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11 January 2013

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 (July – November 2012)
1 Adams Boulevard, Farmingdale, New York
New York State Department of Environmental Conservation Site No. 1-52-140
EA Project No. 14907.16

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 onsite SVE system under Work Assignment No. D004441-29. EA is currently performing site management under Work Assignment No. D007624-16, which was approved on 6 November 2012. The activities are being conducted under the New York State Department of Environmental Conservation (NYSDEC) State Superfund Standby Contract. SVE system details are presented in an Operation & Maintenance (O&M) Manual (Shaw, 2003)[1].

During the reporting period, an O&M visit was performed on the following date by EA personnel.

Date	Purpose
11/15/12	Quarterly Visit (November 2012)

1. SYSTEM OPERATION

Based on the motor's hour meter, the system was operational for a total of 2,693 hours out of an available 3,096 hours (87 percent of the total available) during this reporting period (9 July 2012 to 15 November 2012). A quarterly visit was originally planned for the week of 29 October 2012, but was post-poned due to Hurricane Sandy. The system operated from 9 July 2012 to 29 October 2012, and was off from 29 October 2012 to 15 November 2012 due to a power outage which was a result of Hurricane Sandy. Hurricane Sandy impacted Long Island on 29 October 2012. The system was restarted on 15 November 2012.

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

Operational data for this period have been based on the measurements and effluent sample data collected on 15 November 2012. Operational data are summarized in Table 1 and on the site visit data collection form provided in Attachment A. Key operating parameters for the SVE system are summarized below.

Date	Extraction Well Flow rate (cfm)	Extraction Well Vacuum (H_2O)	SVE Blower Flow rate (cfm)	DCE Conc.[1] (mg/m^3)	TCE Conc.[1] (mg/m^3)	PCE Conc.[1] (mg/m^3)
11/15/12	255	30	374	0.0030	0.022	0.092

[1] PCE, DCE, and TCE concentration measured via laboratory analysis.

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

A complete set of operational data collected are presented in Tables 1 and 2, as well as Attachment A.

AUTO-DIALER ISSUE

The system shut down on 29 October 2012 due to wide-spread power outage associated with Hurricane Sandy. EA personnel found the system off on arrival during the quarterly O&M event on 15 November 2012. The Sensaphone auto-dialer did not call out and was not functioning on arrival. It was determined there was an electrical short in the unit and EA removed the unit from the control panel to ship to Sensaphone for repairs. The SVE system was restarted and the quarterly O&M visit was conducted.

The auto-dialer was repaired by Sensaphone and returned to EA on 10 January 2013. The unit will be reinstalled at the site during the week of 14 January 2013.

2. MONITORING PROBES

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

Vapor Monitoring Point	Vacuum Reading (Inches H_2O)
	15 November 2012
VP-1	0.0
VP-2	0.0
VP-3	0.0
VP-7	0.0
VP-8	0.0
VP-9	0.0
VP-10	0.0
VP-11	0.0
VP-12	0.0
VP-13	0.0
VP-14	0.0
VP-15	-
NOTE: - = Unable to access monitoring point due to closed business.	

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

3. DEPTH-TO-WATER MEASUREMENTS

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

Date	MW-C	MW-E	MW-G
11/15/12	18.15	18.36	--
NOTE: -- = Unable to access monitoring point due to closed business.			

The wells will continue to be gauged during future site visits.

4. AIR DISCHARGE MONITORING

EA personnel collected a grab air sample from the system effluent using a Tedlar bag and submitted the sample to Eurofins Air Toxics, Inc. The sample was analyzed for VOCs using U.S. Environmental Protection Agency Method TO-15. PCE, TCE, and DCE were detected at the following concentrations:

Date	DCE	TCE	PCE
11/15/12	0.0030	0.022	0.092
NOTE: Units = mg/m^3			

Analytical results are summarized in Table 1 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 27.29 lbs of PCE has been discharged during the year 2012 toward the permitted annual discharge limit of 270 lbs. A total of 1.09 lbs of TCE has been discharged during the year 2012 toward the permitted annual discharge limit of 120 lbs. A negligible amount of DCE was discharged during the reporting period (the annual discharge limit is 5,510 lbs).

5. 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.

