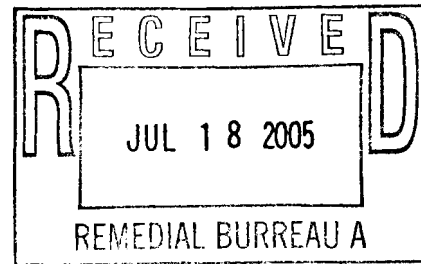




**O'BRIEN & GERE**



July 13, 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 - May 2005**  
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 May 31, 2005 on behalf of O'Brien & Gere Engineers, Inc (OBG) in accordance with our approved Work Plan.

#### System Operation

The SVE system was assumed operational for 100% of the reporting period (April 28, 2005 through May 31, 2005). The system operational data is summarized in Table 1 and on the site visit data collection form provided in Appendix A. As previously reported in the April 2005 report, the run time meter is wired to the ventilation fan rather than the SVE blower. The meter is scheduled to be rewired to the blower in July 2005.

A flow of 98 cfm and a vacuum of 39 inches of water column were observed at the extraction well. The SVE blower operated at a flow of 208 cubic feet per minute (cfm) as measured at the SVE influent. Field personnel recorded a tetrachloroethene (PCE) concentration of 9.5 ppm (by Draeger tube) and a concentration of volatile organic compounds (VOCs) of 7.4 ppm (by PID) from the extraction well (pre-dilution). No water was observed in the knockout vessel during this reporting period.

VOC concentrations of 10.4 ppm (by PID) and a PCE concentration of 10.0 ppm (by Draeger Tube) were observed at the SVE influent port during the site visit. VOC concentrations of 17.6 ppm (by PID) and a PCE concentration of 10 ppm (by Draeger Tube) were observed from the Vapor-phase Granular Activated Carbon (VGAC) mid sampling port, while non-detect VOC concentrations (by PID) and PCE (by Draeger Tube) concentrations were observed from the effluent sampling port. Refer to Table 1.

Mr. Jeff Dyber, P.E.  
July 13, 2005  
Page 2

#### Monitoring Probes

A vacuum of 1.38, 0.49 and 0.15 inches of water column were observed during the site visit at vapor monitoring points VP-1, VP-2 and VP-3, 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 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 2,206 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 collected an air sample from the system effluent and submitted the sample to Mitkem Corporation for analysis. The sample was analyzed for volatile organic compounds (VOCs) using USEPA method TO-14. The laboratory analysis indicated a concentration of tetrachloroethene (PCE) of 5 mg/m<sup>3</sup>, a concentration of trichloroethene (TCE) of 2 mg/m<sup>3</sup>, and a concentration for cis-1,2-dichloroethene (DCE) of 1 mg/m<sup>3</sup>. Analytical results are summarized in Table 3 and the laboratory data report is presented in Appendix B.

Field monitoring of the system effluent conducted during the site visit indicated non-detect concentrations of PCE and total VOCs. The laboratory detections of PCE and cis-1,2-DCE were below the resolution of the field instrumentation (PID), and are, therefore, consistent with the non-detect concentration of VOCs. A summary of the field monitoring and laboratory air discharge monitoring results is presented as Table 4.

Based on an effluent flow rate of 223 cfm, a concentration of 1 mg/m<sup>3</sup> of cis-1, 2-DCE would result in a discharge rate of 0.001 lb/hr; this rate is below the permit limit of 0.66 lb/hr for this compound. An estimated concentration of 5 mg/m<sup>3</sup> of PCE would result in a discharge rate of 0.0042 lb/hr (at 223 cfm); this rate is below the permit limit of 0.031 lb/hr for this compound. An estimated concentration of 2 mg/m<sup>3</sup> of TCE would result in a discharge rate of 0.0017 lb/hr (at 223 cfm); this rate is below the permit limit of 0.014 lb/hr for this compound. A total of 2.69 lb of cis-1, 2-DCE has been discharged during the year 2005 toward the permitted annual discharge limit of 5,510 lbs. A total of 3.61 lb of PCE has been discharged during the year 2005 toward the permitted annual discharge limit of 270 lb. A total of 1.32 lb of TCE has been discharged during the year 2005 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 dilution value was reset to 50% open (from 75%) during this site visit. It is recommended that no additional operational changes be made at this time. As site conditions change, adjustments will be made to optimize the system operation.

