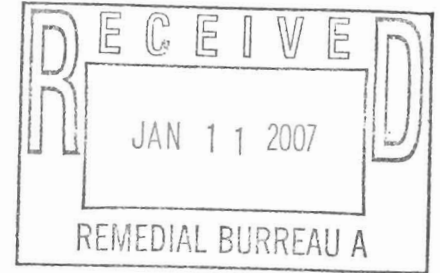




O'BRIEN & GERE

January 9, 2007



Mr. Jeff Dyber, P.E.
Environmental Engineer 2
New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action
625 Broadway
Albany, New York 12233

Re: National Heatset Printing
**Operation & Maintenance Report-
September-October 2006**
1 Adams Boulevard
Farmingdale, New York
NYSDEC Site 1-52-140

File: 10653/35518 #5

Dear Mr. Dyber:

This letter provides an overview of the ongoing operation of the soil vapor extraction (SVE) system at the National Heatset Printing Site in Farmingdale, New York (Figure 1). A site visit was performed by YEC, Inc. (YEC) personnel on October 18, 2006 on behalf of O'Brien & Gere Engineers, Inc (OBG) in accordance with our approved Work Plan.

System Operation

As discussed in last month's report, we observed that the run-time meter continued to operate when the system blower was not operating. On September 1, 2006, the run-time meter was rewired by Gray Electric, Inc. to operate only when the blower was operating.

A carbon change out occurred on October 11, 2006 due to the presence of VOCs at the effluent port. The change out was performed by Service-Tech, Inc. The system was only out of operation for approximately 7 hours. Based on the run time meter, the system was operational for a total of 636 hours during this reporting period (September 21, 2006 to October 18, 2006). The system operational data is summarized in Table 1 and on the site visit data collection form provided in Appendix A.

A flow of 130 cfm and a vacuum of 54 inches of water column were observed at the extraction well. The SVE blower operated at a flow of 231 cubic feet per minute (cfm) as measured at the SVE influent. Field personnel recorded a tetrachloroethene (PCE) concentration of 4.0 ppm (by Draeger tube) and a concentration of volatile organic compounds (VOCs) of 1.0 ppm (by PID) from the extraction well (pre-dilution).

VOC concentrations of 6.0 ppm (by PID) and a PCE concentration of 8.0 ppm (by Draeger Tube) were observed at the SVE influent port during the site visit. VOC concentrations of 0.0 ppm (by PID) and a PCE concentration of 0.0 ppm (by Draeger Tube) were observed from the Vapor-phase Granular Activated Carbon (VGAC) mid sampling port, and a VOC concentration of 0.0 ppm (by PID) and a PCE

Mr. Jeff Dyber, P.E.
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concentration of 0.0 ppm (by Draeger Tube) were observed from the effluent sampling port. Refer to Table 1.

Monitoring Probes

A vacuum of 2.4, 0.45, 0.4, 0.5, 0.4, 0.1, 0.3, 0.2, 0.15, 0.02, 0.00 and 0.00 inches of water column were observed during the site visit at vapor monitoring points VP-1, VP-2, VP-3, VP-7, VP-8, VP-9, VP-10, VP-11, VP-12, VP-13, VP-14, and VP-15, respectively. The vapor points will continue to be monitored during future site visits.

PCE Removal

PCE removal was calculated for this reporting period using SVE influent PCE concentrations and flow rate measured at the SVE influent sampling point. The SVE system removed approximately 17 pounds of PCE from the extraction well during this reporting period and has removed approximately 2,511 pounds of PCE to date. A summary of the estimated PCE mass removal over time is presented in Table 2.

Air Discharge Monitoring

YEC personnel inadvertently did not collect a SVE effluent sample during this site visit. Given that system carbon was changed prior to the site visit and that the effluent port air sample field measurements were 0.0 ppm, it is assumed that no discharge of monitored compounds occurred.

Based on the effluent field measurements, a total of 3.42 lb of PCE has been discharged during the year 2006 toward the permitted annual discharge limit of 270 lb. A total of 0.71 lb of cis-1, 2-DCE has been discharged during the year 2006 toward the permitted annual discharge limit of 5,510 lbs. A total of 0.66 lb of TCE has been discharged during the year 2006 toward the permitted annual discharge limit of 120 lb.

Conclusions and Recommendations

Based on the data collected from the SVE system during this reporting period, OBG recommends continued operation of the SVE system. The extraction well (MW-F) valve remained at the 100% open position, and the dilution valve remained at the 50% open position during this site visit.

Please do not hesitate to contact me at 315-437-6100 with any questions you might have regarding this report.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Marc J. Dent P.E.
Managing Engineer

