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AIR FORCE CIVIL ENGINEER CENTER

March 8, 2016

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SUBJECT: Final SSVM Systems OES and Quarterly Operations and Maintenance Report (4th Quarter / Calendar Year 2015)
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
Former Griffiss Air Force Base (AFB) Rome, New York
Contract Number FA8903-10-D-8595 / Delivery Order 0014
February 2016

Accompanying this letter please find the "Final SSVM Systems OES and Quarterly Operations and Maintenance Report (4th Quarter / Calendar Year 2015) 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.

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 2015.

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



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FINAL
OPTIMIZED EXIT STRATEGY AND
QUARTERLY OPERATION AND MAINTENANCE REPORT
(4TH QUARTER / CALENDAR YEAR 2015 / OCTOBER – DECEMBER)

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

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LIST OF ACRONYMS AND ABBREVIATIONS

acfm	actual cubic feet per minute
AF	Air Force
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFRPA	Air Force Real Property Agency
bgs	below ground surface
COC	Contaminant of Concern
CQCRs	Chemical Quality Controls Reports
CY	calendar year
DCE	dichloroethylene/dichloroethene
EEEPC	Ecology & Environment Engineering, P.C
FPM	FPM Remediations, Inc.
ft	feet
GAC	granular activated carbon
in w.g.	inches of water
J	The analyte was positively identified, but the quantitation is an estimation
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	Operation and Maintenance
PCE	tetrachloroethylene/perchloroethylene/tetrachloroethene/perchloroethene
PDI	pre-design investigation
RAWP	Remedial Action Work Plan
ROD	Record of Decision
RWPCF	Rome Water Pollution Control Facility
sq. ft.	square feet
SSVM	Sub-Slab Vapor Mitigation
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

TCA	trichloroethane
TCE	trichloroethylene/trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VMP	Vapor Monitoring Point
VOC	**V**olatile Organic Compound

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. Figure 1-1 depicts the SSVM site locations of Buildings 774, 776, 785 and 786.

This Quarterly O&M/Optimized Exit Strategy (OES) Report has been prepared to:

- Document the SSVM systems O&M activities from the 4th quarter of the calendar year (CY) 2015 including the months of October through December and
- Provide optimization recommendations based on the previous O&M results following the exit strategy provided in the pending decision document (AFCEC, February 2016).

This report includes analytical results and discussion of soil vapor intrusion (SVI) sampling which was performed to evaluate SSVM. O&M was conducted in accordance with the Final Completion Report Sub-Slab Vapor Mitigation Systems (FPM, February 2013).

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2 SITE INFORMATION

2.1 SD-052-02 Building 775 (Buildings 774 and 776)

Buildings 774 and 776 are located between Phoenix Drive and Patrol Road on Strategic Air Command Hill at the former Griffiss AFB in Rome, NY and are associated with the SD-052-02 Building 775 Site (Figure 2-1). Building 774 is a one-story, 18,990 square feet (sq. ft.) office building, currently occupied by a computer/security firm. The building is occupied on work days from 8 AM to 5 PM by approximately 45 people. Building 774 was built in 1959, but underwent major renovations in 2000. New windows and doors were installed, 36 new air handlers were installed, including new air ducts in ceilings and new cooling towers. The building is built on an 8-inch thick concrete slab, with no basement and most floors are covered with carpeting. Several floor drains exist in bathrooms, janitor closets and the boiler room.

Building 776 is a one-story, 27,410 sq. ft. office building, currently occupied by a software development firm. The building is occupied on work days from 7 AM to 6 PM by approximately 80 people. Building 776 was built in 1959, but underwent major renovations in 2002. New windows, which do not open, and doors were installed, the interior was refinished and most floors were covered with new carpeting. Heat and outdoor air are provided through 43 heat pumps. The building is built on a 3.5 to 6-inch thick concrete slab, with no basement. Several floor drains exist in bathrooms and one crack was observed in the concrete floor near the southeastern entrance door.

The Building 775 Site plume is located downgradient and south of former maintenance facilities in Buildings 774 and 776 and former fuel pump house Building 775. Although the source has not been identified, solvent use in Building 774 was thought to be a primary source of trichloroethylene (TCE) contamination. Solvent use was widespread in these facilities in the 1950s, 1960s, and early 1970s. The contaminated aquifer is comprised of silty sands with an average thickness extending from 60 feet (ft) below ground surface (bgs) to 120 ft bgs, where shale bedrock is encountered.

2.1.1 Groundwater Investigation

The primary contaminant exceeding New York State Department of Environmental Conservation (NYSDEC) Class GA Groundwater Standards is TCE, with minor detections of 1,1,1-trichloroethane (TCA) and perchloroethylene (PCE). Figure 2-1 shows Building 774 and 776 along with the location of monitoring wells. Monitoring well 775VMW-5, located near the corner of Building 776, is the only well in the maintenance area that contains elevated levels of TCE (99.2 micrograms per liter [µg/L] in September 2004). Most of the Building 775 plume appears to have migrated south toward Landfill 6. The location of Landfill 6 is depicted in Figure 1.1. In September 2004, the maximum groundwater TCE concentration was 134 µg/L (detected at well 775MW-20), located near the leading edge of the plume near Perimeter Road. TCE was detected at 132 µg/L (in well 775VMW-10), which is also located near the leading edge of the plume near Perimeter Road. TCE in both of these wells was detected in the bottom half of the sandy aquifer in screened intervals from 88 to 120 ft bgs. Nearby well LF6MW-1 is

screened in the upper 10 ft of the aquifer and does not have detectable TCE concentrations (FPM, February 2005).

Additional sampling was performed by Ecology & Environment, Inc. and FPM in 2006 as part of the feasibility study for the Building 775 Site. Ecology & Environment Engineering, P.C., (EEEPC) performed pre-design investigation (PDI) activities at the Building 775 Site starting in September 2006. First, two monitoring wells were installed (775MW-27 and -28). The wells were developed and sampled at the end of October into the beginning of November 2006. Results showed that the primary contaminant exceeding NYSDEC Class GA Groundwater Standards was TCE, with minor detections of 1,1,1-TCA and PCE. FPM performed sampling at several other monitoring wells at the Building 775 Site in order to create a complete understanding of current site conditions. The results and conclusions were reported in the Final PDI Report (EEEPC, February 2007).

A remedial action was selected through the On-base Groundwater Record of Decision (ROD) [Air Force Real Property Agency (AFRPA), December 2008] and described in the Remedial Action Work Plan (RAWP) [Parsons, July 2008]. The SVI in Buildings 774 and 776 is being managed as a separate operable unit and therefore is not included in the On-base Groundwater ROD. The remedial action is a groundwater extraction system with a discharge to an off-site treatment facility. The groundwater extraction system is designed to contain the contaminated plume and extract the contaminants from the aquifer which is located surrounding monitoring well 775VMW-5 and presented in Figure 2-1. The start-up date of the groundwater extraction system was January 5, 2009. At this time, FPM also started sampling at Building 775 Site to monitor the performance of the installed remedy. The most recent performance monitoring sampling results have shown TCE detections up to 57.8 µg/L in 775VMW-5 (FPM, February 2016). This is a decrease from the September 2004 sampling event, where monitoring results from 775VMW-5 showed a TCE detection of 99 µg/L.

2.1.2 2006 Soil Vapor Intrusion Evaluation

EEEPC also performed an SVI evaluation during the 2006 PDI activities (at Building 775 Site - SD052-02). Sub-slab sampling at the Building 775 Site indicated that chloroform and TCE were present in the sub-slab vapor at Buildings 774 and 776 at concentrations above the Air Force (AF) screening levels (FPM, October 2007). Indoor air sampling at both buildings indicated that these contaminants were present, but at concentrations below the AF screening levels. Sub slab vapor TCE concentrations ranged from 810 micrograms per cubic meter (µg/m^3) to 1,700 µg/m^3 at Building 774. Sub slab vapor TCE concentrations ranged from 700 µg/m^3 to 3,000 µg/m^3 at Building 776. The TCE and chloroform detections were likely associated with the groundwater contamination plume located in the area. TCE has been detected in groundwater at concentrations above screening levels, while chloroform has been detected in groundwater at concentrations below screening levels. The SVI evaluation sample locations are shown on Figure 2-1 and corresponding results are provided in Table 2-1.

This SVI survey was reviewed by the AF, NYSDEC, New York State Department of Health (NYSDOH) and United States Environmental Protection Agency (USEPA) and, during

discussions among these parties, a plan for additional sampling was established and ultimately implemented by FPM in April and May 2008 (FPM, April 2008).

2.1.3 Building 774 Soil Vapor Intrusion Results 2008

The indoor air TCE concentrations, reported for Building 774 during the April 2008 sampling round, were two orders of magnitude higher than those reported in the 2006 sampling round. The Building 774 point of contact (Dave Perella, Senior Facilities Engineer) confirmed that renovations, performed in Building 774 between December 2007 and May 2008, included carpet glue removal through solvent use. Indoor and outdoor air samples were re-collected in May 2008 in Building 774. The re-collected results show that indoor air TCE concentrations were similar to levels reported in 2006 (Table 2-3). Sub-slab vapor results for Building 774 slightly decreased in comparison to 2006 results. The highest result reported in 2008 was 590 µg/m^3 at location 774SSV-2.

In Building 774, the 2008 indoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. The 2008 sub-slab vapor concentrations in Building 774 exceeded AF screening levels.

2.1.4 Building 776 Soil Vapor Intrusion Results 2008

The indoor air TCE concentrations reported for Building 776 during the April 2008 sampling round were comparable to levels reported in 2006. Sub-slab vapor results for Building 776 were lower compared to 2006 results. The highest result reported in 2008 was 110 µg/m^3 at location 776SSV-2.

In Building 776, the 2008 indoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. The 2006 sub-slab vapor concentrations in Building 776 exceeded AF screening levels. Concentrations in 2008 were below screening levels.

2.2 SD-052-01 Apron 2 Chlorinated Plume (Buildings 785 and 786)

Buildings 785 and 786 are located on the SD-052-01 Apron 2 Chlorinated Plume Site at the former Griffiss AFB in Rome, NY (Figure 1-1 and 2-2). Buildings 785 and 786 are 28,251 sq. ft., airplane hangars that were built in 1959. The buildings are built on a 13.5 to 14-inch thick, unsealed concrete slab comprised of numerous concrete pads installed together with areas of caulked expansion gaps. Large visible cracks in the concrete floors were repaired. According to drilling logs from the site, silty sand and gravelly sands are the predominant lithology encountered. Groundwater monitoring wells are currently present in Building 785 and outside in the vicinity of both buildings.

Buildings 785 and 786 are currently undergoing renovations for future use as airplane hangars and have a primarily open layout with the exception of planned bathrooms, offices, and utility rooms in the northern corners of the buildings. The trenches that used to be located in the floors have been filled in during the installation of new concrete floors. Due to the extensive renovations , the buildings are adequately sealed and all doors and windows are kept closed.

2.2.1 Groundwater Investigation

An extensive groundwater investigation has occurred surrounding Buildings 785 and 786, which is now in the performance monitoring phase. There are three primary contaminants in the plumes that exceed NYSDEC Class GA Groundwater Standards: TCE and its breakdown products cis-1,2-dichloroethylene (DCE) and vinyl chloride (VC). The southern plume is commingled with several petroleum fuel plumes originating from the Apron 2 fueling system. At locations where chlorinated solvents and fuel contaminants are commingled, significant reductive dechlorination is occurring. Therefore, the selected remedy is monitored natural attenuation, as stated in the On-base Groundwater ROD (AFRPA, December 2008). The SVI in Buildings 785 and 786 is being managed as a separate operable unit and therefore is not included in the On-base Groundwater ROD. Monitored natural attenuation was initiated on September 24, 2008. The most recent groundwater sampling results have shown TCE detections up to 11.6 µg/L at monitoring well 782VMW-105B, cis-1-2-DCE detections up to 51.0 µg/L at monitoring well 782VMW-78 and VC detections up to 35.6 µg/L at monitoring well 782VMW-96 (FPM, July 2015).

2.2.2 2006 Soil Vapor Intrusion Evaluation

EEEPC performed an SVI Evaluation in 2006 at the Apron 2 Chlorinated Plume Site. Buildings 782, 783, 784, 785, and 786 were evaluated. No exceedances of the screening levels were reported for Buildings 782, 783, and 784. The Nosedocks 1 and 2 ROD (AFRPA, July 2011) included the selected remedy of No Further SVI action or evaluation for these buildings. Sub-slab sampling at the Apron 2 Chlorinated Plume Site indicated that PCE, TCE and chloroform were present in the sub-slab vapor beneath Buildings 785 and 786 at concentrations above the AF screening levels. Sub-slab vapor sampling results for the 2006 sampling event showed TCE concentrations ranging from 2,300 µg/m^3 to 11,000 µg/m^3 at Building 785. TCE was detected beneath Building 786 at concentrations ranging from 4,700 µg/m^3 to 81,000 µg/m^3 in 2006 and PCE was detected at 2,200 µg/m^3at location 786SSV-1. Indoor air sampling indicated that PCE and TCE were present, but at concentrations below the AF screening levels. No chloroform was reported in the indoor air. TCE was detected consistently in groundwater samples from wells within the groundwater contamination plume. PCE was never detected in groundwater. Chloroform exceedances of the NYSDEC Class GA Groundwater Standards were reported in the March 2009 sampling round in virtually all monitoring wells at Building 786. These exceedances were attributed to a reported water line break which discharged drinking water for an extended period of time at the site. The chloroform exceedances have shown a decreasing trend after the leak was repaired. SVI evaluation sample locations are shown on Figure 2-2 and corresponding results are provided in Table 2-1.

This SVI survey was reviewed by the AF, NYSDEC, NYSDOH, and USEPA and, during discussions among these parties, a plan for additional sampling was established and ultimately implemented by FPM in April and May 2008 (FPM, April 2008).

2.2.3 Building 785 Soil Vapor Intrusion Results 2008

Sub-slab sampling in 2008 at the Apron 2 Chlorinated Plume Site indicated that chloroform and TCE exceeded screening levels in the sub-slab vapor beneath Building 785. Indoor air sampling indicated that these contaminants were present, but at concentrations below the screening levels. The April 2008 sampling round data were lower at 785SSV-1 (identical to two orders of magnitude lower) than those reported for the 2006 sampling round data. TCE detections ranged from 11 $\mu g/m^3$ to 2,200 $\mu g/m^3$.

2.2.4 Building 786 Soil Vapor Intrusion Results 2008

Sub-slab sampling in 2008 at the Apron 2 Chlorinated Plume Site indicated that PCE and TCE exceeded screening levels in the sub-slab vapor beneath Building 786. Indoor air sampling indicated that these contaminants were present, but at concentrations below the screening levels. Sub-slab vapor sampling results for the April 2008 sampling round were lower but within the same order of magnitude as those reported for the 2006 sampling round. Sub-slab vapor TCE concentrations ranged from 69 $\mu g/m^3$ to 19,000 $\mu g/m^3$. Generally, small petroleum detections were reported in all samples, but none exceeded the sub-slab screening levels.

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3 SUB-SLAB VAPOR MITIGATION SYSTEM OPERATION AND MAINTENANCE

3.1 Buildings 774 and 776 Sub-Slab Vapor Mitigation System

FPM performed SSVM at Buildings 774 and 776 with continuous system operation starting on June 6, 2011. The Buildings 774 and 776 system is composed of four horizontal wells with a total combined screen length of 430 ft performing under a flow rate of 1 actual cubic feet per minute (acfm) per foot of screen. Building 774 has three horizontal wells with a total combined screen length of 250 ft and Building 776 has one horizontal well with a screen length of 180 ft. The SSVM system is shown in Figure 3-1.

Table 3-1 illustrates the SSVM Systems O&M schedule. O&M includes weekly system component readings (system temperature, flow, vacuum and motor status), semi-annual vapor monitoring point (VMP) vacuum measurements, and granular activated carbon (GAC) disposal and replacement every four months. Indoor and outdoor air sampling, sub-slab vapor sampling, and influent sampling are conducted semi-annually during the heating and cooling months. Table 3-2 presents the sub-slab vapor, indoor and outdoor air results and Table 3-3 presents the influent air results for all of the SSVM System performance monitoring events. The indoor and outdoor air sampling results are now compared to the EPA Regional Industrial Screening Levels (RSLs)[1] (EPA, November 2014). The Sub-slab RSLs used for comparison are calculated using the EPA Vapor Intrusion Screening Level Calculator[2] (USEPA, May 2014). These levels are now used based on USEPA comments provided for the pending SVI decision document.

3.1.1 Previous Buildings 774 and 776 Sub-Slab Vapor Mitigation Operations and Maintenance Results

3.1.1.1 Buildings 774 and 776 Sub-Slab Vapor Mitigation Operations and Maintenance 2011

The installation, start-up and initial operation of the SSVM system at Buildings 774 and 776 occurred under a separate contract (FA8903-04-D-8687). This mitigation action is documented in the Final Completion Report Sub-Slab Vapor Mitigation Systems (FPM, February 2013). The performance evaluation section of this referenced report documents sub-slab vapor sampling results indicating a decreasing trend in TCE levels in Buildings 774 and 776. The highest reported result in Building 774 was during the baseline sampling event (May 4, 2011) at 2,900 µg/m^3 at location 774VMP-2. After five months of system operation, the reported result for this location was 11 µg/m^3. The highest reported result in Building 776 during the baseline sampling event (May 4, 2011) was 830 µg/m^3 at location 776VMP-3. After five months of system operation, the reported result for this location was 7.3 µg/m^3.

All indoor and outdoor air concentrations were within an acceptable range and did not pose an unacceptable risk to building occupants. All sub-slab vapor concentrations fell below screening levels after five months of system operation.

[1] http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

[2] http://www.epa.gov/oswer/vaporintrusion/guidance.html

4th Quarter / Calendar Year 2011 (November - December)

It was documented in the Quarterly Operations and Maintenance Report, (4th Quarter / Calendar Year 2011), (CAPE/FPM, May 2012), that the Buildings 774 and 776 SSVM system extracted approximately 30 gallons per week of water which was collected in a vapor-liquid separator. An application to discharge extracted water into the sanitary sewer was submitted to the Rome Water Pollution Control Facility (RWPCF). Discharge approval was received on January 5, 2012.

A vapor effluent sample was collected on December 19, 2011 from the Buildings 774 and 776 SSVM system. The effluent sampling location was installed on the SSVM system's exhaust stack following carbon filtration in the treatment chain. TCE was not detected in the effluent samples of Buildings 774 and 776.

GAC replacement was conducted in December 2011 following the effluent sampling event. GAC replacement is based on the carbon life span which is a factor of adsorption of the effluent contaminant of concern (COC) concentrations. This replacement schedule for GAC was initially determined through calculations outlined in the Work Plan for SSVM Design (FPM, February 2011). These calculations were then checked empirically using the December 2011 effluent sampling results. It was determined that a bimonthly schedule for GAC replacement (CAPE/FPM, May 2012) was adequate and effluent sampling was eliminated from the O&M schedule once the carbon life span was calculated and subsequent GAC replacement scheduled.

3.1.1.2 Buildings 774 and 776 Sub-Slab Vapor Mitigation Operations and Maintenance 2012

1st Quarter / Calendar Year 2012 (January - March)

GAC was replaced on February 23, 2012, in accordance with the O&M schedule for carbon replacement.

Sampling occurred at Buildings 774 and 776 on January 25 and 26, 2012. The highest TCE concentration for sub-slab sampling results in Building 774 was at location 774VMP-1, with a concentration of 4.8 µg/m^3. The indoor air sampling result for TCE at Building 774 was 1.5 J µg/m^3 (The J data qualifier indicates that the analyte was positively identified, but the quantitation is an estimation). TCE was not detected in the outdoor air sample collected between Buildings 774 and 776. For Building 776, the highest sub-slab TCE concentration was in location 776VMP-3, at 13 µg/m^3. The indoor air TCE concentration was 0.41 J µg/m^3. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. All of the sub-slab results were below vapor screening levels.

Semi-annual influent sampling occurred on January 24, 2012, prior to sub-slab vapor sampling to determine effective soil vapor extraction (SVE). The influent sampling location was installed on

the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 300 µg/m^3.

2nd Quarter / Calendar Year 2012 (April - June)

GAC was replaced on April 23, 2012, in accordance with the O&M schedule for carbon replacement. Sampling did not occur at Buildings 774 and 776 during the 2nd quarter / CY 2012.

Weekly system component readings from this quarter showed that the system vacuum had a decreasing trend. This is attributed to the system initially extracting water from the sub-surface up until April 2012. The vapor liquid separator did not collect any water past April 2012. Therefore, the approved permit (FPM-001) through RWPCF for Buildings 774 and 776 to discharge extracted water into the sanitary sewer was reviewed and closed.

3rd Quarter / Calendar Year 2012 (July - September)

GAC was replaced on July 17 and September 5, 2012 at the site. Additional O&M activities that occurred at the Buildings 774 and 776 SSVM system included the replacement of the inline air filter.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on August 6, 2012. Only one outdoor air sample was collected between Buildings 774 and 776 due to the close proximity of the buildings. The highest sub-slab TCE concentration was 20 µg/m^3 at Building 774 and 12 µg/m^3 at Building 776. At Building 774, TCE was reported at 0.35 F µg/m^3 in the indoor air and was non detect at Building 776. TCE was also not detected in the outdoor air between Buildings 774 and 776. All of the sub-slab results were below vapor screening levels. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants.

Semi-annual influent sampling occurred on August 3, 2012, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location is on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 190 µg/m^3.

4th Quarter / Calendar Year 2012 (October - December)

GAC was replaced on December 4, 2012 at the site. Sampling did not occur for the Buildings 774 and 776 SSVM system during this quarter.

3.1.1.3 Buildings 774 and 776 Sub-Slab Vapor Mitigation Operations and Maintenance 2013

1st Quarter / Calendar Year 2013 (January - March)

The GAC was not replaced during this quarter. Additional O&M activities conducted during this quarter included troubleshooting system shutdown in January. The system was not running upon arrival for the weekly inspection on January 25, 2013. It was assumed that the system had been

off for up to one week since the system was operating during the previous week's readings. Troubleshooting occurred and it was determined that the contactor switch in the control panel failed most likely due to condensation. After troubleshooting, the contactor switch was replaced and the system was turned on. There were no additional shut downs reported during this quarter.

Vacuum readings were collected at all VMPs associated with the system on February 14, 2013. Results showed all VMPs were under vacuum except for 774VMP-1 and -3. The lack of vacuum is attributed to the structural foundation and/ or preferential paths. Also, 774VMP-3 is located at the point designed to capture data from the worst case scenario, and is installed at the end of the 774SSVM-1 well screen with the greatest distance off axis.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on February 21, 2013. The highest sub-slab TCE concentration in Building 774 was reported for location 774VMP-3 at 1.3 F $\mu g/m^3$ and the highest sub-slab TCE concentration in Building 776 was reported for location 776VMP-3 at 2.4 $\mu g/m^3$. TCE was not detected in the indoor air sample from Building 776 or the outdoor air sample. TCE was detected with a concentration of 0.22 F $\mu g/m^3$ in the indoor air at Building 774. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. All of the sub-slab vapor results were below vapor screening levels.

Semi-annual influent sampling occurred on February 15, 2013, prior to sub-slab vapor sampling to determine effective extraction. The influent sampling location is on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 20 $\mu g/m^3$. An effluent sample was also collected. TCE was non detect.

2nd Quarter / Calendar Year 2013 (April - June)

GAC was replaced on April 24, 2013. Additional O&M activities conducted during this quarter included water removal from the knock-out tank. The system was not running upon arrival for the weekly inspection on April 4, 2013. The system is programmed to automatically shut down when the knock-out tank contains more than half of its capacity of water. It was assumed that the system was shut down as a result of the water level in the knockout tank and that it had been off for up to one week since the system was operating during the previous week's readings. Approximately 27 gallons of water was pumped out of the knock-out tank into a 55-gallon drum awaiting sampling and proper disposal. After the water was removed, the system was turned on. There were no additional shut downs reported during this quarter.

3rd Quarter / Calendar Year 2013 (July - September)

The GAC was replaced on September 13, 2013 and no system shutdowns were reported during this quarter. Additional water (approximately 25 gallons) was pumped out of the knock-out during this quarter.

As a result of the collection of water from the knock-out tank in April 2013, the discharge permit through the City of Rome was re-opened. Prior to the re-opening of the discharge permit, the water was sampled on August 8, 2013 and analyzed for volatile organic compounds (VOCs).

Only acetone was detected. The detected concentration was 3.9 J µg/L. The NYS Groundwater Standard is 50 µg/L. The J data qualifier indicates that the analyte was positively identified, but the quantitation is an estimation. The water was discharged to the City of Rome sewer system on September 13, 2013. Additional preventative measures have been implemented as a result of the water collection in the knockout tank. The preventative measures include inspections of the knock-out tank during the weekly system inspections and removal of any water. All collected water will be stored in 55-gallon drums and sampled prior to discharge to the City of Rome sewer system. No additional water was removed through the remainder of the quarter.

A composite sample of the spent GAC from the SSVM system at Buildings 774 and 776 was collected on August 8, 2013 and analyzed for Toxicity Characteristic Leaching Procedure (TCLP) VOCs and ignitibility. There were no detections and disposal of the spent carbon is pending.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on August 8, 2013. The highest sub-slab TCE concentration in Building 774 was reported for location 774VMP-3 at 0.33 F µg/m^3 and the highest sub-slab TCE concentration in Building 776 was reported for location 776VMP-2 at 0.20 F µg/m^3. All of the sub-slab results were below vapor screening levels. TCE was not detected in the indoor air or outdoor air samples from Buildings 774 and 776.

Semi-annual influent sampling occurred on February 15, 2013, prior to sub-slab vapor sampling to determine effective extraction. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 120 µg/m^3.

4th Quarter / Calendar Year 2013 (October - December)

The GAC was not replaced and no system shutdowns were reported during this quarter. Also, no water was observed in the knock-out tank requiring removal. Vacuum readings were collected at all VMPs associated with the system on November 1, 2013. Vacuum readings at Building 774 VMPs were 0.01 inch w.g. (774VMP-1), 0.11 inch w.g. (774VMP-2), and 0.015 inch w.g. (774VMP-3). Vacuum readings at Building 776 VMPs were 0.095 inch w.g. (776VMP-1), 0.015 inch w.g. (776VMP-2), and 0.01 inch w.g. (776VMP-3).

3.1.1.4 Buildings 774 and 776 Sub-Slab Vapor Mitigation Operations and Maintenance 2014

1st Quarter / Calendar Year 2014 (January - March)

The GAC was replaced January 13, 2014 and no system shutdowns were reported during this quarter.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on January 30, 2014. The highest sub-slab TCE concentration in Building 774 was reported for location 774VMP-1 at 6.8 µg/m^3 and the highest sub-slab TCE concentration in Building 776 was

reported for location 776VMP-3 at 2.6 µg/m^3. All of the sub-slab vapor results were below vapor screening levels. TCE was detected with a concentration of 0.34 J µg/m^3 in the indoor air at Building 774 and 0.26 J µg/m^3 in the indoor air at Building 776. The TCE concentration detected in the outdoor air sample was 1.2 µg/m^3. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants.

Semi-annual influent sampling occurred on January 28, 2014, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 32 µg/m^3. An effluent sample was not collected.

2nd Quarter / Calendar Year 2013 (April - June)

The GAC was replaced on May 20, 2014 and no system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

3rd Quarter / Calendar Year 2014 (July - September)

The GAC was not replaced this quarter and no system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on July 17, 2014. The highest sub-slab TCE concentration in Building 774 was 9.2 J µg/m^3 at location 774VMP-3 and the highest sub-slab TCE concentration in Building 776 was 3.5 µg/m^3 at location 776VMP-3. All of the sub-slab vapor results were below vapor screening levels. TCE was not detected in the indoor air at Building 774 but was detected at 0.95 J µg/m^3 in the indoor air at Building 776. The TCE concentration detected in the outdoor air sample was 0.53 J µg/m^3. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants.

Semi-annual influent sampling occurred on July 16, 2014, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 97 µg/m^3. An effluent sample was not collected.

4th Quarter / Calendar Year 2014 (October - December)

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.

3.1.1.5 Buildings 774 and 776 Sub-Slab Vapor Mitigation Operations and Maintenance 2015

1st Quarter / Calendar Year 2015 (January - March)

The GAC was replaced on February 26, 2015 and no system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on January 22, 2015. The highest sub-slab TCE concentration in Building 774 was 0.71 µg/m^3 at location 774VMP-1 and the highest sub-slab TCE concentration in Building 776 was 2.1 µg/m^3 at location 776VMP-3. All of the sub-slab vapor results were below vapor screening levels. TCE was not detected in the indoor air at Building 774 but was detected at 0.35 µg/m^3 in the indoor air at Building 776. TCE was not detected in the outdoor air sample. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants.

Semi-annual influent sampling occurred on January 22, 2015, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 100 µg/m^3. An effluent sample was not collected.

2nd Quarter / Calendar Year 2015 (April - June)

The GAC was not replaced and there were no system shutdowns reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

3rd Quarter / Calendar Year 2015 (July - September)

The GAC was not replaced and no system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 774 and 776 on August 31, 2015. All sampling results are presented in Table 3-2. Only one outdoor air sample was collected between Buildings 774 and 776 due to the close proximity of the buildings. The highest sub-slab TCE concentration in Buildings 774 and 776 were reported as follows:

- Building 774 - TCE concentration: 1.9 µg/m^3 at location 774VMP-2, and
- Building 776 - TCE concentration: 5.1 µg/m^3 at location 776VMP-3.

The indoor and outdoor air TCE concentrations were detected as follows:

- Building 774 - TCE concentration was non detect in the indoor air,
- Building 776 - TCE concentration: 0.52 J µg/m^3 in the indoor air, and
- TCE concentration: non-detect in the outdoor air between Buildings 774 and 776.

All of the sub-slab results were below vapor screening levels. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. Figures 3-2 and 3-3 show the sub-slab TCE vapor trend chart in both Buildings 774 and 776. The trend lines calculated are exponential trend lines based on the coefficient determination best fit regression line. The data fits an exponential trend the best because of the significant decrease in TCE vapor after the initial start-up of the system. As shown in Figure 3-2, there has been some fluctuation in the Building 774 sub-slab TCE vapor results. During the past five rounds the results have varied an order of magnitude from non-detect to 9.2 J µg/m^3. This could be attributed to non-uniform system operation and inconsistent vacuum radius of influences in the sub-slab.

Semi-annual influent sampling occurred on August 28, 2015, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 774 and 776 for TCE were 82 µg/m^3. An effluent sample was not collected. Table 3-3 summarizes influent results since the start-up of the SSVM system.

3.1.2 4th Quarter / Calendar Year 2015 (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 GAC replacement. The system flow rate and vacuum readings collected in previous quarters and this quarter are illustrated on Figure 3-4 and Figure 3-5, respectively. As shown in these figures, the 4Q/2015 system flow rate and vacuum readings are similar to previous quarters. The GAC was replaced on September 30, 2015. In addition, no water removal from the knockout tank was required during this quarter. The system was not running upon arrival for the weekly inspection on November 12, 2015. Since the system was operational on the previous inspection conducted on November 5, 2015, it is assumed that the system was off for less than a week. The system was also not running upon arrival for the weekly inspection on December 3, 2015. Since the system was operational on the previous inspection conducted on November 20, 2015, it is assumed that the system was off for almost two weeks. The shutdowns were due to a knock out tank alarm; however, no water was in the tank. The system was turned back on each time. No other shutdowns have been reported. The O&M field forms and readings are presented in Appendix A. The waste inventory tracking form for the spent carbon is provided in Appendix B.

3.2 Buildings 785 and 786 Sub-Slab Vapor Mitigation System

FPM performed SSVM at Buildings 785 and 786 starting on May 19, 2011. The Buildings 785 and 786 system is composed of two horizontal wells with a total combined screen length of 300 ft performing under a flow rate of 1 acfm per foot of screen. Building 785 has one horizontal well with a screen length of 140 ft and Building 786 has one horizontal well with a screen length of 160 ft. The SSVM system is shown in Figure 3-6.

