

11 January 2011

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 Site / Soil Vapor Extraction System
Operation & Maintenance Report (October – December 2010)
1 Adams Boulevard, Farmingdale, New York
New York State Department of Environmental Conservation Site 1-52-140
EA Project No. 14474.29

Dear Mr. Dyber:

This letter report 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). EA Engineering, P.C. and its affiliate EA Science & Technology, Inc. (EA) assumed management of the on-site SVE system under Work Assignment No. D004441-29. The activities are being conducted under the New York State Department of Environmental Conservation (NYSDEC) State Superfund Standby Contract. SVE system details are presented in an Operation & Maintenance (O&M) Manual (Shaw, 2003)¹.

In accordance with our approved Work Plan, monthly site visits were performed up to the June 2009 event. After the June 2009 visit, the frequency of the O&M visits was changed to quarterly. The decision was made in coordination with NYSDEC and was based on the reliability of system operation and the potential cost savings in system monitoring/maintenance. During the reporting period, O&M visits were performed on the following dates by YEC personnel on behalf of EA.

Date	Purpose
12/28/10	Quarterly Visit (December 2010)

¹ The Shaw Group. 2003. Soil Vapor Extraction Operation and Maintenance Manual. October.



1. SYSTEM OPERATION

Based on the motor's hour meter, the system was operational for a total of 1,216 hours out of an available 2,208 hours (55 percent of the total available) during this reporting period (27 September 2010 to 28 December 2010). YEC personnel found the system off on arrival on 28 December 2010. The system shut down during the reporting period due to an apparent power issue. The Sensaphone auto-dialer did not call out and was not functioning on arrival. YEC personnel contacted Sensaphone technical support from the field for troubleshooting assistance. It was determined there was an electrical short in the unit and YEC removed the unit from the control panel to ship to Sensaphone for repairs. The SVE system did restart after resetting the fail-safes.

Operational data for this period have been based on the measurements and effluent sample data collected on 28 December 2010. Operational data are summarized in Table 1 and on the site visit data collection forms provided in Attachment A. Key operating parameters for the SVE system are summarized below.

Date	Extraction Well Flow rate (cfm)	Extraction Well Vacuum (H ₂ O)	SVE Blower Flow rate (cfm)	DCE Conc. ¹ (mg/m ³)	TCE Conc. ¹ (mg/m ³)	PCE Conc. ¹ (mg/m ³)
12/28/10	90	25	275	0.015	0.041	0.318

¹PCE, DCE & TCE concentration measured via laboratory analysis.

NOTE: cfm = Cubic feet per minute.
PCE = Tetrachloroethylene.
TCE = Trichloroethene.
DCE = cis-1,2 - Dichloroethene

A complete set of operational data collected are presented in Tables 1 through 3.

The dilution valve was adjusted from the 25 percent open position to 75 percent open during the 1st Quarter 2010 by YEC due to water generation that led to a system shut down.

The auto-dialer was sent to Sensaphone on 30 December 2010. YEC will return to the site to reinstall the auto-dialer once repaired.



2. MONITORING PROBES

The following vacuum data (in. of water column) were observed at the listed vapor monitoring points during the monitoring period.

28 December 2010	
Vapor Monitoring Point	Vacuum Reading (Inches H2O)
VP-1	1.1
VP-2	0.4
VP-3	0.25
VP-7	0.25
VP-8	0.15
VP-9	0.10
VP-10	0.20
VP-11	0.10
VP-12	0.04
VP-13	--
VP-14	--
VP-15	--

NOTE: -- Unable to access monitoring point due to being covered by business products.

The vapor points will continue to be monitored during future site visits.

3. DEPTH-TO-WATER MEASUREMENTS

The following gauging data (ft below top-of-casing) were collected during the monitoring period.

Date	MW-C	MW-E	MW-G
12/28/10	18.33	--	18.52

NOTE: -- Unable to access monitoring point.