cc. Trevor Staniec – O'Brien & Gere
Dan Simpson - YEC

TABLES

TABLE 1
SUMMARY OF SOIL VAPOR EXTRACTION SYSTEM READINGS
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY

Date	Run Time Since Last Visit (hours)		Operation Time Since Last Visit (%)	Dilution Valve Position (% Open)	Extraction Well MW-F Valve Position (% Open)	Air Flow at Well (scfm)	Vacuum at Well (inches H2O)	Pre-Dilution PID (ppm)	Pre-Dilution PCE (ppm)	Influent SVE				Mid GAC				Effluent GAC							
	Available	Actual								Blower Flow (cfm)	Vacuum (inches H2O)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)			
9/18/2002	--	--	--	--	--	--	--	--	--	SVE PILOT TEST STARTUP															
9/30/2002	304	294	100%	100	50	34.5	5	2,000	500	256	25	107.2	1,015	--	317	102.3	0	--	290	89.5	0	--			
10/14/2002	642	343	99%	100	50	38	7	1,011	400	258	27	--	75.3	50	--	--	0	--	--	--	--	0	--		
11/19/2002	1508	866	98%	100	50	49	12	0	0	120	28	106	0	0	209	92	0	--	290	80.3	0	--			
12/4/2002	--	368	--	--	--	--	--	77	200	--	--	--	14.3	10	--	--	15.5	10	--	--	0	0			
12/16/2002	2153	294	98%	100	50	36.5	10	560	200	253	28	92	46.4	50	302	60	3.4	--	340	53.9	0	--			
1/21/2003	3016	862	98%	100	50	--	--	--	--	70	52	98	0	0	220	--	0	--	220	--	0	--			
2/10/2003	3496	490	98%	100	50	38	--	639	400	262	27	102	72	50	266	90	26	10	258	83	3.2	10			
3/18/2003	4360	864	98%	100	50	92	12	125	100	266	25	123	15	10	278	124	0	0	282	117	0	0			
4/29/2003	5359	1029	97%	75	50	75	50	152	50	132	16	118.5	48.2	25	302	96	18.6	10	287	86	0.6	0			
5/13/2003	5700	341	99%	75	50	78	--	127	50	239	48	130	41.8	50	246	108	46	25	245	97	0.6	0			
6/30/2003	6850	1176	98%	50	50	99.5	25	82.4	50	140	66	173	36.8	50	198	157	25.1	25	240	150	29.8	100			
7/10/2003	6851	245	0%	50	50	--	--	406	400	151	68	156	221	215	260	76	0	0	222	81.9	0	0			
7/22/2003	7144	294	100	50	50	--	--	127	--	--	--	168	65	--	--	107	0	--	--	106	0	--			
8/26/2003	7957	858	95	50	50	79	13.5	137	10	186	65	170	51.4	5	291	--	55.4	10	232	--	35.6	10			
9/23/2003	8274	686	46	50	50	218	33	141	15	194	64	160	55	30	254	124	0	0	210	110	0	0			
10/21/2003	8945	686	97	50	50	166	45	--	20	158	68	166	37.5	25	214	130	30.7	15	225	112	0	0			
11/24/2003	9749	833	805	50	50	130	46	141	125	178	72	138	261	200	225	52	0	0	205	51.4	0	0			
1/6/2004	9750	1054	0	50	50	98.5	74	118	100	164	12	140	247	250	224	48.6	0	0	200	48.4	0	0			
2/9/2004	10336	833	86	50	50	121	44	23.1	10	172	70	155.8	29.8	25	233	137	41.4	25	235	117	0	0			
3/30/2004	11289	1225	953	50	50	103	>50	34	<10	198	70	160	22	<10	240	128	22	<10	160	115	24	<5			
4/8/2004	11441	221	152	69	75	127	--	23.7	<10	--	--	--	--	--	180	83	30	--	206	83	0.9	--			
4/29/2004	11768	515	327	64	50	131	>60	2.4	0	--	76	170	2.2	0	209	128	0	0	255	116	0	0			
5/24/2004	12264	613	496	81	50	144	75	43.8	50	172	75	178	33.1	<50	250	121	4.4	0	198	111	0	0			
6/22/2004	12817	711	553	78	50	127	74	57	10	140	76	180	52	30	181	123	25.8	15	210	113	0	0			
7/28/2004	13630	882	813	92	50	142	76.5	53.2	7	161	76.5	159	41.1	25	216	137	35.3	20	181	109	3.1	0			
8/31/2004	13989	833	359	43	25	157	58	48	0	104	74	137	202	200	180	98	2.2	0	187	91	0.1	0			
9/29/2004	14256	711	267	38	50	139	60	--	--	140	76	153	27.7	--	194	126	0	--	205	102.1	0	--			
10/20/2004	14729	515	473	92	50	155	58	--	--	120	76	160	19.1	10	202	122	0	0	230	101	0	0			
11/17/2004	15229	686	499	73	50	160	80	17.9	<5	148	77	160	13.5	<10	152	112	7.2	<5	173	94	0	0			
12/22/2004	15565	858	337	39	75	143	80	15.8	<5	125	85	160	18.3	10	127	116	16	5	131	93.4	0	0			
1/20/2005	15933	711	368	52	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
2/23/2005	15933	833	0	75	50	87.5	36	174	50	188	58	110	93	50	265	56	0	0	245	38.5	0	0			
3/29/2005	16217	833	284	34	75	87 ⁽¹⁾	40	--	--	158 ⁽¹⁾	--	121	6.4	4.5	255 ⁽¹⁾	97	3.4	3	234 ⁽¹⁾	81	0	<2			
4/28/2005	--	720	720 ⁽²⁾	100	75	86	39	--	--	227	--	126	8.9	5	244	109	8	4	222	84.2	0	<2			
5/31/2005	--	792	792 ⁽²⁾	100	50	98	39	7.4	9.5	208	--	124.2	10.4	10	227	118.6	17.6	10	223	112.3	0	<2			
6/24/2005	--	576	576 ⁽²⁾	100	50	125	25	28.5	16	266	--	152	8.3	7	283	133	13.9	16	242	116	10.1	15			
8/4/2005	17972	984	984 ⁽²⁾	100	75	216	26	38.1	19	353	--	153.4	8.8	12	423	135.7	10.5	12	381	120.7	7.5	12			
Spent Carbon Replaced 8/10/05																									
9/13/2005	859	960	100	75	50	89.5	25	59.6	14	226	--	164.5	18.3	12	265	143	0.5	0	248	124.6	0	0			
10/10/2005	1502	643	100	75	35	86	27	59.2	19	222	--	101.3	21.7	10	225	110	15.1	0	211	99.3	0	0			
11/11/2005	2271	769	100	50	50	79	31	--	5	209	--	110.9	12.2	9	242	99.4	2.6	2	239	83.1	0	0			

