FINAL

QUARTERLY OPERATION AND MAINTENANCE REPORT
SD-052-02 BUILDING 775 SITE [BUILDINGS 774 AND 776] AND SD-052-01 APRON 2 CHLORINATED PLUME SITE [BUILDINGS 785 AND 786]
SUB-SLAB VAPOR MITIGATION SYSTEMS
(2ND QUARTER / CALENDAR YEAR 2012 / APRIL – JUNE)

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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
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
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
PCE	tetrachloroethylene/perchloroethylene/tetrachloroethene/perchloroethene
PDI	pre-design investigation
QAPP	Quality Assurance Project Plan
RAWP	Remedial Action Work Plan
ROD	Record of Decision
RWPCF	Rome Water Pollution Control Facility
SSVM	Sub-Slab Vapor Mitigation
sq ft	square feet
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TCA	trichloroethane

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

TCE	trichloroethylene/trichloroethene
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VMP	Vapor Monitoring Point
VOC	volatile 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 depicts the SSVM site locations of Buildings 774, 776, 785 and 786.

This quarterly report has been prepared to provide the SSVM systems data from the 2nd quarter of the calendar year (CY) 2012 including the months of April through June. Additionally, the report contains (as applicable) analytical results and discussion of soil vapor intrusion (SVI) sampling which is performed to evaluate SSVM. O&M was conducted in accordance with the Draft Completion Report Sub-Slab Vapor Mitigation Systems (FPM, May 2012a).

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2 SITE INFORMATION

2.1 BUILDINGS 774 AND 776 SITE SD-052-02 BUILDING 775

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). 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. In September 2004, the maximum groundwater TCE concentration was 134 µg/L (detected at well 775-MW20, 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). Based on the

current TCE distribution, it appears that the TCE was likely spilled in the vicinity of Building 774 and has migrated southward and downward in the aquifer.

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 is 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) [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. 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 68 µg/L occurring in 775VMW-5 (FPM, December, 2011). 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 a SVI evaluation during the 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. 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 Air Force Real Property Agency (AFRPA), 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, which was then 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 recollected in May 2008 in Building 774. The recollected results show that indoor air TCE concentrations were similar to levels reported in 2006 (Table 2-1). Sub-slab vapor results for Building 774 slightly decreased in comparison to 2006 results. The highest sub-slab vapor result reported in 2006 was 1,700 micrograms per cubic meter ($\mu g/m^3$) at location 774SSV-1. The highest result reported in 2008 was 590 $\mu g/m^3$ 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 sub-slab vapor result reported in 2006 was 3,000 $\mu g/m^3$ at location 776SSV-1. The highest result reported in 2008 was 110 $\mu g/m^3$ at location 774SSV-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 BUILDINGS 785 AND 786 SITE SD-052-01 APRON 2 CHLORINATED PLUME

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 2-2). Buildings 785 and 786 are 28,251 sq ft, unheated airplane hangars. The buildings are used for storage by the Griffiss International Airport. The buildings are largely open with several first and second floor offices in the southwest corners of the buildings. Buildings 785 and 786 were built in 1959 and were taken out of service in 1995 after the former Griffiss AFB was closed. 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. Two large trenches exist in the buildings; one along the large aircraft bay doors on the southeast side of the building and a smaller trench along the overhead door on the northwest side of the buildings. These trenches contain several cracks that may act as conduits. All heating and air handling equipment is in a state of disrepair and assumed inoperable. The buildings are poorly sealed due to broken windows, doors left ajar and holes observed in the sheet metal outer covering of the building. 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.

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 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 34.8 µg/L at monitoring well 782VMW-105B, cis-1-2-DCE detections up to 43.4 µg/L at monitoring well 782VMW-78 and VC detections up to 39.5 µg/L at monitoring well 782VMW-84 (FPM, December 2011).

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 detection exceeding screening levels was 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. 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, SVI Results Table.

This SVI survey was reviewed by the AFRPA, NYSDEC, NYSDOH, and USEPA and during discussions among these parties, a plan for additional sampling was established, which was then 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 2006 and 2008 at the Apron 2 Chlorinated Plume Site indicated that chloroform and TCE were present in the sub-slab vapor beneath Building 785 at concentrations above the screening levels. Indoor air sampling indicated that these contaminants were present, but at concentrations below the screening levels.

Sub-slab vapor sampling results for the 2006 sampling event showed exceedances for TCE of 11,000 $\mu g/m^3$ at 785SSV-1. The April 2008 sampling round data were lower at this location (identical to two orders of magnitude lower) than those reported for the 2006 sampling round data. TCE exceedances of the sub-slab vapor screening levels were reported for sub-slab vapor locations 785SSV-2 and -6 at 430 and 2,200 $\mu g/m^3$, respectively.

2.2.4 Building 786 Soil Vapor Intrusion Results 2008

Sub-slab sampling in 2006 and 2008 at the Apron 2 Chlorinated Plume Site indicated that PCE, and TCE were present in the sub-slab vapor beneath Building 786 at concentrations above the screening levels; indoor air sampling indicated that these contaminants were present, but at concentrations below the screening levels.

TCE was detected beneath Building 786 at concentrations ranging from 4,700 to 81,000 $\mu g/m^3$ in 2006 and PCE was detected at 2,200 $\mu g/m^3$at location 786SSV-1. 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. Only TCE exceeded the sub-slab vapor screening levels at sampling locations 1, 2, 5, and 6 locations for the 2008 sampling round ranging from 1,500 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 360 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 180 ft and Building 776 has one horizontal well with a screen length of 160 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), weekly vapor monitoring point (VMP) vacuum measurements, and granular activated carbon (GAC) disposal and replacement every two months. Indoor and outdoor air sampling, sub-slab vapor sampling, and influent sampling are conducted semiannually during the heating and cooling months.

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 Draft Completion Report Sub-Slab Vapor Mitigation Systems (FPM, May 2012a). The performance evaluation section of this referenced report documents sub-slab vapor sampling results (Table 3-2) 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 was during the baseline sampling event (May 4, 2011) at 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.

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

It was documented in the Quarterly Operations and Maintenance Report, (4th Quarter / Calendar Year 2011), (FPM, May 2012b), that the Buildings 774 and 776 SSVM system extracted approximately 30 gallons per week of water which was then 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. Effluent sampling location was installed on the SSVM system's exhaust stack after carbon treatment. TCE was not detected in Buildings 774 and 776 effluent sample. Following effluent sampling GAC was replaced.

GAC replacement is based on the carbon life span due to adsorption of the effluent contaminant of concern [COC] concentrations. A replacement schedule for GAC was initially determined through calculations performed in the Work Plan for SSVM Design (FPM, February 2011). These calculations were then checked empirically by sampling vapor effluent on December 19, 2011. It was proven that a bimonthly schedule was an adequate schedule for GAC replacement (FPM, May 2012b). Once the carbon life span was determined, effluent sampling was removed from the O&M schedule.

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 and sampling locations are shown on Figure 3-1. 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 F µg/m^3. 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 F 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. Table 3-2 summarizes the sub-slab vapor, indoor and outdoor air analytical results and Figure 3-7 shows the sub-slab TCE vapor trend chart in both Buildings 774 and 776. This results table and trend chart incorporates data from the initial baseline sampling event which occurred before system start-up (May, 2011) until the most recent data (January, 2012).

Semiannual 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. Table 3-3 summarizes influent results and Figure 3-8 shows the trend for influent results at Buildings 774 and 776 since the start-up of the SSVM system.

3.1.2 2nd Quarter / Calendar Year 2012 (April - June) Buildings 774 and 776 Sub-Slab Vapor Mitigation System Operations and Maintenance Results

Buildings 774 and 776 system flow rate is illustrated on Figure 3-3 and system vacuum is illustrated on Figure 3-4. The SSVM system at Buildings 774 and 776 has been in operation for

over one year (June 2011 through June 2012). Data from this quarter shows that the system vacuum has a decreasing trend. This is attributed to the system initially extracting water from the sub-surface up until April 2012. GAC was replaced on April 23, 2012 at the site. All scanned O&M field forms are provided in Appendix A.

Since April 2012 the system has not extracted any water and the vacuum has decreased. The approved permit (FPM-001) through RWPCF for Buildings 774 and 776 to discharge extracted water into the sanitary sewer was reviewed and closed. The vapor liquid separator did not collect any water past April, 2012. Closure was obtained through a letter received August 7, 2012 and is included in Appendix B.

3.1.2.1 Buildings 774 and 776 Sub-Slab Vapor Mitigation System Soil Vapor Monitoring

Sub-slab vapor, indoor air, outdoor air, and influent sampling is scheduled to be performed semiannually during the heating months (January) and cooling months (July). Therefore, sampling did not occur at Buildings 774 and 776 during the 2nd quarter / CY 2012.

3.2 BUILDINGS 785 AND 786 SUB-SLAB VAPOR MITIGATION SYSTEM

FPM performed SSVM at Buildings 785 and 786 with continuous system operation 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 3-2.

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 two months. Indoor and outdoor air sampling, sub-slab vapor sampling, and influent sampling are conducted semiannually during the heating and cooling months.

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 Draft Completion Report Sub-Slab Vapor Mitigation Systems (FPM, May 2012a). The performance evaluation section of this report documents sub-slab vapor sampling results (Table 3-2) indicated a decreasing trend in TCE levels in Buildings 785 and 786. 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 was sampled during the three month sampling event where 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)

An effluent sample was collected on December 19, 2011 at the Buildings 785 and 786 SSVM system. The effluent sampling location was installed on the SSVM system's exhaust stack after carbon treatment. Results showed a TCE concentration of 4.1 µg/m^3 in Buildings 785 and 786. Following this sampling event, the GAC was replaced.

GAC replacement is based on the carbon life span due to adsorption of the effluent contaminant of concern [COC] concentrations. A replacement schedule for GAC was initially determined through calculations performed in the Work Plan for SSVM Design (FPM, February 2011). These calculations were then checked empirically by sampling vapor effluent on December 19, 2011. It was proven that a bimonthly schedule was an adequate schedule for GAC replacement (FPM, May 2012b). Once the carbon life span was determined, effluent sampling was removed from the O&M schedule.

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 in the month of January through February 2012 on January 27, January 31 and February 7 and sampling locations are shown on Figure 3-2. 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. Table 3-2 summarizes the sub-slab vapor, indoor and outdoor air analytical results and Figure 3-9 shows the sub-slab TCE trend chart in both Buildings 785 and 786. This results table and trend chart incorporates data from the initial baseline sampling event which occurred before system start-up (March, 2011 in Building 785 and January, 2011 in Building 786) until the most recent data (January through February, 2012).

Semiannual 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 at Buildings 785 and 786 for TCE were 140 µg/m^3. Table 3-3 summarizes influent results and Figure 3-10 shows the trend for influent results at Buildings 785 and 786 since the start-up of the SSVM system.

3.2.2 2nd Quarter / Calendar Year 2012 (April - June) Buildings 785 and 786 Sub-Slab Vapor Mitigation System Operations and Maintenance Results

Buildings 785 and 786 system flow rate is illustrated on Figure 3-5 and system vacuum is illustrated on Figure 3-6. The SSVM system at Buildings 785 and 786 Site has been in operation for over one year (May 2011 through June 2012). GAC was replaced on April 23, 2012 at the site. All scanned O&M field forms are provided in Appendix A.

3.2.2.1 Buildings 785 and 786 Sub-Slab Vapor Mitigation System Soil Vapor Monitoring

Sub-slab vapor, indoor air, outdoor air, and influent sampling is scheduled to be performed semiannually during the heating months (January) and cooling months (July). Therefore, sampling did not occur at Buildings 785 and 786 during the 2nd quarter / CY 2012.

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4 DISCUSSION

O&M activities conducted during this period of performance (2nd Quarter / CY 2012) included GAC replacement at both SSVM systems, weekly system component readings (system temperature, flow, vacuum and motor status), and VMP vacuum measurements. Figure 3-3 through 3-6 reflect the SSVM system's flow rates and vacuum measurements. In addition, the approved permit (FPM-001) through RWPCF for Buildings 774 and 776 to discharge extracted water into the sanitary sewer was reviewed and closed.

Sampling was not performed this round. The last sampling event (January through February, 2012) SSVM systems results indicated a decreasing or stable trend in TCE in all sub-slab VMPs and all sub-slab vapor concentrations were below screening levels. All indoor and outdoor air concentrations were within an acceptable range and did not pose any unacceptable risk to building occupants. Influent sampling results at both sites indicated a decreasing trend in TCE.

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5 RECOMMENDATIONS

O&M SVI sampling data shows TCE concentrations in the sub-slab are decreasing at all sites as a result of the mitigation system operation. Therefore, the SSVM systems are operating as intended. Continued operation and maintenance is recommended at this time.

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Tables

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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 ($\mu g/m^3$)	774IA-1			774IA-2			774IA-3	
Sample ID		774-IA1	774IA1BB	774IA1CA	774-IA2	774IA2BB	774IA2CA	774IA3BB	774IA3CA
Sample Type		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		**774IA-4**		**774IA-5**	**774OA-1**		
Sample ID		**774IA4BB**	**774IA4CA**	**774IA5CA**	**774-OA1**	**774OA1BB**	**774OA1CA**
Sample Type	**Indoor Air Screening Level (µg/m^3)**	**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 785/786 AOC Short List Indoor and Outdoor Historical Analytical Results
December 2006/April 2008

Sample Location	**Indoor Air Screening Level ($\mu g/m^3$)**	**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.