James C. Hayward, P.E.
Project Manager

JCH/drs

Enclosures

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

Date	Run Time Meter Reading (hours)	Run Time Since Last Visit (hours)		Operation Time Since Last Visit (%)	Dilution Valve Position (% Open)	Extraction Well MW-F Valve Position (% Open)	Air Flow at Well (scfm)	Vacuum at Well (inches H2O)	Pre-Dilution PID (ppm)	Pre-Dilution PCE (ppm)	Influent SVE					Mid GAC				Effluent GAC			
											Blower Flow (cfm)	Vacuum (inches H2O)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)
		Available	Actual																			
9/18/2002	--	--	--	SVE PILOT TEST STARTUP																			
9/30/2002	304	294	294	100%	100	50	34.5	5	2,000	500	256	25	107.2	1,015	--	317	102.3	0	--	290	89.5	0	--
10/14/2002	642	343	338	99%	100	50	38	7	1,011	400	258	27	--	75.3	50	--	--	0	--	--	--	0	--
11/19/2002	1508	882	866	98%	100	50	49	12	0	0	120	28	106	0	0	209	92	0	--	290	80.3	0	--
12/4/2002	--	368	--	--	--	--	--	--	77	200	--	--	--	14.3	10	--	--	15.5	10	--	--	0	0
12/16/2002	2153	294	645	98%	100	50	36.5	10	560	200	253	28	92	46.4	50	302	60	3.4	--	340	53.9	0	--
1/21/2003	3016	882	863	98%	100	50	--	--	--	--	70	52	98	0	0	220	--	0	--	220	--	0	--
2/10/2003	3496	490	480	98%	100	50	38	--	639	400	262	27	102	72	50	266	90	26	10	258	83	3.2	10
3/18/2003	4360	882	864	98%	100	50	92	12	125	100	266	25	123	15	10	278	124	0	0	282	117	0	0
4/29/2003	5359	1029	999	97%	75	50	75	50	152	50	132	16	118.5	48.2	25	302	96	18.6	10	287	86	0.6	0
5/13/2003	5700	343	341	99%	75	50	78	--	127	50	239	48	130	41.8	50	246	108	46	25	245	97	0.6	0
6/30/2003	6850	1176	1150	98%	50	50	115	32	82.4	50	140	66	173	36.8	50	198	157	25.1	25	240	150	29.8	100
7/10/2003	6851	245	1	0%	50	50	99.5	25	406	400	151	68	156	221	215	260	76	0	0	222	81.9	0	0
7/22/2003	7144	294	294	100	50	50	--	--	127	--	--	--	168	65	--	--	107	0	--	--	106	0	--
8/26/2003	7957	858	813	95	50	50	79	13.5	137	10	186	65	170	51.4	5	291	--	55.4	10	232	--	35.6	10
9/23/2003	8274	686	317	46	50	50	218	33	141	15	194	64	160	55	30	254	124	0	0	210	110	0	0
10/21/2003	8945	686	671	98	50	50	166	45	--	20	158	68	166	37.5	25	214	130	30.7	15	225	112	0	0
11/24/2003	9749	833	805	97	50	50	130	46	141	125	178	72	138	261	200	225	52	0	0	205	51.4	0	0
1/6/2004	9750	1054	1	0	50	50	98.5	74	118	100	164	12	140	247	250	224	48.6	0	0	200	48.4	0	0
2/9/2004	10336	833	586	70	50	50	121	44	23.1	10	172	70	155.8	29.8	25	233	137	41.4	25	235	117	0	0
3/30/2004	11289	1225	953	78	50	50	103	>50	34	<10	198	70	160	22	<10	240	128	22	<10	160	115	24	<5
4/8/2004	11441	221	152	69	50	75	127	--	23.7	<10	--	--	--	--	--	180	83	30	--	206	83	0.9	--
4/29/2004	11768	515	327	64	50	75	131	>60	2.4	0	--	76	170	2.2	0	209	128	0	0	255	116	0	0
5/24/2004	12264	613	496	81	50	75	144	75	43.8	50	172	75	178	33.1	<50	250	121	4.4	0	198	111	0	0
6/22/2004	12817	711	553	78	50	75	127	74	57	10	140	76	180	52	30	181	123	25.8	15	210	113	0	0
7/28/2004	13630	882	813	92	50	75	142	76.5	53.2	7	161	76.5	159	41.1	25	216	137	35.3	20	181	109	3.1	0
8/31/2004	13989	833	359	43	25	90	157	58	48	0	104	74	137	202	200	180	98	2.2	0	187	91	0.1	0
9/29/2004	14256	711	267	38	50	75	139	60	--	--	140	76	153	27.7	--	194	126	0	--	205	102.1	0	--
10/20/2004	14729	515	473	92	50	75	155	58	--	--	120	76	160	19.1	10	202	122	0	0	230	101	0	0
11/17/2004	15229	686	499	73	75	50	160	80	17.9	<5	148	77	160	13.5	<10	152	112	7.2	<5	173	94	0	0
12/22/2004	15565	858	337	39	75	50	143	80	15.8	<5	125	85	160	18.3	10	127	116	16	5	131	93.4	0	0
1/20/2005	15933	711	368	52	25	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/23/2005	15933	833	0	0	75	50	87.5	36	174	50	188	58	110	93	50	265	56	0	0	245	38.5	0	0
3/29/2005	16217	833	284	34	75	50	87 [1]	40	--	--	158 [1]	--	121	6.4	4.5	255 [1]	97	3.4	3	234 [1]	81	0	<2
4/28/2005	--	720	720[2]	100	75	50	86	39	--	--	227	--	126	8.9	5	244	109	8	4	222	84.2	0	<2
5/31/2005	--	792	792[2]	100	50	50	98	39	7.4	9.5	208	--	124.2	10.4	10	227	118.6	17.6	10	223	112.3	0	<2
6/24/2005		576	576[2]	100	50	50	125	25	28.5	16	266	--	152	8.3	7	283	133	13.9	16	242	116	10.1	15
8/4/2005	17972	984	984[2]	100	75	65	216	26	38.1	19	353	--	153.4	8.8	12	423	135.7	10.5	12	381	120.7	7.5	12
Spent Carbon Replaced 8/10/05																							
9/13/2005	859	960	960[2]	100	75	50	89.5	25	59.6	14	226	--	164.5	18.3	12	265	143	0.5	0	248	124.6	0	0
10/10/2005	1502	643	643	100	75	35	86	27	59.2	19	222	--	101.3	21.7	10	225	110	15.1	0	211	99.3	0	0
11/11/2005	2271	769	769	100	50	50	79	31	--	5	209	--	110.9	12.2	9	242	99.4	2.6	2	239	83.1	0	0

