



DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

May 4, 2015

MEMORANDUM FOR: U.S. Environmental Protection Agency – Region 2

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FROM: AFCEC/CIBE – Plattsburgh
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SUBJECT: Final Quarterly Operations and Maintenance Data Summary Report (4th Quarter /
Calendar Year 2014)
SD-052-02 Building 775 Site (Buildings 774 and 776) and SD-052-01 Apron 2
Chlorinated Plume Site (Buildings 785 and 786)
Sub-Slab Vapor Mitigation Systems
May 2015
Former Griffiss Air Force Base (AFB) Rome, New York
Contract Number FA8903-10-D-8595 / Delivery Order 0014

Accompanying this letter please find the “Final Quarterly Operations and Maintenance Data Summary Report (4th Quarter / Calendar Year 2014) for SD-052-02 Building 775 Site (Buildings 774 and 776) and SD-052-01 Apron 2 Chlorinated Plume Site (Buildings 785 and 786)” in relation to work conducted at the Former Griffiss AFB in Rome, New York under the referenced Performance Based Remediation (PBR) contract. The draft report was submitted on February 23, 2015.

This Report has been prepared by the Air Force Civil Engineer Center (AFCEC) to present the operations and maintenance of the respective sub-slab vapor mitigation systems at the Former Griffiss AFB in Rome, New York. This version of the report incorporates data up until December 31, 2014.

We would appreciate review comments by June 5, 2015 so that project schedules and performance milestones can be maintained in accordance with this PBR Contract.

Should you have any questions or concerns please contact me at 518-563-2871.



David S. Farnsworth
Program Manager/BRAC Environment Coordinator
BRAC Program Execution Branch

FINAL
QUARTERLY OPERATION AND MAINTENANCE DATA SUMMARY REPORT
SD-052-02 BUILDING 775 SITE (BUILDINGS 774 AND 776) AND SD-052-01 APRON 2
CHLORINATED PLUME SITE (BUILDINGS 785 AND 786)
SUB-SLAB VAPOR MITIGATION SYSTEMS
(4TH QUARTER / CALENDAR YEAR 2014 / OCTOBER – DECEMBER)

FORMER GRIFFISS AIR FORCE BASE SITE
ROME, NEW YORK

Prepared for:



Air Force Civil Engineer Center
Building 171
2261 Hughes Ave., Suite 155
Joint Base San Antonio Lackland, TX

Prepared by:

FPM Remediations, Inc

584 Phoenix Drive
Rome, New York 13441

In association with:

CAPESM

10901 Lowell Avenue, Suite 271
Overland Park, Kansas 66210

Contract Number FA8903-10-D-8595/Delivery Order 0014

May 2015

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LIST OF ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
CY	calendar year
FPM	FPM Remediations, Inc.
GAC	granular activated carbon
O&M	Operation and Maintenance
SSVM	Sub-Slab Vapor Mitigation

1 Introduction

FPM Remediations, Inc. (FPM), in association with CAPE Environmental Management, Inc., under contract with the Air Force Civil Engineer Center (AFCEC), is conducting Operation and Maintenance (O&M) on Sub-Slab Vapor Mitigation (SSVM) systems associated with SD-052-02 Building 775 Site [Buildings 774 and 776] and SD-052-01 Apron 2 Chlorinated Plume Site [Buildings 785 and 786] at the former Griffiss Air Force Base (AFB) in Rome, New York. The O&M at the sites is conducted in accordance with provisions of the Basic Contract # FA8903-10-D-8595 and Delivery Order # 0014.

This abbreviated Data Summary Report has been prepared to provide the SSVM systems O&M activities from the 4th quarter of the calendar year (CY) 2014 including the months of October through December. As recommended in the 3rd Quarter CY 2012 Quarterly Operation and Maintenance Report (FPM, May 2013), comprehensive reporting of O&M activities will be reduced to semi-annually (to coincide with semi-annual soil vapor monitoring) and quarterly O&M results will be provided in abbreviated Data Summary Reports. O&M was conducted in accordance with the Final Completion Report Sub-Slab Vapor Mitigation Systems (FPM, February 2013). Previous results are presented in the 3rd Quarter CY 2014 Quarterly Operation and Maintenance Report (FPM, January 2015).

