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30 October 2009

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 (April – September 2009)  
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)<sup>1</sup>.

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. O&M visits were performed on the following dates by YEC personnel on behalf of EA.

Date	Purpose
04/28/09	Monthly Visit (April 2009)
05/18/09	Monthly Visit (May 2009)
06/23/09	Monthly / Quarterly Visit (June 2009)
09/22/09	Quarterly Visit (September 2009)

<sup>1</sup> 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 4,319 hours out of an available 4,319 hours (100 percent of the total available) during this reporting period (26 March 2009 to 22 September 2009).

Operational data for this period have been based on the measurements and effluent sample data collected on the dates listed above. The dilution valve has been positioned in the 75 percent open position. The extraction well (MW-F) valve remained at the 100 percent open position.

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 <sub>2</sub> O)	SVE Blower Flow rate (cfm)	TCE Conc. <sup>1</sup> (mg/m <sup>3</sup> )	PCE Conc. <sup>1</sup> (mg/m <sup>3</sup> )
04/28/09	89	31	257	0.21	3.3
05/18/09	100	32	252	0.35	6.1
06/23/09	91	30	241	0.44	18.2
09/22/09	93	31	232	0.13	5.4

<sup>1</sup> PCE & TCE concentration measured via laboratory analysis.

NOTE: cfm = Cubic feet per minute.  
PCE = Tetrachloroethylene.  
TCE = Trichloroethene.

A complete set of operational data collected are presented in Tables 1 through 4.

## 2. MONITORING PROBES

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



Vapor Monitoring Point	04/28/09	05/18/09	06/23/09	09/22/09
VP-1	1.76	1.80	2.00	1.86
VP-2	0.50	0.30	0.68	0.51
VP-3	0.35	0.40	0.48	0.15
VP-7	0.35	0.36	0.27	0.40
VP-8	0.28	0.15	0.25	0.30
VP-9	0.21	0.25	0.23	0.30
VP-10	0.30	0.35	0.25	0.25
VP-11	0.05	0.20	0.20	0.25
VP-12	0.05	0.09	0.02	0.15
VP-13	-	0.01	0.0	-
VP-14	-	0.0	0.0	-
VP-15	0.0	0.0	0.0	-

NOTE: - = Unable to access monitoring point

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
04/28/09	15.11	15.11	15.30
05/18/09	14.69	14.69	15.87
06/23/09	13.68	13.68	13.86
09/22/09	15.49	15.49	15.79

Based on the gauging data, the water table fell and rose approximately 2 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 VOCs using U.S. Environmental Protection Agency Method TO-14. *Cis*-1,2-dichloroethene (*cis*-1,2-DCE), PCE, and TCE were detected at the following concentrations.



Date	<i>cis</i> -1,2-DCE	PCE	TCE
04/28/09	0.08	3.3	0.21
05/18/09	0.1	6.1	0.35
06/23/09	0.19	18.2	0.44
09/22/09	0.11	5.36	0.13

NOTE: ND = Not Detected  
J = Analyte detected below detection limits.  
Units = mg/m<sup>3</sup>

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 34.64 lbs of PCE has been discharged during the year 2009 toward the permitted annual discharge limit of 270 lbs. A total of 1.25 lb of TCE has been discharged during the year 2009 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). The discharge rates for PCE, TCE, and *cis*-1,2-DCE were all within permit limits.

## 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**

<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
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	--	--	--	--	--	--
<b>2003 Totals:</b>									<b>431.38</b>		<b>26.42</b>		<b>5.41</b>		<b>0.00</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	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
<b>2004 Totals:</b>									<b>24.34</b>		<b>62.26</b>		<b>1.41</b>		<b>10.00</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: C = degrees centigrade, assumed to be 25 Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94  
J = Estimated Value cfm = cubic feet per minute ppmv = parts per million (vol./vol.)  
hr = hours 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  
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 <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	
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	
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	
<b>2005 Totals:</b>									<b>149.79</b>		<b>117.08</b>		<b>3.77</b>		<b>4.09</b>	
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	
<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	
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	
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	
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	
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	
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	
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	
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	
<b>2006 Totals:</b>									<b>0.00</b>		<b>4.11</b>		<b>0.66</b>		<b>0.71</b>	
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	
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	
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	
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	

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/453.6 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  
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  
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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
<b>2007 Totals:</b>									<b>0.00</b>		<b>0.27</b>		<b>0.00</b>				<b>0.12</b>
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	0.0012	0.67	0.0000	0.00	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
<b>2007 Totals:</b>											<b>30.13</b>		<b>2.17</b>				<b>0.00</b>
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
<b>2009 Totals:</b>											<b>34.64</b>		<b>1.25</b>				<b>0.00</b>

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 Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94  
J = Estimated Value cfm = cubic feet per minute ppmv = parts per million (vol./vol.)  
hr = hours 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

**Attachment A**  
**Site Visit Data Collection Forms**

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

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Personnel:           Peter Lawler                                Time:           1230            
 Weather:           Raining 84F                                Date:           4/28/2009          

**System Status:**

Arrival:   Running    
 Departure:   Running    
 Run Timer Reading:   2783823    
 Electric Meter Reading:           12306, 00.37, 22.75, 00.59          

**System Data:**

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

**Pre-Bleed Air (Extraction Well):**

Flow:           89.16 CFM            
 Vacuum:           31 "H2O            
 PID Reading:           6 PPM            
 Draeger Tube:           - PPM            
 Temperature:           96.4 °F          

**Post-Bleed Air (SVE Influent):**

Flow:           257.18 CFM            
 Pressure:           18 "H2O           via magnehelic  
 PID Reading:           1.6 PPM            
 Draeger Tube:           0 PPM            
 Temperature:           142.3 °F          

**Carbon Monitoring:**

Mid:           2.7 PPM                     255.66 CFM                     135.8 Temp. (°F)                     0 PPM (Drager)                     9 "H2O            
 Effluent:           1.1 PPM                     286.15 CFM                     118.4 Temp. (°F)                     0 PPM (Drager)          

Carbon effluent sample collected & shipped to lab?           Yes          

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

**Monitoring Well Gauging / Vapor Point Monitoring:**

Well/V.P. ID:	MW-C	MW-E	MW-G	VP-1	VP-2	VP-3	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	VP-13	VP-14	VP-15
DTW (ft):	15.11	15.11	15.3	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	1.76	0.5	0.35	0.35	0.28	0.21	0.3	0.05	0.05	-	-	0.0
PID (PPM):	--	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0

**Comments:**

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Vapor Points 13 and 14 not monitored due to restricted admittance.

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

Personnel:           Dan Simpson                                Time:           1100            
 Weather:           Cloudy 60F                                Date:           5/18/2009          

**System Status:**

Arrival:   Running    
 Departure:   Running    
 Run Timer Reading:   2831733    
 Electric Meter Reading:           12473, 00.36, 23.12, 0060          

**System Data:**

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

**Pre-Bleed Air (Extraction Well):**

Flow:           100.00 CFM            
 Vacuum:           32 "H2O            
 PID Reading:           8.3 PPM            
 Draeger Tube:           - PPM            
 Temperature:           67.6 °F          

**Post-Bleed Air (SVE Influent):**

Flow:           252.00 CFM            
 Pressure:           18 "H2O           via magnehelic  
 PID Reading:           2.4 PPM            
 Draeger Tube:           0 PPM            
 Temperature:           141.7 °F          

**Carbon Monitoring:**

Mid:           3.8 PPM                     280.00 CFM                     128.5 Temp. (°F)                     0 PPM (Drager)                     9 "H2O            
 Effluent:           2.0 PPM                     271.00 CFM                     125.1 Temp. (°F)                     0 PPM (Drager)          

Carbon effluent sample collected & shipped to lab?           Yes          

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

**Monitoring Well Gauging / Vapor Point Monitoring:**

Well/V.P. ID:	MW-C	MW-E	MW-G	VP-1	VP-2	VP-3	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	VP-13	VP-14	VP-15
DTW (ft):	14.69	14.69	15.87	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	1.8	0.3	0.4	0.36	0.15	0.25	0.35	0.2	0.09	0.01	0.0	0.0
PID (PPM):	--	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Comments:**

          Dede R. no longer an employee of Finklestein Reality

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

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Personnel:           Dan Simpson                                Time:           1100            
 Weather:           Sunny 67F                                Date:           6/23/2009          

**System Status:**

Arrival:   Running    
 Departure:   Running    
 Run Timer Reading:   2918143    
 Electric Meter Reading:   12770  

**System Data:**

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

**Pre-Bleed Air (Extraction Well):**

Flow:           91.00 CFM            
 Vacuum:           30 "H2O            
 PID Reading:           0.0 PPM            
 Draeger Tube:           - PPM            
 Temperature:           88.1 °F          

**Post-Bleed Air (SVE Influent):**

Flow:           241.00 CFM            
 Pressure           19 "H2O           via magnehelic  
 PID Reading:           0.0 PPM            
 Draeger Tube:           - PPM            
 Temperature:           131.2 °F          

**Carbon Monitoring:**

Mid:           1.0 PPM                     240.00 CFM                     152.1 Temp. (°F)                     - PPM (Drager)                     9 "H2O            
 Effluent:           1.8 PPM                     272.00 CFM                     135.4 Temp. (°F)                     - PPM (Drager)          

Carbon effluent sample collected & shipped to lab?           Yes          

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

**Monitoring Well Gauging / Vapor Point Monitoring:**

Well/V.P. ID:	MW-C	MW-E	MW-G	VP-1	VP-2	VP-3	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	VP-13	VP-14	VP-15
DTW (ft):	13.68	13.68	13.86	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	2	0.68	0.48	0.27	0.25	0.23	0.25	0.2	0.02	0.00	0.0	0.0
PID (PPM):	--	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Comments:**

