# STAUFFER MANAGEMENT COMPANY MAESTRI SITE

GEDDES, NEW YORK

# POST GROUNDWATER COLLECTION / TREATMENT SYSTEM SHUTDOWN

# **QUARTERLY REPORT – JUNE 2009**

#### Prepared for:

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#### Introduction

This report addresses site maintenance and monitoring activities that have been completed since shutdown of the groundwater treatment system on May 27, 2008. The period of time covered by this report is from March 2009 to June of 2009. This report is organized into the following sections:

- > Site Background
- Site Closure and Monitoring Frequency Alteration Request
- New Monitoring Well (PZ-20) Installation
- Groundwater Sampling
- Groundwater Quality
- Site Inspections
- > Site Maintenance
- > Summary

A site map showing the location of monitoring wells, recovery wells, and piezometers is attached as Figure 1.

#### Site Background

The groundwater treatment system at the Stauffer Management Company (SMC) Maestri Site began operation in 1996. On May 8, 2008, Envirospec submitted a request to the New York State Department of Environmental Conservation (NYSDEC) on behalf of SMC to shutdown the treatment system. As stated in the request, levels of contaminants remaining in groundwater were low, the system was no longer effective as shown by the consistency of the results, and the groundwater treatment system had achieved the goals of the ROD. The NYSDEC approved this request in a letter dated May 14, 2008. After the approval was granted by the NYSDEC, the groundwater treatment system was shutdown on the morning of May 27, 2008.

As part of the approval to shutdown the groundwater treatment system, SMC agreed to maintain the system for a minimum of one (1) year (through May 2009). As part of the system shutdown, the pumps were turned off, all valves were closed, and the effluent line inside the treatment shed



was disconnected to prevent accidental discharges. All other main components (electricity, computer, well pumps, water level probes, alarm system, PLC, etc) remained installed and functional in case the system needed to be restarted during the one-year period. SMC also agreed to conduct weekly site inspections and monthly sampling of perimeter wells MW-2A, MW-9, PZ-4, RW-3, RW-5, RW-6, RW-7 and RW-8 for the three (3) months following shutdown, from June to August 2008. The elevations of site wells were also monitored on a monthly basis during this time. After the three (3) month period, sampling and reporting was conducted quarterly from November 2008 to June 2009. Monitoring reports were submitted to NYSDEC by Envirospec on behalf of SMC following sampling event.

In June 2009 following the fourth quarterly sampling event, a new monitoring well (PZ-20) was installed downgradient from the site in the Alhan Parkway residence area to verify that the groundwater contamination plume was not migrating. The location of PZ-20 is provided in Attachment 4. Samples collected from the new monitoring well after installation did not show elevated levels of xylene.

#### Site Closure and Monitoring Frequency Alteration Request

After a year of monitoring, results indicate that the residual groundwater plume is not migrating. SMC is therefore requesting:

- to permanently decommission the groundwater treatment system (including demolition of the treatment building), and
- to reduce the monitoring frequency to semiannual.

SMC is proposing to permanently decommission the groundwater treatment system at the site. Decommissioning activities will include demolition of the treatment building and disconnecting electrical service to the site. Spent carbon drums will be transported to the Skaneateles Falls Site and removed by Calgon Carbon Corp. Construction debris from the building demolition will be properly disposed at a NYSDEC Part 360 facility. Concrete slabs and blocks foundation will be removed to a depth of 1-foot below existing grade and properly disposed. The foundation footprint area will be backfilled. A 6-inch layer of topsoil will be placed and the backfilled area will then be seeded.



SMC is also proposing to reduce groundwater monitoring to semiannual as monitoring results indicate that the residual groundwater plume is not migrating. Groundwater monitoring will be performed as defined in the Site Management Plan (SMP). As part of the site shutdown, existing groundwater monitoring wells will be equipped with a flush mounted lockable cover and finished at grade. Wells to be sampled on a semi-annual basis include MW-2A, MW-9, PZ-4, RW-3, RW-5, RW-6, RW-7 and RW-8.

