

**Quarterly Operations Report
First Quarter 2017**

**Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant
Bethpage, New York**

**Contract No. N40085-10-D-9409
Contract Task Order No. 0005**

July 2017

Prepared for:



Naval Facilities Engineering Command Mid-Atlantic
9324 Virginia Avenue
Norfolk, VA 23511

Prepared by:



**KOMAN Government Solutions, LLC
160 East Main Street, Suite 2F
Westborough, Massachusetts 01581
(508) 366-7442**

**Quarterly Operations Report
First Quarter 2017**

**Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant
Bethpage, New York**

**Contract No. N40085-10-D-9409
Contract Task Order No. 0005**

July 2017

Prepared for:

Naval Facilities Engineering Command Mid-Atlantic
9324 Virginia Avenue
Norfolk, VA 23511



A handwritten signature in blue ink that reads "Patrick Schauble".

Patrick Schauble
Program Manager

7/27/17

Date

A handwritten signature in blue ink that reads "Stephane Roy".

Stephane Roy
Project Manager

7/27/17

Date

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1-1
1.1	Site Location.....	1-1
1.2	Background.....	1-1
1.3	Project Overview and Objective.....	1-2
1.4	SVECS Overview.....	1-2
2.0	SVECS OPERATION AND MAINTENANCE	2-1
2.1	Routine Maintenance Activities	2-1
2.2	Non-routine Maintenance / Site Activities	2-1
3.0	SVECS MONITORING	3-1
3.1	Monthly Air Quality Monitoring.....	3-1
3.2	Quarterly Air Quality Monitoring of SVEWs	3-1
3.3	Quarterly Soil Vapor Pressure Monitoring of SVEWs and Off-site SVPMs.....	3-2
3.4	Annual Vapor Quality Monitoring of Off-site SVPMs	3-2
3.5	Soil Vapor Quality Concentration Trends	3-3
4.0	CONCLUSIONS AND RECOMMENDATIONS.....	4-1
5.0	REFERENCES.....	5-1

TABLES

TABLE 1	Monthly Vapor Analytical Results – January 2017
TABLE 2	Monthly Vapor Analytical Results – February 2017
TABLE 3	Monthly Vapor Analytical Results – March 2017
TABLE 4	Quarterly Vapor Analytical Results of SVE Wells – First Quarter 2017
TABLE 5	Quarterly Vapor Analytical Results of SVE Wells through First Quarter 2017
TABLE 6	Quarterly Off-site Soil Vapor Monitoring Results of SVPMs – First Quarter 2017
TABLE 7	Quarterly Off-site Soil Vapor Monitoring Results of SVPMs through First Quarter 2017
TABLE 8	Annual Off-site Soil Vapor Analytical Results of SVPMs – January 2017
TABLE 9	Historical Off-site Soil Vapor Analytical Results of SVPMs through January 2017

FIGURES

FIGURE 1	Site Location Map
FIGURE 2	Site Area and Vicinity
FIGURE 3	Site Plan – Existing SVECS Layout
FIGURE 4	System Layout Plan
FIGURE 5	First Quarter 2017 Vapor Analytical Map – Select VOC Concentrations - SVEWs
FIGURE 6	First Quarter 2017 Vacuum Readings – SVPMs

APPENDICES

APPENDIX A	NYSDEC Air Discharge Limit Documentation
APPENDIX B	Data Validation Reports and Validated Data Summary – SVPMs
APPENDIX C	Vapor Concentration Trend Graphs of Select VOCs – SVEWs
APPENDIX D	Vapor Concentration Trend Graphs of Select VOCs – SVPMs

Acronyms and Abbreviations

bgs	below ground surface
CTO	Contract Task Order
DAR	Division of Air Resources
DCA	dichloroethane
DCE	dichloroethene
DoD	Department of Defense
ELAP	Environmental Laboratory Accreditation Program
FMS	Flow Monitoring Station
GOCO	Government Owned Contractor Operated
i.w.	inches of water column
KGS	KOMAN Government Solutions, LLC
NAVFAC	Naval Facilities Engineering Command Mid-Atlantic
Navy	U.S. Department of the Navy
NELAC	National Environmental Accreditation Conference
NG	Northrop Grumman
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	Operation and Maintenance
PAL	project action level
PCB	polychlorinated biphenyls
PCE	tetrachloroethene
QA/QC	quality assurance / quality control
RPD	relative percent difference
scfm	standard cubic feet per minute
SVECS	soil vapor extraction containment system
SVEW	soil vapor extraction well
SVOC	semi-volatile organic compound
SVPM	soil vapor pressure monitor
TCA	trichloroethane
TCE	trichloroethene
TCL	target compound list