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Dreger tubes not used <2 PPM, below limits

---

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

---

Personnel:         Dan Simpson  Time:         1100          
Weather:         Sunny 65F  Date:         9/22/2009        

**System Status:**

Arrival:                                 Running          
Departure:                                 Running          
Run Timer Reading:                         3136509          
Electric Meter Reading:                         13514        

**System Data:**

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

**Pre-Bleed Air (Extraction Well):**

Flow:         93.43 CFM          
Vacuum:         31 "H2O          
PID Reading:         10.0 PPM          
Draeger Tube:         - PPM          
Temperature:         79.4 °F        

**Post-Bleed Air (SVE Influent):**

Flow:         232.49 CFM          
Pressure         20 "H2O         via magnehelic  
PID Reading:         5.3 PPM          
Draeger Tube:         0 PPM          
Temperature:         128.8 °F        

**Carbon Monitoring:**

Mid:         4.3 PPM                 264.82 CFM                 154.2 Temp. (°F)                 0 PPM (Drager)                 9 "H2O          
Effluent:         4.0 PPM                 200.00 CFM                 134.5 Temp. (°F)                 0 PPM (Drager)        

Carbon effluent sample collected & shipped to lab?         Yes        

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

**Monitoring Well Gauging / Vapor Point Monitoring:**

Well/V.P. ID:	MW-C	MW-E	MW-G	VP-1	VP-2	VP-3	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	VP-13	VP-14	VP-15
DTW (ft):	15.49	15.49	15.79	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	1.86	0.51	0.15	0.4	0.3	0.3	0.25	0.25	0.15	N/A	N/A	N/A
PID (PPM):	--	--	--	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Comments:**

Danielle Best (EA) shadowed O&M visit  
VP-12,13,15 not accessible  
First visit of now quarterly monitoring instead of monthly.

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**Attachment B**  
**Laboratory Reports**



## ANALYTICAL REPORT

Lab Number:	L0905303
Client:	EA Engineering, Science and Tech 6712 Brooklawn Parkway Suite 104 Syracuse, NY 13211
ATTN:	Don Conan
Project Name:	NATIONAL HEATSET
Project Number:	NATIONAL HEATSET
Report Date:	04/30/09

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.

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



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L0905303-01	SVE EFFLUENT	FARMINGDALE, NY	04/28/09 13:20

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

### 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.

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.

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TO15-LL

L0905303-01 and WG360689-4 Duplicate have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG360689-2 LCS recoveries for Hexachlorobutadiene and 1,2,4-Trichlorobenzene are outside the 70%-130% acceptance limit. The LCS was within overall method allowances, therefore the analysis proceeded.

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:



Title: Technical Director/Representative

Date: 04/30/09

**AIR**

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

### SAMPLE RESULTS

Lab ID: L0905303-01 D  
 Client ID: SVE EFFLUENT  
 Sample Location: FARMINGDALE, NY  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/29/09 20:05  
 Analyst: RY

Date Collected: 04/28/09 13:20  
 Date Received: 04/29/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	1.38	1.00	7.50	5.45		5
1,1,2,2-Tetrachloroethane	ND	1.00	ND	6.86		5
1,1,2-Trichloroethane	ND	1.00	ND	5.45		5
1,1-Dichloroethane	ND	1.00	ND	4.04		5
1,1-Dichloroethene	ND	1.00	ND	3.96		5
1,2,4-Trichlorobenzene	ND	1.00	ND	7.42		5
1,2,4-Trimethylbenzene	ND	1.00	ND	4.91		5
1,2-Dibromoethane	ND	1.00	ND	7.68		5
1,2-Dichlorobenzene	ND	1.00	ND	6.01		5
1,2-Dichloroethane	ND	1.00	ND	4.04		5
1,2-Dichloropropane	ND	1.00	ND	4.62		5
1,3,5-Trimethylbenzene	ND	1.00	ND	4.91		5
1,3-Dichlorobenzene	ND	1.00	ND	6.01		5
1,4-Dichlorobenzene	ND	1.00	ND	6.01		5
Benzene	ND	1.00	ND	3.19		5
Benzyl chloride	ND	1.00	ND	5.17		5
Bromomethane	ND	1.00	ND	3.88		5
Carbon tetrachloride	ND	1.00	ND	6.29		5
Chlorobenzene	ND	1.00	ND	4.60		5
Chloroethane	ND	1.00	ND	2.64		5
Chloroform	ND	1.00	ND	4.88		5
Chloromethane	ND	1.00	ND	2.06		5
cis-1,2-Dichloroethene	20.4	1.00	80.6	3.96		5
cis-1,3-Dichloropropene	ND	1.00	ND	4.53		5
Dichlorodifluoromethane	ND	1.00	ND	4.94		5



Project Name: NATIONAL HEATSET

Lab Number: L0905303

Project Number: NATIONAL HEATSET

Report Date: 04/30/09

## SAMPLE RESULTS

Lab ID: L0905303-01 D  
 Client ID: SVE EFFLUENT  
 Sample Location: FARMINGDALE, NY

Date Collected: 04/28/09 13:20  
 Date Received: 04/29/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Ethylbenzene	ND	1.00	ND	4.34		5
Freon-113	ND	1.00	ND	7.66		5
Freon-114	ND	1.00	ND	6.98		5
Hexachlorobutadiene	ND	1.00	ND	10.6		5
Methylene chloride	ND	2.50	ND	8.68		5
p/m-Xylene	ND	2.00	ND	8.68		5
o-Xylene	ND	1.00	ND	4.34		5
Styrene	ND	1.00	ND	4.26		5
Tetrachloroethene	484	1.00	3280	6.78		5
Toluene	ND	1.00	ND	3.76		5
trans-1,2-Dichloroethene	ND	1.00	ND	3.96		5
trans-1,3-Dichloropropene	ND	1.00	ND	4.53		5
Trichloroethene	39.0	1.00	209	5.37		5
Trichlorofluoromethane	ND	1.00	ND	5.61		5
Vinyl chloride	ND	1.00	ND	2.55		5

Project Name: NATIONAL HEATSET

Lab Number: L0905303

Project Number: NATIONAL HEATSET

Report Date: 04/30/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/29/09 18:17

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG360689-3						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
Benzene	ND	0.200	ND	0.638		1
Benzyl chloride	ND	0.200	ND	1.03		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	ND	0.200	ND	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Dichlorodifluoromethane	ND	0.200	ND	0.988		1





Project Name: NATIONAL HEATSET

Lab Number: L0905303

Project Number: NATIONAL HEATSET

Report Date: 04/30/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/29/09 18:17

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG360689-3						
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
p/m-Xylene	ND	0.400	ND	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	ND	0.200	ND	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	ND	0.200	ND	1.12		1
Vinyl chloride	ND	0.200	ND	0.511		1

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG360689-2					
1,1,1-Trichloroethane	113	-	70-130	-	
1,1,2,2-Tetrachloroethane	103	-	70-130	-	
1,1,2-Trichloroethane	110	-	70-130	-	
1,1-Dichloroethane	108	-	70-130	-	
1,1-Dichloroethene	98	-	70-130	-	
1,2,4-Trichlorobenzene	132	-	70-130	-	
1,2,4-Trimethylbenzene	104	-	70-130	-	
1,2-Dibromoethane	95	-	70-130	-	
1,2-Dichlorobenzene	98	-	70-130	-	
1,2-Dichloroethane	101	-	70-130	-	
1,2-Dichloropropane	110	-	70-130	-	
1,3,5-Trimethylbenzene	102	-	70-130	-	
1,3-Butadiene	97	-	70-130	-	
1,3-Dichlorobenzene	94	-	70-130	-	
1,4-Dichlorobenzene	95	-	70-130	-	
1,4-Dioxane	121	-	70-130	-	
2,2,4-Trimethylpentane	116	-	70-130	-	
2-Butanone	113	-	70-130	-	
2-Hexanone	115	-	70-130	-	
3-Chloropropene	99	-	70-130	-	
4-Ethyltoluene	104	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG360689-2					
Acetone	106	-	70-130	-	
Benzene	106	-	70-130	-	
Benzyl chloride	111	-	70-130	-	
Bromodichloromethane	113	-	70-130	-	
Bromoform	112	-	70-130	-	
Bromomethane	82	-	70-130	-	
Carbon disulfide	90	-	70-130	-	
Carbon tetrachloride	111	-	70-130	-	
Chlorobenzene	102	-	70-130	-	
Chloroethane	102	-	70-130	-	
Chloroform	113	-	70-130	-	
Chloromethane	99	-	70-130	-	
cis-1,2-Dichloroethene	109	-	70-130	-	
cis-1,3-Dichloropropene	91	-	70-130	-	
Cyclohexane	99	-	70-130	-	
Dibromochloromethane	110	-	70-130	-	
Dichlorodifluoromethane	99	-	70-130	-	
Ethyl Alcohol	95	-	70-130	-	
Ethyl Acetate	124	-	70-130	-	
Ethylbenzene	101	-	70-130	-	
1,1,2-Trichloro-1,2,2-Trifluoroethane	101	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG360689-2					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	99	-	70-130	-	
Hexachlorobutadiene	132	-	70-130	-	
iso-Propyl Alcohol	108	-	70-130	-	
Methylene chloride	97	-	70-130	-	
4-Methyl-2-pentanone	117	-	70-130	-	
Methyl tert butyl ether	113	-	70-130	-	
p/m-Xylene	101	-	70-130	-	
o-Xylene	103	-	70-130	-	
Heptane	82	-	70-130	-	
n-Hexane	110	-	70-130	-	
Propylene	85	-	70-130	-	
Styrene	95	-	70-130	-	
Tetrachloroethene	113	-	70-130	-	
Tetrahydrofuran	115	-	70-130	-	
Toluene	98	-	70-130	-	
trans-1,2-Dichloroethene	103	-	70-130	-	
trans-1,3-Dichloropropene	73	-	70-130	-	
Trichloroethene	117	-	70-130	-	
Trichlorofluoromethane	102	-	70-130	-	
Vinyl acetate	100	-	70-130	-	
Vinyl bromide	101	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Lab Number:** L0905303

