



February 3, 2005

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, January 2005
1 Adams Boulevard
Farmingdale, New York
NYSDEC Site 1-52-140**

Dear Mr. Dyber:

This letter provides an overview of the ongoing operation of the soil vapor extraction (SVE) system for the National Heatset Printing Site in Farmingdale, New York (**Figure 1**) for the reporting period including January 2005. A site visit was performed on January 20, 2005 by Shaw Environmental and Infrastructure Engineering of New York, P.C. (Shaw) in accordance with our contract with the New York State Department of Environmental Conservation (NYSDEC).

System Operation

Operation of SVE system began on September 17, 2002. The SVE system was operational for approximately 52% of the reporting period. The SVE blower was shut down on January 20, 2005 due to the observation of an abnormal motor sound upon arrival at the site. The SVE blower will be removed from the site and transported to K&G Power Systems in Hauppauge, New York for inspection. The system operational data collected to date is summarized in **Table 1**. No water was collected from the knockout vessel during this reporting period.

Monitoring Probes

Monitoring of the vapor monitoring points was not performed during the site visit, but will resume during future site visits.

PCE Removal

PCE removal monitoring was not performed during the site visit, but will resume during future site visits. The SVE system has removed approximately 2,479 pounds of PCE to date. A summary of the estimated PCE mass removal over time is presented in **Table 2**.

Air Discharge Monitoring

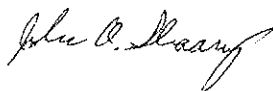
Shaw personnel did not collect a sample of the system effluent air for laboratory analyses during the site visit. Sampling of the system effluent air stream will resume during future site visits. Air sample analytical results to date are presented in **Table 3** and a summary of field monitoring and laboratory air discharge monitoring results to date is presented as **Table 4**.

Conclusions and Recommendations

Shaw recommends continued operation of the SVE system at 1 Adams Boulevard. As site conditions change, adjustments will be made to optimize the system operation. The system is currently idle, but will be restarted as soon as possible upon the completion of maintenance that will be performed on the SVE blower.

Please do not hesitate to contact me at 518-783-1996 with any questions you might have regarding this report.

Sincerely,
Shaw E&I Engineering of New York, P.C.



John A. Skaarup
Project Engineer

Cc: File

Attachments: Tables
Figures
Appendix A – Site Visit Documentation

TABLES

TABLE 1
OF SOL 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)	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	/	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	/	338	99%	100	50	38	7	1,011	400	258	27	--	75.3	50	--	--	0	--	--	--	0	--
11/19/2002	1508	882	/	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	/	645	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	882	/	863	98%	100	50	--	--	--	--	70	52	98	0	0	220	--	0	--	220	--	0	--
2/10/2003	3496	490	/	480	98%	100	50	38	--	639	400	262	27	102	72	50	266	90	26	10	258	83	3.2	10
3/18/2003	4360	882	/	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	/	999	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	343	/	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	/	1150	98%	50	50	115	32	82.4	50	140	66	173	36.8	50	198	157	25.1	25	240	150	29.8	100
7/10/2003	6851	245	/	1	0%	50	50	99.5	25	406	400	151	68	156	221	215	260	76	0	0	222	81.9	0	0
7/22/2003	7144	294	/	294	100	50	50	--	--	127	--	--	--	168	65	--	--	107	0	--	--	106	0	--
8/26/2003	7957	858	/	813	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	/	317	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	/	671	98	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	97	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	/	1	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	/	586	70	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	78	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	50	75	127	--	23.7	<10	--	--	--	--	--	180	83	30	--	206	83	0.9	--
4/29/2004	11768	515	/	327	64	50	75	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	75	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	75	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	75	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	90	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	75	139	60	--	--	140	76	153	27.7	--	194	126	0	--	205	102.1	0	--
10/20/2004	14729	515	/	473	92	50	75	155	58	--	--	120	76	160	19.1	10	202	122	0	0	230	101	0	0
11/17/2004	15229	686	/	499	73	75	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	50	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	25	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