#### New Monitoring Well (PZ-20) installation

A new monitoring well (PZ-20) was installed on June 24th, 2009. The well is 2-inches in diameter and was finished to 20-feet deep with the screened interval from 8 to 18 feet. The well is finished at grade with a flush mounted lockable cover. A well installation report and photolog is provided in Attachment 4. Upon completion of installation of the well, it was developed and sampled for xylene. Sampling results are provided in Table 2a. Temperature, electric conductivity, pH and Total Dissolved Solid (TDS) measurements were also collected during sampling.

#### **Groundwater Sampling**

The 3<sup>rd</sup> quarterly sampling event was conducted on June 10<sup>th</sup> and 11<sup>th</sup>, 2009. The following wells were sampled: MW-2A, MW-9, PZ-4, RW-3, RW-5, RW-6, RW-7 and RW-8. The wells selected to be sampled after shutdown present a cross section of the property and were chosen to indicate if the plume has begun to migrate after pumping ceased. Additional wells (RW-6, PZ-9, PZ-13 and PZ-5) were sampled on June 24<sup>th</sup>, 2009 during the installation of the new offsite monitoring well (PZ-20) located downgradient from the site to further identify if the plume was migrating.

Prior to well purging, site wells were gauged for water level. A table of groundwater elevations is included as Tables 1 and 1a below. A contour map of the groundwater elevations is provided as Figure 2.



Table 1
Groundwater Elevations – June 10-11, 2009

WELL NUMBER	MEASURING POINT ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION
MW-9	408.87	13.80	395.07
MW-10	413.82	10.20	403.62
MW-12	418.28	10.40	407.88
MW-14	405.17	17.50	387.67
PZ-2	407.23	13.00	394.23
PZ-3	409.60	13.40	396.20
PZ-4	394.37	7.30	387.07
PZ-5	393.37	6.10	387.27
PZ-6	410.15	13.50	396.65
PZ-7	409.13	13.60	395.53
PZ-9	408.69	12.90	395.79
PZ-10	407.04	12.30	394.74
PZ-12	408.17	9.50	398.67
PZ-13	407.12	14.80	392.32
PZ-14	408.44	12.90	395.54
PZ-15	406.74	17.80	388.94
PZ-18	406.30	18.20	388.10
PZ-19	406.88	17.80	389.08
MW-2A (formerly RW-2)	406.40	14.20	392.20
RW-3	407.01	18.70	388.31
RW-5	409.18	12.90	396.28
RW-6	393.64	6.00	387.64
RW-7	405.76	17.60	388.16
RW-8	406.81	13.70	393.11

Table 1a Groundwater Elevations – June 24, 2009

WELL NUMBER	MEASURING POINT ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION
PZ-9	408.69	13.1	395.59
RW-6	393.64	6.5	387.14
PZ-13	407.12	12.8	394.32
PZ-5	393.37	4.9	388.47
PZ-20	~386.00	9.2	376.80



A minimum of three wells volumes were purged from each of the wells prior to sampling. Wells were purged with either a 2" submersible Grundfos pump and poly tubing or purged with a 2" disposable polyethylene bailer or both. Purged water was collected and containerized in a poly tank. The containerized water was brought to the Skaneateles Falls Site and sent through the onsite groundwater treatment plant for treatment. Field data including pH, temperature, conductivity, and total dissolved solids (TDS) were recorded for approximately each well volume. A summary of the field data as well as the total volume of groundwater purged is presented in Table 4. Samples were collected using disposable bailers. The well sampling field reports are included as Attachment 1.

On June 11, 2009 a duplicate sample was collected from MW-2A for laboratory and sampling quality assurance/quality control purposes. On June 24, 2009 a duplicate sample was collected from PZ-9. The result of the duplicate samples as shown in Table 2 were within a reasonable margin of the original sample. A trip blank was placed in the sample cooler in the field and during transport for each sampling event to ensure no cross contamination or outside contamination was present. The result of the trip blank samples were non-detect for xylene indicating there was no evidence of outside or cross contamination. The analytical data for the trip blank sample is included in Attachment 2.