Table 3-1 illustrates the SSVM Systems O&M schedule. O&M includes weekly system component readings (system temperature, flow, vacuum and motor status), weekly VMP vacuum measurements, and GAC disposal and replacement every four months. Indoor and outdoor air sampling, sub-slab vapor sampling, and influent sampling are conducted semi-annually during the heating and cooling months. Table 3-4 presents the sub-slab vapor, indoor and outdoor air results and Table 3-5 presents the influent air results for all of the SSVM System performance monitoring events. The indoor and outdoor air sampling results are now compared to the EPA Industrial Regional Screening Level (RSLs)[3] (EPA, November 2014). The Sub-slab RSLs used for comparison are calculated using the EPA Vapor Intrusion Screening Level Calculator[4] (USEPA, May 2014). These levels are now used based on USEPA comments provided for the pending SVI decision document.

3.2.1 Previous Buildings 785 and 786 Sub-Slab Vapor Mitigation Operations and Maintenance Results

3.2.1.1 Buildings 785 and 786 Sub-Slab Vapor Mitigation Operations and Maintenance 2011

The installation, start-up and initial operation of the SSVM system at Buildings 785 and 786 occurred under a separate contract (FA8903-04-D-8687). This mitigation action is documented in the Final Completion Report Sub-Slab Vapor Mitigation Systems (FPM, February 2013). The performance evaluation section of this report documents sub-slab vapor sampling results indicated a decreasing trend in TCE levels in Buildings 785 and 786 (Figure 3-7 and 3-8). The highest reported result in Building 785 was during the baseline sampling event (March 18, 2011) at 720 µg/m^3 at location 785VMP-4. After five months of system operation, the reported result for this location was 33 µg/m^3. The highest reported result in Building 786 was during the baseline sampling event (January 18, 2011) at 4,900 µg/m^3 at location 786VMP-1. After five months of system operation, the reported result for this location was 49 µg/m^3.

Location 785VMP-5 was not sampled during the baseline sampling event due to retained water observed in the VMP. A new location was installed north of the horizontal well. The new location, also called 785VMP-5, was sampled during the three-month sampling event and TCE was reported at 610 µg/m^3. After five months of system operation, the reported result for this location was 140 µg/m^3.

All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. All sub-slab vapor concentrations fell below screening levels after five months of system operation.

4th Quarter / Calendar Year 2011 (November - December)

A vapor effluent sample was collected on December 19, 2011 from the Buildings 785 and 786 SSVM system. The effluent sampling location was installed on the SSVM system's exhaust

[3] http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

[4] http://www.epa.gov/oswer/vaporintrusion/guidance.html

stack following carbon filtration in the treatment chain. Results showed a TCE concentration of 4.1 µg/m^3.

GAC replacement was conducted in December 2011 following the effluent sampling event. GAC replacement is based on the carbon life span which is a factor of adsorption of the effluent contaminant of concern (COC) concentrations. This replacement schedule for GAC was initially determined through calculations outlined in the Work Plan for SSVM Design (FPM, February 2011). These calculations were then checked empirically using the December 2011 effluent sampling results. It was determined that a bimonthly schedule for GAC replacement (FPM, May 2012) was adequate and effluent sampling was eliminated from the O&M schedule once the carbon life span was calculated and subsequent GAC replacement scheduled.

3.2.1.2 Buildings 785 and 786 Sub-Slab Vapor Mitigation Operations and Maintenance 2012

1st Quarter / Calendar Year 2012 (January - March)

GAC was replaced on February 23, 2012, in accordance with the O&M schedule for carbon replacement.

Sampling occurred at Buildings 785 and 786 on January 27, January 31 and February 7. At the Building 785 Site, the highest sub-slab TCE concentration resulted in 18 µg/m^3 at location 785VMP-5. TCE was not detected in the indoor air of Building 785. TCE was not detected in the outdoor air sample collected between Buildings 785 and 786. The highest sub-slab TCE concentration in Building 786 was at location 786VMP-2 at a level of 22 µg/m^3. This location also has a detection for chloroform at 12 µg/m^3. The concentration for chloroform was above sub-slab screening levels up until this sampling event. TCE was not detected in the indoor air of Building 786. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. All of the sub-slab results were below vapor screening levels.

Semi-annual influent sampling occurred on January 24, 2012, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results for TCE were 140 µg/m^3.

2nd Quarter / Calendar Year 2012 (April - June)

GAC was replaced on April 23, 2012, in accordance with the O&M schedule for carbon replacement. Sampling did not occur at Buildings 785 and 786 during the 2nd quarter / CY 2012.

3rd Quarter / Calendar Year 2012 (July - September)

GAC was replaced on July 5 and September 5, 2012 at the site. Additional O&M activities occurred at the Buildings 785 and 786 SSVM system during the 3rd Quarter / CY 2012 besides the weekly system component readings. During system readings on August 24, 2012, it was observed that system vacuum had decreased and the flow rate in horizontal well 786SSVM-1 had

significantly increased. The cause was investigated and the dead end of the horizontal well 786SSVM-1 was damaged. Therefore, the system was shut down and the cap was repaired. The system was turned back on the next day following the repairs.

On August 31, 2012, the system was found to not be operating upon arrival. Troubleshooting procedures were followed including checking the power source and checking for dirt build up in the regenerative blower. It was observed that the regenerative blower was clean, but the power source was not adequate. Griffiss Utility Service Corporation was contacted and they determined that a transformer used by the Buildings 785 and 786 SSVM system was not working properly. The transformer was replaced. Also during the down time, the electrical motor of the regenerative blower was brought to an electrical motor service shop and the bearings were replaced. Following the electrical motor servicing, the system was turned back on and began operation on October 25, 2012.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 785 and 786 on August 8, 2012. One outdoor air sample was collected between Buildings 785 and 786 due to the close proximity of the buildings. The highest sub-slab TCE concentration was 39 $\mu g/m^3$ at Building 785 and 110 $\mu g/m^3$ at Building 786. TCE was not detected in the indoor air or outdoor air samples for both buildings. All of the sub-slab results were below vapor screening levels. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants.

Semi-annual influent sampling occurred on August 3, 2012, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location is on the SSVM system's exhaust stack before carbon treatment. Influent results for TCE were 250 $\mu g/m^3$.

4th Quarter / Calendar Year 2012 (October - December)

The system was not in operation from October 1 through October 25, 2012 as described in the 3rd Quarter / CY 2012 O&M text. GAC was replaced on December 4, 2012 at the site. Sampling did not occur for the Buildings 785 and 786 SSVM system during this quarter.

3.2.1.3 Buildings 785 and 786 Sub-Slab Vapor Mitigation Operations and Maintenance 2013

1st Quarter / Calendar Year 2013 (January - March)

The GAC was not replaced during this quarter. Vacuum readings collected at all VMPs associated with the system on February 14, 2013. Results showed all VMPs were under vacuum except for 786VMP-2. The lack of vacuum is attributed to the structural foundation and/ or preferential paths. As part of the Building 786 interim removal action (FPM, March 2002), a 12 feet by 16 feet area was excavated down to 10 feet bgs. The excavated area was backfilled with crushed stone. The location of the excavation was on the northwest corner of Building 786. The excavation was relatively close (30 feet away) to 786VMP-2 and may create short circuiting under the building footprint.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 785 and 786 on March 6, 2013. The highest sub-slab TCE concentration in Building 785 was reported for 785VMP-4 at 3 µg/m$^{3.}$ The highest sub-slab TCE concentration in Building 786 was reported for 786VMP-1 at 9.1 F µg/m^3. All of the sub-slab results were below vapor screening levels. TCE was not detected in any of the indoor and outdoor air samples.

Semi-annual influent sampling occurred on February 14, 2013, prior to sub-slab vapor sampling to determine effective SVE. Influent results for TCE were 93 µg/m^3. An effluent sample was also collected and TCE was 4.4 µg/m^3.

2nd Quarter / Calendar Year 2013 (April - June)

GAC was replaced on April 24, 2013. No additional O&M activities besides the weekly system component readings were performed during this quarter.

3rd Quarter / Calendar Year 2013 (July - September)

Additional O&M activities occurred at the Buildings 785 and 786 SSVM system during the 3rd Quarter / CY 2013 besides the weekly system component readings. Approximately 50 gallons of water was pumped out of the knock-out tank into a 55-gallon drum on July 19, 2013. The water was sampled on August 8, 2013 and analyzed for VOCs. Only TCE was detected at 0.37 J µg/L. The NYS Groundwater Standard is 5 µg/L and the J qualifier indicates the analyte was positively identified but the quantitation is an estimation. The water was discharged under permit to the City of Rome sewer system on September 13, 2013. A composite sample of the spent GAC from the SSVM system at Buildings 785 and 786 was collected on August 8, 2013 and analyzed for TCLP VOCs and ignitibility. There were no detections and disposal of the spent carbon is pending.

The electrical supply for the Building 786 system was damaged during airport grass mowing activities in August 2013. Therefore, the system was not in operation from August 29, 2013 through the remainder of the quarter.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 785 and 786 on August 9, 2013. The highest sub-slab TCE concentration was at 786VMP-1 at 150 µg/m^3 in Building 786 and at 785VMP-4 at 17 µg/m^3 in Building 785. All of the sub-slab results were below vapor screening levels. TCE was not detected in any of the indoor and outdoor air samples. Semi-annual influent sampling occurred on August 7, 2013, prior to sub-slab vapor sampling to determine effective SVE. Influent results for TCE were 130 µg/m^3.

4th Quarter / Calendar Year 2013 (October - December)

The system was shut down due to the electrical supply being damaged during mowing activities in August 2013.

Rebound Evaluation – Round 1 (October 2013)

Given that the system was shut down, a rebound evaluation was conducted in October 2013 to assess the ambient sub-slab conditions. Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 785 and 786 on August 9, 2013. Sampling results showed an increase in TCE concentrations at all VMPs except for 786VMP-2. The highest sub-slab TCE concentration was at 785VMP-5 at 73 µg/m^3 at Building 785 and at 786VMP-1 at 140 µg/m^3 at Building 786. All of the sub-slab results were below vapor screening levels. TCE was not detected in any of the indoor and outdoor air samples.

3.2.1.4 Buildings 785 and 786 Sub-Slab Vapor Mitigation Operations and Maintenance 2014

1st Quarter / Calendar Year 2014 (January - March)

The system was still shut down this quarter. The shutdown was triggered by the damaged electrical supply. However, now renovations are being performed to Building 786 and the transformer tub that supplied power to the system has been removed. The new transformer will be installed August 2014.

Rebound Evaluation – Round 2 – (January/February 2014)

An additional rebound evaluation round was conducted in January and February 2014 to assess the sub-slab conditions. The rebound evaluation consisted of sub-slab vapor, indoor air and outdoor air sampling. Sampling was conducted on January 30, 2014. As a result of the low temperatures and equipment placement within the buildings, the sampling ports at VMPs 785VMP-4 and 786VMP-1 were frozen and could not be sampled on January 30, 2014. These points were sampled on February 28, 2014 (785VMP-4) and February 29, 2014 (786VMP-1). The indoor and outdoor air TCE concentrations were non detect. The highest sub-slab TCE concentration in Buildings 785 and 786 are as follows:

- Building 785 TCE at 27 µg/m^3 at location 785VMP-4, and
- Building 786 TCE at 26 µg/m^3 at location 786VMP-1.

All of the sub-slab results were below vapor screening levels. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants.

2nd Quarter / Calendar Year 2014 (April - June)

The system was still shut down this quarter awaiting renovation to be completed.

3rd Quarter / Calendar Year 2014 (July - September)

The system was turned back online on September 25, 2014. Prior to the system being turned back online, round 3 of rebound evaluation occurred.

Now that the system is back online, O&M activities will be conducted in the following quarter including weekly system component readings (system temperature, flow, vacuum and motor status), periodic GAC replacement, and semi-annual indoor and outdoor air, sub-slab vapor, and influent sampling. The GAC was replaced on September 24, 2014 prior to system startup. The waste inventory tracking form for the spent carbon is provided in Appendix B.

4th Quarter / Calendar Year 2014 (October – December)

GAC was replaced in the previous quarter prior to system start-up. No system shutdowns were reported during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

3.2.1.5 Buildings 785 and 786 Sub-Slab Vapor Mitigation Operations and Maintenance 2015

1st Quarter / Calendar Year 2015 (January - March)

The GAC was replaced on February 26, 2015. No system shutdowns were reported during this quarter and no water removal from the knockout tank was required.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 785 and 786 on January 26, 2015. The highest sub-slab TCE concentration in Building 785 was 41 µg/m^3 at location 785VMP-5 and the highest sub-slab TCE concentration in Building 786 was 6.3 µg/m^3 at location 786VMP-2. All of the sub-slab vapor results were below vapor screening levels. he indoor and outdoor air TCE concentrations were all non-detect.

Semi-annual influent sampling occurred on January 26, 2015, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 785 and 786 for TCE were 72 µg/m^3. An effluent sample was not collected.

2nd Quarter / Calendar Year 2015 (April - June)

The GAC was not replaced during this quarter. The system was shut down from June 17, 2015 to June 25, 2015 due to floor renovations within Building 785. No other shut downs occurred during this quarter. In addition, no water removal from the knockout tank was required during this quarter.

3rd Quarter / Calendar Year 2015 (July - September)

The GAC was not replaced and no system shutdowns were reported during this quarter. No water removal from the knockout tank was required.

Sub-slab vapor, indoor and outdoor air sampling occurred at Buildings 785 and 786 on September 1, 2015. All sampling results are presented in Table 3-4. Only one outdoor air

sample was collected between Buildings 785 and 786 due to the close proximity of the buildings. All Daily Chemical Quality Control Reports (CQCRs) completed during this event are provided in Appendix C. The indoor and outdoor air TCE concentrations were all non-detect.

The highest sub-slab TCE concentration in Buildings 785 and 786 were detected as follows:

- Building 785 - TCE concentration: 150 µg/m^3 at location 785VMP-5, and
- Building 786 - TCE concentration: 160 µg/m^3 at location 786VMP-1.

All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. Figures 3-7 and 3-8 show the sub-slab TCE vapor trend chart in both Buildings 785 and 786. The trend lines calculated are exponential trend lines based on the coefficient determination best fit regression line. The data fits an exponential trend the best because of the significant decrease in TCE vapor after the initial start-up of the system. All raw lab data and validated lab data are provided in Appendix D and Appendix E, respectively.

Semi-annual influent sampling occurred on August 28, 2015, prior to sub-slab vapor sampling to determine effective SVE. The influent sampling location was installed on the SSVM system's exhaust stack before carbon treatment. Influent results at Buildings 785 and 786 for TCE were 140 µg/m^3. An effluent sample was not collected. Table 3-5 summarizes influent results since the start-up of the SSVM system.

3.2.2 4th Quarter / Calendar Year 2015 (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). The GAC was replaced on September 30, 2015. The system flow rate and vacuum readings collected in previous quarters and this quarter are illustrated on Figure 3-9 and Figure 3-10, respectively. As shown in these figures, the system flow rate and vacuum decreased. at 786SSVM-1 and slightly increased at 785SSVM-1. 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 and readings are presented in Appendix A. The waste inventory tracking form for the spent carbon is provided in Appendix B.

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4 DISCUSSION

4.1 Buildings 774 and 776 Sub-Slab Vapor Mitigation

O&M activities conducted during this period of performance for the Buildings 774 and 776 SSVM system included weekly system component readings (system temperature, flow, vacuum, motor status, and knock-out tank inspection). Semi-annual sub-slab vapor, indoor air, and outdoor air sampling was not conducted during this quarter. The latest sub-slab vapor sampling results (3Q/2015) indicated a slight overall increase in TCE concentrations, but all sub-slab vapor TCE concentrations were below screening levels.

All indoor and outdoor air concentrations were also below screening levels with the exception of naphthalene. The naphthalene concentrations were 0.48 J µg/m^3 and 1.1 J µg/m^3 in the indoor air samples from Building 774 and 776, respectively. The indoor air screening level for naphthalene is 0.36 µg/m^3. Naphthalene was also detected above the indoor air screening level in the 774/776 outdoor air sample with a concentration of 0.37 J µg/m^3. Performance monitoring results from groundwater sampling conducted for the Building 775 Site indicate that naphthalene is non-detect in the groundwater source (FPM/Parsons, February 2016). Given that naphthalene was also detected in the outdoor air sample and is not detected in groundwater, it is assumed that the naphthalene detections are not site generated. Naphthalene concentrations will be monitored to determine any trends or risks to human health.

Contaminant mass removal has been estimated using the baseline and O&M influent air sampling results. An estimated 5,004 grams of TCE have been extracted and treated from the sub-slab at Buildings 774 and 776. Figure 4-1 provides the TCE mass removal trend since 2011 which shows that mass removal is still increasing.

4.2 Buildings 785 and 786 Sub-Slab Vapor Mitigation

O&M activities conducted during this period of performance for the Buildings 785 and 786 SSVM system included weekly system component readings (system temperature, flow, vacuum, motor status, and knock-out tank inspection). System flow rate and vacuum readings showed a decrease at 786SSVM-1 and an increase at 785SSVM-1 during this quarter. It is recommended the settings of the air dilution valves on both wells be evaluated to increase the vacuum at 786SSVM-1, similar to the initial stepped rate tests (FPM, February 2013). Semi-annual sub-slab vapor, indoor air, and outdoor air sampling was not conducted during this quarter. The latest sub-slab vapor sampling results (3Q/2015) showed maximum TCE concentrations at 150 µg/m^3 for Building 785 and 160 µg/m^3 for Building 786. Indoor air, and outdoor air concentrations detected during operation and shutdown sampling events were below screening levels and did not pose any unacceptable risk to building occupants. Contaminant mass removal has been estimated using the baseline and O&M influent air sampling results. An estimated 5,362 grams of TCE have been extracted and treated from the sub-slab at Buildings 785 and 786 since 2011. Figure 4-2 provides the TCE mass removal trend since 2011 which shows that mass removal is stabilizing.

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5 OPTIMIZED EXIT STRATEGY RECOMMENDATIONS

Performance monitoring for groundwater conducted under a separate contract showed chlorinated VOC concentrations were still above NYS Groundwater Standards at both the SD-052-02 Building 775 Site and the SD-052-01 Apron 2 Chlorinated Plume Site. However, SSVM soil vapor monitoring data shows TCE concentrations in the sub-slab are decreasing at all sites as a result of the mitigation system operation. Therefore, continued sub-slab mitigation and optimization following the exit strategy provided in the pending decision document (AFCEC, February 2016) is recommended.

The exit strategy provided below for each system follows the exit strategy provided in the pending decision document and is based on the O&M results from 2011 to 2015.

SVI Mitigation System Operation

Buildings 774/776 –

- Given the elevated TCE concentrations in sub-slab vapors and groundwater and that the TCE mass removal is still increasing (see Figure 4-1), continue operating the current SVI mitigation system. Conduct weekly system component readings, semi-annual vacuum measurements, and periodic GAC replacement and maintenance.

Buildings 785/786 –

- Operate the current system for two years. Recent influent TCE concentrations have been stable between 70 µg/L and 150 µg/L. Given the reduction in influent TCE concentration since 2011 and stabilizing mass removal rates since 2012 (see Figure 4-2), convert to a passive system by connecting the horizontal wells to vertical pipes with wind powered exhaust turbines. Conduct weekly piping and turbine inspections and semi-annual vacuum readings at the exhaust pipe.

Sub-slab Vapor, Indoor, and Outdoor Air Sampling

- Conduct annual sub-slab vapor, indoor air, and outdoor air sampling during the heating season. Conduct semi-annual sampling at Buildings 785/786 for one year once the system is converted from the current system to a passive mitigation system. The reduction in sampling frequency is proposed as previous monitoring shows stabilized concentrations with no seasonal variation.
- Conduct annual influent air sampling to monitor trends and mass removal.
- Analyze all samples for VOCs using method TO-15.

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6 REFERENCES

AECOM, CAPE, FPM, *Final Uniform Federal Policy for Quality Assurance Project Plan,* Former Griffiss Air Force Base, Rome, New York, November 2011.

Air Force Civil Engineering Center, *Revised Draft Final Proposed Plan Soil Vapor Intrusion at SD052-02 Building 775 Site and SD-052-01 Apron 2 Chlorinated Plume Site*, Former Griffiss Air Force Base, Rome, New York, February 2016.

Air Force Institute for Operational Health, *Guide for the Assessment of the Vapor Intrusion Pathway*, IOH-RS-BR-SR-2206-0001, February 2006.

Air Force Real Property Agency, *Final Record of Decision for the On-base Groundwater AOC (SD-52),* Former Griffiss Air Force Base, Rome, New York, December 2008.

Air Force Real Property Agency, *Final Record of Decision for Nosedocks 1 and 2,* Former Griffiss Air Force Base, Rome, New York, July 2011.

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., Final *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 2.0, March 2013.

CAPE/FPM Remediations, Inc., Final *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 2.0, March 2013.

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

CAPE/FPM Remediations, Inc., *Final 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, September 2014.

CAPE/FPM Remediations, Inc., *Final Quarterly Operations and Maintenance Data Summary 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., *Final 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, March 2015.

CAPE/FPM Remediations, Inc., *Final Quarterly Operations and Maintenance Data Summary Report, (4th Quarter / Calendar Year 2014), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program,* Former Griffiss Air Force Base, Rome, New York, May 2015.

CAPE/FPM Remediations, Inc., *Final Quarterly Operations and Maintenance Report, (1st Quarter / Calendar Year 2015), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program,* Former Griffiss Air Force Base, Rome, New York, October 2015.

CAPE/FPM Remediations, Inc., *Final Quarterly Operations and Maintenance Data Summary Report, (2nd Quarter / Calendar Year 2015), SD052 (Buildings 774, 776, 785 and 786), Monitoring Program,* Former Griffiss Air Force Base, Rome, New York, October 2015.

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

Ecology & Environment Engineering, P.C., *Final Predesign Investigation, Data Summary Report at Landfill 6, Building 817/WSA, Building 775, Pumphouse 3, and AOC 9,* February 2007.

Ecology & Environment, Inc., *Final Soil Vapor Intrusion Survey Data Summary Report for Apron 2, Building 817/WSA, Building 775, and AOC 9*, Former Griffiss Air Force Base, Rome, New York, August 2007.

FPM Group Ltd, *Draft Closure Report, Building 786 Area of Concern, Interim Remedial Action,* Griffiss Air Force Base, Rome, New York, March 2002.

FPM Group Ltd, *Long Term Monitoring Report, Petroleum Spill Sites, Long Term Monitoring Program,* Former Griffiss Air Force Base, Rome, New York, Revision 1.0, February 2005.

FPM Group Ltd, *Assumptions and Screening Levels for Soil Vapor Intrusion Evaluation, Industrial/Commercial Scenario,* Revision 0.1, October 2007.

FPM Group Ltd, *Final Work Plan for Soil Vapor Intrusion Sampling at Multiple Sites*, former Griffiss Air Force Base, Revision 0.0, April 2008.

FPM Group Ltd, *Draft Soil Vapor Intrusion Evaluation, Soil Vapor Intrusion Sampling Buildings 774, 776, 785, 786 and 817,* Former Griffiss Air Force Base, Revision 0.0, July 2008.

FPM Group Ltd., *Final Spring 2010 Annual Report Performance Monitoring at On-Base Groundwater Area of Concern,* Former Griffiss Air Force Base, Rome, NY, December 2011.

FPM Group Ltd., *Draft Spring 2013 Annual Report Performance Monitoring at On-Base Groundwater Areas of Concern,* Former Griffiss Air Force Base, Rome, NY, November 2013.

FPM Group Ltd., *Draft Spring 2015 Annual Report Performance Monitoring at On-Base Groundwater Areas of Concern,* Former Griffiss Air Force Base, Rome, NY, February 2016.

FPM Remediations, Inc., *Draft Work Plan for Sub-Slab Vapor Mitigation Design,* Former Griffiss Air Force Base, Revision 0.0, February 2011.

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.

New York State Department of Health, *Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Public, Final*, October 2006.

Parsons, Final Remedial Action Work Plan (RAWP), On-Base Groundwater Remediation Work Plan, Former Griffiss Air Force Base, Rome, NY, July 2008.

United States Environmental Protection Agency, *Soil Vapor Extraction Technology: Reference Handbook*. Cincinnati, OH: Office of Research and Development. EPA/540/2-91/003, 1991.

United States Environmental Protection Agency, *OSWER Vapor Intrusion Assessment, Vapor Intrusion Screening Level Calculator*, May 2014

United States Environmental Protection Agency, *Regional Screening Level Composite Worker Ambient Air Table (TR=1E-6, HQ=1),* November 2014

United States Army Corps of Engineers, *Soil Vapor Extraction and Bioventing Engineer Manual (EM-1110-1-4001),* 3 June 2002.

Tables

Table 2-1 - Building 774/776 AOC Short List Indoor and Outdoor Historical Analytical Results
December 2006/April 2008/May 2008

Sample Location		774IA-1			774IA-2			774IA-3	
Sample ID		774-IA1	774IA1BB	774IA1CA	774-IA2	774IA2BB	774IA2CA	774IA3BB	774IA3CA
Sample Type	Indoor Air Screening Level ($\mu g/m^3$)	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date		20-Dec-2006	15-Apr-2008	29-May-2008	20-Dec-2006	15-Apr-2008	29-May-2008	15-Apr-2008	29-May-2008
Sample Depth (ft above ground)		5	5	5	5	5	5	5	5
Sample Collection Duration (hr)	12	8	12	12	8	12	12	12	12
Volatiles (TO-15) in $\mu g/m^3$									
cis-1,2-dichloroethene	102	U	1.57	0.685	U	U	U	U	U
trichloroethylene (TCE)	41	2.4	347	3.99	3.4	559	4.21	389	4.7
vinyl chloride	186	U	0.13	U	U	U	U	U	U

Notes:
U - Not detected.
$\mu g/m^3$: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

Table 2-1 - Building 774/776 AOC Short List Indoor and Outdoor Historical Analytical Results
December 2006/April 2008/May 2008

Sample Location	Indoor Air Screening Level (µg/m^3)	774IA-4		774IA-5	774OA-1		
Sample ID		**774IA4BB**	**774IA4CA**	**774IA5CA**	**774-OA1**	**774OA1BB**	**774OA1CA**
Sample Type		**Indoor**	**Indoor**	**Indoor**	**Outdoor**	**Outdoor**	**Outdoor**
Sample Date		**15-Apr-2008**	**29-May-2008**	**29-May-2008**	**20-Dec-2006**	**15-Apr-2008**	**29-May-2008**
Sample Depth (ft above ground)		**5**	**5**	**5**	**5**	**5**	**5**
Sample Collection Duration (hr)	**12**	**12**	**12**	**12**	**8**	**8**	**8**
Volatiles (TO-15) in µg/m^3							
cis-1,2-dichloroethene	102	U	U	U	U	U	U
trichloroethylene (TCE)	41	236	2.13	6.61	U	0.492	U
vinyl chloride	186	U	U	U	U	U	U

Notes:
U - Not detected.
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

Table 2-1 - Building 774/776 AOC Short List Indoor and Outdoor Historical Analytical Results
December 2006/April 2008

Sample Location	Indoor Air Screening Level ($\mu g/m^3$)	776IA-1		776IA-2		776IA-3	776IA-4
Sample ID		776-IA1	776IA1BB	776-IA2	776IA2BB	776IA3BB	776IA4BB
Sample Type		Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date		20-Dec-2006	15-Apr-2008	20-Dec-2006	15-Apr-2008	15-Apr-2008	20-Dec-2006
Sample Depth (ft above ground)		5	5	5	5	5	5
Sample Collection Duration (hr)	12	8	12	8	12	12	12
Volatiles (TO-15) in $\mu g/m^3$							
cis-1,2-dichloroethene	102	U	U	U	U	U	U
trichloroethylene (TCE)	41	4.4	3.28	2.9	2.35	2.51	2.62
vinyl chloride	186	U	U	U	U	U	U

Notes:

U - Not detected.

$\mu g/m^3$: microgram per cubic meter.

Exceedance of the indoor or outdoor initial benchmark.

Table 2-1 - Building 774/776 AOC Detected Sub-slab Vapor Historical Analytical Results
October 2006/April 2008

Sample Location	**Sub-slab Vapor Screening Level ($\mu g/m^3$)**	**774SSV-1**		**774SSV-2**		**774SSV-3**	**774SSV-4**
Sample ID		**774-SSV1**	**774SSV1BB**	**774-SSV2**	**774SSV2BB**	**774SSV3BB**	**774SSV4BB**
Sample Type		**SSV**	**SSV**	**SSV**	**SSV**	**SSV**	**SSV**
Sample Date		**24-Oct-2006**	**15-Apr-2008**	**24-Oct-2006**	**15-Apr-2008**	**15-Apr-2008**	**15-Apr-2008**
Sample Depth (ft bgs)		**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)	**12**	**8**	**12**	**8**	**12**	**12**	**12**
Volatiles (TO-15) in $\mu g/m^3$							
cis-1,2-dichloroethene	1,022	U	U	U	U	0.64	0.60
trichloroethylene (TCE)	409	1,700	490	810	590	66	69
vinyl chloride	186	U	U	U	U	U	U

Notes:

U: Not detected.

$\mu g/m^3$: microgram per cubic meter.

Exceedance of the cancer screening value.

Table 2-1 - Building 774/776 AOC Detected Sub-slab Vapor Historical Analytical Results
October 2006/April 2008

Sample Location	**Sub-slab Vapor Screening Level ($\mu g/m^3$)**	**776SSV-1**		**776SSV-2**		**776SSV-3**	**776SSV-4**
Sample ID		**776-SSV1**	**776SSV1BB**	**776-SSV2**	**776SSV2BB**	**776SSV3BB**	**776SSV4BB**
Sample Type		**SSV**	**SSV**	**SSV**	**SSV**	**SSV**	**SSV**
Sample Date		**24-Oct-2006**	**15-Apr-2008**	**24-Oct-2006**	**15-Apr-2008**	**15-Apr-2008**	**15-Apr-2008**
Sample Depth (ft bgs)		**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)	**12**	**8**	**12**	**8**	**12**	**12**	**12**
Volatiles (TO-15) in $\mu g/m^3$							
cis-1,2-dichloroethene	1,022	U	U	U	U	0.64	U
trichloroethylene (TCE)	409	3,000	6.9	700	110	120	230
vinyl chloride	186	U	U	U	U	U	U

Notes:

U: Not detected.

$\mu g/m^3$: microgram per cubic meter.

Exceedance of the cancer screening value.

Table 2-1 - Building 785/786 AOC Short List Indoor and Outdoor Historical Analytical Results
December 2006/April 2008

Sample Location	**Indoor Air Screening Level ($\mu g/m^3$)**	**785IA-1**	**785IA-2**	**785IA-3**
Sample ID		**785-IA1**	**785-IA2**	**785IA3BB**
Sample Type		**Indoor**	**Indoor**	**Indoor**
Sample Date		**20-Dec-2006**	**20-Dec-2006**	**17-Apr-2008**
Sample Depth (ft above ground)		**5**	**5**	**5**
Sample Collection Duration (hr)	**12**	**12**	**12**	**12**
Volatiles (TO-15) in $\mu g/m^3$				
1,2,4-trimethylbenzene	NA	NA	NA	1.30
1,3,5-trimethylbenzene	NA	NA	NA	0.650 F
benzene	88	1.1	1.1	0.617
carbon disulfide	NA	U	U	U
carbon tetrachloride	NA	U	U	U
ethylbenzene	743	NA	NA	0.441 F
freon 11	NA	U	U	U
freon 113	NA	U	U	U
freon 12	NA	U	U	U
isopropyl alcohol	NA	U	U	U
m,p-xylene (sum of isomers)	292	NA	NA	1.28 F
methyl ethyl ketone	NA	U	U	U
methylene chloride	NA	U	U	U
Naphthalene	NA	NA	NA	1.33
o-xylene	292	NA	NA	0.485 F
tetrachloroethylene (PCE)	102	U	U	U
toluene	NA	NA	NA	2.72
trichloroethylene (TCE)	41	U	U	0.655
vinyl chloride	186	U	U	U

Notes:

U - Not detected.

F - The result was detected between the MDL and RL.

NA- Not Available

$\mu g/m^3$: microgram per cubic meter.

