



WALDEN ASSOCIATES

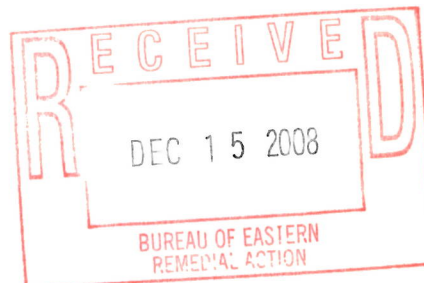
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*Via e-mail 12/10/08 to J. Dyber*  
*Certified Mail # 7008 1140 000 1771 8320*

December 10, 2008

Mr. Jeffrey Dyber, PE  
NYSDEC, Remedial Bureau A  
Division of Environmental Remediation  
625 Broadway  
Albany, New York 12233-7015



Re: Progress Report: November 2008  
Frost Street Sites: Site ID #s 1-30043 I, L, M  
New Cassel Industrial Area, Westbury, New York

Dear Mr. Dyber:

Walden Associates (Walden) is pleased to submit the Progress Report for the above-referenced Site.

**November Work Completed**

The following tasks were completed in November 2008:

**SVE/AS System O&M**

Refer to Appendix A for a summary of SVE/AS System O&M procedures. During periodic O&M visits, system parameters were logged on dedicated O&M log forms (Refer to Appendix B).

- Monthly SVE/AS remedial system O&M.
- Monthly individual SVE well lines and combined effluent flow monitoring at the interior system sampling ports for VOC concentrations utilizing a calibrated PID.
- Monthly PID readings of the sampling ports at the GAC system influent and effluent points.

- Quantitative sampling of influent and effluent SVE system air flow conducted on November 17, 2008. Results of quantitative sampling with one liter summa canisters for TO-15 analysis are summarized in Table D-1 in Appendix D.

### **December Work Items**

The following is a list of work scheduled to be completed during the month of December:

#### **SVE/AS System O&M**

- Monthly operation and maintenance visits to monitor SVE system parameters.
- Monthly individual SVE well line and combined effluent flow monitoring at the interior system sampling ports for VOC concentrations utilizing a calibrated PID.
- Monthly readings of the sampling ports at the influent and effluent points of the GAC system with a PID.
- Quantitative sampling of influent and effluent SVE system air for analysis scheduled for December 22, 2008.
- 3<sup>rd</sup> quarter 2008 groundwater monitoring sampling event (annual sampling of 29 Site related wells – completed in September 2008) results will be presented in a forthcoming quarterly groundwater monitoring report following receipt, evaluation, and data validation of quarterly groundwater sample analysis.
- 4<sup>th</sup> quarter 2008 groundwater monitoring sampling event (quarterly sampling of 8 Site related wells) scheduled to begin the week of December 8, 2008.

#### **GCW System**

Full remedial design containing plans and specifications for construction of the in-well stripping systems to be submitted to NYSDEC by December 28, 2008 in accordance with the dispute resolution decision received on September 29, 2008.

Mr. Jeffrey Dyber, PE  
New York State Department of Environmental Conservation  
December 10, 2008

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Please contact Kristin Scroope or me if you have any questions or require additional information.

Very truly yours,  
Walden Associates

A handwritten signature in black ink, appearing to read 'J. M. Heaney, III', with a large, stylized flourish at the end.

Joseph M. Heaney, III P.E.  
Principal

cc: A. Tamuno, Esq.  
G. Bobersky  
G. Litwin  
A. Cava  
J. Nealon  
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K. Maldonado

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## **Appendix A**

### **Summary of SVE/AS System O & M Procedures**

Frost Street Sites - Site ID #s1-30043 I, L, M  
New Cassel Industrial Area, Westbury, New York

### **Summary of SVE/AS System O&M Activities**

During periodic O&M visits, system parameters were logged on dedicated O&M log forms (Refer to Appendix B). The following summarizes SVE/AS system O&M procedures:

#### **Periodic SVE/AS Remedial System O&M**

- All SVE well lines and the combined effluent air flow were monitored at the interior system sampling ports for volatile organic compounds (VOCs) using a calibrated photo-ionization detector PID to assess the remedial performance of the SVE/AS system.
- Mechanical checks of the SVE/AS system were performed periodically in accordance with the O&M Manual maintenance schedule.

