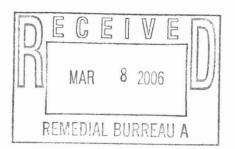


March 1, 2006



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-**December 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 December 8, 2005 on behalf of O'Brien & Gere Engineers, Inc (OBG) in accordance with our approved Work Plan.

## System Operation

The SVE system operated for 100% of the reporting period (November 11, 2005 through December 8, 2005). The system operational data is summarized in Table 1 and on the site visit data collection form provided in Appendix A. Based on the run time meter, the system was operational for a total of 647 hours.

A flow of 79.0 cfm and a vacuum of 29 inches of water column were observed at the extraction well. The SVE blower operated at a flow of 235 cubic feet per minute (cfm) as measured at the SVE influent. Field personnel recorded a tetrachloroethene (PCE) concentration of 5.0 ppm (by Draeger tube) and a concentration of volatile organic compounds (VOCs) of 22.2 ppm (by PID) from the extraction well (pre-dilution).

VOC concentrations of 7.2 ppm (by PID) and a PCE concentration of 2.0 ppm (by Draeger Tube) were observed at the SVE influent port during the site visit. VOC concentrations of 6.8 ppm (by PID) and a PCE concentration of 2.0 ppm (by Draeger Tube) were observed from the Vapor-phase Granular Activated Carbon (VGAC) mid sampling port, and a VOC concentration of 0.1 ppm (by PID) and a PCE concentration of 0.0 ppm (by Draeger Tube) were observed from the effluent sampling port. Refer to Table 1.

## **Monitoring Probes**

A vacuum of 1.9, 0.56 and 0.1 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.

5000 Brittonfield Parkway / P.O. Box 4873, Syracuse, New York 13221-4873 (315) 437-6100 / FAX (315) 463-7554 = http://www.obg.com



Mr. Jeff Dyber, P.E. March 1, 2006 Page 2

# 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 12 pounds of PCE from the extraction well during this reporting period and has removed approximately 2,365 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. Concentrations of PCE, TCE and cis-1, 2-DCE were not detected in the effluent sample above a detection limit of 1 mg/m<sup>3</sup>. Analytical results are summarized in Table 3 and the laboratory data report is presented in Appendix B. A summary of the field monitoring and laboratory air discharge monitoring results is presented as Table 4.

Based on the effluent sampling results, no PCE, TCE or cis-1, 2-DCE was discharged during the current monitoring period. A total of 4.09 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 117.08 lb of PCE has been discharged during the year 2005 toward the permitted annual discharge limit of 270 lb. A total of 3.77 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 extraction well valve was set to the 75% open position during this site visit as recommended in the November 2005 Operation and Maintenance Report.

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.

ste

For: Marc J. Dent P.E. Managing Engineer

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

 $\label{eq:linear} I:\DIV71\Projects\10653\35518\5\_rpts\SVE Monthly reports-OBG\OM Report\_Dec-05.doc Attachments$ 