Table 2-1 - Building 786 AOC Short List Indoor and Outdoor Analytical Results
December 2006/April 2008

Sample Location	Indoor Air Screening Level ($\mu g/m^3$)	786IA-1	786IA-2	786IA-3	786OA-1	
Sample ID		786-IA1	786-IA2	786IA3BB	786-OA1	786OA1BB
Sample Type		Indoor	Indoor	Indoor	Outdoor	Outdoor
Sample Date		20-Dec-2006	20-Dec-2006	18-Apr-2008	20-Dec-2006	18-Apr-2008
Sample Depth (ft above ground)		5	5	5	5	5
Sample Collection Duration (hr)	12	8	8	12	12	12
Volatiles (TO-15) in $\mu g/m^3$						
1,2,4-trimethylbenzene	NA	NA	U	0.749	U	0.949
1,3,5-trimethylbenzene	NA	NA	U	U	U	U
benzene	88	1.2	1.2	0.747	0.96	0.617
cis-1,2-dichloroethene	102	U	U	U	U	U
ethylbenzene	743	NA	NA	U	NA	U
m,p-xylene (sum of isomers)	292	NA	NA	0.750 J	NA	0.883 J
Naphthalene	NA	NA	NA	1.01	NA	U
o-xylene	292	NA	NA	U	NA	0.441 J
tetrachloroethylene (pce)	102	U	0.896 F	U	U	U
toluene	NA	NA	NA	1.92	NA	1.49
trichloroethylene (tce)	41	0.43 J	U	U	U	U
vinyl chloride	186	U	U	U	U	U

Notes:

U - Not detected.

F - The result was detected between the MDL and RL.

NA- Not Available

$\mu g/m^3$: microgram per cubic meter.

J- The analyte was positively indentified; the quantitation is an estimation.

Table 2-1 - Building 785/786 AOC Detected Sub-slab Vapor Historical Analytical Results
October 2006/April 2008

Sample Location	Sub-slab Vapor Screening Level ($\mu g/m^3$)	785SSV-1		785SSV-2		785SSV-3	785SSV-4	785SSV-5	785SSV-6
Sample ID		B785-SSV1	785SSV1BB	B785-SSV2	785SSV2BB	785SSV3BB	785SSV4BB	785SSV5BB	785SSV6BB
Sample Type		SSV	SSV	SSV	SSV	SSV	SSV	SSV	SSV
Sample Date		24-Oct-2006	17-Apr-2008	24-Oct-2006	17-Apr-2008	17-Apr-2008	17-Apr-2008	17-Apr-2008	17-Apr-2008
Sample Depth (ft bgs)		1	1	1	1	1	1	1	1
Sample Collection Duration (hr)	12	8	12	8	12	12	12	12	12
Volatiles (TO-15) in $\mu g/m^3$									
1,1,1-trichloroethane	146,000	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	175	NA	1.9	NA	2.3	2.9	4.0	3.4	9.0
1,3,5-trimethylbenzene	175	U	0.70 J	U	0.90	1.1	1.6	1.6	3.5
acetone	NA	U	U	U	U	U	U	U	U
allyl chloride (3-chloropropene)	29	U	U	U	U	U	U	U	U
benzene	105	U	10	15	3.5	17	19	14	20
carbon disulfide	20,440	U	U	U	U	U	U	U	U
carbon tetrachloride	55	U	U	U	U	U	U	U	U
chloroform	36	U	U	U	U	U	U	U	U
chloromethane	818	U	U	U	U	U	U	U	U
cis-1,2-dichloroethene	1,022	75	13	U	0.69	0.48 J	14	0.52 J	56.00
cyclohexane	175,200	U	U	U	U	U	U	U	U
ethylbenzene	743	U	1.0	U	1.9	1.8	2.4	3.0	4.0
freon 11	20,440	U	U	U	U	U	U	U	U
freon 113	876,000	U	U	U	U	U	U	U	U
freon 12	5,840	U	U	U	U	U	U	U	U
m,p-xylene (sum of isomers)	2,920	U	2.7	U	4.4	6.3	8.8	10	12 J
methyl ethyl ketone	146,000	U	U	U	U	U	U	U	U
methylene chloride	1,740	U	U	U	U	U	U	U	U
Naphthalene	NA	NA	1.2	NA	1.9	1.2	1.4	1.8	1.6
o-xylene	2,920	U	1.1	U	1.6	1.9	2.8	4.9	3.3
tetrachloroethylene (PCE)	139	U	U	U	U	U	U	U	U
tetrahydrofuran	NA	U	U	U	U	U	U	U	U
toluene	146,000	60	5.5	13	5.1	12	18	64	28
trans-1,2-dichloroethene	NA	U	U		U	U	U	U	U
trichloroethylene (TCE)	409	11,000	110	2,300	430	220	11	180	2200
vinyl chloride	186	U	U	U	U	U	U	U	U

Notes:

U - Not detected.

F- The result was detected between the MDL and RL.

J- The analyte was positvely identified, but the quantitation is an approximation.

NA- Not Available

$\mu g/m^3$: microgram per cubic meter.

Exceedance of the indoor or outdoor initial benchmark.

Table 2-1 - Building 785/786 AOC Detected Sub-slab Vapor Historical Analytical Results
October 2006/April 2008

Sample Location		**786SSV-1**		**786SSV-2**		**786SSV-3**	**786SSV-4**	**786SSV-5**	**786SSV-6**
Sample ID	**Sub-slab Vapor Screening Level ($\mu g/m^3$)**	**B786-SSV1**	**786SSV1BB**	**B786-SSV2**	**786SSV2BB**	**786SSV3BB**	**786SSV4BB**	**786SSV5BB**	**786SSV6BB**
Sample Type		**SSV**	**SSV**	**SSV**	**SSV**	**SSV**	**SSV**	**SSV**	**SSV**
Sample Date		**24-Oct-2006**	**18-Apr-2008**	**24-Oct-2006**	**18-Apr-2008**	**18-Apr-2008**	**18-Apr-2008**	**18-Apr-2008**	**18-Apr-2008**
Sample Depth (ft bgs)		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)	**12**	**8**	**12**	**8**	**12**	**12**	**12**	**12**	**12**
Volatiles (TO-15) in $\mu g/m^3$									
1,2,4-trimethylbenzene	175	NA	3.9	NA	4.8	4.5	4.2	170	4.8
benzene	105	U	29	24 J	21	21	35	36	16
cis-1,2-dichloroethene	1,022	480	230	U	12	1.2	U	3.1	5.4
ethylbenzene	743	U	2.3	U	3.1	2.3	2.9	29	2.3
m,p-xylene (sum of isomers)	2,920	U	9.0	U	8.4	8.9	8.4	91	9.2
Naphthalene	NA	NA	1.3	NA	2.1	2.6	1.2	27	1.5
o-xylene	2,920	U	3.0	U	3.9	2.8	3.8	57	3.0
tetrachloroethylene (PCE)	139	2200	70	U	0.97	U	U	57	23
toluene	146,000	U	21	U	14	12	20	75	15
trichloroethylene (TCE)	409	81,000	19,000	4,700 J	1,500	69	320	3,600	6,500
vinyl chloride	186	U	U	U	U	U	U	U	U

Notes:

U - Not detected.

F- The result was detected between the MDL and RL.

J- The analyte was positvely identified, but the quantitation is an approximation.

NA- Not Available

$\mu g/m^3$: microgram per cubic meter.

Exceedance of the indoor or outdoor initial benchmark.

Table 3-1
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

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	774VMP-1										
Sample ID			**774VMP0101AA**	**774VMP0101AB**	**774VMP0101AC**	**774VMP0101AD**	**774VMP0101AG**	**774VMP0101HA**	**774VMP0101IA**	**774VMP0101JA**	**774VMP0101KA**	**774VMP0101MA**	**774VMP0101NA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**4-May-2011**	**24-Aug-2011**	**21-Oct-2011**	**25-Jan-2012**	**6-Aug-2012**	**21-Feb-2013**	**8-Aug-2013**	**30-Jan-2014**	**17-Jul-2014**	**22-Jan-2015**	**31-Aug-2015**
Sample Depth (ft bgs / ags)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in $\mu g/m^3$													
1,1,1-trichloroethane	220,000	22,000	U	U	1.1	U	U	22,000	U	0.84 J	U	0.2 J	U
1,1-dichloroethane	77	7.7	0.53 J	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	U	U	0.27 J	U
1,2,4-trimethylbenzene	310	31	6.7	3.2	U	12	1.8	1.3 J	U	U	U	0.35 J	1.8
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	0.37 J	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	2.5	0.9	U	3.2 J	0.47 J	0.52 J	U	U	U	U	0.49 J
1,3-dichlorobenzene	NA	NA	U	U	U	1.4 J	0.40 J	U	U	U	U	U	0.65 J
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	0.31 J	U	U	0.17 J	1 J
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	1.9	U	2.6 J	2.2	15	1.1	U	U	U	0.18 J
4-ethyltoluene	NA	NA	4.6	1.2	U	3.2 J	0.56 J	0.26 J	U	U	U	0.14 J	0.52 J
4-isopropyltoluene	NA	NA	NA	NA	NA	U	0.28 J	U	U	U	U	U	0.81 J
acetone	1,400,000	140,000	54	31	18	64	30 B	86	28	43 J	U	64	20
benzene	16	1.6	1.6	4.3	U	U	0.44 J	1.3	0.64	0.49 J	U	0.89	0.43 J
carbon disulfide	31,000	3,100	U	0.66	U	U	U	0.42 J	1.3 J	U	U	0.89 J	9
carbon tetrachloride	20	2	1	0.70 J	U	U	0.50 J	0.76 J	0.71 J	0.55 J	U	0.57 J	0.52 J
chlorobenzene	2,200	220	U	0.51 J	U	U	U	U	0.15 J	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	18	9.1	U	U	0.38 J	U	0.42 J	0.82 J	U	U	0.49 J
chloromethane	3,900	390	3.5	U	U	U	1.1	2.1	1.2	1.5	U	1.3	1.1
cis-1,2-dichloroethene	NA	NA	0.89	0.77	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	1.1 J	U	U	0.42 J	U	U	U	0.49 J
cyclohexane	260,000	26,000	4.8	7.8	2.4	U	2.3	18	0.91	1.1	U	1.1	0.59 J
ethyl acetate	3,100	310	U	U	0.77 J	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	1.4	2.8	U	4.1 J	0.95	1.8	0.97	U	U	0.25 J	6.2
freon 11 (trichlorofluoromethane)	31,000	3,100	31	19	2.0	1.9 J	2.3	2 J	3.7	2.4	15 J	1.6	2.1
freon 113 (freon TF)	1,300,000	130,000	U	0.78 J	U	U	0.63 J	0.65 J	0.50 J	0.62 J	U	0.97 J	0.54 J
freon 12 (dichlorodifluoromethane)	4,400	440	2.1	2.8	2.5	2.4 J	2.8	3.4 J	2.3 J	3.1	2.8 J	2.5	2.3 J
freon 22	2,200,000	220,000	NA	NA	NA	300	83	7.3 J	17	8.2	1100	5.1	U
heptane	NA	NA	U	3.7	U	U	0.68 J	18	0.57 J	0.51 J	U	0.44 J	U
hexane	31,000	3,100	U	7.9	U	5.1	1.2	27	0.67 J	0.71	U	0.51 J	0.21 J
isopropyl alcohol	NA	NA	U	U	2.8	17 J	22	65	15	4.0 J	9.0 J	13	7.4 J
m,p-xylene (sum of isomers)	4,400	440	5.3	9	U	12	3.1	6.4	2.5	U	U	0.56 J	6.3
methyl butyl ketone	NA	NA	U	U	U	U	0.43 J	U	0.58 J	U	U	1.2 J	U
methyl ethyl ketone	220,000	22,000	1.7	4.9	1.7	1.9 J	3.2 B	6.1	3.2	2.5	U	7.2	2.6
methyl isobutyl ketone	130,000	13,000	U	U	U	U	1.1 J	U	0.61 J	0.40 J	U	1.2 J	0.8 J
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	0.99	0.46 J	U	0.72 J	0.77 J	0.50 J	0.69 J	U	1.3 J	0.53 J
Naphthalene	3.6	0.36	U	U	U	U	0.60 J	1.1 J	U	U	U	U	0.54 J
n-Butane	NA	NA	NA	NA	NA	U	1.4	3.7	1.0 J	12	U	1.9	1.1 J
n-Propylbenzene	44,000	4,400	NA	NA	NA	2.2 J	0.36 J	U	U	U	U	U	0.45 J
o-xylene	4,400	440	2.4	2.4	U	7.9	1.2	2	0.63 J	U	U	0.27 J	2.3
styrene	44,000	4,400	U	U	U	U	0.48 J	0.41 J	U	U	U	0.12 J	0.54 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	U	1.4 J	1.4 J	U	U	0.96 J	0.77 J
tetrachloroethylene (pce)	470	47	0.97 J	1	U	U	U	U	U	U	U	U	U
tetrahydrofuran	NA	NA	3.1	U	U	U	2.2 J	U	U	U	U	0.75 J	U
toluene	220,000	22,000	1.6	17	2.1	5.2	4.2	7.4	3.3	0.69 J	1.4 J	1	3.4
trichloroethylene (tce)	30	3	580	410	3.7	4.8 J	1.0 J	0.24 J	0.18 J	6.8	U	0.71 J	0.5 J
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	774VMP-2										
Sample ID			**774VMP0201AA**	**774VMP0201AB**	**774VMP0201AC**	**774VMP0201AD**	**774VMP0201AG**	**774VMP0201HA**	**774VMP0201IA**	**774VMP0201JA**	**774VMP0201KA**	**774VMP0201MA**	**774VMP0201NA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**4-May-2011**	**24-Aug-2011**	**21-Oct-2011**	**25-Jan-2012**	**6-Aug-2012**	**21-Feb-2013**	**8-Aug-2013**	**30-Jan-2014**	**17-Jul-2014**	**22-Jan-2015**	**31-Aug-2015**
Sample Depth (ft bgs / ags)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in $\mu g/m^3$													
1,1,1-trichloroethane	220,000	22,000	85	2.4	U	U	2.6	U	U	U	U	U	0.66 JM
1,1-dichloroethane	77	7.7	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	12	4	0.65 J	6.0 J	1.7	0.45 J	0.34 J	0.31 J	U	0.28 J	1.8
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	3.9	2	U	U	0.43 J	U	U	U	U	0.11 J	0.5 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	0.37 J	U	U	U	U	U	0.71 J
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	2.2	U	2.1 J	U	12	U	0.26 J	U	U	0.21 J
4-ethyltoluene	NA	NA	8.5	1.5	U	U	0.52 J	U	U	U	U	U	0.64 J
4-isopropyltoluene	NA	NA	NA	NA	NA	U	0.34 J	U	U	0.47 J	U	U	0.28 J
acetone	1,400,000	140,000	53	U	11	110 J	43	82	22	47 J	U	17	29
benzene	16	1.6	6	4.4	U	U	0.53 J	1.2	0.34 J	0.79	U	0.74	0.41 J
carbon disulfide	31,000	3,100	0.95	0.6	U	U	1.2 J	U	U	U	U	U	0.19 JM
carbon tetrachloride	20	2	1.4	0.70 J	U	U	0.59 J	U	1.0 J	0.78 J	U	0.54 J	0.67 J
chlorobenzene	2,200	220	U	0.56 J	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	45	1.8	0.69 J	U	0.69 J	U	0.76 J	1.1	U	0.23 J	0.58 J
chloromethane	3,900	390	U	U	U	U	0.77 J	1.9	1.3	1.0 J	U	1.1	0.82 J
cis-1,2-dichloroethene	NA	NA	0.73	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	0.43 J
cyclohexane	260,000	26,000	5.9	10	3.5	U	1.8	12	1.3	1.6 J	U	0.98	0.19 JM
ethyl acetate	3,100	310	U	0.62 J	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	1.6	3.2	U	1.9 J	0.94	1.5	0.31 J	0.25 J	U	0.22 J	5.2
freon 11 (trichlorofluoromethane)	31,000	3,100	400	22	2.2	U	3.8	1.8	7.3	3.5	14 J	1.9	3
freon 113 (freon TF)	1,300,000	130,000	0.86 J	0.78 J	U	U	0.61 J	U	0.51 J	0.82 J	U	0.82 J	0.66 J
freon 12 (dichlorodifluoromethane)	4,400	440	2.8	2.8	2.1	3.1 J	2.5	2.9	2.4 J	3.4	U	2.6	2.9
freon 22	2,200,000	220,000	NA	NA	NA	750	130	6.7 J	27	U	1300 J	U	U
heptane	NA	NA	U	4.2	6.2	U	0.88	18	0.32 J	0.75 J	U	0.38 J	0.29 J
hexane	31,000	3,100	U	8.2	U	U	0.77	23	0.49 J	0.83	U	0.55 J	0.37 J
isopropyl alcohol	NA	NA	4.4	15	2.4	20 J	30	39	44	7.2 J	12 J	9.3 J	7.1 J
m,p-xylene (sum of isomers)	4,400	440	5.1	12	0.53 J	5.5 J	3.1	4.7	0.89 J	0.63 J	U	0.57 J	5.7
methyl butyl ketone	NA	NA	U	U	U	U	U	U	0.19 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	4.3	3	U	U	3.4 B	5.4	1.2 J	2.0	U	U	1.9
methyl isobutyl ketone	130,000	13,000	U	U	U	U	1.3 J	U	0.44 J	0.45 J	U	U	U
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	U	U	U	0.59 J	U	0.48 J	1.1 J	U	0.72 J	0.45 J
Naphthalene	3.6	0.36	U	U	U	U	1.9 J	U	U	U	U	U	0.82 J
n-Butane	NA	NA	NA	NA	NA	U	1.2 J	3.6	4.7	18 J	U	3.4	1.9
n-Propylbenzene	44,000	4,400	NA	NA	NA	U	0.31 J	U	U	U	U	U	0.46 J
o-xylene	4,400	440	2.2	2.8	U	3.6 J	1.1	1.2	0.34 J	0.23 J	U	0.2 J	2.2
styrene	44,000	4,400	U	U	U	U	0.44 J	U	0.18 J	U	U	0.078 J	0.55 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	0.63 J
tetrachloroethylene (pce)	470	47	2.8	U	U	U	U	U	U	0.25 J	U	U	U
tetrahydrofuran	NA	NA	6.7	U	U	U	1.4 J	U	U	U	U	U	U
toluene	220,000	22,000	3.2	17	1.4	4.8 J	3.9	4.7	1.4	1.2 J	U	0.91	4.1
trichloroethylene (tce)	30	3	2,900	84	11	4.2 J	20	U	0.21 J	3.3 J	U	0.29 J	1.9
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	774VMP-3										
Sample ID			**774VMP0301AA**	**774VMP0301AB**	**774VMP0301AC**	**774VMW0301AD**	**774VMP0301AG**	**774VMP0301HA**	**774VMP0301IA**	**774VMP0301JA**	**774VMP0301KA**	**774VMP0301MA**	**774VMP0301NA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**4-May-2011**	**24-Aug-2011**	**21-Oct-2011**	**26-Jan-2012**	**6-Aug-2012**	**21-Feb-2013**	**8-Aug-2013**	**30-Jan-2014**	**17-Jul-2014**	**22-Jan-2015**	**31-Aug-2015**
Sample Depth (ft bgs / ags)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in $\mu g/m^3$													
1,1,1-trichloroethane	220,000	22,000	12	0.67 J	U	U	U	U	U	U	U	U	U
1,1-dichloroethane	77	7.7	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	6.3	4.1	0.95	U	0.35 J	1.4 J	U	U	U	U	U
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	2.2	1.8	U	U	U	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	2.3	U	U	U	13	0.22 J	U	U	U	U
4-ethyltoluene	NA	NA	4.2	1.6	U	U	U	U	U	U	U	U	U
4-isopropyltoluene	NA	NA	NA	NA	NA	U	0.27 J	1.8 J	U	U	U	U	U
acetone	1,400,000	140,000	17	19	12	30 J	25 B	94	11 J	U	170 J	8 J	U
benzene	16	1.6	2.5	3.8	0.39 J	U	0.38 J	2.9 J	0.34 J	U	5.8 J	1.4 J	U
carbon disulfide	31,000	3,100	0.95	1.4	U	U	0.32 J	9	0.25 J	U	U	U	U
carbon tetrachloride	20	2	0.45	U	U	U	U	U	U	U	U	U	380 D
chlorobenzene	2,200	220	U	0.84	U	U	U	U	0.10 J	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	9.1	U	U	U	0.22 J	U	0.16 J	U	U	U	U
chloromethane	3,900	390	U	U	U	U	0.43 J	1.3 J	0.79 J	U	U	1.3 J	U
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	6.2	11	4.8	U	0.83	12	0.94	U	12 J	0.44 J	U
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	1.5	3.6	U	U	0.45 J	4 J	0.26 J	U	2.5 J	U	U
freon 11 (trichlorofluoromethane)	31,000	3,100	630	120	9.5	21	15	5.4 J	40	15 J	370	8.5	13 JDM
freon 113 (freon TF)	1,300,000	130,000	0.86 J	0.78 J	U	U	0.51 J	U	0.45 J	U	U	U	U
freon 12 (dichlorodifluoromethane)	4,400	440	U	2.6	2.4	3.5 J	2.4 J	3.5 J	2.1 J	U	24 J	3 J	U
freon 22	2,200,000	220,000	NA	NA	NA	880	26	11 J	11	U	4000	3.1 J	U
heptane	NA	NA	U	3.5	U	U	0.72 J	17	0.23 J	U	U	U	U
hexane	31,000	3,100	U	7.5	U	U	1.6	20	0.37 J	U	U	U	U
isopropyl alcohol	NA	NA	U	U	U	25 J	4.2 J	65	7.4 J	U	110 J	3 J	8.9 JD
m,p-xylene (sum of isomers)	4,400	440	4.5	12	1.2 J	U	1.2 J	15	0.66 J	U	5.6 J	U	U
methyl butyl ketone	NA	NA	U	U	U	U	0.81 J	U	U	U	U	U	U
methyl ethyl ketone	220,000	22,000	U	U	U	7.6 J	3.8 B	13	U	U	U	U	U
methyl isobutyl ketone	130,000	13,000	U	U	U	U	0.37 J	1.1 J	0.37 J	U	U	U	U
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	U	U	U	2.1	2.3 J	0.51 J	U	U	U	U
Naphthalene	3.6	0.36	U	U	U	U	0.68 J	U	U	U	U	U	U
n-Butane	NA	NA	NA	NA	NA	U	2.7	3.2 J	0.96 J	U	U	2.1 J	U
n-Propylbenzene	44,000	4,400	NA	NA	NA	U	U	U	U	U	U	U	U
o-xylene	4,400	440	2.2	3.2	U	U	0.38 J	3.7 J	0.26 J	U	U	U	U
styrene	44,000	4,400	U	1.4	U	U	0.31 J	U	0.23 J	U	5.0 J	U	U
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.3 J	U	0.50 J	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	U	U	U	U	0.24 J	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	12 J	1.3 J	U	U	U	U	U	U
toluene	220,000	22,000	2.3	16	2.2	1.3 J	4.0	12.0	1.1	U	8.6 J	0.68 J	U
trichloroethylene (tce)	30	3	300	11	3.0	U	1.0 J	1.3 J	0.33 J	U	9.2 J	U	U
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location			774-1A										
Sample ID	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	774IA1AD	774IA1AE	774IA1AF	774IA1AG	774IA1AH	774IA1IA	774IA1JA	774IA1KA	774IA1LA	774IA1MA	774IA1NA
Sample Type			Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date			5-May-2011	6-Sep-2011	21-Oct-2011	25-Jan-2012	6-Aug-12	21-Feb-13	8-Aug-13	30-Jan-14	17-Jul-14	22-Jan-15	31-Aug-15
Sample Depth (ft bgs / ags)			5	5	5	5	5	5	5	5	5	5	5
Sample Collection Duration (hr)			12	12	12	12	12	12	12	12	12	12	12
Volatiles (TO-15) in $\mu g/m^3$													
1,1,1-trichloroethane	220,000	22,000	U	U	U	U	U	U	U	U	U	U	U
1,1-dichloroethane	77	7.7	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	2.7	1.6	0.65 J	U	U	U	0.28 J	0.32 J	0.20 J	U	0.13 J
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	0.27 J	U	U	U	U	U
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	0.46 J	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	1.6 J	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	U	U	U	U	0.55 J	0.24 J	U	U	U	U
4-ethyltoluene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
4-isopropyltoluene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
acetone	1,400,000	140,000	52	34	19	28 J	32 B	44	18	47	18 J	11 J	12
benzene	16	1.6	1.3	U	U	U	U	0.69	0.31 J	0.80	0.24 J	0.68	0.32 J
carbon disulfide	31,000	3,100	0.66	U	U	U	U	U	U	U	U	U	U
carbon tetrachloride	20	2	0.51	0.90 J	U	U	0.45 J	0.46 J	0.44 J	0.53 J	0.49 J	0.45 J	0.43 J
chlorobenzene	2,200	220	0.7	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	0.2 J	U	U	U	U	U
chloroform	5.3	0.53	0.55 J	U	U	U	0.28 J	0.32 J	0.18 J	0.57 J	U	U	0.18 J
chloromethane	3,900	390	U	1.2	U	1.7 J	1.2	2.7	1.0 J	1.7	1.2 J	1.1	1
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	0.21 J	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	1.3	U	U	U	U	0.57 J	0.14 J	U	U	U	U
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	0.84	0.57 J	U	U	U	0.19 J	0.24 J	0.26 J	0.23 J	0.15 J	0.19 J
freon 11 (trichlorofluoromethane)	31,000	3,100	33	77	4.2	8.9	5.0	3.2	40	16	18	2.2	2.5
freon 113 (freon TF)	1,300,000	130,000	U	0.86 J	U	U	0.56 J	0.72 J	0.55 J	0.65 J	U	0.67 J	0.49 J
freon 12 (dichlorodifluoromethane)	4,400	440	U	2.8	2.4	U	2.4 J	3	2.2 J	3.0	2.9 J	2.6	2.4 J
freon 22	2,200,000	220,000	NA	NA	NA	350	40	10 J	11	13	330	2	U
heptane	NA	NA	1.7	U	U	U	U	0.66 J	0.21 J	0.51 J	U	U	U
hexane	31,000	3,100	33	U	U	U	U	1.9	0.42 J	0.74	0.34 J	U	0.28 J
isopropyl alcohol	NA	NA	11	32	9.9	29 J	8.3 J	26	14	26	11 J	1.6 J	U
m,p-xylene (sum of isomers)	4,400	440	2.4	1.2 J	0.57 J	U	U	0.44 J	0.65 J	0.61 J	0.45 J	U	0.5 J
methyl butyl ketone	NA	NA	U	U	U	U	0.62 J	U	0.61 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	U	2.8	U	2.5 J	2.2 B	15	2.6	1.6	3.5 J	2.1	0.93 J
methyl isobutyl ketone	130,000	13,000	U	U	U	U	0.37 J	1 J	0.35 J	0.30 J	U	U	U
methyl methacrylate	NA	NA	NA	NA	NA	U	U	0.93 J	U	U	U	U	U
methylene chloride	12,000	1,200	U	1.1	U	U	0.45 J	1 J	0.59 J	0.76 J	U	0.88 J	0.84 J
Naphthalene	3.6	0.36	U	U	U	U	U	U	U	U	U	U	0.48 J
n-Butane	NA	NA	NA	NA	NA	U	0.32 J	2.5	1.0 J	18	U	2.1	1.1 J
n-Propylbenzene	44,000	4,400	NA	NA	NA	U	U	U	U	U	U	U	U
o-xylene	4,400	440	0.71	0.49 J	U	U	U	0.18 J	0.27 J	0.23 J	U	U	0.18 J
styrene	44,000	4,400	0.78	0.56 J	U	U	U	0.18 J	0.24 J	0.16 J	0.43 J	U	0.13 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	U	1.7 J	0.69 J	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	U	U	U	U	U	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U	U	U	U	U	U	U	U
toluene	220,000	22,000	5.1	2.5	1.3	0.76 J	0.47 J	0.71 J	1	1.2	0.65 J	0.58 J	0.85
trichloroethylene (tce)	30	3	4.4	2.3	0.87	1.5 J	0.35 J	0.22 J	U	0.34 J	U	U	U
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level (µg/m³)	Indoor Air Screening Level (µg/m³)	776VMP-1										
Sample ID			776VMP0101AA	776VMP0101AB	776VMP0101AC	776VMP0101AD	776VMP0101AG	776VMP0101HA	776VMP0101IA	776VMP0101JA	776VMP0101KA	776VMP0101MA	776VMP0101NA
Sample Type			sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
Sample Date			4-May-2011	6-Sep-2011	21-Oct-2011	25-Jan-2012	6-Aug-2012	21-Feb-2013	9-Aug-2013	30-Jan-2014	17-Jul-2014	22-Jan-2015	31-Aug-2015
Sample Depth (ft bgs / ags)			1	1	1	1	1	1	1	1	1	1	1
Sample Collection Duration (hr)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	4.5	U	U	U	U	U	U	U	U	U	U
1,1,2,2-tetrachloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	9.0	3.5	U	U	0.46 J	0.66 J	0.27 J	U	U	1.3	2.3
1,2-dichloroethane	4.7	0.47	U	0.45 J	U	U	0.32 J	U	U	U	U	U	0.22 J
1,3,5-trimethylbenzene	NA	NA	3.8	1.6	U	U	U	U	U	U	U	0.4 J	0.66 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	1 J
1,4-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	0.38 J	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	0.99 J	12 J
2,2,4-trimethylpentane	NA	NA	U	U	0.47 J	U	U	6.5	0.18 J	U	U	U	U
4-ethyltoluene	NA	NA	7.2	0.9	U	U	U	U	U	U	U	0.55 J	0.79 J
4-isopropyltoluene	NA	NA	NA	NA	NA	U	0.33 J	U	U	U	U	1.7	0.34 J
acetone	1,400,000	140,000	25	39	39	23	57	37	26	11 J	24	21	38
benzene	16	1.6	1.0	0.55	1.3	0.52 J	0.43 J	0.87	0.30 J	0.68	0.26 J	0.82	0.46 J
bromomethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	1.2	0.57	0.44 J	U	9.5	U	0.22 J	U	2.3 J	4.8	2.2
carbon tetrachloride	20	2	0.77	0.77 J	U	0.53 J	0.83 J	0.51 J	1.1 J	0.52 J	0.47 J	0.52 J♦	0.6 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	0.27 J
chloroform	5.3	0.53	11	0.79	U	0.27 J	U	U	0.66 J	0.17 J	0.25 J	U	0.54 J
chloromethane	3,900	390	U	1.1	U	0.67 J	1.3	1.4	1.2	1.1	0.85 J	0.76 J	0.98 J
cis-1,2-dichloroethene	NA	NA	U	9.70	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	0.17 J	0.67 J
cyclohexane	260,000	26,000	6.8	1.6	3.0	1.2	2.9	6.6	1.1	0.9	1.1 J	0.47 J	0.34 J
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	1.6	0.79	1.6	U	0.92	0.76 J	0.40 J	0.30 J	U	1.40	7.6
freon 11 (trichlorofluoromethane)	31,000	3,100	1.7	2.5	1.3	1.4	1.3	1.5	1.2	1.4	1.2 J	1.3 ♦	1.4
freon 113 (freon TF)	1,300,000	130,000	8.6	0.86 J	U	0.70 J	0.65 J	0.73 J	0.54 J	0.69 J	0.63 J	0.43 J	0.83 J
freon 12 (dichlorodifluoromethane)	4,400	440	6.6	2.9	2.2	2.9	2.5	2.9	U	3.0	2.7 J	2.7	2.6
freon 22	2,200,000	220,000	NA	NA	NA	12	13	52 J	3	17	130	4.9	4.2
heptane	NA	NA	U	U	1.0	U	0.38 J	8.3	0.20 J	U	U	0.72 J	U
hexane	31,000	3,100	U	U	1.9	0.38 J	U	9.8	0.29 J	0.35 J	0.33 J	0.72	1.2
isopropyl alcohol	NA	NA	U	21	21	49	46	46	19	24	15 J	18 ♦	40
m,p-xylene (sum of isomers)	4,400	440	5.4	1.9	4.0	0.23 J	1.8 J	2.4	0.87 J	0.60 J	U	4.9	7.8
methyl butyl ketone	NA	NA	U	U	U	U	1.4 J	U	0.63 J	U	U	U	0.7 J
methyl ethyl ketone	220,000	22,000	2.9	2.7	1.9	5.9	4.3	3.9	2.8	0.86 J	4	U	4.4
methyl isobutyl ketone	130,000	13,000	2.2	U	U	U	3.1	U	1.1 J	0.22 J	0.28 J	0.91 J	0.92 J
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	13	0.46 J	0.49 J	0.52 J	1 J	0.47 J	0.67 J	U	0.71 J	0.43 J
naphthalene	3.6	0.36	U	U	U	U	3.2 J	U	0.61 J	U	U	U	0.75 J
n-Butane	NA	NA	NA	NA	NA	2.4	2.8	2.4	1.1 J	3.3	U	21	5.1
n-Propylbenzene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	0.64 J
o-xylene	4,400	440	2.5	0.97	1.1	U	0.65 J	0.78 J	0.31 J	0.23 J	U	1.5	3.1
styrene	44,000	4,400	1.1	1.1	0.56 J	U	1.0	0.2 J	0.31 J	0.20 J	U	0.3 J♦	0.88
tert-Butyl alcohol	NA	NA	NA	NA	NA	1.3 J	2.0 J	1 J	0.89 J	U	U	0.95 J	2.7 J
tetrachloroethylene (pce)	470	47	U	2.7	U	U	U	U	U	U	U	U	U
tetrahydrofuran	NA	NA	4.8	1.1	U	9.9 J	0.72 J	U	U	U	U	3 J	0.82 J
toluene	220,000	22,000	5.6	4.1	6.1	0.40 J	1.5	3.1	1.1	0.85	0.38 J	5.2	5
trichloroethylene (tce)	30	3	21	38	U	0.36 J	U	U	U	0.36 J	0.71 J	U	0.81 J
vinyl chloride	28	2.8	U	0.81	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level (µg/m³)	Indoor Air Screening Level (µg/m³)	776VMP-2										
Sample ID			776VMP0201AA	776VMP0201AB	776VMP0201AC	776VMP0201AD	776VMP0201AG	776VMP0201HA	776VMP0201IA	776VMP0201JA	776VMP0201KA	776VMP0201MA	776VMP0201NA
Sample Type			sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
Sample Date			4-May-2011	6-Sep-2011	21-Oct-2011	25-Jan-2012	6-Aug-2012	21-Feb-2013	9-Aug-2013	30-Jan-2014	17-Jul-2014	22-Jan-2015	31-Aug-2015
Sample Depth (ft bgs / ags)			1	1	1	1	1	1	1	1	1	1	1
Sample Collection Duration (hr)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	8.7	U	U	U	U	U	U	U	U	U	U
1,1,2,2-tetrachloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	9.1	3.3	0.65 J	U	0.45 J	0.73 J	2	5.6	2.7	0.3 J	2.6
1,2-dichloroethane	4.7	0.47	U	0.49 J	U	U	U	U	U	0.27 J	U	0.22 J	U
1,3,5-trimethylbenzene	NA	NA	2.8	1.2	U	U	U	U	0.55 J	1.6	0.74 J	U	0.73 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	44	7.8	U	1.2
1,4-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	U	U	0.24 J	0.56 J	6.5 J	2.1	0.92 ♦	0.80 J	U	0.21 J
4-ethyltoluene	NA	NA	5.1	1.0	U	U	U	0.27 J	0.58 JM	1.7	0.81 J	0.15 J	0.82 J
4-isopropyltoluene	NA	NA	NA	NA	NA	0.49 J	0.41 J	U	U	1.8 ♦	U	U	0.34 J
acetone	1,400,000	140,000	17	39	45	20	43	36	38	58	38 ♦	8.8 J	35
benzene	16	1.6	1.1	0.45 J	1.5	0.65	0.43 J	0.92	0.7	1.7 ♦	0.60 J♦	0.75	0.41 JM
bromomethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	0.98	0.79	0.38 J	0.64 J	0.41 J	0.33 J	3.4	0.44 J♦	U	U	0.7 J♦
carbon tetrachloride	20	2	0.77	0.77 J	0.70 J	0.53 J	0.70 J	0.56 J	0.42 J	0.62 J♦	U	0.59 J	0.69 J♦
chlorobenzene	2,200	220	U	U	U	0.13 J	U	U	U	0.31 J♦	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	8.3	U	U	0.30 J	0.22 J	U	0.24 J♦	0.22 J	0.33 J♦	U	0.62 J
chloromethane	3,900	390	U	1.2	U	0.85 J	1.4	1.7	1.4♦	1.8	1.3 J	1.2	0.87 J
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	0.36 J	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	0.34 J♦	U	0.82 J
cyclohexane	260,000	26,000	4.5	7.3	8.5	1.4	2.1	5.5	0.79	6.9 J♦	1.3 J♦	0.72	0.57 J♦
ethyl acetate	3,100	310	U	1.9	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	0.66	0.88	1.4	0.75 J	1.1	0.98	1.4	4.1 J♦	2.1	0.4 J	10
freon 11 (trichlorofluoromethane)	31,000	3,100	2.5	1.8	1.6	1.6	1.4	1.5	1.2	1.6 ♦	1.5 J	1.2	1.5
freon 113 (freon TF)	1,300,000	130,000	6.8	1.0 J	U	1.2 J	0.67 J	0.68 J	0.53 J	0.73 J♦	0.74 J	0.54 J	0.98 J♦
freon 12 (dichlorodifluoromethane)	4,400	440	11.0	3.0	2.6	3.1	2.5	2.5 ♦	0.47 J	3.3 ♦	3.0 J	2.6	2.8
freon 22	2,200,000	220,000	NA	NA	NA	16	14	68 J	3.3	99 J♦	170	10	4.6
heptane	NA	NA	0.67	1.3	U	0.38 J	0.43 J	7.1 J	0.72 J	2.3 ♦	0.69 J♦	U	0.35 J
hexane	31,000	3,100	U	U	U	0.53 J	0.43 J	8.5 J	0.68 J	2.3 ♦	0.79 J♦	0.32 J	1.2
isopropyl alcohol	NA	NA	U	68	31	41	40	44	30	95	48	16	42
m,p-xylene (sum of isomers)	4,400	440	2.1	2.4	3.4	1.9 J	2.4	3.2	4.7	11	5.8	1.1 J	9.6
methyl butyl ketone	NA	NA	U	U	U	U	1.0 J	U	1.0 J	0.94 J	U	U	U
methyl ethyl ketone	220,000	22,000	1.7	U	3.9	1.2 J	4.3 B	3.6	5.9	9.4	7.0 ♦	U	4 ♦
methyl isobutyl ketone	130,000	13,000	U	U	U	0.44 J	1.9 J	0.39 J	0.89 J	1.0 J	1.2 J♦	U	0.99 J♦
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	0.74 J	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	0.33 J	U	U
methylene chloride	12,000	1,200	U	0.53	U	0.55 J	0.92 J	0.98 J	0.83 J♦	0.89 J	U	U	0.56 J♦
naphthalene	3.6	0.36	U	U	U	U	1.9 J	0.5 J	0.61 J	U	U	0.68 J	0.85 J
n-Butane	NA	NA	NA	NA	NA	3.2	3.3	2.7 ♦	1.4	5.8 J♦	1.6 J	2.5	5.2
n-Propylbenzene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	0.65 J
o-xylene	4,400	440	1.1	0.93	0.97	0.79 J	0.82 J	1	1.8	4.5 J♦	2.1	0.37 J	3.6
styrene	44,000	4,400	0.78	1.0	0.65	0.44 J	1.8	U	0.44 J	4.8	1.6 J	0.67 J	0.91
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.3 J	1.7 J	17	5.0 J♦	U	2.4 J	
tetrachloroethylene (pce)	470	47	1.4	U	7.4	U	U	U	0.17 J♦	0.52 J♦	U	U	U
tetrahydrofuran	NA	NA	1.6	4.3	U	U	1.1 J	3.3 J♦	U	1.4 J	U	U	0.58 J
toluene	220,000	22,000	3.2	4.5	6.9	1.4	1.7	3.6 J	4.5	19 J♦	4.8	0.85	4.9
trichloroethylene (tce)	30	3	360	3.8	3.7	3.0	1.4	0.33 J	0.20 J♦	0.81 J	1.1 J	0.42 J	0.76 J
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level (µg/m³)	Indoor Air Screening Level (µg/m³)	776VMP-3										
Sample ID			776VMP0301AA	776VMP0301AB	776VMP0301AC	776VMP0301AD	776VMP0301AG	776VMP0301HA	776VMP0301IA	776VMP0301JA	776VMP0301KA	776VMP0301MA	776VMP0301NA
Sample Type			sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
Sample Date			4-May-2011	6-Sep-2011	21-Oct-2011	25-Jan-2012	6-Aug-2012	21-Feb-2013	9-Aug-2013	30-Jan-2014	17-Jul-2014	22-Jan-2015	31-Aug-2015
Sample Depth (ft bgs / ags)			1	1	1	1	1	1	1	1	1	1	1
Sample Collection Duration (hr)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	18	U	U	U	U	U	U	U	U	U	0.18 J
1,1,2,2-tetrachloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	11	2.1	0.50 J	0.61 J	0.52 J	U	0.67 J	U	0.36 J	0.25 J	0.23 J
1,2-dichloroethane	4.7	0.47	U	0.62	U	0.27 J	U	0.29 J	U	U	0.27 J	U	U
1,3,5-trimethylbenzene	NA	NA	2.7	0.70 J	U	U	U	U	U	U	0.11 J	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	0.79 J	U	U
2,2,4-trimethylpentane	NA	NA	U	U	U	U	U	5.7	0.65 J	0.21 J	0.16 J	U	U
4-ethyltoluene	NA	NA	5.2	0.65 J	U	U	U	U	U	U	0.12 J	U	U
4-isopropyltoluene	NA	NA	NA	NA	NA	0.29 J	0.40 J	U	U	U	0.12 J	U	0.22 J
acetone	1,400,000	140,000	20	30	58	34	50	37	19	37	26	21	27
benzene	16	1.6	2	0.39 J	1.0	0.40 J	0.32 J	0.99	0.37 J	0.81	0.31 J	0.54 J	0.28 J
bromomethane	NA	NA	U	U	U	U	U	U	U	U	0.11 J	U	U
carbon disulfide	31,000	3,100	0.95	0.95	0.63	6.0	0.44 J	U	0.21 J	U	2.0	U	0.93 J
carbon tetrachloride	20	2	0.38	0.83 J	0.70 J	0.51 J	0.60 J	0.53 J	0.41 J	0.49 J	U	0.49 J	0.61 J
chlorobenzene	2,200	220	U	U	U	U	0.22 J	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	0.093 J	U	U
chloroform	5.3	0.53	16	U	0.74	0.68 J	0.87 J	1.2	0.18 J	0.29 J	0.44 J	U	0.47 JM
chloromethane	3,900	390	U	0.97	U	U	1.3	U	1.2	0.73 J	1.3	U	0.67 J
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	0.30 J	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	5.4	3.5	4.8	1.2	2.8	5	0.71	3.4	1.2	0.8	0.81 M
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	1.1	0.66	1.2	0.64 J	0.72 J	0.98	0.56 J	0.47 J	0.40 J	0.3 J	0.29 J
freon 11 (trichlorofluoromethane)	31,000	3,100	4.6	1.7	1.5	1.4	1.4	1.5	1.1	1.3	1.3	1.3	1.4
freon 113 (freon TF)	1,300,000	130,000	1.6	0.93 J	U	0.60 J	0.61 J	0.63 J	0.52 J	0.57 J	0.57 J	0.53 J	0.55 J
freon 12 (dichlorodifluoromethane)	4,400	440	21	2.9	2.6	2.9	2.5	2.7	2.3 J	2.9	2.8	2.7	2.6
freon 22	2,200,000	220,000	NA	NA	NA	6.3	15	50 J	9.9	15	50	9.2	6
heptane	NA	NA	U	U	U	0.36 J	0.45 J	5.4	0.36 J	0.74 J	0.34 J	U	U
hexane	31,000	3,100	U	U	U	0.72	0.91	7.2	0.40 J	0.89	0.24 J	U	0.37 J
isopropyl alcohol	NA	NA	U	12	21	28	28	34	24	63	19	20	29
m,p-xylene (sum of isomers)	4,400	440	3.8	1.7	2.7	1.7 J	1.7 J	2.6	1.6 J	0.65 J	0.99 J	0.72 J	0.71 J
methyl butyl ketone	NA	NA	U	U	U	U	0.78 J	U	0.25 J	U	U	0.86 J	U
methyl ethyl ketone	220,000	22,000	2.8	2.0	2.2	2.6	7.0 B	4.6	1.5	6.6	4.0	5.9	3.6
methyl isobutyl ketone	130,000	13,000	U	U	U	0.83 J	3.1	U	0.43 J	0.44 J	1.1 J	U	1.1 J
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	0.95	U	0.50 J	0.99 J	0.79 J	0.43 J	0.66 J	U	U	0.57 J
naphthalene	3.6	0.36	U	U	U	0.51 J	1.6 J	U	0.62 J	U	1.2 J	U	0.31 J
n-Butane	NA	NA	NA	NA	NA	1.7	16	1.8	1.2 J	3.3	0.69 J	1.6	1.2 J
n-Propylbenzene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
o-xylene	4,400	440	1.6	0.66	0.71	0.70 J	0.58 J	U	0.62 J	0.16 J	0.34 J	0.35 J	0.26 J
styrene	44,000	4,400	0.78	0.69	0.56 J	0.26 J	0.79 J	0.14 J	0.31 J	U	0.43 J	0.31 J	0.35 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.4 J	1 J	0.60 J	9.0 J	U	U	0.69 J
tetrachloroethylene (pce)	470	47	0.83 J	U	U	U	U	U	0.19 J	U	U	U	U
tetrahydrofuran	NA	NA	11	1.8	U	0.81 J	2.5 J	U	U	U	U	U	U
toluene	220,000	22,000	4.4	3.1	2.5	1.2	1.8	3.8	1.7	5.2	0.88	0.82	1
trichloroethylene (tce)	30	3	830	10	7.3	13	12	2.4	U	2.6	3.5	2.1	5.1
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level (µg/m³)	Indoor Air Screening Level (µg/m³)	776-1A										
Sample ID			**776IA1CA**	**776IA1DA**	**776IA1EA**	**776IA1FA**	**776IA1GA**	**776IA1HA**	**776IA1IA**	**776IA1JA**	**776IA1LA**	**776IA1MA**	**776IA1NA**
Sample Type			**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**
Sample Date			**4-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**	**6-Aug-2012**	**21-Feb-2013**	**8-Aug-2013**	**30-Jan-2014**	**17-Jul-2014**	**22-Jan-2015**	**31-Aug-2015**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-tetrachloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	1.2	1.7	0.85	U	0.55 J	U	U	U	0.32 J	U	0.29 J
1,2-dichloroethane	4.7	0.47	U	0.53 J	U	U	U	U	U	U	0.27 J	U	U
1,3,5-trimethylbenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	0.097 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	U	U	0.30 J	U	U	0.20 J	U	U	U	0.26 J
4-ethyltoluene	NA	NA	U	U	U	U	U	U	U	U	0.090 J	U	U
4-isopropyltoluene	NA	NA	NA	U	U	U	0.33 J	U	U	U	U	U	0.13 J
acetone	1,400,000	140,000	54	47	30	18	68	28	22	U	20	22	32
benzene	16	1.6	0.49	0.36 J	1.4	0.67 J	0.40 J	1.4	0.29 J	2.4	0.18 J	0.67	0.37 J
bromomethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	0.41 J	0.82	U	U	0.64 J	U	0.21 J	0.26 J	0.82 J	U	0.69 J
carbon tetrachloride	20	2	0.51	0.77 J	U	0.57 J	0.46 J	0.44 J	0.41 J	0.55 J	0.51 J	0.57 J	0.51 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	0.33 J	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	U	U	0.55 J	0.32 J	0.25 J	U	U	U	0.29 J	U	0.22 J
chloromethane	3,900	390	1.8	1.5	U	1.4 J	1.5	1.8	1.1	5.3	1.3	1.3	1.1
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	U	U	U	U	1.2	0.23 J	U	U	U	U	U
ethyl acetate	3,100	310	5.8	3.3	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	0.71	0.93	1.3	0.47 J	1.1	0.29 J	0.37 J	0.50 J	0.45 J	0.25 J	0.37 J
freon 11 (trichlorofluoromethane)	31,000	3,100	1.4	1.7	1.3	1.4 J	1.4	1.4	1.3	1.6	1.5	1.3	1.3
freon 113 (freon TF)	1,300,000	130,000	U	0.93 J	U	U	0.57 J	0.63 J	0.51 J	0.75 J	U	0.46 J	0.42 J
freon 12 (dichlorodifluoromethane)	4,400	440	3.6	3.1	2.2	3.2 J	2.4 J	2.2 J	2.3 J	3.5	3.1	2.8	2.4 J
freon 22	2,200,000	220,000	NA	NA	NA	15	14	69	2.4	17	30	10	4.4
heptane	NA	NA	3.2	1.3	U	0.43 J	1.5	0.14 J	0.19 J	1.8	U	U	U
hexane	31,000	3,100	2.3	U	U	U	2.0	0.54 J	0.25 J	2.8	U	U	0.33 J
isopropyl alcohol	NA	NA	50	50	35	100	57	43	23	1.9 J	15	18	28
m,p-xylene (sum of isomers)	4,400	440	1.2 J	2.1	2.9	1.0 J	2.5	0.23 J	1.2 J	1.6 J	1.1 J	0.54 J	0.89 J
methyl butyl ketone	NA	NA	U	U	U	U	1.2 J	U	0.53 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	3.3	4.1	U	0.84 J	6.5 B	2.1	2.6	U	2.0	2.1	3.9
methyl isobutyl ketone	130,000	13,000	U	U	U	0.83 J	2.7	1.1 J	1.5 J	U	1.5 J	U	U
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	1.3	U	U	1.7 J	1.2 J	1.8	1.0 J	0.64 J	U	0.95 J
naphthalene	3.6	0.36	U	U	U	0.71 J	2.2 J	U	U	U	U	U	1.1 J
n-Butane	NA	NA	NA	NA	NA	2.4	8.9	2.2	3.5	8.5	0.77 J	2.5	1.5
n-Propylbenzene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
o-xylene	4,400	440	0.44 J	0.75	0.88	0.46 J	0.81 J	U	0.66 J	0.47 J	0.36 J	U	0.32 J
styrene	44,000	4,400	1.1	1.0	0.82	0.33 J	1.9	U	0.16 J	U	0.35 J	0.23 J	0.33 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	0.56 J	5.4 J	U	0.69 J	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	U	U	U	0.38 J	U	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U	0.90 J	U	U	U	U	U	U
toluene	220,000	22,000	4.4	3.2	3.9	1.3	5.3	4.3	0.97	8.7	1.1	0.8	1.4
trichloroethylene (tce)	30	3	3.6	1.9	0.98	0.41 J	U	U	U	0.26 J	0.95 J	0.35 J	0.52 J
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-2
Building 774/776 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level (µg/m³)	Indoor Air Screening Level (µg/m³)	774/776-OA										
Sample ID			776OA1DA	776OA1EA	774776OA1FA	774776OA1GA	774776OA1HA	774776OA1IA	774776OA1JA	774776OA1KA	774776OA1LA	774776OA1MA	774776OA1NA
Sample Type			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Sample Date			4-May-2011	6-Sep-2011	21-Oct-2011	25-Jan-2012	6-Aug-2012	21-Feb-2013	8-Aug-2013	30-Jan-2014	17-Jul-2014	22-Jan-2015	1-Sep-2015
Sample Depth (ft bgs / ags)			5	5	5	5	5	5	5	5	5	5	5
Sample Collection Duration (hr)			12	12	12	12	12	12	12	12	12	12	12
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-tetrachloroethane	NA	NA	U	U	U	U	U	U	U	U	5.5	U	U
1,2,4-trimethylbenzene	310	31	U	1.7	0.60 J	U	1.8	U	0.48 J	U	0.11 J	U	0.64 J
1,2-dichloroethane	4.7	0.47	U	U	U	U	0.49 J	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	U	U	U	U	0.51 J	U	U	U	U	U	0.15 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	0.69 J
2,2,4-trimethylpentane	NA	NA	U	U	U	U	0.94 J	U	0.80 J	4.2	U	U	U
4-ethyltoluene	NA	NA	U	U	U	U	0.53 J	U	U	U	U	U	0.17 J
4-isopropyltoluene	NA	NA	U	U	U	U	0.8 J	U	U	U	U	U	U
acetone	1,400,000	140,000	18	53	6.8	1.9 J	97	15	13	7.0 J	9.1 J	U	13
benzene	16	1.6	U	0.39 J	U	0.63	0.92 J	0.61 J	0.47 J	0.91	0.16 J	0.63	0.33 JM
bromomethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	0.6	0.35 J	U	U	2.3 J	U	2	U	0.50 J	U	U
carbon tetrachloride	20	2	0.51	0.90 J	U	0.51 J	0.5 J	0.47 J	0.42 J	0.55 J	0.48 J	0.45 J	0.43 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	U	U	U	U	U	U	U	U	U	U	U
chloromethane	3,900	390	U	1.1	0.76	1.2	1.4 J	1.5	1.1	1.6	1.0	1.1	1.7
cis-1,2-dichloroethene	NA	NA	U	0.48 J	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	U	U	U	U	5.1	U	1.1	U	U	U	U
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U
ethylbenzene	49	4.9	U	U	1.1	U	2.1	U	0.37 J	0.24 J	U	U	0.21 J
freon 11 (trichlorofluoromethane)	31,000	3,100	1.3	1.7	1.3	1.4	1.4 J	1.4	1.1	1.5	1.3	1.4	1.3
freon 113 (freon TF)	1,300,000	130,000	U	0.86 J	U	0.56 J	0.61 J	0.64 J	0.57 J	0.68 J	U	0.53 J	0.43 J
freon 12 (dichlorodifluoromethane)	4,400	440	U	2.9	2.5	2.8	3.4 J	2.7	2.2 J	3.2	2.8	2.7	2.3 J
freon 22	2,200,000	220,000	NA	NA	NA	U	2.1 J	1.1 J	1.2 J	1.2 J	0.94 J	0.86 J	0.96 J
heptane	NA	NA	1.2	U	U	U	3.6	U	0.37 J	1.2	U	U	U
hexane	31,000	3,100	0.9	U	U	0.42 J	8.2	0.48 J	0.73	0.96	U	U	U
isopropyl alcohol	NA	NA	U	U	1.2	U	14 J	U	5.6 J	U	0.98 J	U	U
m,p-xylene (sum of isomers)	4,400	440	U	1.1 J	2.7	0.33 J	6.2	U	0.98 J	0.68 J	0.20 J	U	0.72 J
methyl butyl ketone	NA	NA	U	U	U	U	0.56 J	1.5	0.33 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	U	8.7 J	U	0.42 J	6.7 B	U	15	1.2 J	2.2	U	2
methyl isobutyl ketone	130,000	13,000	U	U	U	U	U	U	0.25 J	U	0.11 J	U	0.95 J
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	U	0.92	0.56	0.50 J	2.0 J	0.98 J	1.3 J	0.92 J	U	0.82 J	0.75 J
naphthalene	3.6	0.36	U	U	U	U	3.1 J	U	U	U	U	U	0.37 J
n-Butane	NA	NA	NA	NA	NA	1.8	24	1.4	1.3	4.7	U	1.4	0.88 J
n-Propylbenzene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	0.14 J
o-xylene	4,400	440	U	0.44 J	0.97	0.12 J	2.2	U	0.43 J	0.21 J	U	U	0.28 J
styrene	44,000	4,400	U	U	U	U	1.2 J	U	0.25 J	U	U	U	U
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.2 J	U	0.73 J	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	U	U	U	U	0.91 J	U	U	U	U
tetrahydrofuran	NA	NA	U	1.3	U	U	8.2 J	U	U	U	U	U	U
toluene	220,000	22,000	1	5.8	3.5	0.73 J	20	0.39 J	5.6	1.9	0.37 J	0.49 J	0.73 J
trichloroethylene (tce)	30	3	0.98	2.6	0.60 J	U	U	U	U	1.2	0.53 J	U	U
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-3
Buildings 774/776
SSVM System Performance Monitoring Influent Air Results