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	**Sub-slab Vapor Screening Level ($\mu g/m^3$)**	**786SSV-1**		**786SSV-2**		**786SSV-3**	**786SSV-4**	**786SSV-5**	**786SSV-6**
Sample ID		**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	Weekly recording to support sub-slab depressurization.	VMPs inside buildings as shown on Figure 2-3 and 2-4	None
Granular Activated Carbon Replacement	Every two 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 2-3 and 2-4	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 2-3 and 2-4	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 2-3 and 2-4	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 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	Sub-slab Vapor Screening Level (µg/m^3) [1]	774VMP-1				774VMP-2				774VMP-3			
Sample ID		**774VMP0101AA**	**774VMP0101AB**	**774VMP0101AC**	**774VMP0101AD**	**774VMP0201AA**	**774VMP0201AB**	**774VMP0201AC**	**774VMP0201AD**	**774VMP0301AA**	**774VMP0301AB**	**774VMP0301AC**	**774VMW0301AD**
Sample Type		**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**
Sample Date		**4-May-2011**	**24-Aug-2011**	**21-Oct-2011**	**25-Jan-2012**	**4-May-2011**	**24-Aug-2011**	**21-Oct-2011**	**25-Jan-2012**	**4-May-2011**	**24-Aug-2011**	**21-Oct-2011**	**26-Jan-2012**
Sample Depth (ft bgs / ags)		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)		**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**
Volatiles (TO-15) in µg/m^3													
1,1,1-trichloroethane	146,000	59	8.3	U	U	85	2.4	U	U	12	0.67 F	U	U
1,1-dichloroethane	NA	0.53 F	U	U	U	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	175	6.7	3.2	U	12	12	4	0.65 F	6.0 F	6.3	4.1	0.95	U
1,3,5-trimethylbenzene	175	2.5	0.9	U	3.2 F	3.9	2	U	U	2.2	1.8	U	U
1,3-dichlorobenzene	NA	U	U	U	1.4 F	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	U	1.9	U	2.6 F	U	2.2	U	2.1 F	U	2.3	U	U
4-ethyltoluene	NA	4.6	1.2	U	3.2 F	8.5	1.5	U	U	4.2	1.6	U	U
acetone	NA	54	31	18	64	53	U	11	110 F	17	19	12	30 F
benzene	105	1.6	4.3	U	U	6	4.4	U	U	2.5	3.8	0.39 F	U
carbon disulfide	20,440	U	0.66	U	U	0.95	0.6	U	U	0.95	1.4	U	U
carbon tetrachloride	55	1	0.70 F	U	U	1.4	0.70 F	U	U	0.45	U	U	U
chlorobenzene	NA	U	0.51 F	U	U	U	0.56 F	U	U	U	0.84	U	U
chloroform	36	18	9.1	U	U	45	1.8	0.69 F	U	9.1	U	U	U
chloromethane	818	3.5	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-dichloroethene	1,022	0.89	0.77	U	U	0.73	U	U	U	U	U	U	U
cumene	NA	NA	NA	NA	1.1 F	NA	NA	NA	U	NA	NA	NA	U
cyclohexane	175,200	4.8	7.8	2.4	U	5.9	10	3.5	U	6.2	11	4.8	U
ethyl acetate	NA	U	U	0.77 F	U	U	0.62 F	U	U	U	U	U	U
ethylbenzene	743	1.4	2.8	U	4.1 F	1.6	3.2	U	1.9 F	1.5	3.6	U	U
freon 11	20,440	31	19	2.0	1.9 F	400	22	2.2	U	630	120	9.5	21
freon 113	876,000	U	0.78 F	U	U	0.86 F	0.78 F	U	U	0.86 F	0.78 F	U	U
freon 12	5,840	2.1	2.8	2.5	2.4 F	2.8	2.8	2.1	3.1 F	U	2.6	2.4	3.5 F
freon 22	NA	NA	NA	NA	300	NA	NA	NA	750	NA	NA	NA	880
heptane	NA	U	3.7	U	U	U	4.2	6.2	U	U	3.5	U	U
hexane	20,440	U	7.9	U	5.1	U	8.2	U	U	U	7.5	U	U
isopropyl alcohol	NA	U	U	2.8	17 F	4.4	15	2.4	20 F	U	U	U	25 F
m,p-xylene (sum of isomers)	2,920	5.3	9	U	12 D	5.1	12	0.53 F	5.5 F	4.5	12	1.2 F	U
methyl ethyl ketone	146,000	1.7	4.9	1.7	1.9 F	4.3	3	U	U	U	U	U	7.6 F
methylene chloride	1,740	U	0.99	0.46 F	U	U	U	U	U	U	U	U	U
n-Propylbenzene	NA	NA	NA	NA	2.2 F	NA	NA	NA	U	NA	NA	NA	U
o-xylene	2,920	2.4	2.4	U	7.9 D	2.2	2.8	U	3.6 F	2.2	3.2	U	U
styrene	NA	U	U	U	U	U	U	U	U	U	1.4	U	U
tetrachloroethylene (PCE)	139	0.97 F	1	U	U	2.8	U	U	U	U	U	U	U
tetrahydrofuran	NA	3.1	U	U	U	6.7	U	U	U	U	U	U	12 F
toluene	146,000	1.6	17	2.1	5.2	3.2	17	1.4	4.8 F	2.3	16	2.2	1.3 F
trichloroethylene (TCE)	409	580	410	3.7	4.8 F	2900	84	11	4.2 F	300	11	3.0	U
vinyl chloride	186	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

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

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3) [1]**	**Indoor Air Screening Level (µg/m^3) [1]**	**774-IA**			
Sample ID			**774IA1AD**	**774IA1AE**	**774IA1AF**	**774IA1AG**
Sample Type			**Indoor**	**Indoor**	**Indoor**	**Indoor**
Sample Date			**5-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**	**12**
Volatiles (TO-15) in µg/m^3						
1,1,1-trichloroethane	146,000	14600	U	U	U	U
1,1-dichloroethane	NA	NA	U	U	U	U
1,2,4-trimethylbenzene	175	18	2.7	1.6	0.65 F	U
1,3,5-trimethylbenzene	175	18	U	U	U	U
1,3-dichlorobenzene	NA	321	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	U	U	U
4-ethyltoluene	NA	NA	U	U	U	U
acetone	NA	NA	52	34	19	28 F
benzene	105	88	1.3	U	U	U
carbon disulfide	20,440	2044	0.66	U	U	U
carbon tetrachloride	55	55	0.51	0.90 F	U	U
chlorobenzene	NA	NA	0.7	U	U	U
chloroform	36	36	0.55 F	U	U	U
chloromethane	818	263	U	1.2	U	1.7 F
cis-1,2-dichloroethene	1,022	102	U	U	U	U
cumene	NA	NA	NA	NA	NA	U
cyclohexane	175,200	17520	1.3	U	U	U
ethyl acetate	NA	9344	U	U	U	U
ethylbenzene	743	743	0.84	0.57 F	U	U
freon 11	20,440	2044	33	77	4.2	8.9
freon 113	876,000	87600	U	0.86 F	U	U
freon 12	5,840	584	U	2.8	2.4	U
freon 22	NA	NA	NA	NA	NA	350
heptane	NA	NA	1.7	U	U	U
hexane	20,440	2044	33	U	U	U
isopropyl alcohol	NA	NA	11	32	9.9	29 F
m,p-xylene (sum of isomers)	2,920	292	2.4	1.2 F	0.57 F	U
methyl ethyl ketone	146,000	14600	U	2.8	U	2.5 F
methylene chloride	1,740	1740	U	1.1	U	U
n-Propylbenzene	NA	NA	NA	NA	NA	U
o-xylene	2,920	292	0.71	0.49 F	U	U
styrene	NA	2920	0.78	0.56 F	U	U
tetrachloroethylene (PCE)	139	102	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U
toluene	146,000	14600	5.1	2.5	1.3	0.76 F
trichloroethylene (TCE)	409	41	4.4	2.3	0.87	1.5 F
vinyl chloride	186	186	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

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

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3) [1]**	**776VMP-1**				**776VMP-2**				**776VMP-3**			
Sample ID		**776VMP0101AA**	**776VMP0101AB**	**776VMP0101AC**	**776VMP0101AD**	**776VMP0201AA**	**776VMP0201AB**	**776VMP0201AC**	**776VMP0201AD**	**776VMP0301AA**	**776VMP0301AB**	**776VMP0301AC**	**776VMP0301AD**
Sample Type		**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**
Sample Date		**4-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**	**4-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**	**4-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**
Sample Depth (ft bgs / ags)		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)		**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**
Volatiles (TO-15) in µg/m^3													
1,1,1-trichloroethane	146,000	4.5	U	U	U	8.7	U	U	U	18	U	U	U
1,2,4-trimethylbenzene	175	9.0	3.5	U	U	9.1	3.3	0.65 F	U	11	2.1	0.50 F	0.61 F
1,2-dichloroethane	9	U	0.45 F	U	U	U	0.49 F	U	U	U	0.62	U	0.27 F
1,3,5-trimethylbenzene	175	3.8	1.6	U	U	2.8	1.2	U	U	2.7	0.70 F	U	U
2,2,4-trimethylpentane	NA	U	U	0.47 F	U	U	U	U	0.24 F	U	U	U	U
4-ethyltoluene	NA	7.2	0.9	U	U	5.1	1.0	U	U	5.2	0.65 F	U	U
4-isopropyltoluene	NA	NA	NA	NA	U	NA	NA	NA	0.49 F	NA	NA	NA	0.29 F
acetone	NA	25	39	39	23	17	39	45	20	20	30	58	34
benzene	105	1.0	0.55	1.3	0.52 F	1.1	0.45 F	1.5	0.65	2	0.39 F	1.0	0.40 F
carbon disulfide	20,440	1.2	0.57	0.44 F	U	0.98	0.79	0.38 F	0.64 F	0.95	0.95	0.63	6.0
carbon tetrachloride	55	0.77	0.77 F	U	0.53 F	0.77	0.77 F	0.70 F	0.53 F	0.38	0.83 F	0.70 F	0.51 F
chloroform	36	11	0.79	U	0.27 F	8.3	U	U	0.30 F	16	U	0.74	0.68 F
chloromethane	818	U	1.1	U	0.67 F	U	1.2	U	0.85 F	U	0.97	U	U
cis-1,2-dichloroethene	1,022	U	9.70	U	U	U	U	U	U	U	U	U	U
cyclohexane	175,200	6.8	1.6	3.0	1.2	4.5	7.3	8.5	1.4	5.4	3.5	4.8	1.2
ethyl acetate	NA	U	U	U	U	U	1.9	U	U	U	U	U	U
ethylbenzene	743	1.6	0.79	1.6	U	0.66	0.88	1.4	0.75 F	1.1	0.66	1.2	0.64 F
freon 11	20,440	1.7	2.5	1.3	1.4	2.5	1.8	1.6	1.6	4.6	1.7	1.5	1.4
freon 113	876,000	8.6	0.86 F	U	0.70 F	6.8	1.0 F	U	1.2 F	1.6	0.93 F	U	0.60 F
freon 12	5,840	6.6	2.9	2.2	2.9	11.0	3.0	2.6	3.1	21	2.9	2.6	2.9
freon 22	NA	NA	NA	NA	12	NA	NA	NA	16	NA	NA	NA	6.3
heptane	NA	U	U	1.0	U	0.67	1.3	U	0.38 F	U	U	U	0.36 F
hexane	20,440	U	U	1.9	0.38 F	U	U	U	0.53 F	U	U	U	0.72
isopropyl alcohol	NA	U	21	21	49	U	68	31	41	U	12	21	28
m,p-xylene (sum of isomers)	2,920	5.4	1.9	4.0	0.23 F	2.1	2.4	3.4	1.9 F	3.8	1.7	2.7	1.7 F
methyl ethyl ketone	146,000	2.9	2.7	1.9	5.9	1.7	U	3.9	1.2 F	2.8	2.0	2.2	2.6
methyl isobutyl ketone	NA	2.2	U	U	U	U	U	U	0.44 F	U	U	U	0.83 F
methylene chloride	1,740	U	13	0.46 F	0.49 F	U	0.53	U	0.55 F	U	0.95	U	0.50 F
Naphthalene	NA	U	U	U	U	U	U	U	U	U	U	U	0.51 F
n-Butane	NA	NA	NA	NA	2.4	NA	NA	NA	3.2	NA	NA	NA	1.7
o-xylene	2,920	2.5	0.97	1.1	U	1.1	0.93	0.97	0.79 F	1.6	0.66	0.71	0.70 F
styrene	NA	1.1	1.1	0.56 F	U	0.78	1.0	0.65	0.44 F	0.78	0.69	0.56 F	0.26 F
tert-Butyl alcohol	NA	NA	NA	NA	1.3 F	NA	NA	NA	U	NA	NA	NA	U
tetrachloroethylene (PCE)	139	U	2.7	U	U	1.4	U	7.4	U	0.83 F	U	U	U
tetrahydrofuran	NA	4.8	1.1	U	9.9 F	1.6	4.3	U	U	11	1.8	U	0.81 F
toluene	146,000	5.6	4.1	6.1	0.40 F	3.2	4.5	6.9	1.4	4.4	3.1	2.5	1.2
trichloroethylene (TCE)	409	21	38	U	0.36 F	360	3.8	3.7	3.0	830	10	7.3	13
vinyl chloride	186	U	0.81	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

