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April 4, 2012 Reference No. 006488

Mr. Timothy Dieffenbach
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Mr. Dieffenbach:

Re: 2011 Annual Operations and Maintenance Report
Stauffer Management Company LLC Site
Lewiston, New York

Enclosed are two copies of the 2011 Operations and Maintenance (O&M) Report for the Stauffer Management Company LLC Site in Lewiston, NY. Also enclosed are two CD-ROMs with the Report in PDF format, consistent with the New York State Department of Environmental Conservation's (NYSDEC's) electronic document submittal requirements. Conestoga-Rovers & Associates (CRA) is submitting this document on behalf of SMC.

Please direct questions or comments to me or Mr. Chuck Elmendorf, the SMC Site Manager.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Robert G. Adams, P.E.
Project Manager

RGA/ck/006488-Dieffenbach-009

Enclosure

cc: Chuck Elmendorf, SMC (report only)
Matthew Forcucci, DOH (report only)

CONESTOGA-ROVERS
& ASSOCIATES

2011 ANNUAL OPERATIONS AND MAINTENANCE REPORT

STAUFFER MANAGEMENT COMPANY, LLC
LEWISTON, NEW YORK

PREPARED BY:
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APRIL 2012
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1.0 INTRODUCTION

This report summarizes the operation and maintenance (O&M) activities performed at the Stauffer Management Company LLC (SMC) Site (Site) in Lewiston, New York for the reporting period of January 1, 2011 through December 31, 2011. This report also summarizes significant modifications to remedial operations during the reporting period. Finally, this report presents data that can be used to evaluate the effectiveness of the remedial systems, provides conclusions about the data, and offers recommendations for 2012 operations.

The O&M services were provided by Conestoga-Rovers & Associates, Inc. (CRA) under contract to SMC. The O&M activities were performed in accordance with the "Operations and Maintenance Manual, Stauffer Management Company, Town of Lewiston, New York" (O&M Manual), dated April 1998.

1.1 SITE BACKGROUND

The SMC Site is located in the Town of Lewiston, New York, immediately north of the Forebay of the Robert Moses Power Plant. Figure 1.1 presents the location of the Site, and Figure 1.2 presents the layout of the Site.

The Site is a former chemical manufacturing facility owned and operated by Stauffer Chemical Company. All structures associated with the former plant were demolished in the early 1980s. Stauffer Chemical Company was divested in 1987, and Atkemix Thirty Seven, a subsidiary of Stauffer Management Company, became the Site owner. In 2000, Stauffer Management Company and Atkemix Thirty Seven restructured into a limited liability company that is now known as Stauffer Management Company LLC.

In 1995, in accordance with Consent Order #B9-0137-86-04, SMC initiated remedial construction for soil and groundwater. At that time, the Treatment Building was erected to house the Site groundwater treatment system and the soil vapor extraction (SVE) treatment system for Area A. A second SVE treatment system, Area C, was mounted in a trailer located off Site, beyond the southeast corner of the Site property. SVE operations at Area C were discontinued in May 2004, and the Area C treatment system was decommissioned in July 2004. A third SVE system at Area T-4 was also installed in 1995, operated until 2000, and decommissioned in September 2001. Dual phase well T-4 (also known as DPT-261) remains operable as a groundwater extraction well.

The major chemicals of concern in the groundwater at the Site have been identified in the Site-Specific Parameter List (SSPL) as follows:

i) carbon disulfide
ii) carbon tetrachloride
iii) chloroform
iv) methylene chloride
v) tetrachloroethene
vi) benzene
vii) chlorobenzene
viii) toluene
ix) trichloroethene

These chemicals have historically been detected at varying concentrations in the groundwater, subsurface soils, seeps, and surface water run-off in the immediate vicinity of the Site.

1.2 REMEDIAL SYSTEMS DESCRIPTIONS

The remedial systems currently being operated at the Site include:

i) the Area A SVE system
ii) the bedrock groundwater extraction and treatment system, consisting of deep bedrock and shallow bedrock extraction wells

The SVE system located in Area T-4 was decommissioned in 2001, and the SVE system located in Area C was decommissioned in 2004.

The remedial systems are briefly described in the following sections.

1.2.1 AREA A

Area A occupies approximately 136,500 square feet near the center of the property as shown on Figures 1.2 and 1.3. The remedial system at Area A is a combination of soil vapor and groundwater extraction and includes 39 SVE wells, 3 dual-phase

groundwater/SVE wells, and a cover comprised of a polyvinyl chloride (PVC) geomembrane liner, a geotextile cushion, and stone.

Each SVE well is connected to one of four header pipes that each enter the Treatment Building and are connected to the vacuum blower housed in the north side of the building. The SVE piping is mounted on a uni-strut/pipe strap support system. The Area A SVE treatment system is comprised of a skid with a moisture separator tank, an in-line filter, a vacuum blower, a discharge silencer, and a condensate removal pump, all located in the Treatment Building. The heat exchanger and granular activated carbon (GAC) adsorption units are mounted separately on the concrete floor in the building.

1.2.2 AREA C

Area C occupies approximately 19,350 square feet beyond the southeast corner of the Site property, as shown on Figures 1.2 and 1.4. Area C is the location of one of the landfills previously used by Stauffer Chemical Company.

Due to the success of the system and with the approval of New York State Department of Environmental Conservation (NYSDEC), operations at Area C were discontinued in May 2004, and the SVE system was decommissioned in July 2004. The SVE wells were plugged and abandoned in accordance with NYSDEC regulations in December 2004.

1.2.3 AREA T-4

Area T-4 occupies approximately 11,500 square feet and is located southwest of the Treatment Building, as shown on Figure 1.2. The Area T-4 SVE system was decommissioned in September 2001 based on the success of the system and with the approval of NYSDEC. Shallow groundwater extraction well T-4 remains operable.

1.2.4 GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

The groundwater extraction network consists of two deep bedrock groundwater extraction wells (LR-66 and OW-3), three intermediate/deep bedrock extraction wells (EW-1, EW-2, EW-3), three shallow bedrock extraction wells (EW-4, EW-5, and EW-6), one shallow extraction well in Area T-4, and three shallow dual-phase wells in Area A (DPA-201, DPA-202, and DPA-203). The locations of the extraction wells are shown on Figure 1.5.

Underground force mains with secondary containment convey recovered groundwater from the extraction wells to the Treatment Building. The groundwater treatment system is currently housed in the south side of the original Treatment Building and in the northwest addition to the building.

All groundwater from each of the extraction wells is pumped into the on-Site treatment system. The major components of the treatment system are listed below:

i) Solids Settling Tank: a 1,500-gallon cone bottom tank installed in 2009 to provide solids settling prior to the influent water entering the carbon treatment system. (Note that this tank replaced a Non-Aqueous Phase Liquid (NAPL) Separator tank that had deteriorated. Phase separation is not required at the Site, as no NAPL has been observed since beginning system operation.)

ii) Carbon Feed Tank: process tank used to accumulate water from the solids settling tank.

iii) Carbon Feed Pump: pumps water from the carbon feed tank through the rest of the treatment system.

iv) Bag Filters: groundwater is pumped through thirteen 10-micron bag filters (consisting of an eight-bag round filter vessel and a separate five-bag unit) operated in parallel to prevent solids from plugging the GAC.

v) GAC Beds: after the bag filters, the groundwater passes through two 20,000-pound GAC adsorption vessels operated in series.

The treated water from the GAC units is discharged through the outfall to the New York Power Authority (NYPA) Forebay, located south of the Site. Treated water is discharged in accordance with limits set by NYSDEC.

2.0 AREA A REMEDIAL SYSTEM O&M ACTIVITIES

2.1 SUMMARY OF AREA A OPERATIONS FOR 2011

The Area A SVE system was operated in automatic mode throughout this reporting period with several Site visits per week to perform system monitoring, inspections, and other routine O&M activities. In addition, the system status is monitored remotely though a computer interface.

The Area A SVE system operated 7,372 hours during 2011 for an operating efficiency of approximately 84 percent. The 2011 operating efficiency is slightly above that of 2010 (80 percent). There was one significant maintenance activity performed on the Area A treatment system in 2011. In July 2011, a slight oil leak developed in the blower, allowing small amounts of oil to pass through to the heat exchanger. The leaking oil raised the differential pressure across the system and resulted in more frequent shutdowns of the blower. An internal inspection at that time revealed that the leak was minor and did not yet require maintenance. However, during the fourth quarter 2011, the leak worsened, and the blower bearings, gaskets and seals on the gear end were replaced in early November. The last time that bearings, critical seals and gaskets had been replaced on the vacuum blower was in 2007.

2.2 MASS REMOVAL – 2011

The mass of organic compounds removed by the Area A SVE system is presented in Table 2.1.

The mass removal calculation is based upon an average air flow rate of 800 cubic feet per minute (cfm) and an operation time of 7,372 hours. Four operational vapor samples were collected during 2011 from the Area A SVE system and analyzed to calculate mass removal. The samples were collected on a quarterly basis in March, May, September and December 2011, utilizing the sample ports in the influent header pipe system just inside the Treatment Building and before the blower. Results from the four Area A influent samples were used to develop the 2011 quarterly mass loading calculations. Influent vapor data from the four quarterly sampling events are presented in Appendix A.

As shown in Table 2.1, the total mass removed in the soil vapor from Area A in 2011 was approximately 289 pounds. Of this mass, 83 percent was carbon tetrachloride. Carbon

disulfide, tetrachloroethene, chloroform, and trichloroethene accounted for the remaining total mass removed.

The 289 pounds of organic compounds removed from Area A in 2011 represents a 38-pound increase (15 percent) compared with that removed in 2010 (251 pounds). The removal efficiency of Area A in 2011 (pound of VOCs recovered/operating hour) was 0.039, compared with 0.036 in 2010.

2.3 ROUTINE INSPECTION AND MAINTENANCE

The Area A SVE system is inspected at least weekly to verify proper operation. The inspected components include the blower, compressor, and heat exchanger. In addition, all aboveground piping associated with the system is inspected for integrity. The operating status and conditions of the Area A SVE system are recorded on the respective operating log and system monitoring sheets in the O&M logbook. Monitoring of the Area A SVE air influent is also performed periodically and is recorded in the Site analytical database.

2.4 OPERATIONS/MONITORING FOR 2012

The 2012 goal is to continue optimization of VOC mass removal from the Area A vadose zone and shallow groundwater. The system upgrades of the past nine years, including the new blower motor (coupled with the blower installed in 2003), the new heat exchanger core in 2006, the header replacements in 2004-2005, the replacement of the blower seals in 2007, and the rebuilding of the transfer pumps in 2008 through 2010, will continue to reduce system downtime. The revised main header configuration, with an additional length of PVC pipe serving as a sump, allows the treatment system to handle large amounts of groundwater by routing it directly to the liquid phase carbon treatment system instead of through the Area A knockout pot.

System progress will continue to be evaluated by sampling the Area A influent on a quarterly basis.

3.0 AREA C REMEDIAL SYSTEM

Due to the success of the system, the former Area C SVE system was decommissioned in July 2004 with the approval of NYSDEC. The SVE wells were plugged and abandoned in accordance with NYSDEC regulations in December 2004.

4.0 AREA T-4 REMEDIAL SYSTEM

Due to the success of the system, the former Area T-4 SVE system was decommissioned in September 2001 with the approval of NYSDEC.

Dual phase well T-4 (also known as DPT-261) was taken out of service as a SVE well in 2001, but remains usable as a groundwater extraction well should groundwater concentrations increase in the T-4 area.

5.0 GROUNDWATER EXTRACTION SYSTEM O&M ACTIVITIES

5.1 2011 EXTRACTION SYSTEM MODIFICATIONS

There were no extraction system modifications of note in 2011. Maintenance issues associated with each of the extraction wells are discussed in the sections that follow.

5.2 SUMMARY OF OPERATIONS – 2011

The bedrock groundwater extraction system operated in automatic mode throughout the reporting period, with visits to the Site approximately two times per week to confirm pump operation, perform piping inspections, and complete other routine O&M activities. The operational status of the groundwater extraction system is also monitored remotely by computer.

With the exception of EW-1, EW-5, EW-6, and OW-3, the eight bedrock groundwater extraction wells and three dual phase extraction wells generally operated reliably throughout 2011. EW-1 experienced operational problems in both the second and fourth quarters of the year, including the failure of its pump and motor and decreases in flow rate that appear to be due to sediment accumulation in the well. Both EW-5 and EW-6 experienced numerous electrical problems throughout the year, and the pump motors and motor circuit protectors (MCPs) were replaced on both wells. In addition, the level transmitter in EW-6 failed and was replaced. The pump installed in OW-3 failed at the end of the second quarter 2011 and had to be replaced.

In addition to the above, routine pump cleaning was performed on several other extraction wells throughout the course of the year.

5.3 MASS REMOVAL – 2011

5.3.1 EXTRACTION WELLS EW-1 THROUGH EW-6

Mass removal calculations for extraction wells EW-1 through EW-6 are summarized in Tables 5.1 through 5.6, respectively.

The mass removal of VOCs from groundwater for each extraction well was calculated on a quarterly basis using flow volumes and analytical data for the quarter. The volume of groundwater pumped from the six extraction wells is summarized below.

	Gallons of Groundwater Removed - 2011				
Extraction Well	***First Quarter***	***Second Quarter***	***Third Quarter***	***Fourth Quarter***	***2011 Total***
EW-1	316,273	319,407	310,689	171,881	1,118,250
EW-2	1,159,217	1,227,333	1,078,530	1,021,160	4,486,240
EW-3	99,726	104,784	90,147	94,114	388,771
EW-4	87,788	85,030	79,560	83,395	335,773
EW-5	1,796,309	1,249,756	1,563,068	179,385	4,788,518
EW-6	70,589	325,995	124,999	173,861	695,444
Total gallons pumped	3,529,902	3,312,305	3,246,993	1,723,796	11,812,996

The total mass, in pounds, removed by the six extraction wells in 2011 is summarized below.

	Total Pounds of VOCs Removed – 2011				
Extraction Well	***First Quarter***	***Second Quarter***	***Third Quarter***	***Fourth Quarter***	***2011 Total***
EW-1	123	114	72	28	338
EW-2	95	136	265	276	772
EW-3	6	5	3	6	21
EW-4	6.8	0.6	2.4	8.7	19
EW-5	42.6	15.4	30.6	8.0	97
EW-6	19	75.3	38.6	85	218
Total Pounds of VOCs Removed					1,465

The 1,465 pounds of VOCs removed from groundwater by EW-1 through EW-6 in 2011 is nearly identical to that removed in 2010 (1,471 pounds of VOCs removed). The volume of groundwater extracted by EW-1 through EW-6 in 2011 (11.8 million gallons) was 12.6 percent lower than in 2010 (13.5 million gallons), however the removal efficiency (pound of VOC recovered/1,000 gallons of groundwater extracted) of the six extraction wells as a group increased slightly from 0.11 to 0.12 between 2010 and 2011.

See Section 9.2 for a summary of mass removal by groundwater extraction on a year-to-year basis.

The two extraction wells responsible for the majority of the VOCs removed by the group are EW-1 and EW-2. The mass of VOCs extracted by EW-1 in 2011 decreased from 489 pounds in 2010 to 338 pounds in 2011, a decrease of 31 percent. Much of this mass decrease can be explained by the fact that 2011 groundwater extraction from EW-1 decreased by 378,000 gallons compared with 2010, a decrease of 25 percent. The removal efficiency of EW-1 decreased from 0.33 pound VOC/1,000 gallons extracted in 2010 to 0.30 pound VOC/1,000 gallons extracted in 2011.

The mass of VOCs extracted by EW-2 increased from 567 pounds in 2010 to 772 pounds in 2011, an increase of 36 percent. The removal efficiency of EW-2 increased slightly between 2010 and 2011, from 0.16 pound VOC/1,000 gallons extracted in 2010 to 0.17 in 2011. With the exception of 2008 (0.12 pound VOC/1,000 gallons extracted), the removal efficiency of EW-2 has remained fairly steady at between 0.16 and 0.18 pound VOC/1,000 gallons extracted since 2006.

At EW-3, the removal efficiency decreased slightly between 2010 and 2011 (from 0.06 to 0.05 pound VOC/1,000 gallons extracted).

At EW-4, the removal efficiency increased slightly between 2010 and 2011 (from 0.04 to 0.06 pound VOC/1,000 gallons extracted).

The removal efficiency remained the same between 2010 and 2011 at EW-5, at 0.02 pound VOC/1,000 gallons extracted.

The removal efficiency of EW-6 increased from 0.21 pound VOC/1,000 gallons extracted in 2010 to 0.31 in 2011. This extraction well, which exhibited a large drop off in the amount of groundwater extracted beginning in 2009 (approximately 75 percent less water recovered than in 2007 and 2008), exhibited another drop off in extracted groundwater flow in 2011, down by an additional 35 percent. Beginning in 2009 and continuing into 2011, EW-6 has operated and cycled much less frequently while maintaining its predetermined set points, indicating that there is less groundwater available for recovery by the well.

Compounds removed by EW-1 through EW-6 in 2011 consisted of carbon disulfide (750 pounds, 51 percent of the total), carbon tetrachloride (527 pounds, 36 percent of the total removed), chloroform (167 pounds, 11.4 percent of the total), tetrachloroethene (10 pounds, 0.7 percent of the total), methylene chloride (7 pounds, 0.5 percent of the

total), trichloroethene (2 pounds, 0.1 percent of the total), chlorobenzene (1 pound, 0.1 percent of the total), and toluene (1 pound, 0.1 percent of the total). Section 9.2 provides historical breakdowns of the compounds removed by groundwater extraction since 1999.

For the group of six extraction wells, the mass of carbon disulfide removed in 2011 increased by 15 pounds compared with 2010, the mass of carbon tetrachloride removed in 2011 increased by 25 pounds compared with 2010, and the mass of chloroform removed decreased by 38 pounds. The cumulative mass of chlorobenzene, tetrachloroethene, trichloroethene, and methylene chloride removed in 2011 remained about the same as in 2010.

5.3.2 AREA A DUAL PHASE WELLS DPA-201, DPA-202, AND DPA-203

Mass removal calculations for VOCs removed from shallow groundwater by DPA-201, DPA-202, and DPA-203 are summarized in Tables 5.7 through 5.9, respectively.

The mass removal estimate for the dual wells is based on quarterly flow data and quarterly analytical results. The volume of groundwater pumped from the three Area A dual wells is summarized below.`

Total Volume of Groundwater (Gallons) Pumped – 2011					
Well No.	*1st Quarter*	*2nd Quarter*	*3rd Quarter*	*4th Quarter*	*System Total-2011*
DPA-201	5,836	32,815	17,034	21,988	77,673
DPA-202	38,995	40,946	28,874	36,270	145,085
DPA-203	4,253	5,773	5,287	2,707	18,020
				Total Gallons Pumped	240,778

The above represents a 17 percent increase in recovered groundwater by the dual phase wells between 2010 (205,677 gallons extracted) and 2011. DPA-202 was mainly responsible for the increase, as the volume extracted by the well in 2011 was 87 percent higher than that removed in 2010 (77,673 gallons extracted). The amount of groundwater recovered in 2011 by DPA-201 increased by 2 percent, and the amount recovered by DPA-203 decreased by 65 percent, compared to 2010 levels. All three of the DPA wells appear to be operating normally and removing the groundwater available to them; however, they are generally cycling much less frequently than in the past.

The total mass removed by the three dual wells is summarized below.

Total VOCs Removed (Pounds) – 2011					
Well No.	*1st Quarter*	*2nd Quarter*	*3rd Quarter*	*4th Quarter*	*Total*
DPA-201	0	1.0	0	0	1.0
DPA-202	37.7	35.3	32.2	48.9	154
DPA-203	10.3	12.5	0	9.5	32
Total VOCs Removed in 2011 (Pounds)					187

The 187 pounds of total VOCs recovered by DPA-201, DPA-202, and DPA-203 in 2011 represent a 10 percent decrease from 2010 (208.6 pounds recovered), and a 68.6 percent decrease compared with 2009 (595.1 pounds recovered). The removal efficiency of the three dual phase extraction wells as a group also decreased, from 1.02 pounds VOC/1,000 gallons extracted in 2010 to 0.78 pounds VOC/1,000 gallons extracted in 2011. This decrease is mainly due to reduced influent concentrations of SSPLs.

From 2010 to 2011, removal efficiency at DPA-201 decreased from 0.02 to 0.013 pounds VOC/1,000 gallons extracted, DPA-202 decreased from 1.17 to 1.06 pounds VOC/1,000 gallons extracted, and DPA-203 decreased from 2.22 to 1.78 pounds VOC/1,000 gallons extracted.

The major compounds removed from groundwater by the three dual wells were carbon tetrachloride (155.5 pounds, 84.6 percent of the total recovered) and chloroform (26.2 pounds, 14.3 percent of total). Approximately 2 pounds of carbon disulfide (1 percent of total) and 0.1 pound of trichloroethene (<1 percent of total) were also removed.

5.3.3 AREA T-4 EXTRACTION WELL DPT-261 (T-4)

Extraction well DPT-261 (T-4) operated very infrequently during 2011 due to a lack of recoverable water. Although there was sufficient water to sample T-4 during all of the quarterly groundwater sampling events, the automatic air-driven pump did not recover measurable amounts of water for the majority of the year. Well T-4 recovers less than 0.1 gallons per minute (GPM) when it operates. Consistent with previous years, the mass of organic compounds recovered from T-4 in 2011 was negligible, less than 1 pound for the year.

5.3.4 EXTRACTION WELL OW-3

The mass of SSPL compounds removed from groundwater by OW-3 is summarized in Table 5.10. The volume of groundwater pumped from OW-3 in 2011 was 94,895 gallons, an increase of 0.7 percent from 2010. As discussed above, the OW-3 pump failed at the end of the Second Quarter 2011 and had to be replaced. As was the case in 2010, the water level in the well remained near the pump level much of the year, and the pump cycled significantly less in 2011 compared with 2009. A total of 847 pounds of VOCs were removed from groundwater by OW-3 in 2011, a decrease of 43 pounds compared with 2010 (890 pounds).

The 2011 removal efficiency of OW-3 was 8.93 pounds VOC/1,000 gallons extracted, compared with a removal efficiency of 9.44 pounds VOC/1,000 gallons extracted in 2010. The compounds removed were carbon disulfide (758 pounds, 89 percent of the total recovered), carbon tetrachloride (67 pounds, 8 percent of total), and chloroform (22 pounds, 3 percent of total).

5.3.5 EXTRACTION WELL LR-66

Former Lockport-Rochester monitoring well LR-66 was converted into a permanent groundwater extraction well in June 2005 and became operable on July 1, 2005.

The mass removal calculations for organic compounds removed from groundwater by LR-66 are summarized in Table 5.11. The volume of groundwater pumped from LR-66 in 2011 was 76,545 gallons, down 18 percent from 2010 (93,669 gallons). A total of 3 pounds of VOCs was removed from groundwater by LR-66 in 2011, the same amount removed in 2010. The removal efficiency of LR-66 was 0.03 pound VOC/1,000 gallons extracted, the same as 2010. The compounds removed in 2011 were carbon tetrachloride (3 pounds, 100 percent of total recovered), with trace amounts of chloroform also removed.

5.3.6 AREA A KNOCKOUT POT AND SUMP

Although not specifically part of the groundwater extraction system, the Area A SVE system air/water separator (i.e., knockout pot) and the 10-foot long PVC "sump" collects groundwater that is present in the SVE air stream (as entrained moisture in the soil gas) and groundwater that is removed by the drop tube assemblies and the blower. The

sump is a 12-inch diameter, 10-foot long PVC pipe located at one end of the Area A header assembly, just inside the Treatment Building.

The mass of organic compounds removed from groundwater by the knockout pot and sump is summarized in Table 5.12. The sump is sampled on a quarterly basis, at the time of the groundwater sampling events.

The volume of groundwater recovered by the Area A knockout pot and the pipe sump is also summarized in Table 5.12. The volume recovered in 2011 was 1,085,473 gallons, a 143 percent increase from 2010 levels. Despite the dramatic increase in recovery rate, the knockout pot and sump removed less than one pound of VOCs in 2011, very similar to the amount removed in 2010.

The amount of water removed by the knockout pot and sump in 2011 was the highest recorded since flow monitoring of the knockout pot began in 2003. The increase occurred despite a decrease in overall flow extracted by the three dual phase wells in the Area A field. One explanation for the increase is that annual precipitation for the area increased greatly between 2010 (36.7 inches) and 2011 (50.4 inches). This means that more surface water may have infiltrated into the SVE field and was available for uptake.