Sample Location	774776- Influent												
Sample ID	**774776CA01AA**	**774776CA01AB**	**774776CA01AC**	**774776CA01AD**	**774776CA01AE**	**774776CA01AF**	**774776CA01AG**	**774776CA01AH**	**774776CA01IA**	**774776CA01JA**	**774776CA01KA**	**774776CA01LA**	**774776CA01MA**
Sample Type	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**
Sample Date	**6-Jun-2011**	**23-Aug-2011**	**14-Oct-2011**	**14-Oct-2011**	**25-Oct-2011**	**24-Jan-2012**	**3-Aug-2012**	**15-Feb-2013**	**7-Aug-2013**	**28-Jan-2014**	**16-Jul-2014**	**20-Jan-2015**	**28-Aug-2015**
Sample Depth (ft bgs / ags)	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**
Sample Collection Duration (hr)	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**
Volatiles (TO-15) in µg/m^3													
1,1,1-trichloroethane	6.6	4.0	6.9	6.1	6.5	5.0 J	2.9	0.91 J	1.8	U	U	1.8	1.6 M
1,2,4-trimethylbenzene	9.5	3.1	U	U	1.7	U	0.69 J	U	0.56 J	U	U	U	1.4
1,3,5-trimethylbenzene	4.7	2.2	U	U	0.55 J	U	U	U	U	U	U	U	0.42 J
1,3-dichlorobenzene	U	U	U	U	U	U	0.81 J	U	U	U	U	U	U
2,2,4-trimethylpentane	U	U	U	U	U	U	U	U	0.23 J	U	U	U	1.1
4-ethyltoluene	6.9	1.0	U	U	U	U	U	U	U	U	U	U	0.55 J
4-isopropyltoluene	NA	NA	NA	NA	NA	U	0.34 J	U	0.35 J	U	U	U	0.49 J
acetone	50	30	300	440	27	16 J	23 B	28	35	19 J	63	7.6 J	36
benzene	0.45 J	4.1	0.42 J	0.7	0.97	1.8 J	0.30 J	0.25 J	0.33 J	3.9	0.65 J	0.53 J	0.37 J
carbon disulfide	0.73	U	U	U	U	U	0.46 J	0.21 J	U	U	U	0.44 J	1.5 J
carbon tetrachloride	U	U	U	U	0.96	U	0.54 J	1.8	0.51 J	U	1.5 J	U	1.5
chloroform	15	4.3	3.6	5.0	4.6	3.6 J	4.9	2.2	5.7	0.93 J	4.4 J	1.8	2.4
chloromethane	U	U	U	U	U	U	0.71 J	1.5	0.61 J	2.0 J	1.7 J	0.96 J	0.58 J
cis-1,2-dichloroethene	1.80	U	U	U	U	U	U	U	U	U	U	U	U
cumene	NA	NA	NA	NA	NA	U	U	U	U	U	0.98 J	0.26 J	0.14 J
cyclohexane	U	U	U	U	U	U	0.36 J	0.38 J	0.14 J	U	U	U	0.14 J
ethylbenzene	0.62 J	0.93	U	U	0.79	U	0.38 J	U	0.47 J	U	0.32 J	U	1.2
freon 11 (trichlorofluoromethane)	50	130	83	59	49	40	61	29	35	14	24	28	42
freon 113 (freon TF)	U	1.9	1.1 J	1.0 J	U	U	0.82 J	0.5 J	0.65 J	U	U	U	U
freon 12 (dichlorodifluoromethane)	3.7	16	6.1	6.1	6.4	11 J	7.1	4.7	6.5	4.4 J	6.9 J	4.5	6.8
freon 22	NA	NA	NA	NA	NA	320	94	33	45	42	510	U	3.3
heptane	0.83	12	U	U	0.87	1.9 J	0.37 J	U	0.30 J	2.5 J	U	U	U
hexane	U	U	U	U	U	U	0.66 J	0.27 J	0.27 J	U	U	0.17 J	0.3 J
isopropyl alcohol	U	U	U	U	U	U	7.9 J	2.1 J	13	U	10 J	2.4 J	11 J
m,p-xylene (sum of isomers)	1.3 J	3.3	U	U	2.4	U	0.99 J	U	1.4 J	U	0.50 J	0.13 J	4
methyl ethyl ketone	14	4.4	300	400	15	4.8 J	2.5 B	0.45 J	5	U	4.7 J	U	4
methyl isobutyl ketone	U	U	U	U	U	U	0.28 J	U	0.46 J	U	U	U	U
methylene chloride	2.2	U	U	U	U	U	0.64 J	1 J	0.41 J	3.8 J	U	0.5 J	U
naphthalene	U	U	U	U	U	U	1.9 J	U	U	U	U	U	U
n-Butane	NA	NA	NA	NA	NA	2.9 J	1.7	3.4	1.1 J	7.3	U	1.7	1.7
n-Propylbenzene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	0.3 J
o-xylene	0.84	1.8	U	U	1.0	U	0.42 J	U	0.53 J	U	U	U	1.4
styrene	U	U	U	U	U	U	0.15 J	U	0.14 J	U	U	U	0.15 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	U	U	1.9 J	U	U	U	0.65 JM
tetrachloroethylene (pce)	3.4	2.4	2.3	12	3.5	U	1.5	U	1.1 J	U	1.6 J	0.84 J	0.69 J
tetrahydrofuran	120	6.0	600	770	5.2	U	1.4 J	1.8 J	0.24 U	U	U	U	0.91 J
toluene	1.8	2.2	0.96	1.4	2.2	0.83 J	1.2	0.17 J	1.1	0.67 J	0.72 J	0.22 J	1.1
trichloroethylene (tce)	510	240	670	1,200	650	300	190	20	120	32	97	100	82
vinyl chloride	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m^3: microgram per cubic meter.
B - Analytes detected in the trip blank.