Notes:

[1] Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05

[2] Run time meter reading not indictitive of SVE system run time; actual hours run is assumed 100% of available.

PID = Total VOC concentration measured with photoionization detector

ppm = parts per million (volume/volume basis)

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

scfm = standard cubic feet per minute

cfm = cubic feet per minute

-- = measurement not recorded or not applicable.

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

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

Effluent GAC = Readings collected after the lag carbon unit

GAC = granular activated carbon unit

As of 4/28/05, the calculation of "Available" run time hours is based on 24 hours, rather than 24.5 hours as prevously calculated.

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

											Influent SVE					Mid GAC				Effluent GAC			
Date	Run Time Meter Reading (hours)	Run Time Since Last Visit (hours) Available	Actual	Operation Time Since Last Visit (%)	Dilution Valve Position (% Open)	Extraction Well MW-F Valve Position (% Open)	Air Flow at Well (scfm)	Vacuum at Well (inches H2O)	Pre-Dilution PID (ppm)	Pre-Dilution PCE (ppm)	Blower Flow (cfm)	Vacuum (inches H2O)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)	Flow (cfm)	Temp. (°F)	PID (ppm)	PCE (ppm)
12/8/2005	2918	647	647	100%	50	50	79	29	22.2	5.0	235	--	113.5	7.2	2.0	227	96.7	6.8	2	212	79.8	0.1	0.0
1/6/2006	3614	696	696	100%	50	75	120	42	2.7	2.0	245	--	82	32.5	4.0	280	83.9	19.0	2.0	265	77.5	5.8	0.0
Spent Carbon Replaced 1/25/06																							
2/6/2006	4332	744	718	100%	75	75	80	25	16.3	3.0	292	--	78	3.6	2.0	333	90.9	0.0	0.0	322	77	0.0	0.0
3/14/2006	5200	868	868	100%	75	75	188	49	12.9	2.0	212	--	132.8	5.5	5.0	287	135.6	0.0	0.0	232	115.1	0.0	0.0
4/12/2006	5895	695	695	100%	75	75	115	47	14.1	2.0	259	--	152.1	6.1	6.0	249	153.2	0.0	0.0	271	135.1	0.0	0.0
5/4/2006	6420	525	525	100%	50	75	189	51	17.9	2.0	199	--	145.2	7.8	5.0	186	136.1	0.1	0.0	214	117.8	0.0	0.0
6/12/2006	7354	934	934	100%	50	100	156	53	5.5	4.0	216	--	141	7.9	9.0	270	134	4.1	3.0	253	116	0.0	0.0
7/12/2006	8074	720	720	100%	50	100	163	54	8.1	2.0	191	--	146	8.3	8.0	210	145	8.8	10.0	196	134	0.0	0.0
8/7/2006	8696	622	622	100%	50	100	136	54	11.3	4.0	201	--	148.7	8.7	7.5	239	135.6	2.0	0.0	210	118.3	0.0	0.0
9/21/2006	9781	1085	1085	100%	50	100	124.5	53	8.9	4.0	227	--	127	7.7	9.0	143	106.9	9.7	7.0	203	99.2	2.1	0.0
Spent Carbon Replaced 10/11/06																							
10/18/2006	10417	636	636	100%	50	100	130	54	1.0	4.0	231	--	154.8	6.0	8.0	154	130.3	0.0	0.0	236	131.1	0.0	0.0
11/29/2006	11425	1008	1008	100%	50	100	130	52	0.6	1.0	193.5	--	138.8	1.6	4.0	226	137.8	0.0	0.0	202	118.0	0.0	0.0
12/21/2006	11953	528	528	100%	50	100	132	54	0.1	1.0	178	--	107.8	4.6	3.0	254	107.4	0.0	0.0	210	93.3	0.0	0.0
1/26/2007	12820	867	867	100%	25	100	156	80	0.0	0.0	142.5	--	135.0	0.4	4.0	123	124.0	0.0	0.0	142	102.3	0.0	0.0
3/19/2007	13296	1248	476	38%	25	100	162.5	80	0.2	2.0	135	--	140.7	7.3	5.0	215	110.1	2.4	0.0	172	120.0	0.0	0.0
4/27/2007	13964	936	668	71%	25	100	218.0	88	0.0	15.0	126	--	180.2	51.7	20.0	149	69.1	0.0	0.0	125	66.8	0.0	0.0
5/24/2007	13968	648	4	1%	25	75	135	84	15.2	1.8	100	--	127	108.0	35.0	181	123	0.7	0.0	170	106	0.0	0.0
6/21/2007	13984	672	16	2%	25	100	232	40	1.8	35.0	130.5	--	107	61.1	38.0	228	107	1.7	0.0	199	89	0.1	0.0
7/24/2007	14775	792	792	100%	50	100	75	29	13.2	2.0	205	--	132.6	3.5	3.0	202	140.5	1.9	0.0	194	138.4	0.0	0.0
