WALDEN ASSOCIATES

*Certified Mail # 7012 0470 0000 6187 6247*
*Via email to jldyber@gw.dec.state.ny.us*

March 10, 2014

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

Re: Progress Report: January – February 2014
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 for work completed from January through February 2014.

The last progress report submitted to NYSDEC was dated February 21, 2014 and covered the activities completed from September through December 2013.

**Work Completed from January 2014 – February 2014**

**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).

- Periodic SVE/AS remedial system O&M was conducted.
- Repair and maintenance tasks were completed as needed to ensure proper operation of the SVE/AS system.
    - Due to operational issues with the two SVE blowers identified in late December 2013, the SVE-2 blower ran continuously throughout January and February.

    - The SVE-2 blower had worn belts between the motor and the pump which were immediately replaced in late December 2013.
    - A replacement motor was ordered for the SVE-1 blower based on wear observed on the motor. The replacement motor was subsequently installed on February 25, 2014.
  - In January 2014, repairs were made to the PVC piping connecting the SVE system moisture knockout tank, the transfer pump, and the liquid phase carbon vessel.
- Periodic individual SVE well lines and combined effluent flow monitoring at the interior system sampling ports for VOC concentrations utilizing a calibrated PID was conducted.
- Periodic PID readings of the influent and effluent sampling ports for the on-site SVE system vapor phase granular activated carbon (GAC) treatment vessels were taken.
- No change of the GAC in the three (3) on-site SVE system vapor phase carbon treatment vessels were completed during this reporting period.
  - The last carbon change for the three (3) SVE/AS system GAC treatment vessels was completed on July 1, 2013.
  - Spent vapor phase GAC totals to date are summarized in Table C-1 in Appendix C.
- The Annual Hazardous Waste Report for the waste carbon disposed in 2013 was electronically submitted to NYSDEC on February 27, 2014.
- Quantitative sampling of the influent and effluent SVE system air flow was conducted with one liter summa canisters for TO-15 analysis on January 30 and March 3, 2014.
  - Received laboratory analytical data for the first of these quantitative sampling events which are attached in Appendix D. The sample results for the latter sampling event are not yet available and will be presented in the next monthly report.
  - Note that the March 3 sampling was done as representative of February 2014. Sampling was attempted on February 28, but had to be rescheduled due to sampling equipment malfunction.
- A discharge permit letter, dated December 27, 2013, was submitted to the NCDPW for annual permit renewal for discharge of carbon treated groundwater sampling and SVE/AS remedial system knockout water to the NCDPW sewer system.
  - NCDPW issued a letter dated January 15, 2014 approving this permitted discharge through December 31, 2014.
- Carbon treated SVE/AS remedial system knockout water was discharged to the NCDPW sewer system via the sewer cleanout pipe located at the end of Main Street, behind the Century 21 Building, and just west of the 101 Frost Street sewer line clean-out.
  - The extended NCDPW discharge permit requires semi-annual reporting of discharge documentation, and a copy of this report will be forwarded to the NYSDEC upon completion.

**Quarterly/Annual Groundwater Monitoring**

- The October 2013 annual sampling groundwater monitoring analytical data were submitted to NYSDEC per the Electronic Data Deliverable (EDD) requirements on February 19, 2014.

## Upcoming Work

- Monthly operation and maintenance visits to monitor SVE system parameters will be completed.
- Monthly individual SVE well line and combined effluent flow monitoring at the interior system sampling ports for VOC concentrations utilizing a calibrated PID will be completed.
- Monthly readings of the sampling ports at the influent and effluent points of the GAC system with a PID will be taken.
- Change of media within the three (3) SVE system vapor phase carbon vessels is scheduled to be completed on March 11, 2014.
- Change of media in the liquid phase carbon vessel that is used to treat knockout tank accumulations prior to discharge is scheduled for March 2014.
- Quantitative sampling of influent and effluent SVE system air for analysis is scheduled for March 27, 2014.
- 1st quarter groundwater sampling (8 monitoring wells) is scheduled to be completed March 25-26, 2014. The NYSDEC was notified of this schedule via email on March 6, 2014.