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* (µg/m³)	Indoor Air Screening Level* (µg/m³)	785VMP-2											
Sample ID			**785VMP0202AD**	**785VMP0202AE**	**785VMP0202AF**	**785VMP0202AG**	**785VMP0202AH**	**785VMP0202IA**	**785VMP0202JA**	**785VMP0202KA**	**785VMP0202LA**	**785VMP0202MA**	**785VMP0202NA**	**785VMP0202PA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**18-Mar-2011**	**24-Aug-2011**	**24-Oct-2011**	**31-Jan-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**29-Jan-2014**	**18-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in µg/m³														
1,1,1-trichloroethane	220,000	22,000	U	U	U	0.57 J	U	U	U	0.43 J	U	U	U	U
1,2,4-trimethylbenzene	310	31	1.5	1.4	U	U	3.7	1.6	U	U	U	1.4 J	0.72 J	3.9
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	U	U	U	U	1.0	0.46 J	U	U	U	0.38 J	U	1.1
1,3-butadiene	4.1	0.41	U	U	U	U	U	U	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	3.0	37	U	U	U	3.1	U	2.2
1,4-dichlorobenzene	23,360	2,336	U	1.5	U	U	U	U	U	U	U		U	0.21 J
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	0.36 J	U	6.6 J♦	U	U
2,2,4-trimethylpentane	NA	NA	U	U	1.2	U	1.5	5.8	0.17 J	U	U	U	U	U
4-ethyltoluene	NA	NA	0.65 J	U	U	U	1.2	0.65 J	U	U	U	0.30 J	U	0.98
4-isopropyltoluene	NA	NA	NA	NA	NA	U	0.33 J	U	U	U	U	U	U	0.45 J
acetone	1,400,000	140,000	10	17	3.2	0.76 J	12 JB	4.5 J	15	8.7 J	3.2 J	28	7.7 J	14
benzene	16	1.6	2.9	0.65	2.2	U	U	U	0.64	0.16 J	0.72	0.68 J	0.37 J	0.25 J
bromodichloromethane	3.3	0.33	U	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	0.82	0.63	U	U	0.86 J	U	0.70 J	0.41 J	0.43 J	4.7	0.65 J	4.8
carbon tetrachloride	20	2	U	U	0.70 J	0.49 J	0.46 J	0.44 J	0.46 J	U	0.33 J	0.86 J	0.42 J	0.57 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	1.5	U	U	U	U	U	0.16 J	0.55 J	0.24 J	26 J	U	0.28 J
chloromethane	3,900	390	1.4	1.1	U	3.5	37	0.21 J	8.8	3.7	5.1	12 J	2.2	4.2
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	0.5 J	0.24 J	2.0	U	0.16 J
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	0.19 J	U	0.61 J
cyclohexane	260,000	26,000	1.3	0.94	1.9	U	U	6.8	U	U	U	U	U	U
dibromochloromethane	10	NA	U	U	U	U	U	U	U	U	U	U	U	U
ethylbenzene	49	4.9	1.5	U	0.75	U	1.2	1.8	0.49 J	0.14 J	0.27 J	0.76 J	0.42 J	5.8
freon 11 (trichlorofluoromethane)	31,000	3,100	1	1.8	1.5	1.4	1.3	1.3	1.2	1.1	1.1 J	2.7	1.2	1.4
freon 113 (freon TF)	1,300,000	130,000	U	0.78 J	U	0.58 J	0.59 J	0.61 J	0.59 J	0.79 J	0.88 J	2.6 J	0.42 J	0.68 J
freon 114 (1,2-dichlorotetrafluoroethane)	NA	NA	U	U	U	U	U	U	U	U	U	U	U	U
freon 12 (dichlorodifluoromethane)	4,400	440	2.8	3.1	2.6	2.9	2.4 J	2.3 J	2.5	2.3 J	3.1	4.6 J	2.4 J	2.7
freon 22	2,200,000	220,000	NA	NA	NA	U	U	0.81 J	0.90 J	0.83 J	U	2.0 J	0.75 J	0.95 J
heptane	NA	NA	2.1	U	1.8	U	3.8	3.4	0.22 J	U	U	U	U	U
hexane	31,000	3,100	6.9	U	6.1	U	1.3	9.8	0.18 J	0.2 J	U	7.5	0.74	0.23 J
isopropyl alcohol	NA	NA	U	U	U	U	13	470	2.4 J	U	U	29	U	4.2 J
m,p-xylene (sum of isomers)	4,400	440	4.7	0.93 J	2.3	0.21 J	4.5	6.8	0.93 J	0.35 J	0.63 J	1.6 J	1.1 J	6.5
methyl butyl ketone	NA	NA	U	U	U	U	0.47 J	U	1.0 J	0.25 J	U	1.2 J♦	U	0.77 J
methyl ethyl ketone	220,000	22,000	3	4.1	U	U	3.3 B	6.3	7.1	U	U	10	2.2	3.6
methyl isobutyl ketone	130,000	13,000	U	U	U	U	1.0 J	U	1.2 J	1.5	U	1.2 J	U	0.96 J
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	0.38 J	U	U
methylene chloride	12,000	1,200	1.4	U	U	U	2.4	U	0.40 J	0.41 J	U	0.45 J♦	U	U
naphthalene	3.6	0.36	U	U	U	U	2.2 J	U	U	U	U	U	U	0.54 J
n-Butane	NA	NA	NA	NA	NA	0.64 J	6.3	0.52 J	1.3	1 J	1.6	2.9	U	1 J
n-Propylbenzene	NA	NA	NA	NA	NA	U	0.68 J	U	U	U	U	U	U	0.78 J
o-xylene	4,400	440	1.3	U	0.71	U	1.6	2.4	0.27 J	0.14 J	0.23 J	0.68 J	0.53 J	2.9
styrene	44,000	4,400	U	U	U	U	0.46 J	0.37 J	U	U	U	0.29 J	U	0.52 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.8 J	U	2.7 J	1.6 J	U	8.9 J	U	3.3 J
tetrachloroethylene (pce)	470	47	U	U	U	U	0.73 J	0.58 J	0.51 J	U	U	U	U	U
tetrahydrofuran	NA	NA	8.2	11	U	4.6 J	87	U	68	46	13 J	95 J	8.2 J	21
toluene	220,000	22,000	15	3.3	6.2	0.36 JB	3.8	7.5	2.3	0.47 J	1.1	1.9	1.3 J	2.1
trichloroethylene (tce)	30	3	U	19	8.9	1.0 J	9.1	0.68 J	7.2	37	6.1	400	0.6 J	15
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U	U

Notes.
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
* EPA Commercial Regional Screening Levels (http://www.epa.gov/reg3hscd/risk/human/rb-concentration_table/Generic_Tables/index.htm)

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* (µg/m³)	Indoor Air Screening Level* (µg/m³)	785VMP-4												
Sample ID			**785VMP0401AA**	**785VMP0401AB**	**785VMP0401AC**	**785VMP0401AD**	**785VMP0401AG**	**785VMP0401HA**	**785VMP0401IA**	**785VMP0401JA**	**785VMP0401KA**	**785VMP0401LA**	**785VMP0401NA**	**785VMP0401PA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**18-Mar-2011**	**24-Aug-2011**	**24-Oct-2011**	**31-Jan-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**28-Feb-2014**	**18-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in µg/m³														
1,1,1-trichloroethane	220,000	22,000	1.7	0.72 J	U	U	0.40 J	U	0.28 J	0.93 J	0.56 J	U	U	U
1,2,4-trimethylbenzene	310	31	0.95	6.7	1.8	0.45 J	15	1.4	1.4	1.1 J	0.20 J	U	0.51 J	11 D
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	U	2.1	0.50 J	U	3.9	0.49 J	0.39 J	U	0.072 J	U	U	3.1 JD
1,3-butadiene	4.1	0.41	U	U	U	U	U	U	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	30	1.8	U	U	U	U	U
1,4-dichlorobenzene	23,360	2,336	U	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	1.5	3.9	0.58 J	U	5.5	0.71 J	U	U	U	U	U
4-ethyltoluene	NA	NA	U	2.7	0.85	U	3.6	0.49 J	0.31 J	U	U	U	U	4.2 JD
4-isopropyltoluene	NA	NA	NA	NA	NA	U	1.6	U	U	1.1 J	U	U	U	U
acetone	1,400,000	140,000	15	16	U	4.9 J	44	8.1 J	73	120	7.2 J	7900	22	120 D
benzene	16	1.6	4.9	4.2	8.4	0.64	0.57 J	0.61 J	0.58 J	0.89 J	0.58 J	U	0.63 J	0.75 JDM
bromodichloromethane	3.3	0.33	2.6	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	4.8	13	9.2	1.1 J	12	0.48 J	2.7	8.3	2.0	U	1.6	21 D
carbon tetrachloride	20	2	U	U	U	0.51 J	0.47 J	0.43 J	0.39 J	U	U	U	0.46 J	0.53 JD
chlorobenzene	2,200	220	U	0.66 J	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	91	0.79	U	U	0.47 J	U	0.33 J	0.74 J	2.5	U	U	1.7 JDM
chloromethane	3,900	390	U	U	U	U	0.30 J	0.15 J	0.29 J	0.43 J	U	U	U	U
cis-1,2-dichloroethene	NA	NA	2.3	U	U	U	U	U	U	0.75 J	U	U	U	5.1 D
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	1.5 J	U	U	U	0.57 JD
cyclohexane	260,000	26,000	6.2	9.4	8.0	0.34 JB	2.1	6.8	1.5	U	U	U	U	U
dibromochloromethane	10	NA	U	U	U	0.34 JB	2.1	6.8	1.5	U	U	U	U	U
ethylbenzene	49	4.9	1.1	6.1	4.9	0.58 J	3.9	3.1	1.9	1.8	0.39 J	U	0.41 J	4.5 D
freon 11 (trichlorofluoromethane)	31,000	3,100	0.86	1.7	1.3	1.4	1.4	1.3	1.1	1.3 J	0.83 J	U	1.1	1.5 JDM
freon 113 (freon TF)	1,300,000	130,000	1.1 J	0.86 J	U	0.58 J	0.69 J	0.64 J	0.60 J	0.91 J	0.97 J	U	0.55 J	U
freon 114 (1,2-dichlorotetrafluoroethane)	NA	NA	U	U	U	U	U	U	U	U	U	U	U	U
freon 12 (dichlorodifluoromethane)	4,400	440	2.9	2.8	2.5	2.9	2.6	2.6	2.3 J	U	2.5	U	2.4 J	3.1 JD
freon 22	2,200,000	220,000	NA	NA	NA	U	U	0.77 J	0.88 J	U	0.75 J	U	0.82 J	U
heptane	NA	NA	3.6	5.3	8.2	0.45 JB	1.1	3.6	0.69 J	U	U	U	U	U
hexane	31,000	3,100	8.2	7.9	13	0.91 B	1.4	9.3	0.57 J	6	0.69	U	1	U
isopropyl alcohol	NA	NA	U	U	0.62	2.3 J	15	190	5.5 J	10 J	1.3 J	U	U	U
m,p-xylene (sum of isomers)	4,400	440	2.7	14	14	1.1 J	3.4	8.7	2.8	1.9 J	0.73 J	U	1.2 J	16 D
methyl butyl ketone	NA	NA	U	U	U	U	0.94 J	U	0.61 J	1.2 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	2.3	2.7	U	0.82 J	10 B	4.4	14	19	U	2300	7.6	55 D
methyl isobutyl ketone	130,000	13,000	U	U	U	U	1.3 J	U	1.7 J	U	2.9	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	0.95	U	U	0.43 J	0.82 J	0.52 J	0.95 J	1.7 J	U	U	0.76 J	U
naphthalene	3.6	0.36	U	U	U	U	0.68 J	U	0.72 J	U	U	U	U	U
n-Butane	NA	NA	NA	NA	NA	4.6	3.8	0.44 J	0.91 J	1.6 J	U	U	1.2	U
n-Propylbenzene	NA	NA	NA	NA	NA	U	1.5	U	0.31 J	U	U	U	U	2.6 JD
o-xylene	4,400	440	0.84	5.1	2.8	0.46 J	1.7	3.4	1.1	0.8 J	0.41 J	U	0.48 J	5.3 D
styrene	44,000	4,400	U	U	U	U	0.30 J	0.35 J	0.34 J	0.33 J	U	U	U	1.4 JD
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.8 J	U	1.2 J	2.2 J	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	1.0	U	1.2 J	0.62 J	0.34 J	0.4 J	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U	3.4 J	U	U	0.95 J	U	20,000	19	360 D
toluene	220,000	22,000	26	23	42	2.2 B	5.9	8.1	3.3	4.2	1.2	U	1.9	6.7 D
trichloroethylene (tce)	30	3	720	88	33	3.5	39	3	17	54	27	170 J	1.2	33 D
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
* EPA Commercial Regional Screening Levels (http://www.epa.gov/reg3hscd/risk/human/rb-concent

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* (µg/m³)	Indoor Air Screening Level* (µg/m³)	785VMP-5											
Sample ID			**785VMP0501AA**	**785VMP0501AB**	**785VMP0501AC**	**785VMP0501AD**	**785VMP0501FA**	**785VMP0501GA**	**785VMP0501HA**	**785VMP0501IA**	**785VMP0501JA**	**785VMP0501NA**	**785VMP0501PA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**25-Aug-2011**	**24-Oct-2011**	**31-Jan-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**29-Jan-2014**	**18-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in µg/m²													
1,1,1-trichloroethane	220,000	22,000	4.8	1.8	0.53 J	0.74 J	U	0.54 J	1.4	U	U	U	
1,2,4-trimethylbenzene	310	31	2.2	1.4	U	0.69 J	0.71 J	U	U	0.55 J	U	1.1 J	9.3 D
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	0.28 J	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	0.85	U	U	U	0.31 J	U	U	U	U	U	2.4 JD
1,3-butadiene	4.1	0.41	U	U	U	U	U	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	17	U	U	U	U	U	U
1,4-dichlorobenzene	23,360	2,336	U	U	U	U	U	U	U	U	U	U	U
1,4-dioxane	NA	NA	U	U	U	U	U	U	0.48 J	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	1.4	1.3	0.92	6.5	0.96	U	U	U	U	U
4-ethyltoluene	NA	NA	0.50 J	U	U	U	0.34 J	U	U	U	U	U	2.6 JD
4-isopropyltoluene	NA	NA	NA	NA	U	0.64 J	U	U	U	U	U	U	U
acetone	1,400,000	140,000	21	4.3	2.3 J	20 B	6.8 J	8.2 J	2.8 J	10 J	2600	54	77 D
benzene	16	1.6	0.39 J	2.6	0.64	0.50 J	0.69	0.38 J	0.27 J	0.62	U	3.3	8.6 D
bromodichloromethane	3.3	0.33	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	0.38 J	U	U	2.7	U	U	U	U	U	U	6.8 JD
carbon tetrachloride	20	2	U	U	0.48 J	0.45 J	0.48 J	0.31 J	0.38 J	0.39 J	U	U	0.92 JD
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	2.8	0.74	U	U	U	0.19 J	0.21 J	U	46 J	U	U
chloromethane	3,900	390	U	U	U	0.97 J	0.85 J	0.48 J	0.42 J	1.4	U	U	U
cis-1,2-dichloroethene	NA	NA	2.1	U	U	U	U	0.41 J	U	U	U	U	U
cumene	18,000	1,800	NA	NA	0.41 J	U	U	U	U	U	U	U	1.2 JD
cyclohexane	260,000	26,000	U	2.9	1.1 B	U	U	U	U	U	U	U	U
dibromochloromethane	10	NA	U	U	U	U	U	U	U	U	U	U	U
ethylbenzene	49	4.9	2.3	1.6	1.8	3.8	2.1	U	0.7 J	0.55 J	U	2.2 J	6.7 D
freon 11 (trichlorofluoromethane)	31,000	3,100	2.2	2.3	1.4	1.5	1.4	1.5	1.4	1.4	U	U	1.5 JDM
freon 113 (freon TF)	1,300,000	130,000	0.86 J	U	U	0.58 J	0.62 J	0.50 J	0.58 J	0.60 J	U	U	U
freon 114 (1,2-dichlorotetrafluoroethane)	NA	NA	U	U	U	U	U	U	U	U	U	U	U
freon 12 (dichlorodifluoromethane)	4,400	440	2.9	2.5	2.8	2.4 J	2.6	2.2 J	2.4 J	3.2	U	2.2 J	2.9 JD
freon 22	2,200,000	220,000	NA	NA	U	U	0.95 J	0.90 J	U	1.2 J	U	U	U
heptane	NA	NA	U	1.9	0.70 JB	1.4	3.4	0.92	U	0.56 J	U	U	U
hexane	31,000	3,100	U	U	3.5 B	1.3	9.9	1.4	0.18 J	0.83	U	U	U
isopropyl alcohol	NA	NA	8.2	U	U	2.1 J	290	15	U	22	U	8.1 J	U
m,p-xylene (sum of isomers)	4,400	440	8.2	5.8	3.6	14	7.5	U	2 J	1.5 J	U	6 J	21 D
methyl butyl ketone	NA	NA	U	U	U	0.86 J	U	U	U	U	U	U	U
methyl ethyl ketone	220,000	22,000	2	U	0.37 J	4.3 B	3.9	0.49 J	U	1.5	1200	13	U
methyl isobutyl ketone	130,000	13,000	U	U	U	0.49 J	U	U	0.48 J	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	3.7	U	U	0.59 J	0.6 J	0.43 J	1.7 J	0.72 J	U	U	U
naphthalene	3.6	0.36	U	U	U	0.46 J	U	U	U	U	U	U	U
n-Butane	NA	NA	NA	NA	4.8	4.4	1.5	0.57 J	0.64 J	3.0	U	U	U
n-Propylbenzene	NA	NA	NA	NA	U	U	U	U	U	U	U	U	1.5 JD
o-xylene	4,400	440	3	1.5	1.7	4.7	2.4	U	0.63 J	0.58 J	U	2.1 J	8.1 D
styrene	44,000	4,400	U	U	U	0.64 J	U	U	U	0.58 J	U	3.9	22 D
tert-Butyl alcohol	NA	NA	NA	NA	U	0.96 J	U	0.55 J	U	2.5 J	U	U	U
tetrachloroethylene (pce)	470	47	2.2	U	U	U	U	U	0.3 J	U	U	U	U
tetrahydrofuran	NA	NA	U	U	0.21 J	0.41 J	U	U	U	U	6900	230	540 D
toluene	220,000	22,000	2.1	7.4	1.6 B	3.7	4.9	1.2	0.69 J	3.2	U	U	2.6 JD
trichloroethylene (tce)	30	3	610	140	18	20	1.1	7	73	1.2	510	41	150 D
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
* EPA Commercial Regional Screening Levels (http://www.epa.gov/reg3hscd/risk/human/rb-concent

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* (µg/m³)	Indoor Air Screening Level* (µg/m³)	785-IA										
Sample ID			**785IA05**	**785IA06**	**785IA07**	**785IA08**	**785IA09**	**785IA10**	**785IA11**	**785IA12**	**785IA13**	**785IA14**	**785IA15**
Sample Type			**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**
Sample Date			**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**28-Jan-2014**	**17-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	1.7	1.4	U	0.37 J	U	0.49 J	U	U	0.42 J	0.21 J	2.4
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	U	U	U	U	U	U	U	U	0.15 J	U	0.54 J
1,3-butadiene	4.1	0.41	U	U	U	U	0.32 J	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	23,360	2,336	U	U	U	U	U	U	U	U	0.11 J		U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	11 J	U	U
2,2,4-trimethylpentane	NA	NA	U	0.52 J	0.29 J	U	U	U	U	U	U	U	0.24 J
4-ethyltoluene	NA	NA	U	U	U	U	U	U	U	U	0.12 J	U	0.61 J
4-isopropyltoluene	NA	NA	NA	NA	U	U	U	U	U	U	0.56 J	U	U
acetone	1,400,000	140,000	35	11	2.6 J	16 B	9.3 J	9.7 J	6.6 J	U	19	U	9.3 J
benzene	16	1.6	U	1.3	0.58 J	0.36 J	U	U	0.31 J	0.48 J	0.30 J	0.64	0.37 JM
bromodichloromethane	3.3	0.33	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	U	U	U	U	U	U	U	0.76 J	6.8	U	0.92 J
carbon tetrachloride	20	2	U	U	0.53 J	0.44 J	U	0.48 J	0.43 J	0.49 J	0.51 J	0.47 J	0.45 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U		U	U	0.3 J	U	U	U	U
chloroform	5.3	0.53	U	4.7	U	U	U	U	0.39 J	U	U	U	U
chloromethane	3,900	390	U	U	1.2	1.1	1.2	1	1.9	1.6	1.5	1.1	0.97 J
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	U	0.84	U	U
cumene	18,000	1,800	NA	NA	U	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	U	U	0.34 JB	U	U	U	U	U	U	U	0.41 JM
dibromochloromethane	10	NA	U	U	U	U	U	U	U	U	U	U	U
ethylbenzene	49	4.9	U	0.75	0.13 J	0.22 J	U	0.19 J	0.13 J	U	0.69 J	0.21 J	0.52 J
freon 11 (trichlorofluoromethane)	31,000	3,100	1.7	1.3	1.4	1.3	1.4	1.3	1.2	1.4	1.5	1.2	1.2
freon 113 (freon TF)	1,300,000	130,000	U	U	0.54 J	0.58 J	0.65 J	0.59 J	0.56 J	0.63 J	0.69 J	0.45 J	0.47 J
freon 114 (1,2-dichlorotetrafluoroethane)	NA	NA	U	U	U	U	U	U	U	U	U	U	5.7
freon 12 (dichlorodifluoromethane)	4,400	440	2.8	2.3	2.8	2.3 J	2.6	2.3 J	2..5	3.0	2.6	2.6	3.4
freon 22	2,200,000	220,000	NA	NA	U	U	1 J	1.0 J	U	1.1 J	1.1 J	0.84 J	1.4 J
heptane	NA	NA	U	0.71	0.37 JB	0.70 J	U	U	U	U	U	U	0.43 JM
hexane	31,000	3,100	U	2.3	2.0 B	0.75	U	U	0.28 J	U	0.29 J	2.2	0.99
isopropyl alcohol	NA	NA	24	U	U	0.84 J	U	U	U	U	2.1 J	U	U
m,p-xylene (sum of isomers)	4,400	440	1.0 J	2.4	0.29 J	0.65 J	U	0.66 J	0.33 J	U	2.1 J	0.53 J	2.2
methyl butyl ketone	NA	NA	U	U	U	U	U	U	U	U	U	U	U
methyl ethyl ketone	220,000	22,000	3.2	U	0.30 J	2.3 B	1.1 J	1.7	1.1 J	1.0 J	3.9	U	1.2 J
methyl isobutyl ketone	130,000	13,000	U	U	U	0.38 J	U	0.37 J	U	U	0.37 J	U	2.3
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	0.85	U	U	0.51 J	U	U	0.63 J	0.69 J	U	0.88 J	1.4 J
naphthalene	3.6	0.36	U	U	U	U	U	U	U	U	U	U	0.22 J
n-Butane	NA	NA	NA	NA	2.0	2.5	1.3	0.70 J	1.1 J	1.4	U	5.9	7.4
n-Propylbenzene	NA	NA	NA	NA	U	U	U	U	U	U	U	U	0.37 J
o-xylene	4,400	440	U	0.75	0.11 J	0.22 J	U	0.25 JM	0.14 J	U	0.40 J	0.2 J	1.2
styrene	44,000	4,400	U	U	U	U	U	U	U	U	U	U	0.069 J
tert-Butyl alcohol	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
tetrachloroethylene (pce)	470	47	U	21	U	U	U	U	U	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U	U	U	U	U	U	U	U
toluene	220,000	22,000	4.2	4.0	1.4 B	1.3	U	0.84	0.75	0.33 J	1.3	0.97	0.89
trichloroethylene (tce)	30	3	1.1	U	U	U	U	U	U	U	0.88 J	U	U
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
* EPA Commercial Regional Screening Levels (http://www.epa.gov/reg3hscd/risk/human/rb-concent

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* (µg/m³)	Indoor Air Screening Level* (µg/m³)	785/786-OA										
Sample ID			**785OA01**	**785786OA02**	**785786OA03**	**785786OA04**	**785786OA05**	**785786OA06**	**785786OA07**	**785786OA08**	**785786OA09**	**785786OA10**	**785786OA11**
Sample Type			**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**
Sample Date			**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**28-Jan-2014**	**17-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
Volatiles (TO-15) in µg/m³													
1,1,1-trichloroethane	220,000	22,000	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	1.3	2.6	U	0.73 J	U	U	U	U	0.073 J	U	0.091 J
1,2-dichloroethane	4.7	0.47	U	U	U	2.6	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,3-butadiene	4.1	0.41	U	U	U	U	U	U	U	U	U	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	23,360	2,336	U	U	U	U	U	U	U	U	U		U
1,4-dioxane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	0.76	0.34 J	0.56 J	U	0.23 J	U	U	U	U	U
4-ethyltoluene	NA	NA	U	0.65 J	U	U	U	U	U	U	U	U	U
4-isopropyltoluene	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
acetone	1,400,000	140,000	39	12	19	150	4 J	22	8.5 J	3.3 J	6.2 J	U	12 J
benzene	16	1.6	0.39 J	1.8	0.56 J	0.80 J	0.78	0.32 J	U	0.53 J	0.14 J	0.5 J	0.3 J
bromodichloromethane	3.3	0.33	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	U	U	U	0.78 J	U	0.57 J	U	U	0.59 J	U	0.8 J
carbon tetrachloride	20	2	U	U	0.52 J	U	0.54 J	0.47 J	0.4 J	0.56 J	0.30 J	0.5 J	0.45 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U
chloroethane	NA	NA	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	U	U	U	U	U	U	U	U	U	U	U
chloromethane	3,900	390	U	U	1.2	1.2 J	1.4	1.0 J	1.1 J	1.7	1.2	1.3	0.93 J
cis-1,2-dichloroethene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	U	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	0.77	U	U	U	U	U	U	U	U	U	U
dibromochloromethane	10	NA	U	U	U	U	U	U	U	U	U	2.8	U
ethylbenzene	49	4.9	U	1.3	U	1.4 J	U	0.13 J	U	U	U	U	0.099 J
freon 11 (trichlorofluoromethane)	31,000	3,100	1.7	1.4	1.4	1.4 J	1.4	1.2	1.2	1.5	1.2	1.3	1.2
freon 113 (freon TF)	1,300,000	130,000	U	U	0.59 J	0.70 J	U	0.55 J	0.54 J	0.70 J	0.54 J	0.49 J	0.49 JM
freon 114 (1,2-dichlorotetrafluoroethane)	NA	NA	U	U	U	U	U	U	U	U	U	U	U
freon 12 (dichlorodifluoromethane)	4,400	440	2.9	2.2	2.8	3.2 J	2.7	2.1 J	2.3 J	3.3	2.5	U	2.3 J
freon 22	2,200,000	220,000	NA	NA	U	U	0.92 J	0.99 J	U	1.3 J	0.84 J	0.93 J	0.96 J
heptane	NA	NA	U	1.2	0.55 JB	2.7	U	0.14 J	0.89 J	U	U	U	U
hexane	31,000	3,100	U	3.8	2.2 B	4.4	U	0.25 J	0.19 J	0.22 J	U	U	U
isopropyl alcohol	NA	NA	15	2.2	1.3 J	11 J	U	1.6 J	U	U	1.1 J	U	U
m,p-xylene (sum of isomers)	4,400	440	0.75 J	4.3	0.30 J	3.8 J	U	0.37 J	U	U	0.14 J	U	0.33 J
methyl butyl ketone	NA	NA	U	U	U	1.1 J	U	0.37 J	2.2	U	U	U	U
methyl ethyl ketone	220,000	22,000	3.4	U	0.92 J	8.6 B	U	3.3	U	U	1.3 J	U	1.7
methyl isobutyl ketone	130,000	13,000	U	U	U	U	U	0.17 J	0.28 J	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	1.1	1.3	0.53 J	2.4 J	U	6.5	0.58 J	1.0 J	0.68 J	U	1.4 J
naphthalene	3.6	0.36	U	U	U	1.1 J	U	U	U	U	U	U	U
n-Butane	NA	NA	NA	NA	1.9	30	1.4	0.54 J	0.95 J	1.5	U	1.3	0.75 J
n-Propylbenzene	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
o-xylene	4,400	440	U	1.3	U	1.3 J	U	0.12 J	U	U	U	U	0.16 JM
styrene	44,000	4,400	U	U	U	0.74 J	U	U	U	U	U	U	U
tert-Butyl alcohol	NA	NA	NA	NA	U	1.8 J	U	0.93 J	U	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	U	1.7 J	U	U	U	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	5.9 J	U	U	U	U	U	U	U
toluene	220,000	22,000	2.3	7.2	0.57 JB	17	0.55 J	0.74	0.57 J	0.34 J	0.58 J	0.28 J	0.62 J
trichloroethylene (tce)	30	3	0.82	0.82	U	U	U	U	U	U	U	U	U
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
µg/m³: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
* EPA Commercial Regional Screening Levels (http://www.epa.gov/reg3hscd/risk/human/rb-concent