8/28/2007	15615	840	840	100%	50	100	85.5	20	16.3	2.0	232	--	139.2	2.7	0.0	190	144.5	3.5	0.0	184	129.1	0.0	0.0
9/18/2007	16120	504	504	100%	50	100	99.2	28	11.7	2.0	214.5	--	138.5	5.2	0.0	184	16.8	1.4	2.0	164	129.8	0.0	0.0
10/31/2007	17151	1032	1032	100%	50	100	80	25	9.9	2.0	216	--	111.9	1.1	0.0	206	118.4	0.0	0.0	231	104.7	0.0	0.0
11/28/2007	17825	672	674	100%	50	100	79	27	9.5	1.0	211	--	117	0.4	0.0	247	116	0.0	0.0	213	110	0.0	0.0
1/4/2008	18714	888	889	100%	50	100	102.4	28	7.0	0.0	268	--	110	0.0	0.0	318	116	0.0	0.0	243	96	0.0	0.0
1/23/2008	19171	456	457	100%	50	100	114	36	6.6	0.0	222	--	112	0.6	0.0	266	126	0.0	0.0	192	108	0.0	0.0
2/28/2008	19269	864	98	11%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/29/2008	19441	1464	172	12%	50	100	129	41	0.0	0.0	230	*	121	3.7	0.0	246	112	0.0	0.0	206	99	0.0	0.0
5/23/2008	20014	576	573	99%	75	100	90	33	10.4	1.0	223	17	126	0.5	1.0	312	138	3.5	0.0	259	115	0.0	0.0
6/26/2008	20832	816	818	100%	75	100	98	34	9.3	2.0	213	18	143	2.1	0.0	304	155	4.4	0.0	202	138	2.4	0.0
7/28/2008	21601	768	769	100%	75	100	91	30	10.8	0.0	237	18	148	1.8	0.0	280	154	0.8	0.0	202	138	2.8	0.0
8/28/2008	22345	744	744	100%	75	100	89	31	11.6	2.0	221	17	153	2.4	0.0	238	157	1.3	0.0	191	135	1.9	0.0
9/25/2008	23015	672	670	100%	75	100	110	33	10.8	0.0	245	18	136	0.9	0.0	244	138	0.0	0.0	215	119	0.0	0.0
10/31/2008	23880	864	865	100%	75	100	102	32	7.3	0.0	250	18	125	0.2	0.0	262	128	0.0	0.0	264	113	0.0	0.0
11/24/2008	24456	576	576	100%	75	100	112	32	4.8	0.0	243	20	116	0.0	0.0	251	119	0.0	0.0	254	104	0.0	0.0
12/22/2008	25129	672	673	100%	75	100	72	19	7.6	0.0	235	10	104	1.9	0.0	230	100	0.5	0.0	176	82	0.3	0.0
1/26/2009	25970	840	841	100%	75	100	111	31	5.7	0.0	243	18	113	1.6	0.0	270	114	1.1	0.0	278	104	0.6	0.0
2/26/2009	26374	744	404	54%	75	100	108	23	44.8	0.0	235	18	111	13.1	0.0	268	114	0.0	0.0	290	82	0.0	0.0
3/26/2009	27046	672	672	100%	75	100	100	31	6.2	0.0	248	18	128	4.8	0.0	265	129	2.9	0.0	268	114	1.3	0.0
4/28/2009	27838	792	792	100%	75	100	89	31	6.0	0.0	257	18	142	1.6	0.0	256	135	2.7	0.0	286	118	1.1	0.0
5/18/2009	28317	480	479	100%	75	100	100	32	8.3	0.0	252	18	142	2.4	0.0	280	129	3.8	0.0	271	125	2.0	0.0
6/23/2009	29181	864	864	100%	75	100	91	30	0.0	0.0	241	19	131	0.0	0.0	240	152	1.0	0.0	272	135	1.8	0.0
9/22/2009	31365	2184	2184	100%	75	100	93	31	10.0	0.0	232	20	129	5.3	0.0	264	154	4.3	0.0	200	135	4.0	0.0
12/21/2009	33527	2160	2162	100%	25	100	157	70	6.1	0.0	184	9	149.5	4.0	0.0	145	151	6.3	0.0	126	123	0.0	0.0
3/31/2010	35169	2400	1642	68%	25 / 75	100	100	82	55.8	0.0	255	18	103	20.5	15.0	250	85.2	4.4	0.0	285	78.7	0.0	0.0
6/28/2010	37303	2136	2134	100%	75	100	170	24	7.9	NA	215	20	98.2	1.6	0.0	236	173	2.9	0.0	283	154	4.4	0.0
9/27/2010	39486	2184	2183	100%	75	100	80	21	145.0	NA	275	21	141.4	42.4	0.0	280	142	19.3	0.0	275	126	8.8	0.0
12/28/2010	40702	2208	1216	55%	75	100	90	25	51.0	NA	275	18	103	13.7	NA	285	73.7	0.9	NA	300	45.5	0.1	NA
3/3/2011	42257	1560	1555	100%	75	100	47	10	9.7	NA	97	8	142	1.1	NA	140	103	0.4	NA	124	80	0.2	NA
6/27/2011	44346	2784	2089	75%	75	100	125	44	0.1	NA	186.5	17	158.6	1.8	NA	129	147.5	1.6	NA	175	118	0.1	NA
12/21/2011	45824	4248	1478	35%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/31/2012	46808	984	984	100%	75	100	80	23	62.0	NA	252	17	92.3	12.5	NA	--	--	0.0	NA	--	--	0.5	NA
4/24/2012	48824	2016	2016	100%	75	100	90	33	4.1	NA	268	19	145.7	1.5	NA	--	--	2.5	NA	--	--	2.0	NA
7/9/2012	50648	1824	1824	100%	75	100	275	32	5.2	NA	246	18	153.7	1.4	NA	--	--	0.8	NA	--	--	0.0	NA
11/15/2012	53341	3096	2693	87%	75	100	255	30	39.2	NA	374	20	119.4	13.1	NA	--	--	0.0	NA	--	--	0.0	NA