#### **Groundwater Quality**

Samples were sent to Certified Environmental Services Laboratory (CES) in Syracuse, NY following typical chain of custody procedures for expedited xylene analysis via EPA Method 602. The analytical results are included as Attachment 2.

At this time, the results indicate that the residual groundwater contamination is not migrating. Xylene concentrations in down-gradient wells are consistent with the seasonal trends noted in previous sampling events while the system was operating. No elevated level of xylene was detected in the new PZ-20 well installed downgradient in the Alhan Parkway residence area.

A summary of results from this sampling round is presented in Table 2 and 2a below as well as



in the attached Table 3. Table 3 also shows the sample results for the respective wells including results prior to system shutdown. Table 3a shows the sample results for the wells sampled during the PZ-20 installation. A summary of the five rounds of sampling post shutdown is shown on Figure 2b.

Table 2
Summary of Xylene in Groundwater – June 10-11, 2009

Well	Xylene Concentration in Groundwater (ppb)
MW-9	7830
MW-2A	4635
DUP	5070
RW-3	< 3.0
RW-5	< 3.0
RW-6	641
RW-7+	23
RW-8	< 3.0
PZ-4	< 3.0

Table 2a Summary of Xylene in Groundwater – June 24, 2009

Well	Xylene Concentration in
	Groundwater (ppb)
PZ-9	5.5
DUP	8.3
RW-6	827
PZ-13	42
PZ-5	59
PZ-20	<3.0

Figures 4 through 9 depict the xylene concentrations in recovery wells for this sampling event compared to levels noted during operation of the treatment system. In general, the xylene concentrations for this sampling round are in line with concentrations noted at the site for the past several years. Levels in MW-2A and RW-6 were slightly elevated as compared to past



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events. These wells will continue to be monitored in further sampling events.

#### **Site Inspections**

Site inspections were conducted on a weekly basis from May to August 2008 following treatment system shutdown. From August to December 2008 the site inspections are conducted on a quarterly basis. To date, no runoff issues have been observed or reported by neighboring residences. The recovery well groundwater elevations were also reviewed during site inspections based on the PLC output on the computer. To date, the groundwater level in the recovery wells has been stable. SMC is requesting to change the site inspection frequency to annual staring December 2009. Site inspections will be conducted as specified in the Site Management Plan (SMP). Items reviewed during the site inspections include site security, general site maintenance, erosion control, condition of neighboring properties and general observations of site conditions (i.e. appearance of sink holes, odors, vegetation growth, etc). Site conditions will also be observed during semiannual sampling events but formal documentation would occur annually. Copies of the site inspections are included as Attachment 3.

#### Site Maintenance

Prior to shutdown of the groundwater treatment system, general site maintenance was performed to ensure appropriate erosion control was in place. Maintenance included the installation of additional silt fence and hay bales at down gradient areas along the perimeter fence, the placement of stone at the northeast corner of the site, lawn maintenance, repair of the sink hole near MW-9, and the addition of topsoil, seed, and mulch to previously disturbed areas.

Other site maintenance conducted during the month of June 2009 included site mowing and garbage/debris removal. Updated signage was posted on the front and back fence of the property. These signs list local numbers in the event of a site issue. While these local numbers can be used on a 24-hour basis, the 24-hour emergency response number is still posted on the front fence. To date, no calls have been received by Envirospec or SMC. "No Trespassing" signs were also posted along the front and rear fences.



Lawn maintenance was performed at the site on June 8-9, 2009 and will be performed on an as needed basis. Prior to site closure damaged plugs and caps on monitoring wells will be repaired. Locking well caps will be installed on each monitoring well.

#### **Summary**

There were no significant flooding events during the one-year period after the shutdown. No elevated xylene concentrations were observed in a new downgradient offsite monitoring well PZ-20.

The plume appears to remain stable with no significant migration. Starting in February 2010 SMC is requesting:

- to permanently decommission the groundwater treatment system in 2010 (including demolition of the treatment building), and
- to reduce the monitoring frequency to semiannual.