Mr. Jeff Dyber, P.E.  
July 13, 2005  
Page 3

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.

A handwritten signature in black ink, appearing to read "Marc J. Dent". The signature is fluid and cursive, with a large initial "M" and "D".

Marc J. Dent P.E.  
Managing Engineer

cc. Trevor Staniec – O'Brien & Gere

I:\DIV71\Projects\10653\35518\5\_rpts\SVE Monthly reports-OBG\OM Report\_May-05.doc  
Attachments

## TABLES

**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)	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)
SVE PILOT TEST STARTUP																							
9/18/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/23/2005	15933	833	0	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	50	87 <sup>(1)</sup>	40	--	--	158 <sup>(1)</sup>	--	121	6.4	4.5	255 <sup>(1)</sup>	97	3.4	3	234 <sup>(1)</sup>	81	0	<2
4/28/2005	--	720	720 <sup>(2)</sup>	100	75	50	86	39	--	--	227	--	126	8.9	5	244	109	8	4	222	84.2	0	<2
5/31/2005	--	792	792 <sup>(2)</sup>	100	50	50	98	39	7.4	9.5	208	--	124.2	10.4	10	227	118.6	17.6	10	223	112.3	0	<2

Notes:

<sup>(1)</sup> Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05

-- = measurement not recorded or not applicable.

<sup>(2)</sup> Run time meter reading not indicative of SVE system run time; actual hours run is assumed 100% of available.

PID = Total VOC concentration measured with photoionization detector

Influent SVE = Readings collected between the SVE Blower and the Carbon Units

ppm = parts per million (volume/volume basis)

Mid GAC = Readings collected between the lead and lag carbon units

PCE = Tetrachloroethene (PCE) concentration measured with Drager tube of 10-500 ppm range

Effluent GAC = Readings collected after the lag carbon unit

scfm = standard cubic feet per minute

GAC = granular activated carbon unit

cfm = cubic feet per minute

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)	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 <sup>(1)</sup>	500 <sup>(1)</sup>	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	--	--
3/29/2005	6.4	4.5	70.3	148	34	9	2,178
4/28/2005	8.9	5	56.2	86	30	11	2,189
5/31/2005	10.4	10	96.2	98	33	17	2,206

**Notes:**

<sup>(1)</sup> = 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.

<sup>(2)</sup> SVE Influent (post-dilution) monitoring point data used for calculation of PCE Removal for dates including and subsequent to March 29, 2005

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

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

**Where:**

MW = molecular weight

cfm = cubic feet per minute

Molecular weight (MW) of PCE is 165.85

ppmv = parts per million (volume/volume basis)

C = degrees centigrade, assumed to be 25

-- = information not available

lb = pounds

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

<b>SVE Influent Concentration (mg/m3)</b>			
<b>Date</b>	<b>cis-1,2-Dichloroethene</b>	<b>Tetrachloroethene (PCE)</b>	<b>Trichloroethene</b>
9/18/2002	5	600E	31
9/30/2002	ND (5)	360E	23
10/14/2002	--	--	--
11/19/2002	--	--	--

<b>VGAC Effluent Concentration (mg/m3)</b>			
<b>Date</b>	<b>cis-1,2-Dichloroethene</b>	<b>Tetrachloroethene (PCE)</b>	<b>Trichloroethene</b>
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