5.4 ROUTINE MAINTENANCE

The operational status of the extraction and dual phase wells is monitored during the weekly visits to the Site. The flows from each of the wells are recorded weekly in the O&M logbook. If the submersible pumps are not maintaining the desired drawdown, or if the dual pumps are not cycling properly, pump maintenance is performed.

All of the extraction wells have been tied into one of two leak detection systems. A leak in the force main of any well on either system will shut off all of the pumping associated with the system. In 2011, no leaks were detected in any force mains.

6.0 GROUNDWATER TREATMENT SYSTEM

6.1 SUMMARY OF OPERATIONS – 2011

The groundwater treatment system operated in the automatic mode in 2011 with at least weekly visits to the Site to perform system monitoring, inspections, and other routine O&M activities. In addition, the operating status of the groundwater treatment system can be monitored remotely by computer.

The groundwater treatment system operated continuously and generally reliably throughout 2011 with few major repairs. In March 2011, the carbon feed pump developed a slight leak, which was traced to a leaking seal that was replaced in late March. In mid-May, the feed pump again began performing erratically. Troubleshooting indicated that the motor bearings were faulty, and they were replaced. The system operated reliably for the remainder of 2011.

Besides the above work, the treatment system was shut down only briefly to perform routine maintenance and carbon changes.

6.2 MAINTENANCE, INSPECTION, AND MONITORING ACTIVITIES

6.2.1 ROUTINE TREATMENT SYSTEM MAINTENANCE

Routine inspection and maintenance of the groundwater treatment system is performed weekly during visits to the Site. Routine weekly inspections and maintenance include:

i) general visual inspection of the treatment equipment for leaks, overflows, or malfunctions
ii) inspection of process-indicating instruments
iii) inspection of aboveground SVE piping
iv) recording operating conditions in logbook
v) correction of operational problems
vi) replacement of bag filters, as indicated by differential pressure across the filters
vii) repair or replacement of damaged parts

All inspections are recorded in the O&M logbook.

The treatment system is shut down periodically to perform routine maintenance on the system components. The periodic maintenance shutdowns involved cleaning and inspection of the following:

i) cone bottom tank

ii) carbon feed tank

iii) carbon feed pump

iv) bag filter housings

The carbon vessels are cleaned and inspected during routine carbon changeouts.

6.2.2 TREATMENT SYSTEM MODIFICATIONS

There were no modifications to the groundwater treatment system in 2011.

6.2.3 GROUNDWATER TREATMENT SYSTEM PROCESS MONITORING

Samples for chemical analysis are collected routinely from the groundwater treatment system. Samples are collected weekly from the carbon interstage. The groundwater influent and system effluent are sampled monthly, at a minimum. Process monitoring sample analytical results are presented in Appendix B. Influent, carbon interstage, and effluent data are summarized in Tables B-1 to B-3, respectively.

The 2011 analytical data for the monthly influent groundwater samples are presented in Table B-1. The data indicate that typically only carbon tetrachloride, carbon disulfide, and chloroform are detected in high concentrations in the influent.

The 2011 analytical data for the weekly carbon interstage groundwater samples are presented in Table B-2. The data indicate that the results are generally non-detect or indicate low (< 100 ppb) total SSPLs except when breakthrough occurred. Note that starting in January 2011, consistent low-level detections of SSPLs began occurring in the carbon interstage samples. While not indicative of breakthrough conditions, these detections were problematic, as SSPLs were entering the lag (polishing) bed. Throughout the year, various manifolds and valves were replaced between the two carbon beds. However, the presence of low-level SSPL detections continued. In November 2011, in an attempt to correct the problem, Calgon Carbon performed the only carbon exchange of 2011. Carbon in the lead bed was replaced and it became the

lag bed. As part of the carbon exchange, Calgon sent technical representatives to perform a vessel inspection, to change nozzles between carbon beds, and to collect carbon samples for inspection and analyses. Following the carbon change, and for the remainder of 2011, there were no SSPLs detected in the interstage samples.

The results of Calgon's investigations indicated that there was significant bioactivity occurring within the carbon, and that current backflushing activities may not be effective given the size of the carbon beds and the flow available to perform the backflushing. In early 2012, the carbon treatment system will be evaluated in order to determine if operational changes are recommended.

As mentioned above, one carbon changeout was performed:

- November 8, 2011

The 2011 analytical data for effluent samples collected from the groundwater treatment system are presented in Table B-3. Effluent samples are collected and analyzed monthly, at a minimum.

6.2.4 GROUNDWATER TREATMENT SYSTEM PERFORMANCE MONITORING – 2011

All extraction wells are sampled on a quarterly basis. Sampling of the Site-wide monitoring well network is performed on a semiannual basis. The purpose of the groundwater monitoring is to evaluate progress of the groundwater extraction system in removing the SSPL compounds from the groundwater. The groundwater sampling data are used to develop concentration trends over time.

Groundwater samples are collected in accordance with established procedures and protocols in the Site Operations and Maintenance Manual. The samples are shipped to Columbia Analytical Services for analysis following Chain of Custody procedures. The laboratory sends the analytical results to CRA. The results are reviewed, collated, put into tabular form, sent to SMC for review, and included in the quarterly status reports to NYSDEC.

Groundwater sampling events were performed at the Site in 2011 as follows:

i) February 2011 (extraction wells only)

ii) May 2011 (monitoring well network and extraction wells)

iii) August 2011 (extraction wells only)

iv) November 2011 (monitoring well network and extraction wells)

The analytical results for the groundwater samples are presented in Appendix C, Tables C-1 through C-4.

6.2.5 GROUNDWATER TREATMENT SYSTEM PERFORMANCE MONITORING – 2012

The currently scheduled quarterly and semiannual sampling programs for 2012 are as follows:

i) Quarterly Sampling: Quarterly sampling rounds are scheduled to be performed in February, May, August, and November 2012. A total of 12 extraction wells will be sampled including:

a) Bedrock extraction wells – EW-1 through EW-6, LR-66, and OW-3

b) Dual wells – DPA-201, DPA-202, and DPA-203

c) T-4 (as long as sufficient water is present)

ii) Semiannual Sampling: During 2012, semiannual sampling is currently scheduled to be performed in May and November. Wells to be sampled include the 12 extraction wells plus the following 47 monitoring wells:

Upper Lockport Wells	*Lower Lockport Wells*	*Lockport/ Rochester Wells*	*Rochester Wells*
OW-11	W-18L	W-19B	B-02
W-11	W-19A	LR-2	R-16
W-16	W-23B	LR-16	R-19
W-16L	W-48E	LR-67	R-68
W-17	W-50L	LR-20	R-48
W-18R	W-60L	LR-48	R-50
W-19D	W-65	LR-49	R-51
W-20	W-66L	LR-50	R-60
W-22	W-67L	LR-51	R-61
W-23C	W-70L	LR-61	R-62
W-66		LR-62	R-66
W-67		LR-69	R-67
		OW-5	

6.2.6 FACILITIES, STRUCTURES, AND GROUNDS MAINTENANCE

The facilities, structures, and grounds are inspected and maintained regularly as specified in the O&M Manual. These inspections are carried out during routine Site visits. These routine inspection tasks include checking the appearance of the grass, driveways, walkways, fencing, and lighting and containment areas. Inspections and maintenance tasks inside the Treatment Building include checking the appearance of walls, floors, ceiling, doors, walkways, emergency equipment, lights, sumps, and equipment support structures. Any problems or deficiencies are noted in the O&M logbook.

6.2.7 UNSCHEDULED MAINTENANCE

Unscheduled maintenance was performed at the Site as required in 2011. Examples of unscheduled maintenance activities performed are:

i) pump maintenance or replacement

ii) extraction well riser pipe replacement

iii) equipment repair or replacement

Section 5.2 provides an overview of the 2011 unscheduled maintenance related to the extraction wells.

6.2.8 MONITORING WELL INVENTORY

An inventory/inspection of the Site monitoring wells was performed in conjunction with the November 2011 groundwater sampling event. A copy of the well inventory is included as Appendix D. The well inventory indicates that the wells are in generally good condition, although three monitoring wells had damaged concrete collars or needed other minor work. The repairs to these wells will be performed during the first quarter of 2012.

7.0 GROUNDWATER LEVEL MONITORING AND CHEMISTRY – 2011

Depth-to-groundwater measurements were recorded for all wells in conjunction with the February, May, August, and November 2011 quarterly sampling events. Note that because several extraction wells were not operable in November 2011, the fourth quarter 2011 depth-to-groundwater measurements were performed in December 2011. Table 7.1 presents the measured groundwater levels for the four events. The May 2011 data were used to prepare potentiometric surface contour maps for each of the four water bearing zones (WBZs). The WBZs include the Upper Lockport, the Lower Lockport, the Lockport/Rochester, and the Rochester. In addition to the potentiometric surface contours, chemical isocontour figures were prepared for each WBZ using groundwater data obtained during the May 2011 event.

The potentiometric surface contour maps and chemical isocontour figures are discussed in the following sections.

7.1 GENERAL

7.1.1 GROUNDWATER POTENTIOMETRIC CONTOURS

Potentiometric surface contours were prepared for each WBZ based on the measured depths to groundwater in the May 2011 sampling event. Hydraulic containment was determined by evaluating the potentiometric contours, as well as considering the results of a detailed hydraulic monitoring program performed in 2000. The 2000 hydraulic monitoring program assessed the relationship between groundwater elevations in individual wells and their responses to pumping activity in the various Site WBZs using transducers installed in individual wells. The results of that program, including individual well hydrographs, were presented in the 2000 Annual Operations and Maintenance Report, March 2001.

Table 7.2 presents a summary of the monitoring wells and extraction wells classified by WBZ. The wells are classified under a specific WBZ if they are screened across or have open intervals in the specific WBZ. This classification was used to prepare the potentiometric surface contour maps for the May 2011 event.

During the preparation of potentiometric surface contours for the various WBZs, CRA noted that several monitoring wells did not appear to be hydraulically connected to the monitored WBZ. For example, well W-17 in the Upper Lockport formation, well W-23B in the Lower Lockport formation, well LR-69 in the Lockport/Rochester formation, and

well R-66 in the Rochester formation exhibited anomalous water levels and, therefore, were not used to create groundwater contours. Well W-23B showed hydraulic response to Lower Lockport pumping in the 2000 hydraulic monitoring program, while W-17, LR-69, and R-66 did not show response to pumping in their respective WBZs. A review of the stratigraphic logs for the latter two wells indicates that the Rochester WBZ at R-66 and the Lockport-Rochester WBZ at LR-69 are generally less fractured than in other areas of the Site; hence, hydraulic interconnection is lower at these two deep monitoring wells. The wells that are not used for contouring are noted on the various potentiometric contour figures.

In addition, water levels for the deep bedrock extraction wells (EW-1, EW-2, and EW-3, whose open intervals span the Lower Lockport, Lockport/Rochester, and Rochester WBZs) were adjusted to levels representative of the specific WBZ. This was done when the measured water level for the deep extraction well was significantly below the base of the designated WBZ (for the Lower Lockport and Lockport/Rochester WBZs) or significantly below the water level elevations of the surrounding wells in a particular WBZ (for the Rochester WBZ). The groundwater elevations in the immediate vicinity of the deep extraction wells are assumed to be at or near the base of the respective WBZ, since the WBZs at the extraction wells are essentially dewatered. However, for generating groundwater contours, these water levels were conservatively assumed to be 5 to 10 feet lower than the lowest measured water level from the respective WBZs (but not lower than the base of the WBZ). This allows meaningful water level contours to be created for each WBZ in the regions around the deep extraction wells, while accounting for potential influences from extraction well operations and well and fracture efficiencies. These assigned values for EW-1, EW-2, and EW-3 are as follows:

Lower Lockport	545 feet mean sea level (MSL)
Lockport/Rochester	545 feet MSL
Rochester	490 feet MSL

Note that the assigned EW-1, EW-2, and EW-3 water level value for both the Lower Lockport and the Lockport/Rochester WBZs for purposes of plotting potentiometric contours is 545 feet MSL. This value reflects the fact that the lowest measured water level in both Lower Lockport and Lockport/Rochester WBZ hydraulically-connected monitoring wells was approximately 550 feet MSL.

For the Upper Lockport potentiometric contour maps, extraction wells EW-1, EW-2, and EW-3 were not used to generate contours, as these wells are not open in the Upper

Lockport. Groundwater elevations for combined Upper and Lower Lockport extraction wells EW-4, EW-5, and EW-6 were adjusted to 570 feet MSL for contouring the Upper Lockport WBZ. The 570 feet MSL is a level very near the lowest measured water level in the Upper Lockport WBZ on Site. Actual water level elevations for EW-4, EW-5, and EW-6 were used for contouring the Lower Lockport WBZ.

7.1.2 CHEMICAL ISOCONTOURS

Chemical isocontours for each WBZ were prepared using analytical data from the May 2011 semiannual groundwater monitoring event. Two figures were prepared for the May data: one for carbon disulfide concentrations, and a second for the sum of carbon tetrachloride and chloroform concentrations[1]. A logarithmic scale was utilized for the isocontour plots.

Note that the May 2011 groundwater analytical results for carbon disulfide and for the sum of carbon tetrachloride and chloroform are also shown on the Groundwater Potentiometric Surface Contour figures for the four WBZs. The analytical results are listed below each well that is monitored in the specific WBZ.

7.2 UPPER LOCKPORT WATER BEARING ZONE

The Upper Lockport WBZ is the shallowest water bearing fracture zone at the Site. The Upper Lockport WBZ consists of the base of the overburden and approximately the top 25 feet of the Lockport bedrock. This zone is generally highly fractured. Existing Site information indicates that the Upper Lockport WBZ pinches out and is not present on the western portion of the Site. DPA-201, DPA-202, DPA-203, EW-4, EW-5, and EW-6 extract groundwater from the Upper Lockport WBZ.

7.2.1 GROUNDWATER POTENTIOMETRIC CONTOURS

Figure 7.1 presents the Groundwater Potentiometric Surface Contours for the Upper Lockport WBZ for the May 2011 event. Based upon the groundwater potentiometric surface contours, Upper Lockport groundwater flow is generally east to west through the middle of the Site. There is a slight response to pumping in Area A from the dual phase wells. There is also localized response to pumping from extraction wells EW-4,

[1] Chemical concentrations of carbon tetrachloride and chloroform are combined (summed) for preparation of isocontour figures because chloroform is a breakdown (daughter) product of carbon tetrachloride.

EW-5, and EW-6, which are completed in both the Upper and Lower Lockport WBZ. The 2011 potentiometric surface contours for the Upper Lockport WBZ are consistent with historical conditions.

7.2.2 CHEMICAL ISOCONTOURS

The chemical isocontour plots for the Upper Lockport WBZ for May 2011 are presented on Figures 7.2 and 7.3. A review of these contours indicates that the only elevated carbon disulfide concentrations exist in the groundwater around DPA-203, DPA-202, W-17, and W-67 (Figure 7.2) located within and to the east of Area A. Elevated levels of carbon tetrachloride and chloroform are present at both DPA-203 and DPA-202, and at W-18R, W-67 and W-17 (Figure 7.3). The mass loading calculations indicate that DPA-202 and DPA-203 were responsible for removing approximately 190 pounds of VOCs in 2011, primarily carbon tetrachloride and chloroform.

Note that there were no detectable levels of carbon disulfide in Upper Lockport wells west of Area A. Three Upper Lockport monitoring wells had detectable levels of carbon tetrachloride and chloroform west of Area A. The highest (W-66) had a concentration of 132 ppb (sum of carbon tetrachloride and chloroform), and the others were all well below 100 ppb.

The chemical isocontour plots for the Upper Lockport WBZ illustrate that DPA-202 and DPA-203 are well-placed to address the areas of elevated concentrations of the two main Site contaminants. The mass loading data indicate that these pumping wells are effective in recovering VOCs from the Upper Lockport WBZ.

A comparison of the 2011 Upper Lockport carbon disulfide isocontours (Figure 7.2) with those of 2010 indicates that the area of carbon disulfide-impacted groundwater decreased slightly, and the concentrations in the center of the impacted area also showed some slight decreases. A comparison of the 2011 Upper Lockport carbon tetrachloride plus chloroform (CTET+CHL) isocontours (Figure 7.3) with those of 2010 also indicates that the size and shape of the impacted groundwater did not change, however concentrations in DPA-202 and DPA-203 in the center of the impacted area decreased in 2011.

7.3 LOWER LOCKPORT WATER BEARING ZONE

The Lower Lockport WBZ is the second bedrock WBZ identified at the Site. The Lower Lockport WBZ generally includes groundwater in the fractured bedrock from about 50 to 75 feet below top of rock.

EW-1 through EW-6 extract groundwater from the Lower Lockport WBZ.

7.3.1 POTENTIOMETRIC SURFACE CONTOURS

Potentiometric surface contours for the Lower Lockport WBZ for May 2011 are presented as Figure 7.4.

The groundwater potentiometric contours indicate that the VOCs in the Lower Lockport WBZ are being contained, captured on Site, and recovered by the groundwater extraction system. There are three strong cones of depression around EW-1, around EW2 and EW-4, and around EW-3, EW-5 and EW-6.

7.3.2 CHEMICAL ISOCONTOURS

Chemical isocontours were prepared for the Lower Lockport WBZ for carbon disulfide (Figure 7.5) and carbon tetrachloride and chloroform combined (Figure 7.6). The chemical isocontour maps for carbon disulfide indicate areas of elevated concentrations in the Lower Lockport WBZ around monitoring well W-16L and extraction wells EW-6 and EW-5.. Hydraulic monitoring data indicate that W-16L is within the capture zone of combined Upper and Lower Lockport extraction well EW-5 and deep extraction well EW-3. EW-6 is near the center of the capture zone at the Site.

The chemical isocontour map for carbon tetrachloride and chloroform combined indicates an area of elevated concentrations around EW-6, and to a lesser extent around EW-5 and EW-4. Other nearby wells with elevated concentrations include W-18L, W-23B, W-67L, and W-70L. Mass loading concentrations for EW-4, EW-5, and EW-6 indicate that approximately 300 pounds of carbon tetrachloride and chloroform were recovered from these wells in 2011.

The 2000 hydraulic monitoring data indicate that Lower Lockport monitoring wells W-18L, W-23B, W-67L and W-70L respond to pumping activity at the Site. The May 2011 surface contours and chemical isocontours illustrate that the existing

groundwater extraction system is effective in containing and recovering SSPLs from the Lower Lockport WBZ.

A comparison of the 2011 Lower Lockport carbon disulfide isocontours (Figure 7.5) with that of 2010 indicates no significant changes in the shape and size of the carbon disulfide impacted area. However, the concentrations in the center of the carbon disulfide plume did increase compared with 2010. A comparison of the 2011 Lower Lockport CTET+CHL isocontours (Figure 7.6) with that of 2010 indicates that 2011 CTET and CHL concentrations decreased significantly in a number of the extraction wells; however, there was no significant change in the size and shape of the impacted area.

7.4 LOCKPORT/ROCHESTER WATER BEARING ZONE

The Lockport/Rochester WBZ is the third WBZ encountered in the bedrock at the Site. The Lockport/Rochester WBZ is a slightly fractured WBZ at the base of the Lockport bedrock, and is at or near the contact with the Rochester shale. EW-1 through EW-3 and LR-66 extract groundwater from the Lockport/Rochester WBZ.

7.4.1 POTENTIOMETRIC SURFACE CONTOURS

Potentiometric surface contours were prepared for the Lockport/Rochester WBZ for May 2011 (Figure 7.7). A review of the contours under pumping conditions indicates that EW-1, EW-2, and EW-3 have a dramatic effect on the groundwater in this WBZ. In addition, the effect of LR-66 on groundwater recovery is evident. The direction of flow is from the Site perimeter inward toward the extraction wells. The pumping contours indicate hydraulic capture across the entire Site.

7.4.2 CHEMICAL ISOCONTOURS

Chemical isocontour maps of the Lockport/Rochester WBZ were prepared from the May 2011 groundwater sampling data. Chemical isocontours for carbon disulfide are presented on Figure 7.8. Chemical isocontours for carbon tetrachloride and chloroform combined are presented on Figure 7.9.

The chemical isocontour plot for carbon disulfide indicates an area of high concentration in groundwater around OW-5 and adjacent well LR-67. Hydraulic monitoring has shown that there is a strong inward gradient from these wells toward the middle of the

Site. Previous hydraulic monitoring activities indicate that both wells respond to pumping activity.

The chemical isocontour plot for carbon tetrachloride and chloroform indicates that an area of high concentrations exists around monitoring wells LR-2 and LR-61. Extraction well LR-66 and monitoring well W-19B also exhibit elevated CTET+CHL concentrations. Previous hydraulic monitoring has shown that LR-2, LR-61, and W-19B all respond to pumping activity, and are situated within the cone of depression of extraction wells EW-2 and EW-3.

The chemical isocontour maps confirm that the existing groundwater treatment system is effective at containing and recovering VOCs from the Lockport/Rochester WBZ.

A comparison of the 2011 Lockport/Rochester carbon disulfide isocontours (Figure 7.8) with that of 2010 indicates that carbon disulfide concentrations generally increased along the eastern edge of the impacted area, and increased near the center of the plume. A comparison of the 2011 Lockport/Rochester CTET+CHL isocontours (Figure 7.9) with that of 2010 also indicates that the concentrations of these two SSPLs increased near the center of the impacted area.

7.5 ROCHESTER WATER BEARING ZONE

The Rochester WBZ is the fourth and deepest bedrock WBZ being remediated at the Site. EW-1 through EW-3 and OW-3 extract groundwater from the Rochester WBZ.

7.5.1 POTENTIOMETRIC SURFACE CONTOURS

The potentiometric surface contour for the Rochester WBZ is presented on Figure 7.10.

The potentiometric contours show a dramatic response to pumping with a strong inward gradient toward EW-1, EW-2, and EW-3. The pumping contours indicate that there is hydraulic containment within the Rochester WBZ across the Site.

7.5.2 CHEMICAL ISOCONTOURS

Chemical isocontour maps of the Rochester WBZ were prepared from the May 2011 groundwater sampling data.

The carbon disulfide chemical isocontour map (Figure 7.11) shows two distinct areas of significantly elevated carbon disulfide in the Rochester WBZ Zone. The first area is around extraction well OW-3, which removed over 750 pounds of carbon disulfide in 2011. Monitoring wells nearby OW-3 with elevated carbon disulfide concentrations are R-68, R-66, and B-02. All of these wells showed a response to pumping during the 2000 hydraulic monitoring program. The second area of elevated carbon disulfide is centered around monitoring wells R-67 and R-62 at the eastern side of the Site, and, to a lesser extent, R-61. These wells are all located relatively close to extraction well EW-3 and show a strong response to Rochester WBZ pumping.

As shown on Figure 7.12, carbon tetrachloride and chloroform are also found in very high concentrations around OW-3. OW-3 removed approximately 90 pounds of these two constituents during 2011. Other wells with high concentrations are R-68, R-66, B-02, R-19, and R-67. Each of these wells is in the capture zone, and the existing groundwater extraction has been demonstrated to be effective in removing VOCs from groundwater in the Rochester WBZ.

A comparison of the 2011 Rochester carbon disulfide isocontours (Figure 7.11) with that of 2010 indicates no significant changes in the size and shape of the impacted groundwater area, however the concentration at OW-3 did increase slightly. A comparison of the 2011 Rochester CTET+CHL isocontours (Figure 7.12) with those of 2010 indicates no significant changes in the concentrations of these two SSPLs at Rochester WBZ extraction and monitoring wells. The general size and shape of the impacted groundwater was also unchanged.

8.0 NORTH SIDE WELL GAS AND GROUNDWATER SAMPLING

As approved by NYSDEC, the North Side well sampling program was discontinued in June 2004. However, in order to confirm that there are no groundwater impacts in this area, Upper Lockport bedrock monitoring well OW-11 continues to be sampled quarterly as part of the routine groundwater monitoring program. Figure 8.1 presents the locations of the North Side wells.

9.0 SUMMARY OF MASS REMOVAL

Mass removals from groundwater and soil gas have been reported for individual wells and SVE systems in previous sections of this report. This section presents combined mass removal estimates for the groundwater and SVE systems at the Site. It also compares the total estimated mass removed for soil vapor and groundwater extraction in previous years with that of 2011.

9.1 SUMMARY OF MASS REMOVAL BY SOIL VAPOR EXTRACTION

The mass removal of organic compounds from soil vapor for SVE system Area A was discussed in Section 2.2. The total mass removed by the SVE system is summarized in Table 2.1.