Notes:
⁽¹⁾ Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05
⁽²⁾ Run time meter reading not indicative of SVE system run time; actual hours run is assumed 100% of available.
 ppm = parts per million (volume/volume basis)
 PCE = Tetrachloroethene (PCE) concentration measured with Dräger tube of 10-500 ppm range
 scfm = standard cubic feet per minute
 cfm = cubic feet per minute
 -- = measurement not recorded or not applicable.
 Influent SVE = Readings collected between the SVE Blower and the Carbon Units
 Mid GAC = Readings collected between the lead and lag carbon units
 Effluent GAC = Readings collected after the lag carbon unit
 GAC = granular activated carbon unit
 As of 4/28/05, the calculation of "Available" run time hours is based on 24 hours, rather than 24.5 hours as previously calculated.

TABLE 1
 SUMMARY OF SOIL VAPOR EXTRACTION SYSTEM READINGS
 NATIONAL HEATSET PRINTING
 1 ADAMS BLVD., FARMINGDALE, NY

Date	Run Time Meter Reading (hours)	Run Time Since Last Visit (hours)		Operation Time Since Last Visit (%)	Dilution Valve Position (% Open)	Extraction Well MW-F Valve Position (% Open)	Air Flow at Well (scfm)	Vacuum at Well (inches H2O)	Pre-Dilution PID (ppm)	Pre-Dilution PCE (ppm)	Blower Flow (cfm)	Vacuum (inches H2O)	Influent SVE				Mid GAC				Effluent GAC														
		Available	Actual										Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)								
12/8/2005	2918	647	647	100	50	50	79	29	22.2	5.0	235	--	113.5	7.2	2.0	227	96.7	6.8	2	212	79.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1/6/2006	3614	696	696	100	50	75	120	42	2.7	2.0	245	--	82	32.5	4.0	280	83.9	19.0	2.0	265	77.5	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Spent Carbon Replaced 1/25/06																																			
2/6/2006	4332	744	718	97	75	75	80	25	16.3	3.0	292	--	78	3.6	2.0	333	90.9	0.0	0.0	322	77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3/14/2006	5200	868	868	100	75	75	188	49	12.9	2.0	212	--	132.8	5.5	5.0	287	135.6	0.0	0.0	232	115.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4/12/2006	5895	695	695	100%	75	75	115	47	14.1	2.0	259	--	152.1	6.1	6.0	249	153.2	0.0	0.0	271	135.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/4/2006	6420	525	525	100%	50	75	189	51	17.9	2.0	199	--	145.2	7.8	5.0	186	136.1	0.1	0.0	214	117.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6/12/2006	7354	934	934	100%	50	100	156	53	5.5	4.0	216	--	141	7.9	9.0	270	134	4.1	3.0	253	116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7/12/2006	8074	720	720	100%	50	100	163	54	8.1	2.0	191	--	146	8.3	8.0	210	145	8.8	10.0	196	134	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8/7/2006	8696	622	622	100%	50	100	136	54	11.3	4.0	201	--	148.7	8.7	7.5	239	135.6	2.0	0.0	210	118.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9/21/2006	9781	1085	1085	100%	50	100	124.5	53	8.9	4.0	227	--	127	7.7	9.0	143	106.9	9.7	7.0	203	99.2	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spent Carbon Replaced 10/11/06																																			
10/18/2006	10417	636	636	100%	50	100	130	54	1.0	4.0	231	--	154.8	6.0	8.0	154	130.3	0.0	0.0	236	131.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
 (1) Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05
 (2) Run time meter reading not indicative of SVE system run time; actual hours run is assumed 100% of available.
 ppm = parts per million (volume/volume basis)
 PCE = Tetrachloroethene (PCE) concentration measured with Dräger tube of 10-500 ppm range
 scfm = standard cubic feet per minute
 cfm = cubic feet per minute

-- = measurement not recorded or not applicable.
 Influent SVE = Readings collected between the SVE Blower and the Carbon Units
 Mid GAC = Readings collected between the lead and lag carbon units
 Effluent GAC = Readings collected after the lag carbon unit
 GAC = granular activated carbon unit
 As of 4/28/05, the calculation of "Available" run time hours is based on 24 hours, rather than 24.5 hours as previously calculated.