**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	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	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	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	21.17	0.003	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	0.00	0.000	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	0.00	0.000	0.00	0.00	0.00	0.00	0.00
11/24/2003	205	0	0	34	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
<b>2003 Totals:</b>									<b>431.38</b>		<b>26.424</b>		<b>5.412</b>				<b>0.000</b>
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	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	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	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	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	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	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	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	0.000	0.00
<b>2004 Totals:</b>									<b>24.34</b>		<b>62.26</b>		<b>1.41</b>				<b>10.00</b>
1/20/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/23/2005	245	0	0	34	--	--	--	0.0000	0.00	--	--	--	--	--	--	--	--
3/29/2005	234 <sup>(1)</sup>	0	0	34	ND (1)	ND (1)	2	0.0000	0.00	0.000	0.00	0.000	0.00	0.002	1.43		
4/28/2005	222	0	0	30	0.5	ND (1)	1	0.0000	0.00	0.0004	0.30	0.000	0.00	0.001	0.60		
5/31/2005	223	0	0	33	5	2	1	0.0000	0.00	0.0042	3.31	0.0017	1.32	0.001	0.66		
<b>2005 Totals:</b>									<b>0.00</b>		<b>3.61</b>		<b>1.32</b>				<b>2.69</b>

Notes:

-- = Measurement not recorded

<sup>(1)</sup> 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)\*influent conc.(ppmv)\*MW\*12.187)/(273.15+C)]\*1 cu. m./35.31 cu. ft\*1g/1000 mg\*1 lb/453.6g\*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:

MW = molecular weight

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

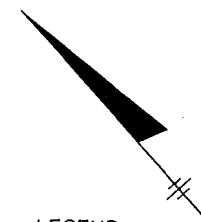
J = Estimated Value

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



**LEGEND**

- ==== TRAIN TRACK
- + 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

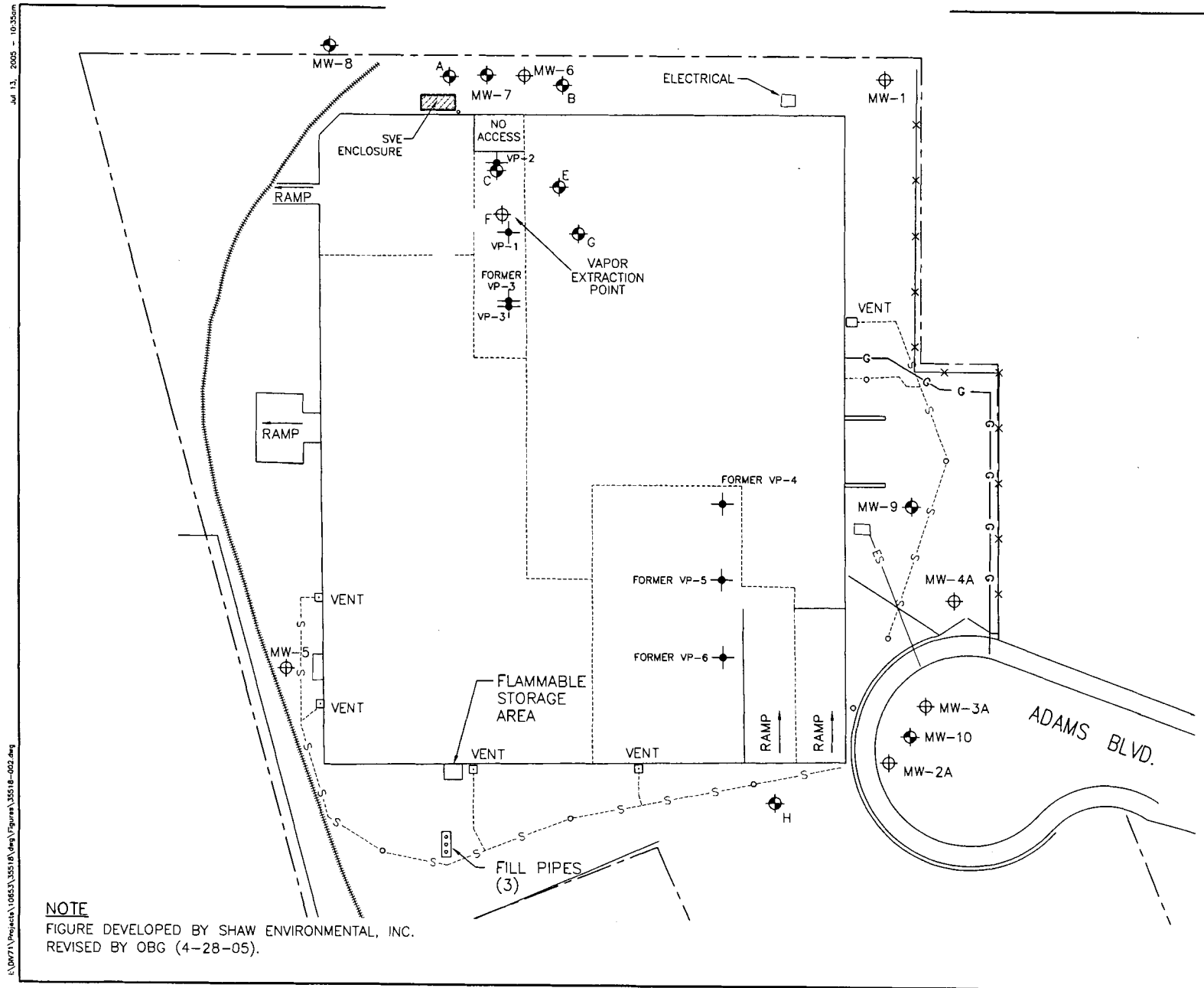
**SOIL VAPOR EXTRACTION  
SYSTEM LOCATION MAP**