As shown in Table 2.1 and discussed in Section 2.2, the total mass removed in the soil vapor from Area A in 2011 was approximately 289 pounds. The 289 pounds of organic compounds removed from Area A in 2011 represents a 15 percent increase compared with the mass removed in 2010 (251 pounds). It is also a 168 percent increase compared with the amount removed in 2009, but a 43 percent decrease compared with the amount removed in 2008. The increase in removal between 2010 and 2011 is attributed to both increased annual operating hours and slightly increased VOC concentrations in Area A influent. Note that the 2011 Area A operating time increased by approximately 300 hours (4 percent) compared with 2010.

The removal efficiency (mass recovered/time) of the Area A SVE system (expressed as pound of VOCs recovered per operating hour) over the past thirteen years is shown in the following table.

Yearly Performance of Area A SVE System

Year	*Pounds of VOC Removed*	*Operating Hours*	*Removal Efficiency (pound VOC per operating hour)*
1999	1,130	3,240	0.35
2000	153	3,360	0.05
2001	154	6,264	0.02
2002	1,207	6,307	0.19
2003	937	3,573	0.26
2004	228	4,582	0.05
2005	1,954	6,425	0.30
2006	1,712	6,113	0.28

(continued from previous page)

Year	*Pounds of VOC Removed*	*Operating Hours*	*Removal Efficiency (pound VOC per operating hour)*
2007	2,349	7,406	0.32
2008	507	7,599	0.07
2009	108	7,811	0.01
2010	251	7,057	0.04
2011	289	7,372	0.04
Total	**10,979**	**77,109**	**-**
Annual Average	**845**	**5,931**	**0.14**

The operating time for Area A is related to the condition of the blower and of the header system that conveys extracted vapor to the blower for subsequent removal in the carbon beds. The replacement of Headers No. 2 and No. 3 with HDPE in 2003 greatly improved the effectiveness of those two headers, which had experienced significant corrosion between 2000 and 2002. In 2004, the integrity of the steel header collection system just inside the Treatment Building significantly worsened due to corrosion, and the entire section was replaced with PVC pipe late in the year. The pipe installed as a "sump" during the header upgrade contributed to increased Area A blower run times beginning in 2005, and the improved vacuum provided by the new PVC header contributed to increased VOC removal. In 2005, the original steel header pipe on Header #4 had seriously deteriorated, and was replaced with HDPE. Improvements in 2006 included the replacement of the heat exchanger core and the blower motor, and in 2007, the blower seals and gaskets were replaced. In 2008 through 2010, the diaphragm pumps that route groundwater collected from Area A to the main treatment area were rebuilt and improved. In 2011, the blower was again rebuilt, as the bearings, gaskets and seals on the gear end were replaced.

Table 9.1 compares the compound-specific removal of SSPLs by the Area A SVE system for the past twelve years. Except for 2000 and 2001, carbon tetrachloride and chloroform combined have comprised between 92 and 100 percent of the total vapor mass removed from Area A. Tetrachloroethene has typically comprised the remainder of the mass removed.

9.2 SUMMARY OF MASS REMOVAL BY GROUNDWATER EXTRACTION

The mass removal of VOCs from groundwater by the eight bedrock groundwater extraction wells (EW-1 through EW-6, LR-66, and OW-3), dual wells (DPA-201, DPA-202, and DPA-203), and the Area A air/water separator (knockout pot) was discussed in Section 5.0 of this report. The total volume of groundwater pumped from the Site in 2011 is summarized in Table 9.2. The total mass of VOCs removed from groundwater at the Site in 2011 is summarized in Table 9.3.

As Table 9.2 indicates, approximately 13.3 million gallons of groundwater were pumped from the Site and treated through the on-Site treatment system. This volume represents a 7.6 percent decrease compared to 2010 (14.4 million gallons).

Of the 13.3 million gallons extracted by the groundwater system in 2011, the bedrock extraction wells accounted for nearly 89 percent of the total, and the overburden dual phase extraction wells (along with the Area A knockout pot/sump) accounted for 11 percent of the total. EW-5 accounted for 36 percent of the recovered groundwater, and EW-2 accounted for about 34 percent. Other significant extraction wells included EW-1 (8 percent of the total recovered), EW-6 (5 percent), EW-3 (3 percent), and EW-4 (3 percent).

As Table 9.3 indicates, the total number of pounds of VOCs recovered through groundwater extraction in 2011 was approximately 2,500 pounds. Of this mass removed, 60 percent was carbon disulfide, 30 percent was carbon tetrachloride, and 9 percent was chloroform. Tetrachloroethene, methylene chloride, trichloroethene, and chlorobenzene combined were approximately 1 percent of the total mass removed from groundwater in 2011.

Extraction well OW-3 accounted for 34 percent of the total VOC mass removed from groundwater in 2011, EW-2 accounted for 31 percent, EW-1 accounted for 13.5 percent, EW-6 accounted for 9 percent, DPA-202 accounted for 6 percent, EW-5 accounted for 4 percent, and DPA-203 accounted for 1 percent. The other four extraction wells accounted for the remaining 1.5 percent of the total mass recovered from groundwater on Site.

The 2,502 pounds of total mass removed by groundwater extraction in 2011, compared to 2,575 pounds removed in 2010, represents a 2.8 percent decrease in the total mass removed. An increase in the mass removed by both EW-2 and DPA 202 was offset by decreases in the total mass removed by EW-1, EW-5, and DPA-203. The 2011 mass removed by other extraction wells remained about the same as in 2010.

The removal efficiency (pound VOCs recovered/1,000 gallons of groundwater extracted) of the groundwater extraction system at the Site over the past thirteen years is shown below:

Yearly Performance of Groundwater Extraction System

Year	*Pounds of VOC Recovered*	*Groundwater Extracted (1,000 gallons)*	*Removal Efficiency (pound of VOC recovered per 1000 gallons extracted)*
1999	4,250	10,310	0.41
2000	6,197	14,906	0.42
2001	10,270	17,327	0.59
2002	6,374	17,515	0.36
2003	6,710	19,276	0.35
2004	4,953	15,951	0.31
2005	4,898	15,496	0.32
2006	3,517	15,370	0.23
2007	3,672	16,545	0.22
2008	4,790	17,289	0.28
2009	2,754	14,416	0.19
2010	2,575	14,360	0.18
2011	2,502	13,310	0.19
Total	**63,462**	**202,071**	**-**
Annual Average	**4,882**	**15,544**	**0.32**

The above table illustrates that the removal efficiency of the groundwater extraction system has decreased from a high of 0.59 pound VOC recovered/1,000 gallons extracted in 2001 to its current removal efficiency of 0.19. The overall decrease is due to a general decline in groundwater concentrations over time, which indicates that the extraction system is remediating Site groundwater.

Table 9.4 compares the compound-specific removal of SSPLs by groundwater extraction for the past twelve years. Between 1999 and 2003, carbon tetrachloride and chloroform combined comprised between 63 and 80 percent of the total mass removed in groundwater. Over the same time period, carbon disulfide comprised between 20 and 33 percent of the total.

However, between 2004 and 2011, the percentage of carbon tetrachloride and chloroform combined has dropped to between 38 and 56 percent of the total mass removed by groundwater extraction, and the percentage of carbon disulfide has risen to between 43 and 60 percent. The amount of tetrachloroethene extracted in groundwater has remained constant at about 1 percent of the total mass recovered.

9.3 SUMMARY OF MASS REMOVAL FOR THE SITE

The total mass removed by operation of the remedial systems at the Site in 2011 is summarized below:

Mass Removal by Remedial System - 2011

Compound	*SVE*	*Groundwater Extraction*	*Site Total (pounds/year)*
Benzene	0	0	0
Carbon Disulfide	0	1,510	1,510
Carbon Tetrachloride	240	753	993
Chlorobenzene	0	2	2
Chloroform	33	216	249
Methylene chloride	0	7	7
Tetrachloroethene	10	12	22
Toluene	0	0	0
Trichloroethene	6	2	8
Total VOC Removal:	**289**	**2,502**	**2,791**

The 2,791 pounds of VOCs removed from soil and groundwater at the Site is a 1.2 percent decrease from 2010. For the year a 38 pound increase in mass of VOCs removed by the SVE system was offset by a 74 pound decrease in mass removed by the groundwater extraction system.

Of the 2,791 pounds of VOCs removed from soil and groundwater at the Site, 54 percent was carbon disulfide, 36 percent was carbon tetrachloride, and 9 percent was chloroform. These three compounds account for 99 percent of the total mass of VOCs removed from the Site in 2011.

The total mass of VOCs removed by the operation of the remedial systems at the Site over the past thirteen years is summarized below:

Yearly Mass Removed by Remedial System

Year	*Pounds of VOC Removed by SVE*	*Pounds of VOC Removed in Groundwater*	*Total Pounds of VOC Removed per Year*
1999	1,221	4,294	5,515
2000	165	6,197	6,362
2001	154	10,269	10,423
2002	1,207	6,374	7,581
2003	937	6,710	7,647
2004	228	4,954	5,182
2005	1,954	4,899	6,853
2006	1,712	3,517	5,229
2007	2,348	3,672	6,020
2008	507	4,790	5,297
2009	108	2,754	2,862
2010	251	2,575	2,826
2011	289	2,502	2,791
Totals	**11,081**	**63,507**	**74,588**

Table 9.5 presents a breakdown of the compound-specific SSPL removal (in pounds per year) for the combined Site remedial systems (SVE and groundwater extraction). The table indicates that carbon tetrachloride and chloroform combined have accounted for 62 percent of the Site-wide recovered mass between 2001 and 2011, with carbon disulfide comprising another 36 percent.

10.0 CONCLUSIONS AND RECOMMENDATIONS

This section presents conclusions regarding the 2011 O&M of the Site and presents recommendations for O&M in 2012. The conclusions and recommendations are presented for both of the active remediation systems at the Site.

10.1 AREA A SVE REMEDIAL SYSTEM

The Area A SVE system operated over 7,350 hours (84 percent of the time) in 2011, which was the fourth highest number of operating hours since tracking of operating time began in 1999. In addition, the number of pounds of SSPL organic compounds recovered by the SVE system in 2011, calculated based upon the operating hours, average system flow rate, and the influent vapor concentrations, increased by 48 pounds compared with 2010 (a 15 percent increase). The increase in mass removal is attributable to an increase in the average influent vapor concentrations. For carbon tetrachloride, the main SSPL in the Area A influent, concentrations increased in 2011 by approximately 10 percent compared with 2010. Note however, that despite the increase for 2011, the mass removed by the SVE system in 2011 was slightly over half of that removed in 2008, and less than 20 percent of the amount removed annually in 2005 through 2007.

In 2012, SMC will perform a technical evaluation of the Area A SVE system, including an assessment of current system condition and operational issues. In addition, SMC will develop alternatives to long-term operation of the SVE system for remediation of the Area A soils.

10.2 BEDROCK GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

10.2.1 GROUNDWATER EXTRACTION SYSTEM

As noted in Section 5.2, the groundwater extraction system operated fairly reliably in 2011. The pump in extraction well OW-3 was replaced for the second straight year due to corrosion problems. Electrical problems continued to hinder operation of EW-5, EW-6, and to a lesser extent, EW-1. Operational troubleshooting related to these wells will continue in 2012. In addition, SMC will undertake a well rehabilitation program for deep bedrock extraction wells EW-1, EW-2, EW-3 and OW-3. These wells exhibited signs of biological growth and sediment accumulation during 2011. Proposals are

currently being developed for this program, and other wells may be added if current operating conditions indicate a need for rehabilitation.

As discussed in Section 9.2, approximately 13.3 million gallons of groundwater were pumped from the Site for subsequent treatment and discharge. This volume was approximately 7.6 percent lower than the amount extracted in 2010. Recovery rates increased significantly in EW-2 and DPA-202, and in the knockout pot, but decreased in almost all other extraction wells, mostly notably in EW-5, EW-6, and EW-1.

The total mass removed by the groundwater extraction system in 2011 was 2,502 pounds. This represents a decrease of 2.8 percent compared with 2010 (2,575 pounds removed in groundwater). An increase in the mass removed by both EW-2 and DPA-202 was offset by decreases in the total mass removed by EW-1, EW-5, and DPA-203. The 2011 mass removed by other extraction wells remained about the same as in 2010.
For 2012, except as noted above, the groundwater extraction system will continue to operate as it has in past years, with no substantive changes planned.

10.2.2 GROUNDWATER TREATMENT SYSTEM

As discussed in Section 6.1, the groundwater treatment system operated continuously and generally reliably throughout 2011 with few major repairs. In March 2011, the carbon feed pump developed a slight leak, which was traced to a leaking seal that was replaced in late March. In mid-May, the feed pump again began performing erratically. Troubleshooting indicated that the motor bearings were faulty, and they were replaced. The system operated reliably for the remainder of 2011.

As discussed in Section 6.2.3, beginning in January 2011, consistent low-level detections of SSPLs, not indicative of breakthrough conditions, began occurring in the carbon interstage samples. Throughout the year, various manifolds and valves were replaced between the two carbon beds with no success. In November 2011, in an attempt to correct address the problem, Calgon Carbon performed the only carbon exchange of 2011. The exchange was performed although there was no indication of breakthrough conditions between carbon beds. Calgon technical representatives who attended the carbon exchange and performed various evaluations noted the presence of significant bioactivity occurring within the carbon. They also made recommendations relating to backflushing operations.

Beginning in early 2012, the carbon treatment system will be evaluated in order to determine if operational changes are needed.

10.2.3 GROUNDWATER TREATMENT SYSTEM PERFORMANCE MONITORING

System performance monitoring includes routine sampling of Site extraction and monitoring wells. As discussed in Section 6.2.4, all extraction wells are sampled on a quarterly basis, and a Site-wide monitoring well sampling event is performed on a semiannual basis. The purpose of the groundwater monitoring is to evaluate progress of the groundwater extraction system in removing SSPL compounds from the groundwater.

Figures presenting groundwater potentiometric contours and chemical isocontours are presented in Section 7.0 for each WBZ present at the Site, and are discussed in some detail in Sections 7.2 through 7.5. The figures indicate that the Site extraction wells are properly placed to contain, capture and recover SSPLs present in the groundwater at the Site. The current configuration provides hydraulic capture across the Site.

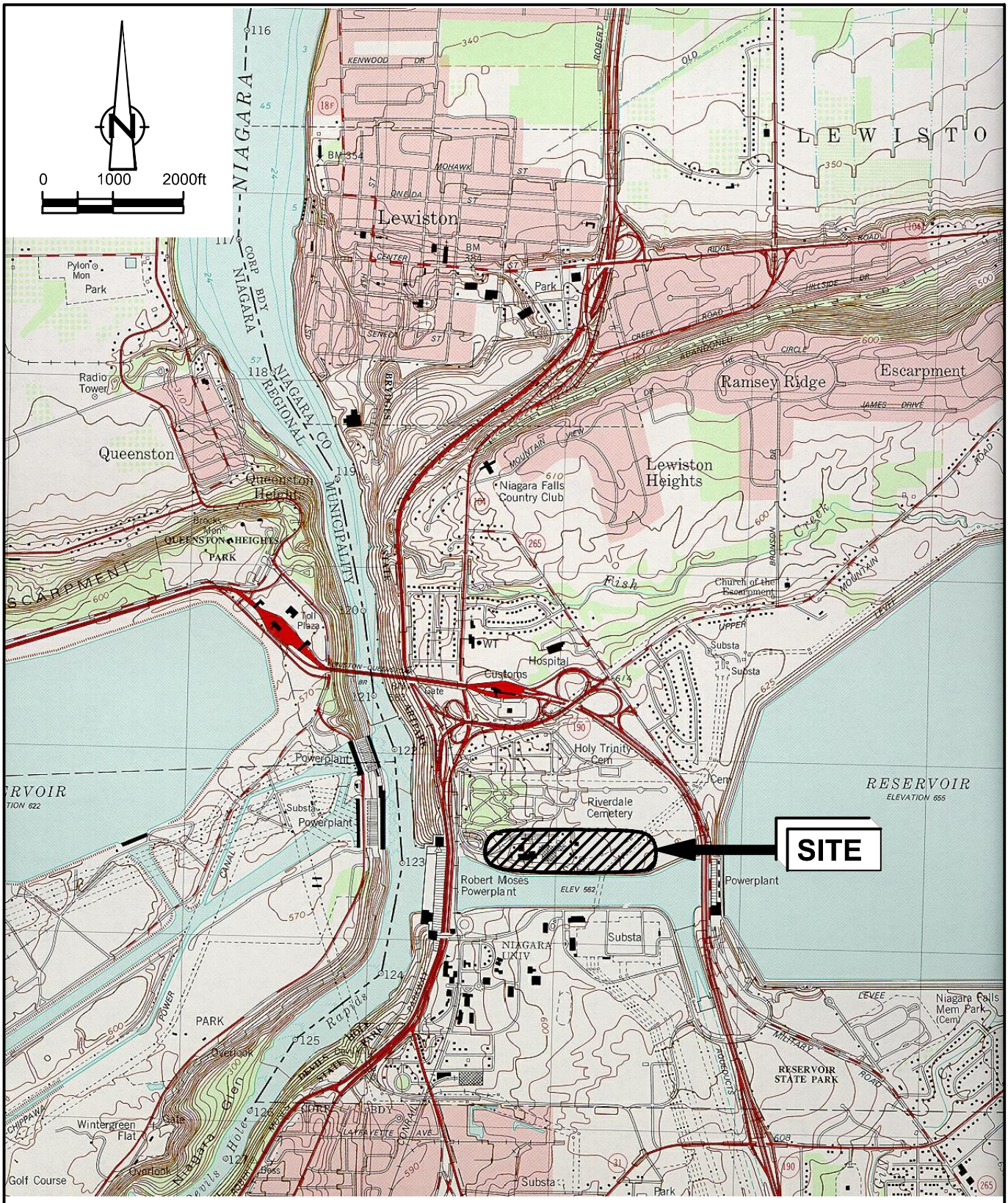
A comparison of 2011 isocontours for carbon disulfide and carbon tetrachloride/chloroform for each of the four water bearing zones is discussed in Sections 7.2 through 7.5, and generally indicates little change in the overall concentrations and areal extent of the impacted groundwater compared with 2010.

Further, there has been no significant change in the general concentrations, areal extent and shape of the impacted groundwater at the Site for the past several years.

Therefore, SMC recommends that the frequency of the routine sampling of Site-wide monitoring wells be changed from a semiannual to an annual basis. The recommended month for the annual event is May, consistent with the current semiannual event that is typically used for contouring purposes in this annual report.

Sampling of the Site extraction wells would continue on a quarterly basis.

FIGURES



SOURCE: USGS

figure 1.1

SITE LOCATION
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

OW-10

TO OW-8
(350')

GROUNDWATER EXTRACTION WELL EW-1

GROUNDWATER EXTRACTON WELL OW-3

GROUNDWATER EXTRACTION WELL LR-66

TREATMENT BUILDING

GROUNDWATER
EXTRACTION WELL
EW-5

AREA A SVE SYSTEM

FORMER LANDFILL
AREA B

N

0 100 200ft

OW-9

OW-11

OLD LEWISTON ROAD (66' R.O.W.)

GRAVEL DRIVE

HEADER

HEADER

HEADER

EW1

EW2

EW3

8" P.V.C. DISCHARGE PIPE

APPROX. LOCATION OF 6" DIA. HYDROGEN LINE PERMANENT EASEMENT TO HOOKER CHEMICAL CORP., NEW YORK POWER AUTHORITY 204C, SEC. 1 FILED IN N.C.C.O. L.4468, P.25.

PERMANENT EASEMENT TO
NIAGARA MOHAWK
POWER CORPORATION

PERMANENT EASEMENT TO
NIAGARA MOHAWK
POWER CORPORATION

FOREBAY

APPROXIMATE ALIGNMENT OF
EXISTING GROUT CURTAIN

GROUNDWATER
EXTRACTION WELL
EW-2

OUTFALL

GROUNDWATER
EXTRACTION WELL
EW-3

GROUNDWATER
EXTRACTION WELL
EW-4

GROUNDWATER
EXTRACTION WELL
EW-6

AREA T-4
(DECOMMISSIONED)

FORMER LANDFILL
AREA C
(DECOMMISSIONED)

figure 1.2

SITE LAYOUT
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

CRA

06488-20(022)GN-BU002 FEB 03/2011

PMA-1
EWA-133
PMA-11
6"ø HDPE SVE HEADER
EWA-104
EWA-103R2
EWA-101
ANCHOR TRENCH
EWA-134
PMA-2
SVE WELL HEAD AND CONTROL VALVE (TYP.)
45' (TYP.)
DPA-201
EWA-105
EWA-114
EWA-113
EWA-111R3
EWA-109R2
PMA-3
EWA-102R2
EW-5
PMA-12
595
PMA-4
EWA-106
EWA-107R2
EWA-115R2
DPA-202
EWA-112R3
PMA-13
EWA-110R2
EWA-108R2
EWA-135
SVE/GW WELL HEAD AND CONTROL VALVE
PMA-5
PMA-6
6"ø HDPE SVE HEADER
SVE HEADER NO. 4
EWA-123R1
EWA-121R1
EWA-119R2
EWA-117R1
EWA-132R2
EWA-130R2
594
SVE HEADER NO. 3
SVE HEADER NO. 2
TREATMENT BUILDING
EWA-131
PMA-7
EWA-122R1
EWA-120R2
EWA-118R2
EWA-116R2
PMA-8
PMA-14
PMA-9
593
SVE HEADER NO. 1
DPA-203
EWA-129R3
EWA-139
EWA-138
EWA-126R3
EWA-124R2
EWA-136
4" MIN. CRUSHED STONE x 6' WIDE (TYP.)
603
PMA-15
45° REDUCING LATERAL (TYPE 1)
W17
EW-6
EWA-128R3
EWA-127
EWA-125R3
6"ø SCH. 40 CARBON STEEL SVE HEADER
PMA-10
EWA-137
599
598
EW3
601
N
0 20 40ft

LEGEND

EWA-113 AREA A SOIL VAPOR EXTRACTION WELL

DPA-202 AREA A DUAL PHASE EXTRACTION WELL

NOTES:

1. SVE WELLS DESIGNATED BY "R1" WERE REPLACED IN MAY 2000.
2. SVE WELLS DESIGNATED BY "R2" WERE REPLACED IN FEBRUARY 2003.
3. SVE WELLS EWA-133 THROUGH EWA-139 WERE INSTALLED IN JUNE 2006.
4. SVE WELLS DESIGNATED BY "R3" WERE REPLACED IN NOVEMBER 2010.