The first semi-annual sampling event was completed in December 2009. The next sampling event will be completed by June 2010. The NYSDEC will be notified two weeks prior to sampling. The annual site inspection will be completed in 2010 pending approval of the Site Management Plan.



#### Table 3

#### Total Xylene Concentration (ppb)

Stauffer Management Company Maestri Site

Sample Date	RW-1	RW-2 <sup>2</sup>	RW-3	RW-4	RW-5	RW-6	RW-7	RW-8	MW-2A <sup>2</sup>	MW-9	PZ-4
							141709117	MERE B			
3-Jan-06		4640	<3.0	**	<3.0	45	<3.0	<3.0	-		4
9-Feb-06	**	3890	<3.0	**	8.4	70	INC	<3.0			
7-Mar-06	**	6250	<3.0	**	<3.0	3.2	129	<3.0			
4-Apr-06	**	2070	<3.0	**	<3.0	142	<30	<3.0			
2-May-06	**	****	<3.0	**	<3.0	58	<30	<3.0	2400		_
6-Jun-06	**	****	<3.0	**	<3.0	9	102	<3.0			
4-Jul-06		****	<3.0	**	<3.0	34	130		665		
1-Aug-06	**	****	5	**	<3.0	63	90	<3.0	A CONTRACTOR OF THE PARTY OF TH		
3-Oct-06	**	***	3.3	**	<3.0	3	55	-	<3.0		
2-Jan-07	**	****	<3.0		<3.0	29	40	_	<3.0		
3-Apr-07	**	***	INC	**	<3.0	145	3.7	-	6.4		# T
3-Jul-07	##	***	<3.0	**	<3.0	<3.0	<3.0	- 19	410		100 7 - 13
2-Oct-07	**	***	<3.0	**	<3.0	30	6		1025		_
7-Jan-08	**	****	<3.0	**	14	52	<3.0		3.0	11	
1-Apr-08	**	****	22	**	<3.0	27	15		987		
reatment System SI	hutdown on M	ay 27th, 2008									
June 2008	**	***	6.1	**	<3.0	84	119	<3.0	68 (54)	964	< 3.0
July 2008	**	***	4.4	**	<3.0 (< 3.0)	71	124	<3.0	1700	1800	< 3.0
August 2008	**	****	4.3	**	<3.0	148	104	<3.0	1770 (1200)	1795	< 3.0
November 2008	**	***	<3.0	**	<3.0	158	73	<3.0	16	73	< 3.0
February 2009	**	***	<3.0	**	<3.0	590	<3.0 (< 3.0)	< 3.0	9.1	< 3.0	< 3.0
June 2009	**	***	<3.0	**	<3.0	641	23	< 3.0	4635	7830	< 3.0

Shaded boxes indciate result when treatment system was in operation

INC - Inconclusive laboratory result

Value in parenthesis is duplicate sample result

<sup>\*\* -</sup> Wells No. 1 and 4 were removed as part of the excavation.

<sup>\*\*\* -</sup> Pump in Well 5 was moved to Well 8.

<sup>\*\*\*\* -</sup> RW2 changed to monitoring well MW-2A

<sup>&</sup>lt;sup>1</sup> RW-8 sample on 8/7/2001 was resampled on 8/24/2001 due to original sample being cross contaminated

<sup>&</sup>lt;sup>2</sup> RW-2 was changed to a monitoring well (MW-2A) in April 2006