FILE NO. 10653.35518.002  
JUNE 2005



2004 © O'Brien and Gere Engineers, Inc.



**NOTE**  
FIGURE DEVELOPED BY SHAW ENVIRONMENTAL, INC.  
REVISED BY OBG (4-28-05).

Jul 13, 2005 - 10:35am  
 E:\D71\Projects\10653.35518\Fig\Figure1\_35518-002.dwg

APPENDIX A  
SITE VISIT DOCUMENTATION

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

Personnel: Dan Simpson Time: 12 20  
 Weather: Sunny 65° Date: 5/31/05

**System Status:**  
 Arrival: 12 20  
 Departure: \_\_\_\_\_  
 Run Timer Reading: 1675918  
 Electric Meter Reading: 1411 (Back room), 00998 01.33 X 20 (front Building on right)

**System Data:**  
 Extraction Well F Gate Valve: 50 % Open  
 Dilution Valve: 30 % Open

<b>Pre-Bleed Air (Extraction Well):</b>	<b>Post-Bleed Air (SVE Influent):</b>
Flow: <u>97.5</u> CFM	Flow: <u>208</u> <del>1200</del> CFM
Vacuum: <u>39</u> "H2O	Vacuum: <u>-</u> "H2O
PID Reading: <u>7.4</u> PPM	PID Reading: <u>10.4</u> PPM
Draeger Tube: <u>9.5</u> PPM	Draeger Tube: <u>10.0</u> PPM
Temperature: <u>84.1</u> °F	Temperature: <u>124.2</u> °F

<b>Carbon Monitoring:</b>				
Mid: <u>17.6</u> PPM	<u>227</u> CFM	<u>118.6</u> Temp. (°F)	<u>10.0</u> PPM (Drager)	
Effluent: <u>0.0</u> PPM	<u>223</u> CFM	<u>112.3</u> Temp. (°F)	<u>&lt; 2</u> PPM (Drager)	

Carbon effluent sample collected & shipped to lab? Yes

Knockout Tank Drained? N/A  
 # Gallons: N/A  
 Purge water drums on-site: N/A

**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):	<u>15.17</u>	<u>15.17</u>	--	<u>15.35</u>	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	--	<u>1.38</u>	<u>0.49"</u>	<u>0.15"</u>	--	--	--

**Comments:**  
4 Draeger tubes used. Note that PPM measurements for PID were higher at the mid-carbon than at the post bleed. F-Gate valve was moved to 50% open at request of Marc Dent.

