report.hw.932053.2006-10-11.AdditionalSVE_WellInstallation.pdf

CONESTOGA-ROVERS
& ASSOCIATES

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October 11, 2006

Reference No. 6488-14

SCAN

F-FILED

Ms. Carol A. Dickerson
Environmental Project Manager
Stauffer Management Company LLC
Shipley 2
1800 Concord Pike
P. O. Box 15437
Wilmington, DE 19850-5437

Dear Ms. Dickerson:

Re: Stauffer Management Company LLC
Lewiston, New York Site
Installation Summary - Additional Area A SVE Wells

INTRODUCTION

The Area A Soil Vapor Extraction (SVE) System was constructed at the Stauffer Management Company LLC (SMC) site (Site) in Lewiston, New York in 1995 to provide remediation of soils contaminated with volatile organic compounds (VOCs). A Site Specific Parameter List (SSPL) of nine VOCs has been established.

The Area A SVE system has been in operation since 1996. As constructed, the Area A SVE system consisted of a total of 32 extraction wells (EWAs) connected to 4 separate header pipes that route collected soil vapors to the Area A treatment room. There are also three dual phase extraction wells (DPA-201 through DPA-203) in Area A.

A confirmatory boring program was performed in portions of Area A during August/September 2005 to determine the effectiveness of the SVE system in remediating impacted soils and whether certain parts of the Area A system can be shut down. A total of 20 soil borings were drilled adjacent to Header #1 and Header #4. Soil samples were collected from each boring. A summary report of the boring program was presented to SMC in May 2006.

The report concluded that the near surface fill layer present in every confirmatory soil boring appeared to be below soil cleanup levels throughout the area investigated. However, there were exceedances of the cleanup standards for SSPLs in samples analyzed from the underlying clay till layer at seven borehole locations. The report recommended that seven additional SVE wells be installed into the underlying clay till layer near the locations where cleanup standards for total SSPLs in soil were exceeded, and that the additional SVE wells focus on extracting VOCs from the clay till layer. In addition, the report recommended that in areas of Area A

where there were no exceedances of any soil cleanup criteria, that the adjacent SVE wells be taken off-line.

A work plan providing the details of the proposed additional SVE wells in Area A was submitted to the New York State Department of Environmental Conservation (NYSDEC) on May 24, 2006, and approved by NYSDEC in a June 1, 2006 letter to SMC.

This correspondence summarizes the installation of the seven additional SVE wells in Area A.

ADDITIONAL SVE WELL INSTALLATION

A total of seven additional SVE wells were installed adjacent to Area A Headers #1 and #4 between June 28-30, 2006. Figure 1 presents the locations of the new SVE wells, and also indicates the number of the corresponding 2005 confirmatory boring associated with the new SVE well. The seven additional wells (EWA-133 through EWA-139) were installed within 5 feet of the seven confirmatory borings where the clay till layer indicated exceedances of the soil cleanup goal. Figure 2 presents the installation details of a typical additional Area A SVE well. The stratigraphic and instrumentation logs for each of the seven additional SVE wells are attached. The logs contain the installation details for each extraction well.

At each location, the protective stone cover was removed, and the PVC geomembrane liner carefully cut. Each of the seven boreholes was advanced to a depth approximately 6 inches into weathered bedrock. In order to provide additional information about the soil VOC levels, two soil samples were collected during drilling from each of the boreholes. The samples were generally collected near the interface between the fill and the clay till (shallow sample depths ranging from 2 to 7 feet, depending upon the fill thickness) and from the clay till at a depth of approximately 10-12 feet. The stratigraphic information from the 2005 confirmatory boring program was used as a guide to the sample depths at each location. Photoionization detector (PID) readings of the collected samples were recorded on Site, and the samples were analyzed in the laboratory for the VOCs that comprise the SSPL.

Table 1 presents the analytical results from the soil samples, and compares the concentrations to the soil cleanup objectives from Table 14 of the Site Record of Decision (ROD) and to NYSDEC Technical and Administrative Guidance (TAGM) #4046, VOCs Soil Cleanup Criteria. Exceedances of the soil cleanup objectives are highlighted, including exceedances of the 10-ppm total SSPL level included in the ROD. A review of the results indicates that 10 of the 14 samples had SSPL concentrations below the soil cleanup objectives. The two samples from EWA-133 (adjacent to 2005 confirmatory boring BH-8) exceeded the cleanup objectives, as did both samples from EWA-138 (adjacent to 2005 confirmatory boring BH-19).