TABLES

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

Meter Reading     Meter Last Visit     Time Since Position     Valve Position     Valve Position     Air Flow at Well (inches     at Well PID     Dilution PCE     Blower Flow     Vacuum (inches     Temp.     PID     PCE     Flow     Flow     Temp.     PID     PCE     Flow     Temp.		Run Time	Run Time S Visit (ho	CARL STRONG LABOR 11	Operation	Dilution	Extraction Well MW-F		Vacuum	Pre-	Pre-		Influ	ent SVE				Mic	GAC			Efflu	ent GAC	
Date         Unit         Usat         Visit         Poston (% at Wiell         Wiell         Open         Open<	1. 2 C 492.			1. 100	The second second second second second	and the second second second		Air Flow			and the second second second	Blower	Vacuum	1.0.10		No. Car	1.5-12	W. Salar	-					Safer)
Date         Open         Cyclin         Pace         Pace<	and all and the				and the second second second second	A CONTRACTOR OF A		10000000000000000000000000000000000000	and the second	and the subscript of th	Contraction of the second second	Construction of the second second		Temp.	PID	PCE	Flow	Temp.	PID	PCE	Flow	Temp.	PID	PCE
9/18/2002         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         0         -         208         855         0         -         -         0         -         <	Date		Available	Actual	The second s				Contraction in the second second			(cfm)		and the second second second	(ppm)	Contraction (Second		(°F)			The second second			(ppm)
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								36.5	10	560	200				46.4	50		60	3.4			53.9		
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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         6/24/2005       576       576 <sup>(2)</sup> 100       50       50       125       25       28.5       16       266        152       8.3       7       283       133       13.9       16       242       116       10.1         8/4/2005       17972       984       984 <sup>(2)</sup> 100       75       65       216       266       38.1       19       353        153.4       8.8       12       423       135.7       10.5       12       381       120.7       7.5         9/13/2005       859       960       960 <sup>(2)</sup> 100       75       50       89.5       25       59.6       14       226        164.5       18.3       12       265       143       0.5       0       248       124.6       0         10/10/2005       1502       643       643       100       75       35       86       27 <t< td=""><td>3/29/2005</td><td>16217</td><td>833</td><td>284</td><td>34</td><td>75</td><td>50</td><td>87 (1)</td><td>40</td><td></td><td></td><td>158<sup>(1)</sup></td><td></td><td>121</td><td>6.4</td><td>4.5</td><td>255 (1)</td><td>97</td><td>3.4</td><td>3</td><td>234 (1)</td><td>81</td><td>0</td><td>&lt;2</td></t<>	3/29/2005	16217	833	284	34	75	50	87 (1)	40			158 <sup>(1)</sup>		121	6.4	4.5	255 (1)	97	3.4	3	234 (1)	81	0	<2
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6/24/2005         576         576 <sup>(2)</sup> 100         50         50         125         25         28.5         16         266          152         8.3         7         283         133         13.9         16         242         116         10.1           8/4/2005         17972         984         984 <sup>(2)</sup> 100         75         65         216         26         38.1         19         353          153.4         8.8         12         423         135.7         10.5         12         381         120.7         7.5           9/13/2005         859         960         960 <sup>(2)</sup> 100         75         50         89.5         25         59.6         14         226          164.5         18.3         12         265         143         0.5         0         248         124.6         0           10/10/2005         1502         643         643         100         75         35         86         27         59.2         19         222          101.3         21.7         10         225         110         15.1         0         211         99.3         0										7.4	9.5												-	<2
8/4/2005         17972         984         984 <sup>(2)</sup> 100         75         65         216         26         38.1         19         353          153.4         8.8         12         423         135.7         10.5         12         381         120.7         7.5           9/13/2005         859         960         960 <sup>(2)</sup> 100         75         50         89.5         25         59.6         14         226          164.5         18.3         12         265         143         0.5         0         248         124.6         0           10/10/2005         1502         643         643         100         75         35         86         27         59.2         19         222          101.3         21.7         10         25         10         15.1         0         211         99.3         0														-										15
9/13/2005         859         960         960 <sup>(2)</sup> 100         75         50         89.5         25         59.6         14         226          164.5         18.3         12         265         143         0.5         0         248         124.6         0           10/10/2005         1502         643         643         100         75         35         86         27         59.2         19         222          101.3         21.7         10         25         110         15.1         0         211         99.3         0		17972																						12
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Notes:

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

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

PID = Total VOC concentration measured with photoionization detector

ppm = parts per million (volume/volume basis)

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

scfm = standard cubic feet per minute

cfm = cubic feet per minute

O'Brien & Gere Engineers, Inc. I\71\10653\35518\5\SVE monthly report-OBG\SVE Tables (OBG).xls -- = 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 prevously calculated.

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

	VOC Influent	PCE Influent	% PCE	Extraction Well	Elapsed Time	PCE Removal	Cumulative
	Concentration	Concentration	of Total	Flow Rate (cfm)	Since Last Visit	Since Last Visit	PCE Remova
Date	(ppmv)	(ppmv)	VOCs	(2)	(day)	(lb)	(lb)
9/18/2002				SVE PILOT TEST	T STARTUP		
9/30/2002	2000 (1)	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		
	VOC Influent	PCE Influent	% PCE	SVE Influent	Elapsed Time	PCE Removal	Cumulative
	Concentration	Concentration	of Total	Flow Rate (cfm)	Since Last Visit	Since Last Visit	PCE Remova
Date	(ppmv)	(ppmv)	VOCs	(2)	(day)	(lb)	(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:

<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; Removal updated on 1-3-06 to represent SVE Influent flow rate.