TtEC	Tetra Tech EC, Inc.
TtNUS	Tetra Tech NUS, Inc.
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
VC	vinyl chloride
VGAC	vapor-phase granular activated carbon
VOC	volatile organic compound

1.0 INTRODUCTION

KOMAN Government Solutions, LLC (KGS) has prepared this Quarterly Operations Report for the First Quarter 2017 for the Soil Vapor Extraction Containment System (SVECS) at Site 1, Former Drum Marshalling Area, at the Naval Weapons Industrial Reserve Plant (NWIRP) in Bethpage, New York. This report has been prepared for the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic, under Contract No. N40085-10-D-9409, Contract Task Order (CTO) No. 0005. This First Quarter 2017 Operations Report details activities that occurred from January 2017 to March 2017. Data was collected and operational activities were performed by KGS in accordance with the following documents:

- *Final Operation & Maintenance Plan for Soil Vapor Extraction Containment System Site 1, Former Drum Marshalling Yard at Naval Weapons Industrial Reserve Plant Bethpage, New York* prepared by Tetra Tech EC, Inc. (TtEC) in 2010, hereafter referred to as the “O&M Manual.”
- *Final Supplemental Offsite Soil Vapor Intrusion Monitoring Plan for the Soil Vapor Extraction Containment System, Site 1, Former Drum Marshalling Yard at Naval Weapons Industrial Reserve Plant, Bethpage, New York* prepared by Tetra Tech NUS, Inc. (TtNUS) in 2012.

1.1 Site Location

NWIRP Bethpage is located in east central Nassau County, Long Island, New York, approximately 30 miles east of New York City. In the late 1990s, the Navy's property totaled approximately 109.5 acres and was formerly a Government Owned Contractor-Operated (GOCO) facility that was operated by Northrop Grumman (NG) until September 1998. NWIRP Bethpage was bordered on the north, west, and south by property owned, or formerly owned, by NG that covered approximately 550 acres, and on the east by a residential neighborhood. The Navy currently retains approximately nine acres of the former NWIRP, including Site 1, which lies within the fenced area of NWIRP Bethpage and is located east of Plant No. 3, west of 11th Street, and north of Plant 17 South (**Figures 1 and 2**).

1.2 Background

NWIRP Bethpage was established in 1943. Since inception, the primary mission of the facility has been the research, prototyping, testing, design engineering, fabrication, and primary assembly of military aircraft. Historical operations that resulted in hazardous material generation at the facility included metal finishing processes, maintenance operations, painting of aircraft and components, and other activities that involve aircraft manufacturing. Wastes generated by plant operations were disposed of directly into drainage sumps, dry wells, and/or on the ground surface, resulting in the disposal of a number of hazardous wastes, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and inorganic analytes (chromium and cadmium) at the site. Some of these contaminants have migrated from the source area to surrounding areas, including the soils at these sites and the groundwater beneath and downgradient of the NWIRP Bethpage property. NWIRP Bethpage is currently listed by the New York State Department of Environmental Conservation (NYSDEC) as an “inactive hazardous waste site” (#1-30-003B).

Soils at Site 1 consist mainly of unconsolidated sediments that overlie crystalline bedrock. A clay unit is present near the groundwater table (50 feet below ground surface [bgs]) at the southeast corner of the site. This clay unit is suspected to be a source of chlorinated solvents that are migrating into the overlying soil gas and the source of off-site VOCs in soil vapor (TtEC 2010).

Chlorinated solvents including trichloroethene (TCE), tetrachloroethene (PCE), and 1,1,1-trichloroethane (TCA) have been identified as the VOCs of interest in soil gas at the site. Concentrations greater than 1,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of soil vapor have been directly associated with Site 1 activities and historical environmental data, and based on preliminary screening, exceed guidelines established by the New York State Department of Health (NYSDOH) for sub-slab soil vapor concentrations at the time. Of these compounds, TCE is the primary VOC of concern. Mitigation of TCE contamination in accordance with NYSDOH guidance is expected to remediate other VOCs associated with the site. PCBs, cadmium, and chromium have also been identified in site soils at concentrations requiring remediation. The majority of these chemicals has been detected in the central portion of Site 1 and will be addressed via a separate remediation (TtEC 2010).