* Blower discharge pressure in inches H2O

TABLE 2 AIR SAMPLE ANALYTICAL RESULTS

VGAC Effluent Concentration (mg/m^3)			
Date	*cis* -1,2-Dichloroethene	Tetrachloroethene	Trichloroethene
3/31/2010	0.02	0.69	0.04
6/28/2010	0.197	14.1	0.306
9/27/2010	0.122	4.18	0.240
12/28/2010	0.015	0.318	0.041
3/3/2011	0.0734	3.22	0.162
6/27/2011	0.0678	1.46	0.220
1/31/2012	0.0892	4.28	0.091
4/24/2012	0.110	5.95	0.193
7/9/2012	0.0959	3.07	0.252
11/15/2012	0.0030	0.092	0.022
NOTE: VGAC = Vapor-phase granular activated carbon mg/m^3 = Milligrams per cubic meter			

TABLE 3 AIR DISCHARGE MONITORING

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)
18 September 2002-24 November 2003 (Total)															
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	--	--	--	--	--	--
									431.38		**26.42**		**5.41**		**0.00**
6 January 2004-22December 2004 (Total)															
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
									24.34		**62.26**		**1.41**		**10.00**
20 January 2005-8 December 2005 (Total)															
1/20/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/23/2005	245	0	0	34	--	--	--	0.0000	0.00	--	--	--	--	--	--
3/29/2005	234 (1)	0	0	34	ND (1)	ND (1)	2	0.0000	0.00	0.000	0.00	0.000	0.00	0.002	1.43
4/28/2005	222	0	0	30	0.5	ND (1)	1	0.0000	0.00	0.0004	0.30	0.000	0.00	0.001	0.60
5/31/2005	223	0	0	33	5	2	1	0.0000	0.00	0.0042	3.31	0.0017	1.32	0.001	0.66
6/24/2005	242	10.1	15	24	64	2	0.8J	0.0620	35.70	0.0580	33.42	0.0018	1.04	0.001	0.42
8/4/2005	381	12	7.5	41	57	1J	0.7J	0.1159	114.09	0.0814	80.05	0.0014	1.40	0.001	0.98
Spent Carbon Replaced 8/10/05															
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
									149.79		**117.08**		**3.77**		**4.09**