2 Sub-Slab Vapor Mitigation System Operation and Maintenance

Table 2-1 provides the O&M schedule for the SD-052-02 Building 775 Site [Buildings 774 and 776] and SD-052-01 Apron 2 Chlorinated Plume Site [Buildings 785 and 786] SSVM systems.

2.1 4th Quarter / Calendar Year 2014 (October – December) Buildings 774 and 776 Sub-Slab Vapor Mitigation System Operation and Maintenance Results

The SSVM system at Buildings 774 and 776 has been in operation since June 2011. O&M activities conducted during this quarter included weekly system component readings (system temperature, flow, vacuum and motor status) and granular activated carbon (GAC) replacement. The system flow rate and vacuum readings collected in previous quarters and this quarter are illustrated on Figure 2-1 and Figure 2-2, respectively. The GAC was replaced on October 14, 2014 and no system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter. The O&M field forms are presented in Appendix A. The waste inventory tracking form for the spent carbon is provided in Appendix B.

2.2 4th Quarter / Calendar Year 2014 (October – December) Buildings 785 and 786 Sub-Slab Vapor Mitigation System Operation and Maintenance Results

The SSVM system at Buildings 785 and 786 was in operation from May 2011 to August 2013. After the shutdown period due to Building 785 and 786 renovations, the system was turned back online September 25, 2014. O&M activities conducted during this quarter included weekly system component readings (system temperature, flow, vacuum and motor status). GAC was replaced in the previous quarter prior to system start-up. The system flow rate and vacuum readings collected in previous quarters and this quarter are illustrated on Figure 2-3 and Figure 2-

4, respectively. No system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter. The O&M field forms are presented in Appendix A. The waste inventory tracking form for the spent carbon is provided in Appendix B.

3 REFERENCES

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (4th Quarter / Calendar Year 2011), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, Revision 1.0, May 2012.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (1st Quarter / Calendar Year 2012), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, Revision 1.0, October 2012.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (2nd Quarter / Calendar Year 2012), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, Revision 1.0, November 2012.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (3rd Quarter / Calendar Year 2012), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, Revision 2.0, May 2013.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Data Summary Report, (4th Quarter / Calendar Year 2012), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, Revision 2.0, July 2013.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (1st Quarter / Calendar Year 2013), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, Revision 2.0, September 2013.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (2nd Quarter / Calendar Year 2013), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, October 2013.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (3rd Quarter / Calendar Year 2013), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, April 2014.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (4th Quarter / Calendar Year 2013), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, June 2014.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (1st Quarter / Calendar Year 2014), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, July 2014.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (2nd Quarter / Calendar Year 2014), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, October 2014.*

CAPE/FPM Remediations, Inc., *Quarterly Operations and Maintenance Report, (3rd Quarter / Calendar Year 2014), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program, Former Griffiss Air Force Base, Rome, New York, January 2015.*

FPM Remediations, Inc. *Final Completion Report Sub-Slab Vapor Mitigation Systems, Buildings 774, 776, 785 and 786, Former Griffiss Air Force Base, Rome, New York, Revision 0.0, February 2013.*

Figures

Figure 2-1
774SSVM-1, -2 and 776SSVM-1
Long Term Operation Flow Rate
(June 2011 through December 2014)