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	786VMP-1											
Sample ID			**786VMP0102AA**	**786VMP0102AB**	**786VMP0102AC**	**786VMP0102AD**	**786VMP0102AG**	**786VMP0102HA**	**786VMP0102IA**	**786VMP0102JA**	**786VMP0102KA**	**786VMP0102LA**	**786VMP0102NA**	**786VMP0102PA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**18-Jan-2011**	**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**26-Feb-2014**	**18-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in $\mu g/m^3$														
1,1,1-trichloroethane	220,000	22,000	12	U	U	U	U	U	U	0.53 J	U	U	U	U
1,1-dichloroethane	77	7.7	U	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	U	U	0.59 J	U	U
1,2,4-trimethylbenzene	310	31	7.5	6.9	1.2	U	0.38 J	1.0	1.7	1.3	0.31 J	4.2	0.48 J	1.7
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	5.2	1.9	U	U	U	0.33 J	0.46 J	0.38 J	U	1.3 J	U	0.5 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	17 J	2.3	U	1.8 J	16	U	1.8
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	U	U	U	U	U	0.16 J
2-chlorotoluene	NA	NA	NA	NA	NA	U	U	U	U	U	U	0.30 J	U	U
2,2,4-trimethylpentane	NA	NA	19	0.95	3.8	1.9	U	7 J	1.3	U	U	1.2 J	U	U
4-ethyltoluene	NA	NA	3.2	2.7	0.65 J	U	U	0.29 J	0.54 J	0.23 J	U	1.4 J	U	0.59 J
4-isopropyltoluene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U	0.27 J
acetone	1,400,000	140,000	31	20	U	3.3 J	7.8 JB	12 J	7.8 J	9.2 J	U	26	3.7 J	15
benzene	16	1.6	19	3.1	9.1	U	U	U	0.66	0.47 J	0.71 J	1.4	0.43 J	0.31 J
bromodichloromethane	3.3	0.33	4.0	U	U	U	U	U	U	U	U	U	U	U
bromomethane	220	22	U	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	15	0.63	U	U	0.65 J	U	0.56 J	2.6	U	8.2	U	0.69 JM
carbon tetrachloride	20	2	U	U	0.70 J	0.43 J	0.52 J	0.41 J♦	0.35 JM	0.37 J♦	U	0.53 J	U	0.78 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	0.90 J	U	U
chloroform	5.3	0.53	30	0.84	U	U	0.43 J	U	U	1.1	U	2.6	U	1.1
chloromethane	3,900	390	U	U	U	U	0.24 J	0.2 J	0.18 J	0.27 J	U	U	U	0.31 J
cis-1,2-dichloroethene	NA	NA	9.7	U	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	0.67 J	U	0.45 J
cyclohexane	260,000	26,000	U	2.5	5.7	2.8	U	8.7 J	U	0.25 J	U	2.7	U	U
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U	U
ethylbenzene	49	4.9	6.6	4.6	3.1	U	0.34 J	0.89	1	2	0.40 J	4.6	0.24 J	4.5
freon 11 (trichlorofluoromethane)	31,000	3,100	3.0	1.8	2.6	1.3	1.3	1.3	1.1	1.3	U	1.6 J	U	2.1
freon 113 (freon TF)	1,300,000	130,000	U	0.86 J	0.78 J	0.64 J	0.62 J	0.64 J	0.52 J	0.61 J	U	0.84 J	0.38 J	0.99 J
freon 12 (dichlorodifluoromethane)	4,400	440	3.8	2.9	U	2.7	2.4 J	2.6 ♦	2.2 J♦	2.3 J	2.0 J	2.9 J	2.4 J	4
freon 22	2,200,000	220,000	NA	NA	NA	U	0.86 J	0.89 J♦	0.79 J♦	0.79 J	U	0.92 J	0.68 J	1.4 J
heptane	NA	NA	25	3.4	8.1	4.1	U	3.9 J	0.39 J♦	0.37 J	U	1.0 J	U	U
hexane	31,000	3,100	52	4.9	16	10	U	13 J	0.22 J♦	2.5	0.81 J	1.5	U	U
isopropyl alcohol	NA	NA	U	14	U	1.1 J	0.87 J	98 J	6.6 J	14	120	68	2.2 J	4.5 J
m,p-xylene (sum of isomers)	4,400	440	17	19	11	0.32 J	1.0 J	3.4	3.6	5.6	1.2 J	13	0.69 J	5
methyl butyl ketone	NA	NA	U	U	U	U	U	U	0.31 J♦	0.34 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	U	2.3	U	0.55 J	1.3 JB	4.1 J	1.4 J♦	3.6	U	11	U	2.3
methyl isobutyl ketone	130,000	13,000	U	U	U	3.5	U	U	U	1.2 J	U	1.4 J	U	0.88 J
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	2.8 J	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	1.3 J	U	U
methylene chloride	12,000	1,200	3.8	U	U	U	0.44 J	0.55 J	0.40 J♦	0.84 J	U	U	U	0.97 JM
naphthalene	3.6	0.36	U	U	U	U	U	U	0.98 J	0.85 J	U	U	U	0.99 J
n-Butane	NA	NA	NA	NA	NA	U	0.43 J	1.2 J♦	U	0.44 J	5.0	2.9	U	4.3
n-Propylbenzene	44,000	4,400	NA	NA	NA	U	U	U	U	U	U	1.0 J	U	0.46 J
o-xylene	4,400	440	7.5	4.9	2.0	0.11 J	0.39 J	1.3	1.4	1.6	1.7 J	4.3	0.14 J	2.0
styrene	44,000	4,400	U	U	U	U	0.20 J	0.2 J	0.37 J♦	0.43 J	U	2.5	U	0.45 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	U	U	0.69 J♦	1.8 J	U	16 J	U	4.1 J
tetrachloroethylene (pce)	470	47	140	3.7	2.0	2.4	1.5	0.5 J	0.71 J♦	3.3	U	8.3	U	6.4
tetrahydrofuran	NA	NA	U	U	U	U	0.43 J	U	U	2.5 J	U	7.5 J	U	U
toluene	220,000	22,000	35	15	29	0.61 J	1.5	3.7 J	3	4.2	3.0	14	0.85	2.5
trichloroethylene (tce)	30	3	4,900	84	49	13	24	9.1 J♦	16♦	140♦	26	270	U	160
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	786VMP-2											
Sample ID			**786VMP0202AA**	**786VMP0202AB**	**786VMP0202AC**	**786VMP0202AE**	**786VMP0202AG**	**786VMP0202HA**	**786VMP0202IA**	**786VMP0202JA**	**786VMP0202KA**	**786VMP0202LA**	**786VMP0202NA**	**786VMP0202PA**
Sample Type			**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**	**sub-slab**
Sample Date			**18-Jan-2011**	**24-Aug-2011**	**24-Oct-2011**	**7-Feb-2012**	**8-Aug-2012**	**6-Mar-2013**	**9-Aug-2013**	**3-Oct-2013**	**29-Jan-2014**	**18-Jul-2014**	**26-Jan-2015**	**1-Sep-2015**
Sample Depth (ft bgs / ags)			**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**
Sample Collection Duration (hr)			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Volatiles (TO-15) in $\mu g/m^3$														
1,1,1-trichloroethane	220,000	22,000	15	4.2	3.7	0.78 J	2.1	U	3.7	6.8	1.5	14	0.55 J	4.7
1,1-dichloroethane	77	7.7	U	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	0.75 J	U	U	U	U
1,2,4-trimethylbenzene	310	31	4.5	7.5	1.6	0.62 J	1.2	1.4	1.5	U	0.49 J	U	0.16 J♦	2.4 ♦
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	1.7	3.1	0.55 J	0.26 J	0.33 J	0.44 J	0.41 J	0.25 J	U	U	U	0.63 J♦
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	28	1.9	0.28 J	4.9	U	U	1.3 ♦
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	U	U	U	U	U	0.12 J♦
2-chlorotoluene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	1.8	U	1.3	U	U	6.8	0.61 J	U	U	U	U	0.14 J
4-ethyltoluene	NA	NA	0.95	2	0.55 J	0.29 J	0.36 J	0.37 J	0.46 J	U	U	U	U	0.72 J♦
4-isopropyltoluene	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U	0.82 J♦
acetone	1,400,000	140,000	49	25	U	1.9 J	26 B	25	4.8 J	15	31 J♦	U	5.5 J	12 ♦
benzene	16	1.6	4.6	0.32 J	2.2	U	0.19 J	0.66	0.44 J	0.42 J	0.66 ♦	0.49 J	0.63	0.27 J
bromodichloromethane	3.3	0.33	7.4	3.2	1.7	0.32 J	1.3 J	U	0.70 J	0.96 J	U	2.1 J	U	0.86 J
bromomethane	220	22	U	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	5.3	1.4	0.41 J	U	0.64 J	U	0.62 J	0.45 J	U	1.1 J	U	26 ♦
carbon tetrachloride	20	2	U	U	U	0.44 J	0.53 J	0.41 J	0.47 J	0.34 J	U	U	0.32 J	0.57 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	620	100	72	12	31	2.4	55	58	11	160	3.8	31
chloromethane	3,900	390	U	U	U	U	0.27 J	U	0.28 J	0.19 J	U	U	U	2.9 ♦
cis-1,2-dichloroethene	NA	NA	1.4	U	U	U	U	U	0.34 J	0.32 J	U	0.90 J	U	0.35 J
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	U	U	0.5 J♦
cyclohexane	260,000	26,000	U	U	U	U	0.38 J	9.1	U	U	3.4 J♦	U	U	U
ethyl acetate	3,100	310	U	1.1	U	U	U	U	NA	U	U	U	U	U
ethylbenzene	49	4.9	1.5	8.8	2.7	1.4	1.9	1.6	0.77 J	0.64 J	0.56 J	U	0.16 J♦	4.2 ♦
freon 11 (trichlorofluoromethane)	31,000	3,100	2.7	1.7	1.4	1.3	1.4	1.4	1.2	1.3	0.91 J♦	1.9 J	U	1.6
freon 113 (freon TF)	1,300,000	130,000	3.7	1.1 J	1.1 J	0.55 J	0.78 J	0.75 J	0.78 J	1.5	1.2 J♦	2.3 J	0.68 J	1.2 J
freon 12 (dichlorodifluoromethane)	4,400	440	3.5	2.8	2.3	2.5	2.4 J	2.7	1.9 J	2.4 J	3.0 ♦	3.0 J	3.1	2.5
freon 22	2,200,000	220,000	NA	NA	NA	U	1.2 J	0.98 J	0.73 J	0.82 J	U	1.0 J	1 J	0.84 J♦
heptane	NA	NA	5.8	U	1.7	U	0.38 J	3.7	U	U	0.85 ♦	U	0.23 J	0.26 J♦
hexane	31,000	3,100	U	U	U	0.22 J	0.76	15	0.19 JM	2.5	1.1 J♦	U	U	0.31 J♦
isopropyl alcohol	NA	NA	U	U	U	1.4 J	1.5 J	170	3.1 J	1 J	24	U	1.4 J	3.7 J♦
m,p-xylene (sum of isomers)	4,400	440	4.8	32	9.9	4.6	7.2	6.3	2.8	1.5 J	1.5 J	U	0.39 J♦	4.9 ♦
methyl butyl ketone	NA	NA	9.2	8.7 J	U	U	0.84 J	U	U	0.58 J	U	U	U	U
methyl ethyl ketone	220,000	22,000	15	U	U	U	4.8 B	7	1.4 J	3.2	3.1 ♦	U	1.4 J	3.1 ♦
methyl isobutyl ketone	130,000	13,000	6.7	U	U	1.0 J	0.74 J	U	U	0.78 J	U	U	U	0.72 J♦
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	1.4	23	2.5	15	2.8	0.83 J	2.3	1.3 J	1.0 J♦	U	0.65 J♦	0.41 J♦
naphthalene	3.6	0.36	U	U	U	U	0.53 J	U	0.77 J	0.52 J	U	U	U	0.87 J♦
n-Butane	NA	NA	NA	NA	NA	0.67 J	2.1	1.3	0.37 J	0.26 J	0.85 J♦	U	1.1 J	0.86 J♦
n-Propylbenzene	44,000	4,400	NA	NA	NA	U	U	U	U	U	U	U	U	0.53 J♦
o-xylene	4,400	440	2.2	6.6	2.1	1.1	1.6	2.2	1	0.53 J	0.61 J	U	0.18 J♦	2.1 ♦
styrene	44,000	4,400	U	2.2	U	U	0.25 J	U	U	0.22 J	0.29 J	U	U	0.39 J♦
tert-Butyl alcohol	NA	NA	NA	NA	NA	U	1.1 J	U	U	3.3 J	4.2 J♦	U	U	2.1 J♦
tetrachloroethylene (pce)	470	47	11	0.83 J	2.9	U	0.82 J	U	0.93 J	0.54 J	U	1.6 J	U	3
tetrahydrofuran	NA	NA	16	U	U	U	0.67 J	U	U	0.42 J	U	1.3 J	1.3 J	18 ♦
toluene	220,000	22,000	6.7	16	11	2.2 B	4.4	5.2	2.1	2	4.3 ♦	0.59 J	0.9	1.9 ♦
trichloroethylene (tce)	30	3	740	260	140	22	110	6.3	150	120	6.3	410	6.3	130
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location			786VMP-3											
Sample ID	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	786VMP0302AA	786VMP0302AB	786VMP0302AC	786VMP0302AD	786VMP0302AG	786VMP0302HA	786VMP03021A	786VMP0302JA	786VMP0302KA	786VMP0302LA	786VMP0302NA	786VMP0302PA
Sample Type			sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
Sample Date			18-Jan-2011	24-Aug-2011	24-Oct-2011	27-Jan-2012	8-Aug-2012	6-Mar-2013	9-Aug-2013	3-Oct-2013	29-Jan-2014	18-Jul-2014	26-Jan-2015	1-Sep-2015
Sample Depth (ft bgs / ags)			2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Sample Collection Duration (hr)			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Volatiles (TO-15) in $\mu g/m^3$														
1,1,1-trichloroethane	220,000	22,000	16	U	U	U	U	U	U	0.6 J	U	1.9	U	U
1,1-dichloroethane	77	7.7	1.4	U	U	U	U	U	U	U	U	0.57 J	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	0.62 J	U	U	0.39 J	U	U	U	U
1,2,4-trimethylbenzene	310	31	13	2.4	0.8	0.33 J	U	U	U	0.96	0.30 J	6.2	0.38 J	U
1,2-dichloroethane	4.7	0.47	U	U	U	U	U	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	9.9	0.65 J	U	U	U	U	U	0.3 J	U	1.6	U	U
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	0.41 J	U	18	U	U
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	U	U	U	1.4	U	U
2-chlorotoluene	NA	NA	NA	NA	NA	U	U	U	U	U	U	0.42 J	U	U
2,2,4-trimethylpentane	NA	NA	U	U	1.4	0.24 J	U	U	1.9	U	U	2.3	U	U
4-ethyltoluene	NA	NA	8.1	0.60 J	U	U	U	U	U	0.28 J	U	2.1	U	U
4-isopropyltoluene	NA	NA	NA	NA	NA	U	U	U	U	2.2	U	0.76 J	U	U
acetone	1,400,000	140,000	50	24	4.3	1.2 J	94	17	5.5 J	9.3 J	31 J	44	7.8 J	50
benzene	16	1.6	4.7	0.32 J	4.2	0.25 J	1.0	0.7	U	0.46 J	0.82	3.5	0.7	2.8
bromodichloromethane	3.3	0.33	2.9	U	U	U	U	U	U	U	U	U	U	U
bromomethane	220	22	U	U	U	U	U	U	U	U	U	U	U	U
carbon disulfide	31,000	3,100	3.1	0.95	U	U	0.91 J	U	0.38 J	3.3	0.64 J	15	U	2.1
carbon tetrachloride	20	2	U	U	0.64 J	0.48 J	0.55 J	U	0.44 J	0.31 JM	0.28 J	0.45 J	0.49 J	0.56 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	3.0	U	U
chloroform	5.3	0.53	47	U	U	U	0.33 J	U	U	0.41 J	0.21 J	1.4	U	U
chloromethane	3,900	390	U	U	U	U	U	0.2 J	0.14 J	0.32 J	U	0.47 J	U	U
cis-1,2-dichloroethene	NA	NA	1.1	U	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	NA	U	U	U	U	U	U	1.1	U	U
cyclohexane	260,000	26,000	U	U	U	U	U	3.6	U	U	U	3.7	U	U
ethyl acetate	3,100	310	U	U	U	U	U	U	NA	U	U	U	U	U
ethylbenzene	49	4.9	9.8	1.6	1.1	0.40 J	0.34 J	U	U	0.8 J	0.31 J	6.4	U	0.71 J
freon 11 (trichlorofluoromethane)	31,000	3,100	3.2	1.7	1.5	1.4	1.4 J	1.4	1.2	1.2	1.1	2	1.4	1.4
freon 113 (freon TF)	1,300,000	130,000	3.4	0.78 J	U	0.54 J	0.67 J	0.6 J	0.59 J	U	0.69 J	0.67 J	0.65 J	0.63 J
freon 12 (dichlorodifluoromethane)	4,400	440	U	2.8	2.6	2.7	2.7 J	2.6	2.1 J	0.56 J	3.1	3.5	3	2.6
freon 22	2,200,000	220,000	NA	NA	NA	0.97 J	1.0 J	0.98 J	U	0.84 J	0.86 J	1.3 J	1 J	0.94 J
heptane	NA	NA	4.7	1.2	1.9	0.40 J	0.83 J	U	0.51 J	U	7.5	2.2	0.67 J	22
hexane	31,000	3,100	U	U	6.8	1.5	U	2.9	U	0.48 JM	4.9	1.9	0.96	24
isopropyl alcohol	NA	NA	U	11	U	U	2.8 J	34	2.3 J	5.5 J	U	73	3.4 J	1.2 J
m,p-xylene (sum of isomers)	4,400	440	16	5.3	3.4	1.4 J	0.75 J	U	U	1.7 J	0.37 J	17	0.42 J	0.77 J
methyl butyl ketone	NA	NA	7.6	U	U	U	7.6	U	U	U	U	U	U	1.9 J
methyl ethyl ketone	220,000	22,000	19	6.3 J	U	U	35	3.5	0.95 J	3.6	7.4	11	2.1	25
methyl isobutyl ketone	130,000	13,000	U	U	U	4.0	1.3 J	U	U	0.75 J	1.4 J	2.2	U	1.9 J
methyl methacrylate	NA	NA	NA	NA	NA	U	U	U	U	U	U	3.3	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	1.7	U	U
methylene chloride	12,000	1,200	U	U	U	0.50 J	U	U	U	1.4 J	0.53 J	1.3 J	0.63 J	U
naphthalene	3.6	0.36	U	U	U	U	0.87 J	U	U	18.0	U	U	U	0.23 J
n-Butane	NA	NA	NA	NA	NA	U	U	U	U	0.33 J	2.4	0.97 J	0.76 J	33
n-Propylbenzene	44,000	4,400	NA	NA	NA	U	U	U	U	U	U	2.3	U	U
o-xylene	4,400	440	6.2 J	1.5	0.84	0.38 J	0.24 J	U	U	0.62 J	0.19 J	5.2	0.11 J	0.34 J
styrene	44,000	4,400	4.8	0.95	U	U	U	U	U	0.27 J	U	3.0	U	0.16 J
tert-Butyl alcohol	NA	NA	NA	NA	NA	0.47 J	150	U	U	2.2 J	U	17	U	0.65 J
tetrachloroethylene (pce)	470	47	85	2.6	1.5	U	4.6	U	4.2	U	0.77 J	8.5	U	1.1 J
tetrahydrofuran	NA	NA	36	U	U	U	U	11 J	U	2 J	U	12 J	1.3 J	U
toluene	220,000	22,000	16	5.2	7.7	0.62 J	2.7	0.2 J	0.70 J	3.2	1.0	19	0.44 J	2.6
trichloroethylene (tce)	30	3	2,200	51	23	1.9	36	1.8	6.5	58	11	200	0.24 J	18
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-4
Buildings 785/786 SSVM System Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location			786-1A										
Sample ID	Sub-slab Vapor Screening Level* ($\mu g/m^3$)	Indoor Air Screening Level* ($\mu g/m^3$)	786IA04	786IA05	786IA06	786IA07	786IA08	786IA09	786IA10	786IA11	786IA12	786IA13	786IA14
Sample Type			Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date			24-Aug-2011	24-Oct-2011	27-Jan-2012	8-Aug-2012	6-Mar-13	9-Aug-13	3-Oct-13	28-Jan-14	17-Jul-14	26-Jan-15	1-Sep-15
Sample Depth (ft bgs / ags)			5	5	5	5	5	5	5	5	5	5	5
Sample Collection Duration (hr)			12	12	12	12	12	12	12	12	12	12	12
Volatiles (TO-15) in $\mu g/m^3$													
1,1,1-trichloroethane	220,000	22,000	U	U	U	U	U	U	U	U	U	U	U
1,1-dichloroethane	77	7.7	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trichlorobenzene	88	9	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	310	31	5.1	1.9	U	0.59 J	U	U	2.8	U	0.15 J	U	0.63 J
1,2-dichloroethane	4.7	0.47	U	U	U	0.44 J	U	U	U	U	U	U	U
1,3,5-trimethylbenzene	NA	NA	2.6	U	U	U	U	U	0.78 J	U	U	U	0.19 J
1,3-dichlorobenzene	NA	NA	U	U	U	U	U	U	U	U	U	U	U
1,4-dichlorobenzene	11	1.1	U	U	U	U	U	U	U	U	U	U	U
2-chlorotoluene	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	0.81	U	0.41 J	0.80 J	2.4	0.38 J	U	0.76 J	U	U	0.44 JM
4-ethyltoluene	NA	NA	1.2	0.60 J	U	U	U	U	0.74 J	U	U	U	0.16 J
4-isopropyltoluene	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
acetone	1,400,000	140,000	49	12	3.3 J	46	21	15	18	U	9.2 J	6.8 J	13
benzene	16	1.6	0.91	1.3	0.75	0.47 J	0.77	0.41 J	0.68	0.52 J	0.22 J	0.52 J	1.2 M
bromodichloromethane	3.3	0.33	U	U	U	U	U	U	U	U	U	U	U
bromomethane	220	22	U	U	U	U	U	U	U	U	0.12 J	U	U
carbon disulfide	31,000	3,100	U	U	U	1.8	U	0.38 J	U	1.2 J	U	0.66 J	0.4 J
carbon tetrachloride	20	2	U	U	0.53 J	0.43 J	0.5 J	0.44 J	0.4 J	0.53 J	0.45 J	0.55 J	0.49 J
chlorobenzene	2,200	220	U	U	U	U	U	U	U	U	U	U	U
chloroform	5.3	0.53	U	U	U	0.19 J	U	U	U	U	U	U	U
chloromethane	3,900	390	U	U	1.2	1.3	U	0.86 J	1	1.6	1.2	1.5	1.1 J
cis-1,2-dichloroethene	NA	NA	0.64	U	U	U	U	U	U	U	U	U	U
cumene	18,000	1,800	NA	NA	U	U	U	U	U	U	U	U	U
cyclohexane	260,000	26,000	U	1.7	0.28 JB	0.35 J	U	0.18 J	U	U	U	U	0.21 JM
ethyl acetate	3,100	310	U	U	U	U	U	NA	U	U	U	U	U
ethylbenzene	49	4.9	3	1.8	0.67 J	1.3	U	1.1	14	U	0.11 J	0.21 J	0.3 J
freon 11 (trichlorofluoromethane)	31,000	3,100	1.7	1.1	1.4	1.4	1.6	1.1 J	1.2	1.4	1.3	1.4	1.2
freon 113 (freon TF)	1,300,000	130,000	0.78 J	U	0.56 J	0.61 J	0.68 J	0.53 J	0.49 J	0.63 J	0.59 J	0.66 J	0.45 J
freon 12 (dichlorodifluoromethane)	4,400	440	2.8	2.0	2.8	2.5	3	2.0 J	2.3 J	3.1	2.5	3	2.4 J
freon 22	2,200,000	220,000	NA	NA	U	1.3 J	1.1 J	0.78 J	0.86 J	1.1 J	1.1 J	1 J	0.94 J
heptane	NA	NA	1.7	0.96	0.48 JB	0.92	1.2	0.36 J	U	0.82	U	0.26 J	0.38 JM
hexane	31,000	3,100	U	2.6	1.3 B	1.5	8.2	0.56 J	0.38 J	0.77	U	0.37 J	0.8
isopropyl alcohol	NA	NA	8.2	3.0	U	3.0 J	1.1 J	2.6 J	1.8 J	U	1.8 J	U	U
m,p-xylene (sum of isomers)	4,400	440	11	6.2	1.8 J	3.9	U	3.3	47	U	0.30 J	0.37 J	1.1 J
methyl butyl ketone	NA	NA	U	U	U	0.40 J	U	0.42 J	U	U	U	U	U
methyl ethyl ketone	220,000	22,000	5.9	U	0.76 J	4.5 B	3.8	3.1	7.6	U	1.2 J	1.1 J	1.6
methyl isobutyl ketone	130,000	13,000	U	U	2.6	0.71 J	U	0.98 J	2.7	U	U	U	0.75 J
methyl methacrylate	NA	NA	NA	NA	U	U	U	U	U	U	U	U	U
methyl tert-butyl ether	31,000	3,100	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	12,000	1,200	2.7	U	0.67 J	1.0 J	0.69 J	0.47 J	0.75 J	0.68 J	U	0.7 J	0.79 J
naphthalene	3.6	0.36	U	U	U	U	U	0.86 J	U	U	U	U	0.21 J
n-Butane	NA	NA	NA	NA	2.3	7.8	3.2	1.3	1.4	2.2	U	2.1	1.9
n-Propylbenzene	44,000	4,400	NA	NA	U	U	U	U	0.48 J	U	U	U	U
o-xylene	4,400	440	2.7	1.7	0.51 J	1.0	U	0.80 J	14	U	0.11 J	0.14 J	0.45 J
styrene	44,000	4,400	1.8	U	U	0.62 J	U	0.33 J	0.58 J	U	U	U	U
tert-Butyl alcohol	NA	NA	NA	NA	U	U	U	0.56 J	U	U	U	U	U
tetrachloroethylene (pce)	470	47	U	U	U	0.34 J	U	U	U	U	1.2 J	U	U
tetrahydrofuran	NA	NA	U	U	U	1.5 J	U	U	U	U	U	U	U
toluene	220,000	22,000	8.8	9.4	2.4 B	7.3	0.98	4.5	9.3	0.33 J	0.52 J	0.51 J	1.6
trichloroethylene (tce)	30	3	2.5	U	U	U	U	U	U	U	U	U	U
vinyl chloride	28	2.8	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
J- The analyte was positively identified; the quantitation is an estimation.
NA- Not Available
$\mu g/m^3$: microgram per cubic meter.
Exceedance of EPA Commercial Regional Screening Levels.
B - Analytes detected in the trip blank.
♦-Denotes higher nominal value of duplicate sample result.
*EPA Commercial Regional Screening Levels

Table 3-5
Buildings 785/786
SSVM Performance Monitoring Influent Results

Sample Location	785786-Influent								
Sample ID	**785786CA01AA**	**785786CA01AB**	**785786CA01AC**	**785786CA01AD**	**785786CA01AG**	**785786CA01AH**	**785786CA01IA**	**785786CA01LA**	**785786CA01MA**
Sample Type	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**	**Influent**
Sample Date	**19-May-2011**	**23-Aug-2011**	**25-Oct-2011**	**24-Jan-2012**	**3-Aug-2012**	**14-Feb-2013**	**7-Aug-2013**	**20-Jan-2015**	**28-Aug-2015**
Sample Depth (ft bgs)	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**
Sample Collection Duration (hr)	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**	**quick grab**
Volatiles (TO-15) in µg/m^3									
1,1,1-trichloroethane	4.8	1.4	1.6	0.32 J	U	U	0.36 J	U	0.5 JM
1,2,4-trimethylbenzene	6.9	1.7	2.8	0.26 J	1.4 J	0.73 J	0.74 J	0.23 J	0.16 J
1,2-dichloroethene	U	U	U	U	U	U	U	0.36 J	1.1 J
1,3,5-trimethylbenzene	6.3	1.5	U	U	0.65 J	U	U	U	U
1,3-butadiene	U	U	U	U	U	0.23 J	U	U	U
1,3-dichlorobenzene	U	U	U	U	0.49 J	U	U	U	U
2,2,4-trimethylpentane	300	31	33	7.9	9.5	10	2.8	3.9	0.17 J
4-ethyltoluene	U	0.75	U	U	0.36 J	U	U	0.1 J	U
acetone	180	5.1	U	1.2 J	56	110	4.3 J	14	17
benzene	1.9	0.81	U	U	0.51 J	0.72 J	0.47 J	0.42 J	0.61 J
carbon disulfide	6.9	0.79	U	U	0.70 J	U	U	1.7	4.4
carbon tetrachloride	U	U	U	0.48 J	0.44 J	0.45 J	0.37 J	1.45 J	1 J
chloroethane	U	U	U	U	U	U	U	U	0.19 J
chloroform	59	8.1	7.8	1.6	2.8	U	1.2	0.67 J	2.5
chloromethane	U	U	U	U	0.45 J	0.59 J	0.24 J	U	1.5
cis-1,2-dichloroethene	17	4.5	3.0	0.56 J	1.6	U	1	0.36 J	1.2 M
cumene	NA	NA	NA	U	U	U	U	0.25 J	U
cyclohexane	180	28	U	U	4.4	7.6	U	0.24 J	U
ethylbenzene	5.9	2.9	1.7	0.30 J	1.1 J	U	0.41 J	0.19 J	0.29 J
freon 11 (trichlorofluoromethane)	1.4	1.8	1.5	1.4	1.4 J	1.5 J	1.1	1.5	2.6
freon 113 (freon TF)	0.78 J	0.78 J	U	0.52 J	0.62 J	0.73 J	0.52 J	0.66 J	1.1 J
freon 12 (dichlorodifluoromethane)	2.4	2.7	U	2.5	2.3 J	3.3 J	2.3 J	3	5
freon 22	NA	NA	NA	U	U	1.3 J	U	1 J	2.3
heptane	130	30	26	3.1	2.5	10	0.15 J	U	U
hexane	150	13	U	1.5	5.4	22	0.20 J	U	0.24 J
isopropyl alcohol	U	U	U	U	9.6 J	6.8 J	3.9 J	1.5 J	1.1 J
m,p-xylene (sum of isomers)	16	6.3	6.0	0.98 J	3.3	1 J	1.5 J	0.41 J	0.87 J
methyl ethyl ketone	20	U	U	0.27 J	5.3 B	2.3 J	0.66 J	3.7	3.3
methylene chloride	1.4	U	U	0.54 J	2.0 J	U	0.55 J	U	0.73 JM
naphthalene	U	U	U	U	2.3 J	U	0.56 J	U	0.18 J
n-butane	NA	NA	NA	2.8	13	2.8	U	3.6	1.1 JM
n-Propylbenzene	NA	NA	NA	U	U	U	U	0.65 J	U
o-xylene	6.5	3.4	1.9	0.30 J	1.3 J	0.4 J	0.47 J	0.13 J	0.28 J
styrene	U	U	U	U	0.48 J	U	0.14 J	U	U
tert-butyl alcohol	NA	NA	NA	U	1.0 J	U	U	U	0.46 J
tetrachloroethylene (pce)	250	52	72	11	22	6.6	11	5	6.1
tetrahydrofuran	510	U	U	U	2.6 J	U	U	0.62 J	U
toluene	5.6	3.4	3.8	0.44 J	9.5	0.97 J	1.6	0.27 J	0.89
trichloroethylene (tce)	3500	520	740	140	250	93	130	72	140
vinyl chloride	U	U	U	U	U	U	U	U	U

Notes:

U - Not detected.

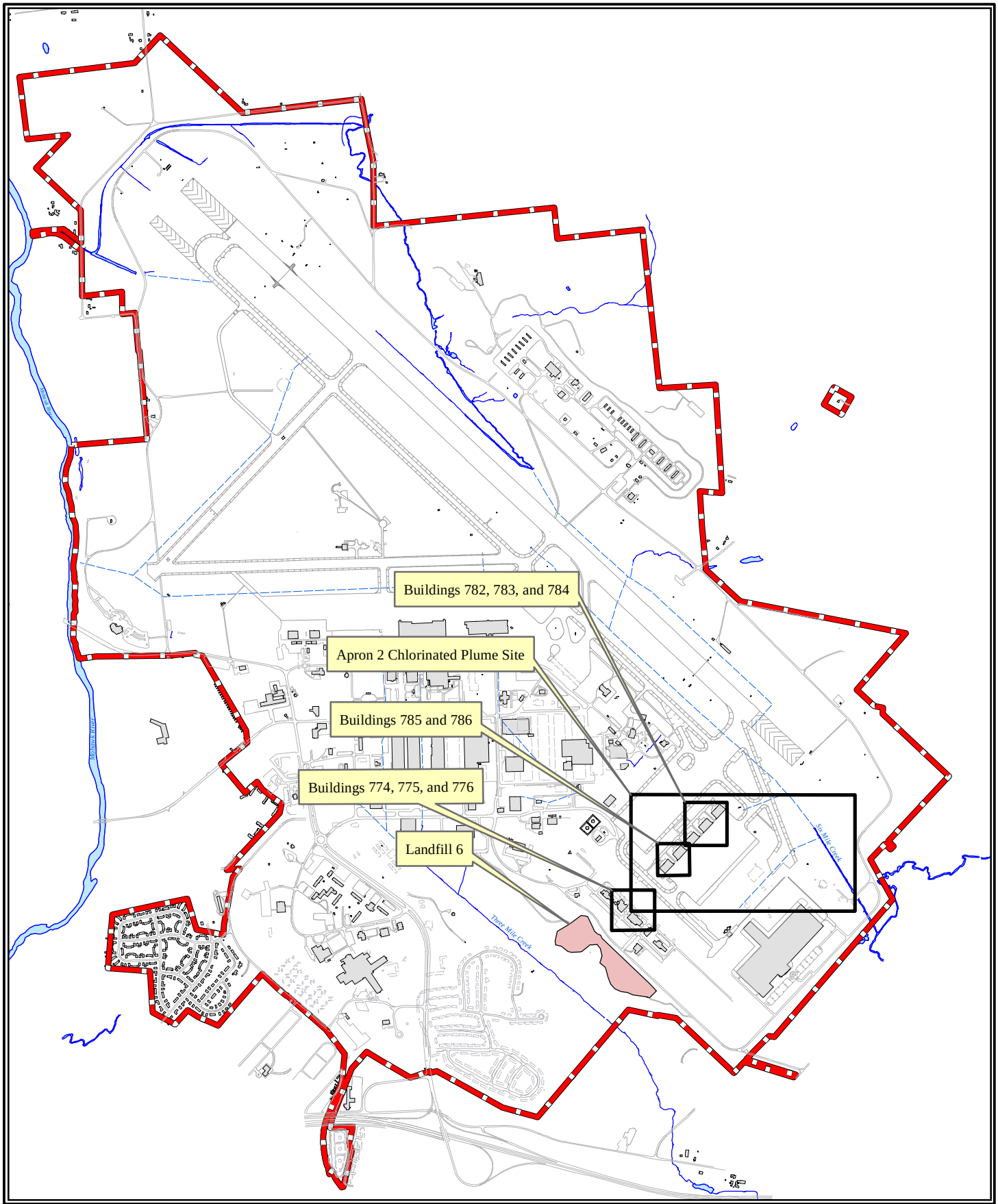
J- The analyte was positively identified; the quantitation is an estimation.

NA- Not Available

µg/m^3: microgram per cubic meter.

B - Analytes detected in the trip blank.