6 January 2006-21 December 2006 (Total)															
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
Spent Carbon Replaced 1/25/06															
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
Spent Carbon Replaced 10/11/06															
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
									0.00		**4.11**		**0.66**		**0.71**
26 January 2007-4 January 2008 (Total)															
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
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	0.000	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	0.000	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	0.0001	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	0.000	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	0.000	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	0.000	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	0.000	0.00
									0.00		**0.27**		**0.00**		**0.12**
23 January 2008-22 December 2008) (Total)															
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	0.000	0.00
2/28/2008	--	--	--	36	--	--	--	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	0.00
											30.13		**2.17**		**0.00**
26 January 2009-21 December 2009 (Total)															
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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	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	0.000	0.00
12/21/2009	126	0	0	90	4.82	0.38	0.09	0.0000	0.00	0.0023	4.92	0.0002	0.39	0.000	0.00
											39.56		**1.64**		**0.00**

31 March 2010-28 December 2010															
3/31/2010	285	0	0	100	0.69	0.04	0.02	0.0000	0.00	0.0007	1.77	0.0000	0.10	0.000	0.00
6/28/2010	283	0	4.4	89	14.1	0.306	0.197	0.0000	0.00	0.0150	31.95	0.0003	0.69	0.000	0.00
9/27/2010	275	0	8.8	91	4.18	0.24	0.122	0.0000	0.00	0.0043	9.41	0.0002	0.54	0.000	0.00
12/28/2010	300	NA	0.1	92	0.318	0.041	0.015	NA	NA	0.0004	0.79	0.0000	0.10	0.000	0.00
3 March 2011-27 June 2011															
3/3/2011	124	NA	0.2	65	3.22	0.162	0.0734	NA	NA	0.0015	2.34	0.0001	0.12	0.000	0.00
6/27/2011	175	NA	0.1	116	1.46	0.22	0.0678	NA	NA	0.0010	2.67	0.0001	0.40	0.000	0.00
31 January 2012-15 November 2012															
1/31/2012	252	NA	0.1	101	4.28	0.091	0.0892	NA	NA	0.0040	9.80	0.0001	0.21	0.000	0.00
4/24/2012	268	NA	2.0	84	5.95	0.193	0.110	NA	NA	0.0060	12.05	0.0002	0.39	0.000	0.00
7/9/2012	246	NA	0.0	76	3.07	0.252	0.0959	NA	NA	0.0028	5.16	0.0002	0.42	0.000	0.00
11/15/2012	255	NA	0.0	129	0.092	0.022	0.0030	NA	NA	0.0001	0.27	0.0000	0.07	0.000	0.00
										2012 TOTALS =	**27.29**		**1.09**		

NOTE: cfm = cubic feet per minute
ppmv = parts per million (vol./vol.)
mg/cu. m = milligrams per cubic meter
PCE = Tetrachloroethylene
TCE = Trichloroethene
cis-1,2-DCE = *cis*-1,2-Dichloroethene
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
Permit limit for PCE is 0.031 lb/hr and 270 lb/yr; TCE is 0.014 lb/hr and 120 lb/year; cis-1,2-DCE is 0.63 lb/hr and 5,510 lb/year

Attachment A

National Heatset Printing

1 Adams Boulevard, Farmingdale, New York

EA Engineering

Personnel: Robert Peterson
Weather: 45F, Overcast
Time: 10:35
Date: 11/15/2012

System Status:

Arrival:	Off
Departure:	Running
Run Timer Reading:	53,341.50
Electric Meter Reading:	--

System Data:

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

Pre-Bleed Air (Extraction Well):

Flow:	255	CFM
Vacuum:	30	"H2O
PID Reading:	39.2	PPM
Temperature:	53.5	°F

Post-Bleed Air (SVE Influent):

Flow:	374	CFM	
Pressure	20	"H2O	via magnehelic
PID Reading:	13.1	PPM	
Temperature:	119.4	°F	

Carbon Monitoring:

Mid: 0.0 PPM 6.7 "H2O
Effluent: 0.0 PPM

Carbon effluent sample collected & shipped to lab? Yes

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

Monitoring Well Gauging / Vapor Point Monitoring:

Well/V.P. ID:	MW-C	MW-E	MW-G	VP-1	VP-2	VP-3	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	VP-13	VP-14	VP-15
DTW (ft):	18.15	18.36	--	--	--	--	--	--	--	--	--	--	--	--	--
Vac. (" H2O):	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--
PID (PPM):	0.0	0.0	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--

Comments:

SVE-Effluent sample collected @ 14:32, PID: 0.0 ppm

MW-G and VP-15 not accessible.