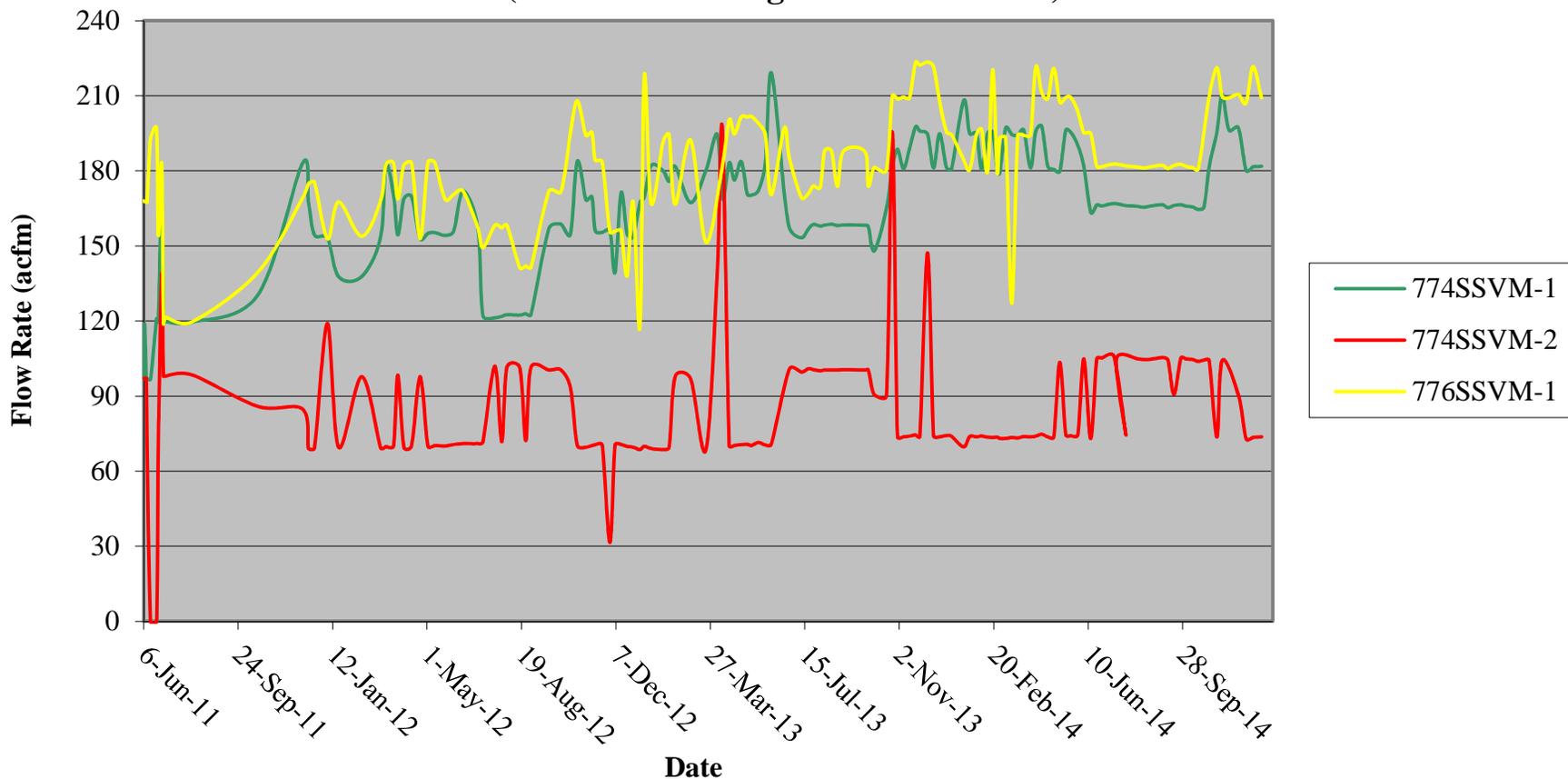