CRA

figure 1.3

AREA A SVE SYSTEM
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

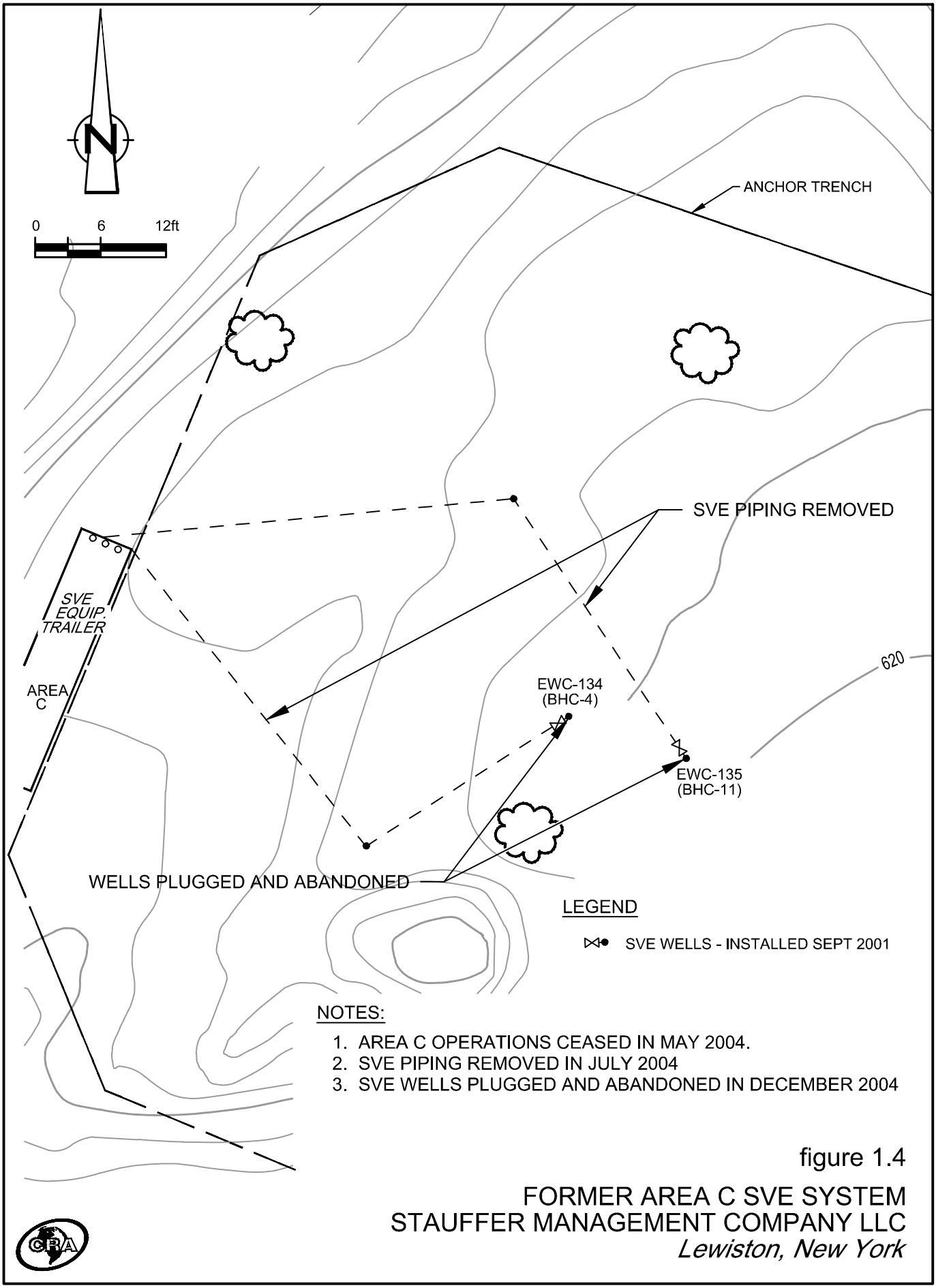


figure 1.4

FORMER AREA C SVE SYSTEM
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

06488-20(022)GN-BU004 FEB 03/2011

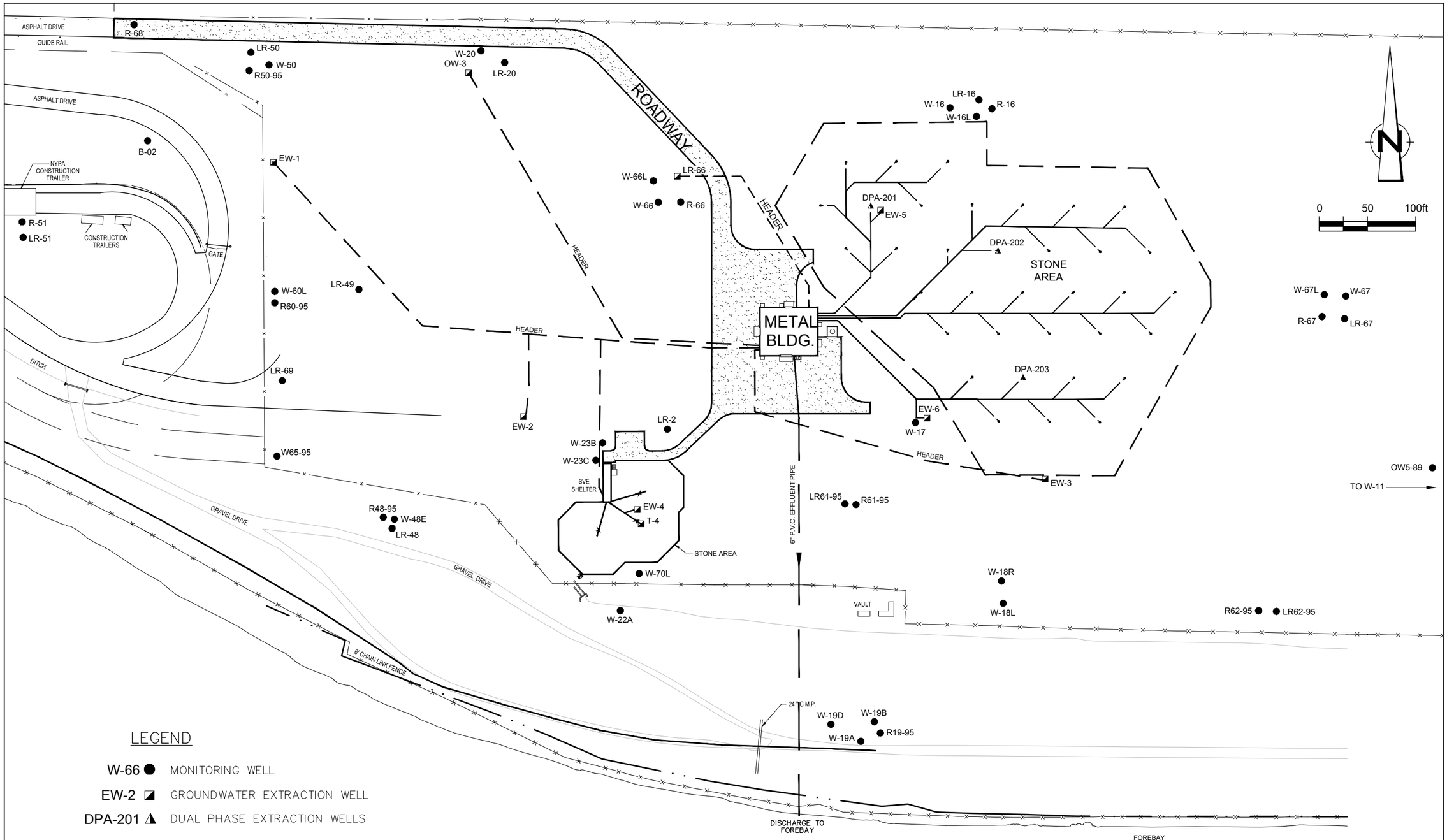


figure 1.5

EXTRACTION AND MONITORING WELLS
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

06488-20(022)GN-BU005 FEB 01/2010

VING

NEW ACCESS ROAD

W-20
(575.92)
CS2-ND1
CTET-ND1

ROADWAY

575

EW-1

CONSTRUCTION TRAILERS

GATE

GRAVEL DRIVE

GRAVEL DRIVE

W-66
(570.73)
CS2-ND1
CTET-132

W-16
(578.2)
CS2-ND1
CTET-320

DPA-201
(579.04)
CS2-2,430

EW-5
<539.14>

DPA-202
(580.13)
CS2-1,000
CTET-101,000

580

585

590

STONE AREA

W-67
(595.01)
CS2-470
CTET-6,100

METAL BLDG.

DPA-203
(578.61)
CS2-5,600
CTET-253,000

EW-2

W-23C
(579.46)
CS2-ND1
CTET-ND1

W-17
(585.01)
CS2-610
CTET-5,600

EW-6
<540>

EW-3

6" P.V.C. EFFLUENT PIPE

EW-4
<541.5>

STONE AREA

T-4
(573.37)
CS2-ND2.5
CTET-76.3

W-22A
(577.91)
CS2-ND1
CTET-42

VAULT

W-18R
(573.62)
CS2-ND50
CTET-24,700

24" C.M.P.

W-19D
(583.51)
CS2-ND20
CTET-ND20

N

0 50 100ft

LEGEND

W-22A *(577.91)* CS2-ND1 CTET-42	WELL LOCATION (WATER LEVEL, FT-MSL) CARBON DISULFIDE CONCENTRATION (ug/L), MAY 2010 CARBON TET + CHLOROFORM CONCENTRATION (ug/L), MAY 2010
EW-6 *<540>*	WATER LEVEL MODIFIED TO 570 FT-MSL FOR GROUNDWATER CONTOURS
W-17 *[585.01]*	WATER LEVEL NOT USED FOR GROUNDWATER CONTOURS

NOTE: EW-1, EW-2 AND EW-3 NOT USED FOR CONTOURING.
THESE EXTRACTION WELLS ARE NOT OPEN IN
THE UPPER LOCKPORT FORMATION

figure 7.1

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
MAY 2011
UPPER LOCKPORT WATER BEARING ZONE
Stauffer Management Company LLC

NG NEW ACCESS ROAD

W-20
(ND1)

ROADWAY

EW-1

W-66
(ND1)

W-16
(ND1)

10

100

1000

0 50 100ft

DPA-201
(ND10)
EW-5

DPA-202
(1,000)

STONE AREA

W-67
(470)

METAL BLDG.

DPA-203
(5,600)

EW-6

W-17
(610)

EW-3

ONSTRUCTION TRAILERS

GATE

EW-2

W-23C
(ND1)

EW-4

T-4
(ND2.5)

STONE AREA

6" P.V.C. EFFLUENT PIPE

GRAVEL DRIVE

GRAVEL DRIVE

W-18R
(ND50)

W-22A
(ND1)

VAULT

6' CHAIN LINK FENCE

24" C.M.P.

W-19D
(ND20)

DISCHARGE TO FOREBAY

LEGEND

W-67
(470) WELL LOCATION
(CONCENTRATION - µg/L)

CRA

figure 7.2

CHEMICAL ISOCONTOURS
MAY 2011 CARBON DISULFIDE
UPPER LOCKPORT WATER BEARING ZONE
Stauffer Management Company LLC

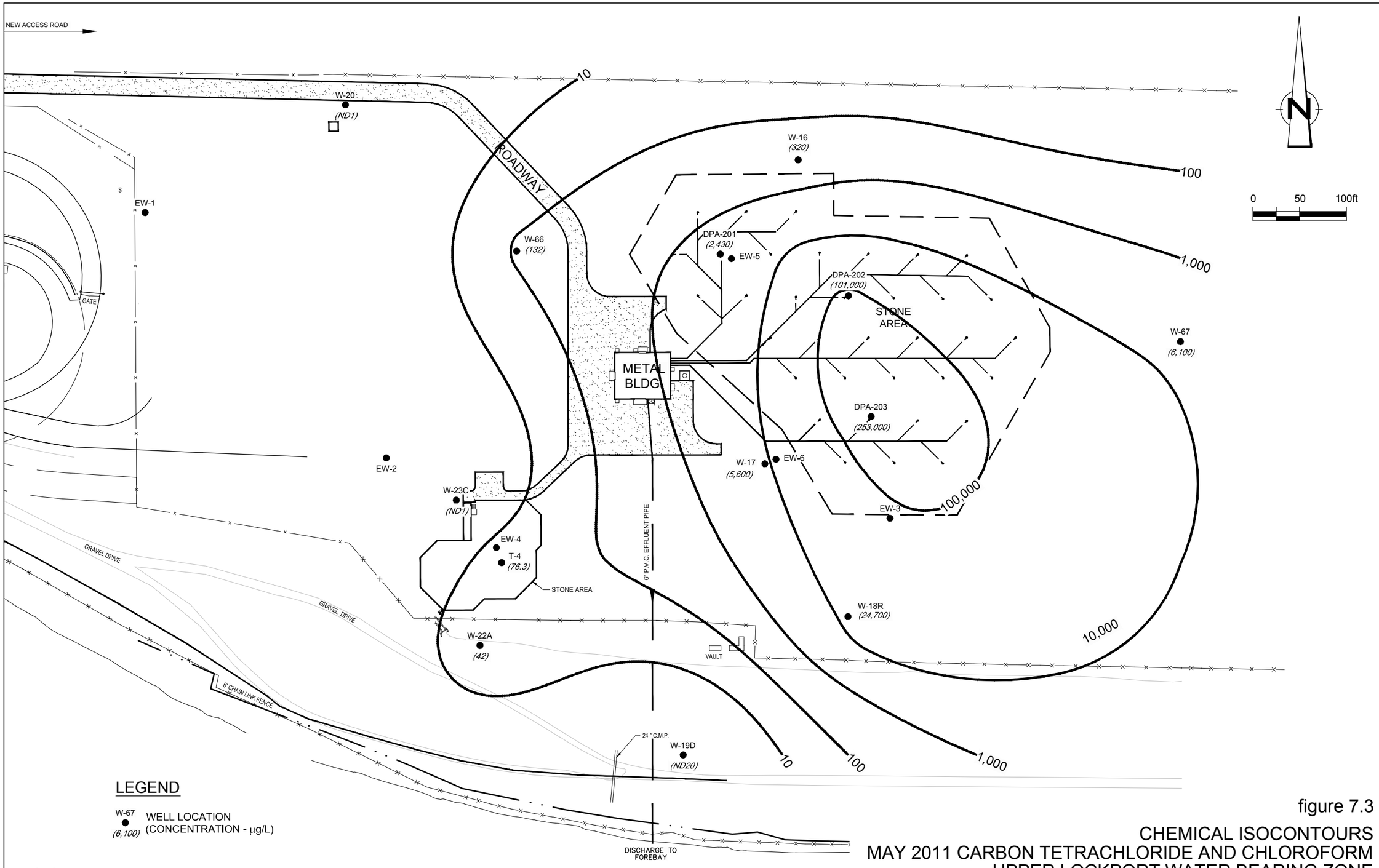


figure 7.3

CHEMICAL ISOCONTOURS
MAY 2011 CARBON TETRACHLORIDE AND CHLOROFORM
UPPER LOCKPORT WATER BEARING ZONE
Stauffer Management Company LLC

EXISTING PAVING
NEW ACCESS ROAD
ASPHALT DRIVE
GUIDE RAIL
RC. WALL
WALK
CURB
ASPHALT DRIVE
GUARD SHACK
NYPA CONSTRUCTION TRAILER
CONSTRUCTION TRAILERS
GATE
DITCH
FOREBAY
GRAVEL DRIVE
GRAVEL DRIVE
6' CHAIN LINK FENCE
ROADWAY
STONE AREA
METAL BLDG.
STONE AREA
8" P.V.C. EFFLUENT PIPE
24 " C.M.P.
VAULT
DISCHARGE TO FOREBAY
0 50 100ft
N
W-50L
(560.54)
CS2-ND1
CTET-1.3
EW-1
<447>
W-60L
(DRY)
W-65
(554.15)
CS2-ND1
CTET-8.2
W-48E
(553.48)
CS2-ND1
CTET-112
W-66L
(556.18)
CS2-ND1
CTET-ND1
W-16L
(554.24)
CS2-3,700
CTET-1.6
EW-5
(539.14)
CS2-510
CTET-770
W-67L
(557.51)
CS2-8.4
CTET-470
EW-2
<458>
W-23B
[555.73]
CS2-ND5
CTET-570
EW-4
(541.5)
CS2-11
CTET-370
W-70L
(554.33)
CS2-1.5
CTET-320
EW-6
(540.00)
CS2-750
CTET-26,600
EW-3
<466>
W-18L
(553.13)
CS2-ND25
CTET-2,400
W-19A
(558.63)
CS2-ND1
CTET-13.2
554
558
550
546
548
552
556

LEGEND

W-67L ●	WELL LOCATION
(557.51)	(WATER LEVEL, FT-MSL)
CS2-8.4	CARBON DISULFIDE CONCENTRATION (ug/L), MAY 2010
CTET-470	CARBON TET + CHLOROFORM CONCENTRATION (ug/L), MAY 2010
EW-2 ●	WATER LEVEL MODIFIED TO 545 FT-MSL
<458>	FOR GROUNDWATER CONTOURS
W-23B ●	WATER LEVEL NOT USED
[555.73]	FOR GROUNDWATER CONTOURS

figure 7.4

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
MAY 2011
LOWER LOCKPORT WATER BEARING ZONE
Stauffer Management Company LLC

EXISTING PAVING
NEW ACCESS ROAD
ASPHALT DRIVE
GUIDE RAIL
ASPHALT DRIVE
CONSTRUCTION TRAILERS
GATE
DITCH
GRAVEL DRIVE
GRAVEL DRIVE
6' CHAIN LINK FENCE
ROADWAY
W-50L
(ND1)
EW-1
W-66L
(ND1)
W-65
(ND1)
W-48E
(ND1)
EW-2
W-23B
(ND5)
SVE SHELTER
EW-4
(11)
W-70L
(1.5)
STONE AREA
6" P.V.C. EFFLUENT PIPE
VAULT
W-18L
(ND25)
24" C.M.P.
W-19A
(ND1)
10
100
1,000
1,000
100
10
W-16L
(3700)
EW-5
(510)
STONE AREA
METAL BLDG.
EW-6
(750)
EW-3
W-67L
(8.4)
N
0 50 100ft

LEGEND

W-16L
(3700) WELL LOCATION (CONCENTRATION - µg/L)

figure 7.5

CHEMICAL ISOCONTOURS
MAY 2011 CARBON DISULFIDE
LOWER LOCKPORT WATER BEARING ZONE
Stauffer Management Company LLC

CRA

06488-20(022)GN-BU010 FEB 06/2012

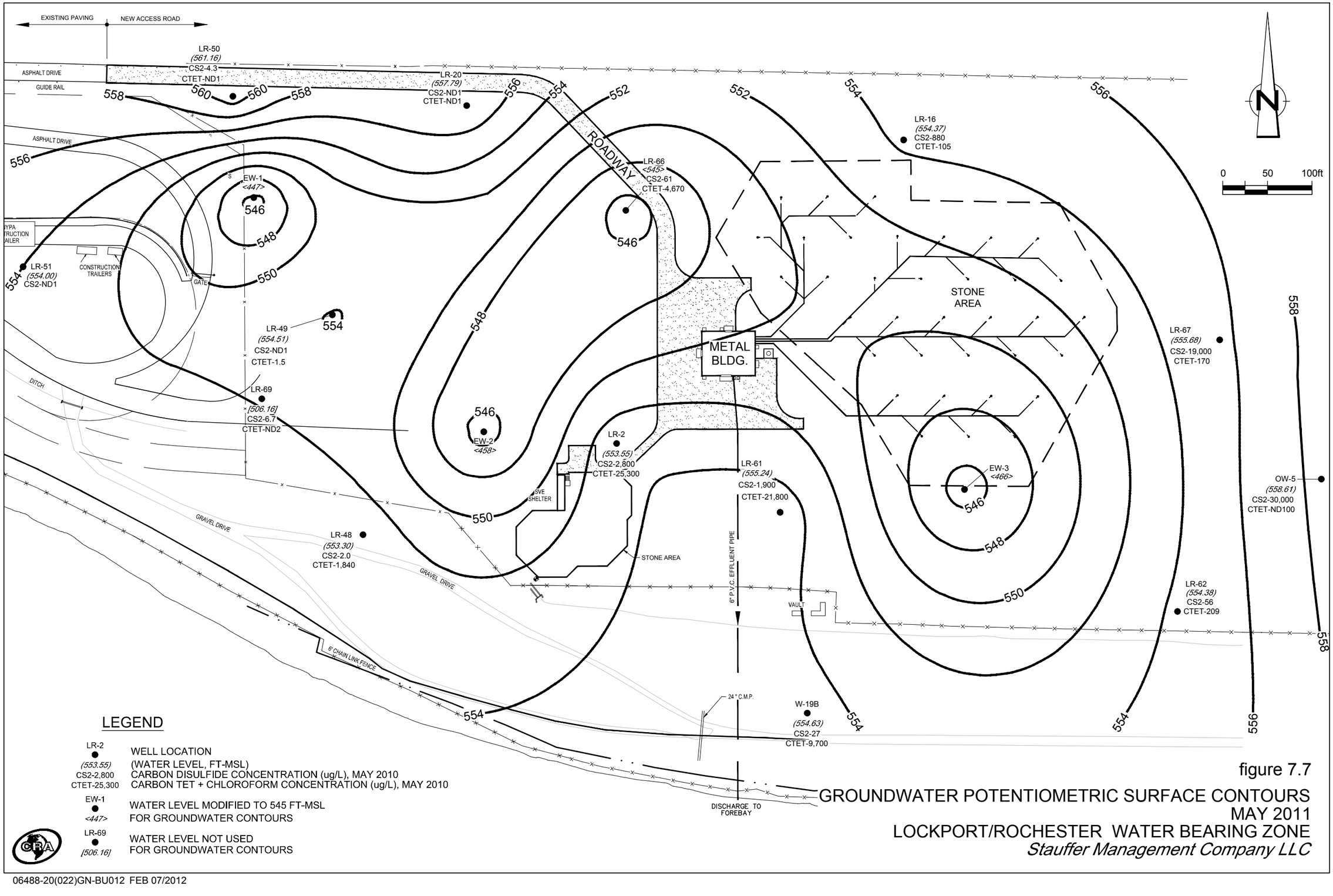
EXISTING PAVING
NEW ACCESS ROAD
ASPHALT DRIVE
GUIDE RAIL
ASPHALT DRIVE
GUARD SHACK
NYPA CONSTRUCTION TRAILER
CONSTRUCTION TRAILERS
GATE
DITCH
GRAVEL DRIVE
FOREBAY
GRAVEL DRIVE
6' CHAIN LINK FENCE
ROADWAY
W-50L
(1.3)
EW-1
W-66L
(ND1)
W-65
(8,2)
EW-2
W-23B
(570)
SVE SHELTER
EW-4
(370)
W-48E
(112)
STONE AREA
W-70L
(320)
6" P.V.C. EFFLUENT PIPE
METAL BLDG.
W-16L
(1.6)
EW-5
(770)
STONE AREA
EW-6
(26,600)
EW-3
W-67L
(470)
W-18L
(2,400)
VAULT
24 " C.M.P.
W-19A
(13.2)
DISCHARGE TO FOREBAY
10
100
1,000
10,000
N
0 50 100ft

LEGEND

W-67L
(470)
WELL LOCATION
(CONCENTRATION - µg/L)

figure 7.6

CHEMICAL ISOCONTOURS
MAY 2011 CARBON TETRACHLORIDE AND CHLOROFORM
LOWER LOCKPORT WATER BEARING ZONE
Stauffer Management Company LLC



LEGEND

LR-2 ●	WELL LOCATION
(553.55)	(WATER LEVEL, FT-MSL)
CS2-2,800	CARBON DISULFIDE CONCENTRATION (ug/L), MAY 2010
CTET-25,300	CARBON TET + CHLOROFORM CONCENTRATION (ug/L), MAY 2010
EW-1 ● *<447>*	WATER LEVEL MODIFIED TO 545 FT-MSL FOR GROUNDWATER CONTOURS
LR-69 ● *[506.16]*	WATER LEVEL NOT USED FOR GROUNDWATER CONTOURS

figure 7.7

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS MAY 2011 LOCKPORT/ROCHESTER WATER BEARING ZONE

Stauffer Management Company LLC

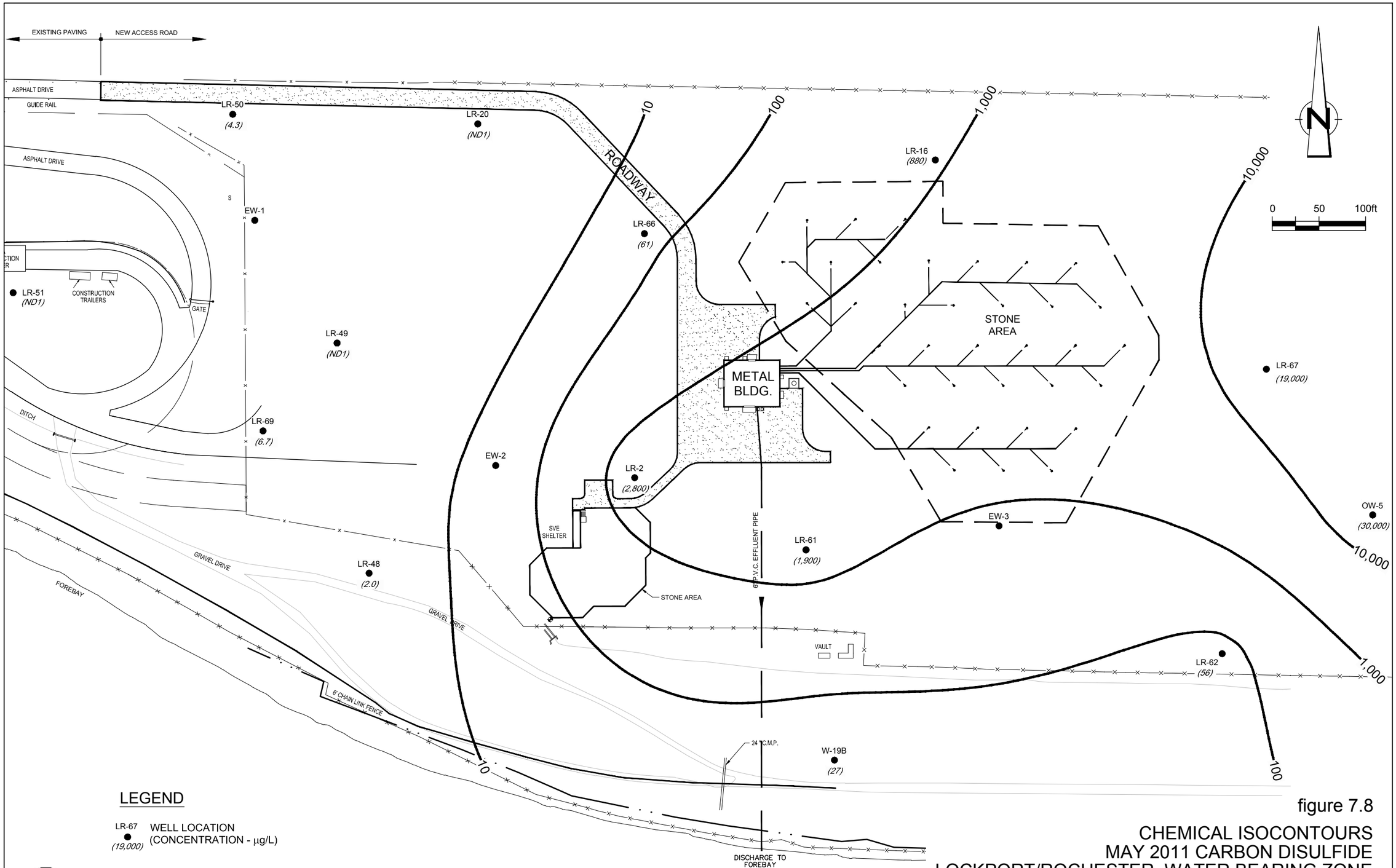


figure 7.8

CHEMICAL ISOCONTOURS
MAY 2011 CARBON DISULFIDE
LOCKPORT/ROCHESTER WATER BEARING ZONE
Stauffer Management Company LLC