Based on the gauging data, the water table dropped approximately 1 ft during the monitoring period. The wells will continue to be gauged during future site visits.

4. AIR DISCHARGE MONITORING

YEC personnel collected grab air samples from the system effluent using Tedlar bags and submitted the samples to Alpha Analytical. The samples were analyzed for volatile organic compounds using U.S. Environmental Protection Agency Method TO-15. PCE, TCE, and *cis*-1,2-DCE were detected at the following concentrations.



Date	DCE Conc. ¹ (mg/m ³)	TCE Conc. ¹ (mg/m ³)	PCE Conc. ¹ (mg/m ³)
12/28/10	0.015	0.041	0.318
NOTE: ND = Not Detected J = Analyte detected below detection limits. Units = mg/m ³			

Analytical results are summarized in Table 2 and the laboratory data reports are presented in Attachment B. A summary of the field monitoring and laboratory air discharge analytical results are presented as Table 3.

Based on the effluent sampling results, a total of 0.79 lbs of PCE has been discharged during Quarter No. 4 for a total of 43.92 lbs for the year 2010 toward the permitted annual discharge limit of 270 lbs. A total of 0.10 lb of TCE has been discharged during Quarter No. 4 for a total of 1.44 lbs for the year 2010 toward the permitted annual discharge limit of 120 lbs. No *cis*-1,2-DCE was discharged during the reporting period (the annual discharge limit is 5,510 lbs).

6. CONCLUSIONS AND RECOMMENDATIONS

Based on the data collected from the SVE system during this reporting period, EA recommends continued operation of the SVE system.

Please do not hesitate to contact me at 315-431-4610 with any questions you might have regarding this report.

Sincerely,

EA SCIENCE AND
TECHNOLOGY, INC.

Donald F. Conan, P.E.
Project Manager

DFC/drs

Enclosures

TABLE 2
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 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		26.42		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)	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

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)*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., 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

mg/cu. m = milligrams per cubic meter

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

**TABLE 3
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)	
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	
<i>Spent Carbon Replaced 8/10/05</i>																
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	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	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	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	0.00
2005 Totals:									149.79		117.08		3.77		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	0.000	0.00	0.00
<i>Spent Carbon Replaced 1/25/06</i>																
2/6/2006	322	0	0	30	1	ND (1)	ND (1)	0.0000	0.00	0.0012	0.87	0.0000	0.00	0.000	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	0.000	0.00	0.00
4/12/2006	271	0	0	29	0.6J	ND (1)	ND (1)	0.0000	0.00	0.0006	0.42	0.0000	0.00	0.000	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	0.000	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	0.000	0.00	0.00
7/12/2006	196	0	0	30	ND (1)	ND (1)	0.6 J	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.001	0.38	
8/7/2006	210	0	0	26	1	ND (1)	ND (1)	0.0000	0.00	0.0008	0.49	0.0000	0.00	0.000	0.00	0.00
9/21/2006	203	0	2.1	45	2	0.8 J	0.4 J	0.0000	0.00	0.0015	1.64	0.0006	0.66	0.0003	0.33	
<i>Spent Carbon Replaced 10/11/06</i>																
10/18/2006	236	0	0	27	--	--	--	0.0000	0.00	--	--	--	--	--	--	--
11/29/2006	202	0	0	42	0.9J	ND (1)	ND (1)	0.0000	0.00	0.0007	0.69	0.0000	0.00	0.0000	0.00	0.00
12/21/2006	210	0	0	22	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	0.00	0.00
2006 Totals:									0.00		4.11		0.66		0.71	
1/26/2007	142	0	0	36	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	0.00	0.00
3/19/2007	172	0	0	20	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	0.00	0.00
4/27/2007	125	0	0	28	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	0.00	0.00
5/24/2007	170	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	0.00

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)*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., 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.)
mg/cu. m = milligrams per cubic meter lb = pounds