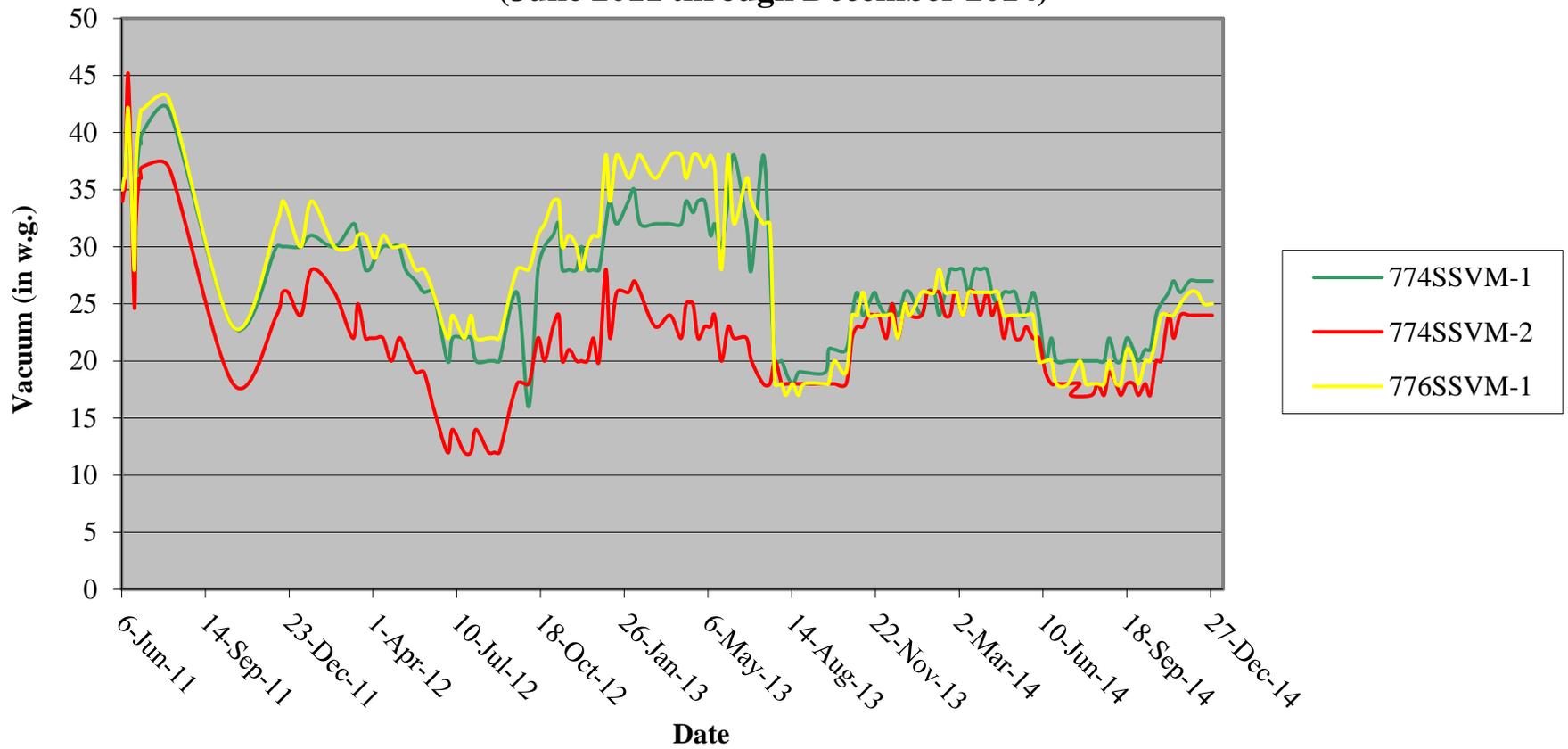