**Project Number:** NATIONAL HEATSET

**Report Date:** 04/30/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG360689-2					
Vinyl chloride	98	-	70-130	-	

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSE

**Lab Number:** L0905303  
**Report Date:** 04/30/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG360689-4 QC Sample: L0905303-01 Client ID: SVE EFFLUENT					
1,1,1-Trichloroethane	1.38	1.66	ppbV	18	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
Benzene	ND	ND	ppbV	NC	25
Benzyl chloride	ND	ND	ppbV	NC	25
Bromomethane	ND	ND	ppbV	NC	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSE

**Lab Number:** L0905303  
**Report Date:** 04/30/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG360689-4 QC Sample: L0905303-01 Client ID: SVE EFFLUENT					
Chloroethane	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Chloromethane	ND	ND	ppbV	NC	25
cis-1,2-Dichloroethene	20.4	21.4	ppbV	5	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Dichlorodifluoromethane	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
Freon-113	ND	ND	ppbV	NC	25
Freon-114	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25
Methylene chloride	ND	ND	ppbV	NC	25
p/m-Xylene	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
Tetrachloroethene	484	462	ppbV	5	25
Toluene	ND	ND	ppbV	NC	25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Trichloroethene	39.0	42.1	ppbV	8	25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Project Number:** NATIONAL HEATSE

**Lab Number:** L0905303

**Report Date:** 04/30/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG360689-4 QC Sample: L0905303-01 Client ID: SVE EFFLUENT					
Trichlorofluoromethane	ND	ND	ppbV	NC	25
Vinyl chloride	ND	ND	ppbV	NC	25



**Project Name:** NATIONAL HEATSET**Lab Number:** L0905303**Project Number:** NATIONAL HEATSET**Report Date:** 04/30/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**

Cooler	Custody Seal
A	Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0905303-01A	Tedlar Bag 5 liter-Polypropylene	A	NA	N/A	NA	Present/Intact	TO15-LL(30)

\*Hold days indicated by values in parentheses

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

## 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL 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

- \*** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0905303  
**Report Date:** 04/30/09

## 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 Woods Hole Labs 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 Woods Hole Labs.

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 February 18, 2009 – 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, Chloride, Fluoride, Sulfate, Sulfite, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, 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 Dissolved Solids, Total Suspended Solids (non-filterable), Total Cyanide, Bromide. 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, Ignitability, Corrosivity, TCLP 1311, Reactivity. 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.

*Non-Potable Water* (Inorganic Parameters: SM2320B, 4500NH3-F, EPA 120.1, SM2510B, 2340B, EPA 245.1, EPA 365.2, EPA 150.1, 160.1, SM2540C, EPA 160.2, SM2540D, EPA 335.2, 420.1, SM2540G, EPA 180.1. Organic Parameters: EPA 624, 625, 608.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 9050, 7470, 7471, 9045, EPA 7.3.3.2, EPA 7.3.4.2, 9014, 9065. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### Louisiana Department of Environmental Quality Certificate/Lab ID: 03090.

*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.)

### Maine Department of Human Services Certificate/Lab ID: MA0030.

*Wastewater* (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

### 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.

*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.

*Non-Potable Water* (Inorganic Parameters: SW-846 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 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, 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)

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

*Non-Potable Water* (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, SM2540C, 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.)

*Air & Emissions* (EPA TO-15.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299.

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.

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7471. Organic Parameters: EPA 8015, 8270.)

**Pennsylvania Department of Environmental Protection** Certificate/Lab ID: 68-02089. Registered Laboratory.

**U.S. Army Corps of Engineers**





## ANALYTICAL REPORT

Lab Number:	L0906362
Client:	EA Engineering, Science and Tech 6712 Brooklawn Parkway Suite 104 Syracuse, NY 13211
ATTN:	Don Conan
Project Name:	NATIONAL HEATSET
Project Number:	NATIONAL HEATSET
Report Date:	05/27/09

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.

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



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L0906362-01	SVE-EFFLUENT	FARMINGDALE, NY	05/18/09 12:00



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

### 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.

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.

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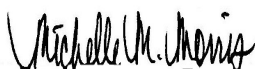
#### Volatile Organics in Air (Low Level)

L0906362-01 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L0906362-01 was re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range. The re-analysis was not performed within holding time.

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:



Title: Technical Director/Representative

Date: 05/27/09

**AIR**

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

### SAMPLE RESULTS

Lab ID: L0906362-01 D  
 Client ID: SVE-EFFLUENT  
 Sample Location: FARMINGDALE, NY  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 05/20/09 09:25  
 Analyst: RY

Date Collected: 05/18/09 12:00  
 Date Received: 05/19/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	2.34	1.00	12.8	5.45		5
1,1,2,2-Tetrachloroethane	ND	1.00	ND	6.86		5
1,1,2-Trichloroethane	ND	1.00	ND	5.45		5
1,1-Dichloroethane	ND	1.00	ND	4.04		5
1,1-Dichloroethene	ND	1.00	ND	3.96		5
1,2,4-Trichlorobenzene	ND	1.00	ND	7.42		5
1,2,4-Trimethylbenzene	ND	1.00	ND	4.91		5
1,2-Dibromoethane	ND	1.00	ND	7.68		5
1,2-Dichlorobenzene	ND	1.00	ND	6.01		5
1,2-Dichloroethane	ND	1.00	ND	4.04		5
1,2-Dichloropropane	ND	1.00	ND	4.62		5
1,3,5-Trimethylbenzene	ND	1.00	ND	4.91		5
1,3-Dichlorobenzene	ND	1.00	ND	6.01		5
1,4-Dichlorobenzene	ND	1.00	ND	6.01		5
Benzene	ND	1.00	ND	3.19		5
Benzyl chloride	ND	1.00	ND	5.17		5
Bromomethane	ND	1.00	ND	3.88		5
Carbon tetrachloride	ND	1.00	ND	6.29		5
Chlorobenzene	ND	1.00	ND	4.60		5
Chloroethane	ND	1.00	ND	2.64		5
Chloroform	ND	1.00	ND	4.88		5
Chloromethane	ND	1.00	ND	2.06		5
cis-1,2-Dichloroethene	25.6	1.00	101	3.96		5
cis-1,3-Dichloropropene	ND	1.00	ND	4.53		5
Dichlorodifluoromethane	ND	1.00	ND	4.94		5



Project Name: NATIONAL HEATSET

Lab Number: L0906362

Project Number: NATIONAL HEATSET

Report Date: 05/27/09

## SAMPLE RESULTS

Lab ID: L0906362-01 D  
 Client ID: SVE-EFFLUENT  
 Sample Location: FARMINGDALE, NY

Date Collected: 05/18/09 12:00  
 Date Received: 05/19/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Ethylbenzene	ND	1.00	ND	4.34		5
Freon-113	ND	1.00	ND	7.66		5
Freon-114	ND	1.00	ND	6.98		5
Hexachlorobutadiene	ND	1.00	ND	10.6		5
Methylene chloride	ND	2.50	ND	8.68		5
p/m-Xylene	ND	2.00	ND	8.68		5
o-Xylene	ND	1.00	ND	4.34		5
Styrene	ND	1.00	ND	4.26		5
Tetrachloroethene	765	1.00	5180	6.78	E	5
Toluene	ND	1.00	ND	3.76		5
trans-1,2-Dichloroethene	ND	1.00	ND	3.96		5
trans-1,3-Dichloropropene	ND	1.00	ND	4.53		5
Trichloroethene	65.5	1.00	352	5.37		5
Trichlorofluoromethane	ND	1.00	ND	5.61		5
Vinyl chloride	ND	1.00	ND	2.55		5

**Project Name:** NATIONAL HEATSET**Lab Number:** L0906362**Project Number:** NATIONAL HEATSET**Report Date:** 05/27/09**SAMPLE RESULTS**

**Lab ID:** L0906362-01 D  
**Client ID:** SVE-EFFLUENT  
**Sample Location:** FARMINGDALE, NY  
**Matrix:** Soil\_Vapor  
**Anaytical Method:** 48,TO-15  
**Analytical Date:** 05/23/09 00:14  
**Analyst:** RY

**Date Collected:** 05/18/09 12:00  
**Date Received:** 05/19/09  
**Field Prep:** Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Tetrachloroethene	899	2.00	6090	13.6		10

Project Name: NATIONAL HEATSET

Lab Number: L0906362

Project Number: NATIONAL HEATSET

Report Date: 05/27/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 05/19/09 17:02

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG363273-3						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
Benzene	ND	0.200	ND	0.638		1
Benzyl chloride	ND	0.200	ND	1.03		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	ND	0.200	ND	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Dichlorodifluoromethane	ND	0.200	ND	0.988		1



Project Name: NATIONAL HEATSET

Lab Number: L0906362

Project Number: NATIONAL HEATSET

Report Date: 05/27/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 05/19/09 17:02

