD

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Life Science Laboratories, Inc.

LSL Central Lab	LSL North Lab	LSL Finger Lakes Lab	LSL Southern Tier Lab	LSL MidLakes Field Offfice
5854 Butternut Drive	131 St. Lawrence Avenue	16 N. Main St., PO Box 424	30 East Main Street	493 South Main Street
East Syracuse, NY 13057	Waddington, NY 13694	Wayland, NY 14572	Cuba, NY 14727	Canandaigua, NY 14424
Tel. (315) 445-1900	Tel. (315) 388-4476	Tel. (585) 728-3320	Tel. (585) 968-2640	Tel. (585) 728-3320
Fax (315) 445-1104	Fax (315) 388-4061	Fax (585) 728-2711	Fax (585) 968-0906	Fax (585) 728-2711
NYS DOH ELAP #10248	NYS DOH ELAP #10900	NYS DOH ELAP #11667	NYS DOH ELAP #10760	
PA DEP #68-2556				

This report was reviewed by: Linda M-Patti, QA **Date:** 8/29/12
Life Science Laboratories, Inc.

A copy of this report was sent to:
Geologic

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-1 12-16' **LSL Sample ID:** 1212760-001

Location:

Sampled: 08/06/12 9:52 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<5	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	15	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	7.6	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	20	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	450	ug/kg			8/9/12	MSV
Toluene	7.1	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	7.4	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	14	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	75	%R			8/8/12	MSV
Surrogate (Tol-d8)	121	%R			8/8/12	MSV
Surrogate (4-BFB)	111	%R			8/8/12	MSV

Analysis performed at: *(1) LSL Central, (2) LSL North, (3) LSL Finger Lakes, (4) LSL Southern Tier, (5) LSL MidLakes*

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-2 4-8' **LSL Sample ID:** 1212760-002
Location:
Sampled: 08/06/12 10:12 **Sampled By:**
Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	31	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	30	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	<3	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	72	%R			8/8/12	MSV
Surrogate (Tol-d8)	120	%R			8/8/12	MSV
Surrogate (4-BFB)	101	%R			8/8/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-3 0-4' **LSL Sample ID:** 1212760-003

Location:

Sampled: 08/06/12 10:40 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	<3	ug/kg			8/8/12	MSV
Toluene	<3	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	<3	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	72	%R			8/8/12	MSV
Surrogate (Tol-d8)	119	%R			8/8/12	MSV
Surrogate (4-BFB)	104	%R			8/8/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID:	DP-12-4 4-8'	**LSL Sample ID:**	1212760-004
Location:			
Sampled:	08/06/12 10:58	**Sampled By:**	
Sample Matrix:	SHW as Recd		

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	8.0	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	4.9	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	87	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	34	ug/kg			8/8/12	MSV
Toluene	<3	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	18	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	<3	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	76	%R			8/8/12	MSV
Surrogate (Tol-d8)	121	%R			8/8/12	MSV
Surrogate (4-BFB)	104	%R			8/8/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID:	**DP-12-5 0-4'**	**LSL Sample ID:**	**1212760-005**
Location:			
Sampled:	08/06/12 11:16	**Sampled By:**	
Sample Matrix:	SHW as Recd		

Analytical Method **Analyte**	**Result**	**Units**	**Prep**	**Prep Date**	**Analysis Date & Time**	**Analyst Initials**
(1) EPA 8260B TCL Volatiles						
Acetone	130	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	45	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	<3	ug/kg			8/8/12	MSV
Toluene	91	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	<3	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	77	%R			8/8/12	MSV
Surrogate (Tol-d8)	131	%R			8/8/12	MSV
Surrogate (4-BFB)	125	%R			8/8/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID:	DP-12-5 4-8'	**LSL Sample ID:**	1212760-006
Location:			
Sampled:	08/06/12 11:18	**Sampled By:**	
Sample Matrix:	SHW as Recd		

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	24	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	24	ug/kg			8/8/12	MSV
Toluene	<3	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	<3	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	76	%R			8/8/12	MSV
Surrogate (Tol-d8)	120	%R			8/8/12	MSV
Surrogate (4-BFB)	105	%R			8/8/12	MSV

- - LABORATORY ANALYSIS REPORT - -

Operations & Maintenance, Inc. ***Pennellville, NY***

Sample ID:	**DP-12-6 4-8'**	**LSL Sample ID:**	**1212760-007**
Location:			
Sampled:	08/06/12 11:48	**Sampled By:**	
Sample Matrix:	SHW as Recd		

Analytical Method **Analyte**	**Result**	**Units**	**Prep**	**Prep Date**	**Analysis Date & Time**	**Analyst Initials**
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	7.2	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	62	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	39	ug/kg			8/8/12	MSV
Toluene	<3	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	4.8	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	7.1	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	79	%R			8/8/12	MSV
Surrogate (Tol-d8)	119	%R			8/8/12	MSV
Surrogate (4-BFB)	103	%R			8/8/12	MSV

- - LABORATORY ANALYSIS REPORT - -

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-7 8-12' **LSL Sample ID:** 1212760-008

Location:

Sampled: 08/06/12 12:10 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/8/12	MSV
Benzene	<3	ug/kg			8/8/12	MSV
Bromodichloromethane	<3	ug/kg			8/8/12	MSV
Bromoform	<3	ug/kg			8/8/12	MSV
Bromomethane	<3	ug/kg			8/8/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/8/12	MSV
Carbon disulfide	<3	ug/kg			8/8/12	MSV
Carbon tetrachloride	<3	ug/kg			8/8/12	MSV
Chlorobenzene	<3	ug/kg			8/8/12	MSV
Chloroethane	<5	ug/kg			8/8/12	MSV
Chloroform	<3	ug/kg			8/8/12	MSV
Chloromethane	<5	ug/kg			8/8/12	MSV
Dibromochloromethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethane	18	ug/kg			8/8/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/8/12	MSV
1,1-Dichloroethene	33	ug/kg			8/8/12	MSV
1,2-Dichloroethene, Total	37	ug/kg			8/8/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/8/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/8/12	MSV
Ethyl benzene	<3	ug/kg			8/8/12	MSV
2-Hexanone	<5	ug/kg			8/8/12	MSV
Methylene chloride	<5	ug/kg			8/8/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/8/12	MSV
Styrene	<3	ug/kg			8/8/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/8/12	MSV
Tetrachloroethene	430 E	ug/kg			8/8/12	MSV
E = This result should be considered an estimate because the concentration exceeded the linear range of the instrument.						
Toluene	<3	ug/kg			8/8/12	MSV
1,1,1-Trichloroethane	48	ug/kg			8/8/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/8/12	MSV
Trichloroethene	9.6	ug/kg			8/8/12	MSV
Vinyl chloride	<5	ug/kg			8/8/12	MSV
Xylenes (Total)	<3	ug/kg			8/8/12	MSV
Surrogate (1,2-DCA-d4)	78	%R			8/8/12	MSV
Surrogate (Tol-d8)	122	%R			8/8/12	MSV
Surrogate (4-BFB)	112	%R			8/8/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-8 8-12' **LSL Sample ID:** 1212760-009
Location:
Sampled: 08/06/12 13:21 **Sampled By:**
Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	9.4	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	7.7	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	6.7	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	36	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	<3	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	80	%R			8/9/12	MSV
Surrogate (Tol-d8)	132	%R			8/9/12	MSV
Surrogate (4-BFB)	142	%R			8/9/12	MSV

Analysis performed at: *(1) LSL Central, (2) LSL North, (3) LSL Finger Lakes, (4) LSL Southern Tier, (5) LSL MidLakes*

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID:	DP-12-9 0-4'	**LSL Sample ID:**	1212760-010
Location:			
Sampled:	08/06/12 13:53	**Sampled By:**	
Sample Matrix:	SHW as Recd		

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	<3	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	<3	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	85	%R			8/9/12	MSV
Surrogate (Tol-d8)	130	%R			8/9/12	MSV
Surrogate (4-BFB)	128	%R			8/9/12	MSV

Analysis performed at: *(1) LSL Central, (2) LSL North, (3) LSL Finger Lakes, (4) LSL Southern Tier, (5) LSL MidLakes*

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-9 8-12' **LSL Sample ID:** 1212760-011

Location:

Sampled: 08/06/12 13:55 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	7.8	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	13	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	8.6	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	170	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	4.3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	9.4	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	83	%R			8/9/12	MSV
Surrogate (Tol-d8)	135	%R			8/9/12	MSV
Surrogate (4-BFB)	143	%R			8/9/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-10 0-4' **LSL Sample ID:** 1212760-012

Location:

Sampled: 08/06/12 14:21 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	<3	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	<3	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	92	%R			8/9/12	MSV
Surrogate (Tol-d8)	132	%R			8/9/12	MSV
Surrogate (4-BFB)	131	%R			8/9/12	MSV

Analysis performed at: *(1) LSL Central, (2) LSL North, (3) LSL Finger Lakes, (4) LSL Southern Tier, (5) LSL MidLakes*

-- LABORATORY ANALYSIS REPORT --

Sample ID: DP-12-11 8-12' **LSL Sample ID:** 1212760-013

Location:

Sampled: 08/06/12 14:50 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	9.1	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	<3	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	84	%R			8/9/12	MSV
Surrogate (Tol-d8)	128	%R			8/9/12	MSV
Surrogate (4-BFB)	121	%R			8/9/12	MSV

-- LABORATORY ANALYSIS REPORT --

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-12 0-4' **LSL Sample ID:** 1212760-014

Location:

Sampled: 08/06/12 15:10 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	<3	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	<3	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	101	%R			8/9/12	MSV
Surrogate (Tol-d8)	105	%R			8/9/12	MSV
Surrogate (4-BFB)	124	%R			8/9/12	MSV

- - LABORATORY ANALYSIS REPORT - -

Operations & Maintenance, Inc. *Pennellville, NY*

Sample ID: DP-12-13 0-4' **LSL Sample ID:** 1212760-015

Location:

Sampled: 08/06/12 15:15 **Sampled By:**

Sample Matrix: SHW as Recd

Analytical Method Analyte	Result	Units	Prep	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8260B TCL Volatiles						
Acetone	<40	ug/kg			8/9/12	MSV
Benzene	<3	ug/kg			8/9/12	MSV
Bromodichloromethane	<3	ug/kg			8/9/12	MSV
Bromoform	<3	ug/kg			8/9/12	MSV
Bromomethane	<3	ug/kg			8/9/12	MSV
2-Butanone (MEK)	<40	ug/kg			8/9/12	MSV
Carbon disulfide	<3	ug/kg			8/9/12	MSV
Carbon tetrachloride	<3	ug/kg			8/9/12	MSV
Chlorobenzene	<3	ug/kg			8/9/12	MSV
Chloroethane	<5	ug/kg			8/9/12	MSV
Chloroform	<3	ug/kg			8/9/12	MSV
Chloromethane	<5	ug/kg			8/9/12	MSV
Dibromochloromethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethane	<3	ug/kg			8/9/12	MSV
1,1-Dichloroethene	<3	ug/kg			8/9/12	MSV
1,2-Dichloroethene, Total	<3	ug/kg			8/9/12	MSV
1,2-Dichloropropane	<3	ug/kg			8/9/12	MSV
cis-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
trans-1,3-Dichloropropene	<3	ug/kg			8/9/12	MSV
Ethyl benzene	<3	ug/kg			8/9/12	MSV
2-Hexanone	<5	ug/kg			8/9/12	MSV
Methylene chloride	<5	ug/kg			8/9/12	MSV
4-Methyl-2-pentanone (MIBK)	<5	ug/kg			8/9/12	MSV
Styrene	<3	ug/kg			8/9/12	MSV
1,1,2,2-Tetrachloroethane	<3	ug/kg			8/9/12	MSV
Tetrachloroethene	7.6	ug/kg			8/9/12	MSV
Toluene	<3	ug/kg			8/9/12	MSV
1,1,1-Trichloroethane	<3	ug/kg			8/9/12	MSV
1,1,2-Trichloroethane	<3	ug/kg			8/9/12	MSV
Trichloroethene	<3	ug/kg			8/9/12	MSV
Vinyl chloride	<5	ug/kg			8/9/12	MSV
Xylenes (Total)	<3	ug/kg			8/9/12	MSV
Surrogate (1,2-DCA-d4)	89	%R			8/9/12	MSV
Surrogate (Tol-d8)	131	%R			8/9/12	MSV
Surrogate (4-BFB)	131	%R			8/9/12	MSV

LSL

SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS

Method	Surrogate(s)	Water Limits, %R	SHW Limits, %R
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4	70-130	NA
EPA 524.2	Tol-d8, 4-BFB	75-125	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyl	80-120	NA
EPA 552.2	2,3-DBPA	70-130	NA
EPA 601/602	1,2-DCA-d4	70-130	NA
EPA 601/602	Tol-d8, 4-BFB	75-125	NA
EPA 608	TCMX, DCB	30-150	NA
EPA 624	1,2-DCA-d4	70-130	NA
EPA 624	Tol-d8, 4-BFB	75-125	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010/8020/8021	1,2-DCA-d4	70-130	69-127
EPA 8010/8020/8021	Tol-d8	75-125	72-138
EPA 8010/8020/8021	4-BFB	75-125	53-167
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4	70-130	69-127
EPA 8260	Tol-d8	75-125	72-138
EPA 8260	4-BFB	75-125	53-167
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Terphenyl-d14	40-110	40-110
DOH 310-14	Terphenyl-d14	40-110	40-110
DOH 310-15	Terphenyl-d14	40-110	40-110
DOH 310-34	4-BFB	50-150	50-150
DOH 313-4	DCB	NA	30-150
8015M_GRO	4-BFB	50-150	50-150
8015M_DRO	Terphenyl-d14	50-150	50-150

Units Key:

ug/l = microgram per liter
ug/kg = microgram per kilogram
mg/l = milligram per liter
mg/kg = milligram per kilogram
%R = Percent Recovery

1 of 2

Life Science Laboratories, Inc.

CHAIN OF CUSTODY RECORD

LSL Central Lab
5854 Butternut Drive
East Syracuse, NY 13057
Phone: (315) 445-1105
Fax: (315) 445-1301
Email: lslcentral@lsl-inc.com

LSL North Lab
131 St Lawrence Ave
Waddington, NY 13694
Phone: (315) 388-4476
Fax: (315) 388-4081
Email: lslnfo@lsl-inc.com

LSL Finger Lakes Lab
16 North Main Street
Wayland, NY 14572
Phone: (585) 728-3320
Fax: (585) 728-2711
Email: lslfll@lsl-inc.com

LSL Southern Tier
30 East Main Stree
Cuba, NY 14727
Phone: (585) 968-
Fax: (585) 968-090
Email: lslstl@lsl-inc

1212760
OMI
6084

Report Address:
Name: Gary Mullen Jr.
Company: Operations & Maintenance, Inc
Street: 1850 Rt 57 Riverview Bus. Park
City/State: Fulton, NY
Zip: 13069
Phone: 315-598-5396
Fax:
Email: gmullenomi@gmail.com
Client Project ID/Client Site ID

Turnaround Time
Normal 14 DAY ☒
Pre-Authorized
Next Day* ☐ 3-Day * ☐
2-Day * ☐ 7-Day* ☐
*Additional Charges may apply

Date Needed or Special Instructions: Copy results to GeoLogic NY, Inc. geologicny@geologic.net
Authorization or P.O. #
LSL Project Number:

Client's Sample Identifications	Sample Date	Sample Time	Type grab/comp	Matrix	Preserv Added	Containers #	Containers size/type	Analyses	Preserv Check	LSL ID#
DP-12-1 12-16'	8/6/12	9:52	Grab	Soil	None	1	Jar	Full 8260		001
DP-12-2 4-8'	↓	10:12	↓	↓	↓	↓	↓	↓		002
DP-12-3 0-4'	↓	10:40	↓	↓	↓	↓	↓	↓		003
DP-12-4 4-8'	↓	10:58	↓	↓	↓	↓	↓	↓		004
DP-12-5 0-4'	↓	11:16	↓	↓	↓	↓	↓	↓		005
DP-12-5 4-8'	↓	11:18	↓	↓	↓	↓	↓	↓		006
DP-12-6 4-8'	↓	11:48	↓	↓	↓	↓	↓	↓		007
DP-12-7 8-12'	↓	12:10	↓	↓	↓	↓	↓	↓		008
DP-12-8 8-12'	↓	1:21	↓	↓	↓	↓	↓	↓		009
DP-12-9 0-4'	↓	1:53	↓	↓	↓	↓	↓	↓		010

LSL use only:

Containers this C-O-C

Custody Transfers

			Date	Time
Sampled By:		Received By:		
Relinquished By:		Received By: Bill Osvaldson	8-7-12	9:05
Relinquished By: Bill Osvaldson		Rec'd for Lab By: R. Dunbar	8-7-12	16:38
Shipment Method:		Received Intact: Y N	Sample Temp	18.6

*** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner IN PEN ONLY***

LSL

Life Science Laboratories, Inc.

CHAIN OF CUSTODY RECORD

2 of 2

LSL Central Lab	LSL North Lab	LSL Finger Lakes Lab	LSL Southern Tier Lab
5854 Butternut Drive	131 St Lawrence Ave	16 North Main Street	30 East Main Street
East Syracuse, NY 13057	Waddington, NY 13694	Wayland, NY 14572	Cuba, NY 14727
Phone: (315) 445-1105	Phone: (315) 388-4476	Phone: (585) 728-3320	Phone: (585) 968-2640
Fax: (315) 445-1301	Fax: (315) 388-4081	Fax: (585) 728-2711	Fax: (585) 968-0906
Email: lslcentral@lsl-inc.com	Email: lslnfo@lsl-inc.com	Email: lslfll@lsl-inc.com	Email: lslstl@lsl-inc.com

1212760
OMI
6084

Report Address:
Name: See Page 1
Company:
Street:
City/State: **Zip:**
Phone: **Fax:**
Email:
Client Project ID/Client Site ID

Turnaround Time
Normal 14 DAY ☒
Pre-Authorized
Next Day* ☐ **3-Day *** ☐
2-Day * ☐ **7-Day*** ☐
***Additional Charges may apply**

Date Needed or Special Instructions: See Page 1

Authorization or P.O. #

LSL Project Number:

Client's Sample Identifications	Sample Date	Sample Time	Type grab/comp	Matrix	Preserv Added	Containers #	Containers size/type	Analyses	Preserv Check	LSL ID#
DP-12-9 8-12'	8/6/12	1:55	Grab	Soil	None	1	Jar	Full 8260		011
DP-12-10 0-4'	↓	2:21	↓	↓	↓	↓	↓	↓		012
DP-12-11 8-12'	↓	2:50	↓	↓	↓	↓	↓	↓		013
DP-12-12 0-4'	↓	3:10	↓	↓	↓	↓	↓	↓		014
DP-12-13 0-4'	↓	3:15	↓	↓	↓	↓	↓	↓		015

LSL use only:

Containers this C-O-C

Custody Transfers

		Date	Time
Sampled By:	**Received By:**		
Relinquished By:	**Received By:** Bill Doraldson	8-7-12	9:05
Relinquished By: Bill Doraldson	**Rec'd for Lab By:** R. Dunbar	8-7-12	16:38
Shipment Method:	Received Intact: Y N	Sample Temp	18.6°C

*** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner IN PEN ONLY***

E-Mail Exchange between John Ciampa of Spectra and Gary Mullen of Operations and Maintenance, Inc. with attached copy of map

From: John D. Ciampa [mailto:jciampa@spectraenv.com]
Sent: Wednesday, May 09, 2012 1:14 PM
To: Gary Mullen, Jr.
Cc: Templeton, Audrey; Rogers, Steve; John Grathwol; Bill Buchan; Merritt, Dean; bkogut@bsk.com; Robert C. LaFleur; Gary T. Kelder; PSharlow@Gilbertilaw.com
Subject: RE: Riccelli Fulton facility

Gary – I am providing this additional information to clarify our discussion last week regarding the elevated VOCs that were detected during the excavation of salt related compounds at the Riccelli Fulton site.

Elevated VOCs were only encountered in one well defined area, as shown on the attached map. The elevated VOCs were present in the approximate 1 – 5 ft. depth interval. We only excavated to a depth of 5 ft. in this area, based on the salt constituent concentrations. According to field personnel, odors and PID readings as high as 20-60 ppm were detected in soil during the excavation activities in the VOC impacted area. The lateral limits of the excavation did result in negligible or non-detect PID readings in the field. An exception to this was on the south sidewall that bordered the existing asphalt parking lot. Due to the existence of asphalt and the purpose of Riccelli's remedial efforts, excavation did not extend into the asphalt parking lot. There were no other areas encountered during Riccelli's excavation activities that detected either PID readings above 1-2ppm or odors. Some PID readings of 1-2 ppm were detected by field personnel during soil removal from the Retention Basin 1 area. There were also some sporadic PID readings of 1-2ppm elsewhere but nothing was well defined or contained any odors.