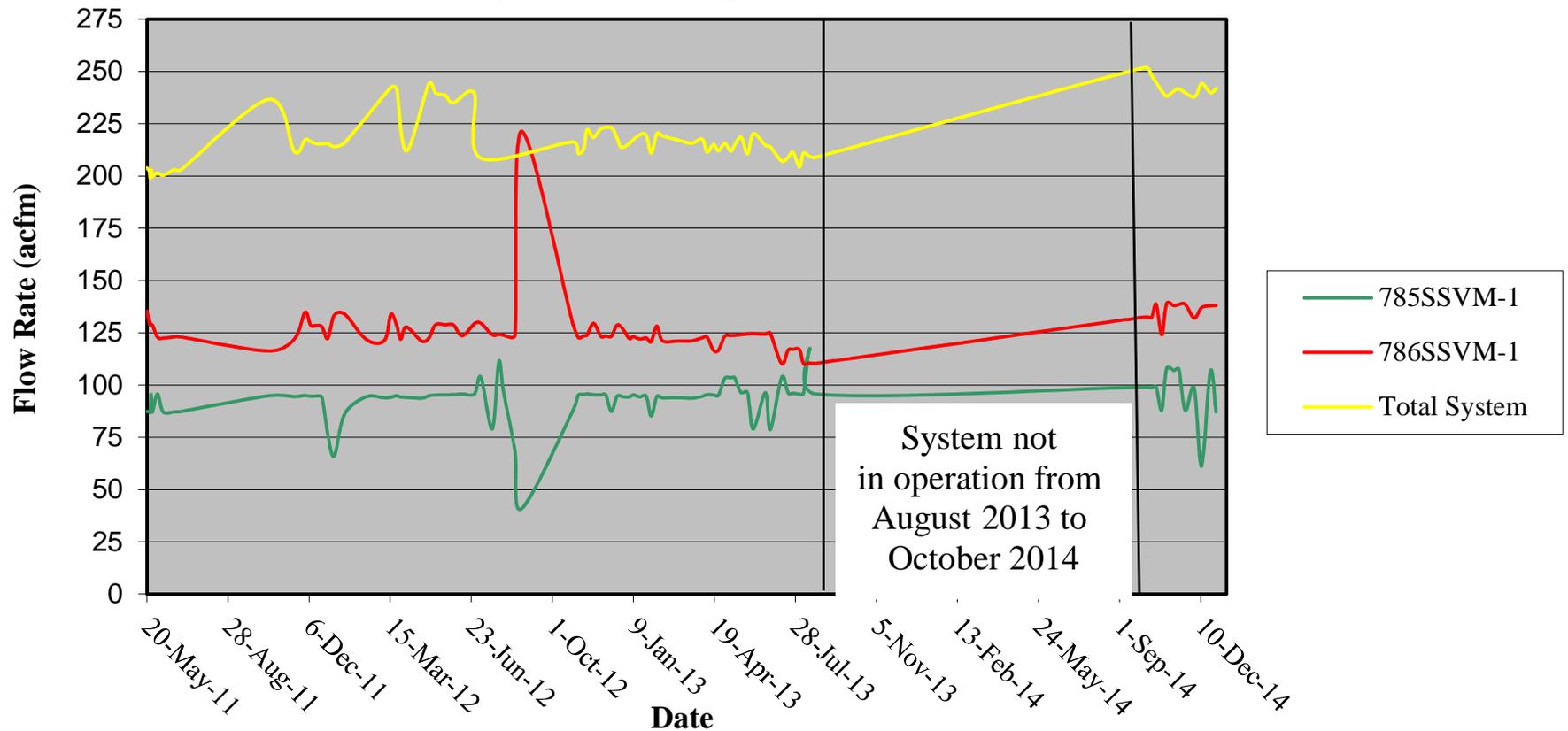