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

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3) [1]**	**Indoor Air Screening Level (µg/m^3) [1]**	**776-IA**				**776-OA**			
Sample ID			**776IA1CA**	**776IA1DA**	**776IA1EA**	**776IA1FA**	**776OA1DA**	**776OA1EA**	**774776OA1FA**	**774776OA1GA**
Sample Type			**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Outdoor**	**Outdoor**	**Outdoor**	**Outdoor**
Sample Date			**4-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**	**4-May-2011**	**6-Sep-2011**	**21-Oct-2011**	**25-Jan-2012**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
Volatiles (TO-15) in µg/m^3										
1,1,1-trichloroethane	146,000	14600	U	U	U	U	U	U	U	U
1,2,4-trimethylbenzene	175	18	1.2	1.7	0.85	U	U	1.7	0.60 F	U
1,2-dichloroethane	9	31	U	0.53 F	U	U	U	U	U	U
1,3,5-trimethylbenzene	175	18	U	U	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	U	U	0.30 F	U	U	U	U
4-ethyltoluene	NA	NA	U	U	U	U	U	U	U	U
4-isopropyltoluene	NA	NA	NA	U	U	U	U	U	U	U
acetone	NA	NA	54	47	30	18	18	53	6.8	1.9 F
benzene	105	88	0.49	0.36 F	1.4	0.67 F	U	0.39 F	U	0.63
carbon disulfide	20,440	2044	0.41 F	0.82	U	U	0.6	0.35 F	U	U
carbon tetrachloride	55	55	0.51	0.77 F	U	0.57 F	0.51	0.90 F	U	0.51 F
chloroform	36	36	U	U	0.55 F	0.32 F	U	U	U	U
chloromethane	818	263	1.8	1.5	U	1.4 F	U	1.1	0.76	1.2
cis-1,2-dichloroethene	1,022	102	U	U	U	U	U	0.48 F	U	U
cyclohexane	175,200	17520	U	U	U	U	U	U	U	U
ethyl acetate	NA	9344	5.8	3.3	U	U	U	U	U	U
ethylbenzene	743	743	0.71	0.93	1.3	0.47 F	U	U	1.1	U
freon 11	20,440	2044	1.4	1.7	1.3	1.4 F	1.3	1.7	1.3	1.4
freon 113	876,000	87600	U	0.93 F	U	U	U	0.86 F	U	0.56 F
freon 12	5,840	584	3.6	3.1	2.2	3.2 F	U	2.9	2.5	2.8
freon 22	NA	NA	NA	NA	NA	15	NA	NA	NA	U
heptane	NA	NA	3.2	1.3	U	0.43 F	1.2	U	U	U
hexane	20,440	2044	2.3	U	U	U	0.9	U	U	0.42 F
isopropyl alcohol	NA	NA	50	50	35	100	U	U	1.2	U
m,p-xylene (sum of isomers)	2,920	292	1.2 F	2.1	2.9	1.0 F	U	1.1 F	2.7	0.33 F
methyl ethyl ketone	146,000	14600	3.3	4.1	U	0.84 F	U	8.7 F	U	0.42 F
methyl isobutyl ketone	NA	8760	U	U	U	0.83 F	U	U	U	U
methylene chloride	1,740	1740	U	1.3	U	U	U	0.92	0.56	0.50 F
Naphthalene	NA	NA	U	U	U	0.71 F	U	U	U	U
n-Butane	NA	NA	NA	NA	NA	2.4	NA	NA	NA	1.8
o-xylene	2,920	292	0.44 F	0.75	0.88	0.46 F	U	0.44 F	0.97	0.12 F
styrene	NA	2920	1.1	1.0	0.82	0.33 F	U	U	U	U
tert-Butyl alcohol	NA	NA	NA	NA	NA	0.56 F	NA	NA	NA	U
tetrachloroethylene (PCE)	139	102	U	U	U	U	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U	U	1.3	U	U
toluene	146,000	14600	4.4	3.2	3.9	1.3	1	5.8	3.5	0.73 F
trichloroethylene (TCE)	409	41	3.6	1.9	0.98	0.41 F	0.98	2.6	0.60 F	U
vinyl chloride	186	186	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

Table 3-2
Building 785 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3) [1]**	**785VMP-2**				**785VMP-4**				**785VMP-5**		
Sample ID		**785VMP0202AD**	**785VMP0202AE**	**785VMP0202AF**	**785VMP0202AG**	**785VMP0401AA**	**785VMP0401AB**	**785VMP0401AC**	**785VMP0401AD**	**785VMP0501AA**	**785VMP0501AB**	**785VMP0501AC**
Sample Type		**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**
Sample Date		**18-Mar-2011**	**24-Aug-2011**	**24-Oct-2011**	**31-Jan-2012**	**18-Mar-2011**	**24-Aug-2011**	**24-Oct-2011**	**31-Jan-2012**	**25-Aug-2011**	**24-Oct-2011**	**31-Jan-2012**
Sample Depth (ft bgs / ags)		**2.5**	**2.5**	**2.5**	**2.5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Sample Collection Duration (hr)		**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**
Volatiles (TO-15) in µg/m^3												
1,1,1-trichloroethane	146,000	U	U	U	0.57 F	1.7	0.72 F	U	U	4.8	1.8	0.53 F
1,2,4-trimethylbenzene	175	1.5	1.4	U	U	0.95	6.7	1.8	0.45 F	2.2	1.4	U
1,3,5-trimethylbenzene	175	U	U	U	U	U	2.1	0.50 F	U	0.85	U	U
2,2,4-trimethylpentane	NA	U	U	1.2	U	U	1.5	3.9	0.58 F	U	1.4	1.3
4-ethyltoluene	NA	0.65 F	U	U	U	U	2.7	0.85	U	0.50 F	U	U
acetone	NA	10	17	3.2	0.76 F	15	16	U	4.9 F	21	4.3	2.3 F
benzene	105	2.9	0.65	2.2	U	4.9	4.2	8.4	0.64	0.39 F	2.6	0.64
bromodichloromethane	NA	U	U	U	U	2.6	U	U	U	U	U	U
carbon disulfide	20,440	0.82	0.63	U	U	4.8	13	9.2	1.1 F	0.38 F	U	U
carbon tetrachloride	55	U	U	0.70 F	0.49 F	U	U	U	0.51 F	U	U	0.48 F
chlorobenzene	NA	U	U	U	U	U	0.66 F	U	U	U	U	U
chloroform	36	1.5	U	U	U	91	0.79	U	U	2.8	0.74	U
chloromethane	818	1.4	1.1	U	3.5	U	U	U	U	U	U	U
cis-1,2-dichloroethene	1,022	U	U	U	U	2.3	U	U	U	2.1	U	U
cumene	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA	0.41 F
cyclohexane	175,200	1.3	0.94	1.9	U	6.2	9.4	8.0	0.34 FB	U	2.9	1.1 B
ethylbenzene	743	1.5	U	0.75	U	1.1	6.1	4.9	0.58 F	2.3	1.6	1.8
freon 11	20,440	1	1.8	1.5	1.4	0.86	1.7	1.3	1.4	2.2	2.3	1.4
freon 113	876,000	U	0.78 F	U	0.58 F	1.1 F	0.86 F	U	0.58 F	0.86 F	U	U
freon 12	5,840	2.8	3.1	2.6	2.9	2.9	2.8	2.5	2.9	2.9	2.5	2.8
heptane	NA	2.1	U	1.8	U	3.6	5.3	8.2	0.45 FB	U	1.9	0.70 FB
hexane	20,440	6.9	U	6.1	U	8.2	7.9	13	0.91 B	U	U	3.5 B
isopropyl alcohol	NA	U	U	U	U	U	U	0.62	2.3 F	8.2	U	U
methyl ethyl ketone	146,000	3	4.1	U	U	2.3	2.7	U	0.82 F	2	U	0.37 F
methylene chloride	1,740	1.4	U	U	U	0.95	U	U	0.43 F	3.7	U	U
n-Butane	NA	NA	NA	NA	0.64 F	NA	NA	NA	4.6	NA	NA	4.8
o-xylene	2,920	1.3	U	0.71	U	0.84	5.1	2.8	0.46 F	3	1.5	1.7
tetrachloroethylene (PCE)	139	U	U	U	U	U	U	1.0	U	2.2	U	U
tetrahydrofuran	NA	8.2	11	U	4.6 F	U	U	U	U	U	U	0.21 F
toluene	146,000	15	3.3	6.2	0.36 FB	26	23	42	2.2 B	2.1	7.4	1.6 B
trichloroethylene (TCE)	409	U	19	8.9	1.0 F	720	88	33	3.5	610	140	18
vinyl chloride	186	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.

Table 3-2
Building 785 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3) [1]**	**Indoor Air Screening Level (µg/m^3) [1]**	**785-IA**			**785-OA**		
Sample ID			**785IA05**	**785IA06**	**785IA07**	**785OA01**	**785786OA02**	**785786OA03**
Sample Type			**Indoor**	**Indoor**	**Indoor**	**Outdoor**	**Outdoor**	**Outdoor**
Sample Date			**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**	**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**	**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**	**12**	**12**	**12**
Volatiles (TO-15) in µg/m^3								
1,1,1-trichloroethane	146,000	14600	U	U	U	U	U	U
1,2,4-trimethylbenzene	175	18	1.7	1.4	U	1.3	2.6	U
1,3,5-trimethylbenzene	175	18	U	U	U	U	U	U
2,2,4-trimethylpentane	NA	NA	U	0.52 F	0.29 F	U	0.76	0.34 F
4-ethyltoluene	NA	NA	U	U	U	U	0.65 F	U
acetone	NA	NA	35	11	2.6 F	39	12	19
benzene	105	88	U	1.3	0.58 F	0.39 F	1.8	0.56 F
bromodichloromethane	NA	NA	U	U	U	U	U	U
carbon disulfide	20,440	2044	U	U	U	U	U	U
carbon tetrachloride	55	55	U	U	0.53 F	U	U	0.52 F
chlorobenzene	NA	NA	U	U	U	U	U	U
chloroform	36	36	U	4.7	U	U	U	U
chloromethane	818	263	U	U	1.2	U	U	1.2
cis-1,2-dichloroethene	1,022	102	U	U	U	U	U	U
cumene	NA	NA	NA	NA	U	NA	NA	U
cyclohexane	175,200	17520	U	U	0.34 FB	0.77	U	0.63 FB
ethylbenzene	743	743	U	0.75	0.13 F	U	1.3	U
freon 11	20,440	2044	1.7	1.3	1.4	1.7	1.4	1.4
freon 113	876,000	87600	U	U	0.54 F	U	U	0.59 F
freon 12	5,840	584	2.8	2.3	2.8	2.9	2.2	2.8
heptane	NA	NA	U	0.71	0.37 FB	U	1.2	0.55 FB
hexane	20,440	2044	U	2.3	2.0 B	U	3.8	2.2 B
isopropyl alcohol	NA	NA	24	U	U	15	2.2	1.3 F
methyl ethyl ketone	146,000	14600	3.2	U	0.30 F	3.4	U	0.92 F
methylene chloride	1,740	1740	0.85	U	U	1.1	1.3	0.53 F
n-Butane	NA	NA	NA	NA	2.0	NA	NA	1.9
o-xylene	2,920	292	U	0.75	0.11 F	U	1.3	U
tetrachloroethylene (PCE)	139	102	U	21	U	U	U	U
tetrahydrofuran	NA	NA	U	U	U	U	U	U
toluene	146,000	14600	4.2	4.0	1.4 B	2.3	7.2	0.57 FB
trichloroethylene (TCE)	409	41	1.1	U	U	0.82	0.82	U
vinyl chloride	186	186	U	U	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.
B - Analytes detected in the trip blank.

Table 3-2
Building 786 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3)**	**786VMP-1**				**786VMP-2**				**786VMP-3**			
Sample ID		**786VMP0102AA**	**786VMP0102AB**	**786VMP0102AC**	**786VMP0102AD**	**786VMP0202AA**	**786VMP0202AB**	**786VMP0202AC**	**786VMP0202AE**	**786VMP0302AA**	**786VMP0302AB**	**786VMP0302AC**	**786VMP0302AD**
Sample Type		**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**	**VMP**
Sample Date		**18-Jan-2011**	**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**	**18-Jan-2011**	**24-Aug-2011**	**24-Oct-2011**	**7-Feb-2012**	**18-Jan-2011**	**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**
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**	**0.08**	**0.08**	**0.08**	**0**	**0.08**	**0.08**	**0.08**	**0**	**0.08**	**0.08**	**0.08**
Volatiles (TO-15) in µg/m^3													
1,1,1-trichloroethane	146,000	12	U	U	U	15	4.2	3.7	0.78 F	16	U	U	U
1,1-dichloroethane	NA	U	U	U	U	U	U	U	U	1.4	U	U	U
1,2,4-trimethylbenzene	175	7.5	6.9	1.2	U	4.5	7.5	1.6	0.62 F	13	2.4	0.8	0.33 F
1,3,5-trimethylbenzene	175	5.2	1.9	U	U	1.7	3.1	0.55 F	0.26 F	9.9	0.65 F	U	U
2,2,4-trimethylpentane	NA	19	0.95	3.8	1.9	1.8	U	1.3	U	U	U	1.4	0.24 F
4-ethyltoluene	NA	3.2	2.7	0.65 F	U	0.95	2	0.55 F	0.29 F	8.1	0.60 F	U	U
acetone	NA	31	20	U	3.3 F	49	25	U	1.9 F	50	24	4.3	1.2 F
benzene	105	19	3.1	9.1	U	4.6	0.32 F	2.2	U	4.7	0.32 F	4.2	0.25 F
bromodichloromethane	NA	4.0	U	U	U	7.4	3.2	1.7	0.32 F	2.9	U	U	U
carbon disulfide	20,440	15	0.63	U	U	5.3	1.4	0.41 F	U	3.1	0.95	U	U
carbon tetrachloride	55	U	U	0.70 F	0.43 F	U	U	U	0.44 F	U	U	0.64 F	0.48 F
chloroform	36	30	0.84	U	U	620	100	72	12	47	U	U	U
chloromethane	818	U	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-dichloroethene	1,022	9.7	U	U	U	1.4	U	U	U	1.1	U	U	U
cyclohexane	175,200	U	2.5	5.7	2.8	U	U	U	U	U	U	U	U
ethyl acetate	NA	U	U	U	U	U	1.1	U	U	U	U	U	U
ethylbenzene	743	6.6	4.6	3.1	U	1.5	8.8	2.7	1.4	9.8	1.6	1.1	0.40 F
freon 11	20,440	3.0	1.8	2.6	1.3	2.7	1.7	1.4	1.3	3.2	1.7	1.5	1.4
freon 113	876,000	U	0.86 F	0.78 F	0.64 F	3.7	1.1 F	1.1 F	0.55 F	3.4	0.78 F	U	0.54 F
freon 12	5,840	3.8	2.9	U	2.7	3.5	2.8	2.3	2.5	U	2.8	2.6	2.7
freon 22	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA	NA	0.97 F
heptane	NA	25	3.4	8.1	4.1	5.8	U	1.7	U	4.7	1.2	1.9	0.40 F
hexane	20,440	52	4.9	16	10	U	U	U	0.22 F	U	U	6.8	1.5
isopropyl alcohol	NA	U	14	U	1.1 F	U	U	U	1.4 F	U	11	U	U
m,p-xylene (sum of isomers)	2,920	17	19	11	0.32 F	4.8	32	9.9	4.6	16	5.3	3.4	1.4 F
methyl butyl ketone	NA	U	U	U	U	9.2	8.7 F	U	U	7.6	U	U	U
methyl ethyl ketone	146,000	U	2.3	U	0.55 F	15	U	U	U	19	6.3 F	U	U
methyl isobutyl ketone	NA	U	U	U	3.5	6.7	U	U	1.0 F	U	U	U	4.0
methylene chloride	1,740	3.8	U	U	U	1.4	23	2.5	15	U	U	U	0.50 F
n-Butane	NA	NA	NA	NA	U	NA	NA	NA	0.67 F	NA	NA	NA	U
o-xylene	2,920	7.5	4.9	2.0	0.11 F	2.2	6.6	2.1	1.1	6.2 F	1.5	0.84	0.38 F
styrene	NA	U	U	U	U	U	2.2	U	U	4.8	0.95	U	U
tert-Butyl alcohol	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA	NA	0.47 F
tetrachloroethylene (PCE)	139	140	3.7	2.0	2.4	11	0.83 F	2.9	U	85	2.6	1.5	U
tetrahydrofuran	NA	U	U	U	U	16	U	U	U	36	U	U	U
toluene	146,000	35	15	29	0.61 F	6.7	16	11	2.2 B	16	5.2	7.7	0.62 F
trichloroethylene (TCE)	409	4,900	84	49	13	740	260	140	22	2,200	51	23	1.9
vinyl chloride	186	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