Soil generated during the drilling process was drummed for off-Site disposal as nonhazardous waste under the recently updated waste profile for Area A soils.

The SVE well material was 4-inch Schedule 80 PVC. The well screen lengths were selected based upon the thickness of the clay layer and observations during drilling. Most of the well screens were 5 feet long, installed to the depth of the clay till/bedrock interface. In two boreholes where the drill cuttings and recovered soil samples indicated a strong chemical odor (including the sample in the fill), the installed screen lengths were increased to 7.5 feet (in EWA-138) and to 10 feet (in EWA-137).

The screens were set on the bottom of the borehole. A sand pack was installed to 2 feet above the top of the screened interval. A 2-foot thick bentonite seal was installed on top of the sand pack, and each additional extraction well was carefully completed with a cement-bentonite grout to slightly above the PVC liner surface to prevent water from infiltrating to the subsurface along the well casing. The integrity of the grout seal is also critical to insure a good seal that will not allow short-circuiting of air flow at the well casing/liner surface interface. Sand and grout were installed by the tremie method.

On October 10, 2006, each new well casing was completed with a "witch's hat" boot around the well casing to provide a permanent, watertight seal between the well casing and the PVC liner. The protective stone layer was then put back in place.

The aboveground casings on all seven additional SVE wells were equipped with cam lock fittings to allow the quick installation of flow meters, for the purpose of measuring air flow in individual extraction wells. Each of the existing SVE wells on Headers #1 and #4 were also equipped with cam lock fittings to enable the installation of flow meters on these wells. This will allow SMC to measure air flow in Headers #1 and #4, both for the entire header and on a well-by-well basis. After analyzing the flow rates, if there is an existing SVE well that indicates little or no air flow, that well may be recommended for taking off-line. At present, based solely upon the results of the 2005 confirmatory boring program that showed clean soils in a number of areas, EWA-125 on Header #1 and EWA-104 and EWA-105 on Header #4 are scheduled for shutdown, subject to the results of the flow monitoring program.

Upon completion of the well installations, each additional SVE well was connected to newly installed laterals, which were in turn connected to the appropriate adjacent Area A header

(Header #1 or Header #4). The additional SVE wells were put on-line as they were completed. As of August 3, 2006, all new SVE wells were operating.

If you have any questions, please contact me at 716-297-6150.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Bob Adams

Robert G. Adams, P.E.
Project Manager

RGA/amd/71

Encl.