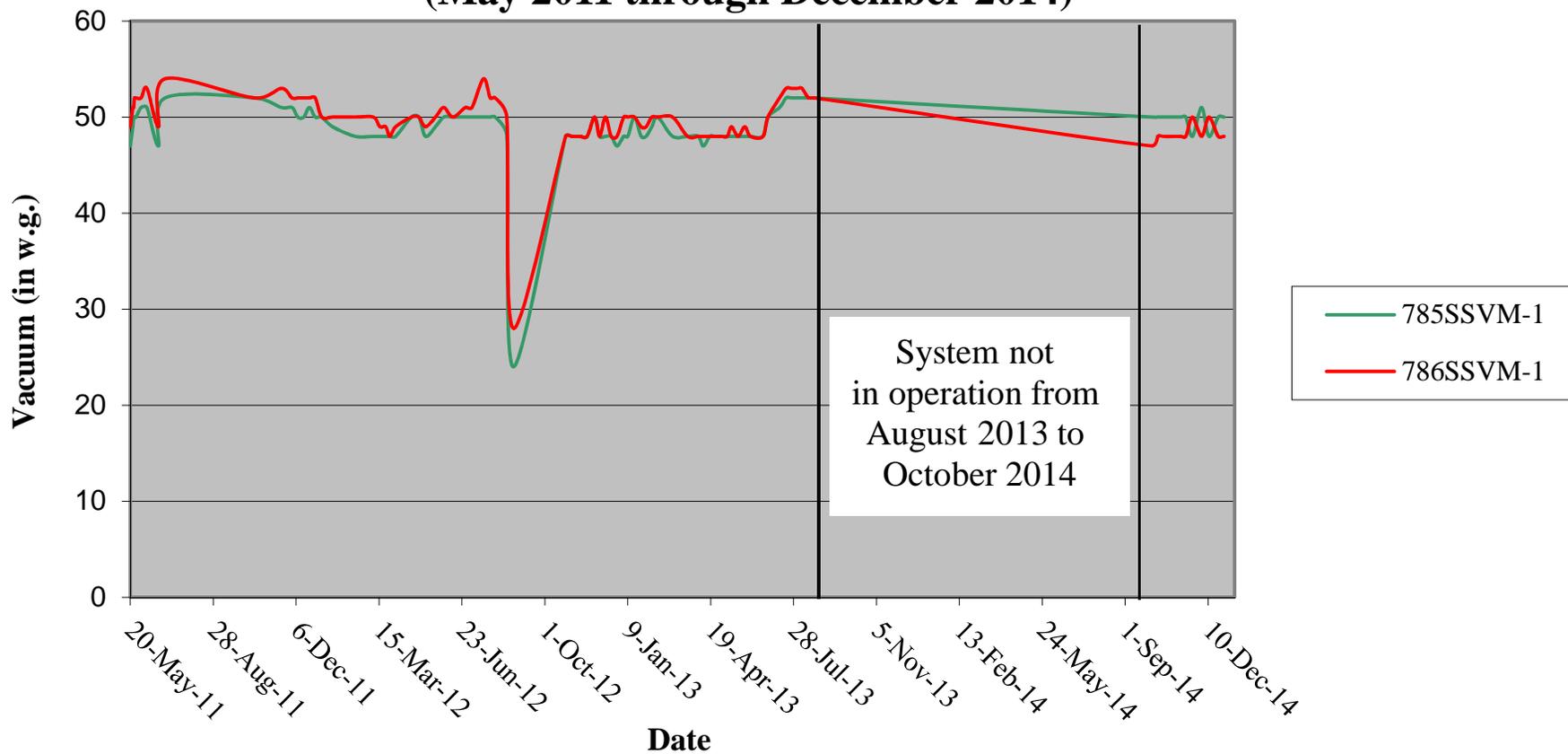
Figure 2-2
774SSVM-1, -2 and 776SSVM-1
Long Term Operation Vacuum
(June 2011 through December 2014)