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG363273-3						
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
p/m-Xylene	ND	0.400	ND	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	ND	0.200	ND	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	ND	0.200	ND	1.12		1
Vinyl chloride	ND	0.200	ND	0.511		1

Project Name: NATIONAL HEATSET

Lab Number: L0906362

Project Number: NATIONAL HEATSET

Report Date: 05/27/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 05/22/09 21:13

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG363273-7						
Tetrachloroethene	ND	0.200	ND	1.36		1



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG363273-2					
1,1,1-Trichloroethane	114	-	70-130	-	
1,1,2,2-Tetrachloroethane	100	-	70-130	-	
1,1,2-Trichloroethane	107	-	70-130	-	
1,1-Dichloroethane	115	-	70-130	-	
1,1-Dichloroethene	112	-	70-130	-	
1,2,4-Trichlorobenzene	90	-	70-130	-	
1,2,4-Trimethylbenzene	93	-	70-130	-	
1,2-Dibromoethane	99	-	70-130	-	
1,2-Dichlorobenzene	84	-	70-130	-	
1,2-Dichloroethane	101	-	70-130	-	
1,2-Dichloropropane	111	-	70-130	-	
1,3,5-Trimethylbenzene	91	-	70-130	-	
1,3-Butadiene	100	-	70-130	-	
1,3-Dichlorobenzene	86	-	70-130	-	
1,4-Dichlorobenzene	87	-	70-130	-	
1,4-Dioxane	113	-	70-130	-	
2,2,4-Trimethylpentane	106	-	70-130	-	
2-Butanone	108	-	70-130	-	
2-Hexanone	108	-	70-130	-	
3-Chloropropene	95	-	70-130	-	
4-Ethyltoluene	89	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG363273-2					
Acetone	100	-	70-130	-	
Benzene	108	-	70-130	-	
Benzyl chloride	87	-	70-130	-	
Bromodichloromethane	107	-	70-130	-	
Bromoform	95	-	70-130	-	
Bromomethane	90	-	70-130	-	
Carbon disulfide	94	-	70-130	-	
Carbon tetrachloride	122	-	70-130	-	
Chlorobenzene	106	-	70-130	-	
Chloroethane	112	-	70-130	-	
Chloroform	108	-	70-130	-	
Chloromethane	111	-	70-130	-	
cis-1,2-Dichloroethene	115	-	70-130	-	
cis-1,3-Dichloropropene	98	-	70-130	-	
Cyclohexane	100	-	70-130	-	
Dibromochloromethane	102	-	70-130	-	
Dichlorodifluoromethane	110	-	70-130	-	
Ethyl Alcohol	101	-	70-130	-	
Ethyl Acetate	109	-	70-130	-	
Ethylbenzene	94	-	70-130	-	
1,1,2-Trichloro-1,2,2-Trifluoroethane	112	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG363273-2					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	109	-	70-130	-	
Hexachlorobutadiene	78	-	70-130	-	
iso-Propyl Alcohol	103	-	70-130	-	
Methylene chloride	106	-	70-130	-	
4-Methyl-2-pentanone	112	-	70-130	-	
Methyl tert butyl ether	104	-	70-130	-	
p/m-Xylene	93	-	70-130	-	
o-Xylene	94	-	70-130	-	
Heptane	114	-	70-130	-	
n-Hexane	104	-	70-130	-	
Propylene	86	-	70-130	-	
Styrene	89	-	70-130	-	
Tetrachloroethene	110	-	70-130	-	
Tetrahydrofuran	102	-	70-130	-	
Toluene	95	-	70-130	-	
trans-1,2-Dichloroethene	108	-	70-130	-	
trans-1,3-Dichloropropene	81	-	70-130	-	
Trichloroethene	110	-	70-130	-	
Trichlorofluoromethane	113	-	70-130	-	
Vinyl acetate	74	-	70-130	-	
Vinyl bromide	101	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362

**Report Date:** 05/27/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG363273-2					
Vinyl chloride	107	-	70-130	-	
Naphthalene	79	-	70-130	-	

Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG363273-6					
Tetrachloroethene	113	-	70-130	-	

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSE

**Lab Number:** L0906362  
**Report Date:** 05/27/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG363273-4 QC Sample: L0906305-01 Client ID: DUP Sample					
1,1,1-Trichloroethane	3.20	3.54	ppbV	10	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	4.52	4.83	ppbV	7	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	1.23	1.24	ppbV	1	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
Benzene	2.70	2.84	ppbV	5	25
Benzyl chloride	ND	ND	ppbV	NC	25
Bromomethane	ND	ND	ppbV	NC	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Project Number: NATIONAL HEATSE

Lab Number: L0906362

Report Date: 05/27/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG363273-4 QC Sample: L0906305-01 Client ID: DUP Sample					
Chloroethane	ND	ND	ppbV	NC	25
Chloroform	0.438	0.416	ppbV	5	25
Chloromethane	1.27	1.24	ppbV	2	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Dichlorodifluoromethane	0.557	0.566	ppbV	2	25
Ethylbenzene	3.06	2.97	ppbV	3	25
Freon-113	0.435	0.428	ppbV	2	25
Freon-114	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25
Methylene chloride	ND	ND	ppbV	NC	25
p/m-Xylene	13.5	13.1	ppbV	3	25
o-Xylene	4.76	4.75	ppbV	0	25
Styrene	ND	ND	ppbV	NC	25
Tetrachloroethene	5.10	5.18	ppbV	2	25
Toluene	18.4	21.4	ppbV	15	25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Trichloroethene	1.81	1.80	ppbV	1	25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Project Number:** NATIONAL HEATSE

**Lab Number:** L0906362

**Report Date:** 05/27/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG363273-4 QC Sample: L0906305-01 Client ID: DUP Sample					
Trichlorofluoromethane	1.19	1.25	ppbV	5	25
Vinyl chloride	ND	ND	ppbV	NC	25

**Project Name:** NATIONAL HEATSET**Lab Number:** L0906362**Project Number:** NATIONAL HEATSET**Report Date:** 05/27/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**

Cooler	Custody Seal
A	Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0906362-01A	Tedlar Bag 5 liter-Polypropylene	A	N/A		NA	Present/Intact	TO15-LL(30)

\*Hold days indicated by values in parentheses



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

## 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL 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

- \*** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

Report Format: Data Usability Report



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0906362  
**Report Date:** 05/27/09

## 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 Woods Hole Labs 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 Woods Hole Labs.

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 May 22, 2009 – 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, Chloride, Fluoride, Sulfate, Sulfite, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, 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 Dissolved Solids, Total Suspended Solids (non-filterable), Total Cyanide, Bromide. 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, Ignitability, Corrosivity, TCLP 1311, Reactivity. 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.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, 4500NH3-F, EPA 120.1, SM2510B, 2340B, EPA 245.1, EPA 365.2, EPA 150.1, 160.1, SM2540C, EPA 160.2, SM2540D, EPA 335.2, 420.1, SM2540G, EPA 180.1. Organic Parameters: EPA 624, 625, 608.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 9050, 7470, 7471, 9045, EPA 7.3.3.2, EPA 7.3.4.2, 9014, 9065. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

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

*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.)

### **Maine Department of Human Services Certificate/Lab ID: MA0030.**

*Wastewater* (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

### **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.**

*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.**

*Non-Potable Water* (Inorganic Parameters: SW-846 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 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, 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)

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

*Non-Potable Water* (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, SM2540C, 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.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089**

*Non-Potable Water* (Organic Parameters: EPA 5030B, EPA 8260)

**Rhode Island Department of Health Certificate/Lab ID: LAO00299.**

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.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7471. Organic Parameters: EPA 8015, 8270.)

**U.S. Army Corps of Engineers**

# AIR ANALYSIS

PAGE 1 OF 1

**ALPHA ANALYTICAL**  
 CHAIN OF CUSTODY  
 320 Forbes Blvd, Mansfield, MA 02048  
 TEL: 508-822-9300 FAX: 508-822-3288

**Client Information**

Client: **EA Engineering**  
 Address: **6712 Brookhaven Pkwy**  
**Syracuse, NY 13211**  
 Phone: **315 481 2323**  
 Fax:  
 Email: **dolan@d-east.com**

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

**Project Information**

Project Name: **National Heat Set**  
 Project Location: **Formingdale, NY**  
 Project #: \_\_\_\_\_  
 Project Manager: **Don Dolan**  
 ALPHA Quote #: \_\_\_\_\_  
**Turn-Around Time**

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

**Date Rec'd in Lab:** \_\_\_\_\_

**Report Information - Data Deliverables**

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) \_\_\_\_\_

**ALPHA Job #: 20906362**

**Billing Information**

Same as Client info PO #: \_\_\_\_\_

**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	ID Can	ID-Flow Controller	Sample Comments (i.e. PID)
		Date	Start Time	End Time	Vacuum						
20906352-1	SVE-EXP/ven F	5/18/09	1200	1200	-	-	SV	DS	5L	-	3.08ppm

\*SAMPLE MATRIX CODES  
 AA = Ambient Air (Indoor/Outdoor)  
 SV = Soil Vapor/Landfill Gas/SVE  
 Other = Please Specify

Relinquished By: **[Signature]** Date/Time: **5/18/09 1400**

Received By: **[Signature]** Date/Time: **5/18/09 1400**

Container Type: **5**

Received By: **[Signature]** Date/Time: **5/19/09 0900**

Please print clearly, legibly and completely. Samples can not 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.



## ANALYTICAL REPORT

Lab Number:	L0908400
Client:	EA Engineering, Science and Tech 6712 Brooklawn Parkway Suite 104 Syracuse, NY 13211
ATTN:	Don Conan
Project Name:	NATIONAL HEATSET
Project Number:	NATIONAL HEATSET
Report Date:	06/29/09

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.