06488-20(022)GN-BU013 FEB 06/2012

T DRIVE
UIDE RAIL
PHALT DRIVE
CONSTRUCTION TRAILERS
GATE
GRAVEL DRIVE
GRAVEL DRIVE
6' CHAIN LINK FENCE
ROADWAY
SVE SHELTER
STONE AREA
METAL BLDG.
STONE AREA
6" P.V.C. EFFLUENT PIPE
VAULT
24" C.M.P.
DISCHARGE TO FOREBAY
LR-50 (ND1)
LR-20 (ND1)
LR-16 (105)
EW-1
LR-66 (4,670)
LR-49 (1.5)
LR-69 (ND2)
EW-2
LR-2 (25,300)
LR-48 (1840)
LR-61 (21,800)
EW-3
LR-67 (170)
OW-5 (ND100)
LR-62 (209)
W-19B (9,700)
10
100
1,000
10,000
N
0 50 100ft

figure 7.9

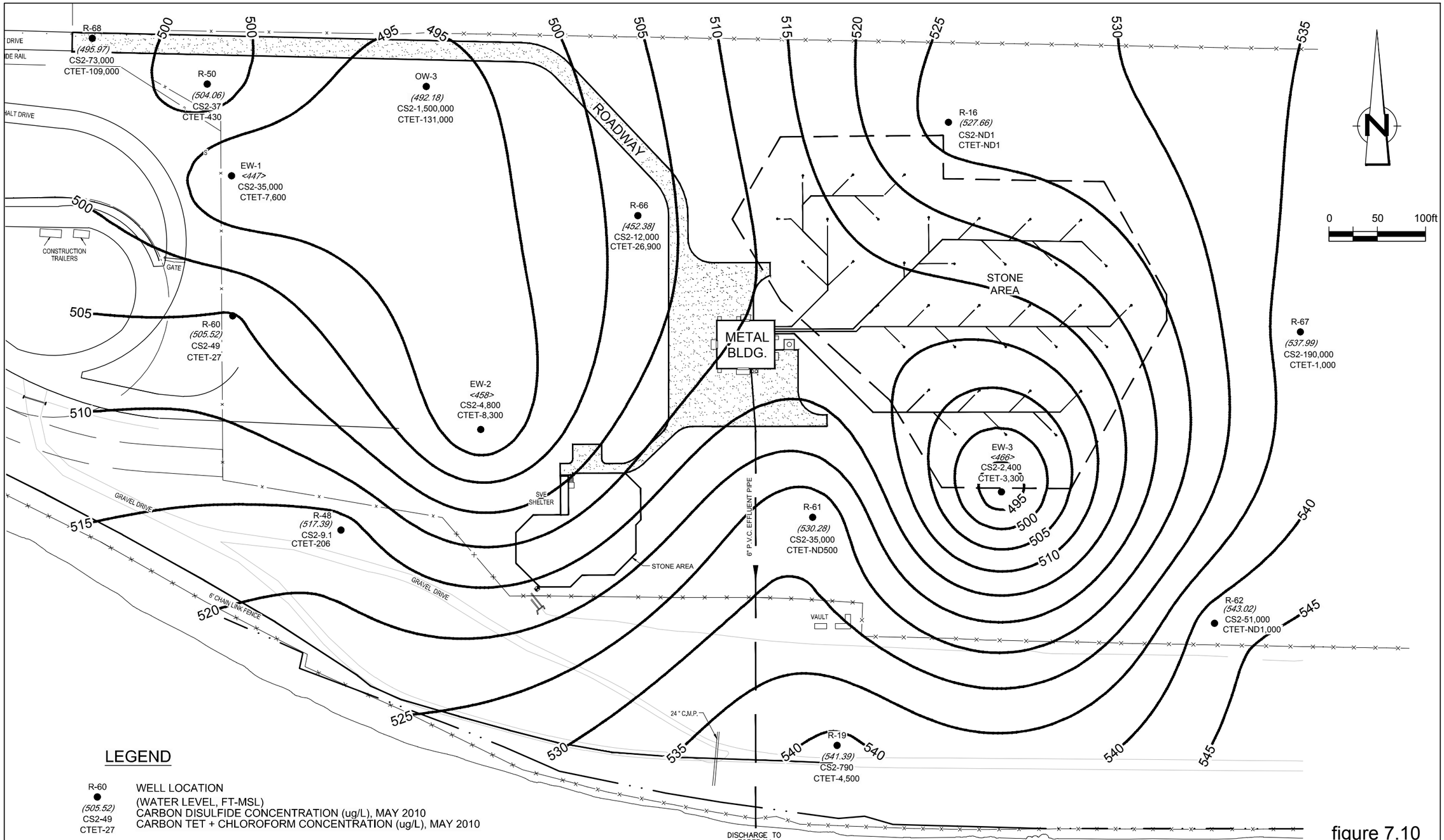
CHEMICAL ISOCONTOURS
MAY 2011 CARBON TETRACHLORIDE AND CHLOROFORM
LOCKPORT/ROCHESTER WATER BEARING ZONE
Stauffer Management Company LLC

LEGEND

LR-61 (21,800) WELL LOCATION (CONCENTRATION - µg/L)

CRA

06488-20(022)GN-BU014 FEB 06/2012



LEGEND

R-60 ● (505.52) CS2-49 CTET-27 — WELL LOCATION (WATER LEVEL, FT-MSL) CARBON DISULFIDE CONCENTRATION (ug/L), MAY 2010 CARBON TET + CHLOROFORM CONCENTRATION (ug/L), MAY 2010

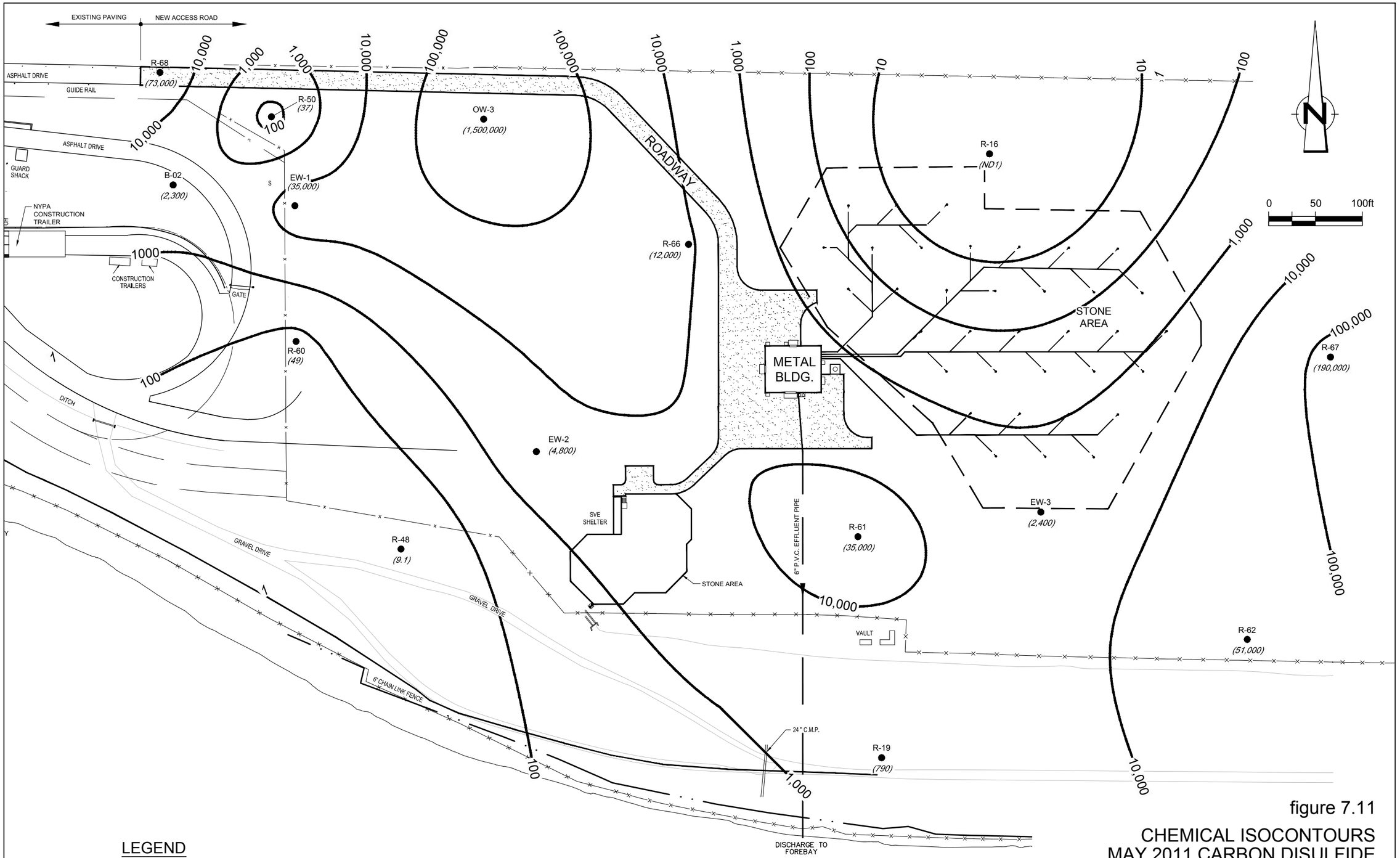
EW-1 ● <447> — WATER LEVEL MODIFIED TO 490 FT-MSL FOR GROUNDWATER CONTOURS

R-66 ● [452.38] — WATER LEVEL NOT USED FOR GROUNDWATER CONTOURS

figure 7.10

GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
MAY 2011
ROCHESTER WATER BEARING ZONE
Stauffer Management Company LLC

06488-20(022)GN-BU015 FEB 07/2012



LEGEND

R-48 (9.1) WELL LOCATION (CONCENTRATION - µg/L)

figure 7.11

CHEMICAL ISOCONTOURS
MAY 2011 CARBON DISULFIDE
ROCHESTER WATER BEARING ZONE
Stauffer Management Company LLC

EXISTING PAVING
NEW ACCESS ROAD
R-68
(109,000)
ASPHALT DRIVE
GUIDE RAIL
NC. WALL
C. WALK
CURB
ASPHALT DRIVE
GUARD SHACK
B-02
(9,500)
OH
NYPA CONSTRUCTION TRAILER
CONSTRUCTION TRAILERS
GATE
R-50
(430)
EW-1
(7,600)
ROADWAY
OW-3
(131,000)
100,000
10,000
1,000
100
10
R-16
(ND1)
R-66
(26,900)
STONE AREA
METAL BLDG.
R-67
(1,000)
R-60
(27)
DITCH
EW-2
(8,300)
SVE SHELTER
6" P.V.C. EFFLUENT PIPE
R-61
(ND500)
EW-3
(3,300)
FOREBAY
GRAVEL DRIVE
R-48
(206)
STONE AREA
VAULT
R-62
(ND1,000)
6' CHAIN LINK FENCE
24 " C.M.P.
R-19
(4,500)
N
0 50 100ft

LEGEND

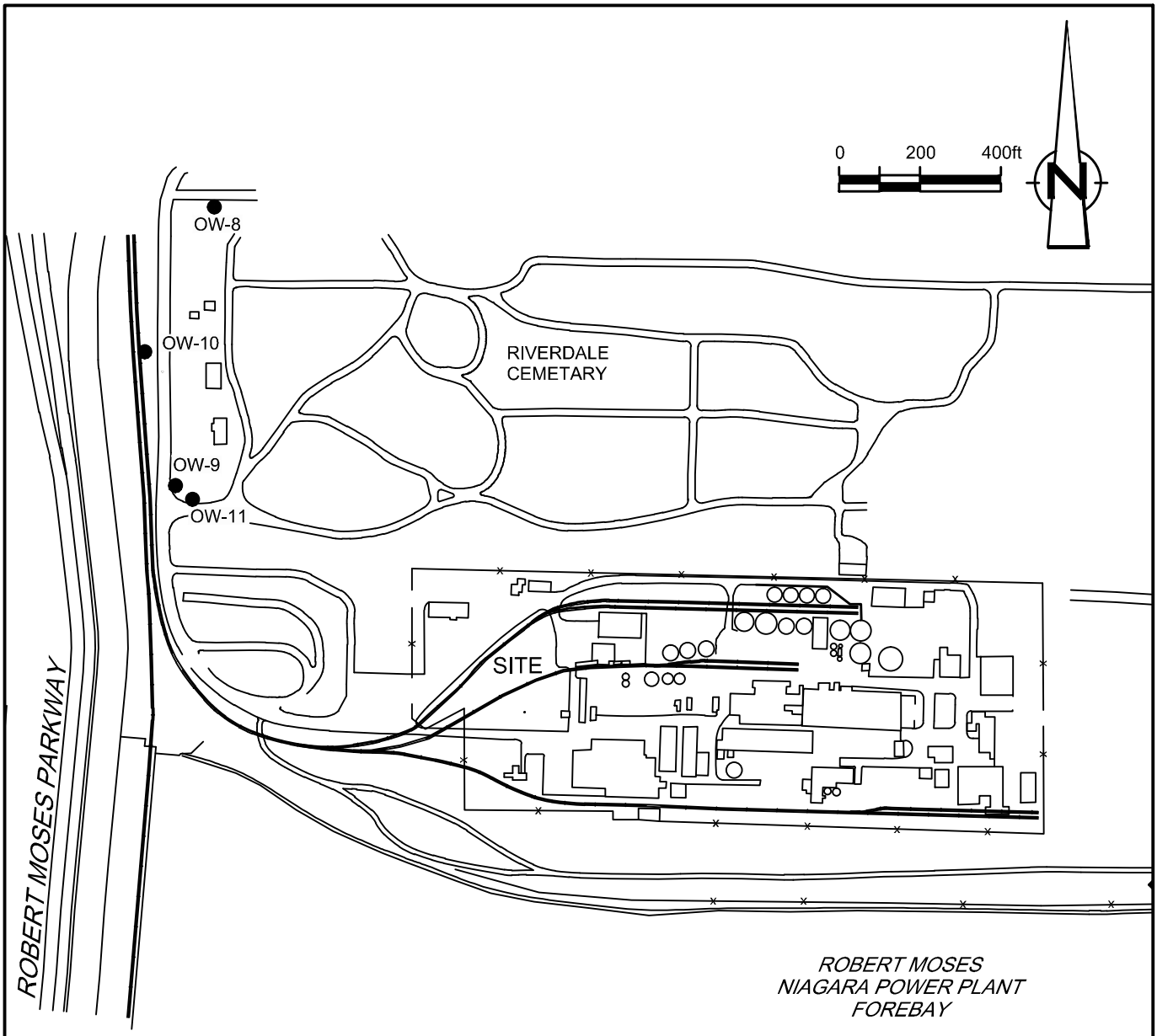
R-66 (26,900) WELL LOCATION (CONCENTRATION - µg/L)

figure 7.12

CHEMICAL ISOCONTOURS
MAY 2011 CARBON TETRACHLORIDE AND CHLOROFORM
ROCHESTER WATER BEARING ZONE
Stauffer Management Company LLC

CRA

06488-20(022)GN-BU017 FEB 07/2012



LEGEND

OW-11 ● NORTH SIDE GROUNDWATER MONITORING WELL LOCATIONS

NOTE:
SAMPLING OF OVERBURDEN WELLS OW-8, OW-9 AND OW-10 WAS DISCONTINUED IN MAY 2004. BEDROCK WELL OW-11 CONTINUES TO BE SAMPLED SEMIANNUALLY.

figure 8.1

NORTH SIDE WELL LOCATIONS
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

TABLES

TABLE 2.1

AREA A SVE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Average Air Flow Rate:		800	cfm
Est. Operating Time:	1st Quarter	1,799	hours
	2nd Quarter	2,072	hours
	3rd Quarter	1,693	hours
	4th Quarter	1,808	hours
	Total	7,372	hours/year

		1st Quarter		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
Compound	*MW*	*Conc. (ppmv)*	*Mass (lbs)*	*Conc. (ppmv)*	*Mass (lbs)*	*Conc. (ppmv)*	*Mass (lbs)*	*Conc. (ppmv)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Carbon disulfide	76	0.0	0.0	0.0	0.0	0.0	0.2	0.01	0.1	0
Carbon tetrachloride	154	1.20	40.5	1.90	73.9	3.70	117.7	0.22	7.5	240
Chlorobenzene	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Chloroform	119	0.12	3.1	0.22	6.6	0.90	22.2	0.04	1.0	33
Methylene chloride	85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Tetrachloroethene	166	0.03	1.2	0.06	2.6	0.18	6.2	0.01	0.3	10
Toluene	92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Trichloroethene	131	0.01	0.2	0.02	0.5	0.19	5.2	0.00	0.1	6
Total VOC Removal			**45**		**84**		**151**		**9**	**289**

Notes:
cfm Cubic Feet per Minute
MW Molecular Weight
ppmv Part per Million by Volume.
VOC Volatile Organic Compound.

TABLE 5.1

EXTRACTION WELL EW-1
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	316,273	gallons
2nd Quarter	319,407	gallons
3rd Quarter	310,689	gallons
4th Quarter	171,881	gallons
Total	**1,118,250**	**gallons**

	1st Quarter		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
Compound	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	34,000	89.7	35,000	93.2	22,000	57.0	14,000	20.1	260
Carbon tetrachloride	9,700	25.6	5,400	14.4	4,200	10.9	3,400	4.9	56
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	2,800	7.4	2,200	5.9	1,600	4.1	2,000	2.9	20
Methylene chloride	200	0.5	150	0.4	120	0.3	180	0.3	1
Tetrachloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Toluene	380	1.0	0	0.0	0	0.0	0	0.0	1
Trichloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Total VOC Removal		**123**		**114**		**72**		**28**	**338**

Notes:
VOC Volatile Organic Compound.

TABLE 5.2

EXTRACTION WELL EW-2
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	1,159,217	gallons
2nd Quarter	1,227,333	gallons
3rd Quarter	1,078,530	gallons
4th Quarter	1,021,160	gallons
Total	**4,486,240**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	4,300	41.6	4,800	49.1	21,000	188.9	22,000	187.4	467
Carbon tetrachloride	4,200	40.6	7,000	71.7	7,200	64.8	8,500	72.4	249
Chlorobenzene	0	0.0	39	0.4	0	0.0	0	0.0	0
Chloroform	1,300	12.6	1,300	13.3	1,200	10.8	1,700	14.5	51
Methylene chloride	0	0.0	73	0.7	61	0.5	100	0.9	2
Tetrachloroethene	0	0.0	60	0.6	45	0.4	72	0.6	2
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Total VOC Removal		**95**		**136**		**265**		**276**	**772**

Notes:
VOC Volatile Organic Compound.

TABLE 5.3

EXTRACTION WELL EW-3
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	99,726	gallons
2nd Quarter	104,784	gallons
3rd Quarter	90,147	gallons
4th Quarter	94,114	gallons
Total	**388,771**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	12	0.0	10	0.0	0	0.0	17	0.0	0
Carbon disulfide	1,700	1.4	2,400	2.1	1,400	1.1	4,500	3.5	8
Carbon tetrachloride	1,500	1.2	1,400	1.2	980	0.7	1,300	1.0	4
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	3,800	3.2	1,900	1.7	1,700	1.3	1,700	1.3	7
Methylene chloride	120	0.1	140	0.1	130	0.1	140	0.1	0
Tetrachloroethene	85	0.1	71	0.1	52	0.0	62	0.0	0
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	160	0.1	160	0.1	160	0.1	190	0.1	1
Total VOC Removal		**6**		**5**		**3**		**6**	**21**

Notes:
VOC Volatile Organic Compound.

TABLE 5.4

EXTRACTION WELL EW-4
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	87,788	gallons
2nd Quarter	85,030	gallons
3rd Quarter	79,560	gallons
4th Quarter	83,395	gallons
Total	**335,772**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass Removal*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*(lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	1
Carbon disulfide	29	0.0	11	0.0	13	0.0	45	0.0	0
Carbon tetrachloride	910	0.7	0	0.0	140	0.1	460	0.3	1
Chlorobenzene	1,400	1.0	11	0.0	27	0.0	210	0.1	1
Chloroform	6,400	4.7	370	0.3	3,300	2.2	11,000	7.7	15
Methylene chloride	170	0.1	220	0.2	71	0.0	390	0.3	1
Tetrachloroethene	240	0.2	200	0.1	59	0.0	310	0.2	1
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	97	0.1	35	0.0	22	0.0	160	0.1	0
Total VOC Removal		**6.8**		**0.6**		**2.4**		**8.7**	**19**

Notes:
VOC Volatile Organic Compound.

TABLE 5.5

EXTRACTION WELL EW-5
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	1,796,309	gallons
2nd Quarter	1,249,756	gallons
3rd Quarter	1,563,068	gallons
4th Quarter	179,385	gallons
Total	**4,788,518**	**gallons**

	1st Quarter		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
Compound	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	230	3.4	510	5.3	150	2.0	25	0.0	11
Carbon tetrachloride	1,400	21.0	590	6.1	1,200	15.6	4,900	7.3	50
Chlorobenzene	0	0.0	0	0.0	0	0.0	3	0.0	0
Chloroform	1,000	15.0	180	1.9	860	11.2	330	0.5	29
Methylene chloride	36	0.5	0	0.0	37	0.5	27	0.0	1
Tetrachloroethene	150	2.2	170	1.8	78	1.0	69	0.1	5
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	28	0.4	23	0.2	24	0.3	0	0.0	1
Total VOC Removal		**42.6**		**15.4**		**30.6**		**8.0**	**97**

Notes:
VOC Volatile Organic Compound.

TABLE 5.6

EXTRACTION WELL EW-6
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	70,589	gallons
2nd Quarter	325,995	gallons
3rd Quarter	124,999	gallons
4th Quarter	173,861	gallons
Total	**695,444**	**gallons**

	1st Quarter		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
Compound	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	420	0.2	750	2.0	410	0.4	910	1.3	4
Carbon tetrachloride	20,000	11.8	22,000	59.8	28,000	29.2	45,000	65.3	166
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	11,000	6.5	4,600	12.5	8,200	8.5	12,000	17.4	45
Methylene chloride	360	0.2	100	0.3	170	0.2	260	0.4	1
Tetrachloroethene	350	0.2	190	0.5	280	0.3	460	0.7	2
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	120	0.1	66	0.2	0	0.0	0	0.0	0
Total VOC Removal		**19.0**		**75.3**		**38.6**		**85.0**	**218**

Notes:
VOC Volatile Organic Compound.

TABLE 5.7

DUAL-PHASE AREA A WELL DPA-201
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	5,836	gallons
2nd Quarter	32,815	gallons
3rd Quarter	17,034	gallons
4th Quarter	21,988	gallons
Total	**77,673**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass Removal*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*(lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Carbon disulfide	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Carbon tetrachloride	4,300	0.0	1,700	0.5	1,300	0.0	1,400	0.0	0.5
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Chloroform	2,000	0.0	730	0.2	1,100	0.0	910	0.0	0.2
Methylene chloride	45	0.0	26	0.0	0	0.0	17	0.0	0.0
Tetrachloroethene	1,900	0.0	760	0.2	1,400	0.0	780	0.0	0.2
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Trichloroethene	980	0.0	460	0.1	1,200	0.0	1,300	0.0	0.1
Total VOC Removal		**0.0**		**1.0**		**0.0**		**0.0**	**1.0**

Notes:

VOC Volatile Organic Compound.