# Table 3a

# Sampling June 24, 2009 (PZ-20 installation)

# **Total Xylene Concentration (ppb)**

Stauffer Management Company Maestri Site

Sample Date	PZ-9	RW-6	PZ-13	PZ-5	PZ-20
June 24, 2009	. 5.5	827	42	59	<3.0

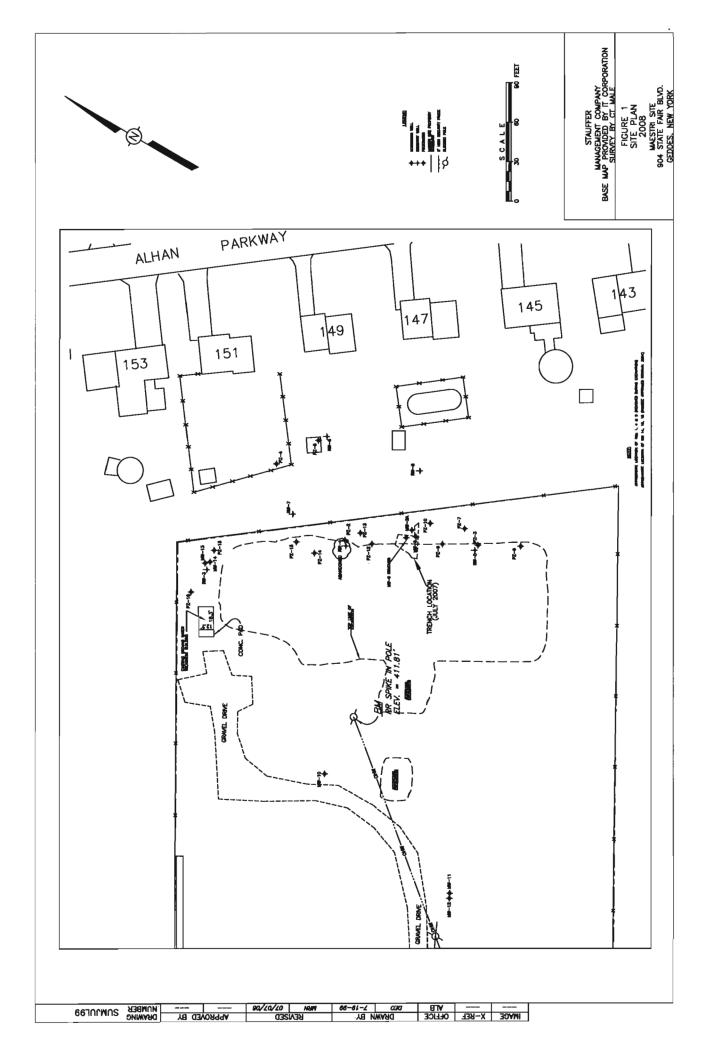
#### Table 4

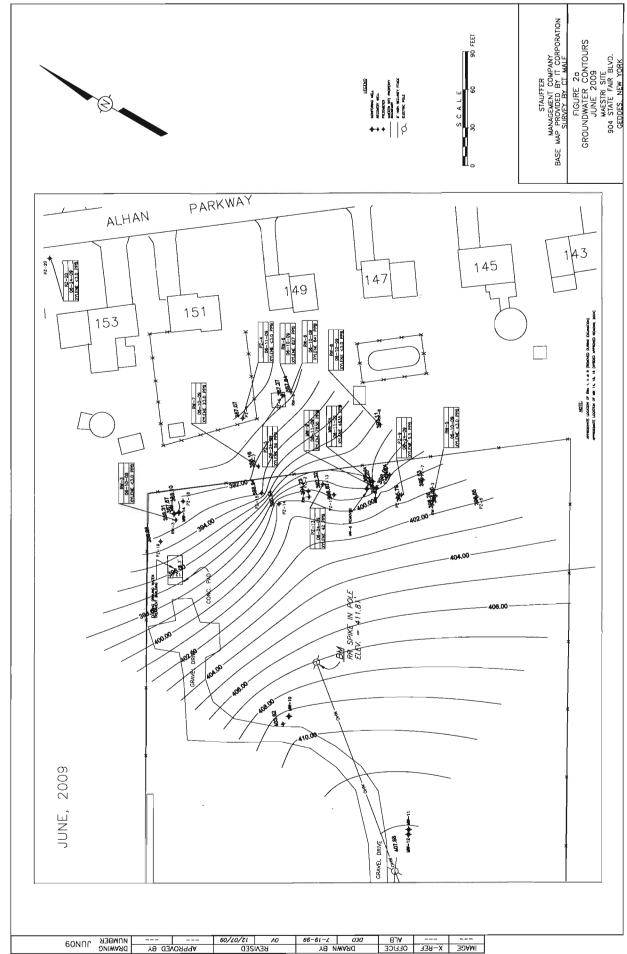
# **Well Field Data**

Stauffer Management Company Maestri Site

# **Quarterly Groundwater Sampling - June 2009**

Well	Date Sampled	Diameter (in)	Total Well Depth (ft bgs)	Depth to Water (ft)	Water Column (ft)	Purged Volume (gal)	Final pH	Final Temp (°C)	Conductivity (mS/cm)	TDS (ppt)