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



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L0908400-01	SVE-EFFLUENT	FARMINGDALE, NY	06/23/09 12:00

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

### 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.

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.

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#### Volatile Organics in Air (Low Level)

L0908400-01: Sample was transferred from a Tedlar bag into a fused silica lined canister upon receipt in order to extend the holding time for analysis.

L0908400-01 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample. The sample was re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

**Case Narrative (continued)**

The WG368445-2 LCS recovery for 1,2-Dichloroethane (165%) is outside the 70%-130% acceptance limit. 1,2-Dichloroethane exceeded method allowance with a high response and the associated samples were non detect for this compound, therefore no further action was taken.

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:



Title: Technical Director/Representative

Date: 06/29/09

**AIR**

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

### SAMPLE RESULTS

Lab ID: L0908400-01 D  
 Client ID: SVE-EFFLUENT  
 Sample Location: FARMINGDALE, NY  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 06/26/09 02:43  
 Analyst: RY

Date Collected: 06/23/09 12:00  
 Date Received: 06/24/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	3.09	0.426	16.8	2.32		2.131
1,1,2,2-Tetrachloroethane	ND	0.426	ND	2.92		2.131
1,1,2-Trichloroethane	ND	0.426	ND	2.32		2.131
1,1-Dichloroethane	ND	0.426	ND	1.72		2.131
1,1-Dichloroethene	ND	0.426	ND	1.69		2.131
1,2,4-Trichlorobenzene	ND	0.426	ND	3.16		2.131
1,2,4-Trimethylbenzene	ND	0.426	ND	2.09		2.131
1,2-Dibromoethane	ND	0.426	ND	3.27		2.131
1,2-Dichlorobenzene	ND	0.426	ND	2.56		2.131
1,2-Dichloroethane	ND	0.426	ND	1.72		2.131
1,2-Dichloropropane	ND	0.426	ND	1.97		2.131
1,3,5-Trimethylbenzene	ND	0.426	ND	2.09		2.131
1,3-Dichlorobenzene	ND	0.426	ND	2.56		2.131
1,4-Dichlorobenzene	ND	0.426	ND	2.56		2.131
Benzene	ND	0.426	ND	1.36		2.131
Benzyl chloride	ND	0.426	ND	2.20		2.131
Bromomethane	ND	0.426	ND	1.65		2.131
Carbon tetrachloride	ND	0.426	ND	2.68		2.131
Chlorobenzene	ND	0.426	ND	1.96		2.131
Chloroethane	ND	0.426	ND	1.12		2.131
Chloroform	0.752	0.426	3.67	2.08		2.131
Chloromethane	ND	0.426	ND	0.879		2.131
cis-1,2-Dichloroethene	48.0	0.426	190	1.69		2.131
cis-1,3-Dichloropropene	ND	0.426	ND	1.93		2.131
Dichlorodifluoromethane	0.624	0.426	3.08	2.11		2.131



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

### SAMPLE RESULTS

Lab ID: L0908400-01 D  
 Client ID: SVE-EFFLUENT  
 Sample Location: FARMINGDALE, NY

Date Collected: 06/23/09 12:00  
 Date Received: 06/24/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Ethylbenzene	ND	0.426	ND	1.85		2.131
Freon-113	ND	0.426	ND	3.26		2.131
Freon-114	ND	0.426	ND	2.98		2.131
Hexachlorobutadiene	ND	0.426	ND	4.54		2.131
Methylene chloride	1.13	1.06	3.92	3.70		2.131
p/m-Xylene	ND	0.852	ND	3.70		2.131
o-Xylene	ND	0.426	ND	1.85		2.131
Styrene	ND	0.426	ND	1.81		2.131
Tetrachloroethene	2340	0.426	15900	2.89	E	2.131
Toluene	0.579	0.426	2.18	1.60		2.131
trans-1,2-Dichloroethene	0.663	0.426	2.63	1.69		2.131
trans-1,3-Dichloropropene	ND	0.426	ND	1.93		2.131
Trichloroethene	81.6	0.426	438	2.29		2.131
Trichlorofluoromethane	0.433	0.426	2.43	2.39		2.131
Vinyl chloride	ND	0.426	ND	1.09		2.131

**Project Name:** NATIONAL HEATSET**Lab Number:** L0908400**Project Number:** NATIONAL HEATSET**Report Date:** 06/29/09**SAMPLE RESULTS**

**Lab ID:** L0908400-01 R\D  
**Client ID:** SVE-EFFLUENT  
**Sample Location:** FARMINGDALE, NY  
**Matrix:** Soil\_Vapor  
**Anaytical Method:** 48,TO-15  
**Analytical Date:** 06/26/09 21:45  
**Analyst:** RY

**Date Collected:** 06/23/09 12:00  
**Date Received:** 06/24/09  
**Field Prep:** Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Tetrachloroethene	2690	14.2	18200	96.3		71.04

Project Name: NATIONAL HEATSET

Lab Number: L0908400

Project Number: NATIONAL HEATSET

Report Date: 06/29/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 06/25/09 15:25

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG368445-4						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
Benzene	ND	0.200	ND	0.638		1
Benzyl chloride	ND	0.200	ND	1.03		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	ND	0.200	ND	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Dichlorodifluoromethane	ND	0.200	ND	0.988		1



Project Name: NATIONAL HEATSET

Lab Number: L0908400

Project Number: NATIONAL HEATSET

Report Date: 06/29/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 06/25/09 15:25

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG368445-4						
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
p/m-Xylene	ND	0.400	ND	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	ND	0.200	ND	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	ND	0.200	ND	1.12		1
Vinyl chloride	ND	0.200	ND	0.511		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ppbV		1



Project Name: NATIONAL HEATSET

Lab Number: L0908400

Project Number: NATIONAL HEATSET

Report Date: 06/29/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 06/26/09 18:10

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG368445-9						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
Benzene	ND	0.200	ND	0.638		1
Benzyl chloride	ND	0.200	ND	1.03		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	ND	0.200	ND	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Dichlorodifluoromethane	ND	0.200	ND	0.988		1





Project Name: NATIONAL HEATSET

Lab Number: L0908400

Project Number: NATIONAL HEATSET

Report Date: 06/29/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 06/26/09 18:10

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG368445-9						
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
p/m-Xylene	ND	0.400	ND	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	ND	0.200	ND	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	ND	0.200	ND	1.12		1
Vinyl chloride	ND	0.200	ND	0.511		1