Prior to implementation of the SVECS, the mean concentrations of VOCs in soil gas samples collected along the eastern fence-line were 41,128 $\mu\text{g}/\text{m}^3$ of TCE, 381 $\mu\text{g}/\text{m}^3$ of PCE, and 20,634 $\mu\text{g}/\text{m}^3$ of 1,1,1-TCA. The maximum concentrations of VOCs in the soil gas samples were 180,000 $\mu\text{g}/\text{m}^3$ of TCE, 1,200 $\mu\text{g}/\text{m}^3$ of PCE, and 90,000 $\mu\text{g}/\text{m}^3$ of 1,1,1-TCA (TtEC 2010).

1.3 Project Overview and Objective

The remedial objective for this project is to use an on-site soil vapor extraction system to prevent further off-site migration of VOC-contaminated soil vapor and to the extent practical, capture contaminated soil vapor with a TCE concentration greater than 250 $\mu\text{g}/\text{m}^3$. A secondary objective of this project is to address soil vapor with a TCE concentration greater than 5 $\mu\text{g}/\text{m}^3$. The SVECS is an interim action intended to address migration of VOCs in contaminated soil vapors. It is expected to operate continuously 24 hours/day, seven days/week, with the exception of maintenance and adjustment periods, until the remedial objectives are met (TtEC 2010).

1.4 SVECS Overview

The SVECS consists of soil vapor extraction, soil vapor monitoring, and soil vapor treatment. Twelve SVE wells (SVEWs) are located along the eastern boundary of Site 1 in six clusters, each consisting of one intermediate well and one deep well. Intermediate wells SVE-101I, SVE-102I, SVE-103I, SVE-104I, SVE-105I, and SVE-106I have a screened interval between 25 and 35 feet bgs. Deep wells SVE-101D, SVE-102D, SVE-103D, SVE-104D, SVE-105D, and SVE-106D have a screened interval between 40 and 60 feet bgs. The groundwater table fluctuates between approximately 50 and 55 feet bgs. Each SVEW is operated at a flow rate such that the combined total flow rate is approximately 300-400 standard cubic feet per minute (scfm) of soil vapor. Each intermediate depth SVEW requires an approximate vacuum of four inches of water column (i.w.) and each deep SVEW requires an approximate vacuum of 10 to 20 i.w. in order to extract the targeted flow rates. These twelve SVEWs have been piped below the ground to the Flow Monitoring Station (FMS), where flow, vacuum, and vapor quality are monitored. Within the FMS,

the discharges from the individual SVEWs have been equipped with a 2-inch flow control butterfly valve, a vacuum gauge, and a sampling port. The sampling port is utilized to measure the flow rate from an individual well using a portable velocity meter and to collect vapor samples. All the SVE lines collect into a single manifold within the FMS and from this location a single underground pipeline has been routed approximately 1,400 linear feet to the Treatment Building (Building 03-35). Five additional SVEWs (SV-107D, SV-108D, SV-109D, SV-110D, and SV-111D) were installed in October 2011 to address potential VOCs under Plant No. 3 and the South Warehouse. A site plan depicting well locations is included as **Figure 3**.

The SVECS is housed within the Treatment Building, an existing and unoccupied building also known as Building 03-35. The treatment system consists of a moisture separator, two SVE blowers, and a 5,000-pound vapor-phase granular activated carbon (VGAC) unit for removal of chlorinated VOCs from the off-gas. Soil vapor that enters the Treatment Building first passes through the moisture separator tank where any condensate is separated. To date, no condensate has formed in this tank. The vapor is then passed through an air filter and SVE blower and then treated in the VGAC unit. The treated vapor is discharged from the VGAC via an exhaust stack. The SVECS has a control panel comprised of mechanical interlocks and relays for local operation. A System Layout Plan is presented in **Figure 4**, which also illustrates the design flow rates through the soil vapor extraction and treatment process.

The off-gas from the SVECS is monitored for chlorinated VOCs as identified in the NYSDEC Division of Air Resources (DAR) permit equivalent effluent limitations and updated approval documentation (**Appendix A**) and monitoring requirements (TtEC 2010). Samples are submitted to a National Environmental Laboratory Accreditation Conference (NELAC)-accredited, Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)-certified laboratory, Air Toxics, Inc. located in Folsom, CA, for analysis of VOCs by modified method TO-15. Prior to January 2014, samples were analyzed for target compound list (TCL) VOCs. As of January 2014, upon approval by NYSDEC and NYSDOH, samples are analyzed for site-specific VOCs. The site-specific VOCs are: 1,1,1-TCA, 1,1-dichloroethane (DCA), 1,1-dichloroethene (DCE), 1,2-DCA, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, and vinyl chloride (VC).