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

**TABLE 3
AIR DISCHARGE MONITORING
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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)		
6/21/2007	199	0	0.1	28	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
7/24/2007	194	0	0	33	0.22 J	ND (1)	ND (1)	0.0000	0.00	0.0002	0.13	0.0000	0.00	0.0000	0.00	0.0000	0.00
8/28/2007	129	0	0	35	0.35 J	ND (1)	0.29 J	0.0000	0.00	0.0002	0.14	0.0000	0.00	0.0000	0.00	0.0001	0.12
9/18/2007	164	0	0	21	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0002	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
10/31/2007	231	0	0	43	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
11/28/2007	213	0	0	28	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
1/4/2008	243	0	0	37	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
2007 Totals:									0.00		0.27		0.00				0.12
1/23/2008	192	0	0	19	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
2/28/2008	--	--	--	36	--	--	--	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
4/29/2008	206	0	0	61	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00
5/23/2008	259	0	0	24	ND (1)	1.2	0.22 J	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0012	0.67	0.0000	0.00
6/26/2008	202	0	2.4	34	10	1.3	0.24 J	0.0000	0.00	0.0076	6.18	0.0010	0.80	0.0000	0.00	0.0000	0.00
7/28/2008	202	0	2.8	32	11	0.49 J	0.25 J	0.0000	0.00	0.0083	6.40	0.0000	0.00	0.0000	0.00	0.0000	0.00
8/28/2008	191	0	1.9	31	13.6	0.48	0.22	0.0000	0.00	0.0097	7.25	0.0003	0.26	0.0000	0.00	0.0000	0.00
9/25/2008	215	0	0	28	9.4	0.36	0.14	0.0000	0.00	0.0076	5.09	0.0003	0.19	0.0000	0.00	0.0000	0.00
10/31/2008	264	0	0	36	4	0.17	0.1	0.0000	0.00	0.0040	3.42	0.0002	0.15	0.0000	0.00	0.0000	0.00
11/24/2008	254	0	0	24	2.3	0.13	0.06	0.0000	0.00	0.0022	1.26	0.0001	0.07	0.0000	0.00	0.0000	0.00
12/22/2008	176	0	0.3	28	1.2	0.06	0.03	0.0000	0.00	0.0008	0.53	0.0000	0.03	0.0000	0.00	0.0000	0.00
2007 Totals:											30.13		2.17				0.00
1/26/2009	278	0	0.6	35	2.3	0.14	0.07	0.0000	0.00	0.0024	2.01	0.0001	0.12	0.0000	0.00	0.0000	0.00
2/26/2009	290	0	0	31	0.1	0.01	0.005	0.0000	0.00	0.0001	0.08	0.0000	0.01	0.0000	0.00	0.0000	0.00
3/26/2009	268	0	1.3	28	2.9	0.25	0.11	0.0000	0.00	0.0029	1.96	0.0003	0.17	0.0000	0.00	0.0000	0.00
4/28/2009	286	0	1.1	33	3.3	0.21	0.08	0.0000	0.00	0.0035	2.80	0.0002	0.18	0.0000	0.00	0.0000	0.00
5/18/2009	271	0	2	20	6.1	0.35	0.1	0.0000	0.00	0.0062	2.97	0.0004	0.17	0.0000	0.00	0.0000	0.00
6/23/2009	272	0	1.8	36	18.2	0.44	0.19	0.0000	0.00	0.0186	16.04	0.0004	0.39	0.0000	0.00	0.0000	0.00
9/22/2009	200	0	4	91	5.36	0.13	0.11	0.0000	0.00	0.0040	8.78	0.0001	0.21	0.0000	0.00	0.0000	0.00
12/21/2009	126	0	0	90	4.82	0.38	0.09	0.0000	0.00	0.0023	4.92	0.0002	0.39	0.0000	0.00	0.0000	0.00
3/31/2010	285	0	0	100	0.69	0.04	0.02	0.0000	0.00	0.0007	1.77	0.0000	0.10	0.0000	0.00	0.0000	0.00
6/28/2010	283	0	4.4	89	14.1	0.306	0.197	0.0000	0.00	0.0150	31.95	0.0003	0.69	0.0000	0.00	0.0000	0.00
9/27/2010	275	0	8.8	91	4.18	0.24	0.122	0.0000	0.00	0.0043	9.41	0.0002	0.54	0.0000	0.00	0.0000	0.00
12/28/2010	300	NA	0.1	92	0.318	0.041	0.015	NA	NA	0.0004	0.79	0.0000	0.10	0.0000	0.00	0.0000	0.00