Table 3-2
Building 786 SSVM Performance Monitoring
Sub-Slab Vapor, Indoor and Outdoor Air Results

Sample Location	**Sub-slab Vapor Screening Level (µg/m^3)**	**Indoor Air Screening Level (µg/m^3) [1]**	**786-IA**		
Sample ID			**786IA04**	**786IA05**	**786IA06**
Sample Type			**Indoor**	**Indoor**	**Indoor**
Sample Date			**24-Aug-2011**	**24-Oct-2011**	**27-Jan-2012**
Sample Depth (ft bgs / ags)			**5**	**5**	**5**
Sample Collection Duration (hr)			**12**	**12**	**12**
Volatiles (TO-15) in µg/m^3					
1,1,1-trichloroethane	146,000	14600	U	U	U
1,1-dichloroethane	NA	NA	U	U	U
1,2,4-trimethylbenzene	175	18	5.1	1.9	U
1,3,5-trimethylbenzene	175	18	2.6	U	U
2,2,4-trimethylpentane	NA	NA	0.81	U	0.41 F
4-ethyltoluene	NA	NA	1.2	0.60 F	U
acetone	NA	NA	49	12	3.3 F
benzene	105	88	0.91	1.3	0.75
bromodichloromethane	NA	NA	U	U	U
carbon disulfide	20,440	2044	U	U	U
carbon tetrachloride	55	55	U	U	0.53 F
chloroform	36	36	U	U	U
chloromethane	818	263	U	U	1.2
cis-1,2-dichloroethene	1,022	102	0.64	U	U
cyclohexane	175,200	17520	U	1.7	0.28 FB
ethyl acetate	NA	9344	U	U	U
ethylbenzene	743	743	3	1.8	0.67 F
freon 11	20,440	2044	1.7	1.1	1.4
freon 113	876,000	87600	0.78 F	U	0.56 F
freon 12	5,840	584	2.8	2.0	2.8
freon 22	NA	NA	NA	NA	U
heptane	NA	NA	1.7	0.96	0.48 FB
hexane	20,440	2044	U	2.6	1.3 B
isopropyl alcohol	NA	NA	8.2	3.0	U
m,p-xylene (sum of isomers)	2,920	292	11	6.2	1.8 F
methyl butyl ketone	NA	NA	U	U	U
methyl ethyl ketone	146,000	14600	5.9	U	0.76 F
methyl isobutyl ketone	NA	8760	U	U	2.6
methylene chloride	1,740	1740	2.7	U	0.67 F
n-Butane	NA	NA	NA	NA	2.3
o-xylene	2,920	292	2.7	1.7	0.51 F
styrene	NA	2920	1.8	U	U
tert-Butyl alcohol	NA	NA	NA	NA	U
tetrachloroethylene (PCE)	139	102	U	U	U
tetrahydrofuran	NA	NA	U	U	U
toluene	146,000	14600	8.8	9.4	2.4 B
trichloroethylene (TCE)	409	41	2.5	U	U
vinyl chloride	186	186	U	U	U

Notes:
U - Not detected.
F- Analyte detectd at or below quantitation limits
J- The analyte was positvely identified, but the quantitation is an approximation.
NA- Not Available
µg/m^3: microgram per cubic meter.
Exceedance of the indoor or outdoor initial benchmark.

Table 3-3
Buildings 774 and 776
SSVM Performance Monitoring Influent Results

Sample Location	**774776- Influent**					
Sample ID	**774776CA01AA**	**774776CA01AB**	**774776CA01AC[a]**	**774776CA01AD[b]**	**774776CA01AE**	**774776CA01AF**
Sample Type	**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**
Sample Depth (ft bgs / ags)	**na**	**na**	**na**	**na**	**na**	**na**
Sample Collection Duration (hr)	**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 F
1,2,4-trimethylbenzene	9.5	3.1	U	U	1.7	U
1,3,5-trimethylbenzene	4.7	2.2	U	U	0.55 F	U
4-ethyltoluene	6.9	1.0	U	U	U	U
acetone	50	30	300	440	27	16 F
benzene	0.45 F	4.1	0.42 F	0.7	0.97	1.8 F
carbon disulfide	0.73	U	U	U	U	U
carbon tetrachloride	U	U	U	U	0.96	U
chloroform	15	4.3	3.6	5.0	4.6	3.6 F
cis-1,2-dichloroethene	1.80	U	U	U	U	U
ethylbenzene	0.62 F	0.93	U	U	0.79	U
freon 11	50	130	83	59	49	40
freon 113	U	1.9	1.1 F	1.0 F	U	U
freon 12	3.7	16	6.1	6.1	6.4	11 F
freon 22	NA	NA	NA	NA	NA	320
heptane	0.83	12	U	U	0.87	1.9 F
m,p-xylene (sum of isomers)	1.3 F	3.3	U	U	2.4	U
methyl ethyl ketone	14	4.4	300	400	15	4.8 F
methylene chloride	2.2	U	U	U	U	U
n-Butane	NA	NA	NA	NA	NA	2.9 F
o-xylene	0.84	1.8	U	U	1.0	U
tetrachloroethylene (PCE)	3.4	2.4	2.3	12	3.5	U
tetrahydrofuran	120	6.0	600	770	5.2	U
toluene	1.8	2.2	0.96	1.4	2.2	0.83 F
trichloroethylene (TCE)	510	240	670	1,200	650	300
vinyl chloride	U	U	U	U	U	U

Notes:

U - Not detected.

F- Analyte detectd at or below quantitation limits

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

NA- Not Available

µg/m^3: microgram per cubic meter.

a- Influent sampled prior to the install of 774SSVM-3.

b- Influent sampled after the install of 774SSVM-3.

Table 3-3
Buildings 785 and 786
SSVM Performance Monitoring Influent Results

Sample Location	**785786-Influent**			
Sample ID	**785786CA0100AA**	**785786CA01AB**	**785786CA01AC**	**785786CA01AD**
Sample Type	**Influent**	**Influent**	**Influent**	**Influent**
Sample Date	**19-May-2011**	**23-Aug-2011**	**25-Oct-2011**	**24-Jan-2012**
Sample Depth (ft bgs)	**na**	**na**	**na**	**na**
Sample Collection Duration (hr)	**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 F
1,2,4-trimethylbenzene	6.9	1.7	2.8	0.26 F
1,3,5-trimethylbenzene	6.3	1.5	U	U
2,2,4-trimethylpentane	300	31	33	7.9
4-ethyltoluene	U	0.75	U	U
acetone	180	5.1	U	1.2 F
benzene	1.9	0.81	U	U
carbon disulfide	6.9	0.79	U	U
carbon tetrachloride	U	U	U	0.48 F
chloroform	59	8.1	7.8	1.6
cis-1,2-dichloroethene	17	4.5	3.0	0.56 F
cyclohexane	180	28	U	U
ethylbenzene	5.9	2.9	1.7	0.30 F
freon 11	1.4	1.8	1.5	1.4
freon 113	0.78 F	0.78 F	U	0.52 F
freon 12	2.4	2.7	U	2.5
heptane	130	30	26	3.1
hexane	150	13	U	1.5
m,p-xylene (sum of isomers)	16	6.3	6.0	0.98 F
methyl ethyl ketone	20	U	U	0.27 F
methylene chloride	1.4	U	U	0.54 F
n-Butane	NA	NA	NA	2.8
o-xylene	6.5	3.4	1.9	0.30 F
tetrachloroethylene (PCE)	250	52	72	11
tetrahydrofuran	510	U	U	U
toluene	5.6	3.4	3.8	0.44 F
trichloroethylene (TCE)	3500	520	740	140
vinyl chloride	U	U	U	U

Notes:

U - Not detected.

F- Analyte detectd at or below quantitation limits

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

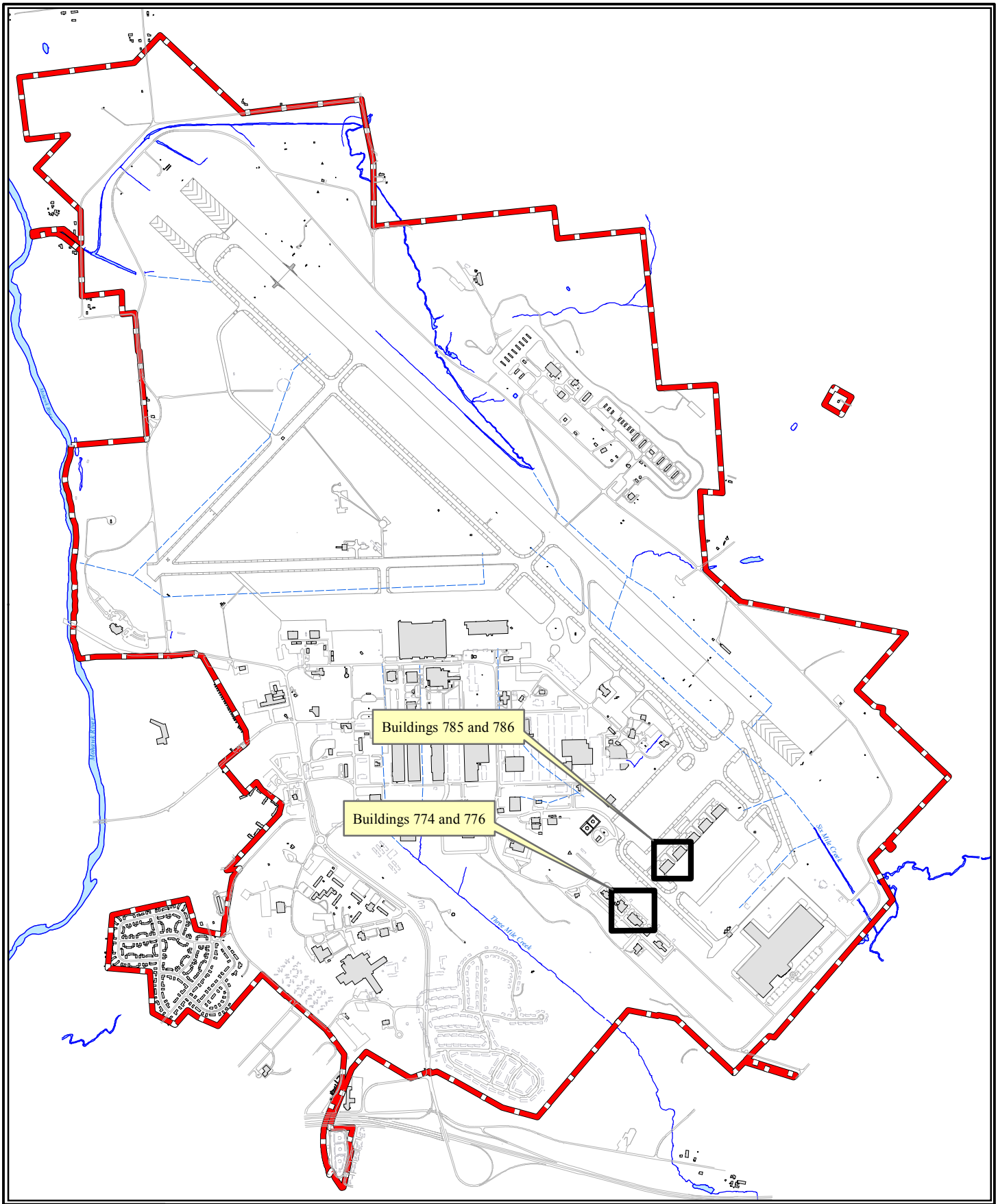
M - Manual Intergrated Compound.

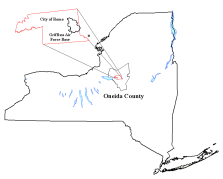
NA- Not Available

µg/m^3: microgram per cubic meter.