A total of 18 soil vapor pressure monitor (SVPM) / soil gas monitoring points have been installed in the neighborhood east of Site 1 at NWIRP Bethpage (**Figure 3**). These off-site monitoring points consist of eight previously existing SVPMs as well as 10 SVPMs installed in September 2012. Pressure readings from the SVPMs are collected quarterly and used to evaluate the SVECS vacuum field. In addition, analytical results of vapor samples collected annually from these locations and the pressure readings are used to further evaluate the SVECS operation and the potential for vapor intrusion.

2.0 SVECS OPERATION AND MAINTENANCE

While designed to run autonomously, the SVECS requires regular visits by an operator to record and adjust operational parameters and to perform scheduled maintenance. The SVECS is equipped with telemetry that will alert an on-call operator in the event of a plant shutdown.

2.1 Routine Maintenance Activities

Routine maintenance activities at the SVECS were performed during the operator's weekly visits during this reporting period. These activities include general site inspections (of the grounds, buildings, doors and locks), collection of operational data (vapor flowrates, pressures, vacuums, temperature and photoionization detector readings), adjustment of system valves, collection of vapor samples (on a monthly and quarterly basis), collection/disposal of condensate if needed, cleaning of filters, switching of lead/lag blower assignments, and preventive maintenance of system equipment.

2.2 Non-routine Maintenance / Site Activities

The following non-routine activities / repair activities occurred at the SVECS during this quarterly reporting period:

On 28 February, the Site 1 building alarm system was activated. It was later determined that a contractor had entered the building without deactivating the safety alarm.

3.0 SVECS MONITORING

Several process vapor samples are collected on a monthly basis to monitor the SVECS operation. These samples consist of an influent sample (as well as a duplicate sample), located immediately prior to the VGAC unit, and an effluent sample, located after the VGAC unit and before the exhaust stack. Vapor samples are also collected from the 12 original SVEWs on a quarterly basis to monitor the capture of the contaminated soil vapor by the SVEWs. In addition, quarterly pressure measurements are collected from the SVEWs and SVPs to monitor the SVECS vacuum field, and soil gas sampling for SVPs is conducted annually (generally in the winter time-frame) to evaluate the effectiveness of the SVECS. The first annual soil gas sampling event was conducted in the winter 2012-2013. The fifth annual sampling event was conducted in the winter 2016-2017; samples were collected from the 18 SVPs in January 2017, as discussed in Section 3.4 below.

3.1 Monthly Air Quality Monitoring

Analysis of influent and effluent vapor sample locations is performed to evaluate VOC mass removal and the effectiveness of the VGAC adsorption unit. Time-integrated vapor samples are collected using 6-liter summa canisters with 30-minute flow regulators.

Treated off-gas discharged at the exhaust stack is subject to emissions limitations. Initially, discharge goals were derived from calculations submitted by the Navy and approved by the NYSDEC DAR in February 2010. In September 2011, the Navy submitted an evaluation proposing revised discharge goals (TtNUS 2011), which NYSDEC approved in October 2011. A copy of this documentation is included as **Appendix A**.

A summary of monthly vapor sampling results collected in January, February, and March (First Quarter) is presented in **Tables 1, 2, and 3**, respectively. Emission rate calculations for both the influent stream (prior to VGAC treatment) and effluent stream (following VGAC treatment) and estimated monthly mass recoveries are also presented. Emission rates of the influent stream as well as mass recovery are calculated to monitor progress and determine when influent concentrations have reached levels at which vapor treatment via carbon adsorption is no longer required. The data presented in **Tables 1, 2, and 3** demonstrate that all constituents were within the effluent emission rate guidelines (**Appendix A**). Raw analytical data is provided under a separate cover.

3.2 Quarterly Air Quality Monitoring of SVEWs

Time-integrated vapor samples are collected quarterly using 6-liter summa canisters with 30-minute flow regulators at six intermediate and six deep SVE wells. The samples are collected for the purpose of tracking and documenting the performance of the SVECS (TtEC 2010).