2010 TOTALS = 43.92 1.44

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)*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., 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

mg/cu. m = milligrams per cubic meter

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

Attachment A

National Heatset Printing
 1 Adams Boulevard, Farmingdale, New York
 EA Engineering

Personnel: Peter Lawler Time: 1000
 Weather: 32F, cloudy, windy Date: 12/28/2010

System Status:

Arrival: off
 Departure: running
 Run Timer Reading: 4070232
 Electric Meter Reading: 16895; 00.41; 30.26; 0079

System Data:

Extraction Well F Gate Valve: 100 % Open
 Dilution Valve: 75 % Open

Pre-Bleed Air (Extraction Well):

Flow: 90 CFM
 Vacuum: 25 "H2O
 PID Reading: 51 PPM
 Draeger Tube: N/A PPM
 Temperature: 58.4 °F

Post-Bleed Air (SVE Influent):

Flow: 275 CFM
 Pressure: 18 "H2O via magnehelic
 PID Reading: 13.7 PPM
 Draeger Tube: N/A PPM
 Temperature: 103.1 °F

Carbon Monitoring:

Mid: 0.9 PPM 285 CFM 73.7 Temp. (°F) N/A PPM (Drager) 9 "H2O
 Effluent: 0.1 PPM 300 CFM 45.5 Temp. (°F) N/A PPM (Drager)

Carbon effluent sample collected & shipped to lab? Yes

Knockout Tank Drained? No
 # 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-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):	18.33	N/A	18.52	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	1.1	0.4	0.25	0.25	0.15	0.1	0.2	0.1	0.04	N/A	N/A	N/A
PID (PPM):	--	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A

Comments:

Draeger tubes no longer used in system check

Knockout tank empty upon arrival, system had power, reset breaker inside of SVE power box, and system restarted, appears to have lost power. Sensaphone non-functioning, keypad is partially non-responsive, called troubleshooting, determined keypad has a short, unit will be sent in for repair. System heater adjusted from 50F to 55F. VP-15 not accessible, VP-13,14 & MW-E covered by boxes.

Attachment B



ANALYTICAL REPORT

Lab Number:	L1020589
Client:	EA Engineering, Science and Tech 6712 Brooklawn Parkway Suite 104 Syracuse, NY 13211
ATTN:	Don Conan
Phone:	(315) 491-6649
Project Name:	NATIONAL HEATSET
Project Number:	NATIONAL HEATSET
Report Date:	01/05/11

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSET

Lab Number: L1020589
Report Date: 01/05/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1020589-01	SVE EFFLUENT	FARMINGDALE, NY	12/28/10 13:00

Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSET

Lab Number: L1020589
Report Date: 01/05/11

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.


For additional information, please contact Client Services at 800-624-9220.