TABLE 2
PCE
REMOVAL ESTIMATE
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY

Date	VOC Influent Concentration (ppmv)	PCE Influent Concentration (ppmv)	% PCE of Total VOCs	Extraction Well Flow Rate (cfm) ⁽²⁾	Elapsed Time Since Last Visit (day)	PCE Removal Since Last Visit (lb)	Cumulative PCE Removal (lb)
9/18/2002	SVE PILOT TEST STARTUP						
9/30/2002	2000 ⁽¹⁾	500 ⁽¹⁾	25.0	34.5	12	126	126
10/14/2002	1,011	400	39.6	38	14	127	253
11/19/2002	0	0	--	49	36	113	367
12/16/2002	560	200	35.7	36.5	27	69	436
1/13/2003	485	400	82.5	28.5	28	154	589
1/21/2003	0	0	--	0	8	63	652
2/10/2003	639	400	62.6	38	20	64	715
3/5/2003	263	200	76.0	24.4	23	129	844
3/18/2003	125	100	80.0	92	13	76	920
4/29/2003	152	50	32.9	75	42	105	1,025
5/13/2003	127	50	39.4	78	14	65	1,090
6/30/2003	82.4	50	60.7	115	48	89	1,179
7/22/2003	406	400	98.5	99.5	12	187	1,367
8/26/2003	137	10	7.3	79	35	276	1,643
9/23/2003	141	15	10.6	218	14	14	1,657
10/21/2003	37.5	20	53.3	166	28	41	1,698
11/24/2003	141	125	88.7	130	34	179	1,877
1/6/2004	118	100	84.7	98.5	43	--	1,877
2/9/2004	23.1	10	43.3	121	34	91	1,968
3/30/2004	22	10	45.5	103	50	22	1,990
4/29/2004	2.4	0	0.0	131	30	8	1,999
5/24/2004	43.8	50	114.2	144	25	49	2,047
6/22/2004	57	10	17.5	127	29	54	2,102
7/28/2004	53.2	7	13.2	142	36	21	2,122
8/12/2004	48	0	0	157	15	8	2,130
9/29/2004	27.7	0	--	139	48	0	2,130
10/20/2004	19.1	10	--	140	21	14	2,144
11/17/2004	17.9	10	55.9	160	28	16	2,160
12/22/2004	15.8	5	31.6	143	35	9	2,169
1/20/2005	--	--	--	--	--	--	--
2/23/2005	174	50	28.7	87.5	34	--	--
Date	VOC Influent Concentration (ppmv)	PCE Influent Concentration (ppmv)	% PCE of Total VOCs	SVE Influent Flow Rate (cfm) ⁽²⁾	Elapsed Time Since Last Visit (day)	PCE Removal Since Last Visit (lb)	Cumulative PCE Removal (lb)
3/29/2005	6.4	4.5	70.3	158	34	11	2,180
4/28/2005	8.9	5	56.2	227	30	10	2,190
5/31/2005	10.4	10	96.2	208	33	18	2,208
6/24/2005	8.3	7	84.3	266	24	16	2,224
8/4/2005	8.8	12	136.4	353	41	39	2,263

Notes:

⁽¹⁾ = VOC concentrations of 2,000 ppm and PCE concentrations of 500 ppm are greater than the limit of their respective monitoring device and are to be taken as estimations.

⁽²⁾ SVE Influent (post-dilution) monitoring point data used for calculation of PCE Removal for dates including and subsequent to March 29, 2005; Removal updated on 1-3-06 to represent SVE Influent flow rate.

$$\text{Removal Rate} = \left[\frac{(\text{flow}(\text{cfm}) \times \text{influent conc.}(\text{ppmv}) \times \text{MW} \times 12.187)}{(273.15 + C)} \right] \times 1 \text{ cu. m.} / 35.31 \text{ cu. ft} \times 1 \text{ g} / 1000 \text{ mg} \times 1 \text{ lb} / 453.6 \text{ g} \times 60 \text{ min} / 1 \text{ hr} \times 24 \text{ hr} / 1 \text{ day} \times \text{days of operation}$$

⁽³⁾ Run time meter reading not indicative of SVE system run time; actual hours run is assumed equal to elapsed time.

Where: MW = molecular weight
Molecular weight (MW) of PCE is 165.85
C = degrees centigrade, as measured
flow = average of the present and the previous months measured SVE influent rate in cubic feet per minute (cfm)

lb = pounds
ppmv = parts per million (volume/volume basis)
-- = information not available

TABLE 2
PCE
REMOVAL ESTIMATE
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY

Date	VOC Influent Concentration (ppmv)	PCE Influent Concentration (ppmv)	% PCE of Total VOCs	SVE Influent Flow Rate (cfm) ⁽²⁾	Elapsed Time Since Last Visit (day)	PCE Removal Since Last Visit (lb)	Cumulative PCE Removal (lb)
<i>Spent Carbon Replaced 8/10/05</i>							
9/13/2005	18.3	12	65.6	226	40	43	2,306
10/10/2005	21.7	10	46.1	222	27	22	2,328
11/11/2005	12.2	9	73.8	209	32	25	2,353
12/8/2005	7.2	2	27.8	235	27	12	2,365
1/6/2006	32.5	4	12.3	245	29	8	2,373
<i>Spent Carbon Replaced 1/25/06</i>							
2/6/2006	3.6	2	55.6	292	30	10	2,383
3/14/2006	5.5	5	90.9	212	36	13	2,396
4/12/2006	6.1	6	98.4	259	29	14	2,410
5/4/2006	7.8	5	64.1	199	22	9	2,419
6/12/2005	7.9	9	113.9	216	39	18	2,437
7/12/2006	8.3	8	96.4	191	30	17	2,454
8/7/2006	8.7	7.5	86.2	201	26	13	2,467
9/21/2006	7.7	9	116.9	227	45	27	2,494
<i>Spent Carbon Replaced 10/11/06</i>							
10/18/2006	6	8	133.3	231	27	17	2,511