With respect to the VOC soil sampling, that was conducted after the soil had been excavated, segregated, stockpiled and covered on the asphalt pad. All samples from the stockpile were collected after digging 1-2 ft. into the pile. During the stockpile sampling, odors were noted. The first 3 samples (S1, S2, S3) collected on 1/31/12 were random grab samples that were analyzed for total VOCs. The second sample (SS-1), collected on March 2, 2012 was selected based upon field screening of the stockpile with a PID at 5 locations. The location with the highest PID reading (based on holding the PID meter in the sampling hole, 3.6 ppm) was submitted for TCLP analysis. Attached are the lab results for the total VOCs and the TCLP testing. The VOC soil pile was taken to Seneca Meadows landfill on April 6, 2012.

Currently, Riccelli is working with DEC on a Consent Order that will include additional soil sampling beneath the asphalt pad, within the natural pond, and just south of the pond. The soil sampling will also include screening for VOCs and possible lab testing for VOCs. The current proposal includes sampling to the top of the water table in the soil borings and about 4 ft. in the pond. That Consent Order is not yet final but draft maps for the sampling locations are attached to this email. A firm schedule for sampling is not yet established but it may begin during the week of May 21 or May 28 depending upon finalization of the Consent Order.

Regarding the fill material, it was brought to the site only after the excavation and stockpiling of the soil in which elevated VOCs were detected. The fill is clean “virgin” soil from a green-field quarry site. It was not sampled but there was no reason to suspect contamination. A total of about 5 ft. of new soil covers the area where the VOC impacted soil was removed.

Let me know if you have any other questions.

Regards,
John Ciampa

From: Gary Mullen, Jr. [mailto:gmullenomi@gmail.com]
Sent: Tuesday, May 01, 2012 10:55 AM
To: John D. Ciampa
Cc: 'Templeton, Audrey'; 'Rogers, Steve'; 'John Grathwol'; 'Bill Buchan'; 'Merritt, Dean'; bkogut@bsk.com
Subject: Riccelli Fulton facility

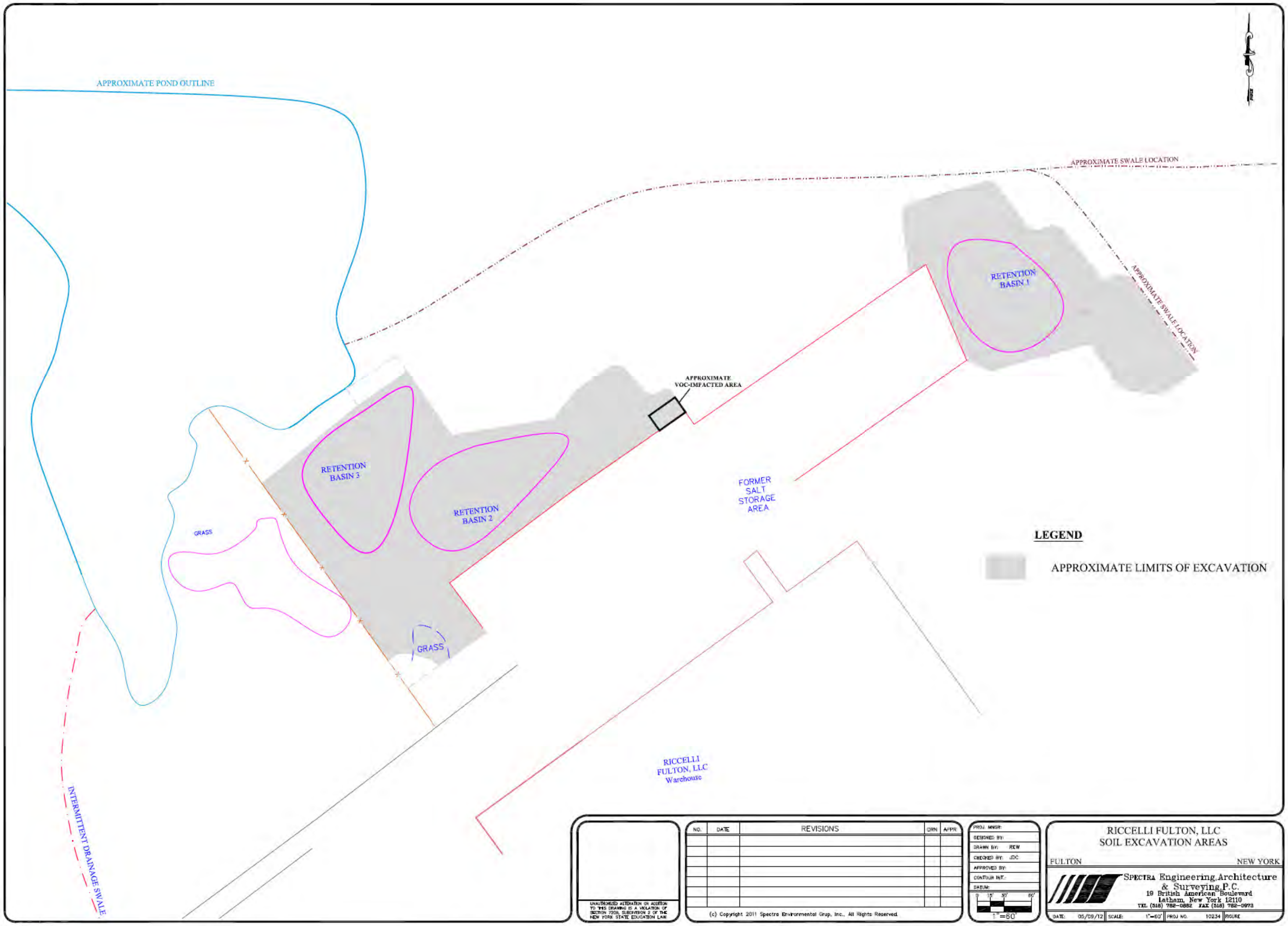
John:
Thank you for taking the time to return my call. We have been requested to investigate the area that Spectra uncovered the VOC impacted soil at the referenced site. The following summarizes the information that would be helpful in assisting in our investigation.