Figures



Base Location

Key to Features

- Road/Airfield
- Storm Drain
- Surface Water
- Base Boundary
- Landfill 6
- Demolished Facility
- Existing Facility
- Site Location

1,200 600 0 1,200 2,400
Feet

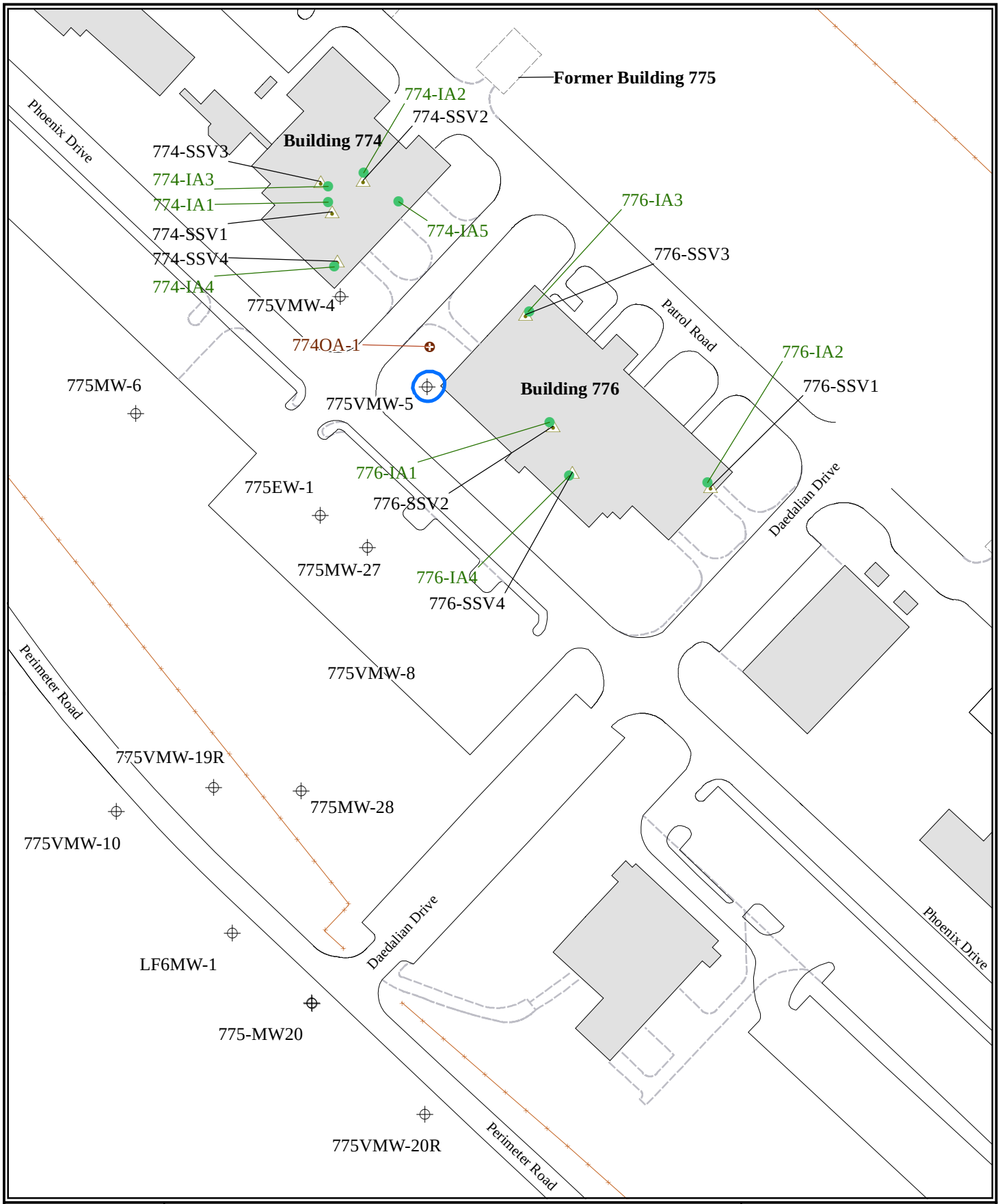
Figure 1-1
SSVM Site Locations

N

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Site Location

Key to Features

- Monitoring Well
- Indoor Air Sample Location
- Outdoor Air Sample Location
- Sub-Slab Vapor
- Existing Road
- Removed Road
- Demolished Facility
- Existing Facility
- TCE 50 µg/L 2014

Figure 2-1
Buildings 774 and 776
Site Features

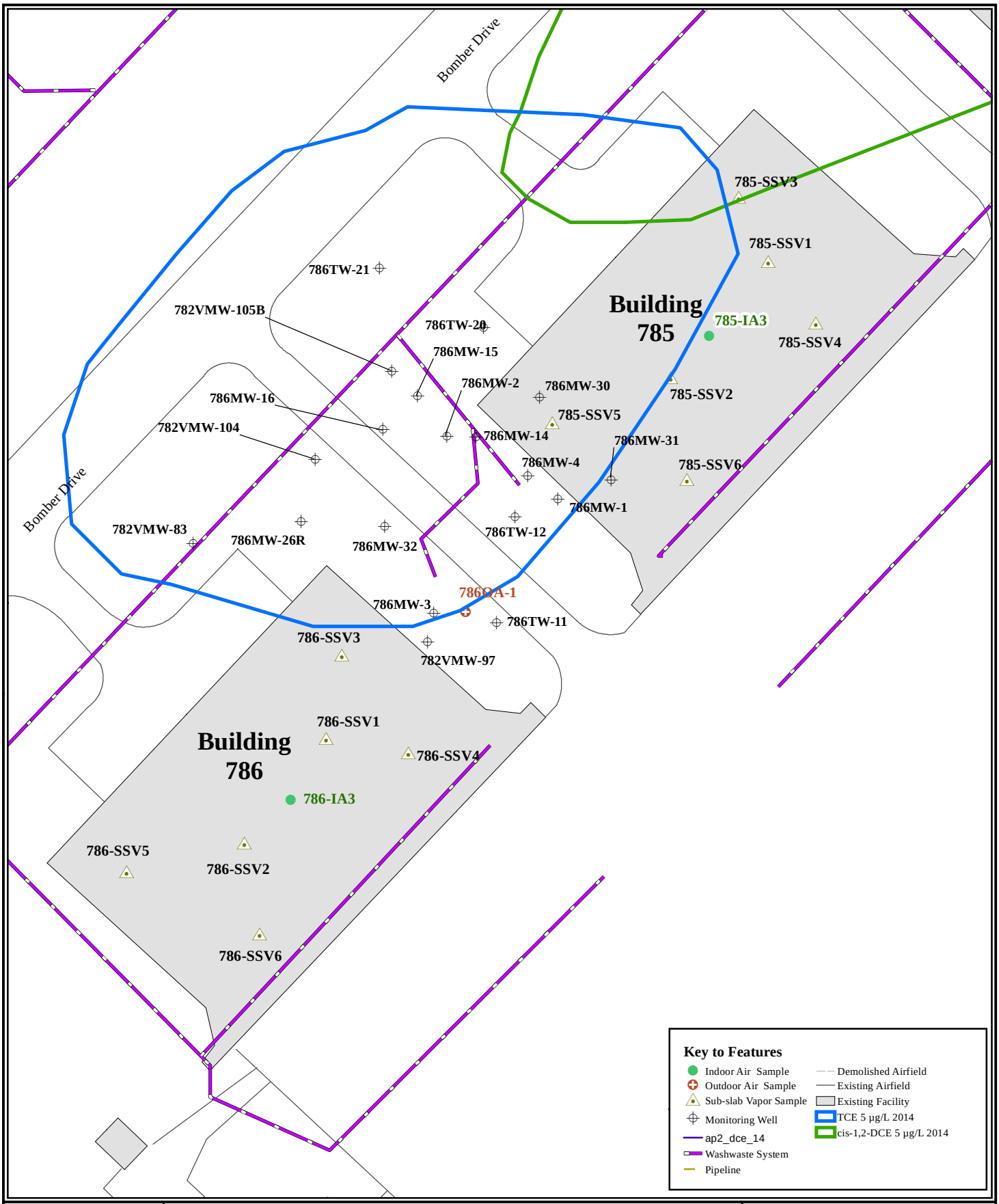
0 50 100 200
Feet

N

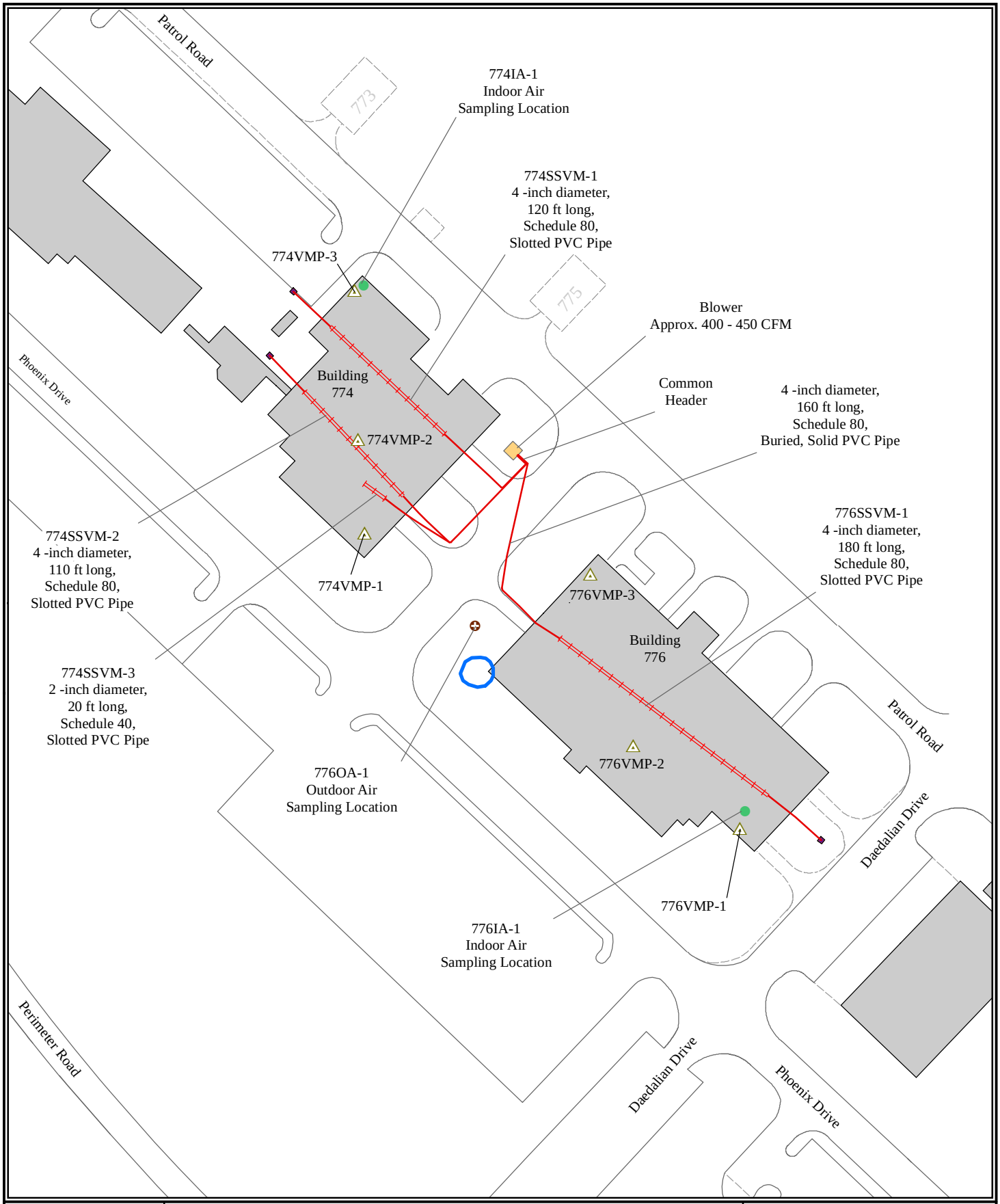
UNITED STATES AIR FORCE
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Y:\GIS_Projects\Griffiss\Projects\1015-11-01\SVI\SVI Proposed Plan\ArcView10_1\Figure 2.mxd



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Site Location

Key to Features

- Indoor
- Outdoor
- SubSlab Vapor
- Horizontal Well Screen
- Horizontal Well Riser
- Existing Road
- Removed Road
- TCE 50 µg/L 2014
- SVE System
- Entrance/Exit Pit
- Demolished Facility
- Existing Facility

Figure 3-1
Buildings 774 and 776
SSVM System

N

0 50 100 200

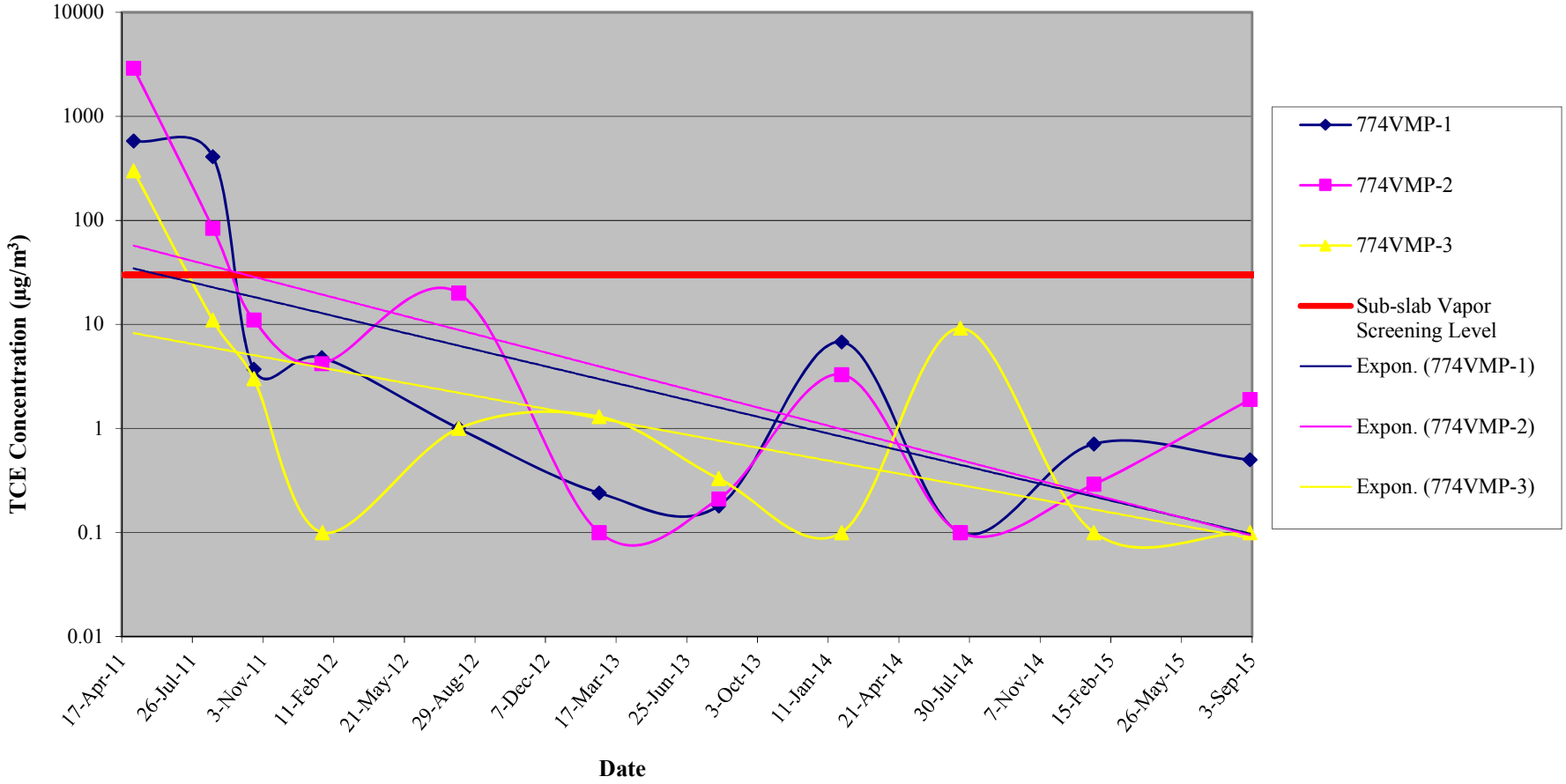
Feet

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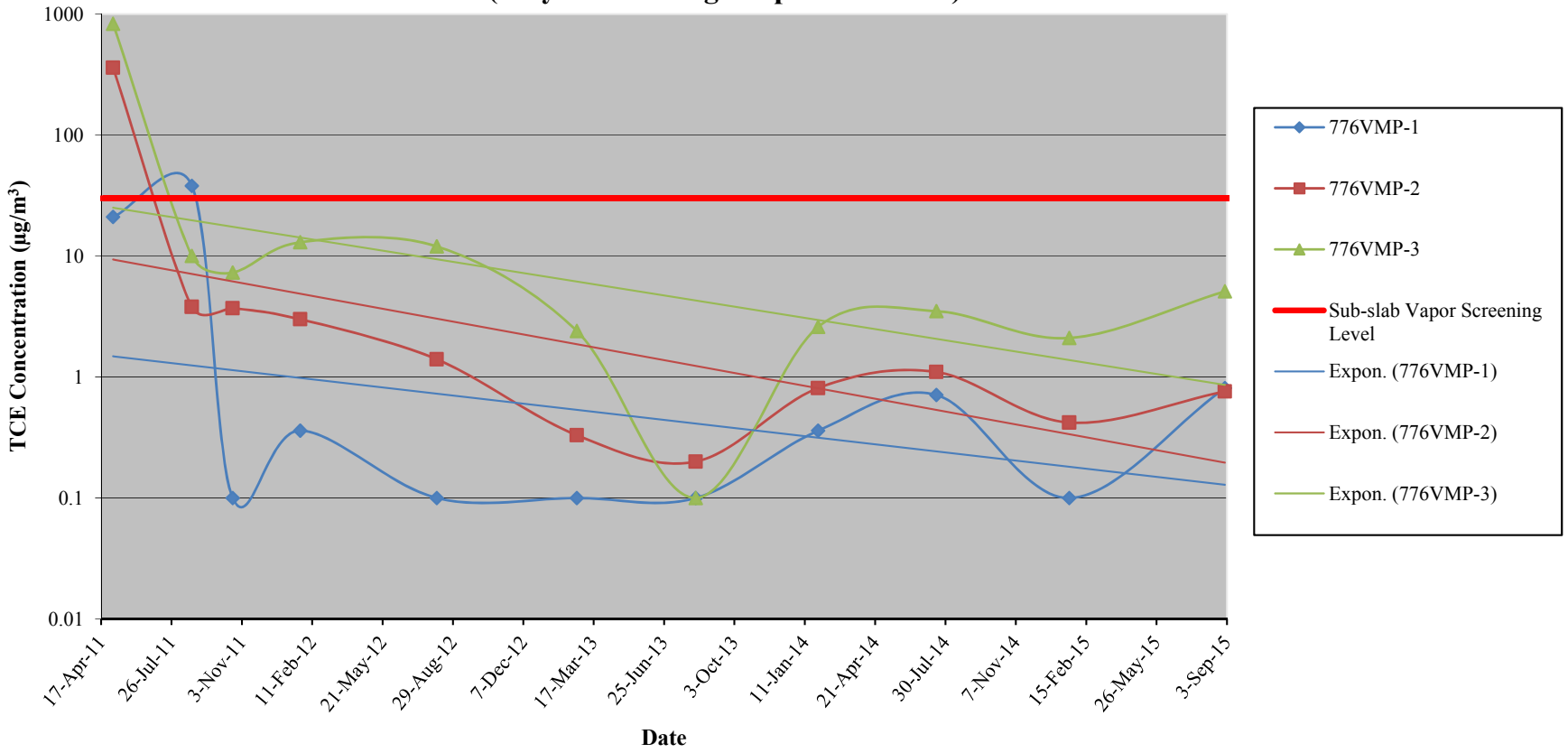
Y:\GIS_Projects\Griffiss\Projects\1015-11-01\SVI\SVI Proposed Plan\ArcView10_1\Figure 4.mxd

Figure 3-2
Sub-Slab TCE Trend Chart Building 774
(May 2011 through September 2015)



Note: Not detected results are plotted as 0.10 µg/m^3.

Figure 3-3
Sub-Slab TCE Trend Chart Building 776
(May 2011 through September 2015)



Note: Not detected results are plotted as 0.10 µg/m^3.

Figure 3-4
774SSVM-1, -2 and 776SSVM-1
Long Term Operation Flow Rate
(June 2011 through December 2015)

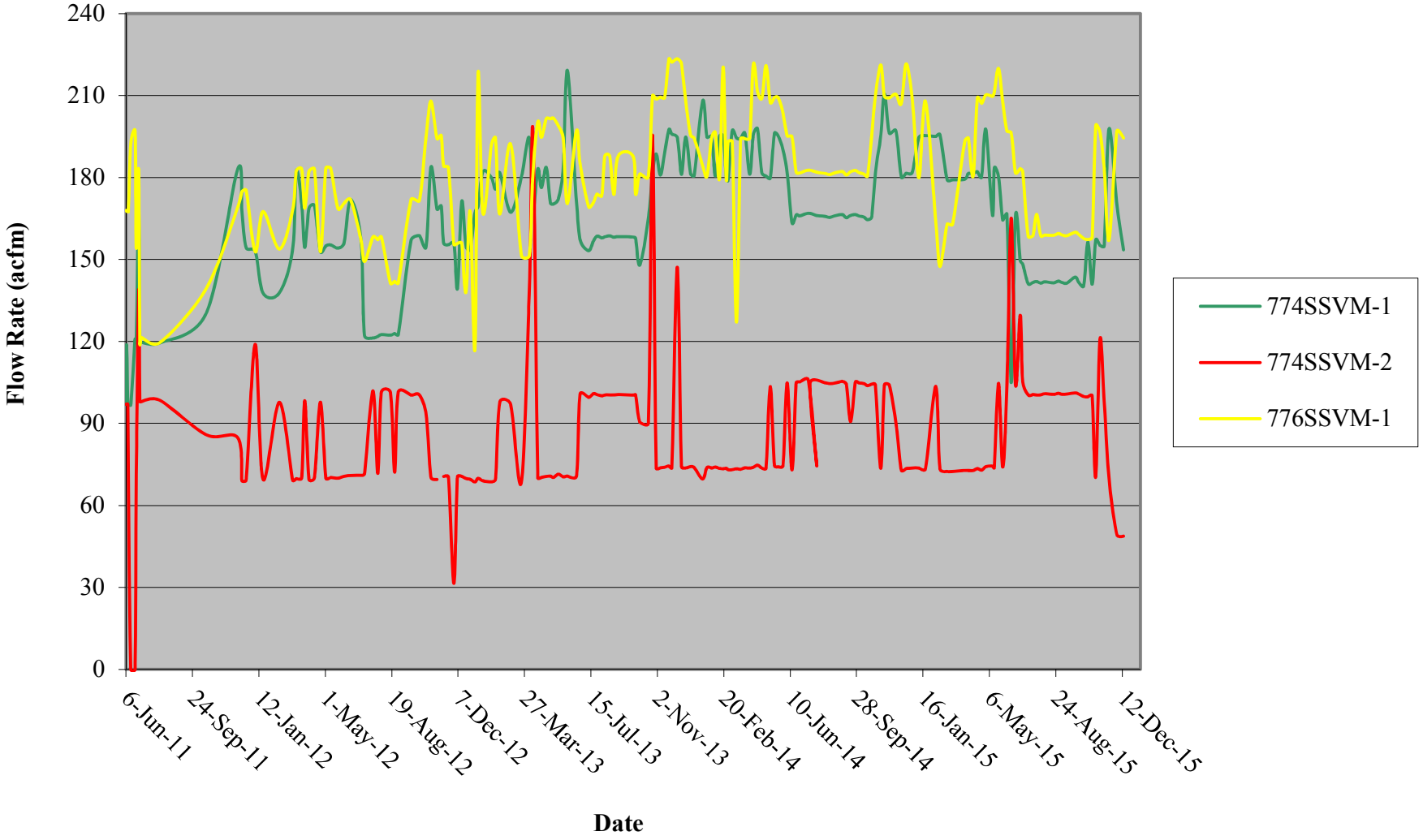
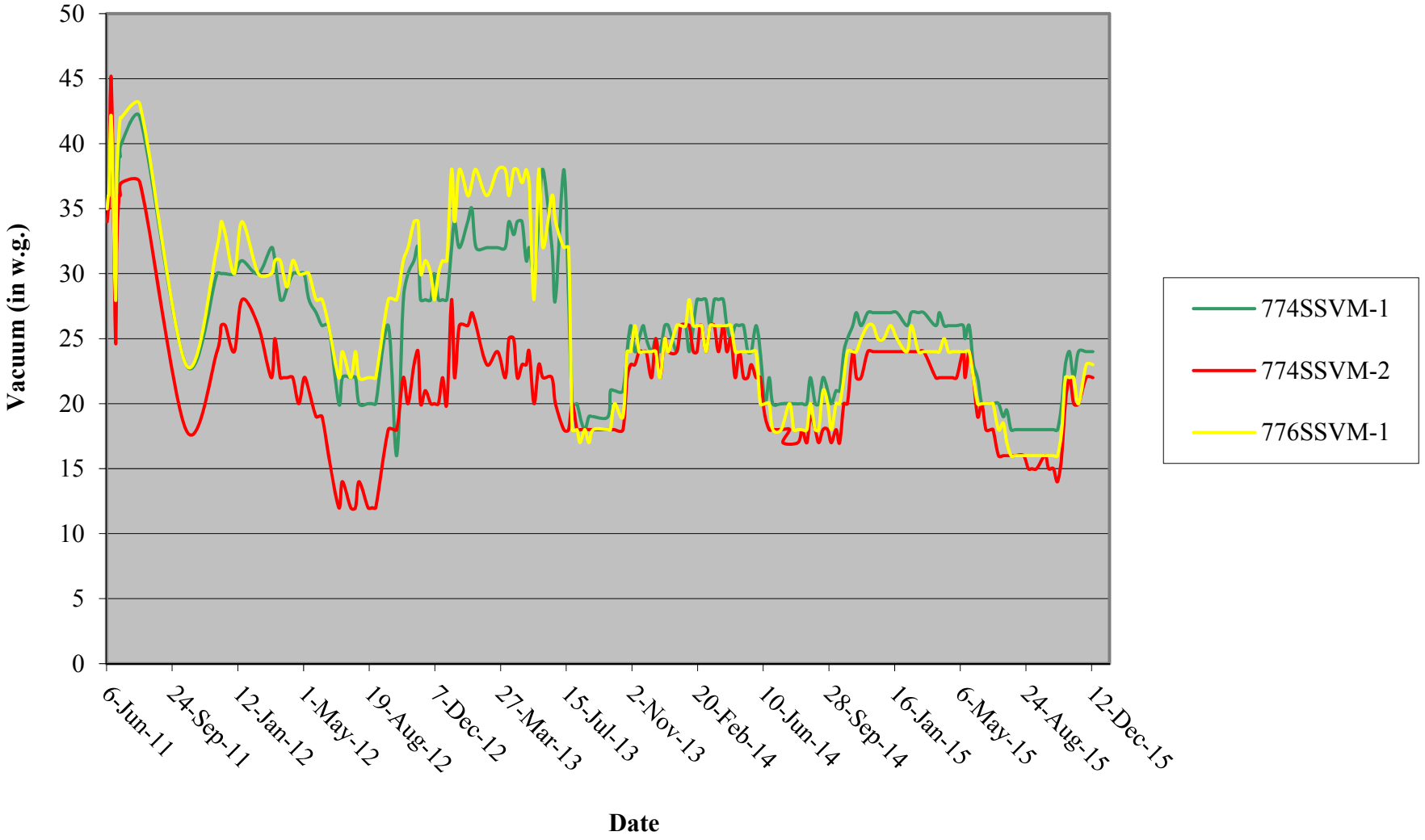


Figure 3-5
774SSVM-1, -2 and 776SSVM-1
Long Term Operation Vacuum
(June 2011 through December 2015)



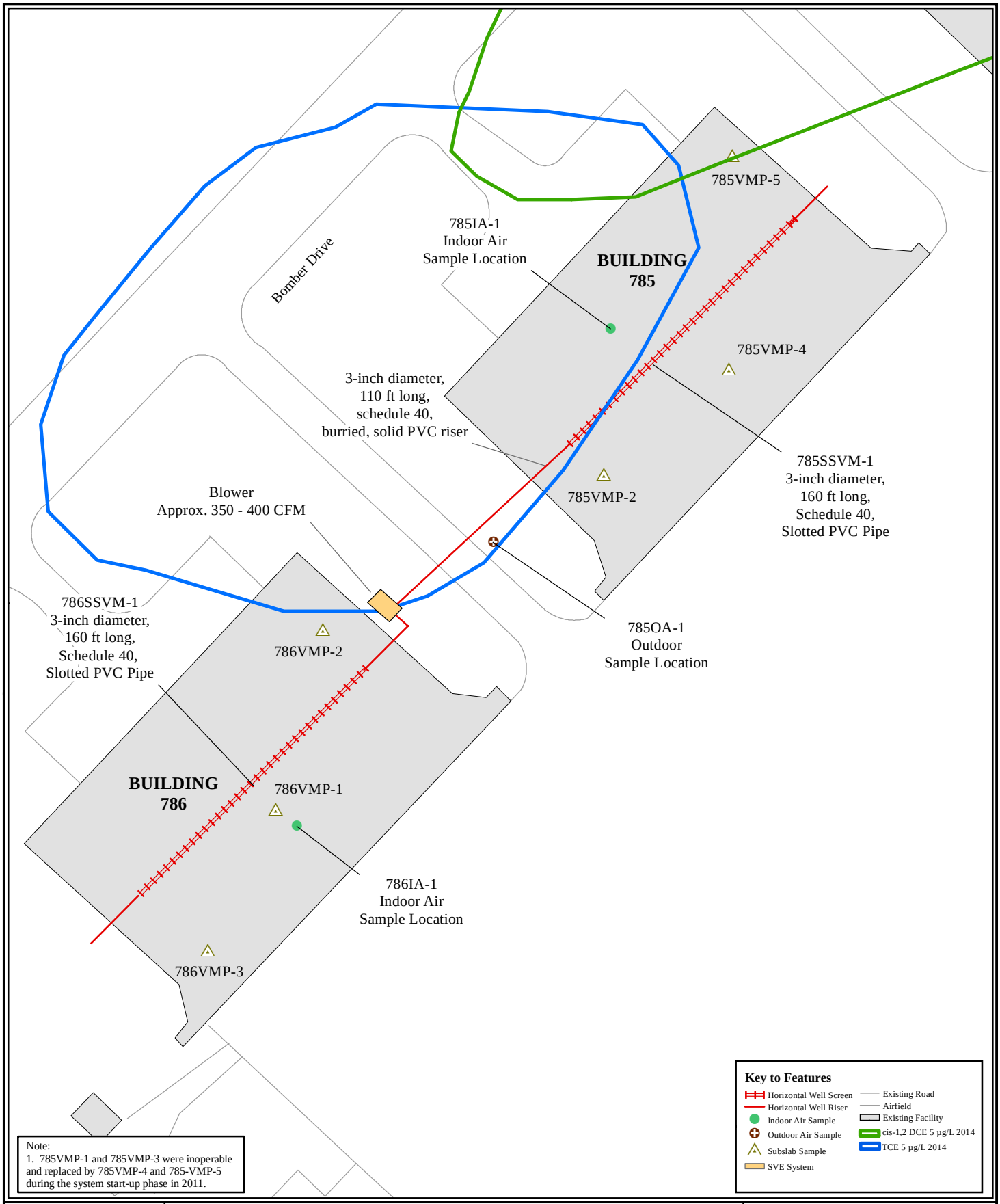


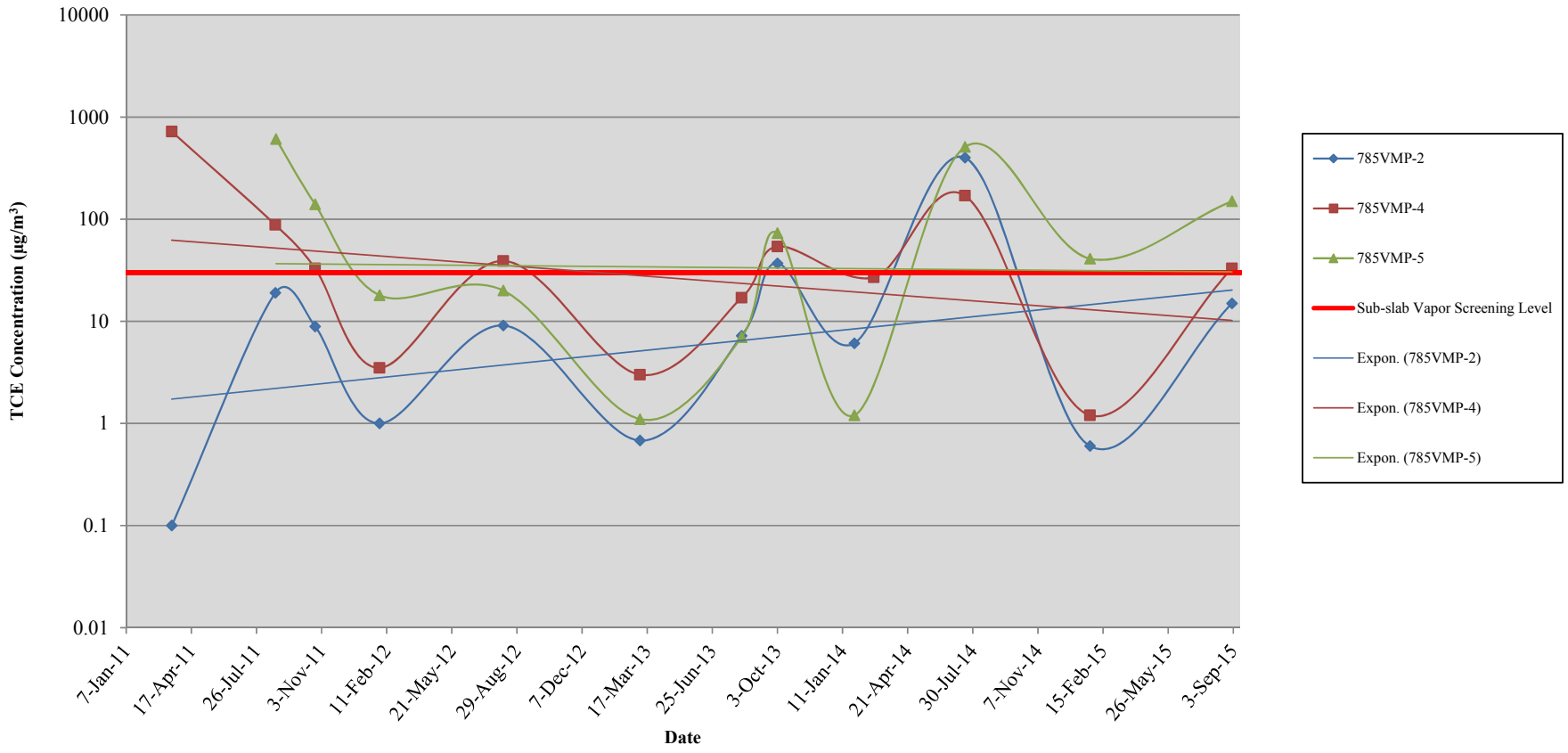
Figure 3-6
Buildings 785 and 786
SSVM System

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Figure 3-7
Sub-Slab TCE Trend Chart Building 785
(January 2011 through September 2015)



Note: Not detected results are plotted as 0.1 µg/m³.