**Figure 2-3 - 785SSVM-1 and 786SSVM-1
Long Term Operation Flow Rate
(May 2011 through December 2014)**



**Figure 2-4 - 785SSVM-1 and 786SSVM-1
Long Term Operation Vacuum
(May 2011 through December 2014)**



Table

**Table 2-1
SSVM Systems Operation and Maintenance**

Field Activities	Rationale	Location	Parameters
System Component Readings	Weekly recording of system temperature, flow, vacuum and motor status to determine proper operation.	Building 774 / 776 Blower Shed and Building 785 / 786 Blower Shed	None
VMP Vacuum Measurements	Semi-annually recording to support sub-slab depressurization.	VMPs inside buildings as shown on Figure 3-1 and 3-2	None
Granular Activated Carbon Replacement	Every four months to adsorb extracted chlorinated solvent vapors.	Building 774 / 776 Blower Shed and Building 785 / 786 Blower Shed	None
Indoor Air Sampling	Semi-Annually to evaluate current human exposure and to obtain site specific attenuation factors for risk assessment (ratio of indoor air to sub-slab vapor concentrations).	One sample per building as shown on Figure 3-1 and 3-2	VOC: Method TO-15 Full List
Outdoor Air Sampling	Semi-Annually to occur simultaneously with indoor air sampling to evaluate potential influence of outdoor air on indoor air sampled.	One sample per site as shown on Figure 3-1 and 3-2	VOC: Method TO-15 Full List
Sub-Slab Vapor Sampling	Semi-Annually to occur simultaneously with indoor air sampling to evaluate chlorinated solvent transport and mitigation and to obtain site specific attenuation factors for risk assessment (ratio of indoor air to sub-slab vapor concentrations).	VMPs inside buildings as shown on Figure 3-1 and 3-2	VOC: Method TO-15 Full List
Influent Sampling	Semi-Annually prior to sub-slab sampling to determine soil vapor extraction.	SSVM System's exhaust stack before carbon treatment	VOC: Method TO-15 Full List

Appendix A

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10/2/14			
conducted by:	VM/DB			
Site ID:	785/786		Patm (inch hg):	30.19
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	-50	785-1	0.5	58
786-1	-47	786-1	0.9	59
total	6.3 inHg	total	3.6	72
Blower Temp (deg F)	152	After Cooler Temp (deg F)	128	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)
786VMP-2		0.075		
786VMP-1		72 →	2.2	
786VMP-3		1.35		
785VMP-2		0.4		
785VMP-4		1.95		
785VMP-5		0.3		

Flow Rate (acfm)
99.1
132.54
 251.93

Appendix B

Waste Inventory Tracking Form

Location: Buildings 774, 776, 785 and 786

Project Name: 1015-11-01 SVI

Activities: Spent Carbon Generation

Date	Activity Generating Waste (borehole # / well #)	Description of Waste	Field Evidence of Contamination	Estimated Volume (gals)	Type of Container (storage ID #)	Location of Container	Waste Characterization
19-Dec-11	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	Yes - Sampled on 08/13/13
23-Feb-12	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	Yes - Sampled on 08/13/13
23-Apr-12	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	Yes - Sampled on 08/13/13
5-Jul-12	SVE System (785 and 786)	Spent Carbon	Soil Vapor	110	55-gal drum	B786	Yes - Sampled on 08/13/13o
17-Jul-12	SVE System (774 and 776)	Spent Carbon	Soil Vapor	110	55-gal drum	B774	Yes - Sampled on 08/13/13
5-Sep-12	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	Yes - Sampled on 08/13/13
4-Dec-12	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	Yes - Sampled on 08/13/13
24-Apr-13	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	Yes - Sampled on 08/13/13
13-Sep-13	SVE System (774 and 776)	Spent Carbon	Soil Vapor	110	55-gal drum	B774	Yes - Sampled on 8/22/14
13-Jan-14	SVE System (774 and 776)	Spent Carbon	Soil Vapor	110	55-gal drum	B774	Yes - Sampled on 8/22/14
20-May-14	SVE System (774 and 776)	Spent Carbon	Soil Vapor	110	55-gal drum	B774	Yes - Sampled on 8/22/14
24-Sept-14	SVE System (785 and 786)	Spent Carbon	Soil Vapor	110	55-gal drum	B785	Yes - Sampled on 10/14/14
14-Oct-14	SVE System (774 and 776)	Spent Carbon	Soil Vapor	110	55-gal drum	B774	Yes - Sampled on 10/14/14

Note: Describe whether soil or water samples have been collected for waste characterization, include date, if known.

Comments : _____

Signature : _____