PID = Total VOC concentration measured with photoionization detector

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

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

-- = measurement not recorded

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)	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	2,000	500	25.0	34.5	12	126	126
10/14/2002	1,011	400	39.6	38	14	129	255
11/19/2002	0	0	--	49	36	116	371
12/16/2002	560	200	35.7	36.5	27	70	441
1/13/2003	485	400	82.5	28.5	28	157	597
1/21/2003	0	0	--	0	8	63	660
2/10/2003	639	400	62.6	38	20	65	725
3/5/2003	263	200	76.0	24.4	23	132	856
3/18/2003	125	100	80.0	92	13	77	934
4/29/2003	152	50	32.9	75	42	109	1,042
5/13/2003	127	50	39.4	78	14	65	1,107
6/30/2003	82.4	50	60.7	115	48	91	1,198
7/22/2003	406	400	98.5	99.5	12	416	1,615
8/26/2003	137	10	7.3	79	35	291	1,906
9/23/2003	141	15	10.6	218	14	30	1,936
10/21/2003	37.5	20	53.3	166	28	42	1,978
11/24/2003	141	125	88.7	130	34	179	2,157
1/6/2004	118	100	84.7	98.5	43	--	2,157
2/9/2004	23.1	10	43.3	121	34	126	2,283
3/30/2004	22	10	45.5	103	50	28	2,311
4/29/2004	2.4	0	0.0	131	30	12	2,323
5/24/2004	43.8	50	114.2	144	25	59	2,382
6/22/2004	57	10	17.5	127	29	68	2,449
7/28/2004	53.2	7	13.2	142	36	22	2,471
8/12/2004	48	0	0	157	15	7	2,479
9/29/2004	27.7	0	--	139	48	0	2,479
10/20/2004	19.1	10	--	140	21	14	2,493
11/17/2004	17.9	10	55.9	160	28	22	2,515
12/22/2004	15.8	5	31.6	143	35	9	2,523
1/20/2005	--	--	--	--	--	--	--

Notes:

* = 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.

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

Where:

MW = molecular weight

Molecular weight (MW) of PCE is 165.85

C = degrees centigrade, assumed to be 25

lb = pounds

cfm = cubic feet per minute

ppmv = parts per million (volume/volume basis)

-- = information not available

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	--	--	--

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

SVE = Soil vapor extraction

VGAC = vapor-phase granular activated carbon unit

mg/m3 = milligrams per cubic meter

-- = sample not collected

J = Estimated Value

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

Date	System Effluent Flow Rate (cfm)	Field Monitoring		Elapsed Time (day)	Laboratory Results			Discharge based on Field Monitoring		Discharge based on Laboratory Results					
		PCE System Effluent Concentration (ppmv)	System Effluent VOC Concentration (ppmv)		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)	cis-1,2-DCE Discharge Since Last Visit (lb/hr)	cis-1,2-DCE Discharge Since Last Visit (lb)
9/18/2002					SVE PILOT TEST STARTUP										
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
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	3.71	0.006	2.78	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	1.54	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
8/26/2003	232	10	35.6	35	29.0	3.6	ND (5)	0.0588	49.42	0.025	21.17	0.003	2.63	0.00	0.00
9/23/2003	210	0	0	28	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.00	0.000	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	0.00	0.000	0.00	0.00	0.00
11/24/2003	205	0	0	34	--	--	--	0.0000	0.00	--	--	--	--	--	--
2003 Totals:									431.38		26.424		5.412		0.000
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	0.00	0.000	0.00	0.009	7.18
3/30/2004	160	5	24	50	77	1J	2J	0.0203	24.34	0.046	55.38	0.001	0.72	0.001	1.44
4/29/2004	255	0	0	30	10	ND (5)	ND (5)	0.0000	0.00	0.010	6.88	0.001	0.69	0.002	1.38
5/24/2004	198	0	0	25	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
6/22/2004	210	0	0	29	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
7/28/2004	181	0	3.1	36	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.00	0.000	0.00	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	0.00	0.000	0.00	0.000	0.00
10/20/2004	230	0	0	21	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
11/17/2004	173	0	0	28	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
12/22/2004	131	0	0	35	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
2004 Totals:									24.34		62.26		1.41		10.00
1/20/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

-- = Measurement not recorded

Discharge Rate (Field Monitoring, lb/hr) = ((flow(cfm)*influent 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 (Field Monitoring, lb) = Discharge Rate (lb/hr) * # of days*24hours/day*60 minutes/hr

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

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

Where:

MW = molecular weight

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

C = degrees centigrade, assumed to be 25

cfm = cubic feet per minute

mg/cu. m = milligrams per cubic meter

ppmv = parts per million (volume/volume basis)