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

Very truly yours,

Walden Associates

Joseph M. Heaney, III P.E.
Principal

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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: TMJ | Date: 1/30/2014 | Weather: Sunny @ 22° F |
|---|---|---|

| | | | |
|---|---|---|---|
| **Arrival Time:** | 16:00 PM | SVE 1 Clock: 34091.0 | AS 1 Clock: 24808.2 |
| **Departure Time:** | 18:00 PM | SVE 2 Clock: 34429.7 | AS 2 Clock: 15147.5 |

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

| AIR SPARGE SYSTEM | | |
|---|---|---|
| Cleaned Particulate Filter | Yes | |
| Drained Filter/collector 1 | Yes | |
| Drained Filter/collector 2 | Yes | |
| Compressor Discharge Pressure | 35 | psi |
| Compressor Holding tank Pressure | 120 | psi |

| PID | ppm range | ppb range |
|---|---|---|
| Calibrated | Yes | Yes |
| Concentration: | 100 ppm | 10 ppb |

| SVE SYSTEM | | |
|---|---|---|
| Knockout Tank Level | 75 | |
| Knockout Discharge to Sewer | -- | gallons |

| Carbon Vessels | Pre-Carbon PID | | | | Post Carbon PID | | | | Bypassed |
|---|---|---|---|---|---|---|---|---|---|
| Carbon Vessel 1 | -- | ppm | -- | ppb | -- | ppm | -- | ppb | Yes |
| Carbon Vessel 2 | -- | ppm | -- | ppb | -- | ppm | -- | ppb | Yes |
| Carbon Vessel 3 | 0 | ppm | 427 | ppb | -- | ppm | -- | ppb | No |

| Monitoring Well Depth to Water Readings (feet) | |
|---|---|
| 2a | Covered by snow |
| 4a | 50.75 |
| 6a | 50.53 |

**SVE WELL READINGS (INSIDE TRAILER)**

| SVE | Velocity | | Flow | | Vacuum | | PID Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V1 | 1100 | FPM | -- | scfm | 24 | inch $H_2O$ | 0 | ppm | 924 | ppb |
| V2 | 500 | FPM | -- | scfm | 23 | inch $H_2O$ | 0 | ppm | 2642 | ppm |
| V3a | 500 | FPM | -- | scfm | 23 | inch $H_2O$ | 0.0 | ppm | 48 | ppb |
| V3 | 500 | FPM | -- | scfm | 24 | inch $H_2O$ | 0.0 | ppm | 976 | ppb |
| V4 | 3000 | FPM | -- | scfm | 24 | inch $H_2O$ | 0.0 | ppm | 22 | ppb |
| V6 | 1200 | FPM | -- | scfm | 22 | inch $H_2O$ | 0.0 | ppm | 12 | ppb |
| V5 | 2000 | FPM | -- | scfm | 32 | inch $H_2O$ | 0.0 | ppm | 24 | ppb |
| V7 | 5000 | FPM | -- | scfm | 30 | inch $H_2O$ | 0.0 | ppm | 1 | ppb |
| Pre-Knockout Port | | | | | 1.0 | inch Hg vac | | ppm | | ppb |
| SVE Flow Rate | -- | FPM | -- | scfm | | | | | | |