Quarterly vapor samples were collected on 17 January from the 12 SVEWs. A summary of detected compounds is included as **Table 4**. Analytical results of select VOCs (1,1,1-TCA, PCE, and TCE) detected at the 12 SVEWs during the First Quarter monitoring event are presented graphically as

Figure 5. Raw analytical data is provided under a separate cover. Historical analytical results of quarterly vapor samples collected from December 2009 through the First Quarter 2017 are presented in **Table 5.**

3.3 Quarterly Soil Vapor Pressure Monitoring of SVEWs and Off-site SVPMS

Vacuum readings are collected quarterly from the 12 SVEWs and 18 SVPMS in order to monitor the SVECS vacuum field. Vacuum readings from the 18 SVPMS were collected both before and after the collection of soil gas samples from these locations, on 16 January and 17 January, respectively. Results of the First Quarter vapor monitoring are presented in **Table 6.**

Vacuum readings for the individual SVEWs provide an indication that a negative pressure is being established along the fence line. During the First Quarter, the recorded measurements from the SVEWs were (-) 2.6 i.w.to (-) 19.5 i.w.

As indicated in **Table 6,** vacuum measurements of the SVPMS ranged from (-) 0.01 to (-) 0.12 i.w. during the First Quarter monitoring event. These measurements indicate that a vacuum field continues to be maintained in the residential neighborhood adjacent to Site 1. Vacuum readings from the 18 SVPMS are presented graphically as **Figure 6.**

Historical results of quarterly vapor monitoring from Third Quarter 2012 through First Quarter 2017 are presented in **Table 7.**

3.4 Annual Vapor Quality Monitoring of Off-site SVPMS

Time-integrated vapor samples are collected annually using 6-liter summa canisters with 30-minute flow regulators at 18 SVPMS locations.

3.4.1 Vapor Quality Results

Annual vapor samples were collected on 16 January from the 18 SVPMS locations. Validated analytical results of samples collected in January 2017 are summarized in **Table 8.** As indicated, 1,1,1-TCA was not detected at any of the 18 locations. PCE was detected at twelve of the 18 locations, with concentrations ranging from 0.40 J $\mu\text{g}/\text{m}^3$ at SVPMS-2007D to 7.3 $\mu\text{g}/\text{m}^3$ at SVPMS-2002D. TCE was detected at seven of the 18 locations, with concentrations ranging from 0.87 J $\mu\text{g}/\text{m}^3$ at SVPMS-2001I to 59 $\mu\text{g}/\text{m}^3$ at SVPMS-2006D. All detected concentrations were well below the project action levels (PALs) established for this system of 1,000 $\mu\text{g}/\text{m}^3$ for 1,1,1-TCA, 1,000 $\mu\text{g}/\text{m}^3$ for PCE, and 250 $\mu\text{g}/\text{m}^3$ for TCE.

Data validation reports and a validated analytical data summary are presented in **Appendix B.** Raw analytical data is provided under separate cover. Historical vapor quality analytical results collected from the 18 SVPMS locations, beginning in October 2008 and including the most recent results obtained in January 2017, are presented in **Table 9.**

3.4.2 Quality Assurance/Quality Control Sampling

Quality assurance/quality control (QA/QC) samples were collected during the annual off-site vapor monitoring event in accordance with the *Final Supplemental Offsite Soil Vapor Intrusion Monitoring Plan* (TtNUS 2012). These samples consisted of blind field duplicates (collected from SVPM-2001I and SVPM-2006S) and field blanks as ambient air samples.

For field blanks, ambient air samples were collected simultaneously during the soil gas sampling to evaluate potential chemicals in the local ambient air. The 6-L summa canister was positioned at an upwind location at a height of four feet above grade. The ambient air sample was obtained over an eight-hour period for each day that routine samples were collected. Field blanks were free of contaminants.

For field duplicate samples, the precision between the original sample and its duplicate is evaluated by calculating the relative percent difference (RPD). RPDs for the First Quarter sampling event are presented in the data validation report in **Appendix B**. As indicated, RPDs for all analytes were below the guideline of 50% when calculated. The overall consistency between the samples and its duplicate verifies that proper sample collection methods were followed.

3.5 Soil Vapor Quality Concentration Trends

3.5.1 Historical SVEW Vapor Quality Results and Concentration Trends

Historical vapor analytical results for the 12 SVEWs through the First Quarter are presented in **Table 5**. In addition, concentration trends of select VOCs over time for the SVECS combined influent (1,1,1-TCA, PCE, TCE, and total VOCs) and each of the 12 SVEWs (1,1,1-TCA, PCE, and TCE) are presented in **Appendix C**. Concentration trends observed in the 12 SVEWs through the First Quarter are discussed below.