Figure 3-8
Sub-Slab TCE Trend Chart Building 786
(January 2011 through September 2015)

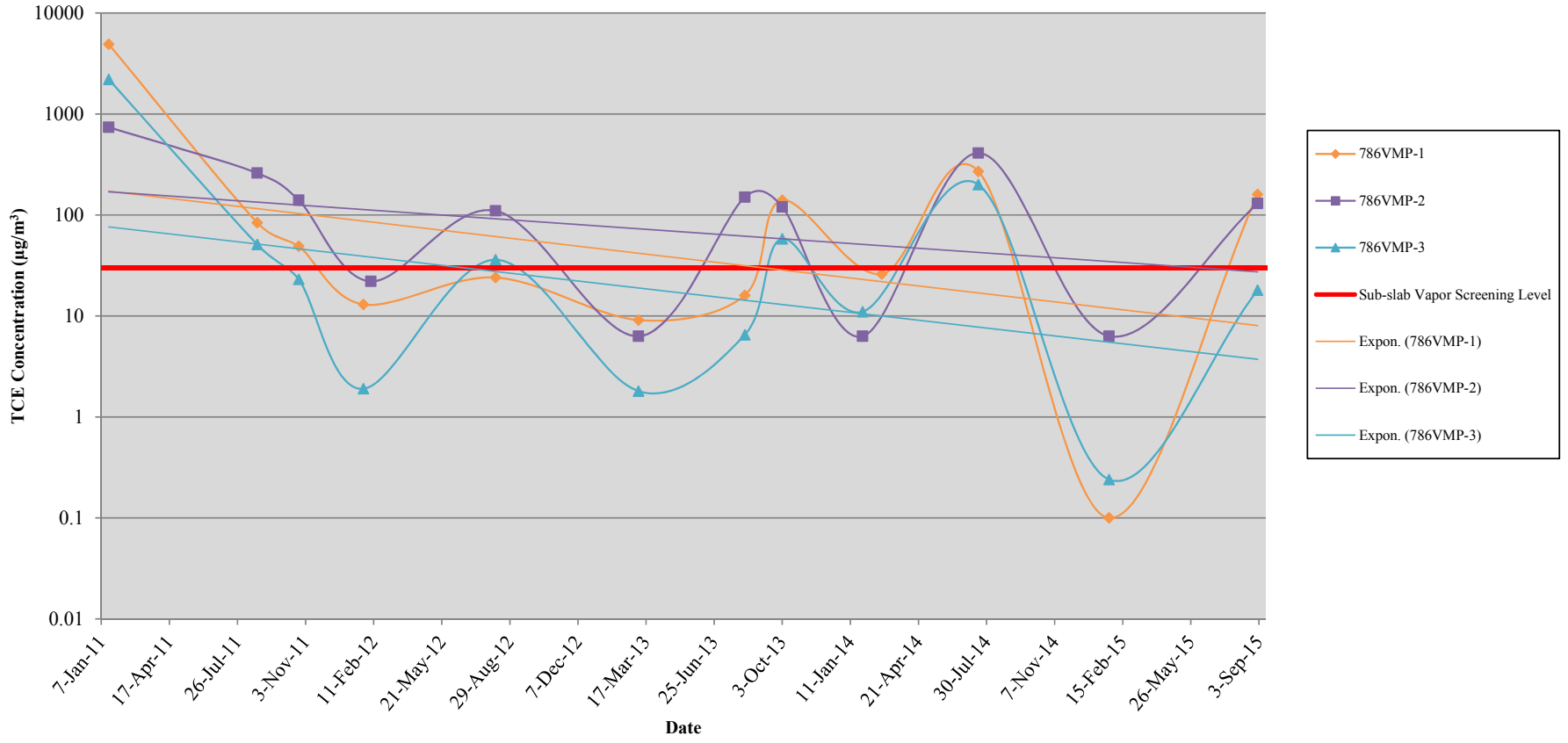


Figure 3-9
785SSVM-1 and 786SSVM-1
Long Term Operation Flow Rate
(May 2011 through December 2015)

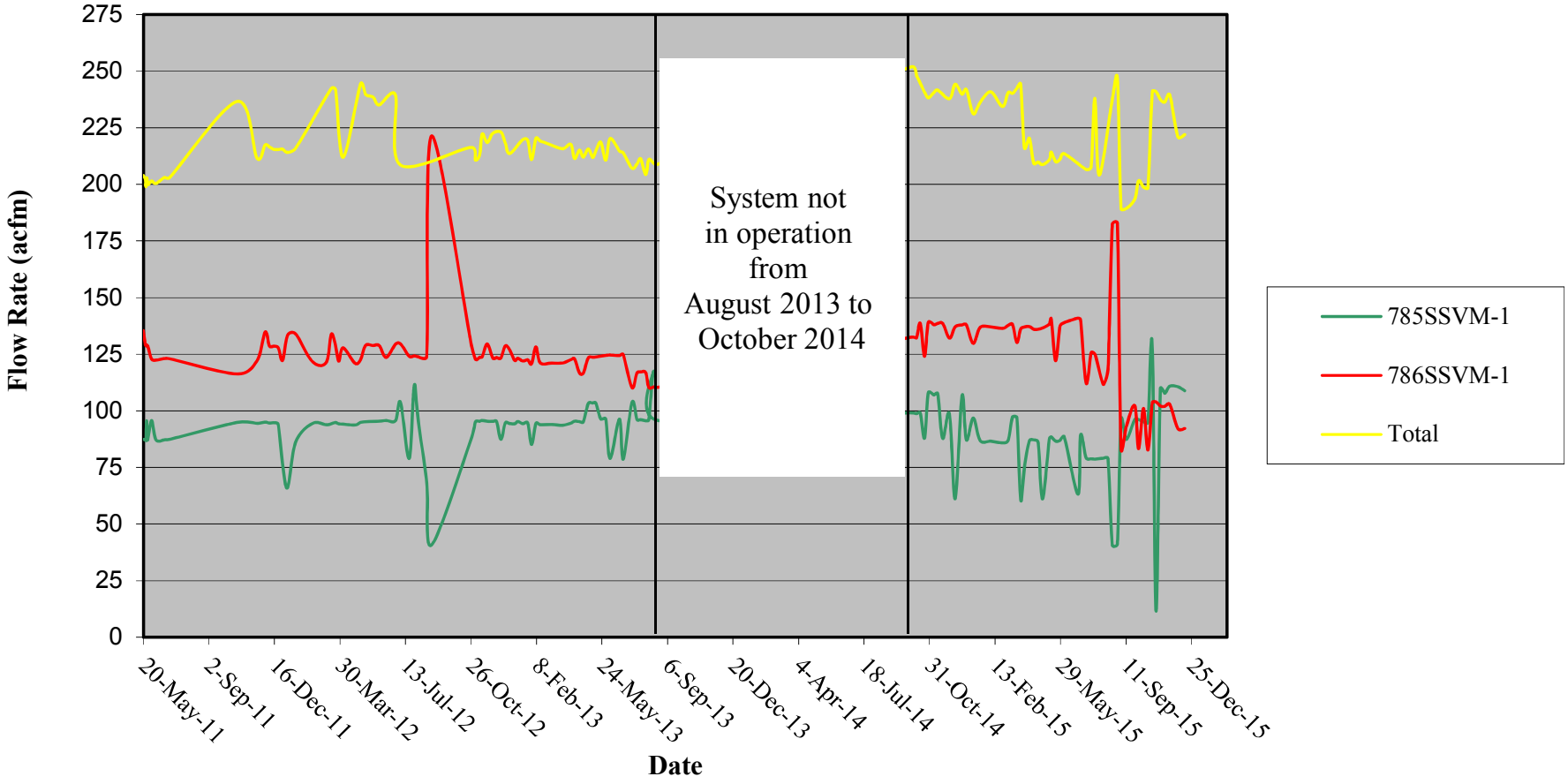


Figure 3-10
785SSVM-1 and 786SSVM-1
Long Term Operation Vacuum
(May 2011 through December 2015)

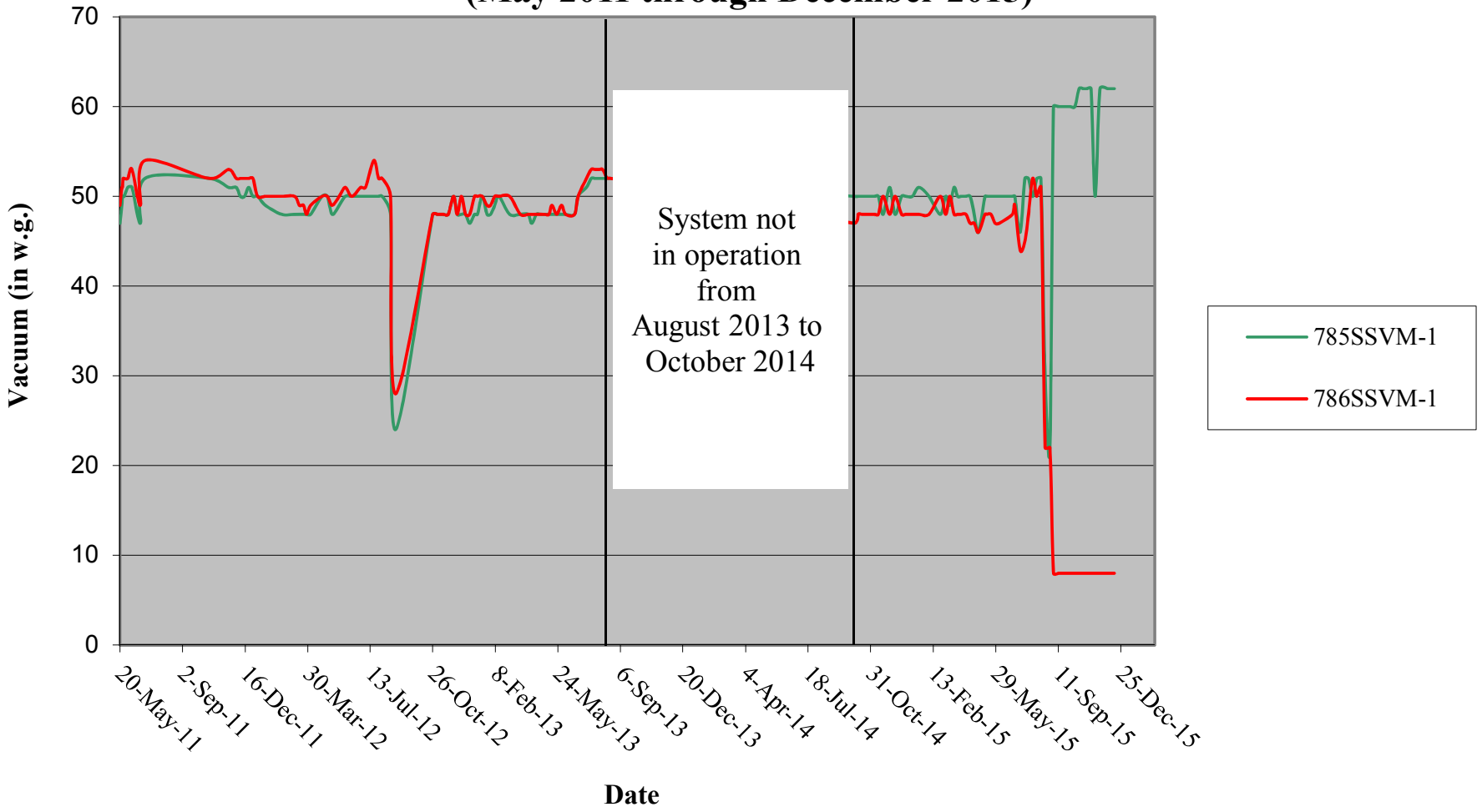
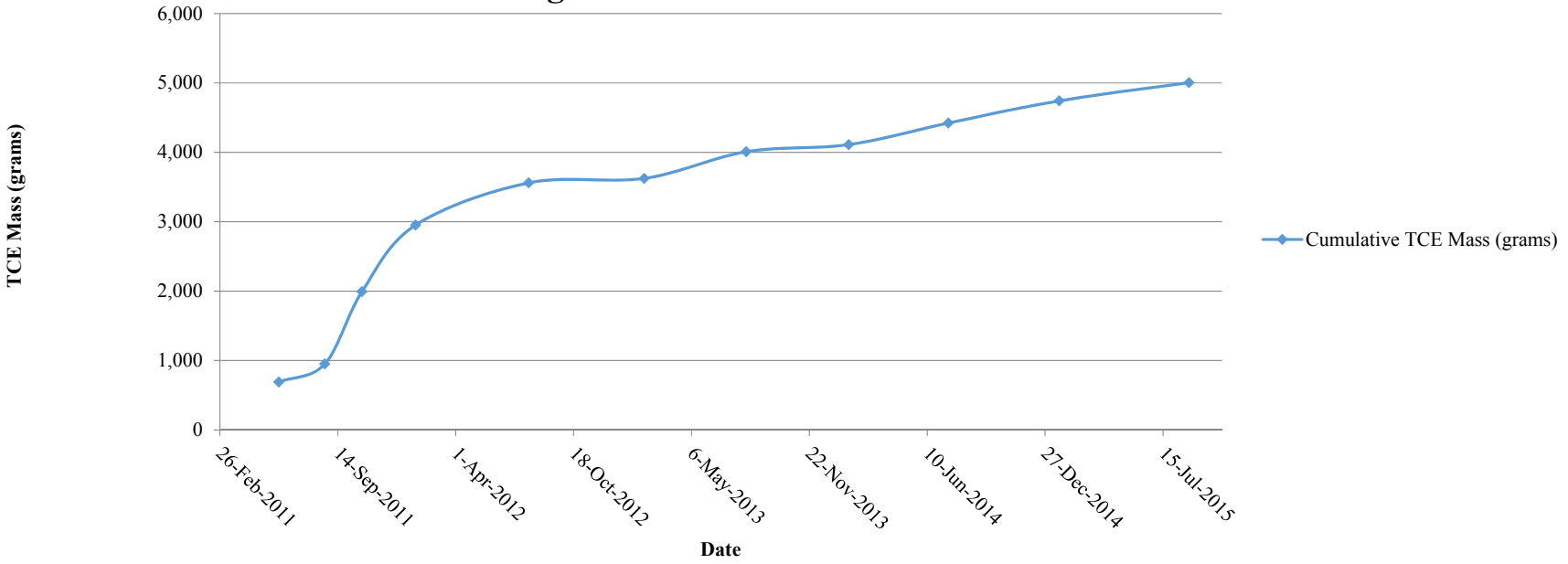
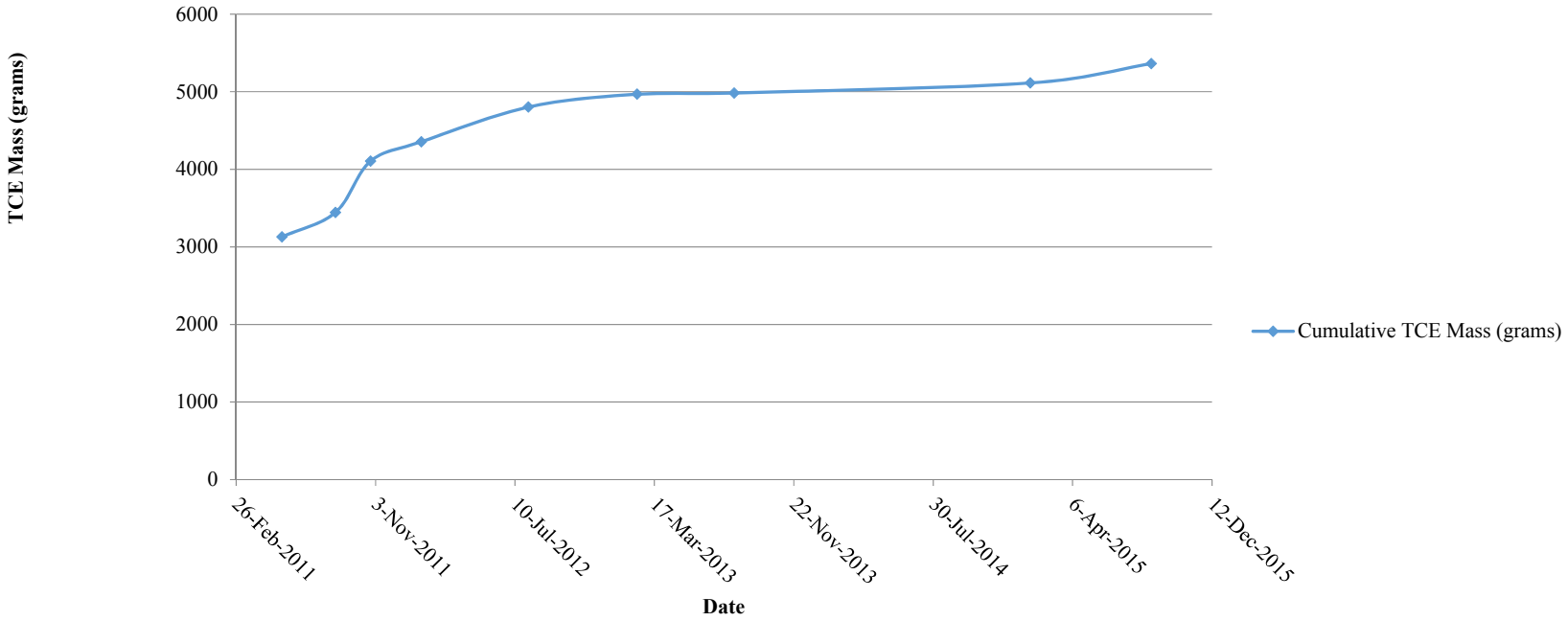


Figure 4-1
Building 774/776 TCE Mass Removal



Date	Influent (ug/m³)	Average Flow Rate (acfm)	flow (m3/quarter)	TCE Mass (grams/quarter)	Cumulative TCE Mass (grams)
6-Jun-2011	510	430	1351139.348	689.08	689.08
23-Aug-2011	240	430	1087930.384	261.10	950.18
25-Oct-2011	650	430	1601187.864	1040.77	1990.96
24-Jan-2012	300	430	3202375.727	960.71	2951.67
3-Aug-2012	190	430	3202375.727	608.45	3560.12
15-Feb-2013	20	430	3202375.727	64.05	3624.17
7-Aug-2013	120	430	3202375.727	384.29	4008.45
28-Jan-2014	32	430	3202375.727	102.48	4110.93
16-Jul-2014	97	430	3202375.727	310.63	4421.56
20-Jan-2015	100	430	3202375.727	320.24	4741.80
28-Aug-2015	82	430	3202375.727	262.59	5004.39
			Total	5004.39	

Figure 4-2
Building 785/786 TCE Mass Removal



Date	Influent (ug/m³)	Average Flow Rate (acfm)	flow (m3/quarter)	TCE Mass (grams/quarter)	Cumulative TCE Mass (grams)
19-May-2011	3500	240	893686.2495	3127.901873	3127.901873
23-Aug-2011	520	240	607216.9585	315.7528184	3443.654692
25-Oct-2011	740	240	893686.2495	661.3278246	4104.982516
24-Jan-2012	140	240	1787372.499	250.2321499	4355.214666
3-Aug-2012	250	240	1787372.499	446.8431247	4802.057791
14-Feb-2013	93	240	1787372.499	166.2256424	4968.283433
7-Aug-2013	130	240	117525.8629	15.27836218	4983.561795
20-Jan-2015	72	240	1787372.499	128.6908199	5112.252615
28-Aug-2015	140	240	1787372.499	250.2321499	5362.484765
			total	5362.484765	

Appendix A

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-1-15			
conducted by:	MG			
Site ID:	B774/B776SVT		Baro. (inch hg):	30.406 in HG)
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	-18	774-1	.4	62°F
774-2	-15	774-2	.2	65°F
776-1	-16	776-1	.5	65°F
Blower Temp (deg F)	110°F	After Cooler Temp (deg F)	80°F	

141.60
100.78
159.15

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-9-15			
conducted by:	ML			
Site ID:	B774/776 SVE		Patm (inch hg):	29.83 in Hg
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	-18	774-1	.41	62°F
774-2	-15	774-2	.2	60°F
776-1	-16	776-1	.5	65°F
Blower Temp (deg F)	115°F	After Cooler Temp (deg F)	100°F	
Well ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

140.32
99.86
157.71

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-16-15			
conducted by:	Mark G.			
Site ID:	B774/B776 SVE		Patm (inch hg):	29.99 (in Hg)
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	-18	774-1	0.5	56°F
774-2	-141	774-2	0.2	60°F
776-1	-16	776-1	0.5	60°F
Blower Temp (deg F)	80°F	After Cooler Temp (deg F)	50°F	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

156.39
99.76
157.36

* system OFF on arrival

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-23-15			
conducted by:	Mark G.			
Site ID:	774/776 SVE		Patm (inch hg):	30.39 inch Hg
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	-20	774-1	.4	60°F
774-2	-16	774-2	.2	60°F
776-1	-18	776-1	.5	61°F
Blower Temp (deg F)	105°F	After Cooler Temp (deg F)	75°F	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

140.97
100.16
158.13

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-29-15			
conducted by:	WMG			
Site ID:	B774/B776 SVE		Patm (inch hg):	30.44 (in HG)
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	-23	774-1	.5	60°F
774-2	-20	774-2	.1	60°F
776-1	-22	776-1	.8	60°F
Blower Temp (deg F)	110°F	After Cooler Temp (deg F)	100°F	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

157.17
70.54
199.04

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	11/5/15			
conducted by:	KW			
Site ID:	B774/776		Patm (inch hg):	29.59
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	24	774-1	0.5	62
774-2	22	774-2	0.3	64
776-1	22	776-1	0.8	62
Blower Temp (deg F)	118°F	After Cooler Temp (deg F)	105°F	

155.19
120.72
196.76

Well_ID, Distance from well axis (ft)	Tune	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	11/12/15
conducted by:	DB / KW

Site ID:	774/776		Patm (inch hg):	29.46
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	22	774-1	0.5	60
774-2	20	774-2	0.2	60
776-1	22	776-1	0.7	60
Blower Temp (deg F)	90	After Cooler Temp (deg F)		

154.93
98.21
183.32

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w g.)	Deep Vacuum (inch w.g.)

off on arrival - Knock-out tank alarm - no water in tank - turned on -

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	11-20-15			
conducted by:	Mark G.			
Site ID:	B774/B776 SVE		Patm (inch hg):	30.19 (+15)
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	-24	774-1	0.8	60°F
774-2	-20	774-2	0.1	53°F
776-1	-20	776-1	0.5	60°F
Blower Temp (deg F)	104°F	After Cooler Temp (deg F)	90°F	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

197.80
69.78
157.11

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	12/3/15			
conducted by:	KU			
Site ID:	774/776		Patm (inch hg):	30.07
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	24	774-1	0.6	55
774-2	22	774-2	0.05	57
776-1	23	776-1	0.8	56
Blower Temp (deg F)	102	After Cooler Temp (deg F)	84	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

170.15
49, 33
196.90

* System off on arrival, reset system

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	12/14/15			
conducted by:	K. Wilhelm			
Site ID:	774/776		Patm (inch hg):	29.17
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1	24	774-1	0.5	58
774-2	22	774-2	0.05	60
776-1	23	776-1	0.8	58
Blower Temp (deg F)	115	After Cooler Temp (deg F)	100	

153.56
48.76
194.46

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-1-15				
conducted by:	MG				
Site ID:	B785/B786 SVT			Patm (inch hg):	30.40 (in HG)
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)	
785-1	-60	785-1	.6	60°F	96.15
786-1	-8	786-1	.4	58°F	83.27
total	X (in H2O)	total	3.2	72°F	201.60
Blower Temp (deg F)	165°F	After Cooler Temp (deg F)	128°F		
Well_ID. Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)	

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-9-15			
conducted by:	mg			
Site ID:	B785/B786SVE		Patm (inch Hg):	29.936 in HG
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	~~Temperature~~ (Deg F)
785-1	-60	785-1	.6	~~587~~
786-1	-8	786-1	.16	~~587~~
total	35 (in HG)	total	3.2	74°F
Blower Temp (deg F)	160F	After Cooler Temp (deg F)	130F	
Well_ID: Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

~~10.64~~ 95.17
~~103.07~~ 101.04
198.75

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-16-15			
conducted by:	MarkG			
Site ID:	B785/B786 SVE		Patm (inch hg):	29.99 (inHG)
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	-62	785-1	0.6	54°F
786-1	-8	786-1	0.4	[redacted] 58°F
total	3.5 (inHG)	total	3.2	70°F
Blower Temp (deg F)	160°F	After Cooler Temp (deg F)	128°F	

94.82
82.71
198.48

Well_ID; Distance from well axis (ft)	Tune	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-23-15			
conducted by:	mark G			
Site ID:	R785/B786		Patm (inch hg):	30.3 in HG
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	-62	785-1	.8	55°F
786-1	-8	786-1	.6	54°F
total	3(in HG)	total	3.2	68°F
Blower Temp (deg F)	155°F	After Cooler Temp (deg F)	125°F	
Well ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

129,16
103.64
241,05

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	10-29-15
conducted by:	MG

Site ID:	B785/B786 SVT		Patm (inch hg):	30.44 in HG
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	~~-8~~ ~~-62~~	785-1	.6	52°F
786-1	~~-62~~ -8	786-1	.6	56°F
total	3.5 (in HG)	total	3.2	~~3.5 (in HG)~~ MG
Blower Temp (deg F)	155°F	After Cooler Temp (deg F)	124°F	

111.64
103.93
66°F - 240.94

Well ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	11/5/15			
conducted by:	KD			
Site ID:	B 785/786		Patm (inch hg):	29.59
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	-62	785-1	0.6	53
786-1	-8	786-1	0.6	53
total	3.5	total	3.2	66
Blower Temp (deg F)	155°F	After Cooler Temp (deg F)	126°F	

109.90
102.15
237.53

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	11/12/15			
conducted by:	DB/JW			
Site ID:	785/786		Patm (inch hg):	29.46
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w g)	Temperature (Deg F)
785-1	50	785-1	0.6	80
786-1	9	786-1	0.6	50
total	~~24~~	total	3.2	60
Blower Temp (deg F)	150	After Cooler Temp (deg F)	120	

107.71
101.97
236.32

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	~~11-2-15~~ 11/20/15			
conducted by:	Mark G.			
Site ID:	B785/B786 SVI		Patm (inch-hg):	30.196 inHG
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	-62	785-1	.6	50°F
786-1	-8	786-1	.6	50°F
total	35 inHG	total	3.2	64°F
Blower Temp (deg F)	150°F	After Cooler Temp (deg F)	110°F	
Well ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

110.88
102.89
239.49

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	12/3/15
conducted by:	KW

Site ID:	785/786		Patm (inch hg):	30.07	
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)	
785-1	-62	785-1	0.6	50	110.62
786-1	-8	786-1	0.5	48	92.12
total	3.5	total	3.2	60	221.43
Blower Temp (deg F)	150	After Cooler Temp (deg F)	115		

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	12/14/15			
conducted by:	K. Wilhelmsen			
Site ID:	785/786		Patm (inch hg):	29.17
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785-1	-62	785-1	0.6	52
786-1	-8	786-1	0.5	49
total	4.5	total	3.2	64
Blower Temp (deg F)	155	After Cooler Temp (deg F)	124	

108.87
92.21
222.60

Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

774-1 O&M Readings/Flow Rate					
Well	Date	Vacuum (inch w.g)	Pressure Differential (inch w.g)	Temperature (°F)	Flow (ACFM)
774-1	10/1/2015	-18	0.4	62	141.6
774-1	10/9/2015	-18	0.4	62	140.32
774-1	10/16/2015	-18	0.5	56	156.38
774-1	10/23/2015	-20	0.4	60	140.97
774-1	10/29/2015	-23	0.5	60	157.17
774-1	11/5/2015	-24	0.5	62	155.19
774-1	11/12/2015	-22	0.5	60	154.93
774-1	11/20/2015	-24	0.8	60	197.80
774-1	12/3/2015	-24	0.6	55	170.15
774-1	12/14/2015	-24	0.5	58	153.56

774-2 O&M Readings/Flow Rate					
Well	Date	Vacuum (inch w.g)	Pressure Differential (inch w.g)	Temperature (°F)	Flow (ACFM)
774-2	10/1/2015	-15	0.2	65	100.78
774-2	10/9/2015	-15	0.2	65	99.86
774-2	10/16/2015	-14	0.2	60	99.76
774-2	10/23/2015	-16	0.2	60	100.16
774-2	10/29/2015	-20	0.1	60	70.54
774-2	11/5/2015	-22	0.3	64	120.72
774-2	11/12/2015	-20	0.2	60	98.21
774-2	11/20/2015	-20	0.5	60	69.78
774-2	12/3/2015	-22	0.05	57	49.33
774-2	12/14/2015	-22	0.05	60	48.76

776-1 O&M Readings/Flow Rate					
Well	Date	Vacuum (inch w.g)	Pressure Differential (inch w.g)	Temperature (°F)	Flow (ACFM)
776-1	10/1/2015	-16	0.5	65	159.15
776-1	10/9/2015	-16	0.5	65	157.71
776-1	10/16/2015	-16	0.5	60	157.36
776-1	10/23/2015	-18	0.5	61	158.13
776-1	10/29/2015	-22	0.8	60	199.04
776-1	11/5/2015	-22	0.8	62	196.76
776-1	11/12/2015	-22	0.7	60	183.32
776-1	11/20/2015	-20	0.5	60	157.11
776-1	12/3/2015	-23	0.8	56	196.90
776-1	12/14/2015	-23	0.8	58	194.46

785-1 O&M Readings/Flow Rate					
Well	Date	Vacuum (inch w.g)	Pressure Differential (inch w.g)	Temperature (°F)	Flow (ACFM)
785-1	10/1/2015	-60	0.6	60	96.15
785-1	10/9/2015	-60	0.6	58	95.17
785-1	10/16/2015	-62	0.6	54	94.82
785-1	10/23/2015	-62	0.8	55	129.16
785-1	10/29/2015	-62	0.6	52	111.64
785-1	11/5/2015	-62	0.6	53	109.9
785-1	11/12/2015	-50	0.6	50	107.71
785-1	11/20/2015	-62	0.6	50	110.88
785-1	12/3/2015	-62	0.6	50	110.62
785-1	12/14/2015	-62	0.6	52	108.87

786-1 O&M Readings/Flow Rate					
Well	Date	Vacuum (inch w.g)	Pressure Differential (inch w.g)	Temperature (°F)	Flow (ACFM)
786-1	10/1/2015	-8	0.4	58	83.27
786-1	10/9/2015	-8	0.6	58	101.04
786-1	10/16/2015	-8	0.4	58	82.71
786-1	10/23/2015	-8	0.6	54	103.64
786-1	10/29/2015	-8	0.6	56	103.93
786-1	11/5/2015	-8	0.6	53	102.15
786-1	11/12/2015	-9	0.6	50	101.97
786-1	11/20/2015	-8	0.6	50	102.89
786-1	12/3/2015	-8	0.5	48	92.12
786-1	12/14/2015	-8	0.5	49	92.21

Total O&M Readings/Flow Rate					
Well	Date	Vacuum (inch h.g)	Pressure Differential (inch w.g)	Temperature (°F)	Flow (ACFM)
Total	10/1/2015	-3	3.2	72	201.6
Total	10/9/2015	-3.5	3.2	74	198.75
Total	10/16/2015	-3.5	3.2	70	198.48
Total	10/23/2015	-3	3.2	68	241.05
Total	10/29/2015	-3.5	3.2	66	240.94
Total	11/5/2015	-3.5	3.2	66	237.53
Total	11/12/2015	-4	3.2	60	236.32
Total	11/20/2015	-3.5	3.2	64	239.49
Total	12/3/2015	-3.5	3.2	60	221.43
Total	12/14/2015	-4.5	3.2	64	222.60

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
26-Feb-15	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774	
30-Sept-15	SVE System (774, 776, 785 and 786)	Spent Carbon	Soil Vapor	220	55-gal drum	B774 and B786	

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

Comments : _____

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