Figures

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Base Location

Key to Features

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

Figure 1-1
SSVM Site Locations

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

N

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ROME, NEW YORK

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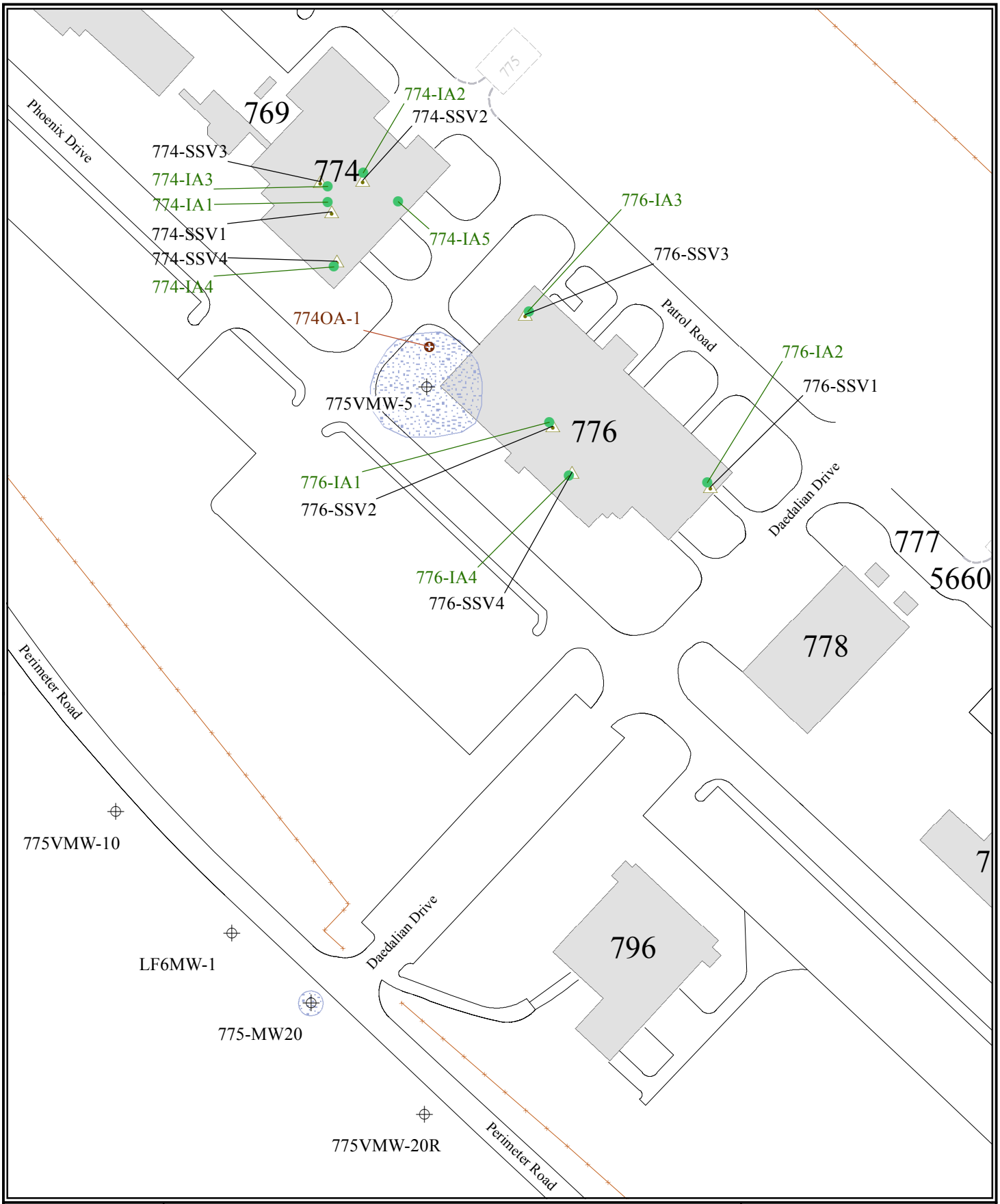
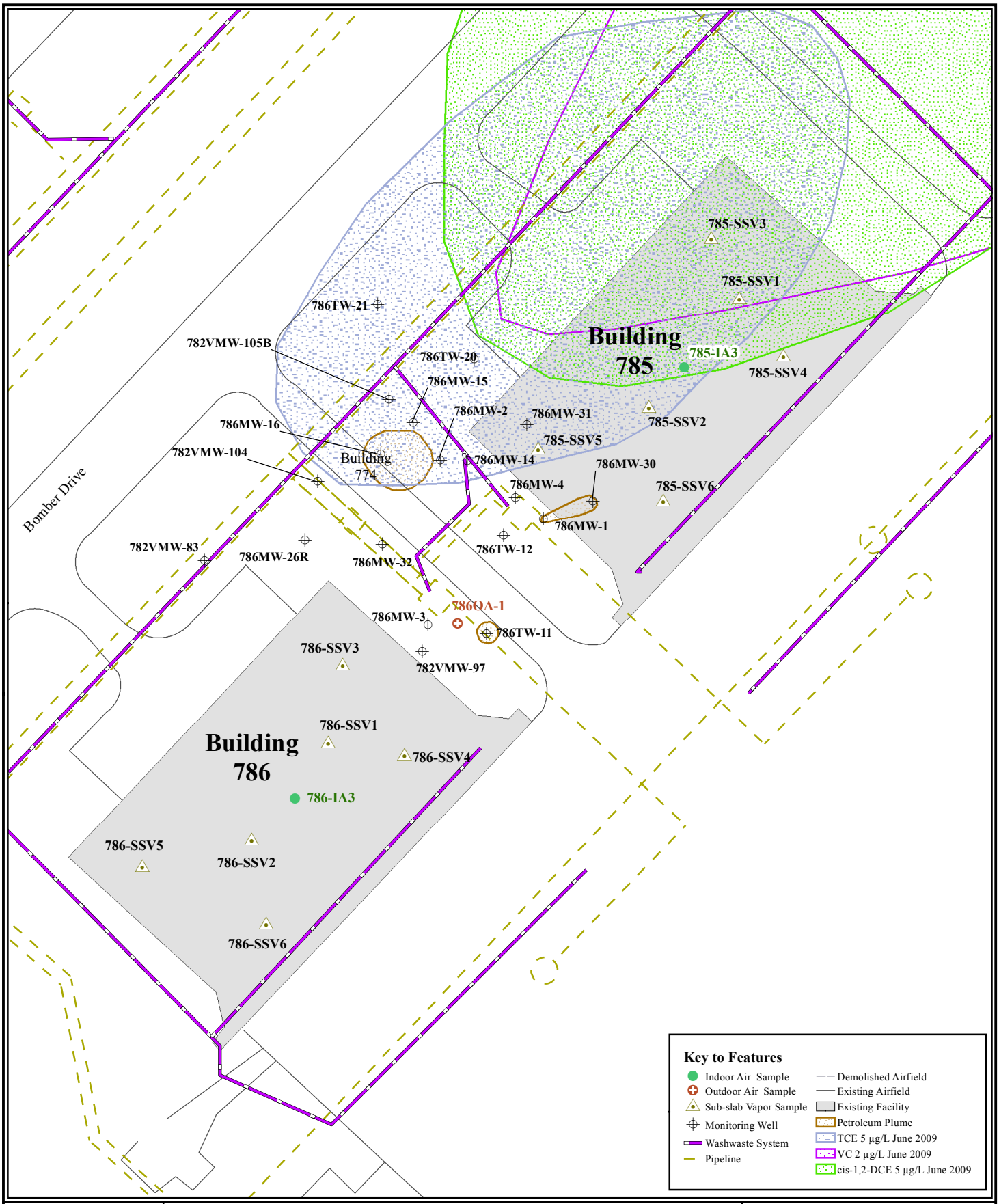


Figure 2-1
Buildings 774 and 776
Site Features

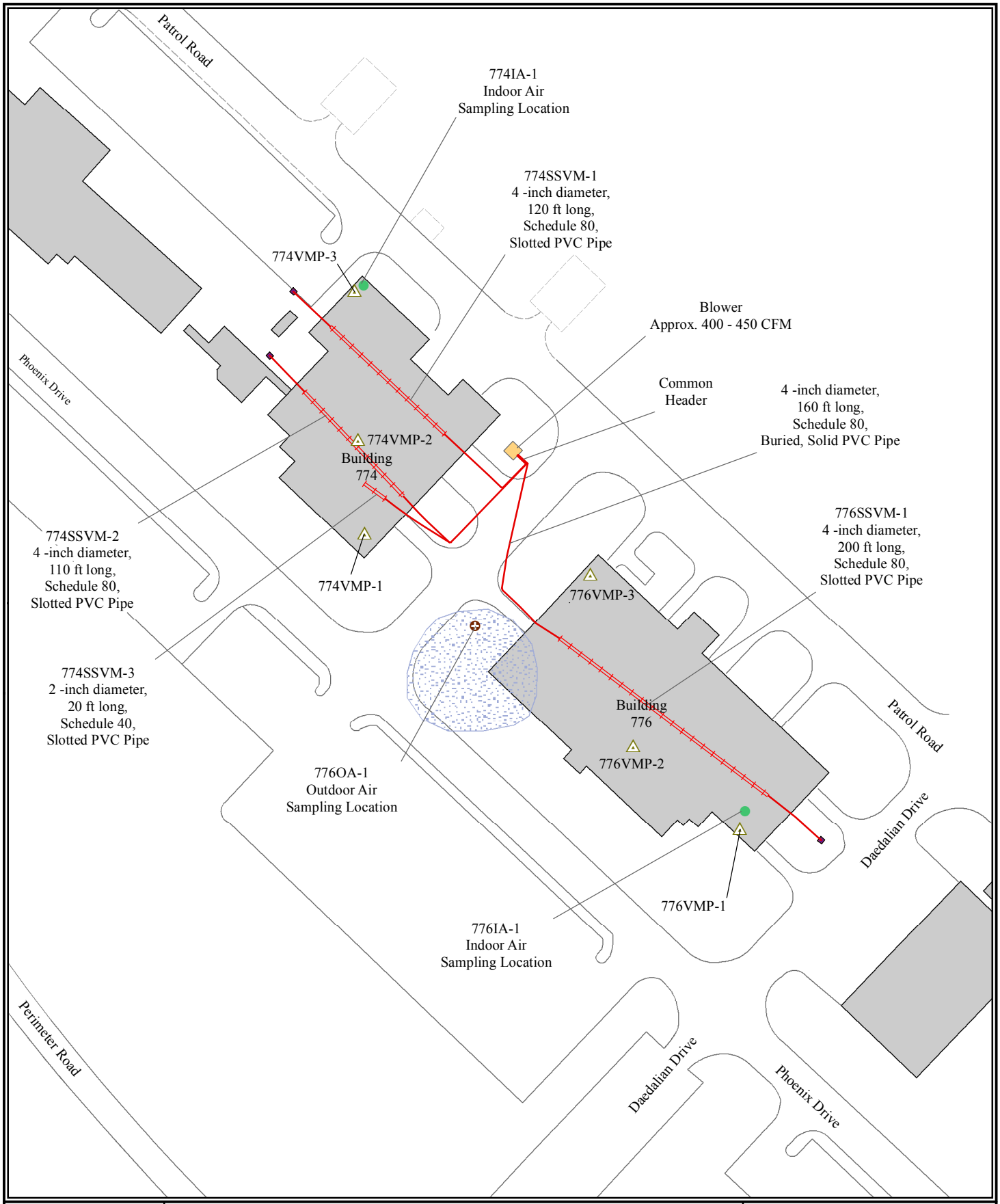
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Site Location

Key to Features

- Indoor
- Outdoor
- SubSlab Vapor
- Horizontal Well Screen
- Horizontal Well Riser
- Demolished Road
- Existing Road
- TCE 50 µg/L October 2010
- SVE System
- Entrance/Exit Pit
- Demolished Facility
- Existing Facility

Figure 3-1
Buildings 774 and 776
SSVM System

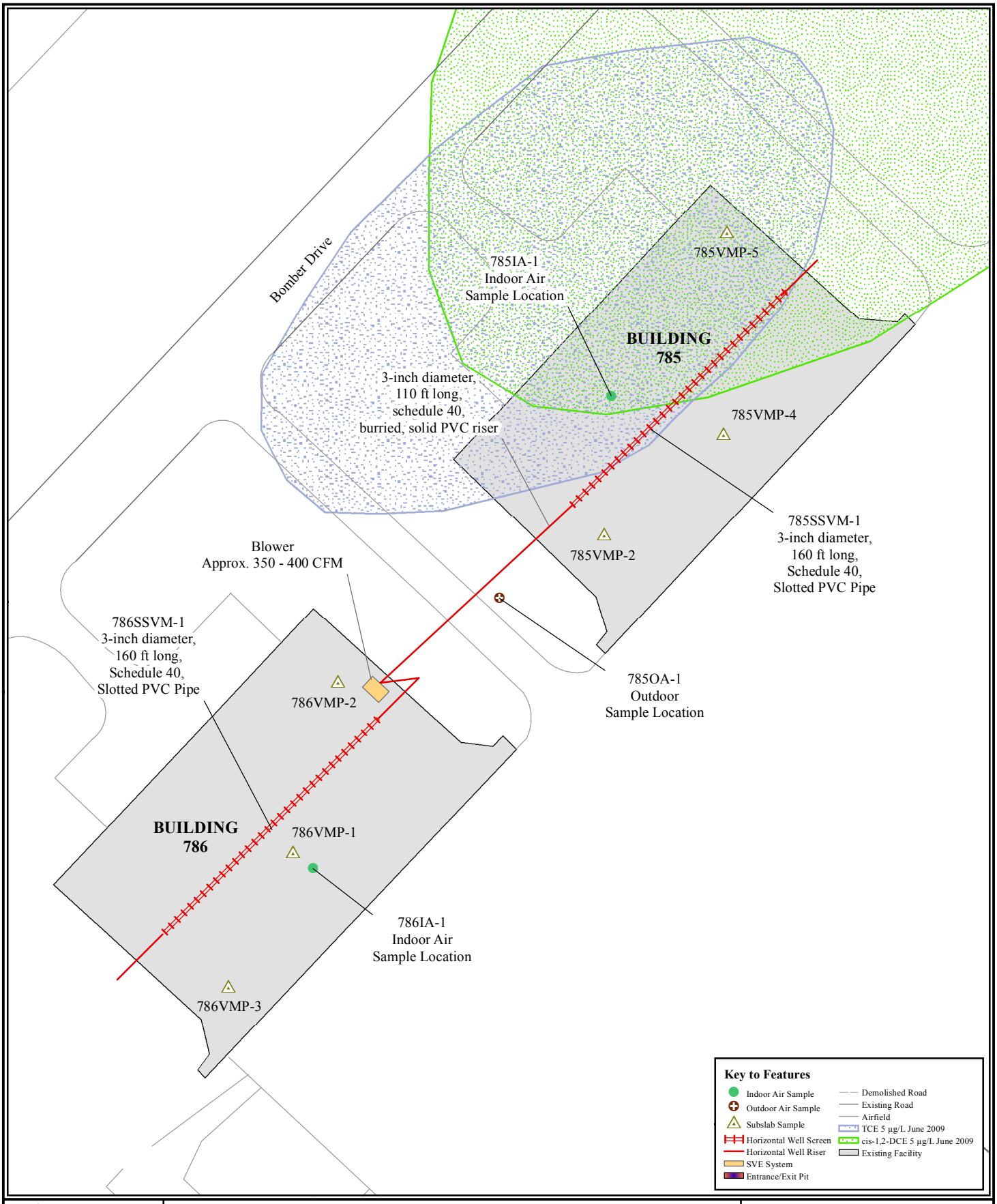
0 50 100 200
Feet

N

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Site Location

Figure 3-2
Buildings 785 and 786
SSVM System

0 25 50 100 150
Feet

N

UNITED STATES AIR FORCE
GRIFFISS AIR FORCE BASE
ROME, NEW YORK

FPM Remediations, Inc

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Figure 3-3- 774SSVM-1, -2 and 776SSVM-1
Long Term Operation Flow Rate
(June 2011 through June 2012)