APPENDIX B  
LABORATORY REPORT OF ANALYSES



*"Environmental Testing For The New Millennium"*

---

July 5, 2005

O'Brien & Gere  
5000 Brittonfield Parkway  
P. O. Box 4873  
Syracuse, NY 13221-4873  
Attn: Mr. Marc Dent

RE: Client Project: National Heatsct  
Lab Project #: D0632

Dear Mr. Dent:

Enclosed please find the data report of the required analysis for the sample associated with the above referenced project. If you have any questions regarding this report, please call me.

We appreciate your business.

Sincerely,

A handwritten signature in cursive script, appearing to read "Edward A. Lawler".

Edward A. Lawler  
Laboratory Operations Manager



Report of Laboratory Analyses for O'Brien & Gere

Client Project: National Heatset

SDG# MD0632

Mitkem Work Order ID: D0632

July 5, 2005

Prepared For: O'Brien & Gere  
5000 Brittonfield Parkway  
P. O. Box 4873  
Syracuse, NY 13221-4873  
Attn: Mr. Marc Dent

Prepared By: Mitkem Corporation  
175 Metro Center Boulevard  
Warwick, RI 02886  
(401) 732-3400



**Client: O'Brien & Gere**

**Client Project: National Heatset**

**Lab Project: D0632**

**Date samples received: 04/29/05**

### **Project Narrative**

This data report includes the analysis results for one (1) air sample in a Tedlar bag that was received from O'Brien & Gere on June 1, 2005. Analyses were performed per specification in the Chain of Custody form. For reference, a copy of the Mitkem Work Order form is included for cross-referencing the client sample ID and laboratory sample ID.

All of the analyses were performed according to method specifications, as modified by Mitkem. The common laboratory contaminant methylene chloride was detected in the sample as well as the laboratory blank. The result for this compound is qualified with the "B" flag to indicate potential laboratory contamination.

No unusual occurrences were noted during sample analysis.

All pages in this report have been numbered consecutively, starting with the title page and ending with a page saying only "Last Page of Data Report".

This data report has been reviewed and is authorized for release as evidenced by the signature below.

A handwritten signature in cursive script, appearing to read "Edward A. Lawler".

Edward A. Lawler  
Laboratory Operations Manager



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SVE EFFLUENT

Lab Name: MITKEM CORPORATION                      Contract:  
 Lab Code: MITKEM      Case No.:                      SAS No.:                      SDG No.: MD0632  
 Matrix: (soil/water) AIR                              Lab Sample ID: D0632-01A  
 Sample wt/vol:                      25 (g/mL) ML                      Lab File ID: V5G0525  
 Level: (low/med)      LOW                              Date Received: 06/01/05  
 % Moisture: not dec.                      \_\_\_\_\_                      Date Analyzed: 06/16/05  
 GC Column: DB-624      ID: 0.25 (mm)                      Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL)                      Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/M3	Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	U
74-88-4	Iodomethane	1	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	0.2	BJ
156-60-5	trans-1,2-Dichloroethene	1	U
1634-04-4	Methyl tert-butyl ether	1	U
75-34-3	1,1-Dichloroethane	1	U
108-05-4	Vinyl acetate	1	U
78-93-3	2-Butanone	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
590-20-7	2,2-Dichloropropane	1	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
563-58-6	1,1-Dichloropropene	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	2	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SVE EFFLUENT
--------------

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: MD0632

Matrix: (soil/water) AIR

Lab Sample ID: D0632-01A

Sample wt/vol: 25 (g/mL) ML

Lab File ID: V5G0525

Level: (low/med) LOW

Date Received: 06/01/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 06/16/05

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/M3	Q
142-28-9	1,3-Dichloropropane	1	U
127-18-4	Tetrachloroethene	5	
591-78-6	2-Hexanone	1	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	1	U
100-41-4	Ethylbenzene	1	U
	m,p-Xylene	1	U
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U
106-43-4	4-Chlorotoluene	1	U
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
99-87-6	4-Isopropyltoluene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-68-3	Hexachlorobutadiene	1	U
91-20-3	Naphthalene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