TABLE 5.8

DUAL-PHASE AREA A WELL DPA-202
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	38,995	gallons
2nd Quarter	40,946	gallons
3rd Quarter	28,874	gallons
4th Quarter	36,270	gallons
Total	**145,085**	**gallons**

	1st Quarter		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
Compound	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	910	0.3	1,000	0.3	2,100	0.5	1,000	0.3	1
Carbon tetrachloride	94,000	30.6	88,000	30.1	110,000	26.5	140,000	42.3	129
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	19,000	6.2	13,000	4.4	20,000	4.8	18,000	5.4	21
Methylene chloride	0	0.0	0	0.0	0	0.0	0	0.0	0
Tetrachloroethene	1,900	0.6	1,400	0.5	1,600	0.4	2,500	0.8	2
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Total VOC Removal		**37.7**		**35.3**		**32.2**		**48.9**	**154**

Notes:
VOC Volatile Organic Compound.

TABLE 5.9

DUAL-PHASE AREA A WELL DPA-203
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	4,253	gallons
2nd Quarter	5,773	gallons
3rd Quarter	5,287	gallons
4th Quarter	2,707	gallons
Total	**18,020**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass Removal*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*(lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	6,600	0.2	5,600	0.3	9,200	0.0	8,800	0.2	1
Carbon tetrachloride	230,000	8.2	210,000	10.1	270,000	0.0	350,000	7.9	26
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	53,000	1.9	43,000	2.1	63,000	0.0	64,000	1.4	5
Methylene chloride	0	0.0	0	0.0	0	0.0	0	0.0	0
Tetrachloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Total VOC Removal		**10.3**		**12.5**		**0.0**		**9.5**	**32**

Notes:
VOC Volatile Organic Compound.
Dry Well dry, no sample collected

TABLE 5.10

EXTRACTION WELL OW-3
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	24,047	gallons
2nd Quarter	22,580	gallons
3rd Quarter	36,086	gallons
4th Quarter	12,182	gallons
Total	**94,895**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass Removal*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*(lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	770,000	154.4	1,500,000	282.5	750,000	225.7	940,000	95.5	758
Carbon tetrachloride	92,000	18.5	100,000	18.8	58,000	17.5	120,000	12.2	67
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	34,000	6.8	31,000	5.8	21,000	6.3	27,000	2.7	22
Methylene chloride	0	0.0	0	0.0	0	0.0	0	0.0	0
Tetrachloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Total VOC Removal		**179.7**		**307.1**		**249.5**		**110.4**	**847**

Notes:
VOC Volatile Organic Compound.

TABLE 5.11

EXTRACTION WELL LR-66
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	8,673	gallons
2nd Quarter	26,060	gallons
3rd Quarter	16,142	gallons
4th Quarter	25,670	gallons
Total	**76,545**	**gallons**

Compound	*1st Quarter*		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass Removal*
	Conc. (ug/L)	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*(lbs/yr)*
Benzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Carbon disulfide	0	0.0	61	0.0	0	0.0	79	0.0	0
Carbon tetrachloride	4,900	0.4	4,200	0.9	2,900	0.4	4,300	0.9	3
Chlorobenzene	0	0.0	0	0.0	0	0.0	0	0.0	0
Chloroform	540	0.0	470	0.1	330	0.0	400	0.1	0
Methylene chloride	62	0.0	0	0.0	0	0.0	0	0.0	0
Tetrachloroethene	89	0.0	98	0.0	0	0.0	78	0.0	0
Toluene	0	0.0	0	0.0	0	0.0	0	0.0	0
Trichloroethene	0	0.0	0	0.0	0	0.0	0	0.0	0
Total VOC Removal		**0.4**		**1.0**		**0.4**		**1.0**	**3**

Notes:
VOC Volatile Organic Compound.

TABLE 5.12
AREA A KNOCKOUT POT AND SUMP
LIQUID-PHASE MASS LOADINGS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Flow Rates:

1st Quarter	239,144	gallons
2nd Quarter	563,401	gallons
3rd Quarter	35,248	gallons
4th Quarter	247,680	gallons
Total	**1,085,473**	**gallons**

	1st Quarter		*2nd Quarter*		*3rd Quarter*		*4th Quarter*		*Total Mass*
Compound	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Conc. (ug/L)*	*Mass (lbs)*	*Removal (lbs/yr)*
Benzene	0	0.00	0	0.00	0	0.00	0	0.00	0.0
Carbon disulfide	0	0.00	0	0.00	0	0.00	0	0.00	0.0
Carbon tetrachloride	120	0.24	14	0.07	13	0.00	17	0.04	0.3
Chlorobenzene	0	0.00	0	0.00	0	0.00	0	0.00	0.0
Chloroform	52	0.10	10	0.05	11.0	0.00	11	0.02	0.2
Methylene chloride	0	0.00	0	0.00	0	0.00	0	0.00	0.0
Tetrachloroethene	3.9	0.01	0.0	0.00	2.7	0.00	2.4	0.00	0.0
Toluene	0	0.00	0	0.00	0	0.00	0	0.00	0.0
Trichloroethene	0	0.00	0	0.00	1.1	0.00	0.0	0.00	0.0
Total VOC Removal		**0.4**		**0.1**		**0.0**		**0.1**	**0.5**

Notes:

VOC Volatile Organic Compound.

TABLE 7.1

2011 MEASURED GROUNDWATER ELEVATIONS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Well I.D.	*February 2011*	*May 2011*	*August 2011*	*December 2011*
Extraction Wells				
DPA-201	579.14	579.04	577.04	579.09
DPA-202	578.99	580.13	578.7	587.26
DPA-203	581.57	578.61	576.88	583.05
T-4	572.47	573.37	570.39	573.4
EW-1	446	447	444	NM
EW-2	460	458	459	458
EW-3	468	466	476	468
EW-4	524.96	541.5	524.71	525.57
EW-5	536.29	539.14	537.2	533.99
EW-6	544.63	540	549.45	550.23
OW-3	494.1	492.18	>111.50	>112.00
LR-66	NM	NM	NM	NM
Upper Lockport Wells				
W-16	578.14	578.2	578.98	578.36
W-17	583.8	585.01	583.75	585.38
W-18R	573.53	573.62	573.55	573.74
W-19D	582.58	583.51	571.38	581.91
W-20	575.43	575.92	572.71	576.97
W-22A	Dry	577.91	Dry	Dry
W-23C	578.8	579.46	577.51	579.5
W-66	569.99	570.73	569.37	570.5
W-67	592.57	595.01	588.71	596.37
OW-11	559.66	560.27	557.09	559.28

TABLE 7.1

2011 MEASURED GROUNDWATER ELEVATIONS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Well I.D.	*February 2011*	*May 2011*	*August 2011*	*December 2011*
Lower Lockport Wells				
W-16L	550.57	554.24	549.27	552.85
W-18L	550.04	553.13	551.69	548.68
W-19A	558.63	558.63	558.6	558.59
W-23B	555.71	555.73	555.75	555.75
W-48E	549.41	553.48	552.93	Dry
W-50	558.96	560.54	556.15	559.7
W-60L	Dry	Dry	Dry	555.03
W-65	551.54	554.15	549	542.8
W-66L	552.7	556.18	551.67	553.32
W-67L	554.89	557.51	552.36	555.96
W-70L	551.05	554.33	547.86	541.03
Lockport/Rochester Wells				
W-19B	550.89	554.63	555	546.5
LR-2	549.82	553.55	551.02	549.42
LR-16	550.71	554.37	549.33	552.98
LR-20	554.7	557.79	552.57	555.29
LR-48	549.39	553.3	552.97	546.06
LR-49	550.53	554.51	552.28	549.5
LR-50	559.29	561.16	556.63	559.85
LR-51	550.76	554	552.85	546.21
LR-61	551.75	555.24	553.3	551.32
LR-62	554.68	554.38	552.41	549.71
LR-67	552.71	555.68	551.22	553.08
LR-69	504.39	506.16	504.56	502.75
OW-5	556.44	558.61	554.64	555.56

TABLE 7.1

2011 MEASURED GROUNDWATER ELEVATIONS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Well I.D.	*February 2011*	*May 2011*	*August 2011*	*December 2011*
Rochester Wells				
R-16	519.47	527.66	511.8	487.25
R-19	544.79	541.39	544.73	534.75
R-48	514.12	517.39	518.14	517.35
R-50	506.18	504.06	497.8	502.8
R-60	502.66	505.52	505.23	512.32
R-61	535.51	530.28	536.57	530.32
R-62	545.28	543.02	541.72	535.78
R-66	451.02	452.38	450.53	449.05
R-67	541.16	537.99	537.74	532.94
R-68	495.56	495.97	495.45	504.26

Notes:

Ft. msl	Feet, Mean Sea Level
NM	Not measured

TABLE 7.2

MONITORING AND EXTRACTION WELLS BY WATER BEARING ZONE
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Upper Lockport	*Lower Lockport*	*Lockport/Rochester*	*Rochester*
Well ID	*Well ID*	*Well ID*	*Well ID*
OW-11	W-16L	LR-2	B-02
T-4	W-18L	LR-16	R-16
W-16	W-19A	LR-20	R-19
W-17	W-23B	LR-48	R-48
W-18R	W-48E	LR-49	R-50
W-19D	W-50	LR-50	R-51
W-20	W-60L	LR-51	R-60
W-22A	W-65	LR-61	R-61
W-23C	W-66L	LR-62	R-62
W-66	W-67L	LR-67	R-66
W-67	W-70L	LR-69	R-67
DPA-201	EW-1	OW-5	R-68
DPA-202	EW-2	W-19B	EW-1
DPA-203	EW-3	LR-66	EW-2
EW-4	EW-4	EW-1	EW-3
EW-5	EW-5	EW-2	OW-3
EW-6	EW-6	EW-3	

TABLE 9.1
COMPOUND-SPECIFIC SSPL REMOVAL
AREA A SVE SYSTEM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2000-2011

SSPL Compound	*2000*		*2001*		*2002*		*2003*		*2004*		*2005*	
	Lbs. Removed	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*
Benzene	0	0	0	0	0	0	0	0	0	0	0	0
Carbon disulfide	0	0	0	0	0	0	0	0	1	0	1	0
Carbon tetrachloride	43	28	33	21	1,154	96	801	85	198	87	1,782	91
Chlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0
Chloroform	11	7	16	10	43	4	68	7	18	8	95	5
Methylene chloride	13	8	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	75	49	105	68	10	1	68	7	8	4	75	4
Toluene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	11	7	0	0	0	0	0	0	3	1	1	0
Total:	**153**		**154**		**1,207**		**937**		**228**		**1,954**	

SSPL Compound	*2006*		*2007*		*2008*		*2009*		*2010*		*2011*	
	Lbs. Removed	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*
Benzene	0	0	0	0	0	0	0	0	0	0	0	0
Carbon disulfide	3	0	0	0	0	0	1	1	2	1	0	0
Carbon tetrachloride	1,536	90	2,132	91	442	87	94	87	227	90	240	83
Chlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0
Chloroform	98	6	93	4	32	6	7	7	14	6	33	11
Methylene chloride	2	0	0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	62	4	110	5	28	6	5	5	7	3	10	4
Toluene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	11	0	13	1	4	1	1	1	1	0	6	2
Total:	**1,712**		**2,349**		**507**		**108**		**251**		**289**	

TABLE 9.2

EXTRACTION WELL SUMMARY
TOTAL VOLUME OF GROUNDWATER EXTRACTED
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Volume Pumped by Extraction Wells (Gallons/Year)												
Period	***EW-1***	***EW-2***	***EW-3***	***EW-4***	***EW-5***	***EW-6***	***DPA-201***	***DPA-202***	***DPA-203***	***OW-3***	***LR-66***	***KO Pot***	***Site Total***
First Quarter	316,273	1,159,217	99,726	87,788	1,796,309	70,589	5,836	38,995	4,253	24,047	8,673	239,144	3,850,850
Second Quarter	319,407	1,227,333	104,784	85,030	1,249,756	325,995	32,815	40,946	5,773	22,580	26,060	563,401	4,003,880
Third Quarter	310,689	1,078,530	90,147	79,560	1,563,068	124,999	17,034	28,874	5,287	36,086	16,142	35,248	3,385,664
Fourth Quarter	171,881	1,021,160	94,114	83,395	179,385	173,861	21,988	36,270	2,707	12,182	25,670	247,680	2,070,293
Total Gallons:	**1,118,250**	**4,486,240**	**388,771**	**335,772**	**4,788,518**	**695,444**	**77,673**	**145,085**	**18,020**	**94,895**	**76,545**	**1,085,473**	**13,310,686**

TABLE 9.3

EXTRACTION WELL SUMMARY
TOTAL MASS REMOVAL BY GROUNDWATER EXTRACTION
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Total Mass Removal (Lbs/Year)												
Compound	***EW-1***	***EW-2***	***EW-3***	***EW-4***	***EW-5***	***EW-6***	***DPA-201***	***DPA-202***	***DPA-203***	***OW-3***	***LR-66***	***KO Pot***	***Site Total***
Benzene	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbon disulfide	260	467	8	0	11	4	0	1	1	758	0	0	1,510
Carbon tetrachloride	56	249	4	1	50	166	0	129	26	67	3	0	753
Chlorobenzene	0	0	0	1	0	0	0	0	0	0	0	0	2
Chloroform	20	51	7	15	29	45	0	21	5	22	0	0	216
Methylene chloride	1	2	0	1	1	1	0	0	0	0	0	0	7
Tetrachloroethene	0	2	0	1	5	2	0	2	0	0	0	0	12
Toluene	1	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	0	1	0	1	0	0	0	0	0	0	0	2
Total VOC Removal	**338**	**772**	**21**	**19**	**97**	**218**	**1**	**154**	**32**	**847**	**3**	**1**	**2,502**

Notes:
VOC Volatile Organic Compound.

TABLE 9.4

COMPOUND-SPECIFIC SSPL REMOVAL
GROUNDWATER EXTRACTION SYSTEM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2000-2011

SSPL Compound	*2000*		*2001*		*2002*		*2003*		*2004*		*2005*	
	Lbs. Removed	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*
Benzene	0	0	0	0	0	0	0	0	0	0	0	0
Carbon disulfide	1,815	29	3,741	36	1,481	23	2,185	33	2,311	47	2,611	53
Carbon tetrachloride	3,433	55	4,769	46	3,981	62	3,615	54	2,113	43	1,771	36
Chlorobenzene	6	0	3	0	1	0	3	0	1	0	2	0
Chloroform	903	15	1,707	17	874	14	835	12	482	10	461	9
Methylene chloride	0	0	0	0	0	0	8	0	6	0	14	0
Tetrachloroethene	39	1	47	0	36	1	57	1	36	1	33	1
Toluene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	1	0	2	0	1	0	7	0	5	0	7	0
Total:	**6,197**		**10,269**		**6,374**		**6,710**		**4,954**		**4,899**	

SSPL Compound	*2006*		*2007*		*2008*		*2009*		*2010*		*2011*	
	Lbs. Removed	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*	*Lbs. Removed*	*% of Total*
Benzene	0	0	0	0	0	0	0	0	0	0	0	0
Carbon disulfide	1,664	47	1,954	53	2,109	44	1,182	43	1,554	60	1,510	60
Carbon tetrachloride	1,420	40	1,278	35	1,998	42	1,147	42	731	28	753	30
Chlorobenzene	1	0	1	0	2	0	7	0	2	0	2	0
Chloroform	401	11	400	11	605	13	387	14	257	10	216	9
Methylene chloride	11	0	14	0	15	0	10	0	9	0	7	0
Tetrachloroethene	17	1	20	1	42	1	18	1	20	1	12	0
Toluene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	3	0	5	0	19	0	3	0	3	0	2	0
Total:	**3,517**		**3,672**		**4,790**		**2,754**		**2,575**		**2,501**	

TABLE 9.5
COMPOUND-SPECIFIC SSPL REMOVAL
SITE REMEDIAL SYSTEMS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2001-2011

Pounds Removed Per Year

SSPL Compound	*2001*		*2002*		*2003*		*2004*		*2005*		*2006*	
	SVE Systems	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*
Benzene	0	0	0	0	0	0	0	0	0	0	0	0
Carbon disulfide	0	3,741	0	1,481	0	2,185	1	2,311	1	2,611	3	1,664
Carbon tetrachloride	33	4,769	1,154	3,981	801	3,615	198	2,113	1,782	1,771	1,536	1,420
Chlorobenzene	0	3	0	1	0	3	0	1	0	2	0	1
Chloroform	16	1,707	43	874	68	835	18	482	95	461	98	401
Methylene chloride	0	0	0	0	0	8	0	6	0	14	2	11
Tetrachloroethene	105	47	10	36	68	57	8	36	75	33	62	17
Toluene	0	0	0	0	0	0	0	0	0	0	0	0
Trichloroethene	0	2	0	1	0	7	3	5	1	7	11	3
Total:	**154**	**10,269**	**1,207**	**6,374**	**937**	**6,710**	**228**	**4,954**	**1,954**	**4,899**	**1,712**	**3,517**

SSPL Compound	*2007*		*2008*		*2009*		*2010*		*2011*		*Cumulative Compound Total*	*% of Total*
	SVE Systems	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*	*SVE Systems*	*GW*		
Benzene	0	0	0	0	0	0	0	0	0	0	**0**	0
Carbon disulfide	0	1954	0	2109	1	1182	2	1554	0	1510	**22,311**	36
Carbon tetrachloride	2,132	1278	442	1998	94	1147	227	731	240	753	**32,215**	51
Chlorobenzene	0	1	0	2	0	7	0	2	0	2	**25**	0
Chloroform	93	400	32	605	7	387	14	257	33	216	**7,142**	11
Methylene chloride	0	14	0	15	0	10	0	9	0	7	**95**	0
Tetrachloroethene	110	20	28	42	5	18	7	20	10	12	**827**	1
Toluene	0	0	0	0	0	0	0	0	0	0	**0**	0
Trichloroethene	13	5	4	19	1	3	1	3	6	2	**96**	0
Total:	**2,349**	**3,672**	**507**	**4,790**	**108**	**2,754**	**251**	**2,575**	**289**	**2,501**	**62,710**	100

Notes:
GW Groundwater extraction system.

APPENDIX A

SOIL VAPOR EXTRACTION SYSTEM
2011 PROCESS MONITORING DATA

TABLE A-1
ANALYTICAL RESULTS SUMMARY
FIRST QUARTER 2011 - AREA A INFLUENT VAPOR SAMPLING
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Sample Location:		*HEADER 1*	*HEADER 2*	*HEADER 3*	*HEADER 4*	*MAIN SYSTEM*
Sample ID:		*H1-032911-DO*	*H2-032511-DO*	*H3-032511-DO*	*H4-032511-DO*	*TOT-032911-DO*
Sample Date:		*3/29/2011*	*3/25/2011*	*3/25/2011*	*3/25/2011*	*3/29/2011*
Volatile Organic Compounds	***Units***					
1,1,1-Trichloroethane	ppbv	4.2	ND 9	ND 12	ND 1.8	ND 18
1,1,2,2-Tetrachloroethane	ppbv	ND 0.19	ND 1.8	ND 2.4	ND 0.35	ND 3.6
1,1,2-Trichloroethane	ppbv	ND 0.95	ND 9	ND 12	ND 1.8	ND 18
1,1-Dichloroethane	ppbv	2.5	ND 9.1	ND 12	ND 1.8	ND 18
1,1-Dichloroethene	ppbv	ND 0.95	ND 9.1	ND 12	ND 1.8	ND 18
1,2-Dibromoethane (Ethylene dibromide)	ppbv	ND 0.19	ND 1.8	ND 2.4	ND 0.35	ND 3.6
1,2-Dichlorobenzene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
1,2-Dichloroethane	ppbv	ND 0.96	ND 9.1	ND 12	ND 1.8	ND 18
1,2-Dichloropropane	ppbv	ND 0.95	ND 9.1	ND 12	ND 1.8	ND 18
1,3-Dichlorobenzene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
1,4-Dichlorobenzene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
2-Hexanone	ppbv	ND 0.94	ND 9	ND 12	ND 1.7	ND 18
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
Acetone	ppbv	ND 18	ND 170	ND 230	ND 34	ND 350
Benzene	ppbv	ND 0.94	ND 9	ND 12	ND 1.7	ND 18
Bromodichloromethane	ppbv	ND 0.19	ND 1.8	ND 2.4	ND 0.36	ND 3.7
Bromoform	ppbv	ND 0.95	ND 9	ND 12	ND 1.8	ND 18
Bromomethane (Methyl bromide)	ppbv	ND 0.95	ND 9.1	ND 12	ND 1.8	ND 18
Carbon disulfide	ppbv	1.8	ND 9	ND 12	ND 1.7	ND 18
Carbon tetrachloride	ppbv	82	470	820	210	1200
Chlorobenzene	ppbv	ND 0.95	ND 9.1	ND 12	ND 1.8	ND 18
Chloroethane	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
Chloroform (Trichloromethane)	ppbv	34	64	89	96	120
Chloromethane (Methyl chloride)	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
cis-1,2-Dichloroethene	ppbv	3.7	ND 9.1	ND 12	27	ND 18
cis-1,3-Dichloropropene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
Dibromochloromethane	ppbv	ND 0.19	ND 1.8	ND 2.4	ND 0.36	ND 3.7
Ethylbenzene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
m&p-Xylenes	ppbv	ND 3.8	ND 36	ND 48	ND 7	ND 72
Methyl tert butyl ether (MTBE)	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
Methylene chloride	ppbv	ND 0.94	ND 9	ND 12	ND 1.7	ND 18
o-Xylene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
Styrene	ppbv	ND 1.9	ND 18	ND 24	ND 3.5	ND 36
Tetrachloroethene	ppbv	12	14	40	44	33
Toluene	ppbv	ND 0.94	ND 8.9	ND 12	ND 1.7	ND 18
trans-1,2-Dichloroethene	ppbv	ND 0.95	ND 9.1	ND 12	3.1	ND 18
trans-1,3-Dichloropropene	ppbv	ND 0.95	ND 9	ND 12	ND 1.8	ND 18
Trichloroethene	ppbv	2.8	ND 0.92	6.1	35	6.9
Trichlorofluoromethane (CFC-11)	ppbv	ND 0.95	ND 9.1	ND 12	ND 1.8	ND 18
Trifluorotrichloroethane (Freon 113)	ppbv	ND 0.19	ND 1.8	ND 2.4	ND 0.35	ND 3.6
Vinyl acetate	ppbv	ND 12	ND 120	ND 160	ND 23	ND 230
Vinyl chloride	ppbv	0.62	ND 1.9	ND 2.6	4	ND 3.8
Total VOCs		**144**	**548**	**955**	**419**	**1360**

Notes:
ND - Not present at or above the associated value.