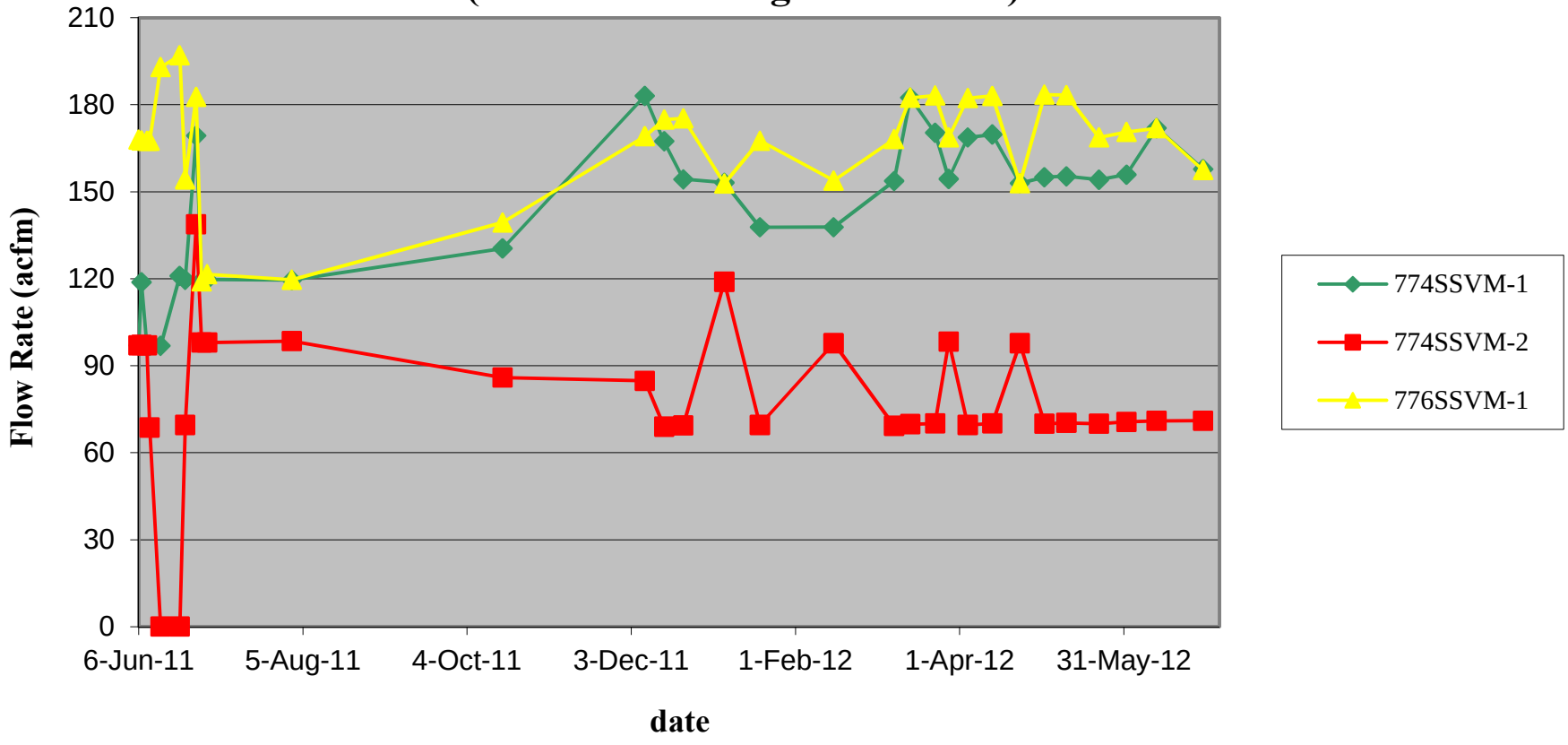


Figure 3-4 - 774SSVM-1, -2 and 776SSVM-1
Long Term Operation Vacuum
(June 2011 through June 2012)

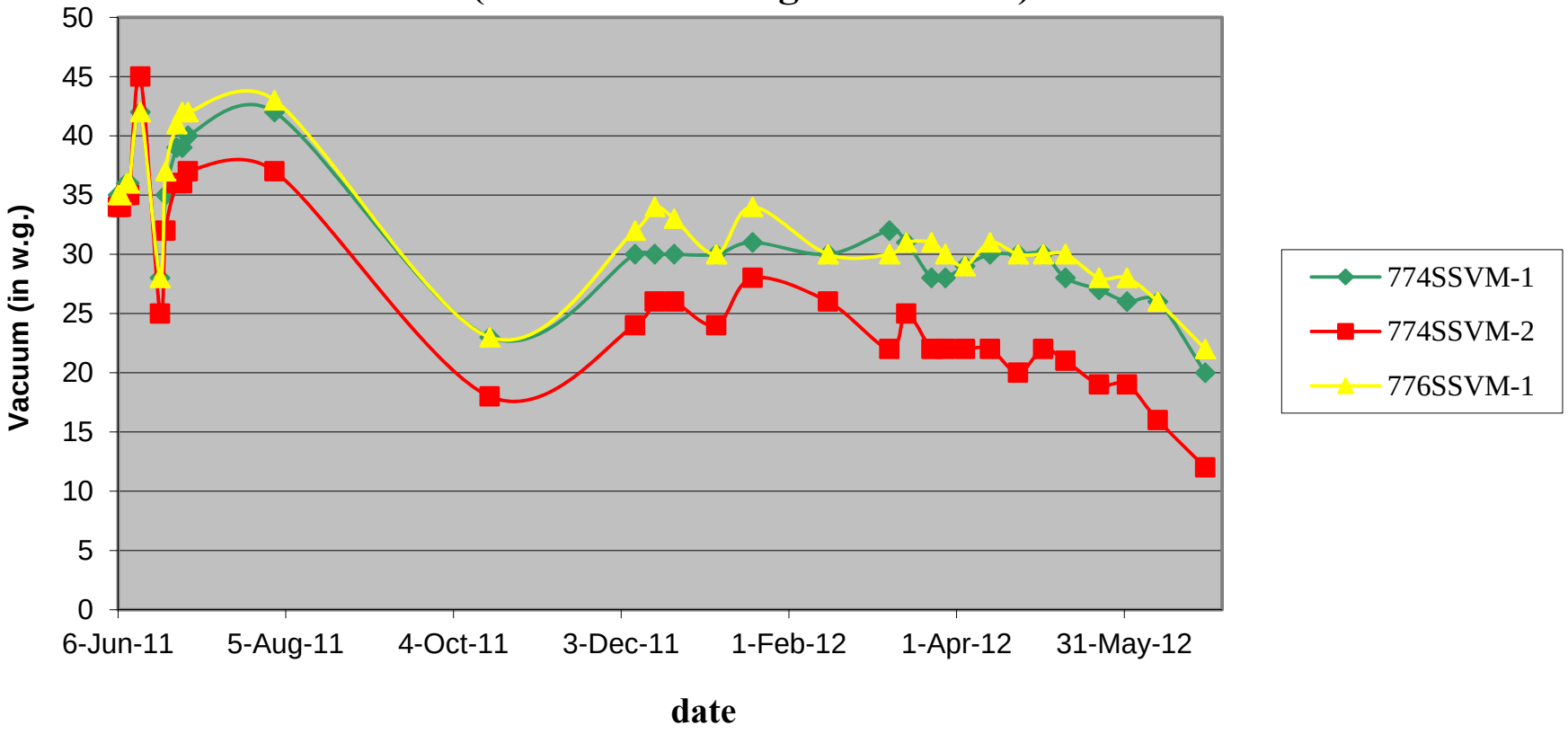


Figure 3-5 - 785SSVM-1 and 786SSVM-1
Long Term Operation Flow Rate
(May 2011 through June 2012)

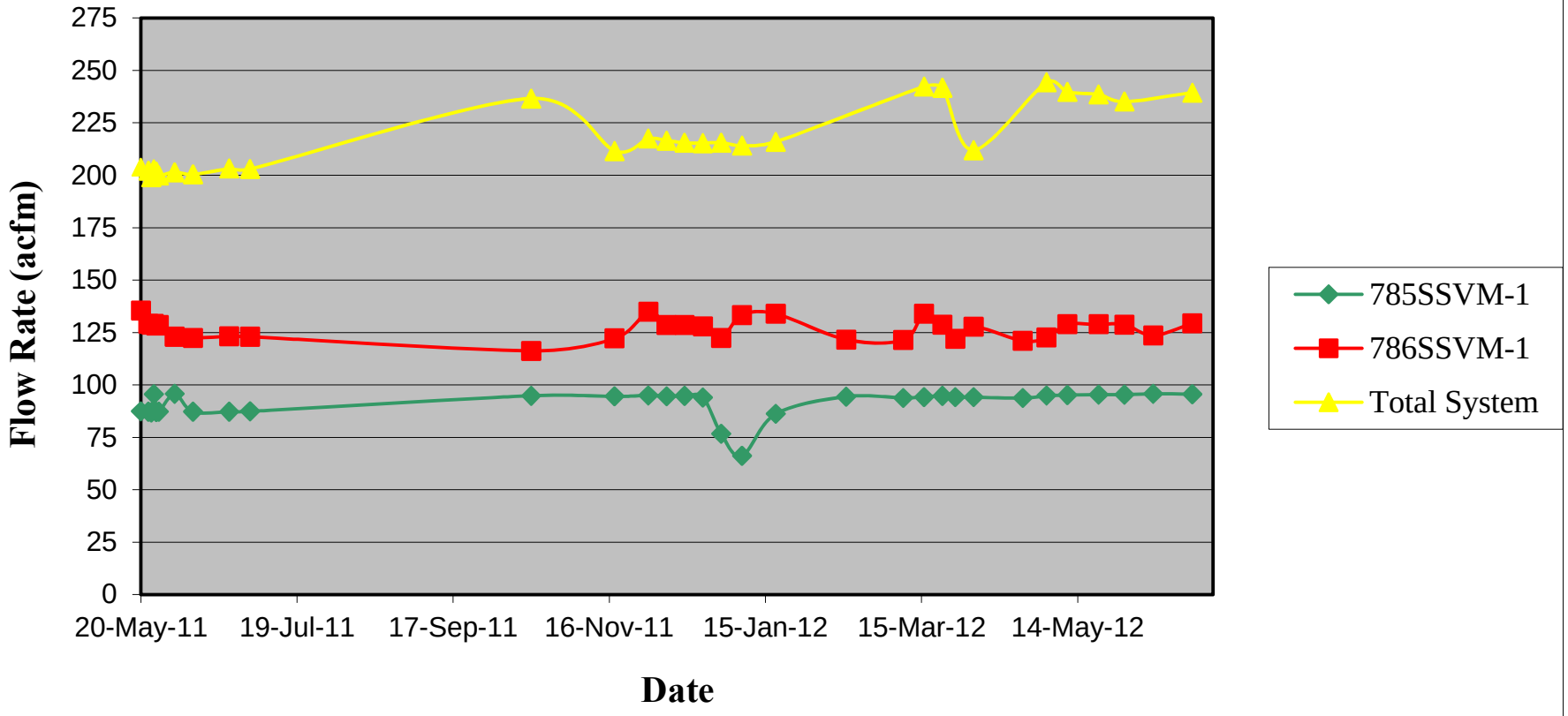


Figure 3-6- 785SSVM-1 and 786SSVM-1
Long Term Operation Vacuum
(May 2011 through June 2012)