1. Field notes
    a. Where were the samples (S1, S2 and S3) were collected (location, depth and field screening performed…)
    b. When the VOC soil was detected and what the action levels were to indicated this soil needed to be segregated?
    c. Any other areas that may have exhibited VOC contamination but below the action level.
    d. A more defined drawing of the area that the VOC’s were detected.
    e. Analytical results from the additional testing that the DEC requested for waste characterization (TCLP)
2. Schedule of test borings to be performed in the parking lot area?
    a. When do they anticipate the borings will be performed.
    b. Drawing of proposed locations
    c. Anticipated depth of test pits

3. Backfill material
    a. Analytical performed on the material that was placed back into the excavated areas
    b. Thickness of the fill in the area where the VOC soil originated

Thanks you,
Gary

Gary Mullen, Jr
Project Manager
Operations & Maintenance Inc.
1850 Route 57
Fulton, NY 13069
Mobile 315-378-5088
Office 315-598-5396
gmullenomi@gmail.com



UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

NO.	DATE	REVISIONS	DRN	APPR

PROJ. MNGR:
DESIGNED BY:
DRAWN BY: REW
CHECKED BY: JDC
APPROVED BY:
CONTOUR INT.:
DATUM:
0 15' 30' 60'
1"=60'

RICCELLI FULTON, LLC
SOIL EXCAVATION AREAS
FULTON NEW YORK

SPECTRA Engineering, Architecture & Surveying, P.C.
19 British American Boulevard
Latham, New York 12110
TEL (518) 782-0882 FAX (518) 782-0973

DATE: 05/09/12 SCALE: 1"=60' PROJ NO. 10234 FIGURE

Upstate Laboratories, Inc.

Shipping: 6034 Corporate Dr. * E. Syracuse, NY 13057-1017 * (315) 437-0255 * Fax (315) 437-1209
Mailing: Box 169 * Syracuse, NY 13206
Albany (518) 459-3134 * Binghamton (607) 239-4413 * Buffalo (716) 972-0371
Rochester (866) 437-0255 * New Jersey (908) 581-4285

Mr. Frank Peduto
Spectra Environmental
19 British American Blvd.
Latham, NY 12110

Friday, February 03, 2012

RE: Analytical Report:
10234

Order No.: U1201661

Dear Mr. Frank Peduto:

Upstate Laboratories, Inc. received 3 sample(s) on 1/31/2012 for the analyses presented in the following report.

All analytical results relate to the samples as received by the laboratory.

All analytical data conforms with standard approved methodologies and quality control. Our quality control narrative will be included should any anomalies occur.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your samples. Samples will be disposed of approximately one month from final report date.

Should you have any questions regarding these tests, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.
Anthony J. Scala
Anthony J. Scala
President/CEO

Upstate Laboratories, Inc.

Analytical Report

Date: *03-Feb-12*

CLIENT: Spectra Environmental
Client Sample ID: S1
Lab Order: U1201661
Collection Date: 1/31/2012 10:00:00 AM
Project: 10234
Lab ID: U1201661-001
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METHOD 8260B 2005 LIST VOLATILES IN SOIL			**8260_05_S**			Analyst: **JKS**
1,2,3-Trichlorobenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,2,4-Trichlorobenzene	ND	590	Q	µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,2,4-Trimethylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,2-Dibromo-3-chloropropane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,2-Dibromoethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,2-Dichlorobenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,3,5-Trimethylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,3-Dichlorobenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,4-Dichlorobenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,4-Dioxane	ND	12000		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Bromochloromethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Cyclohexane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Dichlorodifluoromethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Freon-113	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Isopropylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Methyl Acetate	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Methyl tert-butyl ether	ND	590	Q	µg/Kg-dry	100	2/1/2012 7:12:00 PM
Methylcyclohexane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
n-Butylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
n-Propylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
sec-Butylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
tert-Butylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Trichlorofluoromethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Chloromethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Vinyl chloride	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Bromomethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Chloroethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Acetone	ND	1200		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,1-Dichloroethene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Carbon disulfide	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Methylene chloride	600	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
trans-1,2-Dichloroethene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,1-Dichloroethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
2-Butanone	ND	1200		µg/Kg-dry	100	2/1/2012 7:12:00 PM
cis-1,2-Dichloroethene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Chloroform	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,1,1-Trichloroethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Carbon tetrachloride	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Benzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM

Approved By: KMA
Date: 2/3/12

Qualifiers:

#	Accreditation not offered by NYS DOH for this parameter	*	Low Level
**	Value exceeds Maximum Contaminant Value	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this parameter	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *03-Feb-12*

CLIENT:	Spectra Environmental	**Client Sample ID:**	S1
Lab Order:	U1201661	**Collection Date:**	1/31/2012 10:00:00 AM
Project:	10234		
Lab ID:	U1201661-001	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METHOD 8260B 2005 LIST VOLATILES IN SOIL				**8260_05_S**		Analyst: **JKS**
1,2-Dichloroethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Trichloroethene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,2-Dichloropropane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Bromodichloromethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
4-Methyl-2-pentanone	ND	1200		µg/Kg-dry	100	2/1/2012 7:12:00 PM
cis-1,3-Dichloropropene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Toluene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
trans-1,3-Dichloropropene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,1,2-Trichloroethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
2-Hexanone	ND	1200		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Tetrachloroethene	1300	590	Q	µg/Kg-dry	100	2/1/2012 7:12:00 PM
Dibromochloromethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Chlorobenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Ethylbenzene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
m,p-Xylene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
o-Xylene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Styrene	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM
Bromoform	ND	590	Q	µg/Kg-dry	100	2/1/2012 7:12:00 PM
1,1,2,2-Tetrachloroethane	ND	590		µg/Kg-dry	100	2/1/2012 7:12:00 PM

NOTES:

The reporting limits were raised due to the high concentration of target compounds.

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE BY ASTM D2216				**PMOIST**		Analyst: **KLS**
Percent Moisture	14.8	0.0100		wt%	1	2/3/2012

Approved By: KMA **Date:** 2/3/12

Qualifiers:

#	Accreditation not offered by NYS DOH for this parameter	*	Low Level
**	Value exceeds Maximum Contaminant Value	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this parameter	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *03-Feb-12*

CLIENT:	Spectra Environmental	**Client Sample ID:**	S2
Lab Order:	U1201661	**Collection Date:**	1/31/2012 10:15:00 AM
Project:	10234		
Lab ID:	U1201661-002	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METHOD 8260B 2005 LIST VOLATILES IN SOIL			**8260_05_S**			Analyst: **JKS**
1,2,3-Trichlorobenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,2,4-Trichlorobenzene	ND	580	Q	µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,2,4-Trimethylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,2-Dibromo-3-chloropropane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,2-Dibromoethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,2-Dichlorobenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,3,5-Trimethylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,3-Dichlorobenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,4-Dichlorobenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,4-Dioxane	ND	12000		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Bromochloromethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Cyclohexane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Dichlorodifluoromethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Freon-113	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Isopropylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Methyl Acetate	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Methyl tert-butyl ether	ND	580	Q	µg/Kg-dry	100	2/1/2012 7:53:00 PM
Methylcyclohexane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
n-Butylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
n-Propylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
sec-Butylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
tert-Butylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Trichlorofluoromethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Chloromethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Vinyl chloride	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Bromomethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Chloroethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Acetone	ND	1200		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,1-Dichloroethene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Carbon disulfide	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Methylene chloride	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
trans-1,2-Dichloroethene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,1-Dichloroethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
2-Butanone	ND	1200		µg/Kg-dry	100	2/1/2012 7:53:00 PM
cis-1,2-Dichloroethene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Chloroform	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,1,1-Trichloroethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Carbon tetrachloride	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Benzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM

Approved By: KMA **Date:** 2/3/12

Qualifiers:				
	#	Accreditation not offered by NYS DOH for this parameter	*	Low Level
	**	Value exceeds Maximum Contaminant Value	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	Q	Outlying QC recoveries were associated with this parameter	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *03-Feb-12*

CLIENT:	Spectra Environmental	**Client Sample ID:**	S2
Lab Order:	U1201661	**Collection Date:**	1/31/2012 10:15:00 AM
Project:	10234		
Lab ID:	U1201661-002	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METHOD 8260B 2005 LIST VOLATILES IN SOIL			**8260_05_S**			Analyst: **JKS**
1,2-Dichloroethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Trichloroethene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,2-Dichloropropane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Bromodichloromethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
4-Methyl-2-pentanone	ND	1200		µg/Kg-dry	100	2/1/2012 7:53:00 PM
cis-1,3-Dichloropropene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Toluene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
trans-1,3-Dichloropropene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,1,2-Trichloroethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
2-Hexanone	ND	1200		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Tetrachloroethene	1400	580	Q	µg/Kg-dry	100	2/1/2012 7:53:00 PM
Dibromochloromethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Chlorobenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Ethylbenzene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
m,p-Xylene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
o-Xylene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Styrene	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM
Bromoform	ND	580	Q	µg/Kg-dry	100	2/1/2012 7:53:00 PM
1,1,2,2-Tetrachloroethane	ND	580		µg/Kg-dry	100	2/1/2012 7:53:00 PM

NOTES:

The reporting limits were raised due to the high concentration of target compounds.