FORM I VOA

OLM03.0

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5Q

Lab Name: MITKEM CORPORATION

Contract:

Lab Code: MITKEM

Case No.:

SAS No.:

SDG No.: MD0632

Matrix: (soil/water) AIR

Lab Sample ID: MB-18568

Sample wt/vol: 25 (g/mL) ML

Lab File ID: V5G0522

Level: (low/med) LOW

Date Received: \_\_\_\_\_

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 06/16/05

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/M3	Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	1	U
74-88-4	Iodomethane	1	U
75-15-0	Carbon Disulfide	1	U
75-09-2	Methylene Chloride	0.4	J
156-60-5	trans-1,2-Dichloroethene	1	U
1634-04-4	Methyl tert-butyl ether	1	U
75-34-3	1,1-Dichloroethane	1	U
108-05-4	Vinyl acetate	1	U
78-93-3	2-Butanone	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
590-20-7	2,2-Dichloropropane	1	U
74-97-5	Bromochloromethane	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
563-58-6	1,1-Dichloropropene	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
74-95-3	Dibromomethane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U

FORM I VOA

OLM03.0

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5Q

Lab Name: MITKEM CORPORATION                      Contract: \_\_\_\_\_

Lab Code: MITKEM      Case No.: \_\_\_\_\_      SAS No.: \_\_\_\_\_      SDG No.: MD0632

Matrix: (soil/water) AIR                                      Lab Sample ID: MB-18568

Sample wt/vol:              25 (g/mL) ML                      Lab File ID:    V5G0522

Level:    (low/med)    LOW                                      Date Received: \_\_\_\_\_

% Moisture: not dec. \_\_\_\_\_                      Date Analyzed: 06/16/05

GC Column: DB-624      ID: 0.25 (mm)                      Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)                      Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/M3	Q
142-28-9	1,3-Dichloropropane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	1	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U
630-20-6	1,1,1,2-Tetrachloroethane	1	U
100-41-4	Ethylbenzene	1	U
	m,p-Xylene	0.2	J
95-47-6	o-Xylene	1	U
1330-20-7	Xylene (Total)	0.2	J
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
108-86-1	Bromobenzene	1	U
96-18-4	1,2,3-Trichloropropane	1	U
103-65-1	n-Propylbenzene	1	U
95-49-8	2-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1	U
106-43-4	4-Chlorotoluene	1	U
98-06-6	tert-Butylbenzene	1	U
95-63-6	1,2,4-Trimethylbenzene	1	U
135-98-8	sec-Butylbenzene	1	U
99-87-6	4-Isopropyltoluene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-68-3	Hexachlorobutadiene	1	U
91-20-3	Naphthalene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U

4A  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK5Q

Lab Name: MITKEM CORPORATION                      Contract:  
 Lab Code: MITKEM    Case No.:                      SAS No.:                      SDG No.: MD0632  
 Lab File ID: V5G0522                                      Lab Sample ID: MB-18568  
 Date Analyzed: 06/16/05                                      Time Analyzed: 1115  
 GC Column: DB-624    ID: 0.25 (mm)                      Heated Purge: (Y/N) N  
 Instrument ID: V5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	SVE EFFLUENT	D0632-01A	V5G0525	1325
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

---



---

Client ID: OBRIEN\_GERE  
Project: Nation Heatset  
Location:  
Comments: N/A

Case:  
SDG:  
PO: HEATSET

Report Level: LEVEL 2  
EDD: CLF  
HC Due: 06/15/05  
Fax Due:

Sample ID	Client Sample ID	Collection Date	Date Received	Matrix	Test Code	Lab Test Comments	fold	MS	SEL	Storage
D0632-01A	SVE EFFLUENT	05/31/05 13:13	06/01/05	Air	TO14					VOA