**AS WELL READINGS (INSIDE TRAILER)**

| AS WELL # | Pressure | | Air Flow | | AS WELL # | Pressure | | | |
|---|---|---|---|---|---|---|---|---|---|
| AS Well #1 | 15 | psi | 1.0 | SCFM | AS Well #16 | 12 | psi | 1.0 | SCFM |
| AS Well #2 | 13 | psi | 1.0 | SCFM | AS Well #12 | 13 | psi | 1.0 | SCFM |
| AS Well #4 | 15 | psi | 1.0 | SCFM | AS Well #10 | -- | psi | -- | SCFM |
| AS Well #3 | 14.5 | psi | 1.0 | SCFM | AS Well #13 | 13.5 | psi | 1.0 | SCFM |
| AS Well #5 | 15 | psi | 1.0 | SCFM | AS Well #14 | 13 | psi | 1.0 | SCFM |
| AS Well #7 | 15 | psi | 1.0 | SCFM | AS Well #18 | 12.5 | psi | 1.0 | SCFM |
| AS Well #9 | 14.5 | psi | 1.0 | SCFM | AS Well #17 | 14 | psi | 1.0 | SCFM |
| AS Well #8 | 14.5 | psi | 1.0 | SCFM | AS Well #15 | 15 | psi | 1.0 | SCFM |
| AS Well #6 | 14 | psi | 1.0 | SCFM | AS Well #19 | 13 | psi | 2.0 | SCFM |
| AS Well #11 | 12 | psi | 1.0 | SCFM | | | | | |

**NOTES**

1033 Collected effluent 01302014 air sample in canister 1SC01155.

1043 Collected influent 01302014 air sample in canister 1SC01103.

Pressure 1032 hPa

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

| Inspected By: JWB | Date: 3/3/2014 | Weather: Cloudy/ Snow @ 29° F |
|---|---|---|

| | | | |
|---|---|---|---|
| **Arrival Time:** | 9:00 | SVE 1 Clock: 34091.0 | AS 1 Clock: 24808.2 |
| **Departure Time:** | 12:15 | SVE 2 Clock: 35864.4 | AS 2 Clock: 15147.5 |

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

| AIR SPARGE SYSTEM | | |
|---|---|---|
| Cleaned Particulate Filter | Yes | |
| Drained Filter/collector 1 | Yes | |
| Drained Filter/collector 2 | Yes | |
| Compressor Discharge Pressure | 30 | psi |
| Compressor Holding tank Pressure | 110 | psi |

| PID | ppm range | ppb range |
|---|---|---|
| Calibrated | Yes | Yes |
| Concentration: | 100 ppm | 10 ppb |

| SVE SYSTEM | | |
|---|---|---|
| Knockout Tank Level | 25 | |
| Knockout Discharge to Sewer | -- | gallons |

| Carbon Vessels | Pre-Carbon PID | | | | Post Carbon PID | | | | Bypassed |
|---|---|---|---|---|---|---|---|---|---|
| Carbon Vessel 1 | -- | ppm | -- | ppb | -- | ppm | -- | ppb | Yes |
| Carbon Vessel 2 | -- | ppm | -- | ppb | -- | ppm | -- | ppb | Yes |
| Carbon Vessel 3 | 0 | ppm | 427 | ppb | -- | ppm | -- | ppb | No |

| Monitoring Well Depth to Water Readings (feet) | |
|---|---|
| 2a | Covered by snow |
| 4a | 51.75 |
| 6a | 47.75 |

**SVE WELL READINGS (INSIDE TRAILER)**

| SVE | Velocity | | Flow | | Vacuum | | PID Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V1 | 7500 | FPM | -- | scfm | 50 | inch $H_2O$ | 0.3 | ppm | 1106 | ppb |
| V2 | 4500 | FPM | -- | scfm | 52 | inch $H_2O$ | 1.6 | ppm | 3690 | ppm |
| V3a | 4200 | FPM | -- | scfm | 42 | inch $H_2O$ | 0.0 | ppm | 47 | ppb |
| V3 | 5000 | FPM | -- | scfm | 44 | inch $H_2O$ | 0.0 | ppm | 514 | ppb |
| V4 | 4000 | FPM | -- | scfm | 42 | inch $H_2O$ | 0.0 | ppm | 56 | ppb |
| V6 | 3400 | FPM | -- | scfm | 42 | inch $H_2O$ | 0.0 | ppm | 41 | ppb |
| V5 | 3200 | FPM | -- | scfm | 42 | inch $H_2O$ | 0.0 | ppm | 8 | ppb |
| V7 | 3400 | FPM | -- | scfm | 44 | inch $H_2O$ | 0.0 | ppm | 8 | ppb |
| Pre-Knockout Port | | | | | 4.0 | inch Hg vac | 0.5 | ppm | 1,356 | ppb |
| SVE Flow Rate | 4000 | FPM | -- | scfm | | | | | | |