Removal Rate = [(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\*24 hr/1 day\*days of operation

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

Where: MW = molecular weight

Molecular weight (MV	/) of PCE is 165.85
----------------------	---------------------

lb = pounds 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 2 PCE REMOVAL ESTIMATE NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

	VOC Influent	PCE Influent	% PCE	SVE Influent	Elapsed Time	PCE Removal	Cumulative
	Concentration	Concentration	of Total	Flow Rate (cfm)	Since Last Visit	Since Last Visit	PCE Removal
Date	(ppmv)	(ppmv)	VOCs	(2)	(day)	(lb)	(lb)
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
12/0/2000	7.2			200			2,000
					)		
						w.	
					2		

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; Removal updated on 1-3-06 to represent SVE Influent flow rate.

Removal Rate = [(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\*24 hr/1 day\*days of operation

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

Where:

Molecular weight (MW) of PCE is 165.85

MW = molecular weight

C = degrees centigrade, as measured

ppmv = parts per million (volume/volume basis)

lb = pounds

-- = 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 Conc		
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
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)

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 = Concentation exceeded calibration range SVE = Soil vapor extraction

- -- = sample not collected
- J = Estima

VGAC = vapor-phase granular activated carbon

J = Estimated Value

mg/m3 = milligrams per cubic meter

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

ALL AND ADDRESS	and the second	Sale State State			1. Jan	S. S. C. S.		Discharge ba	ased on Field	d					
	148.4	Field Mo	onitoring		Labo	ratory R	esults		toring	一般的考虑了	Disch	arge based or	Laboratory	Results	
	A T-WAR		We want was	and the series	14 - 14 M		2.22 01		The art was	1. 法保持法院主义	Walter State		State Last Last	and the second	
	System	PCE System	System	Sand.		122	cis-1,2-	PCE	PCE	PCE	PCE	TCE	TCE	cis-1 2-DCE	cis-1,2-DCE
	Effluent	Effluent	Effluent VOC	Elapsed	PCE	TCE	DCE	Discharge	Discharge	Discharge		Discharge	Discharge	Discharge	Discharge
Station of the	Flow Rate		Concentration	Time	(mg/cu	(mg/cu	(mg/cu	Since Last	Since Last		Since Last	Since Last	Since Last	Since Last	
Date	(cfm)	(ppmv)	(ppmv)	(day)	m.)	m.)	m.)	Visit (lb/hr)	Visit (lb)	Visit: Ib/hr	the second s	Visit (lb/hr)	Visit (lb)	Visit (lb/hr)	Visit (lb)
9/18/2002	(Ontr)	(ppint)	(ppint)	(44)/	may			VE PILOT TE		VIOIC IDITI					(io)
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		26.42		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	0.00	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)		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
Notos:		omont not recor		(1) 0 1 1				ao of flows mos	1 0.00						

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., Ib/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 Mon., Ib) = Discharge Rate (Ib/hr) \* # of days\*24hours/day\*60 minutes/hr

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

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

- C = degrees centigrade, assumed to be 25
- J = Estimated Value
- hr = hours

Where:

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

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

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

					1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 ( 1.000 (	1.4	ADAMS BL	VD., FARMING		1. C. C. C. C. C. T. C. T. C.	STREET, STREET	and the second states of the	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
		Field Mo	onitoring		Labo	oratory R	esults		ased on Field toring		Disch	narge based or		Results	
				N. Star	Labe			WOIII			Disci	large based of	Laboratory		1
Date	System Effluent Flow Rate (cfm)	PCE System Effluent Concentration (ppmv)	System Effluent VOC Concentration (ppmv)	and the second second second	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)	Discharge
1/20/2005										-					
2/23/2005	245	0	0	34				0.0000	0.00			-			
3/29/2005	234 (1)	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
6/24/2005	242	10.1	15	24	64	2	0.8J	0.0620	35.70	0.0580	33.42	0.0018	1.04	0.001	0.42
8/4/2005	381	12	7.5	41	57	1J	0.7J	0.1159	114.09	0.0814	80.05	0.0014	1.40	0.001	0.98
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	0.000	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	0.000	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	0.000	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	0.000	0.00
2005 Totals:								4	149.79		117.08		3.77		4.09
2006 Totals:									0.00		0.000		0.000		0.000
Notes:	= Measu	rement not recor	rded	<sup>(1)</sup> Calculat	ed flows	based on	the avera	ge of flows mea	asured on 3-29-	05 and 4-28-0	05				