TABLE A-2
ANALYTICAL RESULTS SUMMARY
SECOND QUARTER 2011 - AREA A INFLUENT VAPOR SAMPLING
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK

Sample Location:		*HEADER 1*	*HEADER 2*	*HEADER 3*	*HEADER 4*	*MAIN SYSTEM*
Sample ID:		*H1-051911-DO*	*H2-051911-DO*	*H3-051911-DO*	*H4-051911-DO*	*TOT-051911-DO*
Sample Date:		*5/19/2011*	*5/19/2011*	*5/19/2011*	*5/19/2011*	*5/19/2011*
Volatile Organic Compounds	***Units***					
1,1,1-Trichloroethane	ppbv	11	ND 12	ND 66	ND 57	ND 15
1,1,2,2-Tetrachloroethane	ppbv	ND 0.81	ND 2.5	ND 13	ND 11	ND 3
1,1,2-Trichloroethane	ppbv	ND 4.1	ND 12	ND 66	ND 57	ND 15
1,1-Dichloroethane	ppbv	6	ND 13	ND 66	ND 58	ND 15
1,1-Dichloroethene	ppbv	ND 4.1	ND 13	ND 66	ND 58	ND 15
1,2-Dibromoethane (Ethylene dibromide)	ppbv	ND 0.82	ND 2.5	ND 13	ND 12	ND 3.1
1,2-Dichlorobenzene	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 30
1,2-Dichloroethane	ppbv	ND 4.1	ND 13	ND 66	ND 58	ND 15
1,2-Dichloropropane	ppbv	ND 4.1	ND 13	ND 66	ND 57	ND 15
1,3-Dichlorobenzene	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 30
1,4-Dichlorobenzene	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 30
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 31
2-Hexanone	ppbv	ND 4.1	ND 12	ND 66	ND 57	ND 15
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 30
Acetone	ppbv	ND 78	ND 240	ND 1300	ND 1100	ND 290
Benzene	ppbv	ND 4.1	ND 12	ND 65	ND 57	ND 15
Bromodichloromethane	ppbv	ND 0.83	ND 2.5	ND 13	ND 12	ND 3.1
Bromoform	ppbv	ND 4.1	ND 13	ND 66	ND 57	ND 15
Bromomethane (Methyl bromide)	ppbv	ND 4.1	ND 13	ND 66	ND 58	ND 15
Carbon disulfide	ppbv	ND 4.1	13	ND 65	ND 57	ND 15
Carbon tetrachloride	ppbv	420	1400	6000	3700	1900
Chlorobenzene	ppbv	ND 4.1	ND 13	ND 66	ND 58	ND 15
Chloroethane	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 30
Chloroform (Trichloromethane)	ppbv	89	200	610	900	220
Chloromethane (Methyl chloride)	ppbv	ND 8.1	ND 25	ND 130	ND 110	ND 30
cis-1,2-Dichloroethene	ppbv	8.3	ND 13	ND 66	100	ND 15
cis-1,3-Dichloropropene	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 31
Dibromochloromethane	ppbv	ND 0.83	ND 2.5	ND 13	ND 12	ND 3.1
Ethylbenzene	ppbv	ND 8.1	ND 25	ND 130	ND 110	ND 30
m&p-Xylenes	ppbv	ND 16	ND 50	ND 260	ND 230	ND 61
Methyl tert butyl ether (MTBE)	ppbv	ND 8.1	ND 25	ND 130	ND 110	ND 30
Methylene chloride	ppbv	ND 4.1	ND 12	ND 65	ND 57	ND 15
o-Xylene	ppbv	ND 8.1	ND 25	ND 130	ND 110	ND 30
Styrene	ppbv	ND 8.2	ND 25	ND 130	ND 110	ND 31
Tetrachloroethene	ppbv	25	54	190	180	63
Toluene	ppbv	ND 4	ND 12	ND 65	ND 57	ND 15
trans-1,2-Dichloroethene	ppbv	ND 4.1	ND 13	ND 66	ND 58	ND 15
trans-1,3-Dichloropropene	ppbv	ND 4.1	ND 13	ND 66	ND 57	ND 15
Trichloroethene	ppbv	5.9	3.1	45	190	15
Trichlorofluoromethane (CFC-11)	ppbv	ND 4.1	ND 13	ND 66	ND 57	ND 15
Trifluorotrichloroethane (Freon 113)	ppbv	ND 0.82	ND 2.5	ND 13	ND 12	ND 3.1
Vinyl acetate	ppbv	ND 53	ND 160	ND 850	ND 740	ND 200
Vinyl chloride	ppbv	1.9	ND 2.7	ND 14	12	ND 3.3
Total VOCs		**567**	**1670**	**6845**	**5082**	**2198**

Notes:
ND - Not present at or above the associated value.

TABLE A-3
ANALYTICAL RESULTS SUMMARY
THIRD QUARTER 2011 - AREA A INFLUENT VAPOR SAMPLING
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK

Sample Location:		*HEADER 1*	*HEADER 2*	*HEADER 3*	*HEADER 4*	*MAIN SYSTEM*
Sample ID:		*H1-090811-DJO*	*H2-090811-DJO*	*H3-090811-DJO*	*H4-090811-DJO*	*TOT-090811-DJO*
Sample Date:		*9/8/2011*	*9/8/2011*	*9/8/2011*	*9/8/2011*	*9/8/2011*
Volatile Organic Compounds	*Units*					
1,1,1-Trichloroethane	ppbv	ND 46	ND 96	ND 64	ND 65	ND 57
1,1,2,2-Tetrachloroethane	ppbv	ND 9.1	ND 19	ND 13	ND 13	ND 11
1,1,2-Trichloroethane	ppbv	ND 46	ND 96	ND 64	ND 65	ND 57
1,1-Dichloroethane	ppbv	ND 46	ND 97	ND 65	ND 65	ND 58
1,1-Dichloroethene	ppbv	ND 46	ND 97	ND 65	ND 65	ND 58
1,2-Dibromoethane (Ethylene dibromide)	ppbv	ND 9.2	ND 19	ND 13	ND 13	ND 12
1,2-Dichlorobenzene	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
1,2-Dichloroethane	ppbv	ND 46	ND 97	ND 65	ND 65	ND 58
1,2-Dichloropropane	ppbv	ND 46	ND 97	ND 64	ND 65	ND 57
1,3-Dichlorobenzene	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
1,4-Dichlorobenzene	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
2-Hexanone	ppbv	ND 46	ND 96	ND 64	ND 64	ND 57
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
Acetone	ppbv	ND 880	ND 1800	ND 1200	ND 1200	ND 1100
Benzene	ppbv	ND 46	ND 96	ND 64	ND 64	ND 57
Bromodichloromethane	ppbv	ND 9.3	ND 20	ND 13	ND 13	ND 12
Bromoform	ppbv	ND 46	ND 97	ND 64	ND 65	ND 57
Bromomethane (Methyl bromide)	ppbv	ND 46	ND 97	ND 65	ND 65	ND 58
Carbon disulfide	ppbv	ND 46	ND 96	ND 64	ND 64	ND 57
Carbon tetrachloride	ppbv	2300	7800	3100	4200	3700
Chlorobenzene	ppbv	ND 46	ND 97	ND 65	ND 65	ND 58
Chloroethane	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
Chloroform (Trichloromethane)	ppbv	320	740	490	1000	900
Chloromethane (Methyl chloride)	ppbv	ND 91	ND 190	ND 130	ND 130	ND 110
cis-1,2-Dichloroethene	ppbv	ND 46	ND 97	ND 65	ND 65	100
cis-1,3-Dichloropropene	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
Dibromochloromethane	ppbv	ND 9.3	ND 20	ND 13	ND 13	ND 12
Ethylbenzene	ppbv	ND 91	ND 190	ND 130	ND 130	ND 110
m&p-Xylenes	ppbv	ND 180	ND 380	ND 260	ND 260	ND 230
Methyl tert butyl ether (MTBE)	ppbv	ND 91	ND 190	ND 130	ND 130	ND 110
Methylene chloride	ppbv	ND 46	ND 96	ND 64	ND 64	ND 57
o-Xylene	ppbv	ND 91	ND 190	ND 130	ND 130	ND 110
Styrene	ppbv	ND 92	ND 190	ND 130	ND 130	ND 110
Tetrachloroethene	ppbv	48	230	540	120	180
Toluene	ppbv	ND 45	ND 95	ND 63	ND 64	ND 57
trans-1,2-Dichloroethene	ppbv	ND 46	ND 97	ND 65	ND 65	ND 58
trans-1,3-Dichloropropene	ppbv	ND 46	ND 96	ND 64	ND 65	ND 57
Trichloroethene	ppbv	ND 4.7	ND 9.8	80	33	190
Trichlorofluoromethane (CFC-11)	ppbv	ND 46	ND 97	ND 64	ND 65	ND 57
Trifluorotrichloroethane (Freon 113)	ppbv	ND 9.3	ND 19	ND 13	ND 13	ND 12
Vinyl acetate	ppbv	ND 590	ND 1200	ND 830	ND 830	ND 740
Vinyl chloride	ppbv	ND 9.8	ND 21	ND 14	ND 14	12
Total VOCs		**2668**	**8770**	**4210**	**5353**	**5082**

Notes:
ND - Not present at or above the associated value.

TABLE A-4
ANALYTICAL RESULTS SUMMARY
FOURTH QUARTER 2011 - AREA A INFLUENT VAPOR SAMPLING
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK

Sample Location:		*HEADER 1*	*HEADER 2*	*HEADER 3*	*HEADER 4*	*MAIN SYSTEM*
Sample ID:		*H1-122211-DO*	*H2-122211-DO*	*H3-122211-DO*	*H4-122211-DO*	*TOT-122211-DO*
Sample Date:		*12/22/2011*	*12/22/2011*	*12/22/2011*	*12/22/2011*	*12/22/2011*
Volatile Organic Compounds	***Units***					
1,1,1-Trichloroethane	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
1,1,2,2-Tetrachloroethane	ppbv	ND 0.037	ND 1.1	ND 2.9	ND 2.6	ND 0.53
1,1,2-Trichloroethane	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
1,1-Dichloroethane	ppbv	ND 0.19	ND 5.4	ND 15	ND 13	ND 2.7
1,1-Dichloroethene	ppbv	ND 0.19	ND 5.4	ND 15	ND 13	ND 2.7
1,2-Dibromoethane (Ethylene dibromide)	ppbv	ND 0.038	ND 1.1	ND 2.9	ND 2.6	ND 0.54
1,2-Dichlorobenzene	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.3
1,2-Dichloroethane	ppbv	ND 0.19	ND 5.4	ND 15	ND 13	ND 2.7
1,2-Dichloropropane	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
1,3-Dichlorobenzene	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.3
1,4-Dichlorobenzene	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.3
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	1.3	ND 11	ND 29	ND 26	ND 5.4
2-Hexanone	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.4
Acetone	ppbv	4.6	ND 100	ND 280	ND 250	ND 51
Benzene	ppbv	0.44	ND 5.3	ND 14	ND 13	ND 2.7
Bromodichloromethane	ppbv	ND 0.038	ND 1.1	ND 2.9	ND 2.7	ND 0.55
Bromoform	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
Bromomethane (Methyl bromide)	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
Carbon disulfide	ppbv	9	ND 5.3	ND 14	ND 13	8
Carbon tetrachloride	ppbv	53	420	890	700	220
Chlorobenzene	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
Chloroethane	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.4
Chloroform (Trichloromethane)	ppbv	6	44	120	290	37
Chloromethane (Methyl chloride)	ppbv	0.62	ND 11	ND 28	ND 26	ND 5.3
cis-1,2-Dichloroethene	ppbv	ND 0.19	ND 5.4	ND 15	27	ND 2.7
cis-1,3-Dichloropropene	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.4
Dibromochloromethane	ppbv	ND 0.038	ND 1.1	ND 2.9	ND 2.7	ND 0.54
Ethylbenzene	ppbv	ND 0.37	ND 11	ND 29	ND 26	ND 5.3
m&p-Xylenes	ppbv	ND 0.75	ND 21	ND 57	ND 52	ND 11
Methyl tert butyl ether (MTBE)	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.3
Methylene chloride	ppbv	ND 0.19	ND 5.3	ND 14	ND 13	ND 2.7
o-Xylene	ppbv	ND 0.37	ND 11	ND 29	ND 26	ND 5.3
Styrene	ppbv	ND 0.38	ND 11	ND 29	ND 26	ND 5.4
Tetrachloroethene	ppbv	1	10	40	34	8.7
Toluene	ppbv	0.55	ND 5.3	ND 14	ND 13	ND 2.7
trans-1,2-Dichloroethene	ppbv	ND 0.19	ND 5.4	ND 15	ND 13	ND 2.7
trans-1,3-Dichloropropene	ppbv	ND 0.19	ND 5.4	ND 14	ND 13	ND 2.7
Trichloroethene	ppbv	0.16	ND 0.54	11	50	2.3
Trichlorofluoromethane (CFC-11)	ppbv	0.23	ND 5.4	ND 14	ND 13	ND 2.7
Trifluorotrichloroethane (Freon 113)	ppbv	0.086	ND 1.1	ND 2.9	ND 2.6	ND 0.54
Vinyl acetate	ppbv	ND 2.4	ND 69	ND 190	ND 170	ND 35
Vinyl chloride	ppbv	ND 0.04	ND 1.1	ND 3.1	3.5	ND 0.57
Total VOCs		**77**	**474**	**1061**	**1105**	**276**

Notes:
ND - Not present at or above the associated value.

APPENDIX B

GROUNDWATER TREATMENT SYSTEM
2011 PROCESS MONITORING DATA

TABLE B-1
GROUNDWATER INFLUENT
ANALYTICAL RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	*INF-011011-DJT*	*INF-020611-DJT*	*INF-030611-DJT*	*INF-040311-DJT*	*INF-050111-DJT*	*INF-060511-DJT*
	Collection Date:	*01/10/11*	*02/06/11*	*03/06/11*	*04/03/11*	*05/01/11*	*06/05/11*
Parameters	***Units***						
Volatiles							
Benzene	µg/L	6.5	ND 50	ND 50	ND 50	ND 50	ND 100
Carbon disulfide	µg/L	8600	7400	2600	7400	9200	10000
Carbon tetrachloride	µg/L	7000	15000	7700	7500	9900	9600
Chlorobenzene	µg/L	19	ND 50	ND 50	ND 50	ND 50	ND 100
Chloroform	µg/L	2300	5300	2300	2400	3300	2900
Methylene chloride	µg/L	45	130	68	92	110	110
Tetrachloroethene	µg/L	160	260	440	150	150	ND 100
Toluene	µg/L	5.4	ND 50	ND 50	ND 50	ND 50	ND 100
Trichloroethene	µg/L	33	ND 50	55	ND 50	ND 50	ND 100

	Sample ID:	*INF-070311-DJT*	*INF-080811-SG*	*INF-090411-DJT*	*INF-100211-DJT*	*INF-110711-DJT*	*INF-120511-DJT*
	Collection Date:	*07/03/11*	*08/08/11*	*09/04/11*	*10/02/11*	*11/07/11*	*12/05/11*
Parameters	***Units***						
Volatiles							
Benzene	µg/L	ND 50	ND 50	ND 50	ND 50	ND 50	ND 100
Carbon disulfide	µg/L	7900	8900	7500	21000	20000	23000
Carbon tetrachloride	µg/L	5200	4900	4200	7900	9400	8700
Chlorobenzene	µg/L	ND 50	ND 50	ND 50	ND 50	ND 50	ND 100
Chloroform	µg/L	1900	1700	1600	1900	3800	1800
Methylene chloride	µg/L	90	92	76	110	210	ND 100
Tetrachloroethene	µg/L	110	86	92	65	120	ND 100
Toluene	µg/L	ND 50	ND 50	ND 50	ND 50	ND 50	ND 100
Trichloroethene	µg/L	ND 50	ND 50	ND 50	ND 50	ND 50	ND 100

Notes:
ND - Not detected at or above the associated value.

TABLE B-2
CARBON BED
INTERSTAGE RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	*CBT-010311-DJT*	*CBT-011011-DJT*	*CBT-011711-DJT*	*CBT-012411-DJT*	*CBT-013111-DJT*	*CBT-020611-DJT*	*CBT-021*
	Collection Date:	*01/03/11*	*01/10/11*	*01/17/11*	*01/24/11*	*01/31/11*	*02/06/11*	*02/1*
Parameters	***Units***							
Volatiles								
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	23	13	
Carbon tetrachloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	6.5	3.8	
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	25	19	
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	1.3	ND 1.0	ND 1.0	ND

	Sample ID:	*CBT-022111-SG*	*CBT-022711-SG*	*CBT-030611-DJT*	*CBT-031411-SG*	*CBT-032011-DJT*	*CBT-032711-DJT*	*CBT-040*
	Collection Date:	*02/21/11*	*02/27/11*	*03/06/11*	*03/14/11*	*03/20/11*	*03/27/11*	*04/0*
Parameters	***Units***							
Volatiles	µg/L							
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	6.1	5.2	3.0	49	15	12	
Carbon tetrachloride	µg/L	1.6	1.3	1.0	15	6.9	4.5	
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	12	11	7.3	84	43	31	
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	1.4	ND 1.0	ND 1.0	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene		ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND

Notes:
ND - Not detected at or above the associated value.

TABLE B-2
CARBON BED
INTERSTAGE RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	*411-DJT*	*CBT-041111-SG*	*CBT-041811-DJT*	*CBT-042311-DJT*	*CBT-050111-DJT*	*CBT-050911-DJT*	*CBT-051511-DJT*
	Collection Date:	*4/11*	*04/11/11*	*04/18/11*	*04/23/11*	*05/01/11*	*05/09/11*	*05/15/11*
Parameters	***Units***							
Volatiles								
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	7.8	9.2	18	12	11	8.7	17
Carbon tetrachloride	µg/L	2.1	2.4	8.9	5.9	4.1	7.6	10
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	15	19	55	37	35	29	48
Methylene chloride	µg/L	1.0	ND 1.0	1.4	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

	Sample ID:	*311-DJT*	*CBT-052911-DJT*	*CBT-060511-DJT*	*CBT-061211-DJT*	*CBT-062011-SG*	*CBT-062711-SG*	*CBT-070311-DJT*
	Collection Date:	*3/11*	*05/29/11*	*06/05/11*	*06/12/11*	*06/20/11*	*06/27/11*	*07/03/11*
Parameters	***Units***							
Volatiles	µg/L							
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	21	16	7.6	10.0	22	22	21
Carbon tetrachloride	µg/L	16	9.4	4.4	4.4	6.8	4.1	4.5
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	24	73	43	46	91	77	68
Methylene chloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene		1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not detected at or above the associated value.

TABLE B-2
CARBON BED
INTERSTAGE RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	*CBT-052211-DJT*	*CBT-071811-DJT*	*CBT-072511-SG*	*CBT-080111-SG*	*CBT-080811-SG*	*CBT-081511-SG*	*CBT-08*
	Collection Date:	*05/22/11*	*07/18/11*	*07/25/11*	*08/01/11*	*08/08/11*	*08/15/11*	*08/2*
Parameters	***Units***							
Volatiles								
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	18	21	16	19	16	21	
Carbon tetrachloride	µg/L	25	2.3	1.5	1.1	ND 1.0	3.4	
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	46	79	64	53	42	59	
Methylene chloride	µg/L	1.2	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND

	Sample ID:	*CBT-071111-DJT*	*CBT-090411-DJT*	*CBT-091111-DJT*	*CBT-091811-DJT*	*CBT-092511-DJT*	*CBT-100211-DJT*	*CBT-100*
	Collection Date:	*07/11/11*	*09/04/11*	*09/11/11*	*09/18/11*	*09/25/11*	*10/02/11*	*10/0*
Parameters	***Units***							
Volatiles	µg/L							
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	21	18	19	20	23	25	
Carbon tetrachloride	µg/L	3.8	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	57	48	51	41	39	66	
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	2.6	
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene		ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND

Notes:
ND - Not detected at or above the associated value.

TABLE B-2
CARBON BED
INTERSTAGE RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	?211-SG	CBT-082911-DJT	CBT-102311-DJT	CBT-103011-DJT	CBT-110711-DJT	CBT-111411-DJT	CBT-112111-DJT
	Collection Date:	2/11	08/29/11	10/23/11	10/30/11	11/07/11	11/14/11	11/21/11
Parameters	**Units**							
Volatiles								
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	30	19	19	25	20	ND 1.0	ND 1.0
Carbon tetrachloride	µg/L	7.4	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	67	53	53	54	46	ND 1.0	ND 1.0
Methylene chloride	µg/L	1.0	ND 1.0	7.2	10	11	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

	Sample ID:	611-DJT	CBT-101711-SG	CBT-121211-SG	CBT-121811-DJT	CBT-122611-DJT
	Collection Date:	6/11	10/17/11	12/12/11	12/18/11	12/26/11
Parameters	**Units**					
Volatiles	µg/L					
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	30	26	ND 1.0	ND 1.0	ND 1.0
Carbon tetrachloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	68	72	ND 1.0	ND 1.0	ND 1.0
Methylene chloride	µg/L	3.0	5.6	ND 1.0	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene		1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not detected at or above the associated value.

TABLE B-2
CARBON BED
INTERSTAGE RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	***CBT-112811-DJT***	***CBT-120511-DJT***
	Collection Date:	***11/28/11***	***12/05/11***
Parameters	***Units***		
Volatiles			
Benzene	µg/L	ND 1.0	ND 1.0
Carbon disulfide	µg/L	ND 1.0	ND 1.0
Carbon tetrachloride	µg/L	ND 1.0	ND 1.0
Chlorobenzene	µg/L	ND 1.0	ND 1.0
Chloroform	µg/L	ND 1.0	ND 1.0
Methylene chloride	µg/L	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	ND 1.0	ND 1.0
Toluene	µg/L	ND 1.0	ND 1.0
Trichloroethene	µg/L	ND 1.0	ND 1.0

	Sample ID:
	Collection Date:
Parameters	***Units***
Volatiles	µg/L
Benzene	µg/L
Carbon disulfide	µg/L
Carbon tetrachloride	µg/L
Chlorobenzene	µg/L
Chloroform	µg/L
Methylene chloride	µg/L
Tetrachloroethene	µg/L
Toluene	µg/L
Trichloroethene	

Notes:
ND - Not detected at or above the associated value.

TABLE B-3
GROUNDWATER EFFLUENT
ANALYTICAL RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	*EFF-010311-DJT*	*EFF-011011-DJT*	*EFF-011711-DJT*	*EFF-012411-DJT*	*EFF-013111-DJT*	*EFF-020611-DJT*	*EFF-021*
	Collection Date:	*01/03/11*	*01/10/11*	*01/17/11*	*01/24/11*	*01/31/11*	*02/06/11*	*02/1*
Parameters	***Units***							
Volatiles								
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	2.3	1.9	1.6	1.3	1.8	1.2	ND
Carbon tetrachloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	2.9	1.9	1.6	1.3	1.3	1.0	ND
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	5.7	ND 1.0	ND 1.0	ND

	Sample ID:	*EFF-022111-SG*	*EFF-022711-DJT*	*EFF-030611-DJT*	*EFF-031411-SG*	*EFF-032011-DJT*	*EFF-032711-DJT*	*EFF-040*
	Collection Date:	*02/21/11*	*02/27/11*	*03/06/11*	*03/14/11*	*03/20/11*	*03/27/11*	*04/0*
Parameters	***Units***							
Volatiles	µg/L							
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	2.2	1.1	1.5	2.1	3.4	1.2	ND
Carbon tetrachloride	µg/L	2.1	ND 1.0	1.6	3.7	3.1	ND 1.0	ND
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	1.5	ND 1.0	ND 1.0	1.3	ND 1.0	ND 1.0	ND
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene		ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND

Notes:
ND - Not detected at or above the associated value.

TABLE B-3
GROUNDWATER EFFLUENT
ANALYTICAL RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	411-DJT	EFF-041111-SG	EFF-041811-DJT	EFF-042311-DJT	EFF-050111-DJT	EFF-050911-DJT	EFF-051511-DJT
	Collection Date:	4/11	04/11/11	04/18/11	04/23/11	05/01/11	05/09/11	05/15/11
Parameters	***Units***							
Volatiles								
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon tetrachloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Methylene chloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

	Sample ID:	311-DJT	EFF-052911-DJT	EFF-060511-DJT	EFF-061211-DJT	EFF-062011-SG	EFF-062711-SG	EFF-070311-DJT
	Collection Date:	3/11	05/29/11	06/05/11	06/12/11	06/20/11	06/27/11	07/03/11
Parameters	***Units***							
Volatiles	µg/L							
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	1.0	ND 1.0	ND 1.0	2.0	1.3	ND 1.0	1.2
Carbon tetrachloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Methylene chloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene		1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not detected at or above the associated value.

TABLE B-3
GROUNDWATER EFFLUENT
ANALYTICAL RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID:	*EFF-052211-DJT*	*EFF-071811-DJT*	*EFF-072511-DJT*	*EFF-080111-SG*	*EFF-080811-SG*	*EFF-081511-SG*	*EFF-082*
	Collection Date:	*05/22/11*	*07/18/11*	*07/25/11*	*08/01/11*	*08/08/11*	*08/15/11*	*08/2*
Parameters	***Units***							
Volatiles								
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	ND 1.0	ND 1.0	ND 1.0	1.2	ND 1.0	ND 1.0	ND
Carbon tetrachloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND

	Sample ID:	*EFF-071111-DJT*	*EFF-090411-DJT*	*EFF-091111-DJT*	*EFF-091811-DJT*	*EFF-092511-DJT*	*EFF-100211-DJT*	*EFF-100*
	Collection Date:	*07/11/11*	*09/04/11*	*09/11/11*	*09/18/11*	*09/25/11*	*10/02/11*	*10/0*
Parameters	***Units***							
Volatiles	µg/L							
Benzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Carbon disulfide	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	25	ND
Carbon tetrachloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chlorobenzene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Chloroform	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	65	ND
Methylene chloride	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	2.3	ND
Tetrachloroethene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Toluene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND
Trichloroethene		ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND

Notes:
ND - Not detected at or above the associated value.