c.c.: D. Oscar

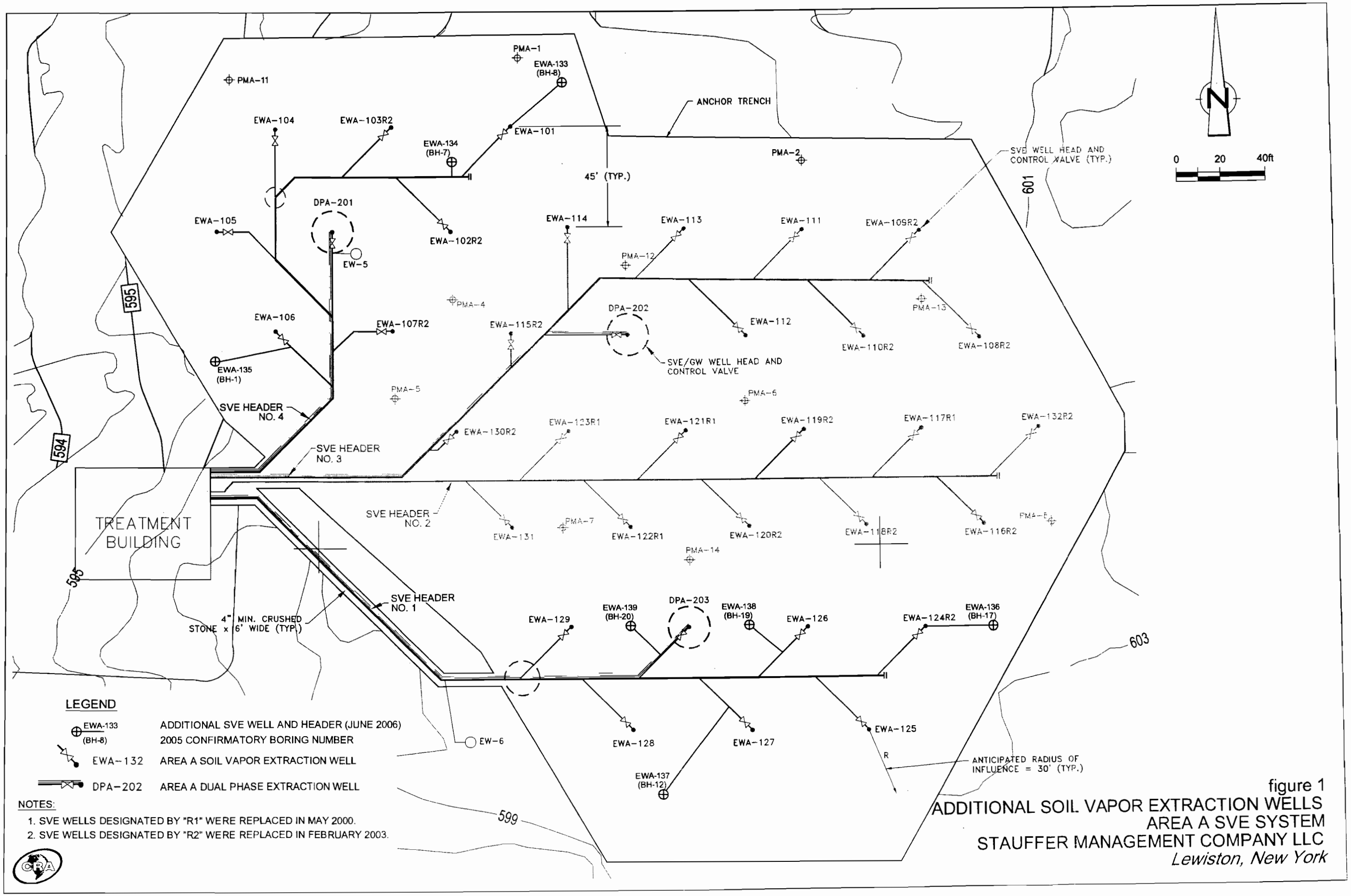
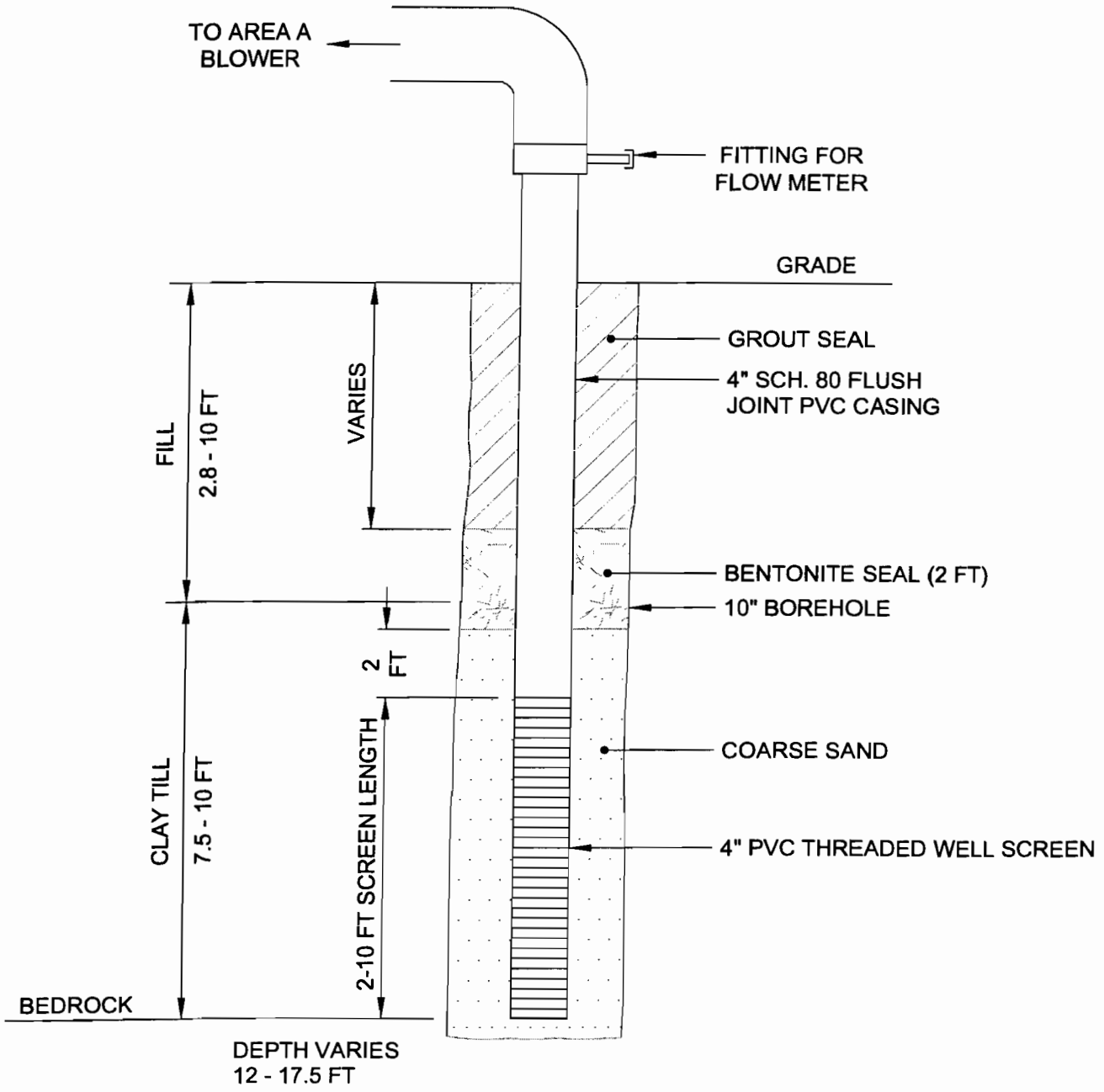