Discharge Rate (Field Mon., Ib/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 Mon., Ib) = Discharge Rate (Ib/hr) \* # of days\*24hours/day\*60 minutes/hr

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

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

Where: C = degrees centigrade, assumed to be 25

J = Estimated Value

hr = hours

cfm = cubic feet per minute mg/cu. m = milligrams per cubic meter

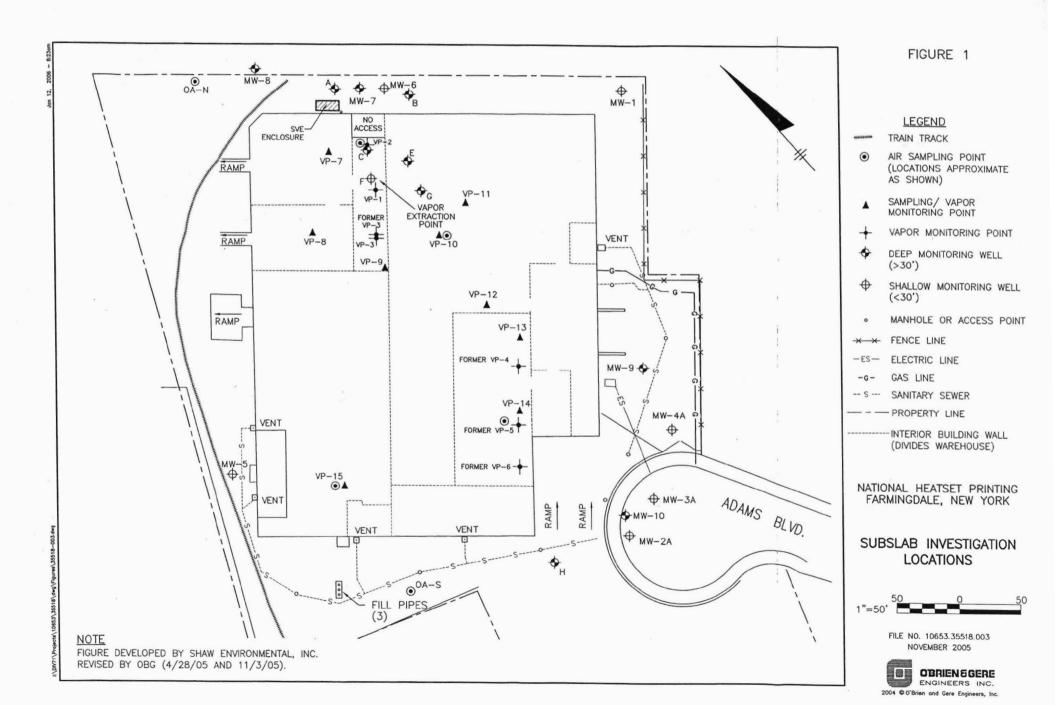
Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94 ppmv = parts per million (vol./vol.) lb = pounds

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

FIGURES

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# APPENDIX A SITE VISIT DOCUMENTATION

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	O'Brien &	Gere Eng	Job # 35	518.005				
Personnel: <u>FERNANDE</u> Weather: <u>SUNU</u>			Time: Date:	10	1000 2 /08/2	2005		
System Status: Arrival: Departure: Run Timer Reading: Electric Meter Reading:	1000 1430 29180 03011	7 KwH		×			ж. <sup>1</sup>	
System Data:								
Extraction Well F Gate Valve Dilution Valve:	50 <u>50</u>	% Open % Open						
Pre-Bleed Air (Extraction W Flow: Vacuum: PID Reading: Draeger Tube: Temperature:	Vell): <u>79</u> CFM <u>29</u> "H2O <u>22.2</u> PPM <u>5.0</u> PPM <u>38.8</u> °F		Flow: Vacuur PID Re	n: ading: er Tube:	(SVE Influ 235  7.2 2.0 ((3.5	ent): CFM "H2O PPM PPM °F		
	PPM <u>227</u> PPM <u>212</u>	CFM CFM		Temp. (° Temp. (°			PPM (Dra PPM (Dra	
Carbon effluent sample colle	cted & shipped to	lab?						
Knockout Tank Drained? # Gallons: Purge water drums on-site:		NØ 						
Monitoring Well Gauging /	Vapor Point Mon	itoring:						
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): 14.38	14.37	14.55		-	-		••	
Vac. (* H2O):			1.9	0.56	0.1			
Comments: <u>Air Souple Colle</u>			SHIPP	ed u		Ex		
F GRATE VALUE WAS	s nousd from	<u>4 50%</u>	OPEN	10	75% 0	per		