MW-2A	6/11/09	8	20.6	14.2	9.1	72	7.35	8.4	0.63	0.31
MW-9	6/11/09	2	17	13.8	3.8	2	6.98	14.2	0.93	0.46
RW-3	6/11/09	6	25.33	18.7	7.6	34	8.78	13.3	2.45	1.22
RW-5	6/10/09	6	24.53	12.9	12.6	56	6.98	14.2	0.85	0.42
RW-6	6/11/09	6	21.86	6	15.9	70	8.40	12.8	1.51	0.76
RW-7	6/10/09	6	27.5	17.6	10.9	48	7.47	10.0	0.9	1.47
RW-8	6/11/09	6	24.5	13.7	11.8	52	6.95	11.9	0.82	0.41
PZ-4	6/11/09	2	19.5	6.1	11.7	76	7.36	15.5	1.56	0.73





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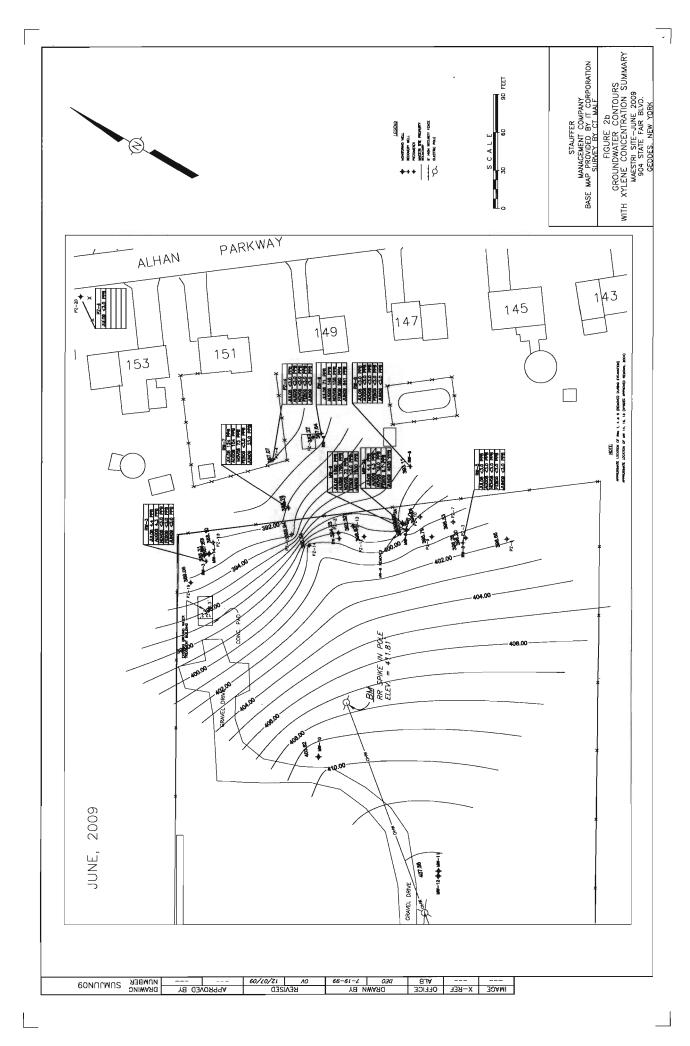


Figure 3
Aquifer Thickness