- Combined Influent: Overall VOC concentrations in the combined influent decreased throughout the first two monthly events and increased in the third month of the First Quarter, with total VOC concentrations of 3,045 $\mu\text{g}/\text{m}^3$, 2,608 $\mu\text{g}/\text{m}^3$, and 2,923 $\mu\text{g}/\text{m}^3$ in January, February, and March, respectively. Overall concentrations remain below baseline concentrations observed in December 2009 when a total VOC concentration of 63,650 $\mu\text{g}/\text{m}^3$ was observed.
- SV-101I: Concentrations observed at this location (3,400 $\mu\text{g}/\text{m}^3$ TCE, 29 $\mu\text{g}/\text{m}^3$ PCE, and 1,100 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) increased in the First Quarter from non-detected concentrations observed in the Third and Fourth Quarter 2016. All concentrations remain below baseline concentrations observed in December 2009 (180,000 $\mu\text{g}/\text{m}^3$ TCE, 1,700 $\mu\text{g}/\text{m}^3$ PCE, and 51,000 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-101D: Concentrations observed at this location (760 $\mu\text{g}/\text{m}^3$ TCE, 240 $\mu\text{g}/\text{m}^3$ PCE, and 15 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Fourth Quarter 2016. All concentrations remain below baseline concentrations observed in December 2009 (100,000 $\mu\text{g}/\text{m}^3$ TCE, 3,200 $\mu\text{g}/\text{m}^3$ PCE, and 26,000 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).

- SV-102I: Concentrations observed at this location (8.4 $\mu\text{g}/\text{m}^3$ TCE, 1.6 J $\mu\text{g}/\text{m}^3$ PCE, and 0.54 J $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. The First Quarter concentrations are above baseline concentrations observed in December 2009 for TCE (5.6 $\mu\text{g}/\text{m}^3$) and 1,1,1-TCA (ND) but below the December 2009 concentration for PCE (2.4 $\mu\text{g}/\text{m}^3$). The First Quarter concentrations are also below the maximum concentrations observed in June 2010 (300 $\mu\text{g}/\text{m}^3$ TCE, 17 $\mu\text{g}/\text{m}^3$ PCE, and 13 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-102D: Concentrations observed at this location (44 $\mu\text{g}/\text{m}^3$ TCE, 26 $\mu\text{g}/\text{m}^3$ PCE, and 2.7 J $\mu\text{g}/\text{m}^3$ of 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. Concentrations remain below baseline concentrations observed in December 2009 for TCE and 1,1,1-TCA (440 $\mu\text{g}/\text{m}^3$ TCE and 130 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA), and also below the maximum PCE concentration observed in October 2011 (39 $\mu\text{g}/\text{m}^3$).
- SV-103I: Concentrations observed at this location (20 $\mu\text{g}/\text{m}^3$ TCE, 70 $\mu\text{g}/\text{m}^3$ PCE, and 0.70 J $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. Concentrations remain below baseline concentrations observed in December 2009 (900 $\mu\text{g}/\text{m}^3$ TCE, 580 $\mu\text{g}/\text{m}^3$ PCE, and 900 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-103D: Concentrations observed at this location (620 $\mu\text{g}/\text{m}^3$ TCE, 13,000 $\mu\text{g}/\text{m}^3$ PCE, and 11 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) remain similar in the First Quarter from concentrations observed in the Fourth Quarter 2016. All concentrations remain below baseline concentrations observed in December 2009 (3,100 $\mu\text{g}/\text{m}^3$ TCE, 20,000 $\mu\text{g}/\text{m}^3$ PCE, and 3,000 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-104I: Concentrations observed at this location (non-detected concentrations of TCE and 1,1,1-TCA, and 0.68 J $\mu\text{g}/\text{m}^3$ for PCE) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. Concentrations remain below baseline concentrations observed in December 2009 (710 $\mu\text{g}/\text{m}^3$ TCE, 3,100 $\mu\text{g}/\text{m}^3$ PCE, and 730 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-104D: Concentrations observed at this location (290 $\mu\text{g}/\text{m}^3$ TCE, 1,400 $\mu\text{g}/\text{m}^3$ PCE, and 88 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. Concentrations remain below baseline concentrations observed in December 2009 (4,600 $\mu\text{g}/\text{m}^3$ TCE, 20,000 $\mu\text{g}/\text{m}^3$ PCE, and 3,600 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-105I: Concentrations observed at this location (50 $\mu\text{g}/\text{m}^3$ TCE, 26 $\mu\text{g}/\text{m}^3$ PCE, and 5.6 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. These concentrations are above baseline concentrations observed in December 2009 (76 $\mu\text{g}/\text{m}^3$ TCE, 70 $\mu\text{g}/\text{m}^3$ PCE, and 9.9 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-105D: Concentrations observed at this location (140 $\mu\text{g}/\text{m}^3$ TCE, 69 $\mu\text{g}/\text{m}^3$ PCE, and 23 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. These concentrations are below baseline concentrations observed in December 2009 (1,700 $\mu\text{g}/\text{m}^3$ TCE, 2,100 $\mu\text{g}/\text{m}^3$ PCE, and 550 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).