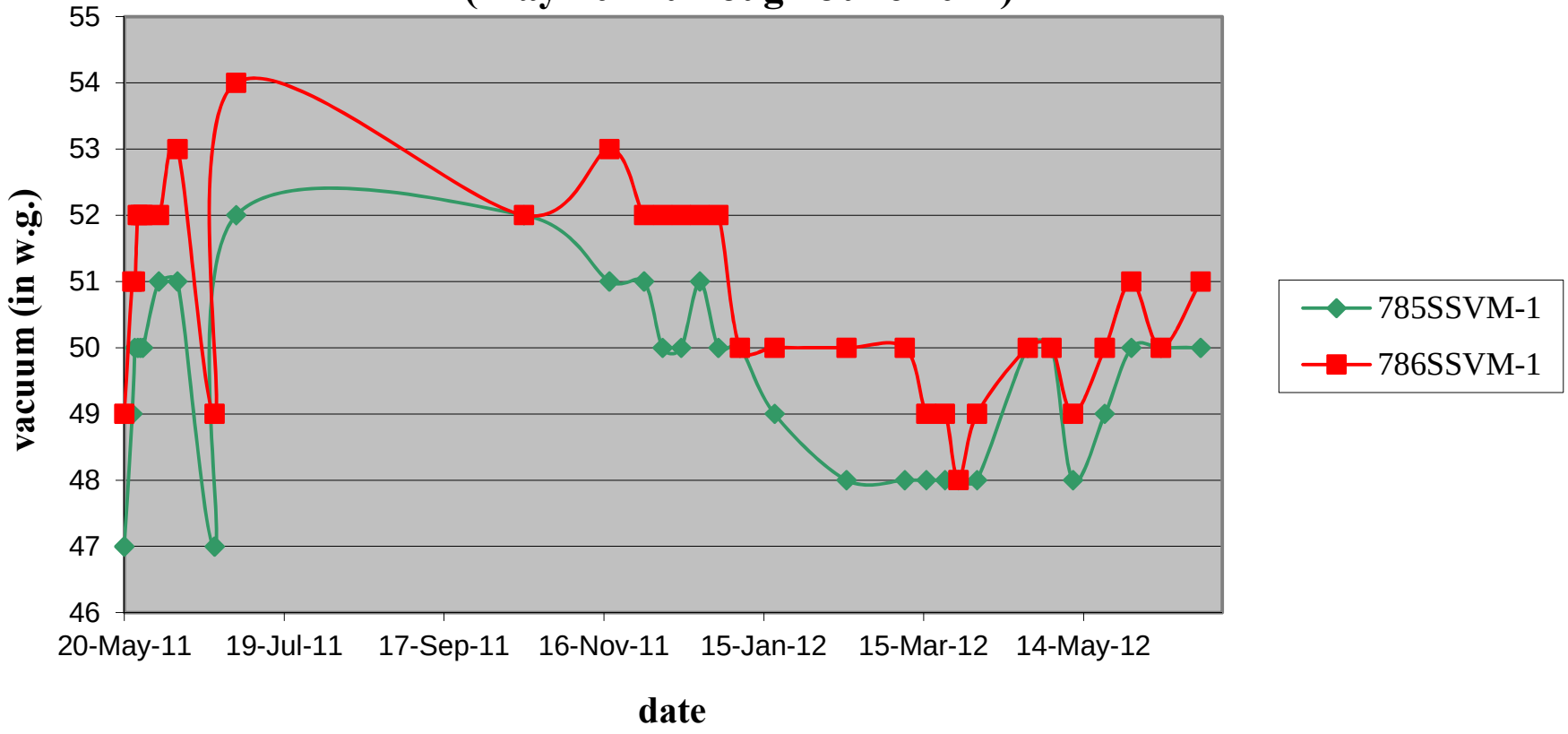


Figure 3-7
Sub-Slab TCE Trend Chart Buildings 774 and 776
(May 2011 through January 2012)

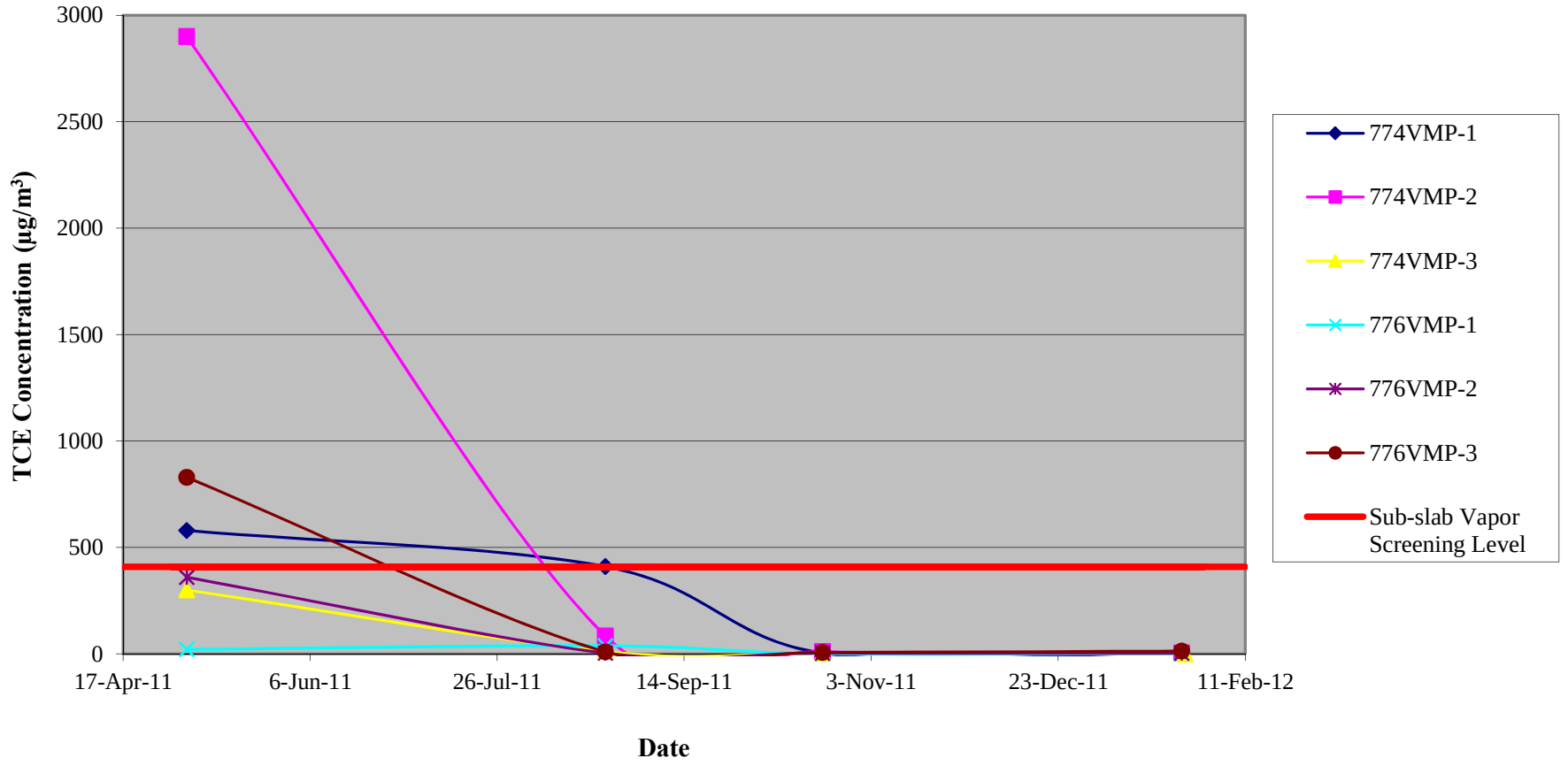


Figure 3-8
Influent TCE Trend Chart Buildings 774 and 776
(June 2011 through January 2012)

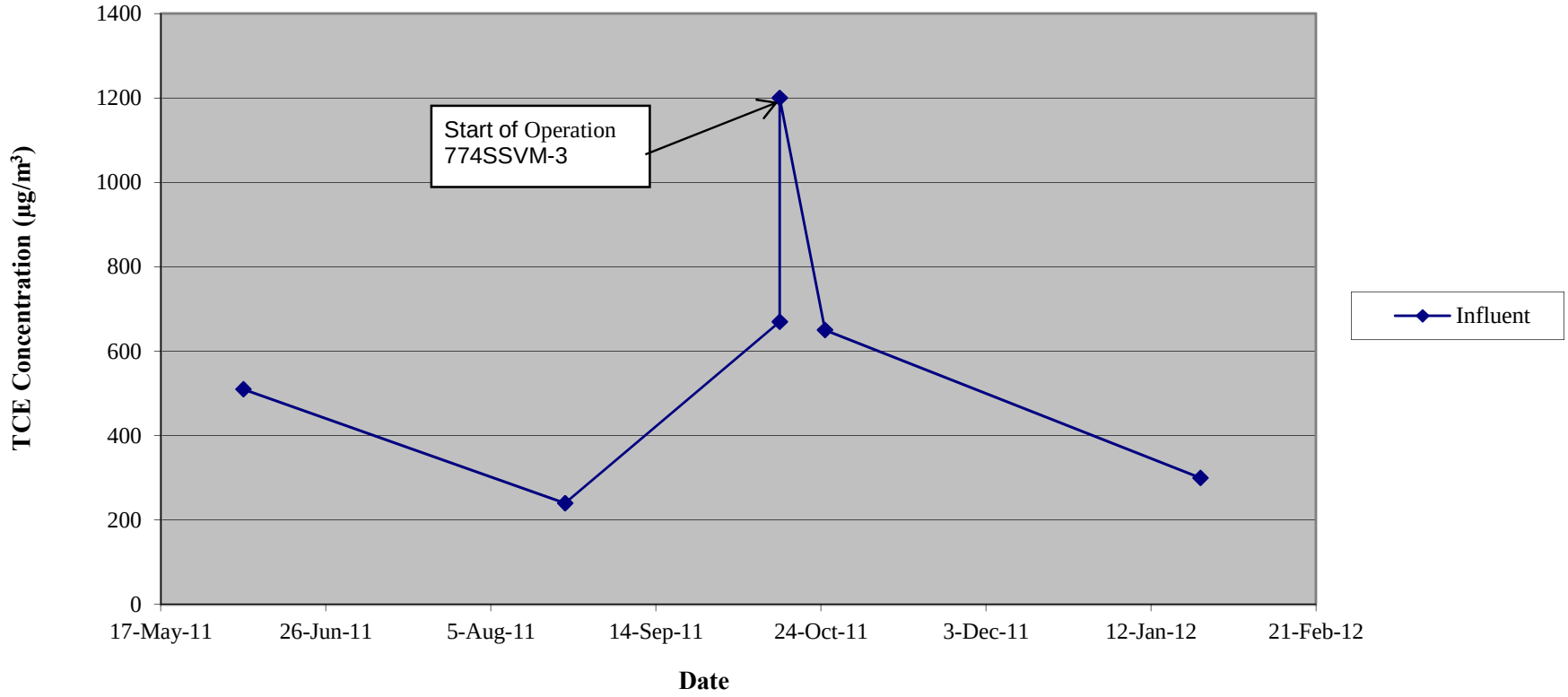


Figure 3-9
Sub-Slab TCE Trend Chart Buildings 785 and 786
(March 2011 through February 2012)