National Heatset Printing

1 Adams Boulevard, Farmingdale, New York

site check form.xls 11/4/05

APPENDIX B LABORATORY REPORT OF ANALYSES

\*



"Environmental Testing For The New Millennium"

December 27, 2005

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

# RE: Client Project: National Heatset Lab Project #: D1502

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,

lignes R/Q

Agnes R. Ng CLP Project Manager



Report of Laboratory Analyses for O'Brien & Gere

Client Project: National Heatset

# SDG# MD1502

Mitkem Work Order ID: D1502

December 27, 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: D1502 Date samples received: 12/09/05

# **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 December 9, 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. 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.

Agnes Ng CLP Project Manager

## 1A

1

1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Na	me: MITKEM COR	PORATION	Contract	:		SVE E	FFLUEN	T	
Lab Co	de: MITKEM	Case No.:	SAS No.:	:	SDG	No.: M	D1502		
Matrix	: (soil/water)	AIR		Lab Samp	le ID:	D1502	-01A		
Sample	wt/vol:	25 (g/mL) ML		Lab File	ID:	V6D98	07		
Level:	(low/med)	LOW		Date Rece	eived:	12/09	/05		
% Mois	sture: not dec.			Date Ana	lyzed:	12/15	/05		
GC Col	umn: DB-624	ID: 0.25 (mm)		Dilution	Facto	or: 1.0	)		
Soil B	Extract Volume:	(uL)		Soil Alio	quot V	Volume:		(	(uL)
	CAS NO.	COMPOUND		VTRATION V or ug/Kg			Q		
	75-71-8	Dichlorodiflue	promethane	9		1	U		

75-71-8Dichlorodifluoromethane         74-87-3Chloromethane         75-01-4Vinyl Chloride         74-83-9Bromomethane         75-00-3Chloroethane         75-09-4Chloroethane         75-35-4Chloroethane         75-35-4Chloroethane         75-35-4Chloroethane         75-35-4	1 1 1 1 1 1 1 1 1	
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FORM I VOA

OLM03.0

# 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: MITKEM CORPORA	ATION Contract	:	SVE EFFLUENT
Lab Code: MITKEM Case	e No.: SAS No.	: SDG	No.: MD1502
Matrix: (soil/water) AI	R	Lab Sample ID:	D1502-01A
Sample wt/vol: 25	(g/mL) ML	Lab File ID:	V6D9807
Level: (low/med) LO	Ŵ	Date Received:	12/09/05
% Moisture: not dec		Date Analyzed	12/15/05
GC Column: DB-624 ID	: 0.25 (mm)	Dilution Facto	or: 1.0
Soil Extract Volume:	(uL)	Soil Aliquot V	/olume:(uL)
CAS NO.		NTRATION UNITS or ug/Kg) MG/N	
127 - 18 - 4	Dibromochloromethane 1,2-Dibromoethane Chlorobenzene 1,1,1,2-Tetrachloroeth Ethylbenzene m,p-Xylene o-Xylene Xylene (Total) Styrene Bromoform Isopropylbenzene 1,2,2-Tetrachloroeth Bromobenzene 1,2,3-Trichloropropane n-Propylbenzene 2-Chlorotoluene 1,3,5-Trimethylbenzene 4-Chlorotoluene 1,2,4-Trimethylbenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 1,2,4-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropr 1,2,4-Trichlorobenzene Hexachlorobutadiene	ane	1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U

FORM I VOA

OLM03.0

Mitkem	<b>Corporation</b>	09/Dec/03	5 16:20	WorkOrde	r: D1502
Proj Locati		Case: SDG: PO: H	IEATSET	HC Due	: CLF : 12/30/05
Comme	nts: Level 2 for air samples	м С		Fax Due	: 12/23/05
Sample ID	Client Sample ID	Collection Date Date Received Matrix	Test Code	Lab Test Comments Iold	MS SEL Storage
D1502-01A	SVE EFFLUENT	12/08/05 11:54 12/09/05 Air T	014		U VOA