Notes:
⁽¹⁾ = VOC concentrations of 2,000 ppm and PCE concentrations of 500 ppm are greater than the limit of their respective monitoring device and are to be taken as estimations.
⁽²⁾ SVE Influent (post-dilution) monitoring point data used for calculation of PCE Removal for dates including and subsequent to March 29, 2005; Removal updated on 1-3-06 to represent SVE Influent flow rate.
Removal Rate = $\frac{[(\text{flow}(\text{cfm}) \times \text{influent conc.}(\text{ppmv}) \times \text{MW} \times 12.187) / (273.15 + \text{C})] \times 1 \text{ cu. m.} / 35.31 \text{ cu. ft} \times 1 \text{ g} / 1000 \text{ mg} \times 1 \text{ lb} / 453.6 \text{ g} \times 60 \text{ min} / 1 \text{ hr} \times 24 \text{ hr} / 1 \text{ day}}{\text{days of operation}}$
⁽³⁾ Run time meter reading not indicative of SVE system run time; actual hours run is assumed equal to elapsed time.

Where: MW = molecular weight lb = pounds
Molecular weight (MW) of PCE is 165.85 ppmv = parts per million (volume/volume basis)
C = degrees centigrade, as measured -- = information not available
flow = average of the present and the previous months measured SVE influent rate in cubic feet per minute (cfm)

TABLE 3
AIR SAMPLE ANALYTICAL RESULTS
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY

SVE Influent Concentration (mg/m3)			
Date	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	Trichloroethene
9/18/2002	5	600E	31
9/30/2002	ND (5)	360E	23
10/14/2002	--	--	--
11/19/2002	--	--	--
VGAC Effluent Concentration (mg/m3)			
Date	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	Trichloroethene
9/18/2002	--	--	--
9/30/2002	--	--	--
10/14/2002	--	--	--
11/19/2002	--	--	--
12/16/2002	ND (5)	ND (5)	ND (5)
1/21/2003	--	--	--
2/10/2003	ND (5)	8	6
3/18/2003	--	--	--
4/29/2003	--	--	--
5/13/2003	ND (1)	5	ND (1)
6/30/2003	--	--	--
7/22/2003	ND (1)	ND (1)	ND (1)
8/26/2003	ND (5)	29	3.6
9/23/2003	ND (5)	ND (5)	ND (5)
10/21/2003	ND (5)	ND (5)	ND (5)
11/24/2003	--	--	--
1/6/2004	--	--	--
2/9/2004	10	ND (5)	ND (5)
3/30/2004	2J	77	1J
4/29/2004	ND (5)	10	ND (5)
5/24/2004	ND (1)	ND (1)	ND (1)
6/22/2004	ND (1)	ND (1)	ND (1)
7/28/2004	ND (5)	ND (5)	ND (5)
8/12/2004	--	--	--
9/29/2004	ND (1)	ND (1)	ND (1)
10/20/2004	ND (1)	ND (1)	ND (1)
11/17/2004	ND (1)	ND (1)	ND (1)
12/22/2004	ND (1)	ND (1)	ND (1)
1/20/2005	--	--	--
3/29/2005	2	ND (1)	ND (1)
4/28/2005	1	0.5J	ND (1)
5/31/2005	1	5	2
6/24/2005	0.8J	64	2
8/4/2005	0.7J	57	1J
<i>Spent Carbon Replaced 8/10/05</i>			
9/13/2005	ND (1)	ND (1)	ND (1)
10/10/2005	ND (1)	ND (1)	ND (1)
11/11/2005	ND (1)	ND (1)	ND (1)
12/8/2005	ND (1)	ND (1)	ND (1)
1/6/2006	ND (1)	ND (1)	ND (1)
<i>Spent Carbon Replaced 1/25/06</i>			
2/6/2006	ND (1)	1	ND (1)

Notes:

Only compounds that were detected above the method reporting limit were presented above

ND (5) = Not detected above method reporting limit in parenthesis

E = Concentration exceeded calibration range

-- = sample not collected

SVE = Soil vapor extraction

J = Estimated Value

VGAC = vapor-phase granular activated carbon

mg/m3 = milligrams per cubic meter

**TABLE 3
AIR SAMPLE ANALYTICAL RESULTS
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY**

VGAC Effluent Concentration (mg/m3)			
Date	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	Trichloroethene
3/14/2006	ND (1)	ND (1)	ND (1)
4/12/2006	ND (1)	0.6J	ND (1)
5/4/2006	ND (1)	ND (1)	ND (1)
6/12/2006	ND (1)	ND (1)	ND (1)
7/12/2005	0.6 J	ND (1)	ND (1)
8/7/2006	ND (1)	1	ND (1)
9/21/2006	0.4 J	2	0.8 J
<i>Spent Carbon Replaced 10/11/06</i>			
10/18/2006	No sample collected		

Notes:

- Only compounds that were detected above the method reporting limit were presented above
- ND (5) = Not detected above method reporting limit in parenthesis
- E = Concentration exceeded calibration range -- = sample not collected
- SVE = Soil vapor extraction J = Estimated Value
- VGAC = vapor-phase granular activated carbon mg/m3 = milligrams per cubic meter

TABLE 4
AIR DISCHARGE MONITORING
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY

Date	Field Monitoring			Laboratory Results			Discharge based on Field Monitoring					Discharge based on Laboratory Results					
	System Effluent Flow Rate (cfm)	PCE System Effluent Concentration (ppmv)	System Effluent VOC Concentration (ppmv)	Elapsed Time (day)	PCE (mg/cu m.)	TCE (mg/cu m.)	cis-1,2-DCE (mg/cu m.)	PCE Discharge Since Last Visit (lb/hr)	PCE Discharge Since Last Visit (lb)	TCE Discharge Since Last Visit (lb/hr)	TCE Discharge Since Last Visit (lb)	PCE Discharge Since Last Visit (lb/hr)	PCE Discharge Since Last Visit (lb)	TCE Discharge Since Last Visit (lb/hr)	TCE Discharge Since Last Visit (lb)	cis-1,2-DCE Discharge Since Last Visit (lb/hr)	cis-1,2-DCE Discharge Since Last Visit (lb)
9/18/2002																	
9/30/2002	290	--	0	12	--	--	--	--	--	--	--	--	--	--	--	--	--
10/14/2002	--	--	0	14	--	--	--	--	--	--	--	--	--	--	--	--	--
11/19/2002	290	--	0	36	--	--	--	--	--	--	--	--	--	--	--	--	--
12/16/2002	340	--	0	27	ND (5)	ND (5)	ND (5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/13/2003	45	0	--	28	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
1/21/2003	220	--	0	8	--	--	--	--	--	--	--	--	--	--	--	--	--
2/10/2003	258	10	3.2	20	8.0	6.0	ND (5)	0.0654	31.40	0.008	0.006	3.71	0.006	2.78	0.00	0.00	0.00
3/5/2003	305	--	0	23	--	--	--	--	--	--	--	--	--	--	--	--	--
3/18/2003	282	0	0	13	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
4/29/2003	287	0	0.6	42	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
5/13/2003	245	0	0.6	14	5.0	ND (1)	ND (1)	0.0000	0.00	0.005	0.00	1.54	0.00	0.00	0.00	0.00	0.00
6/30/2003	240	100	29.8	48	--	--	--	0.3043	350.56	--	--	--	--	--	--	--	--
7/22/2003	222	--	0	12	ND (1)	ND (1)	ND (1)	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/26/2003	232	10	35.6	35	29.0	3.6	ND (5)	0.0588	49.42	0.025	0.003	21.17	2.63	0.00	0.00	0.00	0.00
9/23/2003	210	0	0	28	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00
10/21/2003	225	0	0	28	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00
11/24/2003	205	0	0	34	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
2003 Totals:									431.38			26.42		5.41			0.00
1/6/2004	200	0	0	43	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
2/9/2004	235	0	0	34	ND (5)	ND (5)	10	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.009	0.000	7.18
3/30/2004	160	5	24	50	77	1J	2J	0.0203	24.34	0.046	0.001	55.38	0.72	0.001	0.001	0.001	1.44
4/29/2004	255	0	0	30	10	ND (5)	ND (5)	0.0000	0.00	0.010	0.001	6.88	0.69	0.002	0.002	0.002	1.38
5/24/2004	198	0	0	25	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
6/22/2004	210	0	0	29	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
7/28/2004	181	0	3.1	36	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
8/12/2004	187	0	0.1	15	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
9/29/2004	205	--	0	48	ND (1)	ND (1)	ND (1)	--	--	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
10/20/2004	230	0	0	21	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
11/17/2004	173	0	0	28	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
12/22/2004	131	0	0	35	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.000	0.00	0.00	0.000	0.000	0.000	0.00
2004 Totals:									24.34			62.26		1.41			10.00

Notes: -- = Measurement not recorded ⁽¹⁾ Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05

Discharge Rate (Field Mon., lb/hr) = [(flow/cfm)*inlet conc. (ppmv)*MW*12.187]/(273.15+C)]*1 cu. m./35.31 cu. ft*1g/1000 mg*1 lb/453.6 g*60 min/1 hr

Discharge Rate (Lab Res., lb) = Discharge Rate (lb/hr) * # of days*24hours/day*60 minutes/hr

Discharge Rate (Lab Res., lb/hr) = flow (cfm)*effluent conc. (mg/cu. m.)*1g/1000mg*1lb/453.6g*1 cu. m./35.31cu. ft*60min/1 hr

Discharge (Lab Res., lb) = Discharge Rate (lb/hr) * # of days*24hours/day

Where: C = degrees centigrade, assumed to be 25

J = Estimated Value

hr = hours

Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94

cfm = cubic feet per minute

mg/cu. m = milligrams per cubic meter

ppmv = parts per million (vol./vol.)