figure 1
ADDITIONAL SOIL VAPOR EXTRACTION WELLS
AREA A SVE SYSTEM
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

06488-14(DICK071)GN-NF001 SEP 07/2006



NOT TO SCALE

figure 2

ADDITIONAL SOIL VAPOR EXTRACTION WELLS
AREA A SVE SYSTEM
STAUFFER MANAGEMENT COMPANY LLC
Lewiston, New York

TABLE 1

ANALYTICAL RESULTS SUMMARY
AREA A SOILS - INSTALLATION OF ADDITIONAL SVE WELLS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
JUNE 2006

Parameters	Soil Cleanup Objectives Table 14	Soil Cleanup Objectives TAGM 4046	Units	Sample ID: BH1A-062806-DO	Sample ID: BH1B-062806-DO	Sample ID: BH7A-062806-DO	Sample ID: BH7B-062806-DO
				Depth (ft.): 2-4	Depth (ft.): 6-8	Depth (ft.): 4-6	Depth (ft.): 8-10
				PID Reading (ppm): 9	PID Reading (ppm): 10.5	PID Reading (ppm): 0	PID Reading (ppm): 4
				SVE Well: EWA-135	SVE Well: EWA-135	SVE Well: EWA-134	SVE Well: EWA-134
				Collection Date: 06/28/06	Collection Date: 06/28/06	Collection Date: 06/28/06	Collection Date: 06/28/06
Volatiles							
Benzene	500	60	µg/Kg	ND 6.5	ND 5.5	ND 5.8	ND 5.9
Carbon disulfide	NV	2,700	µg/Kg	ND 13	ND 11	ND 12	ND 12
Carbon tetrachloride	500	600	µg/Kg	ND 6.5	ND 5.5	ND 5.8	ND 5.9
Chlorobenzene	NV	1,700	µg/Kg	ND 6.5	ND 5.5	ND 5.8	ND 5.9
Chloroform	200	300	µg/Kg	ND 6.5	ND 5.5	ND 5.8	ND 5.9
Methylene chloride	1,000	100	µg/Kg	ND 6.5	ND 5.5	ND 5.8	ND 5.9
Tetrachloroethene	1,500	1,400	µg/Kg	9.5	ND 5.5	110	70
Toluene	1,500	1,500	µg/Kg	ND 6.5	ND 5.5	ND 5.8	ND 5.9
Trichloroethene	500	700	µg/Kg	ND 6.5	ND 5.5	33	150
TOTAL VOCs			µg/Kg	9.5	ND	143	220

Notes:

ND Non-detect at the associated value.

NV No value.

VOCs Volatile Organic Compounds.

Highlighted results exceed the applicable soil cleanup objectives.