**AS WELL READINGS (INSIDE TRAILER)**

| AS WELL # | Pressure | | Air Flow | | AS WELL # | Pressure | | | |
|---|---|---|---|---|---|---|---|---|---|
| AS Well #1 | 15 | psi | 3.5 | SCFM | AS Well #16 | 12.5 | psi | 4.0 | SCFM |
| AS Well #2 | 13 | psi | 3.0 | SCFM | AS Well #12 | 12.5 | psi | 3.0 | SCFM |
| AS Well #4 | 14.5 | psi | 4.0 | SCFM | AS Well #10 | - | psi | -- | SCFM |
| AS Well #3 | 13.5 | psi | 3.0 | SCFM | AS Well #13 | 13 | psi | 3.0 | SCFM |
| AS Well #5 | 14 | psi | 3.0 | SCFM | AS Well #14 | 13 | psi | 3.5 | SCFM |
| AS Well #7 | 14 | psi | 5.0 | SCFM | AS Well #18 | 12 | psi | 3.0 | SCFM |
| AS Well #9 | 14 | psi | 3.0 | SCFM | AS Well #17 | 13.5 | psi | 3.0 | SCFM |
| AS Well #8 | 14 | psi | 3.5 | SCFM | AS Well #15 | 15 | psi | 3.0 | SCFM |
| AS Well #6 | 13 | psi | 3.0 | SCFM | AS Well #19 | 12.5 | psi | 4.0 | SCFM |
| AS Well #11 | 12 | psi | 3.0 | SCFM | | | | | |

**NOTES**

1020 Collected inffluent 03032014 air sample in canister 1SC00727.

1025 Collected effluent 03032014 air sample in canister 1SC00070.

# 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**

| Date of Transport from Site | Spent GAC Weight (pounds) | Carbon Facility | RCRA Facility # |
|---|---|---|---|
| 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 |
| ***2006 Total*** | ***37,041*** | | |
| March 30, 2007 | 6,913 | Envirotrol Inc. | PAD987270725 |
| September 20, 2007 | 6,164 | Envirotrol Inc. | PAD987270725 |
| ***2007 Total*** | ***13,077*** | | |
| 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 |
| ***2008 Total*** | ***22,033*** | | |
| January 28, 2009 | 7,004 | Siemens Water Technologies | PAD987270725 |
| June 4, 2009 | 6,814 | Siemens Water Technologies | PAD987270725 |
| December 8, 2009 | 6,924 | Siemens Water Technologies | PAD987270725 |
| ***2009 Total*** | ***20,742*** | | |
| June 3, 2010 | 7,207 | Siemens Water Technologies | PAD987270725 |
| ***2010 Total*** | ***7,207*** | | |
| January 25, 2012 | 7,394 | Siemens Water Technologies | PAD987270725 |
| ***2012 Total*** | ***7,394*** | | |
| July 1, 2013 | 6,757 | Siemens Water Technologies | PAD987270725 |
| ***2013 Total*** | ***6,757*** | | |
| **Project Total** | **121,353** | | |

# Appendix D

**SVE System Influent/Effluent Sampling (TO-15)**
**Laboratory Analytical Results (on CD)**
Frost Street Sites - Site ID #s1-30043 I, L, M
New Cassel Industrial Area, Westbury, New York