- SV-106I: Concentrations observed at this location (53 $\mu\text{g}/\text{m}^3$ TCE, 4.9 $\mu\text{g}/\text{m}^3$ PCE, and 5.5 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. These concentrations are below baseline concentrations observed in December 2009 (1,900 $\mu\text{g}/\text{m}^3$ TCE, 390 $\mu\text{g}/\text{m}^3$ PCE, and 220 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).
- SV-106D: Concentrations observed at this location (170 $\mu\text{g}/\text{m}^3$ TCE, 24 $\mu\text{g}/\text{m}^3$ PCE, and 10 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA) decreased in the First Quarter from concentrations observed in the Third and Fourth Quarter 2016. These concentrations are below baseline concentrations observed in December 2009 (3,400 $\mu\text{g}/\text{m}^3$ TCE, 720 $\mu\text{g}/\text{m}^3$ PCE, and 340 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA).

3.5.2 Historical SVPM Vapor Quality Results and Concentration Trends

Table 9 presents historical vapor quality analytical results collected from the 18 SVPM locations, beginning in October 2008 and including the most recent results obtained in January 2017. As indicated, concentrations observed in January 2017 have decreased substantially from initial concentrations observed in October 2008, and were generally similar to those observed in January 2016 with a few exceptions, as discussed below.

TCE Detection Summary

- In 2008, TCE was detected at all 18 locations, with concentrations ranging from 1.0 $\mu\text{g}/\text{m}^3$ (SVPM-2004S) to 89,000 $\mu\text{g}/\text{m}^3$ (SVPM-2002I). Concentrations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$ at nine locations (SVPM-2001S, SVPM-2001I, SVPM-2001D, SVPM-2002S, SVPM-2002I, SVPM-2002D, SVPM-2003D, SVPM-2004I, and SVPM-2004D).
- In 2013, TCE concentrations ranged from non-detect at 12 locations to 47 $\mu\text{g}/\text{m}^3$ in SVPM-2006I. No sampling locations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$.
- In 2014, TCE was detected at nine of the 18 locations, with concentrations ranging from 0.73 J $\mu\text{g}/\text{m}^3$ at SVPM-2003I to 3.7 J $\mu\text{g}/\text{m}^3$ at SVPM-2004I. No sampling locations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$.
- In 2015, TCE was detected at two of the 18 locations, with concentrations ranging from 1.5 J $\mu\text{g}/\text{m}^3$ at SVPM-2004D to 30 $\mu\text{g}/\text{m}^3$ at SVPM-2006D. No sampling locations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$.
- In January 2016, TCE was detected at six of the 18 locations, with concentrations ranging from 1.6 J $\mu\text{g}/\text{m}^3$ at SVPM-2006S to 48 $\mu\text{g}/\text{m}^3$ (and a duplicate concentration of 48 $\mu\text{g}/\text{m}^3$) at SVPM-2006I. No sampling locations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$.
- In September 2016, TCE was detected at 16 of the 18 locations, with concentrations ranging from 1.8 J $\mu\text{g}/\text{m}^3$ at SVPM-2001S to 61 J $\mu\text{g}/\text{m}^3$ (duplicate concentration of 84 J $\mu\text{g}/\text{m}^3$) at SVPM-2006D. No sampling locations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$.

- In 2017, TCE was detected at six of the 18 locations, with concentrations ranging from 0.87 J $\mu\text{g}/\text{m}^3$ at SVPM-2001I to 59 $\mu\text{g}/\text{m}^3$ at SVPM-2006D. No sampling locations exceeded the PAL of 250 $\mu\text{g}/\text{m}^3$.