lb = pounds

Permit Limit	
lb/hr	lb/yr
PCE	0.031
TCE	0.014
cis-1,2-DCE	0.63
	270
	120
	5,510

TABLE 4
AIR DISCHARGE MONITORING
NATIONAL HEATSET PRINTING
1 ADAMS BLVD., FARMINGDALE, NY

Date	Field Monitoring		Laboratory Results			Discharge based on Field Monitoring						Discharge based on Laboratory Results						
	System Effluent Flow Rate (cfm)	PCE System Effluent Concentration (ppmv)	System Effluent VOC Concentration (ppmv)	Elapsed Time (day)	PCE (mg/cu m.)	TCE (mg/cu m.)	cis-1,2-DCE (mg/cu m.)	PCE Discharge Since Last Visit (lb/hr)	PCE Discharge Since Last Visit (lb)	PCE Discharge Since Last Visit (lb/hr)	PCE Discharge Since Last Visit (lb)	TCE Discharge Since Last Visit (lb/hr)	TCE Discharge Since Last Visit (lb)	TCE Discharge Since Last Visit (lb/hr)	TCE Discharge Since Last Visit (lb)	cis-1,2-DCE Discharge Since Last Visit (lb/hr)	cis-1,2-DCE Discharge Since Last Visit (lb)	
1/20/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2/23/2005	245	0	0	34	--	--	--	0.0000	0.00	0.00	0.0000	0.00	0.00	0.00	0.0000	0.00	0.00	
3/29/2005	234 ⁽¹⁾	0	0	34	ND (1)	ND (1)	2	0.0000	0.00	0.0000	0.00	0.00	0.0000	0.00	0.0000	0.002	1.43	
4/28/2005	222	0	0	30	0.5	ND (1)	1	0.0000	0.30	0.0000	0.00	0.00	0.0000	0.00	0.001	0.60	0.60	
5/31/2005	223	0	0	33	5	2	1	0.0000	3.31	0.0000	0.00	0.0017	1.32	0.001	0.001	0.66	0.66	
6/24/2005	242	10.1	15	24	64	2	0.8J	0.0620	33.42	0.0580	35.70	0.0018	1.04	0.001	0.001	0.42	0.42	
8/4/2005	381	12	7.5	41	57	1J	0.7J	0.1159	80.05	0.0814	114.09	0.0014	1.40	0.001	0.001	0.98	0.98	
Spent Carbon Replaced 8/10/05																		
9/13/2005	248	0	0	40	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
10/10/2005	211	0	0	27	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
11/11/2005	239	0	0	32	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
12/8/2005	212	0	0.1	27	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
2005 Totals:									149.79				117.08				4.09	4.09
1/6/2006	265	0	5.8	29	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
Spent Carbon Replaced 1/25/06																		
2/6/2006	322	0	0	30	1	ND (1)	ND (1)	0.0000	0.87	0.0012	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
3/14/2006	232	0	0	36	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
4/12/2006	271	0	0	29	0.6J	ND (1)	ND (1)	0.0000	0.42	0.0006	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
5/4/2006	214	0	0	22	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
6/12/2006	253	0	0	39	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
7/12/2006	196	0	0	30	ND (1)	ND (1)	0.6J	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.001	0.38	0.38	0.38
8/7/2006	210	0	0	26	1	ND (1)	ND (1)	0.0000	0.49	0.0008	0.00	0.0000	0.00	0.0000	0.0000	0.0000	0.00	0.00
9/21/2006	203	0	2.1	45	2	0.8J	0.4J	0.0000	1.64	0.0015	0.00	0.0006	0.66	0.0003	0.0003	0.33	0.33	0.33
Spent Carbon Replaced 10/11/06																		
10/18/2006	236	0	0	27	--	--	--	0.0000	0.00	0.0000	0.00	0.0000	--	--	--	--	--	--
2006 Totals:									3.42				0.66				0.71	0.71

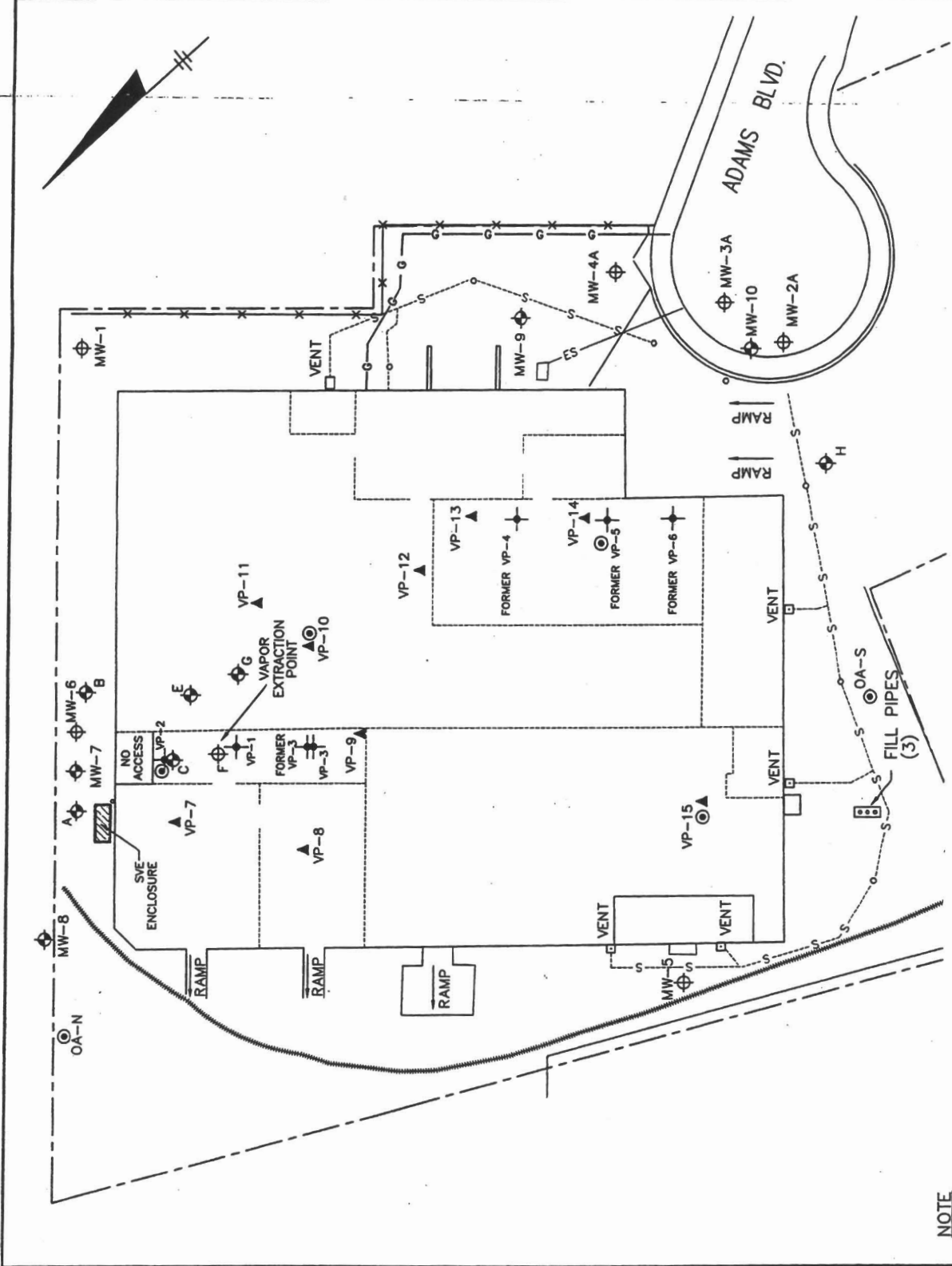
Notes:
 -- = Measurement not recorded
⁽¹⁾ Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05
Discharge Rate (Field Mon., lb/hr) = [(flow/cfm)*inflow conc. (ppmv)*MW*12.167]/(273.15+C)*1 cu. m./35.31 cu. ft*1g/1000 mg*1 lb/453.6 g*60 min/1 hr
Discharge (Field Mon., lb) = Discharge Rate (lb/hr) * # of days*24hours/day*60 minutes/hr
Discharge Rate (Lab Res., lb/hr) = flow (cfm)*effluent conc. (mg/cu. m.)*1g/1000mg*1lb/453.6g*1cu. m./35.31cu. ft*60min/1 hr
Discharge (Lab Res., lb) = Discharge Rate (lb/hr) * # of days*24hours/day
 Where:
 C = degrees centigrade, assumed to be 25
 J = Estimated Value
 hr = hours
 Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94
 cfm = cubic feet per minute
 ppmv = parts per million (vol./vol.)
 lb = pounds
 mg/cu. m = milligrams per cubic meter