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE BY ASTM D2216			**PMOIST**			Analyst: **KLS**
Percent Moisture	13.8	0.0100		wt%	1	2/3/2012

Approved By: KMA **Date:** 2/3/12

Qualifiers:

#	Accreditation not offered by NYS DOH for this parameter	*	Low Level
**	Value exceeds Maximum Contaminant Value	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this parameter	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *03-Feb-12*

CLIENT:	Spectra Environmental	**Client Sample ID:**	S3
Lab Order:	U1201661	**Collection Date:**	1/31/2012 10:26:00 AM
Project:	10234		
Lab ID:	U1201661-003	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METHOD 8260B 2005 LIST VOLATILES IN SOIL			**8260_05_S**			Analyst: **JKS**
1,2,3-Trichlorobenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,2,4-Trichlorobenzene	ND	2900	Q	µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,2,4-Trimethylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,2-Dibromo-3-chloropropane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,2-Dibromoethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,2-Dichlorobenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,3,5-Trimethylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,3-Dichlorobenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,4-Dichlorobenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,4-Dioxane	ND	57000		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Bromochloromethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Cyclohexane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Dichlorodifluoromethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Freon-113	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Isopropylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Methyl Acetate	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Methyl tert-butyl ether	ND	2900	Q	µg/Kg-dry	500	2/1/2012 8:33:00 PM
Methylcyclohexane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
n-Butylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
n-Propylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
sec-Butylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
tert-Butylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Trichlorofluoromethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Chloromethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Vinyl chloride	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Bromomethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Chloroethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Acetone	11000	5700		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,1-Dichloroethene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Carbon disulfide	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Methylene chloride	4300	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
trans-1,2-Dichloroethene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,1-Dichloroethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
2-Butanone	ND	5700		µg/Kg-dry	500	2/1/2012 8:33:00 PM
cis-1,2-Dichloroethene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Chloroform	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,1,1-Trichloroethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Carbon tetrachloride	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Benzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM

Approved By: KMA **Date:** 2/3/12

Qualifiers:

#	Accreditation not offered by NYS DOH for this parameter	*	Low Level
**	Value exceeds Maximum Contaminant Value	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this parameter	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *03-Feb-12*

CLIENT:	Spectra Environmental	**Client Sample ID:**	S3
Lab Order:	U1201661	**Collection Date:**	1/31/2012 10:26:00 AM
Project:	10234		
Lab ID:	U1201661-003	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METHOD 8260B 2005 LIST VOLATILES IN SOIL			**8260_05_S**			Analyst: **JKS**
1,2-Dichloroethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Trichloroethene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,2-Dichloropropane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Bromodichloromethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
4-Methyl-2-pentanone	ND	5700		µg/Kg-dry	500	2/1/2012 8:33:00 PM
cis-1,3-Dichloropropene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Toluene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
trans-1,3-Dichloropropene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,1,2-Trichloroethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
2-Hexanone	ND	5700		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Tetrachloroethene	33000	2900	Q	µg/Kg-dry	500	2/1/2012 8:33:00 PM
Dibromochloromethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Chlorobenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Ethylbenzene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
m,p-Xylene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
o-Xylene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Styrene	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM
Bromoform	ND	2900	Q	µg/Kg-dry	500	2/1/2012 8:33:00 PM
1,1,2,2-Tetrachloroethane	ND	2900		µg/Kg-dry	500	2/1/2012 8:33:00 PM

NOTES:

The reporting limits were raised due to the high concentration of target compounds.

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE BY ASTM D2216			**PMOIST**			Analyst: **KLS**
Percent Moisture	12.5	0.0100		wt%	1	2/3/2012

Approved By: KMA **Date:** 2/3/12

Qualifiers:

#	Accreditation not offered by NYS DOH for this parameter	*	Low Level
**	Value exceeds Maximum Contaminant Value	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
Q	Outlying QC recoveries were associated with this parameter	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.
6034 Corporate Drive • E. Syracuse, NY 13057-1017
(315) 437 0255 Fax 437 1209

Chain Of Custody Record

Client: Spectra Engineering		Client Project # / Project Name: 10234	
Client Contact: John Ciampa	Phone #: 782-0882	Site Location (city/state): Fulton	

Special Turnaround Time______ (Lab Notification required)

Sample Location:	Date	Time	Matrix	Grab or Comp.	ULI Internal Use Only U1201Ldel	No. of Containers	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	Remarks
S1	1-31-12	10:06	Soil	Grab	1	1	X	(Y)	KM 1-31-12								
S2	1-31-12	10:15	↓	↓	2	1	X	↓									
S3	1-31-12	10:24	↓	↓	3	1	X	↓									

parameter and method / sample bottle:	type	size	pres.
1) VOCS SW846 Method 8260 EPA			
2) (pmoist) KWT 1-31-12			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			

Note: The numbered columns above cross-reference with the numbered columns in the upper right-hand corner.

Sampled by: (Please Print) David A. Trujillo
Company: Spectra Engineering

ULI Internal Use Only
Delivery (check one):
☐ ULI Sampled
☐ Pickup ☐ Dropoff
☐ CC ______

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Rec'd for Lab by: (Signature)
	1-31-12	1113	

Syracuse Rochester Buffalo Albany Binghamton Fair Lawn (NJ)