Client Rep: Agnes R Ng

1 of 1 Page

0005

# MITKEM Corporation

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

# **CHAIN-OF-CUSTODY RECORD**

Page \_\_\_\_\_ of \_\_\_\_\_

		RT TO	65123					Sec.		and the second			1. A.	IN	VOICI	е то	1456T		C. C.					
COMPANY E BAIEA	- GHE				PHO	NE		COM	IPANY	0	Shie	v +	61	-IE				PHON	<sup>IE</sup> (31	5)4	37-610	D LA	B PROJI	ECT #:
NAME MAR	J. DET				FAX			NAM	1E	1	140	1	D.	c.T				FAX (	(315)	46	3-7554		D15	20
		01	D	0	0		77	ADD	RESS	50	20 1	0.5		Ciald	10	lane	P.8	Ra	~ 4	187	37-610 8-7554 -3	TU	RNAROU	ND TIME:
5000	BriTTon Field	rkwy	r.	Ø. <u>[</u>	50%	48	73			200	1	SMI	190		• •	10-9	1.0	"De	~ 1	07		_		
CLIENT PROJECT NAME	ISE, N.Y.	132	21 -	48	73		CLIENT P.O.#:				syin	eus	she !	, N.	7.	13.	221-	. 4 *	\$15					
					CEIEI II.O.#.						,	, ,	F	REQUE	STED A	NALY	SES		<i>,</i> ,	/	/			
NATIONAL HE	Iset											/	u/		/			/	/	/		/ ,	/	
		(7)						ERS					Υ,	/ /	/ ,	/ ,	/ /	/ /	/ /	/ /	/ /	/		
SAMPLE	DATE/TIME	COMPOSITE	AB	ER	Е	ER	LAB ID	TAIN			6	N	/		/		/	/			/ /	/	COMMI	ENTS
IDENTIFICATION	SAMPLED	OMPC	GRAB	WATER	SOIL	OTHER		CON		/		/ /	/ /	/ /	/ /	/ /	/ /	/	/ /	/ /				
		Ŭ						# OF CONTAINERS		/>	S)	/		/	/	/	/		/	/				
SVE Effloent	12/02/05/1154		X		1	ATR		1		X		[	Í								/			
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SAAL	<del>,</del>	92/	8/05	/ 133	30	Fede	8527-	077	7 - 3	328'	1	12/0	3/05	/ 133 / 03	30								Anb	nen f
				7	-	5	V Jak	r				1.2	14/10	4 29										
				,		44	Jul	~				14	10)	09	12	1								
				/									/											

MITKEM CORPORATION Sample Condition Form

	ſ	1
Page	/ of	/

Received By: 6	Reviewed B	y: om		Date:	2/9/05	мітке	M Project	#: D/J	102		
Client Project: National				Client:					Soil Headspace		
	Lab Oa			Preserva			VOA	or Air Bubbles			
$\dot{c}$		Lab Sam		HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	HCI	NaOH	Matrix A	<u>≥</u> 1/4"		
Cooler Sealed Yes No	*	D1502	01					A			
	\								-/		
1) Custody Seal(s)	Present / Absent								/		
safe	Coolers / Bottles										
1~	Intact Broken							-/			
	VIA							/			
2) Custody Seal Number(s)	N				·			/			
						3	/				
							/				
							/				
3) Chain-of-Custody	Present Absent					/	-				
4) Cooler Temperature	Ambient			-							
Coolant Condition					i.	/					
Coolant Condition						/					
5) Airbill(s)	Present Absent										
Airbill Number(s)	TiesenicorAbsenic				-/-						
	27 0.777 3589				1						
					/						
6) Sample Bottles	Intact/Broken/Leakin			V	×						
	labe		/								
7) Date Received	12/9/05										
	08:50										
8) Time Received	00.50		/		- ( <b>k</b> .)	VOA N	latrix Key:				
		/				US = L	Inpreserv	ed Soil	A = Air		
Preservative Name/Lot No:	/					Inpreserv					
						M/N= MeOH & NaHSO <sub>4</sub> E = Encore					
						N = Na	HSO <sub>4</sub>	M =MeO	Н		
	l										
See Sample Condition Notification/Corrective Action Form yes (no)											
				F		Rad O	K yes/no	C			

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# Last Page of Data Report