Equipment used: Air Velocity Meter - TSI VelociCalc Model 8345; Pressure/Vacuum Readings - Dwyer Series 477 Handheld Digital Manometer.

System off upon arrival. EA reset blower starter and restarted system. Prior to restarting the system, the dilution valve was opened 100%. Once restarted the system was allowed to equilibrate for 25 minutes, the dilution valve was positioned to 75% open, and O&M was conducted. EA calculated run time meter readings between the previous O&M date (9 July 2012) and November 15 2012. Calculations revealed that the system went offline on 29 October 2012, the date that Hurricane Sandy impacted Long Island.

Attachment B

eurofins | Air Toxics

12/5/2012

Mr. Jim Hayward
EA Engineering
6712 Brooklawn Parkway

Syracuse NY 13211

Project Name: National Heatset
Project #: 1490716.002
Workorder #: 1211367

Dear Mr. Jim Hayward

The following report includes the data for the above referenced project for sample(s) received on 11/19/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1211367

Work Order Summary

CLIENT:	Mr. Jim Hayward EA Engineering 6712 Brooklawn Parkway Syracuse, NY 13211	**BILL TO:**	Ms. Accounts Payable EA Engineering 3 Washington Center Newburgh, NY 12550
PHONE:	315-431-4610	**P.O. #**	1490716
FAX:	315-431-4280	**PROJECT #**	1490716.002 National Heatset
DATE RECEIVED:	11/19/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	12/04/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SVE Effluent	Modified TO-15	Tedlar Bag	Tedlar Bag
02A	Lab Blank	Modified TO-15	NA	NA
03A	CCV	Modified TO-15	NA	NA
04A	LCS	Modified TO-15	NA	NA
04AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 12/04/12

Technical Director

Certfication numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
EPA Method TO-15
EA Engineering
Workorder# 1211367

One 1 Liter Tedlar Bag sample was received on November 19, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

Sample was received past the recommended hold time of 3 days. Analysis proceeded.

Analytical Notes

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV and/or LCS.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SVE Effluent

Lab ID#: 1211367-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	2.0	14	3.8	27
Acetone	5.0	7.2	12	17
cis-1,2-Dichloroethene	0.50	0.75	2.0	3.0
Benzene	0.50	0.54	1.6	1.7
Trichloroethene	0.50	4.2	2.7	22
Toluene	0.50	13	1.9	49
Tetrachloroethene	0.50	13	3.4	92
m,p-Xylene	0.50	1.2	2.2	5.0

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Client Sample ID: SVE Effluent

Lab ID#: 1211367-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112020**	**Date of Collection:**	**11/15/12 12:12:00 P**
Dil. Factor:	**1.00**	**Date of Analysis:**	**11/20/12 09:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	14	3.8	27
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	7.2	12	17
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	0.75	2.0	3.0
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	0.54	1.6	1.7
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	4.2	2.7	22
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	13	1.9	49
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	13	3.4	92
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: SVE Effluent

Lab ID#: 1211367-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112020**	**Date of Collection:**	**11/15/12 12:12:00 P**
Dil. Factor:	**1.00**	**Date of Analysis:**	**11/20/12 09:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	1.2	2.2	5.0
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	115	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1211367-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 01:10 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1211367-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 01:10 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: CCV

Lab ID#: 1211367-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 11:02 AM**	

Compound	%Recovery
Freon 12	100
Freon 114	99
Chloromethane	88
Vinyl Chloride	111
1,3-Butadiene	115
Bromomethane	104
Chloroethane	96
Freon 11	102
Ethanol	100
Freon 113	102
1,1-Dichloroethene	104
Acetone	105
2-Propanol	109
Carbon Disulfide	102
3-Chloropropene	104
Methylene Chloride	99
Methyl tert-butyl ether	116
trans-1,2-Dichloroethene	114
Hexane	118
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	109
Tetrahydrofuran	113
Chloroform	103
1,1,1-Trichloroethane	102
Cyclohexane	116
Carbon Tetrachloride	101
2,2,4-Trimethylpentane	116
Benzene	103
1,2-Dichloroethane	100
Heptane	119
Trichloroethene	101
1,2-Dichloropropane	101
1,4-Dioxane	98
Bromodichloromethane	99
cis-1,3-Dichloropropene	109
4-Methyl-2-pentanone	118
Toluene	104
trans-1,3-Dichloropropene	108
1,1,2-Trichloroethane	100
Tetrachloroethene	101
2-Hexanone	118

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Client Sample ID: CCV

Lab ID#: 1211367-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 11:02 AM**	