175 Metro Center Boulevard  
 Warwick, Rhode Island 02886-1755  
 (401) 732-3400 • Fax (401) 732-3499  
 email: mitkem@mitkem.com

# CHAIN-OF-CUSTODY RECORD

REPORT TO				INVOICE TO																		
COMPANY <i>O'Brien + Gere</i>		PHONE <i>(315) 437-6100</i>		COMPANY <i>O'Brien + Gere</i>		PHONE <i>(315) 437-6100</i>																
NAME <i>Marc J. Dent</i>		FAX <i>(315) 463-7554</i>		NAME <i>Marc J. Dent</i>		FAX <i>(315) 463-7554</i>																
ADDRESS <i>5000 Brittonfield Pkwy, P.O. Box 4873</i>				ADDRESS <i>5000 Brittonfield Pkwy P.O. Box 4873</i>																		
CITY/ST/ZIP <i>Syracuse, NY 13221-4873</i>				CITY/ST/ZIP <i>Syracuse, NY 13221-4873</i>																		
CLIENT PROJECT NAME: <i>National Heatset</i>		CLIENT PROJECT #:		CLIENT P.O.#:		REQUESTED ANALYSES																
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES										COMMENTS			
									Method TO-14													
<i>SVE Effluent</i>	<i>5/31/13</i>	<input checked="" type="checkbox"/>				<i>Air</i>	<i>01</i>	<i>1</i>	<i>X</i>													
/	/																					
/	/																					
/	/																					
/	/																					
/	/																					
/	/																					
/	/																					
/	/																					
/	/																					
/	/																					
TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY		DATE/TIME	ADDITIONAL REMARKS:		COOLER TEMP:														
	<i>Stanisl Lipov</i>	<i>5/31/08 3pm</i>	<i>J. Healy</i>		<i>6/10/08 1:45</i>			<i>Ambient</i>														
		/			/																	
		/			/																	

6000

**MITKEM CORPORATION**  
**Sample Condition Form**

Received By: <u>J. Healey</u>		Reviewed By: <u>AM</u>		Date: <u>6/1/05</u>		MITKEM Project #: <u>D0632</u>	
Client Project: <u>NATIONAL HEATSET</u>				Client: <u>O'BRIEN + GORE (YEC)</u>			Soil Headspace or Air Bubbles $\geq 1/4"$
Cooler Sealed <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No	Lab Sample ID	Preservation (pH)				VOA Matrix	
		HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	HCl	NaOH		
	<u>01</u>						
1) Custody Seal(s) Present / <input checked="" type="checkbox"/> Absent		<div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border-left: 1px solid black; border-bottom: 1px solid black; pointer-events: none;"></div>					
Coolers / <input checked="" type="checkbox"/> Bottles							
Intact / <input checked="" type="checkbox"/> Broken							
2) Custody Seal Number(s) <u>N/A</u>							
3) Chain-of-Custody <input checked="" type="checkbox"/> Present / <input type="checkbox"/> Absent							
4) Cooler Temperature <u>Ambient</u>							
Coolant Condition <u>/</u>							
5) Airbill(s) <input checked="" type="checkbox"/> Present / <input type="checkbox"/> Absent							
Airbill Number(s) <u>EX EX</u>							
6) Sample Bottles <u>AIR BAG</u> <input checked="" type="checkbox"/> Intact / <input type="checkbox"/> Broken / <input type="checkbox"/> Leaking							
7) Date Received <u>6/1/05</u>							
8) Time Received <u>08:45</u>							
Preservative Name/Lot No:							

**VOA Matrix Key:**  
**US** = Unpreserved Soil    **A** = Air  
**UA** = Unpreserved Aqueo    **H** = HCl  
**M/N** = MeOH & NaHSO<sub>4</sub>    **E** = Encore  
**N** = NaHSO<sub>4</sub>    **M** = MeOH

See Sample Condition Notification/Corrective Action Form    yes  no

Rad OK    yes/ no



CONFIDENTIAL

**Last Page of Data Report**