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-2					
1,1,1-Trichloroethane	109	-	70-130	-	
1,1,2,2-Tetrachloroethane	107	-	70-130	-	
1,1,2-Trichloroethane	117	-	70-130	-	
1,1-Dichloroethane	109	-	70-130	-	
1,1-Dichloroethene	101	-	70-130	-	
1,2,4-Trichlorobenzene	115	-	70-130	-	
1,2,4-Trimethylbenzene	122	-	70-130	-	
1,2-Dibromoethane	101	-	70-130	-	
1,2-Dichlorobenzene	124	-	70-130	-	
1,2-Dichloroethane	165	-	70-130	-	
1,2-Dichloropropane	97	-	70-130	-	
1,3,5-Trimethylbenzene	126	-	70-130	-	
1,3-Butadiene	84	-	70-130	-	
1,3-Dichlorobenzene	124	-	70-130	-	
1,4-Dichlorobenzene	120	-	70-130	-	
1,4-Dioxane	103	-	70-130	-	
2,2,4-Trimethylpentane	85	-	70-130	-	
2-Butanone	103	-	70-130	-	
2-Hexanone	90	-	70-130	-	
3-Chloropropene	90	-	70-130	-	
4-Ethyltoluene	125	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-2					
Acetone	110	-	70-130	-	
Benzene	99	-	70-130	-	
Benzyl chloride	100	-	70-130	-	
Bromodichloromethane	104	-	70-130	-	
Bromoform	112	-	70-130	-	
Bromomethane	88	-	70-130	-	
Carbon disulfide	88	-	70-130	-	
Carbon tetrachloride	118	-	70-130	-	
Chlorobenzene	116	-	70-130	-	
Chloroethane	85	-	70-130	-	
Chloroform	126	-	70-130	-	
Chloromethane	83	-	70-130	-	
cis-1,2-Dichloroethene	113	-	70-130	-	
cis-1,3-Dichloropropene	89	-	70-130	-	
Cyclohexane	74	-	70-130	-	
Dibromochloromethane	113	-	70-130	-	
Dichlorodifluoromethane	109	-	70-130	-	
Ethyl Alcohol	92	-	70-130	-	
Ethyl Acetate	115	-	70-130	-	
Ethylbenzene	117	-	70-130	-	
1,1,2-Trichloro-1,2,2-Trifluoroethane	108	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-2					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	103	-	70-130	-	
Hexachlorobutadiene	121	-	70-130	-	
iso-Propyl Alcohol	98	-	70-130	-	
Methylene chloride	86	-	70-130	-	
4-Methyl-2-pentanone	88	-	70-130	-	
Methyl tert butyl ether	122	-	70-130	-	
p/m-Xylene	118	-	70-130	-	
o-Xylene	114	-	70-130	-	
Heptane	80	-	70-130	-	
n-Hexane	83	-	70-130	-	
Propylene	69	-	70-130	-	
Styrene	115	-	70-130	-	
Tetrachloroethene	113	-	70-130	-	
Tetrahydrofuran	104	-	70-130	-	
Toluene	108	-	70-130	-	
trans-1,2-Dichloroethene	100	-	70-130	-	
trans-1,3-Dichloropropene	88	-	70-130	-	
Trichloroethene	107	-	70-130	-	
Trichlorofluoromethane	130	-	70-130	-	
Vinyl acetate	112	-	70-130	-	
Vinyl bromide	103	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-2					
Vinyl chloride	94	-	70-130	-	
Naphthalene	108	-	70-130	-	
Propane	66	-	70-130	-	
Acrylonitrile	95	-	70-130	-	
Acrolein	93	-	70-130	-	
1,1,1,2-Tetrachloroethane	112	-	70-130	-	
Isopropylbenzene	120	-	70-130	-	
1,2,3-Trichloropropane	101	-	70-130	-	
Acetonitrile	77	-	70-130	-	
Bromobenzene	107	-	70-130	-	
Chlorodifluoromethane	87	-	70-130	-	
Dichlorofluoromethane	94	-	70-130	-	
Dibromomethane	99	-	70-130	-	
Pentane	81	-	70-130	-	
Octane	81	-	70-130	-	
Tertiary-Amyl Methyl Ether	97	-	70-130	-	
o-Chlorotoluene	118	-	70-130	-	
p-Chlorotoluene	117	-	70-130	-	
2,2-Dichloropropane	124	-	70-130	-	
1,1-Dichloropropene	95	-	70-130	-	
Isopropyl Ether	105	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-2					
Ethyl-Tert-Butyl-Ether	105	-	70-130	-	
1,2,3-Trichlorobenzene	123	-	70-130	-	
Ethyl ether	86	-	70-130	-	
n-Butylbenzene	109	-	70-130	-	
sec-Butylbenzene	115	-	70-130	-	
tert-Butylbenzene	120	-	70-130	-	
1,2-Dibromo-3-chloropropane	94	-	70-130	-	
p-Isopropyltoluene	110	-	70-130	-	
n-Propylbenzene	123	-	70-130	-	
1,3-Dichloropropane	99	-	70-130	-	
Methanol	79	-	70-130	-	
Butane	74	-	70-130	-	
Nonane (C9)	86	-	70-130	-	
Decane (C10)	97	-	70-130	-	
Undecane	82	-	70-130	-	
Dodecane (C12)	84	-	70-130	-	
Butyl Acetate	83	-	70-130	-	
tert-Butyl Alcohol	98	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-8					
1,1,1-Trichloroethane	104	-	70-130	-	
1,1,2,2-Tetrachloroethane	103	-	70-130	-	
1,1,2-Trichloroethane	112	-	70-130	-	
1,1-Dichloroethane	106	-	70-130	-	
1,1-Dichloroethene	100	-	70-130	-	
1,2,4-Trichlorobenzene	100	-	70-130	-	
1,2,4-Trimethylbenzene	116	-	70-130	-	
1,2-Dibromoethane	94	-	70-130	-	
1,2-Dichlorobenzene	116	-	70-130	-	
1,2-Dichloroethane	124	-	70-130	-	
1,2-Dichloropropane	95	-	70-130	-	
1,3,5-Trimethylbenzene	117	-	70-130	-	
1,3-Butadiene	82	-	70-130	-	
1,3-Dichlorobenzene	117	-	70-130	-	
1,4-Dichlorobenzene	114	-	70-130	-	
1,4-Dioxane	94	-	70-130	-	
2,2,4-Trimethylpentane	82	-	70-130	-	
2-Butanone	100	-	70-130	-	
2-Hexanone	82	-	70-130	-	
3-Chloropropene	86	-	70-130	-	
4-Ethyltoluene	116	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-8					
Acetone	111	-	70-130	-	
Benzene	97	-	70-130	-	
Benzyl chloride	94	-	70-130	-	
Bromodichloromethane	102	-	70-130	-	
Bromoform	106	-	70-130	-	
Bromomethane	84	-	70-130	-	
Carbon disulfide	87	-	70-130	-	
Carbon tetrachloride	115	-	70-130	-	
Chlorobenzene	108	-	70-130	-	
Chloroethane	82	-	70-130	-	
Chloroform	122	-	70-130	-	
Chloromethane	83	-	70-130	-	
cis-1,2-Dichloroethene	110	-	70-130	-	
cis-1,3-Dichloropropene	87	-	70-130	-	
Cyclohexane	72	-	70-130	-	
Dibromochloromethane	102	-	70-130	-	
Dichlorodifluoromethane	108	-	70-130	-	
Ethyl Alcohol	89	-	70-130	-	
Ethyl Acetate	116	-	70-130	-	
Ethylbenzene	115	-	70-130	-	
1,1,2-Trichloro-1,2,2-Trifluoroethane	103	-	70-130	-	



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-8					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	91	-	70-130	-	
Hexachlorobutadiene	110	-	70-130	-	
iso-Propyl Alcohol	94	-	70-130	-	
Methylene chloride	82	-	70-130	-	
4-Methyl-2-pentanone	83	-	70-130	-	
Methyl tert butyl ether	118	-	70-130	-	
p/m-Xylene	114	-	70-130	-	
o-Xylene	118	-	70-130	-	
Heptane	79	-	70-130	-	
n-Hexane	79	-	70-130	-	
Propylene	69	-	70-130	-	
Styrene	110	-	70-130	-	
Tetrachloroethene	103	-	70-130	-	
Tetrahydrofuran	112	-	70-130	-	
Toluene	102	-	70-130	-	
trans-1,2-Dichloroethene	98	-	70-130	-	
trans-1,3-Dichloropropene	87	-	70-130	-	
Trichloroethene	102	-	70-130	-	
Trichlorofluoromethane	124	-	70-130	-	
Vinyl acetate	108	-	70-130	-	
Vinyl bromide	98	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-8					
Vinyl chloride	90	-	70-130	-	
Naphthalene	93	-	70-130	-	
Propane	66	-	70-130	-	
Acrylonitrile	92	-	70-130	-	
Acrolein	88	-	70-130	-	
1,1,1,2-Tetrachloroethane	104	-	70-130	-	
Isopropylbenzene	117	-	70-130	-	
1,2,3-Trichloropropane	104	-	70-130	-	
Acetonitrile	76	-	70-130	-	
Bromobenzene	103	-	70-130	-	
Chlorodifluoromethane	84	-	70-130	-	
Dichlorofluoromethane	90	-	70-130	-	
Dibromomethane	97	-	70-130	-	
Pentane	77	-	70-130	-	
Octane	72	-	70-130	-	
Tertiary-Amyl Methyl Ether	94	-	70-130	-	
o-Chlorotoluene	110	-	70-130	-	
p-Chlorotoluene	108	-	70-130	-	
2,2-Dichloropropane	121	-	70-130	-	
1,1-Dichloropropene	92	-	70-130	-	
Isopropyl Ether	99	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Lab Number:** L0908400

**Project Number:** NATIONAL HEATSET

**Report Date:** 06/29/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG368445-8					
Ethyl-Tert-Butyl-Ether	100	-	70-130	-	
1,2,3-Trichlorobenzene	106	-	70-130	-	
Ethyl ether	82	-	70-130	-	
n-Butylbenzene	102	-	70-130	-	
sec-Butylbenzene	109	-	70-130	-	
tert-Butylbenzene	113	-	70-130	-	
1,2-Dibromo-3-chloropropane	88	-	70-130	-	
p-Isopropyltoluene	102	-	70-130	-	
n-Propylbenzene	114	-	70-130	-	
1,3-Dichloropropane	95	-	70-130	-	
Methanol	78	-	70-130	-	
Butane	71	-	70-130	-	
Nonane (C9)	86	-	70-130	-	
Decane (C10)	93	-	70-130	-	
Undecane	73	-	70-130	-	
Dodecane (C12)	75	-	70-130	-	
Butyl Acetate	75	-	70-130	-	
tert-Butyl Alcohol	94	-	70-130	-	

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSE

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG368445-5 QC Sample: L0908421-02 Client ID: DUP Sample					
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
Benzene	ND	ND	ppbV	NC	25
Benzyl chloride	ND	ND	ppbV	NC	25
Bromomethane	ND	ND	ppbV	NC	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSE

**Lab Number:** L0908400  
**Report Date:** 06/29/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG368445-5 QC Sample: L0908421-02 Client ID: DUP Sample					
Chloroethane	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Chloromethane	ND	ND	ppbV	NC	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Dichlorodifluoromethane	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
Freon-113	ND	ND	ppbV	NC	25
Freon-114	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25
Methylene chloride	22.0	20.2	ppbV	9	25
p/m-Xylene	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
Tetrachloroethene	38.7	37.2	ppbV	4	25
Toluene	2.41	2.42	ppbV	0	25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Project Number:** NATIONAL HEATSE

**Lab Number:** L0908400

**Report Date:** 06/29/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG368445-5 QC Sample: L0908421-02 Client ID: DUP Sample					
Trichlorofluoromethane	ND	ND	ppbV	NC	25
Vinyl chloride	ND	ND	ppbV	NC	25

**Project Name:** NATIONAL HEATSET**Lab Number:** L0908400**Project Number:** NATIONAL HEATSET**Report Date:** 06/29/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**

Cooler	Custody Seal
A	Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0908400-01A	Tedlar Bag 5 liter-Polypropylene	A	N/A		NA	Absent	TO15-LL(30)

\*Hold days indicated by values in parentheses

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

## 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL 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

- \*** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0908400  
**Report Date:** 06/29/09

## 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 Woods Hole Labs 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 Woods Hole Labs.

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 June 17, 2009 – 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, 4500NH3-F, EPA 120.1, SM2510B, 2340B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, 420.1, 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.)