lb = pounds

hr = hours

J = Estimated Value

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

FIGURES

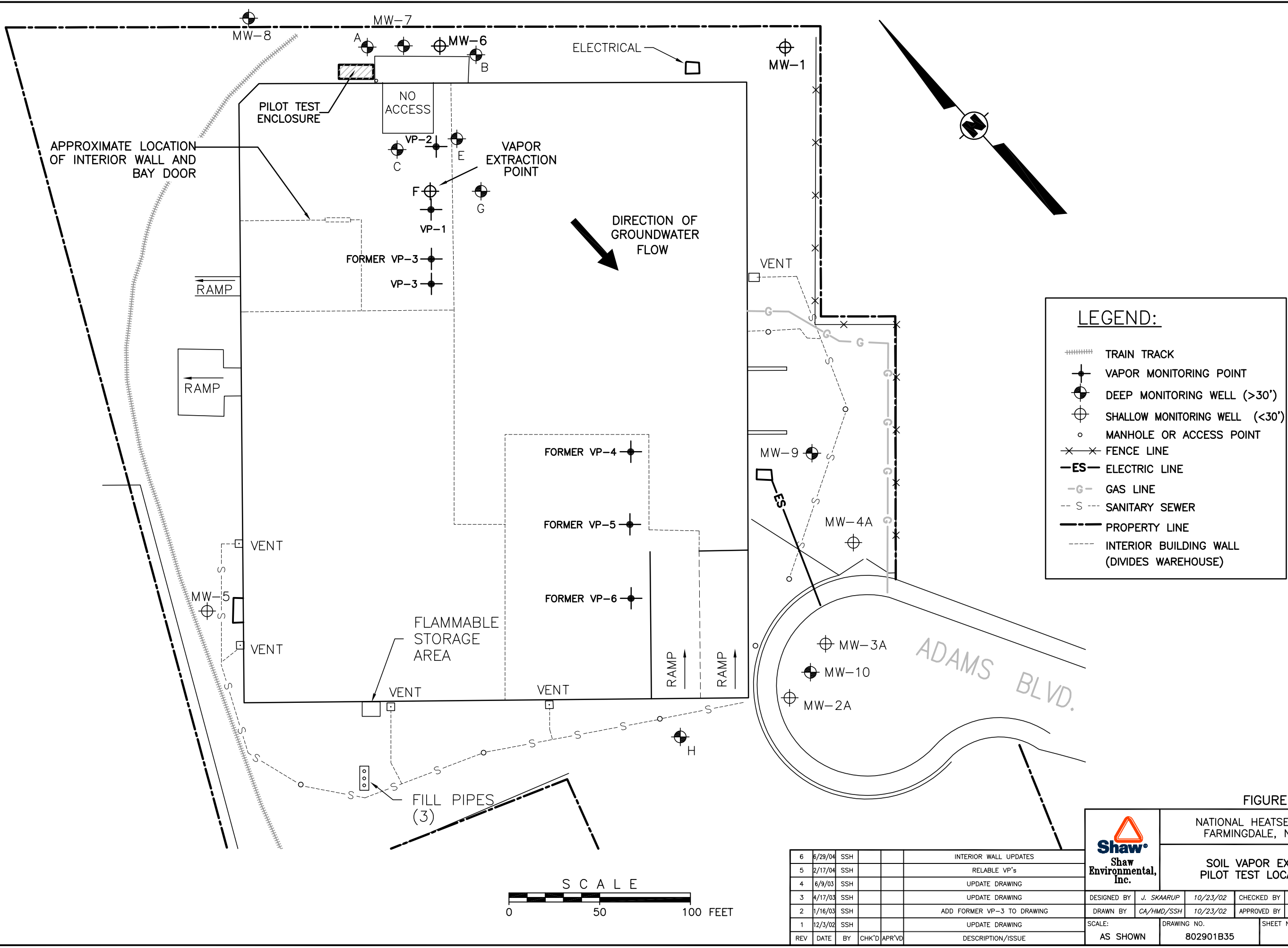


FIGURE 1

NATIONAL HEATSET PRINTING
FARMINGDALE, NEW YORK

SOIL VAPOR EXTRACTION
PILOT TEST LOCATION MAP

DESIGNED BY	J. SKAARUP	10/23/02	CHECKED BY	
DRAWN BY	CA/HMD/SSH	10/23/02	APPROVED BY	
SCALE:	AS SHOWN	DRAWING NO.	802901B35	SHEET NO.
				REVISION NO.
				6

APPENDIX A
SITE VISIT DOCUMENTATION

National Heatset Printing

1 Adams Boulevard, Farmingdale, New York

Shaw Environmental, Inc. Job/Task Number 802901/06010000

Personnel: R Hyde
Weather: _____

Time: 10:00 AM
Date: 1/20/05

System Status:

Arrival: operational
Departure: not operational
Run Timer Reading: 15933.83
Electric Meter Reading: 1470

System Data:

Extraction Well F Gate Valve: 100 % Open
Dilution Valve: 25 % Open

Pre-Bleed Air (Extraction Well):

Flow: _____ CFM
Vacuum: _____ "H2O
PID Reading: _____ PPM
Draeger Tube: _____ PPM
Temperature: _____ °F

Post-Bleed Air (SVE Influent):

Flow: _____ CFM
Vacuum: _____ "H2O
PID Reading: _____ PPM
Draeger Tube: _____ PPM
Temperature: _____ °F

Carbon Monitoring:

Mid: _____ PPM _____ CFM _____ Temp. (°F) _____ PPM (Drager)
Effluent: _____ PPM _____ CFM _____ Temp. (°F) _____ PPM (Drager)

Carbon effluent sample collected & shipped to lab? No

Knockout Tank Drained? No

Gallons: _____

Purge water drums on-site: _____

Monitoring Well Gauging / Vapor Point Monitoring:

Well/V.P. ID:	MW-C	MW-E	MW-F	MW-G	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6
DTW (ft):	—	—	—	—	—	—	—	—	—	—
Vac. (" H2O):	—	—	—	—	—	—	—	—	—	—

Comments:

SVE blower sounded abnormal upon arrival. Worse than in August when it was removed + maintained @ local shop. Shut down system to prevent (further) damage to SVE blower. Blower to be removed and repaired ASAP.