TABLE 1

ANALYTICAL RESULTS SUMMARY
AREA A SOILS - INSTALLATION OF ADDITIONAL SVE WELLS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
JUNE 2006

Parameters	Soil Cleanup Objectives Table 14	Soil Cleanup Objectives TAGM 4046	Units	Sample ID: BH8A-062806-DO	Sample ID: BH8B-062806-DO	Sample ID: BH12A-063006-DO	Sample ID: BH12B-063006-DO
				Depth (ft.): 4-6	Depth (ft.): 10-12	Depth (ft.): 5-7	Depth (ft.): 10-12
				PID Reading (ppm): 1.7	PID Reading (ppm): 0.2	PID Reading (ppm): 15.0	PID Reading (ppm): 5.4
				SVE Well: EWA-133	SVE Well: EWA-133	SVE Well: EWA-137	SVE Well: EWA-137
				Collection Date: 06/28/06	Collection Date: 06/28/06	Collection Date: 06/30/06	Collection Date: 06/30/06
Volatiles							
Benzene	500	60	µg/Kg	ND 1,100	9	ND 33	ND 6.1
Carbon disulfide	NV	2,700	µg/Kg	ND 2,300	ND 12	ND 66	ND 12
Carbon tetrachloride	500	600	µg/Kg	ND 1,100	4,800	ND 33	71
Chlorobenzene	NV	1,700	µg/Kg	ND 1,100	ND 6.1	ND 33	ND 6.1
Chloroform	200	300	µg/Kg	ND 1,100	29	ND 33	180
Methylene chloride	1,000	100	µg/Kg	ND 1,100	ND 6.1	ND 33	ND 6.1
Tetrachloroethene	1,500	1,400	µg/Kg	3,600	22	ND 33	ND 6.1
Toluene	1,500	1,500	µg/Kg	ND 1,100	ND 6.1	ND 33	ND 6.1
Trichloroethene	500	700	µg/Kg	31,000	660	ND 33	ND 6.1
TOTAL VOCs			µg/Kg	34,600	5,520	ND	251

Notes:

ND Non-detect at the associated value.

NV No value.

VOCs Volatile Organic Compounds.

Highlighted results exceed the applicable soil cleanup objectives.

TABLE 1

ANALYTICAL RESULTS SUMMARY
AREA A SOILS - INSTALLATION OF ADDITIONAL SVE WELLS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
JUNE 2006

Parameters	Soil Cleanup Objectives Table 14	Soil Cleanup Objectives TAGM 4046	Units	Sample ID: BH17A-062906-DO	Sample ID: BH17B-062906-DO	Sample ID: BH19A-062906-DO	Sample ID: BH19B-062906-DO
				Depth (ft.): 4-6	Depth (ft.): 10-12	Depth (ft.): 5-7	Depth (ft.): 10-12
				PID Reading (ppm): 54	PID Reading (ppm): 4.9	PID Reading (ppm): 23.5	PID Reading (ppm): 10
				SVE Well: EWA-136	SVE Well: EWA-136	SVE Well: EWA-138	SVE Well: EWA-138
				Collection Date: 06/29/06	Collection Date: 06/29/06	Collection Date: 06/29/06	Collection Date: 06/29/06
Volatiles							
Benzene	500	60	µg/Kg	ND 6.4	ND 6.1	ND 33	ND 1,300
Carbon disulfide	NV	2,700	µg/Kg	ND 13	ND 12	ND 66	3,200
Carbon tetrachloride	500	600	µg/Kg	ND 6.4	ND 6.1	ND 33	29,000
Chlorobenzene	NV	1,700	µg/Kg	ND 6.4	ND 6.1	ND 33	ND 1,300
Chloroform	200	300	µg/Kg	ND 6.4	ND 6.1	820	21,000
Methylene chloride	1,000	100	µg/Kg	ND 6.4	ND 6.1	160	ND 1,300
Tetrachloroethene	1,500	1,400	µg/Kg	ND 6.4	ND 6.1	13,000	52,000
Toluene	1,500	1,500	µg/Kg	ND 6.4	ND 6.1	ND 33	ND 1,300
Trichloroethene	500	700	µg/Kg	ND 6.4	ND 6.1	130	ND 1,300
TOTAL VOCs			µg/Kg	ND	ND	14,110	105,200

Notes:

ND Non-detect at the associated value.

NV No value.

VOCs Volatile Organic Compounds.

Highlighted results exceed the applicable soil cleanup objectives.