Volatile Organics in Air

L1020589-01: Sample was transferred from a Tedlar bag into a fused silica lined canister upon receipt in order to extend the holding time for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Kathleen O'Brien

Title: Technical Director/Representative

Date: 01/05/11

AIR

Project Name: NATIONAL HEATSET**Lab Number:** L1020589**Project Number:** NATIONAL HEATSET**Report Date:** 01/05/11**SAMPLE RESULTS**

Lab ID: L1020589-01
 Client ID: SVE EFFLUENT
 Sample Location: FARMINGDALE, NY
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 12/30/10 09:00
 Analyst: BS

Date Collected: 12/28/10 13:00
 Date Received: 12/29/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.988	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
Bromomethane	ND	0.200	--	ND	0.776	--		1
Chloroethane	ND	0.200	--	ND	0.527	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Methylene chloride	1.32	1.00	--	4.57	3.47	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	3.78	0.200	--	15.0	0.792	--		1
Chloroform	ND	0.200	--	ND	0.976	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	0.699	0.200	--	3.81	1.09	--		1
Benzene	ND	0.200	--	ND	0.638	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Trichloroethene	7.61	0.200	--	40.9	1.07	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.753	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1



Project Name: NATIONAL HEATSET**Lab Number:** L1020589**Project Number:** NATIONAL HEATSET**Report Date:** 01/05/11**SAMPLE RESULTS**

Lab ID: L1020589-01
 Client ID: SVE EFFLUENT
 Sample Location: FARMINGDALE, NY

Date Collected: 12/28/10 13:00
 Date Received: 12/29/10
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab								
Tetrachloroethene	46.9	0.200	--	318	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.920	--		1
Ethylbenzene	ND	0.200	--	ND	0.868	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Styrene	ND	0.200	--	ND	0.851	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.868	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
Benzyl chloride	ND	0.200	--	ND	1.03	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	81		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	93		60-140



Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/29/10 15:32

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG449394-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.988	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
Bromomethane	ND	0.200	--	ND	0.776	--		1
Chloroethane	ND	0.200	--	ND	0.527	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.792	--		1
Chloroform	ND	0.200	--	ND	0.976	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.638	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.907	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.753	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1



Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/29/10 15:32

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG449394-4								
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.920	--		1
Ethylbenzene	ND	0.200	--	ND	0.868	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Styrene	ND	0.200	--	ND	0.851	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.868	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.982	--		1
Benzyl chloride	ND	0.200	--	ND	1.03	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG449394-3								
Chlorodifluoromethane	96		-		70-130	-		
Propylene	93		-		70-130	-		
Propane	85		-		70-130	-		
Dichlorodifluoromethane	104		-		70-130	-		
Chloromethane	94		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	106		-		70-130	-		
Methanol	83		-		70-130	-		
Vinyl chloride	97		-		70-130	-		
1,3-Butadiene	99		-		70-130	-		
Butane	96		-		70-130	-		
Bromomethane	96		-		70-130	-		
Chloroethane	99		-		70-130	-		
Ethyl Alcohol	97		-		70-130	-		
Dichlorofluoromethane	98		-		70-130	-		
Vinyl bromide	105		-		70-130	-		
Acrolein	100		-		70-130	-		
Acetone	103		-		70-130	-		
Acetonitrile	101		-		70-130	-		
Trichlorofluoromethane	109		-		70-130	-		
iso-Propyl Alcohol	108		-		70-130	-		
Acrylonitrile	104		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG449394-3								
Pentane	94		-		70-130	-		
Ethyl ether	93		-		70-130	-		
1,1-Dichloroethene	104		-		70-130	-		
tert-Butyl Alcohol	106		-		70-130	-		
Methylene chloride	93		-		70-130	-		
3-Chloropropene	95		-		70-130	-		
Carbon disulfide	91		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	107		-		70-130	-		
trans-1,2-Dichloroethene	99		-		70-130	-		
1,1-Dichloroethane	101		-		70-130	-		
Methyl tert butyl ether	110		-		70-130	-		
Vinyl acetate	113		-		70-130	-		
2-Butanone	97		-		70-130	-		
cis-1,2-Dichloroethene	107		-		70-130	-		
Ethyl Acetate	113		-		70-130	-		
Chloroform	110		-		70-130	-		
Tetrahydrofuran	98		-		70-130	-		
2,2-Dichloropropane	104		-		70-130	-		
1,2-Dichloroethane	106		-		70-130	-		
n-Hexane	84		-		70-130	-		
Isopropyl Ether	97		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG449394-3								
Ethyl-Tert-Butyl-Ether	98		-		70-130	-		
1,1,1-Trichloroethane	103		-		70-130	-		
1,1-Dichloropropene	98		-		70-130	-		
Benzene	97		-		70-130	-		
Carbon tetrachloride	103		-		70-130	-		
Cyclohexane	89		-		70-130	-		
Tertiary-Amyl Methyl Ether	102		-		70-130	-		
Dibromomethane	97		-		70-130	-		
1,2-Dichloropropane	97		-		70-130	-		
Bromodichloromethane	98		-		70-130	-		
1,4-Dioxane	102		-		70-130	-		
Trichloroethene	101		-		70-130	-		
2,2,4-Trimethylpentane	93		-		70-130	-		
Heptane	89		-		70-130	-		
2,4,4-Trimethyl-1-Pentene	97		-		70-130	-		
cis-1,3-Dichloropropene	105		-		70-130	-		
4-Methyl-2-pentanone	96		-		70-130	-		
2,4,4-Trimethyl-2-Pentene	103		-		70-130	-		
trans-1,3-Dichloropropene	93		-		70-130	-		
1,1,2-Trichloroethane	101		-		70-130	-		
Toluene	106		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG449394-3								
1,3-Dichloropropane	106		-		70-130	-		
2-Hexanone	108		-		70-130	-		
Dibromochloromethane	111		-		70-130	-		
1,2-Dibromoethane	112		-		70-130	-		
Butyl Acetate	104		-		70-130	-		
Octane	108		-		70-130	-		
Tetrachloroethene	111		-		70-130	-		
1,1,1,2-Tetrachloroethane	112		-		70-130	-		
Chlorobenzene	114		-		70-130	-		
Ethylbenzene	114		-		70-130	-		
p/m-Xylene	119		-		70-130	-		
Bromoform	117		-		70-130	-		
Styrene	124		-		70-130	-		
1,1,2,2-Tetrachloroethane	119		-		70-130	-		
o-Xylene	119		-		70-130	-		
1,2,3-Trichloropropane	113		-		70-130	-		
Nonane (C9)	108		-		70-130	-		
Isopropylbenzene	123		-		70-130	-		
Bromobenzene	114		-		70-130	-		
o-Chlorotoluene	119		-		70-130	-		
n-Propylbenzene	124		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Lab Number: L1020589

Project Number: NATIONAL HEATSET

Report Date: 01/05/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG449394-3								
p-Chlorotoluene	114		-		70-130	-		
4-Ethyltoluene	117		-		70-130	-		
1,3,5-Trimethylbenzene	117		-		70-130	-		
tert-Butylbenzene	120		-		70-130	-		
1,2,4-Trimethylbenzene	123		-		70-130	-		
Decane (C10)	112		-		70-130	-		
Benzyl chloride	112		-		70-130	-		
1,3-Dichlorobenzene	118		-		70-130	-		
1,4-Dichlorobenzene	117		-		70-130	-		
sec-Butylbenzene	117		-		70-130	-		
p-Isopropyltoluene	113		-		70-130	-		
1,2-Dichlorobenzene	118		-		70-130	-		
n-Butylbenzene	126		-		70-130	-		
1,2-Dibromo-3-chloropropane	118		-		70-130	-		
Undecane	118		-		70-130	-		
Dodecane (C12)	116		-		70-130	-		
1,2,4-Trichlorobenzene	124		-		70-130	-		
Naphthalene	111		-		70-130	-		
1,2,3-Trichlorobenzene	121		-		70-130	-		
Hexachlorobutadiene	121		-		70-130	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSE

Lab Number: L1020589
Report Date: 01/05/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG449394-5 QC Sample: L1020475-04 Client ID: DUP Sample						
Dichlorodifluoromethane	0.553	0.579	ppbV	5		25
Chloromethane	0.545	0.535	ppbV	2		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Trichlorofluoromethane	0.273	0.303	ppbV	10		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	8.67	8.96	ppbV	3		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Chloroform	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	0.202	0.223	ppbV	10		25
Carbon tetrachloride	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSE

Lab Number: L1020589
Report Date: 01/05/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG449394-5 QC Sample: L1020475-04 Client ID: DUP Sample					
Trichloroethene	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	0.732	0.893	ppbV	20	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
p/m-Xylene	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,1,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NATIONAL HEATSET

Project Number: NATIONAL HEATSE

Lab Number: L1020589

Report Date: 01/05/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG449394-5 QC Sample: L1020475-04 Client ID: DUP Sample					
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Project Name: NATIONAL HEATSET**Lab Number:** L1020589**Project Number:** NATIONAL HEATSET**Report Date:** 01/05/11**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal**Cooler**

A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1020589-01A	Tedlar Bag 3 liter-Polypropylene	A	NA		Y	Present/Intact	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSET

Lab Number: L1020589
Report Date: 01/05/11

GLOSSARY

Acronyms

- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD** - Laboratory Control Sample Duplicate: Refer to LCS.
- MDL** - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MSD** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NI** - Not Ignitable.
- RL** - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.

Report Format: Data Usability Report



Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSET

Lab Number: L1020589
Report Date: 01/05/11

Data Qualifiers

- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: NATIONAL HEATSET
Project Number: NATIONAL HEATSET

Lab Number: L1020589
Report Date: 01/05/11

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised July 19, 2010 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3051, 6020, 747A, 7474, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl.

AIR ANALYSIS

ANALYTICAL
ALPHA
 CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
 TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: EIA Engineering
 Address: 6712 Brooklawn Dr Key Syracuse, NY 13211
 Phone: (315) 877-7403
 Fax:

Email: dconan@ecest.com

These samples have been previously analyzed by Alpha
 Other Project Specific Requirements/Comments:

Project Information

Project Name: National Harbor
 Project Location: Farmingdale, NY
 Project #: _____
 Project Manager: Don Conan
 ALPHA Quote #: _____
 Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
 Date Due: _____ Time: _____

Report Information - Data Deliverables

Date Rec'd in Lab: _____
 FAX
 ADEX
 Criteria Checker: _____
 (Default based on Regulatory Criteria Indicated)
 Other Formats: _____
 EMAIL (standard pdf report)
 Additional Deliverables:
 Report to: (if different than Project Manager)

Billing Information

Same as Client info
 PO #: _____

ALPHA Job #: 1020589

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

All columns below must be filled out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION						Sample Matrix*	Sampler's Initials	Can Size	I.D. Can	I.D. - Flow Controller	ANALYSIS	Sample Comments (i.e. PID)
		Date	Start Time	End Time	Vacuum	Initial	Final							
<u>20589-1</u>	<u>SVE Effluent</u>	<u>12-28-10</u>	<u>13:00</u>	<u>13:00</u>	<u>-</u>	<u>-</u>	<u>SV</u>	<u>RL</u>	<u>SL</u>	<u>-</u>	<u>-</u>	<u>TO-14A by TO-15 TO-15 TO-15 SIM APH FIXED GASES TO-13A TO-4 / TO-10</u>	<u>PID = 0.1 ppm</u>	

***SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/SVE
 Other = Please Specify

Container Type

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>12-28-10 15:30</u>	<u>[Signature]</u>	<u>12-28-10/15:30</u>
<u>[Signature]</u>	<u>12/29/10 10:30</u>	<u>[Signature]</u>	<u>12/29/10 10:30</u>

Please print clearly, legibly and completely. Samples cannot be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.