Permit Limit	
PCE	0.031 lb/yr
TCE	0.014 lb/yr
cis-1,2-DCE	0.63 lb/yr

FIGURES

FIGURE 1

- LEGEND**
- TRAIN TRACK
 - AIR SAMPLING POINT (LOCATIONS APPROXIMATE AS SHOWN)
 - ▲ SAMPLING/ VAPOR MONITORING POINT
 - ⊕ VAPOR MONITORING POINT
 - ⊕ DEEP MONITORING WELL (>30')
 - ⊕ SHALLOW MONITORING WELL (<30')
 - MANHOLE OR ACCESS POINT
 - ⊕ FENCE LINE
 - ES- ELECTRIC LINE
 - G- GAS LINE
 - S- SANITARY SEWER
 - PROPERTY LINE
 - INTERIOR BUILDING WALL (DIVIDES WAREHOUSE)



NATIONAL HEATSET PRINTING
FARMINGDALE, NEW YORK

**SUBSLAB INVESTIGATION
LOCATIONS**



FILE NO. 10653.35518.003
NOVEMBER 2005



NOTE
FIGURE DEVELOPED BY SHAW ENVIRONMENTAL, INC.
REVISED BY OBG (4/28/05 AND 11/3/05).

APPENDIX A
SITE VISIT DOCUMENTATION

National Heatset Printing

1 Adams Boulevard, Farmingdale, New York
O'Brien & Gere Eng. - Job # 35518.005

Personnel: Fernando Perez Time: 1020
Weather: Overcast 70° Date: 10/18/2006

System Status:

Arrival: 1020
Departure: 1345
Run Timer Reading: 1041718
Electric Meter Reading: 5876

System Data:

Extraction Well F Gate Valve: 100 % Open
Dilution Valve: 50 % Open

Pre-Bleed Air (Extraction Well):

Flow: >130.0 CFM
Vacuum: 54 "H2O
PID Reading: 1 PPM
Draeger Tube: 4.0 PPM
Temperature: 69.9 °F

Post-Bleed Air (SVE Influent):

Flow: 231 CFM
Vacuum: -- "H2O
PID Reading: 6 PPM
Draeger Tube: 8 PPM
Temperature: 154.8 °F

Carbon Monitoring:

Mid: 0.0 PPM 154 CFM 130.3 Temp. (°F) 0.0 PPM (Drager)
Effluent: 0.0 PPM 236 CFM 131.1 Temp. (°F) 0.0 PPM (Drager)

Carbon effluent sample collected & shipped to lab?

Knockout Tank Drained? No
Gallons: N/A
Purge water drums on-site: 0

Monitoring Well Gauging / Vapor Point Monitoring:

Well/V.P. ID:	MW-C	MW-E	MW-G	VP-1	VP-2	VP-3	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	VP-13	VP-14	VP-15
DTW (ft):	15.15	15.13	15.31	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	2.4	0.45	0.4	0.5	0.4	0.1	0.3	0.2	0.15	0.02	0.0	0.0
PID (PPM):	--	--	--	--	--	--	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0

Comments:

Lights inside the warehouse are burnt out. VP 1, 2, 3, 7, 8 & 9 have no lights.

*Observed water in sight glass for knockout, need to have a drum delivered to the site.

APPENDIX B
LABORATORY REPORT OF ANALYSES
(No sample collected)