#### **Vapor Phase Granular Activated Carbon Treatment System Monitoring**

- Monthly readings at the influent and effluent sampling ports were made with a calibrated PID to check the GAC system to detect carbon breakthrough. Qualitative VOC monitoring with a PID was utilized to record the performance of the GAC absorption system.
- PID-recorded VOC concentrations (reported in calibrant-gas-equivalents) were used to determine when the GAC in the lead unit requires replacement. The flow from the SVE lines to the lead carbon unit was typically changed to a new lead unit when the intermediate VOC reading is 25 percent or greater of the influent VOC concentration.
- Refer to Appendix C for a log of spent GAC totals to date.



## **Appendix B**

### **SVE/AS System O & M Log Forms**

Frost Street Sites - Site ID #s1-30043 I, L, M  
New Cassel Industrial Area, Westbury, New York

**O & M CHECKLIST FOR SVE/AIR SPARGE SYSTEM**  
**101 Frost Street, Westbury, New York**

Inspected By:	GLW	Date:	11/17/2008	Weather:	Sunny ~42F
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Arrival Time:	800	SVE 1 Clock:	SVE 2 Clock:
Departure Time:		SVE 1 Clock:	SVE 2 Clock:

CONTROL PANEL	Arrival	Departure
AS System	On	On
SVE System	On	On
Surge Protection	Lit	Lit
Lightning Protection	White	White
Sensaphone	On	On

PID	
Calibrated	Yes
Concentration:	101 ppm

Carbon Vessels	Pre-Carbon PID	Post Carbon PID	Bypassed
Carbon Vessel 1	ppm	ppm	
Carbon Vessel 2	10.7 ppm	0.0 ppm	No
Carbon Vessel 3	ppm	ppm	

AIR SPARGE SYSTEM	
Cleaned Particulate Filter	No
Drained Filter/collector 1	Yes
Drained Filter/collector 2	Yes
Compressor Discharge Pressure	30 psi
Compressor Holding tank Pressure	80 psi

SVE SYSTEM	
Knockout Tank Level	1/3 full inside
Knockout Discharge to Sewer	NA gallons

Monitoring Well Depth to Water Readings	
2a	50.87
4a	50.26
6a	46.27

SVE WELL READINGS (INSIDE TRAILER)						
SVE	Velocity		Flow	Vacuum		PID Concentration
V1	8250	FPM	scfm	50	inch H <sub>2</sub> O	19.1 ppm
V2	5500	FPM	scfm	54	inch H <sub>2</sub> O	22.6 ppm
V3a	4600	FPM	scfm	46	inch H <sub>2</sub> O	0.9 ppm
V3	6000	FPM	scfm	44	inch H <sub>2</sub> O	9.4 ppm
V4	4800	FPM	scfm	45	inch H <sub>2</sub> O	0.9 ppm
V6	3650	FPM	scfm	44	inch H <sub>2</sub> O	0.5 ppm
V5	3200	FPM	scfm	46	inch H <sub>2</sub> O	0.4 ppm
V7	3050	FPM	scfm	45	inch H <sub>2</sub> O	0.1 ppm
Pre-Knockout Port				4	inch Hg vac	12.0 ppm
SVE Flow Rate	4200	FPM	scfm			

AS WELL READINGS (INSIDE TRAILER)									
AS WELL #	Pressure		Air Flow		AS WELL #	Pressure		Air Flow	
AS Well #1	15.5	psi	4	SCFM	AS Well #16	16.25	psi	3.5	SCFM
AS Well #2	15.5	psi	4	SCFM	AS Well #12	17.75	psi	--	SCFM
AS Well #4	16	psi	5	SCFM	AS Well #10	18	psi	--	SCFM
AS Well #3	16	psi	4.5	SCFM	AS Well #13	17.5	psi	--	SCFM
AS Well #5	16.5	psi	5	SCFM	AS Well #14	15.5	psi	4	SCFM
AS Well #7	16	psi	4.5	SCFM	AS Well #18	15.5	psi	5	SCFM
AS Well #9	15.75	psi	8	SCFM	AS Well #17	16.25	psi	5	SCFM
AS Well #8	15	psi	6	SCFM	AS Well #15	16	psi	8	SCFM
AS Well #6	15.5	psi	5.5	SCFM	AS Well #19	16	psi	3.5	SCFM
AS Well #11	16	psi	3.5	SCFM					

NOTES
at 0900 PID sensor contaminated - clean off and recalibrate to fresh air and 100 ppm isobutylene gas
Effluent 11/17/08 sample collected at 0920
Influent 11/17/08 sample collected at 0926
System was last off on Friday, Nov. 14 for a short period of time for repairs - system was on for 3 days prior to sampling.