Compound	%Recovery
Dibromochloromethane	101
1,2-Dibromoethane (EDB)	102
Chlorobenzene	100
Ethyl Benzene	112
m,p-Xylene	113
o-Xylene	119
Styrene	118
Bromoform	104
Cumene	120
1,1,2,2-Tetrachloroethane	99
Propylbenzene	114
4-Ethyltoluene	118
1,3,5-Trimethylbenzene	126
1,2,4-Trimethylbenzene	131 Q
1,3-Dichlorobenzene	110
1,4-Dichlorobenzene	113
alpha-Chlorotoluene	116
1,2-Dichlorobenzene	111
1,2,4-Trichlorobenzene	108
Hexachlorobutadiene	102

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1211367-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 11:31 AM**	

Compound	%Recovery
Freon 12	100
Freon 114	101
Chloromethane	98
Vinyl Chloride	102
1,3-Butadiene	104
Bromomethane	108
Chloroethane	100
Freon 11	99
Ethanol	107
Freon 113	104
1,1-Dichloroethene	117
Acetone	104
2-Propanol	112
Carbon Disulfide	126
3-Chloropropene	124
Methylene Chloride	98
Methyl tert-butyl ether	115
trans-1,2-Dichloroethene	126
Hexane	118
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	109
Tetrahydrofuran	110
Chloroform	103
1,1,1-Trichloroethane	102
Cyclohexane	118
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	117
Benzene	106
1,2-Dichloroethane	98
Heptane	120
Trichloroethene	105
1,2-Dichloropropane	104
1,4-Dioxane	99
Bromodichloromethane	99
cis-1,3-Dichloropropene	111
4-Methyl-2-pentanone	117
Toluene	106
trans-1,3-Dichloropropene	111
1,1,2-Trichloroethane	102
Tetrachloroethene	104
2-Hexanone	120

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Client Sample ID: LCS

Lab ID#: 1211367-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 11:31 AM**	

Compound	%Recovery
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	106
Chlorobenzene	103
Ethyl Benzene	113
m,p-Xylene	117
o-Xylene	120
Styrene	123
Bromoform	102
Cumene	122
1,1,2,2-Tetrachloroethane	100
Propylbenzene	115
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	126
1,2,4-Trimethylbenzene	128
1,3-Dichlorobenzene	110
1,4-Dichlorobenzene	111
alpha-Chlorotoluene	115
1,2-Dichlorobenzene	111
1,2,4-Trichlorobenzene	99
Hexachlorobutadiene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 1211367-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 11:57 AM**	

Compound	%Recovery
Freon 12	97
Freon 114	100
Chloromethane	96
Vinyl Chloride	113
1,3-Butadiene	113
Bromomethane	106
Chloroethane	98
Freon 11	96
Ethanol	104
Freon 113	102
1,1-Dichloroethene	116
Acetone	104
2-Propanol	110
Carbon Disulfide	124
3-Chloropropene	125
Methylene Chloride	96
Methyl tert-butyl ether	114
trans-1,2-Dichloroethene	125
Hexane	117
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	107
Tetrahydrofuran	108
Chloroform	101
1,1,1-Trichloroethane	98
Cyclohexane	117
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	116
Benzene	102
1,2-Dichloroethane	94
Heptane	116
Trichloroethene	102
1,2-Dichloropropane	101
1,4-Dioxane	95
Bromodichloromethane	96
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	113
Toluene	102
trans-1,3-Dichloropropene	108
1,1,2-Trichloroethane	100
Tetrachloroethene	101
2-Hexanone	116

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Client Sample ID: LCSD

Lab ID#: 1211367-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3112004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/20/12 11:57 AM**	

Compound	%Recovery
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	104
Chlorobenzene	100
Ethyl Benzene	111
m,p-Xylene	114
o-Xylene	118
Styrene	119
Bromoform	99
Cumene	119
1,1,2,2-Tetrachloroethane	97
Propylbenzene	111
4-Ethyltoluene	109
1,3,5-Trimethylbenzene	122
1,2,4-Trimethylbenzene	126
1,3-Dichlorobenzene	108
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	111
1,2-Dichlorobenzene	109
1,2,4-Trichlorobenzene	98
Hexachlorobutadiene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	101	70-130

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager James Hayward

Collected by: (Print and Sign) Rob Peterson Robert Peterson

Company EA Engineering Email jhayward@eaest.com

Address 6712 Brooklawn Pkwy City Syracuse State NY Zip 13211

Phone 315-431-4610 Fax 315-431-4280

Project Info:

P.O. # 1490716

Project # 1490716.0002

Project Name National Heatset

Turn Around Time:

☒ Normal

☐ Rush

specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	SVE Effluent	Tedlar	11/15/12	1212	TO-15				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Robert Peterson	11/16/12 1145	FedEx	11/16/12 1145
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		BrShuttleton	AZA 11/19/12 1005
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No None BW 11/19/12	1211367

Form 1293 rev.11