### **Maine Department of Human Services Certificate/Lab ID: MA0030.**

*Wastewater* (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

### **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.)

**Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089. *NELAP Accredited.***

*Non-Potable Water* (Organic Parameters: EPA 5030B, EPA 8260)

**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, 7471. Organic Parameters: EPA 8015, 8270.)

**U.S. Army Corps of Engineers**

# AIR ANALYSIS

PAGE 1 OF 1

**ALPHA ANALYTICAL**  
 CHAIN OF CUSTODY

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

**Client Information**  
 Client: EA Engineering  
 Address: 6712 Brooklyn Parkway  
 Syracuse, NY 13211  
 Phone: 315 481 2333

**Project Information**  
 Project Name: National Hestset  
 Project Location: Farmingdale, NY  
 Project #: \_\_\_\_\_  
 Project Manager: Don Conan  
 ALPHA Quote #: \_\_\_\_\_

**Turn-Around Time**  
 Standard  RUSH (only confirmed if pre-approved)  
 Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

**Other Project Specific Requirements/Comments:**  
 Email: donan@east.com  
 These samples have been previously analyzed by Alpha

**Date Rec'd in Lab:** \_\_\_\_\_  
**Report Information - Data Deliverables**  
 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) \_\_\_\_\_

**ALPHA Job #: 10908400**  
**Billing Information**  
 Same as Client Info PO #: \_\_\_\_\_

**ANALYSIS**

- TO-14A by TO-15
- TO-15
- TO-15 SIM
- APH
- FIXED GASES
- TO-13A
- TO-4 / TO-10

**All Columns Below Must Be Filled Out**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection				Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow controller	Sample Comments (i.e. PID)
		Date	Start Time	End Time	Vacuum						
10908400-1	SVE-Effluent	6/23/09	1200	1200	-	SV	DS	5L	-	1	PID: 0.0 ppm

\*SAMPLE MATRIX CODES  
 AA = Ambient Air (Indoor/Outdoor)  
 SV = Soil Vapor/Landfill Gas/SVE  
 Other = Please Specify

Container Type

Relinquished By: <i>Don Conan</i>	Date/Time: 6/23/09 1400	Received By: <i>Don Conan</i>	Date/Time: 6/23/09 1400
Relinquished By: <i>Don Conan</i>	Date/Time: 6/24/09 0900	Received By: <i>Don Conan</i>	Date/Time: 6/24/09 0900

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time quites are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L0913324
Client:	EA Engineering, Science and Tech 6712 Brooklawn Parkway Suite 104 Syracuse, NY 13211
ATTN:	Don Conan
Project Name:	NATIONAL HEATSET
Project Number:	NATIONAL HEATSET
Report Date:	09/25/09

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.

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



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L0913324-01	SVE-EFFLUENT	FARMINGDALE, NY	09/22/09 13:00

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

### 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.

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.

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#### Volatile Organics in Air (Low Level)

L0913324-01 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

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:



Title: Technical Director/Representative

Date: 09/25/09

**AIR**



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

### SAMPLE RESULTS

Lab ID: L0913324-01  
 Client ID: SVE-EFFLUENT  
 Sample Location: FARMINGDALE, NY  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 09/23/09 22:32  
 Analyst: AJ

Date Collected: 09/22/09 13:00  
 Date Received: 09/23/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
1,1,1-Trichloroethane	ND	2.00	ND	10.9		10
1,1,2,2-Tetrachloroethane	ND	2.00	ND	13.7		10
1,1,2-Trichloroethane	ND	2.00	ND	10.9		10
1,1-Dichloroethane	ND	2.00	ND	8.09		10
1,1-Dichloroethene	ND	2.00	ND	7.92		10
1,2,4-Trichlorobenzene	ND	2.00	ND	14.8		10
1,2,4-Trimethylbenzene	ND	2.00	ND	9.82		10
1,2-Dibromoethane	ND	2.00	ND	15.4		10
1,2-Dichlorobenzene	ND	2.00	ND	12.0		10
1,2-Dichloroethane	ND	2.00	ND	8.09		10
1,2-Dichloropropane	ND	2.00	ND	9.24		10
1,3,5-Trimethylbenzene	ND	2.00	ND	9.82		10
1,3-Dichlorobenzene	ND	2.00	ND	12.0		10
1,4-Dichlorobenzene	ND	2.00	ND	12.0		10
Benzene	ND	2.00	ND	6.38		10
Benzyl chloride	ND	2.00	ND	10.3		10
Bromomethane	ND	2.00	ND	7.76		10
Carbon tetrachloride	ND	2.00	ND	12.6		10
Chlorobenzene	ND	2.00	ND	9.20		10
Chloroethane	ND	2.00	ND	5.27		10
Chloroform	ND	2.00	ND	9.76		10
Chloromethane	ND	2.00	ND	4.13		10
cis-1,2-Dichloroethene	28.6	2.00	113	7.92		10
cis-1,3-Dichloropropene	ND	2.00	ND	9.07		10
Dichlorodifluoromethane	ND	2.00	ND	9.88		10



**Project Name:** NATIONAL HEATSET**Lab Number:** L0913324**Project Number:** NATIONAL HEATSET**Report Date:** 09/25/09**SAMPLE RESULTS**

Lab ID: L0913324-01  
 Client ID: SVE-EFFLUENT  
 Sample Location: FARMINGDALE, NY

Date Collected: 09/22/09 13:00  
 Date Received: 09/23/09  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab						
Ethylbenzene	ND	2.00	ND	8.68		10
Freon-113	ND	2.00	ND	15.3		10
Freon-114	ND	2.00	ND	14.0		10
Hexachlorobutadiene	ND	2.00	ND	21.3		10
Methylene chloride	5.30	5.00	18.4	17.4		10
p/m-Xylene	ND	4.00	ND	17.4		10
o-Xylene	ND	2.00	ND	8.68		10
Styrene	ND	2.00	ND	8.51		10
Tetrachloroethene	791	2.00	5360	13.6		10
Toluene	ND	2.00	ND	7.53		10
trans-1,2-Dichloroethene	ND	2.00	ND	7.92		10
trans-1,3-Dichloropropene	ND	2.00	ND	9.07		10
Trichloroethene	24.0	2.00	129	10.7		10
Trichlorofluoromethane	ND	2.00	ND	11.2		10
Vinyl chloride	ND	2.00	ND	5.11		10



Project Name: NATIONAL HEATSET

Lab Number: L0913324

Project Number: NATIONAL HEATSET

Report Date: 09/25/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 09/23/09 14:47

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG381000-4						
1,1,1-Trichloroethane	ND	0.200	ND	1.09		1
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37		1
1,1,2-Trichloroethane	ND	0.200	ND	1.09		1
1,1-Dichloroethane	ND	0.200	ND	0.809		1
1,1-Dichloroethene	ND	0.200	ND	0.792		1
1,2,4-Trichlorobenzene	ND	0.200	ND	1.48		1
1,2,4-Trimethylbenzene	ND	0.200	ND	0.982		1
1,2-Dibromoethane	ND	0.200	ND	1.54		1
1,2-Dichlorobenzene	ND	0.200	ND	1.20		1
1,2-Dichloroethane	ND	0.200	ND	0.809		1
1,2-Dichloropropane	ND	0.200	ND	0.924		1
1,3,5-Trimethylbenzene	ND	0.200	ND	0.982		1
1,3-Dichlorobenzene	ND	0.200	ND	1.20		1
1,4-Dichlorobenzene	ND	0.200	ND	1.20		1
Benzene	ND	0.200	ND	0.638		1
Benzyl chloride	ND	0.200	ND	1.03		1
Bromomethane	ND	0.200	ND	0.776		1
Carbon tetrachloride	ND	0.200	ND	1.26		1
Chlorobenzene	ND	0.200	ND	0.920		1
Chloroethane	ND	0.200	ND	0.527		1
Chloroform	ND	0.200	ND	0.976		1
Chloromethane	ND	0.200	ND	0.413		1
cis-1,2-Dichloroethene	ND	0.200	ND	0.792		1
cis-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Dichlorodifluoromethane	ND	0.200	ND	0.988		1



Project Name: NATIONAL HEATSET

Lab Number: L0913324

Project Number: NATIONAL HEATSET

Report Date: 09/25/09

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 09/23/09 14:47

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organics in Air (Low Level) - Mansfield Lab for sample(s): 01 Batch: WG381000-4						
Ethylbenzene	ND	0.200	ND	0.868		1
Freon-113	ND	0.200	ND	1.53		1
Freon-114	ND	0.200	ND	1.40		1
Hexachlorobutadiene	ND	0.200	ND	2.13		1
Methylene chloride	ND	0.500	ND	1.74		1
p/m-Xylene	ND	0.400	ND	1.74		1
o-Xylene	ND	0.200	ND	0.868		1
Styrene	ND	0.200	ND	0.851		1
Tetrachloroethene	ND	0.200	ND	1.36		1
Toluene	ND	0.200	ND	0.753		1
trans-1,2-Dichloroethene	ND	0.200	ND	0.792		1
trans-1,3-Dichloropropene	ND	0.200	ND	0.907		1
Trichloroethene	ND	0.200	ND	1.07		1
Trichlorofluoromethane	ND	0.200	ND	1.12		1
Vinyl chloride	ND	0.200	ND	0.511		1