## **Appendix C**

### **Log of Spent Vapor Phase GAC Totals to Date**

Frost Street Sites - Site ID #s1-30043 I, L, M  
New Cassel Industrial Area, Westbury, New York



**Frost Street Sites  
Westbury, New York**

**Table C1  
Spent Vapor Phase GAC Totals**

<b>Date of Transport from Site</b>	<b>Spent GAC Weight (pounds)</b>	<b>Carbon Facility</b>	<b>RCRA Facility #</b>
January 19, 2006	7,500	Giant Resource Recovery-Sumter Inc.	SCD036275626
February 2, 2006	11,441	Envirotrol Inc.	PAD987270725
April 7, 2006	6,486	Envirotrol Inc.	PAD987270725
August 25, 2006	5,923	Envirotrol Inc.	PAD987270725
December 5, 2006	5,691	Envirotrol Inc.	PAD987270725
<b><i>2006 Total</i></b>	<b><i>37,041</i></b>		
March 30, 2007	6,913	Envirotrol Inc.	PAD987270725
September 20, 2007	6,164	Envirotrol Inc.	PAD987270725
<b><i>2007 Total</i></b>	<b><i>13,077</i></b>		
January 16, 2008	8,750	Siemens Water Technologies	PAD987270725
April 29, 2008	7,814	Siemens Water Technologies	PAD987270725
September 12, 2008	5,469	Siemens Water Technologies	PAD987270725
<b><i>2008 Total</i></b>	<b><i>22,033</i></b>		
<b>Project Total</b>	<b>72,151</b>		

## **Appendix D**

### **Summary of SVE System Influent/Effluent Results (TO-15)**

Frost Street Sites - Site ID #s1-30043 I, L, M  
New Cassel Industrial Area, Westbury, New York

FROST STREET SITES  
WESTBURY, NEW YORK

TABLE 1  
SUMMARY OF SVE SYSTEM INFLUENT/EFFLUENT AIR SAMPLE RESULTS (TO-15)

Target Compound	Influent												
	10/23/2006	12/7/2006	1/18/2007	4/4/2007	4/27/2007	5/16/2007	6/15/2007	7/18/2007	8/15/2007	10/10/2007	10/19/2007	11/19/2007	12/18/2007
	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal	µg/gal
Vinyl Chloride	460u	430u	0.25u	60.2U	60.2U	23.5U	1.22U	1.22U	1.22U	ND	ND	ND	ND
1,1-Dichloroethene	710u	670u	0.39u	43.7U	43.7U	11.0U	1.01U	1.01U	1.01U	ND	ND	ND	ND
trans-1,2-Dichloroethene	710u	670u	0.39u	49.7U	49.7U	12.5U	0.99U	0.99U	0.99U	ND	ND	ND	ND
1,1-Dichloroethane	730u	690u	0.40u	42.6U	42.6U	10.5U	0.85U	0.85U	0.85U	ND	ND	ND	ND
cis-1,2-Dichloroethene	710u	670u	0.39u	63.6U	63.6U	16.0U	1.27U	1.27U	1.27U	ND	ND	ND	ND
1,2-Dichloroethane	730u	690u	0.40u	34.9U	34.9U	86.0U	1.01U	1.01U	1.01U	ND	ND	ND	ND
1,1,1-Trichloroethane	980u	930u	0.53u	82.0U	82.0U	15.0U	1.64U	1.64U	1.64U	ND	ND	ND	ND
Trichloroethene	2,700	3,200	110	1,480	4,690	1,120	1,35U	1,35U	1,35U	1,900	1,100	970	330
1,1,2-Trichloroethane	980u	930u	0.53u	68.4U	68.4U	12.5U	1.37U	1.37U	1.37U	ND	ND	ND	ND
Tetrachloroethene	190,000	180,000	10,000	129,000	116,000	13,700	145,000	37,500	13,500	92,000	73,000	62,000	27,000
1,1,2,2-Tetrachloroethane	1200u	1,200u	0.67u	53.4U	53.4U	12.5U	1.07U	1.07U	1.07U	ND	ND	ND	ND
1,2-Dichloroethene (total)	710u	670u	0.39u	50.7U	50.7U	12.5U	0.87U	0.87U	0.87U	ND	ND	ND	ND