TABLE 1

ANALYTICAL RESULTS SUMMARY
AREA A SOILS - INSTALLATION OF ADDITIONAL SVE WELLS
STAUFFER MANAGEMENT COMPANY LLC
LEWISTON, NEW YORK
JUNE 2006

			Sample ID:	***BH20A-062906-DO***	***BH20B-062906-DO***
			Depth (ft.):	***5-7***	***10-12***
			PID Reading (ppm):	3.1	1.7
			SVE Well:	***EWA-139***	***EWA-139***
			Collection Date:	***06/29/06***	***06/29/06***
	Soil Cleanup Objectives				
Parameters	***Table 14***	***TAGM 4046***	***Units***		
Volatiles					
Benzene	500	60	µg/Kg	ND 6.8	ND 31
Carbon disulfide	NV	2,700	µg/Kg	46	ND 61
Carbon tetrachloride	500	600	µg/Kg	ND 6.8	ND 31
Chlorobenzene	NV	1,700	µg/Kg	ND 6.8	ND 31
Chloroform	200	300	µg/Kg	13	ND 31
Methylene chloride	1,000	100	µg/Kg	ND 6.8	ND 31
Tetrachloroethene	1,500	1,400	µg/Kg	61	200
Toluene	1,500	1,500	µg/Kg	ND 6.8	ND 31
Trichloroethene	500	700	µg/Kg	16	ND 31
TOTAL VOCs			µg/Kg	136	200

Notes:

ND Non-detect at the associated value.

NV No value.

VOCs Volatile Organic Compounds.

Highlighted results exceed the applicable soil cleanup objectives.

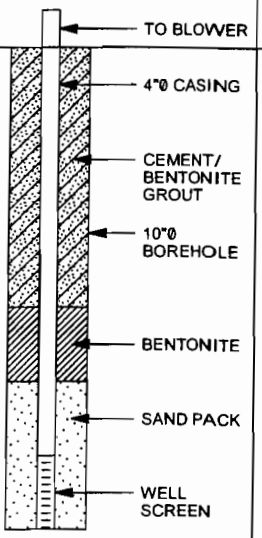
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-133
DATE COMPLETED: June 28, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	FILL	
	- Two refusals @ 3 ft BGS	
	CL-CLAY TILL	5.0
	- Bedrock @ 13 ft BGS	
	END OF BOREHOLE @ 13.0ft BGS	13.0
	Water in borehole at completion.	

Soil Vapor Extraction Well



WELL DETAILS
Screened interval:
11.0 to 13.0ft BGS
Length: 2ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
7.0 to 9.0ft BGS
Material: Bentonite
Sand Pack:
9.0 to 13.0ft BGS
Material: Quartz Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
BH8A				1.7
BH8B				0.2

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE: REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06

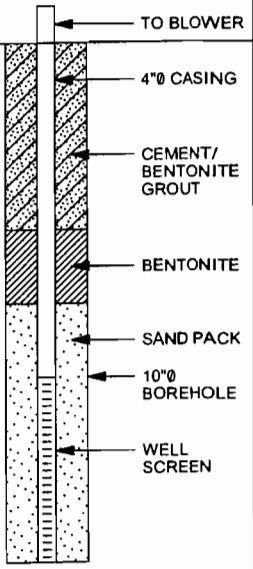
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-134
DATE COMPLETED: June 28, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	FILL, gravel, brick, soil	
6	CL-CLAY TILL	6.0
14	- Bedrock @ 14 ft BGS	14.0
	END OF BOREHOLE @ 14.0ft BGS	
	Noticeable odor during well installation.	

Soil Vapor Extraction Well



WELL DETAILS
Screened interval:
9.0 to 14.0ft BGS
Length: 5ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
5.0 to 7.0ft BGS
Material: Bentonite
Sand Pack:
7.0 to 14.0ft BGS
Material: Quartz Sand

SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
BH7A				0
BH7B				4

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-135
DATE COMPLETED: June 28, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	Soil Vapor Extraction Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	FILL		TO BLOWER					
2			4"Ø CASING					
4	CL-CLAY TILL	2.8	CEMENT/ BENTONITE GROUT	BH1A				9
6			BENTONITE					
8			SAND PACK	BH1B				10.5
10			10"Ø BOREHOLE					
12	- Bedrock @ 13 ft BGS	13.0	WELL SCREEN					
14	END OF BOREHOLE @ 13.0ft BGS							
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