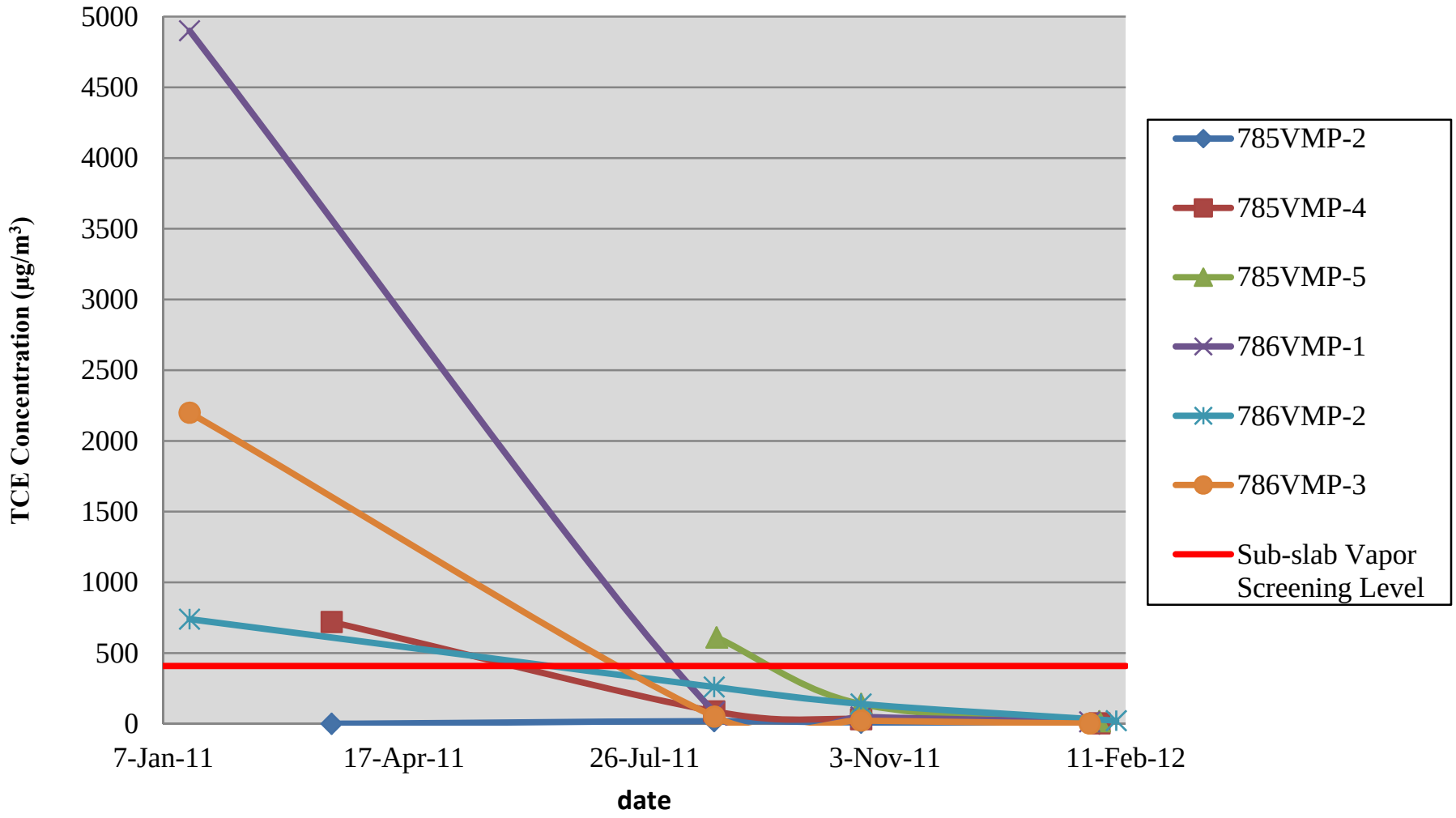
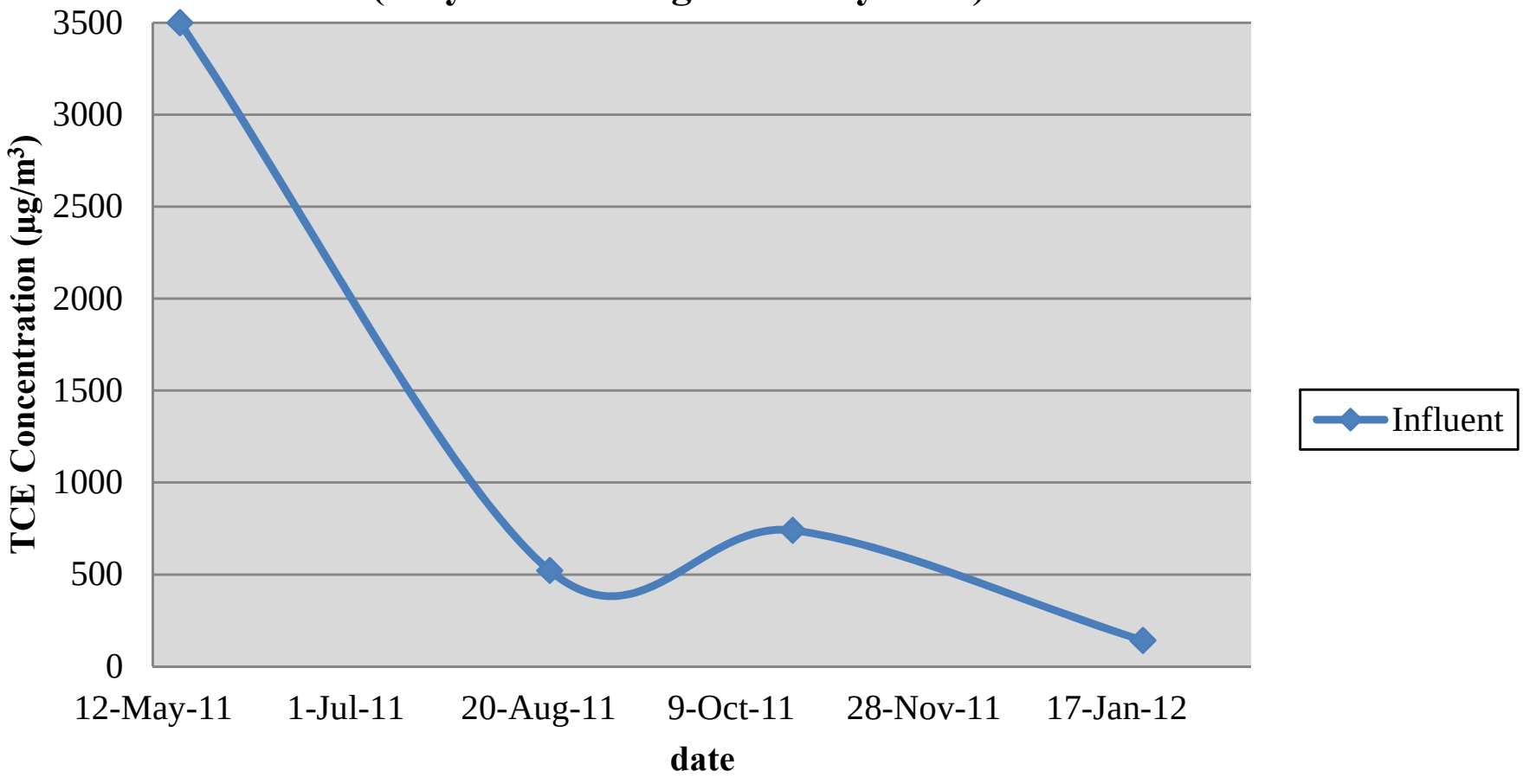


Figure 3-10
Influent TCE Trend Chart Buildings 785 and 786
(May 2011 through January 2012)



Appendices

Appendix A

Field Forms

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	4/4/2012			
conducted by:	KM/MG			
Site ID:	B774/726		Patm (inch hg):	29.72
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
726-1 well 1	29	well 1	0.7	58
774-1 well 2	29	well 2	0.6	58
774-2 well 3	22	well 3	0.1	60
Blower Temp (deg F)	120	After Cooler Temp (deg F)	108	

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

Flow Rate (acfm)

182.26

168.74

69.58

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	4/13/12			
conducted by:	KM			
Site ID:	B774/776		Patm (inch hg):	30.16
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
776 well 1	31	well 1	0.7	58
774-1 well 2	30	well 2	0.6	58
774-2 well 3	22	well 3	0.1	60
Blower Temp (deg F)	121	After Cooler Temp (deg F)	106	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

Flow Rate (Actm)

183.09

169.70

70.10

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	4-23-12			
conducted by:	MG			
Site ID:	774-7765 VF		Patm (inch hg):	29.20

Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)	Flow Rate (acfm)
7765SVM1 well 1	-30	well 1	0.5	60°	152.90
7745SVM2 well 2	-20	well 2	0.7	60°	97.80
7745 VM-1 well 3	-28	well 3	0.5	60°	153.24
Blower Temp (deg F)	120°	After Cooler Temp (deg F)	96°		

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:	5/2/12			
conducted by:	PM			
Site ID:	774/776		Patm (inch hg):	30.07

Vacuum Gauge:	Vacuum (inch w.g.) 7	Magnehelic Gauge:	Differential Pressure (inch w.g.) 3	Temperature (Deg F) (0)
776 well 1	~~30~~	well 1	0.7 ~~0.6~~	60
774-1 well 2	30	well 2	0.5	60
774-2 well 3	~~22~~	well 3	~~1/2~~ 0.1	60

Blower Temp (deg (0) F)	120	After Cooler Temp (deg F)	111	

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

Flow Rate (acfm)

183.40

155.00

70.00

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	5/10/12			
conducted by:	KM			
Site ID:	B774/776		Patm (inch hg):	30.0
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
774-1 well 1	28	well 1	0.5	61
774-2 well 2	21	well 2	0.1	64
776 well 3	30	well 3	0.7	61
Blower Temp (deg F)	120	After Cooler Temp (deg F)	106	
Well_ID, Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

Flow Rate Calc'n:

155.34

70.24

183.38

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	5/22/12			
conducted by:	PM			
Site ID:	B774/776		Patm (inch hg):	29.87

Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
TW well 1	28	well 1	0.6	54
774-1 well 2	27	well 2	0.5	54
774-2 well 3	19	well 3	0.1	60
Blower Temp (deg F)	127	After Cooler Temp (deg F)	122	

Flow Rate (acfm)
168.67
154.16
70.00

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:	6/1/12			
conducted by:	KM			
Site ID:	B774/776		Patm (inch hg):	29.85
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
776 well 1	28	well 1	0.6	66
774-1 well 2	26	well 2	0.5	65
774.2 well 3	19	well 3	0.1	70
Blower Temp (deg F)	122	After Cooler Temp (deg F)	116	

Flow Rate (acfm)
170.58
155.93
70.64

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:	6-12-2012			
conducted by:	MG			
Site ID:	774-776 SVI		Patm (inch hg):	29.95
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
776 SVM-1 well 1	-26	well 1	0.6	70°F
774 SVM-2 well 2	-16	well 2	0.1	70°F
774 SVM-1 well 3	-24	well 3	0.5	65°F
Blower Temp (deg F)	130°F	After Cooler Temp (deg F)	120°F	

Flow Rate (acfm)
171.89
71.00
156.54

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:	6/29/12				
conducted by:	KM / KW				
Site ID:	B774/776		Patm (inch hg):	29.85	
Vacuum Gauge:	~~Vacuum (inch w.g.)~~ 49 (inch w.g.)	Magnehelic Gauge:	~~Differential Pressure (inch w.g.)~~	Temperature (Deg F)	Flow Rate (acfm)
776 SSVM-1 well 1	0.5	well 1	-22	70°F	157.40
774 SSVM-2 well 2	0.1	well 2	-12	67°F	71.02
7745SVM-1 well 3	0.5	well 3	-20	70°F	157.76
Blower Temp (deg F)	140°F	After Cooler Temp (deg F)	138°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:	4/4/2022			
conducted by:	KM/MG			
Site ID:	B785/786		Patm (inch hg):	29.72
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
~~785~~ well 1	48	well 1	0.6	~~48~~ 44
786 well 2	49	well 2	1.1	48
~~787~~ well 3	4.2 in Hg	well 3	3.8	58
Blower Temp (deg F)	136	After Cooler Temp (deg F)	110	

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

Flow Rate (acfm)

94.13

127.82

211.95

4.2 in Hg = 57.14 in w.g.

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	4-23-D			
conducted by:	MG			
Site ID:	785-786 SVI		Paim (inch hg):	29.20
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785SVM-1 well 1	-50	well 1	.6	50°
786SVM-1 well 2	-50	well 2	1	50°
well 3		well 3		
Blower Temp (deg F)	140°	After Cooler Temp (deg F)	112°	

Flow Rate (acfm)
93.74
121.02

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:	5/2/12			
conducted by:	PM			
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)	FlowRate (cafm)
785 well 1	50	well 1	0.6	49	94.88
786 well 2	50	well 2	~~5~~ 1.0	50	122.61
~~TOT~~ well 3	Valve @ 4.6	well 3	4	60	244.27
Blower Temp (deg F)	140	After Cooler Temp (deg F)	112		

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

4.6 in Hg = 62.58 in w.g.

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	5/10/12			
conducted by:	KM			
Site ID:	B785 / 786		Patm (inch hg):	30.0
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785 well 1	48	well 1	0.6	51
786 well 2	49	well 2	1.1	52
TOT well 3	4.2 in Hg	well 3	3.8	62
Blower Temp (deg F)	140	After Cooler Temp (deg F)	112	

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

FlowRate (cfm)
95.18
128.86
239.69

4.2 in Hg = 57.14 in w.g.

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	5/22/12			
conducted by:	KM			
Site ID:	B785/786		Patm (inch hg):	29.87
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785 well 1	49	well 1	0.6	56
786 well 2	50	well 2	1.1	55
total well 3	4.8 in Hg	well 3	3.8	68
Blower Temp (deg F)	149	After Cooler Temp (deg F)	126	
Well_ID. Distance from well axis (ft)	Time	Shallow Vacuum (inch w.g.)	Medium Vacuum (inch w.g.)	Deep Vacuum (inch w.g.)

Flow Rate (acfm)

95.35

128.84

238.53

4.8 in Hg = 65.30 in w.g.

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	6/1/12			
conducted by:	KM			
Site ID:	B785/786		Patm (inch hg):	29.85
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785 well 1	50	well 1	0.6	58
786 well 2	51	well 2	1.1	56
TOT well 3	4.4 in Hg	well 3	3.7	61
Blower Temp (deg F)	150	After Cooler Temp (deg F)	124	

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

Flow Rate (acfm)
95.40
128.79
235.09

4.4 in Hg = 59.86 in w.g.

SSVM Vapor Monitoring Point Vacuum Measurements

Date:	6-12-2012			
conducted by:	MG			
Site ID:	785-786 SVE		Patm (inch hg):	29.95
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785 SSVM-1 well 1	0.6	well 1	-50	60F
786 SSVM-1 well 2	1.0	well 2	-50	60°F
well 3		well 3		
Blower Temp (deg F)	150°F	After Cooler Temp (deg F)	130°F	

Flow Rate (acfm)
95.73
123.59

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:	6/27/12			
conducted by:	KM/KW			
Site ID:	B785/786		Patm (inch hg).	29.78
Vacuum Gauge:	Vacuum (inch w.g.)	Magnehelic Gauge:	Differential Pressure (inch w.g.)	Temperature (Deg F)
785 well 1	50	well 1	0.6	62
786 well 2	51	well 2	1.1	62
TW well 3	3.8 in hg	well 3	3.7	72
Blower Temp (deg F)	150	After Cooler Temp (deg F)	130	

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

Flow Rate (acfm)
95.67
129.40
239.40

3.8 in hg = 51.70 in w.g.

Appendix B

RWPCF Documentation

JOSEPH R. FUSCO, JR.
Mayor

William Baynes
Chief Operator
Matt Coppola
Pretreatment Coordinator

CITY OF ROME
WATER POLLUTION CONTROL FACILITY
7180 E. Dominick St.
Rome, New York 13440-5815
Telephone: (315) 339-7775 Fax: (315) 339-7828
www.romenewyork.com

received
8/7/2012

Ms. Katrina Mattice
Junior Engineer
FPM Group
584 Phoenix Drive
Rome, New York

Re: Permit Close and Billing

Permit No. FPM-001 covered the discharge of wastewater from buildings 774 & 776 through the soil vapor extraction system knockout tank located on Phoenix Drive in Rome, New York. Upon your request the permit is now officially closed. From January 2012 through the end of the March 2012 a total of 458 gallons of wastewater was discharged into the City of Rome sewer system.

The agreed upon rate of 4 cents per gallon will put the total owed to the City of Rome at $18. 32.

Please make check payable to : Rome City Treasurer

To ensure proper record keeping please send check to: City of Rome Water Pollution Control Facility
7180 East Dominick Street
Rome, New York 13440
Attn: Matt Coppola, I.P.P. Coordinator

Please feel free to contact me if you have any questions or comments.

Sincerely,
Matt Coppola
Matt Coppola
IPP Coordinator
City of Rome Water Pollution Control Facility