TABLE B-3
GROUNDWATER EFFLUENT
ANALYTICAL RESULTS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

	Sample ID: !211-SG		EFF-082911-DJT	EFF-102311-DJT	EFF-103011-DJT	EFF-110711-DJT	EFF-111411-DJT	EFF-120511-DJT
	Collection Date: 2/11		08/29/11	10/23/11	10/30/11	11/07/11	11/14/11	12/05/11
Parameters	**Units**							
Volatiles								
Benzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Carbon disulfide	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	1.1
Carbon tetrachloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chlorobenzene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chloroform	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Methylene chloride	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trichloroethene	µg/L	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

	Sample ID: 611-DJT		EFF-101711-SG
	Collection Date: 6/11		10/17/11
Parameters	**Units**		
Volatiles	µg/L		
Benzene	µg/L	1.0	ND 1.0
Carbon disulfide	µg/L	1.0	ND 1.0
Carbon tetrachloride	µg/L	1.0	ND 1.0
Chlorobenzene	µg/L	1.0	ND 1.0
Chloroform	µg/L	1.0	ND 1.0
Methylene chloride	µg/L	1.0	ND 1.0
Tetrachloroethene	µg/L	1.0	ND 1.0
Toluene	µg/L	1.0	ND 1.0
Trichloroethene		1.0	ND 1.0

Notes:
ND - Not detected at or above the associated value.

APPENDIX C

GROUNDWATER TREATMENT SYSTEM
2011 PERFORMANCE MONITORING DATA

TABLE C-1
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
FEBRUARY 2011

Sample Location		Collection Date	Benzene ug/L	Carbon disulfide ug/L	Carbon tetrachloride ug/L	Chlorobenzene ug/L	Chloroform ug/L	Methylene chloride ug/L	Tetrachloroethene ug/L	Toluene ug/L	Trichloroethene ug/L
Extraction Wells											
DPA-201		2/14/2011	ND 10	ND 10	4300	ND 10	2000	45	1900	ND 10	980
DPA-202		2/14/2011	ND 500	910	94000	ND 500	19000	ND 500	1900	ND 500	ND 500
DPA-202	(Dup.)	2/14/2011	ND 500	2300	90000	ND 500	17000	ND 500	1600	ND 500	ND 500
DPA-203		2/14/2011	ND 2000	6600	230000	ND 2000	53000	ND 2000	ND 2000	ND 2000	ND 2000
EW-1		2/14/2011	ND 50	34000	9700	ND 50	2800	200	ND 50	380	ND 50
EW-2		2/14/2011	ND 100	4300	4200	ND 100	1300	ND 100	ND 100	ND 100	ND 100
EW-3		2/14/2011	12	1700	1500	ND 10	3800	120	85	ND 10	160
EW-4		2/14/2011	ND 10	29	910	1400	6400	170	240	ND 10	97
EW-5		2/14/2011	ND 2.5	230	1400	ND 2.5	1000	36	150	ND 2.5	28
EW-6		2/14/2011	ND 50	420	20000	ND 50	11000	360	350	ND 50	120
LR-66		2/14/2011	ND 50	ND 50	4900	ND 50	540	62	89	ND 50	ND 50
OW-3		2/14/2011	ND 2000	770000	92000	ND 2000	34000	ND 2000	ND 2000	ND 2000	ND 2000
T-4		2/14/2011	ND 2.5	ND 2.5	4.0	350	68	ND 2.5	95	ND 2.5	20
QA/QC											
Trip Blank		2/14/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not present at or above the associated value.

TABLE C-2
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
MAY 2011

Parameter:		*Benzene*	*Carbon disulfide*	*Carbon tetrachloride*	*Chlorobenzene*	*Chloroform*	*Methylene chloride*	*Tetrachloroethene*	*Toluene*	*Trichloroethene*
Units:		*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Sample Location	*Collection Date*									
Extraction Wells										
DPA-201	5/17/2011	ND 10	ND 10	1700	ND 10	730	26	760	ND 10	460
DPA-202	5/17/2011	ND 500	1000	88000	ND 500	13000	ND 500	1400	ND 500	ND 500
DPA-203	5/17/2011	ND 2000	5600	210000	ND 2000	43000	ND 2000	ND 2000	ND 2000	ND 2000
EW-1	5/13/2011	ND 50	35000	5400	ND 50	2200	150	ND 50	ND 50	ND 50
EW-2	5/13/2011	ND 25	4800	7000	39	1300	73	60	ND 25	ND 25
EW-3	5/13/2011	10	2400	1400	ND 10	1900	140	71	ND 10	160
EW-4	5/13/2011	ND 10	11	ND 10	11	370	220	200	ND 10	35
EW-5	5/13/2011	ND 2.5	510	590	ND 2.5	180	ND 2.5	170	ND 2.5	23
EW-6	5/13/2011	ND 50	750	22000	ND 50	4600	100	190	ND 50	66
LR-66	5/13/2011	ND 50	61	4200	ND 50	470	ND 50	98	ND 50	ND 50
OW-3	5/18/2011	ND 10000	1500000	100000	ND 10000	31000	ND 10000	ND 10000	ND 10000	ND 10000
T-4	5/13/2011	ND 2.5	ND 2.5	8.3	95	68	ND 2.5	96	ND 2.5	18
Upper Lockport Wells										
OW-11	5/18/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-11	5/17/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	9.1	ND 1.0	4.0
W-16	5/18/2011	2.4	ND 1.0	160	ND 1.0	160	1.6	44	ND 1.0	79
W-16 (Dup.)	5/18/2011	2.9	ND 1.0	150	ND 1.0	160	1.9	49	ND 1.0	88
W-17	5/19/2011	ND 200	610	3200	ND 200	2400	ND 200	ND 200	ND 200	ND 200
W-18R	5/18/2011	ND 50	ND 50	20000	ND 50	4700	170	270	ND 50	ND 50
W-19D	5/17/2011	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20
W-20	5/18/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-22A	5/18/2011	ND 1.0	ND 1.0	25	ND 1.0	17	ND 1.0	9.6	ND 1.0	2.9
W-23C	5/18/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	1.6	ND 1.0	ND 1.0
W-66	5/19/2011	ND 1.0	ND 1.0	76	ND 1.0	56	ND 1.0	22	ND 1.0	15
W-67	5/16/2011	ND 50	470	3500	ND 50	2600	79	190	ND 50	ND 50

Notes:
ND - Not present at or above the associated value.

TABLE C-2
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
MAY 2011

Parameter:		*Benzene*	*Carbon disulfide*	*Carbon tetrachloride*	*Chlorobenzene*	*Chloroform*	*Methylene chloride*	*Tetrachloroethene*	*Toluene*	*Trichloroethene*
Units:		*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Sample Location		*Collection Date*								
Lower Lockport Well										
W-16L		5/17/2011	ND 1.0	3700	ND 1.0	ND 1.0	1.6	ND 1.0	3.1	ND 1.0	4.4
W-18L		5/19/2011	ND 25	ND 25	500	ND 25	1900	ND 25	69	ND 25	ND 25
W-19A		5/18/2011	ND 1.0	ND 1.0	4.4	ND 1.0	8.8	ND 1.0	8.4	ND 1.0	3.8
W-23B		5/18/2011	ND 5.0	ND 5.0	390	5.9	180	ND 5.0	390	ND 5.0	73
W-48E		5/17/2011	ND 1.0	ND 1.0	68	ND 1.0	44	ND 1.0	22	ND 1.0	4.1
W-50L		5/17/2011	ND 1.0	ND 1.0	1.3	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-60L		5/17/11	DRY								
W-65		5/17/2011	ND 1.0	ND 1.0	3.4	ND 1.0	4.8	ND 1.0	1.5	ND 1.0	1.4
W-66L		5/19/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-67L		5/17/2011	ND 2.0	8.4	170	ND 2.0	300	7.5	19	ND 2.0	17
W-70L		5/19/2011	1.9	1.5	ND 1.0	79	320	ND 1.0	2.8	ND 1.0	11
LR-2		5/19/2011	2.6	2800	18000	15	7300	540	400	ND 1.0	58
LR-16		5/17/2011	ND 2.0	880	24	ND 2.0	81	22	22	ND 2.0	4.9
LR-20		5/17/2011	ND 1.0	ND 1.0	ND 1.0	2.2	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-20	(Dup.)	5/17/2011	ND 1.0	ND 1.0	ND 1.0	2.2	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-48		5/17/2011	ND 1.0	2.0	1200	140	640	14	90	ND 1.0	25
LR-49		5/19/2011	ND 1.0	ND 1.0	1.5	3.6	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-49	(Dup.)	5/19/2011	ND 1.0	ND 1.0	ND 1.0	3.6	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-50		5/16/2011	ND 1.0	4.3	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-51		5/17/2011	ND 1.0	ND 1.0	ND 1.0	5.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-61		5/19/2011	ND 200	1900	16000	ND 200	5800	290	320	ND 200	ND 200
LR-62		5/19/2011	5.5	56	29	ND 1.0	180	6.9	13	ND 1.0	48
LR-62	(Dup.)	5/19/2011	5.4	52	28	ND 1.0	180	6.8	13	ND 1.0	46
LR-67		5/17/2011	ND 50	19000	ND 50	ND 50	170	83	280	ND 50	ND 50
LR-67	(Dup.)	5/17/2011	ND 50	19000	ND 50	ND 50	180	84	290	ND 50	ND 50
LR-69		5/18/2011	120	6.7	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	7.7	ND 2.0
OW-5		5/19/2011	ND 100	30000	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100
W-19B		5/17/2011	ND 20	27	4000	170	5700	270	210	ND 20	270

Notes:
ND - Not present at or above the associated value.

TABLE C-2
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
MAY 2011

Parameter:		*Benzene*	*Carbon disulfide*	*Carbon tetrachloride*	*Chlorobenzene*	*Chloroform*	*Methylene chloride*	*Tetrachloroethene*	*Toluene*	*Trichloroethene*
	Units:	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Sample Location	*Collection Date*									
Rochester Wells										
B-02	5/19/2011	ND 50	2300	2900	ND 50	6600	550	ND 50	ND 50	ND 50
R-16	5/17/2011	89	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	37	ND 1.0
R-19	5/19/2011	ND 50	790	3300	ND 50	1200	140	ND 50	ND 50	ND 50
R-48	5/19/2011	ND 5.0	9.1	160	ND 5.0	46	ND 5.0	ND 5.0	ND 5.0	ND 5.0
R-50	5/19/2011	180	37	130	ND 2.5	300	89	14	98	ND 2.5
R-51	5/19/2011	29	17	ND 1.0	ND 1.0	21	31	ND 1.0	7.5	ND 1.0
R-60	5/19/2011	34	49	18	ND 1.0	9.0	ND 1.0	2.1	ND 1.0	1.3
R-61	5/19/2011	ND 500	35000	ND 500	ND 500	ND 500	ND 500	ND 500	ND 500	ND 500
R-62	5/19/2011	ND 1000	51000	ND 1000	ND 1000	ND 1000	ND 1000	ND 1000	ND 1000	ND 1000
R-66	5/22/2011	ND 100	12000	7900	ND 100	19000	4000	ND 100	ND 100	ND 100
R-67	5/17/2011	ND 1000	190000	ND 1000	ND 1000	1000	ND 1000	ND 1000	ND 1000	ND 1000
R-68	5/18/2011	140	73000	69000	ND 50	40000	1400	650	130	ND 50
QA/QC										
RINSEBLANK	5/16/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
RINSEBLANK	5/17/2011	ND 1.0	5.7	2.6	ND 1.0	1.5	ND 1.0	ND 1.0	ND 1.0	ND 1.0
RINSEBLANK	5/18/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
RINSEBLANK	5/19/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	5/13/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	5/16/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	5/18/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	5/22/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not present at or above the associated value.

TABLE C-3
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
AUGUST 2011

Parameter:			*Benzene*	*Carbon disulfide*	*Carbon tetrachloride*	*Chlorobenzene*	*Chloroform*	*Methylene chloride*	*Tetrachloroethene*	*Toluene*	*Trichloroethene*
		Units:	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Sample Location		*Collection Date*									
Extraction Wells											
DPA-201		8/10/2011	ND 10	ND 10	1300	ND 10	1100	ND 10	1400	ND 10	1200
DPA-202		8/8/2011	ND 500	2100	110000	ND 500	20000	ND 500	1600	ND 500	ND 500
DPA-203		8/8/2011	ND 2000	9200	270000	ND 2000	63000	ND 2000	ND 2000	ND 2000	ND 2000
DPA-203	(Dup.)	8/8/2011	ND 2000	9000	290000	ND 2000	67000	ND 2000	ND 2000	ND 2000	ND 2000
EW-1		8/8/2011	ND 50	22000	4200	ND 50	1600	120	ND 50	ND 50	ND 50
EW-2		8/8/2011	ND 25	21000	7200	ND 25	1200	61	45	ND 25	ND 25
EW-3		8/8/2011	ND 10	1400	980	ND 10	1700	130	52	ND 10	160
EW-4		8/8/2011	ND 10	13	140	27	3300	71	59	ND 10	22
EW-5		8/8/2011	ND 5.0	150	1200	ND 5.0	860	37	78	ND 5.0	24
EW-6		8/8/2011	ND 50	410	28000	ND 50	8200	170	280	ND 50	ND 50
LR-66		8/8/2011	ND 50	ND 50	2900	ND 50	330	ND 50	ND 50	ND 50	ND 50
OW-3		8/8/2011	ND 10000	750000	58000	ND 10000	21000	ND 10000	ND 10000	ND 10000	ND 10000
T-4		8/8/2011	ND 2.5	ND 2.5	7.5	250	71	ND 2.5	150	ND 2.5	20
QA/QC											
Trip Blank		8/8/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank		8/10/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not present at or above the associated value.

TABLE C-4
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
NOVEMBER 2011

Parameter:		*Benzene*	*Carbon disulfide*	*Carbon tetrachloride*	*Chlorobenzene*	*Chloroform*	*Methylene chloride*	*Tetrachloroethene*	*Toluene*	*Trichloroethene*
Units:		*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Sample Location	*Collection Date*									
Extraction Wells										
DPA-201	11/15/2011	ND 10	ND 10	1400	ND 10	910	17	780	ND 10	1300
DPA-202	11/15/2011	ND 500	1000	140000	ND 500	18000	ND 500	2500	ND 500	ND 500
DPA-203	11/15/2011	ND 2000	8800	350000	ND 2000	64000	ND 2000	ND 2000	ND 2000	ND 2000
EW-1	11/14/2011	ND 50	14000	3400	ND 50	2000	180	ND 50	ND 50	ND 50
EW-2	11/14/2011	ND 25	22000	8500	ND 25	1700	100	72	ND 25	ND 25
EW-3	11/14/2011	17	4500	1300	ND 10	1700	140	62	ND 10	190
EW-4	11/15/2011	ND 10	45	460	210	11000	390	310	ND 10	160
EW-5	12/21/2011	ND 2.5	25	4900	2.9	330	27	69	ND 2.5	ND 2.5
EW-6	1/3/2012	ND 200	910	45000	ND 200	12000	260	460	ND 200	ND 200
LR-66	11/14/2011	ND 50	79	4300	ND 50	400	ND 50	78	ND 50	ND 50
OW-3	11/15/2011	ND 5000	940000	120000	ND 5000	27000	ND 5000	ND 5000	ND 5000	ND 5000
T-4	11/15/2011	ND 2.5	ND 2.5	7.6	110	50	ND 2.5	93	ND 2.5	15
Upper Lockport Wells										
OW-11	11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	1.8	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-11	11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	5.4	ND 1.0	7.4
W-16	11/15/2011	5.3	1.6	770	ND 1.0	2000	2.0	430	ND 1.0	280
W-16 (Dup.)	11/15/2011	5.4	1.5	870	ND 1.0	2100	2.2	470	ND 1.0	280
W-17	11/17/2011	ND 250	560	28000	ND 250	9800	270	370	ND 250	ND 250
W-18R	11/15/2011	ND 50	ND 50	19000	ND 50	13000	500	250	ND 50	ND 50
W-19D	11/16/11	Dry								
W-20	11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-22A	11/15/11	Dry								
W-23C	11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	1.6	ND 1.0	ND 1.0
W-66	11/17/2011	ND 1.0	1.2	540	ND 1.0	360	2.4	64	ND 1.0	39
W-67	11/17/2011	ND 50	57	310	ND 50	340	ND 50	56	ND 50	ND 50

Notes:
ND - Not present at or above the associated value.

TABLE C-4
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
NOVEMBER 2011

Sample Location		Collection Date	Benzene ug/L	Carbon disulfide ug/L	Carbon tetrachloride ug/L	Chlorobenzene ug/L	Chloroform ug/L	Methylene chloride ug/L	Tetrachloroethene ug/L	Toluene ug/L	Trichloroethene ug/L
Lower Lockport Well											
W-16L		11/16/2011	ND 1.0	1400	ND 1.0	ND 1.0	ND 1.0	ND 1.0	2.3	ND 1.0	3.8
W-18L		11/17/2011	ND 25	ND 25	470	ND 25	2400	240	110	ND 25	110
W-19A		11/16/11	Dry								
W-23B		11/15/2011	ND 5.0	ND 5.0	2000	ND 5.0	550	ND 5.0	650	ND 5.0	110
W-48E		11/14/2011	ND 1.0	2.5	960	32	660	11	71	ND 1.0	54
W-50L		11/16/2011	ND 1.0	ND 1.0	2.9	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-65		11/16/2011	ND 1.0	ND 1.0	8.6	ND 1.0	3.4	ND 1.0	2.9	ND 1.0	1.5
W-60L		11/16/11	Dry								
W-66L		11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
W-67L		11/17/2011	ND 2.0	ND 2.0	200	ND 2.0	530	11	37	ND 2.0	31
W-70L		11/22/2011	1.9	1.8	ND 1.0	74	170	1.5	1.7	1.1	9.6
W-70L	(Dup.)	11/22/2011	2.2	2.1	ND 1.0	83	190	1.7	2.0	1.3	10
Lockport/Rochester Wells											
LR-2		11/17/2011	1.2	4300	15000	8.0	6800	530	180	ND 1.0	47
LR-16		11/16/2011	ND 2.0	510	45	ND 2.0	200	49	47	ND 2.0	15
LR-16	(Dup.)	11/16/2011	ND 2.0	490	44	ND 2.0	210	49	46	ND 2.0	15
LR-20		11/15/2011	ND 1.0	ND 1.0	ND 1.0	2.2	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-20	(Dup.)	11/15/2011	ND 1.0	ND 1.0	ND 1.0	2.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-48		11/16/2011	1.2	90	2900	380	1600	83	110	ND 1.0	110
LR-49		11/15/2011	ND 1.0	ND 1.0	2.8	3.9	1.4	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-50		11/16/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-51		11/15/2011	ND 1.0	ND 1.0	ND 1.0	5.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
LR-61		11/21/2011	ND 200	8400	26000	ND 200	13000	720	300	ND 200	ND 200
LR-62		11/22/2011	19	13	19	ND 1.0	59	ND 1.0	5.7	ND 1.0	17
LR-67		11/17/2011	ND 50	1900	ND 50	ND 50	ND 50	ND 50	63	ND 50	ND 50
LR-67	(Dup.)	11/17/2011	ND 50	1900	ND 50	ND 50	ND 50	ND 50	61	ND 50	ND 50
LR-69		11/15/2011	230	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	51	ND 1.0
OW-5		11/17/2011	ND 200	13000	ND 200	ND 200	ND 200	ND 200	ND 200	ND 200	ND 200
W-19B		11/17/2011	ND 20	ND 20	4300	150	7100	470	210	ND 20	340

Notes:
ND - Not present at or above the associated value.

TABLE C-4
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER PROGRAM
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
NOVEMBER 2011

Sample Location	Collection Date	Benzene ug/L	Carbon disulfide ug/L	Carbon tetrachloride ug/L	Chlorobenzene ug/L	Chloroform ug/L	Methylene chloride ug/L	Tetrachloroethene ug/L	Toluene ug/L	Trichloroethene ug/L
Rochester Wells										
B-02	11/17/2011	ND 50	1900	2100	ND 50	4400	440	ND 50	ND 50	ND 50
R-16	11/16/2011	89	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	38	ND 1.0
R-19	11/22/2011	ND 50	980	6100	ND 50	1500	180	ND 50	ND 50	ND 50
R-48	11/22/2011	5.4	11	160	ND 5.0	54	ND 5.0	ND 5.0	ND 5.0	ND 5.0
R-50	11/22/2011	210	180	240	ND 2.5	370	85	8.9	110	ND 2.5
R-51	11/17/2011	38	5.6	ND 1.0	ND 1.0	9.8	27	ND 1.0	11	ND 1.0
R-60	11/22/2011	38	55	21	ND 1.0	17	ND 1.0	1.8	ND 1.0	1.3
R-61	11/22/2011	ND 500	89000	ND 500	ND 500	ND 500	ND 500	ND 500	ND 500	ND 500
R-62	11/22/2011	ND 500	50000	ND 500	ND 500	ND 500	ND 500	ND 500	ND 500	ND 500
R-66	11/22/2011	ND 100	21000	11000	ND 100	20000	4200	ND 100	ND 100	ND 100
R-67	11/17/2011	ND 1000	100000	ND 1000	ND 1000	ND 1000	ND 1000	ND 1000	ND 1000	ND 1000
R-68	11/16/2011	150	66000	66000	ND 50	36000	1600	710	140	ND 50
QA/QC										
RINSEBLANK	11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
RINSEBLANK	11/16/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
RINSEBLANK	11/17/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	11/14/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	11/15/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	11/16/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	11/17/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	11/21/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Trip Blank	12/21/2011	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0

Notes:
ND - Not present at or above the associated value.

APPENDIX D

MONITORING WELL INVENTORY

APPENDIX D

MONITORING WELL INVENTORY
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Date: 12/28/2011

Well No.	*Sounded Depth (Ft. BTOC)*	*Pro-Casing*	*Lock*	*Concrete Collar*
B02	Barcad	Good	Yes	Good
OW-3	Extraction	N/A	N/A	N/A
OW-5	103.04	Good	Yes	Good
OW-8	9.68	Good	N/A	Good
OW-9	13.87	Good	N/A	Good
OW-10	13.11	Good	N/A	Good
OW-11	28.79	Good	N/A	Good
W-11	32.59	Good	Yes	Good
W-16	31.67	Good	Yes	Good
W-16L	67.18	Good	Yes	Good
W-17	29.38	Good	Yes	Poor
W-18R	31.78	Good	Yes	Good
W-18L	74.35	Good	Yes	Good
W-19A	40.93	Good	Yes	Good
W-19B	82.85	Good	Yes	Good
W-19D	24.50	Good	Yes	Good
W-20	28.88	Good	Yes	Good
W-22A	22.65	Good	Yes	Good
W-23B	43.78	Good	Yes	Good
W-23C	23.09	Good	Yes	Good
W-48E	40.27	Good	Yes	Good
W-50	37.87	Good	Yes	Good
W-60L	33.89	Good	Yes	Good
W-65	57.60	Good	Yes	Good
W-66	48.15	Good	Yes	Good
W-66L	66.51	Good	Yes	Good
W-67	42.61	Good	Yes	Good
W-67L	72.97	Good	Yes	Poor
W-70L	74.09	Good	Yes	Good
LR-2	90.22	Good	Yes	Good
LR-16	92.98	Good	Yes	Good
LR-20	87.12	Good	Yes	Good
LR-48	68.84	Good	Yes	Good
LR-49	75.83	Good	Yes	Good
LR-50	76.35	Good	Yes	Good
LR-51	65.89	Good	Yes	Good
LR-61	98.13	Good	Yes	Good
LR-62	104.49	Good	Yes	Good
LR-66	Extraction	N/A	N/A	N/A
LR-67	102.53	Good	Yes	Good
LR-69	87.43	Good	Yes	Good

APPENDIX D

MONITORING WELL INVENTORY
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
2011

Date: 12/28/2011

Well No.	*Sounded Depth (Ft. BTOC)*	*Pro-Casing*	*Lock*	*Concrete Collar*
R-16	132.64	Good	Yes	Good
R-19	147.02	Good	Yes	Good
R-48	139.78	Good	Yes	Good
R-50	140.98	Good	Yes	Good
R-51	Barcad	Good	Yes	Good
R-60	138.69	Good	Yes	Good
R-61	154.18	Good	Yes	Good
R-62	158.32	Good	Yes	Good
R-66	152.35	Good	Yes	Good
R-67	141.89	Good	Yes	Good
R-68	121.92	Good	Yes	Good
EW-4	Extraction	N/A	N/A	N/A
EW-5	Extraction	N/A	N/A	N/A
EW-6	Extraction	N/A	N/A	N/A
DPA-201	23.90	N/A	N/A	N/A
DPA-202	25.75	N/A	N/A	N/A
DPA-203	30.60	N/A	N/A	N/A
EW-1	Extraction	N/A	N/A	N/A
EW-2	Extraction	N/A	N/A	N/A
EW-3	Extraction	N/A	N/A	N/A
T4	28.30	N/A	N/A	N/A