WELL DETAILS
Screened interval:
8.0 to 13.0ft BGS
Length: 5ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
4.0 to 6.0ft BGS
Material: Bentonite
Sand Pack:
6.0 to 13.0ft BGS
Material: Quartz Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-136
DATE COMPLETED: June 29, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	Soil Vapor Extraction Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
			TO BLOWER					
0	FILL		4"Ø CASING					
2			CEMENT/ BENTONITE GROUT					
4			BENTONITE					
	CL-CLAY TILL	4.5		BH17A	X			54
6			SAND PACK					
8			WELL SCREEN					
10			10"Ø BOREHOLE					
				BH17B	X			4.9
12	- Bedrock @ 12 ft BGS	12.0						
	END OF BOREHOLE @ 12.0ft BGS							
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

WELL DETAILS
Screened interval:
7.0 to 12.0ft BGS
Length: 5ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
3.0 to 5.0ft BGS
Material: Bentonite
Sand Pack:
5.0 to 12.0ft BGS
Material: Quartz Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE: REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06

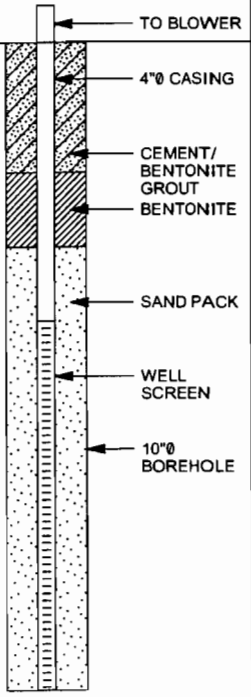
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-137
DATE COMPLETED: June 30, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	FILL, soil, gravel, wood, odor	
10	CL-CLAY TILL, strong odor	10.0
17.5	- Bedrock @ 17.5 ft BGS END OF BOREHOLE @ 17.5ft BGS	17.5

Soil Vapor Extraction Well



WELL DETAILS
Screened interval:
7.5 to 17.5ft BGS
Length: 10ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
3.5 to 7.5ft BGS
Material: Bentonite
Sand Pack:
5.5 to 17.5ft BGS
Material: Quartz Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
BH12A				15.0
BH12B				5.4

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06

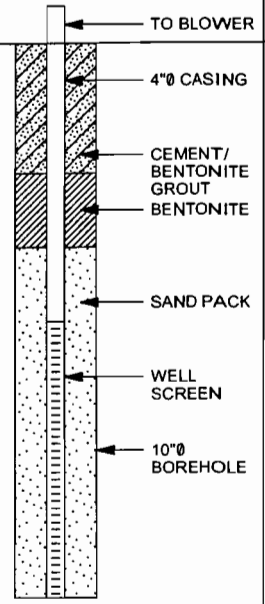
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-138
DATE COMPLETED: June 29, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	FILL	
5.0	CL-CLAY TILL, strong odor	5.0
15.0	- Bedrock @ 15 ft BGS END OF BOREHOLE @ 15.0ft BGS	15.0

Soil Vapor Extraction Well



WELL DETAILS
Screened interval:
7.5 to 15.0ft BGS
Length: 7.5ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
3.5 to 5.5ft BGS
Material: Bentonite
Sand Pack:
5.5 to 15.0ft BGS
Material: Quartz Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
BH19A				23.5
BH19B				10

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SMC Lewiston
PROJECT NUMBER: 06488
CLIENT: Stauffer Management Company LLC
LOCATION: Lewiston, NY

HOLE DESIGNATION: EWA-139
DATE COMPLETED: June 29, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: D. Oscar

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	Soil Vapor Extraction Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
			TO BLOWER					
0	FILL		4"Ø CASING					
2			CEMENT/BENTONITE GROUT					
4								
6		6.5		BH20A				3.1
	CL-CLAY TILL		BENTONITE					
8								
10			SAND PACK	BH20B				1.7
12			WELL SCREEN					
14			10"Ø BOREHOLE					
	- Bedrock @ 16 ft BGS	16.0						
16	END OF BOREHOLE @ 16.0ft BGS							
18								
20								
22								
24								
26								
28								
30								
32								
34								

WELL DETAILS
Screened interval:
11.0 to 16.0ft BGS
Length: 5ft
Diameter: 4in
Slot Size: 20
Material: PVC
Seal:
7.0 to 9.0ft BGS
Material: Bentonite
Sand Pack:
9.0 to 16.0ft BGS
Material: Quartz Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 06488.GPJ CRA_CORP.GDT 9/11/06