Target Compound	NYSDEC DAR-1 SGC	Effluent												
		10/19/2006	12/7/2006	1/18/2007	4/4/2007	4/27/2007	5/16/2007	6/15/2007	7/18/2007	8/15/2007 *	9/26/2007	10/19/2007	11/19/2007	12/18/2007
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Vinyl Chloride	180,000	0.51u	0.51u	0.51u	1.20U	1.20U	0.47U	1.22U	1.22U	1.22U	ND	ND	ND	ND
1,1-Dichloroethene		0.79u	0.79u	0.79u	0.87U	0.87U	0.22U	1.01U	1.01U	1.01U	ND	ND	ND	ND
trans-1,2-Dichloroethene		0.79u	0.79u	0.79u	0.96U	0.96U	0.25U	0.96U	0.96U	0.96U	ND	ND	ND	ND
1,1-Dichloroethane	none	0.81u	0.81u	0.81u	0.85U	0.85U	0.21U	0.85U	0.85U	0.85U	ND	ND	ND	ND
cis-1,2-Dichloroethene		0.79u	0.79u	0.79u	1.27U	1.27U	0.32U	1.27U	1.27U	1.27U	ND	ND	ND	ND
1,2-Dichloroethane		0.81u	0.81u	0.81u	6.98U	6.98U	1.72U	1.01U	1.01U	1.01U	ND	ND	ND	ND
1,1,1-Trichloroethane	68,000	1.1u	1.1u	1.1u	1.64U	1.64U	0.30U	1.64U	1.64U	1.64U	ND	ND	ND	ND
Trichloroethene	54,000	4.1	1.4	1.1	1.35U	16.9	2.75	1.35U	1.35U	3.00U	ND	690	80	ND
1,1,2-Trichloroethane	none	1.1u	1.1u	1.1u	1.37U	1.37U	0.25U	1.37U	1.37U	1.37U	ND	ND	ND	6,000
Tetrachloroethene	1,000	55	26	8.8	54.4	196	2.84	1.680	107	9.580	25	9.2	21,000	ND
1,1,2,2-Tetrachloroethane		1.4u	1.4u	1.4u	1.07U	1.07U	0.25U	1.07U	1.07U	1.07U	ND	ND	ND	ND
1,2-Dichloroethene (total)	none	0.79u	0.79u	0.79u	1.01U	1.01U	0.25U	0.87U	0.87U	0.87U	ND	ND	ND	ND

SGC = short-term guideline concentration

u = compound not detected at concentration above the listed reporting limit

U = compound not detected at concentration above the Method Detection Limit (MDL)

ND = Compound was analyzed for but not detected above the laboratory reporting limit.

10/23/06 - 1/18/07 results analyzed by Severn Trent Laboratories

4/4/07 - 8/15/07 data analyzed by United Chemists

9/26/07 to present data analyzed by Columbia Analytical Services

Note: Lower concentrations detected on 1/18/07, 5/16/07, 7/18/07, 8/15/07 likely due to Air Sparging System component fault - System temporarily down around time of sampling event.

\* Effluent sample secured post primary carbon vessel

\*\* Suma canister leaked after filling



FROST STREET SITES  
WESTBURY, NEW YORK

TABLE 1 (cont.)  
SUMMARY OF SVE SYSTEM INFLUENT/EFFLUENT AIR SAMPLE RESULTS (TO-15)

Target Compound	Influent								
	1/21/2008**	2/28/2008	3/20/2008	4/30/2008	5/28/2008	6/27/2008	7/23/2008	8/20/2008	9/29/2008
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	1,500	840	1,100	850	1,200	4.1	1,400	1,300
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	9.4	80,000	65,000	60,000	61,000	58,000	ND	57,000	73,000
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	ND	ND	ND	ND	ND	ND	ND	ND	ND

Target Compound	Effluent									
	NYSDEC DAR-1 SGC	1/21/2008	2/28/2008	3/20/2008	4/30/2008	5/28/2008	6/27/2008	7/23/2008	8/20/2008	9/29/2008
	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Vinyl Chloride	180,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	none	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene		ND	16	49	49	ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	68,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	54,000	ND	17	480	480	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	none	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1,000	15	580	7,000	1,700	49	4.1	ND	12	4.7
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	none	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Note: Lower concentrations detected on 1/18/07, 5/16/07, 7/18/07, 8/15/07 likely due to Air Sparging System component fault - System temporarily down around time of sampling event.

\* Effluent sample secured post primary carbon vessel.

\*\* Summa canister leaked after filling