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG381000-3					
1,1,1-Trichloroethane	103	-	70-130	-	
1,1,2,2-Tetrachloroethane	112	-	70-130	-	
1,1,2-Trichloroethane	110	-	70-130	-	
1,1-Dichloroethane	110	-	70-130	-	
1,1-Dichloroethene	100	-	70-130	-	
1,2,4-Trichlorobenzene	102	-	70-130	-	
1,2,4-Trimethylbenzene	110	-	70-130	-	
1,2-Dibromoethane	103	-	70-130	-	
1,2-Dichlorobenzene	106	-	70-130	-	
1,2-Dichloroethane	116	-	70-130	-	
1,2-Dichloropropane	112	-	70-130	-	
1,3,5-Trimethylbenzene	108	-	70-130	-	
1,3-Butadiene	96	-	70-130	-	
1,3-Dichlorobenzene	108	-	70-130	-	
1,4-Dichlorobenzene	108	-	70-130	-	
1,4-Dioxane	98	-	70-130	-	
2,2,4-Trimethylpentane	102	-	70-130	-	
2-Butanone	105	-	70-130	-	
2-Hexanone	90	-	70-130	-	
3-Chloropropene	102	-	70-130	-	
4-Ethyltoluene	108	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG381000-3					
Acetone	109	-	70-130	-	
Benzene	107	-	70-130	-	
Benzyl chloride	98	-	70-130	-	
Bromodichloromethane	104	-	70-130	-	
Bromoform	107	-	70-130	-	
Bromomethane	79	-	70-130	-	
Carbon disulfide	88	-	70-130	-	
Carbon tetrachloride	97	-	70-130	-	
Chlorobenzene	113	-	70-130	-	
Chloroethane	98	-	70-130	-	
Chloroform	107	-	70-130	-	
Chloromethane	100	-	70-130	-	
cis-1,2-Dichloroethene	109	-	70-130	-	
cis-1,3-Dichloropropene	94	-	70-130	-	
Cyclohexane	91	-	70-130	-	
Dibromochloromethane	106	-	70-130	-	
Dichlorodifluoromethane	98	-	70-130	-	
Ethyl Alcohol	98	-	70-130	-	
Ethyl Acetate	110	-	70-130	-	
Ethylbenzene	118	-	70-130	-	
1,1,2-Trichloro-1,2,2-Trifluoroethane	100	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG381000-3					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	98	-	70-130	-	
Hexachlorobutadiene	106	-	70-130	-	
iso-Propyl Alcohol	95	-	70-130	-	
Methylene chloride	101	-	70-130	-	
4-Methyl-2-pentanone	101	-	70-130	-	
Methyl tert butyl ether	113	-	70-130	-	
p/m-Xylene	119	-	70-130	-	
o-Xylene	119	-	70-130	-	
Heptane	98	-	70-130	-	
n-Hexane	91	-	70-130	-	
Propylene	92	-	70-130	-	
Styrene	113	-	70-130	-	
Tetrachloroethene	108	-	70-130	-	
Tetrahydrofuran	108	-	70-130	-	
Toluene	115	-	70-130	-	
trans-1,2-Dichloroethene	95	-	70-130	-	
trans-1,3-Dichloropropene	77	-	70-130	-	
Trichloroethene	103	-	70-130	-	
Trichlorofluoromethane	100	-	70-130	-	
Vinyl acetate	129	-	70-130	-	
Vinyl bromide	96	-	70-130	-	

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET

**Lab Number:** L0913324

**Project Number:** NATIONAL HEATSET

**Report Date:** 09/25/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG381000-3					
Vinyl chloride	98	-	70-130	-	
Naphthalene	80	-	70-130	-	
Propane	82	-	70-130	-	
Acrylonitrile	119	-	70-130	-	
Acrolein	105	-	70-130	-	
1,1,1,2-Tetrachloroethane	104	-	70-130	-	
Isopropylbenzene	113	-	70-130	-	
1,2,3-Trichloropropane	105	-	70-130	-	
Acetonitrile	100	-	70-130	-	
Bromobenzene	106	-	70-130	-	
Chlorodifluoromethane	90	-	70-130	-	
Dichlorofluoromethane	88	-	70-130	-	
Dibromomethane	99	-	70-130	-	
Pentane	77	-	70-130	-	
Octane	104	-	70-130	-	
Tertiary-Amyl Methyl Ether	100	-	70-130	-	
o-Chlorotoluene	105	-	70-130	-	
p-Chlorotoluene	106	-	70-130	-	
2,2-Dichloropropane	101	-	70-130	-	
1,1-Dichloropropene	100	-	70-130	-	
Isopropyl Ether	99	-	70-130	-	



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 Batch: WG381000-3					
Ethyl-Tert-Butyl-Ether	103	-	70-130	-	
1,2,3-Trichlorobenzene	92	-	70-130	-	
Ethyl ether	112	-	70-130	-	
n-Butylbenzene	108	-	70-130	-	
sec-Butylbenzene	106	-	70-130	-	
tert-Butylbenzene	106	-	70-130	-	
1,2-Dibromo-3-chloropropane	95	-	70-130	-	
p-Isopropyltoluene	98	-	70-130	-	
n-Propylbenzene	106	-	70-130	-	
1,3-Dichloropropane	109	-	70-130	-	
Methanol	87	-	70-130	-	
Butane	86	-	70-130	-	
Nonane (C9)	107	-	70-130	-	
Decane (C10)	104	-	70-130	-	
Undecane	105	-	70-130	-	
Dodecane (C12)	90	-	70-130	-	
Butyl Acetate	96	-	70-130	-	
2,4,4-Trimethyl-2-Pentene	96	-	70-130	-	
2,4,4-Trimethyl-1-Pentene	92	-	70-130	-	
tert-Butyl Alcohol	102	-	70-130	-	

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSE

**Lab Number:** L0913324  
**Report Date:** 09/25/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG381000-5 QC Sample: L0913258-01 Client ID: DUP Sample					
1,1,1-Trichloroethane	319	322	ppbV	1	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
1,1-Dichloroethane	495	500	ppbV	1	25
1,1-Dichloroethene	63.7	64.4	ppbV	1	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
Benzyl chloride	ND	ND	ppbV	NC	25
Bromomethane	ND	ND	ppbV	NC	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Chloroethane	5.04	4.85	ppbV	4	25
Chloroform	ND	ND	ppbV	NC	25
Chloromethane	ND	ND	ppbV	NC	25
cis-1,2-Dichloroethene	2.22	2.26	ppbV	2	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: NATIONAL HEATSET

Project Number: NATIONAL HEATSE

Lab Number: L0913324

Report Date: 09/25/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG381000-5 QC Sample: L0913258-01 Client ID: DUP Sample					
Dichlorodifluoromethane	ND	ND	ppbV	NC	25
Freon-113	1.22	1.26	ppbV	3	25
Methylene chloride	ND	ND	ppbV	NC	25
Tetrachloroethene	4.72	4.69	ppbV	1	25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
Trichloroethene	30.5	30.6	ppbV	0	25
Trichlorofluoromethane	ND	ND	ppbV	NC	25
Vinyl chloride	ND	ND	ppbV	NC	25

**Project Name:** NATIONAL HEATSET**Lab Number:** L0913324**Project Number:** NATIONAL HEATSET**Report Date:** 09/25/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**

Cooler	Custody Seal
A	Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis
L0913324-01A	Tedlar Bag 1 liter-Polypropylene	A	NA	N/A	NA	Present/Intact	TO15-LL(30)

\*Hold days indicated by values in parentheses

**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

## 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL 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 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.
- 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 RDL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

Report Format: Data Usability Report



**Project Name:** NATIONAL HEATSET  
**Project Number:** NATIONAL HEATSET

**Lab Number:** L0913324  
**Report Date:** 09/25/09

## 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 Woods Hole Labs 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 Woods Hole Labs.

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 June 17, 2009 – 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, 4500NH3-F, EPA 120.1, SM2510B, 2340B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, 420.1, 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.)

### **Maine Department of Human Services Certificate/Lab ID: MA0030.**

*Wastewater* (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

### **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.)

**Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089. NELAP Accredited.**

*Non-Potable Water* (Organic Parameters: EPA 5030B, EPA 8260)

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

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

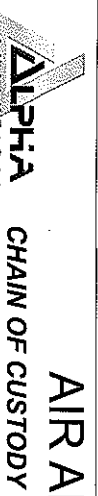
Refer to LA-DEQ Certificate for Non-Potable Water.

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

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7471. Organic Parameters: EPA 8015, 8270.)

**U.S. Army Corps of Engineers**





# AIR ANALYSIS

### Project Information

Project Name: National Heartset

Project Location: Farmlydale, NY

Project #:

Project Manager: Don Coran

ALPHA Quote #:

Turn-Around Time

### Report Information - Data Deliverables

Date Rec'd In Lab:

FAX

ADEX

Criteria Checker:

Other Formats:

EMAIL (standard pdf report)

Additional Deliverables:

Report ID: (if different than Project Manager)

### Billing Information

ALPHA Job #: U0913324

Same as Client info

PO #:

### Client Information

Client: EA Engineers, Inc

Address: 6712 Brookhaven Pkwy

Phone: (315) 481-9383

Fax:

Email: don@eaest.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Standard  RUSH (only confirmed if pre-approved)

Date Due: Time:

## All Columns Below Must Be Filled Out

ALPHALab ID (Lab Use Only)	Sample ID	COLLECTION				Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS	Sample Comments (i.e. PID)
		Date	Start Time	End Time	Vacuum							
13324.1	SVE-EH Vent	9/24/09	1300	1300	-	-	SV	05	1L	-	-	4.0 ppm SL not rec. software

### \*SAMPLE MATRIX CODES

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

Relinquished By: [Signature]

Date/Time: 9/24/09

Received By: [Signature]

Date/Time: 9/25/09

Container Type:

Please print clearly, legibly and completely. Samples can not 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.