PCE Detection Summary

- In 2008, PCE was detected at all 18 locations, with concentrations ranging from 1.8 $\mu\text{g}/\text{m}^3$ (SVPM-2004S) to 5,000 $\mu\text{g}/\text{m}^3$ (SVPM-2001I). Concentrations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$ at two locations (SVPM-2001S and SVPM-2001I).
- In 2013, PCE concentrations ranged from non-detect at seven locations to 2.3 J $\mu\text{g}/\text{m}^3$ (SVPM-2004D). No sampling locations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In 2014, PCE was detected at 15 of the 18 locations, with concentrations ranging from 0.53 J $\mu\text{g}/\text{m}^3$ at SVPM-2001D to 2.9 J $\mu\text{g}/\text{m}^3$ at SVPM-2004I. No sampling locations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In 2015, PCE was detected at three of the 18 locations, with concentrations ranging from 1.7 J $\mu\text{g}/\text{m}^3$ at SVPM-2006D to 7.1 $\mu\text{g}/\text{m}^3$ at SVPM-2004D. No sampling locations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In January 2016, PCE was detected at 10 of the 18 locations, with concentrations ranging from 0.83 J $\mu\text{g}/\text{m}^3$ at SVPM-2004I to 10 $\mu\text{g}/\text{m}^3$ at SVPM-2001D. No sampling locations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In September 2016, PCE was detected at 14 of the 18 locations, with concentrations ranging from 0.94 J $\mu\text{g}/\text{m}^3$ at SVPM-2002S to 6.8 $\mu\text{g}/\text{m}^3$ at SVPM-2007S. No sampling locations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In 2017, PCE was detected at 11 of the 18 locations, with concentrations ranging from 0.40 J $\mu\text{g}/\text{m}^3$ at SVPM-2007D to 7.3 $\mu\text{g}/\text{m}^3$ at SVPM-2002D. No sampling locations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$.

1,1,1-TCA Detection Summary

- In 2008, 1,1,1-TCA was detected at all 18 locations, with concentrations ranging from 1.4 $\mu\text{g}/\text{m}^3$ (SVPM-2004S) to 52,000 $\mu\text{g}/\text{m}^3$ (SVPM-2002I). Concentrations exceeded the PAL of 1,000 $\mu\text{g}/\text{m}^3$ at six locations (SVPM-2001S, SVPM-2001I, SVPM-2001D, SVPM-2002S, SVPM-2002I, SVPM-2002D).
- In 2013, 1,1,1-TCA was detected at only one location, SVPM-2007D, at a concentration of 1.3 J $\mu\text{g}/\text{m}^3$, well below the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In 2014 and 2015, 1,1,1-TCA was not detected at any location.
- In January 2016, 1,1,1-TCA was detected at only one of the 18 locations, at a concentration of 0.87 J $\mu\text{g}/\text{m}^3$ at SVPM-2007D, well below the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In September 2016, 1,1,1-TCA was detected at only one of the 18 locations, at a concentration of 0.59 J $\mu\text{g}/\text{m}^3$ at SVPM-2006D in the duplicate sample; however, 1,1,1-TCA was not detected in the routine sample. The detected concentration is well below the PAL of 1,000 $\mu\text{g}/\text{m}^3$.
- In 2017, 1,1,1-TCA was not detected at any location.

Concentration Trends Summary

Concentration trends of select VOCs (1,1,1-TCA, PCE, TCE, and cis-1,2-DCE) over time for each of the 18 SVPMs are presented in **Appendix D**. As indicated by the trend graphs and as discussed above, an overall decreasing trend was observed at a majority of locations between October 2008 and January 2017, with a few exceptions as noted below.

- SVPM-2001D: Concentrations of TCE (3.9 J $\mu\text{g}/\text{m}^3$), PCE (10 $\mu\text{g}/\text{m}^3$), and cis-1,2-DCE (6.3 $\mu\text{g}/\text{m}^3$) increased slightly in January 2016 compared with concentrations observed in January 2015 (non-detectable levels of TCE, PCE, and cis-1,2-DCE). Overall concentrations of PCE, TCE and cis-1,2-DCE decreased in October 2016 and remained at similar levels in January 2017 which are well below initial concentrations observed in October 2008 (1,500 $\mu\text{g}/\text{m}^3$ TCE, 720 $\mu\text{g}/\text{m}^3$ PCE, and 73 $\mu\text{g}/\text{m}^3$ cis-1,2-DCE). 1,1,1-TCA has not been detected at this location since the baseline event in October 2008.
- SVPM-2006I: Concentrations of TCE (44 $\mu\text{g}/\text{m}^3$), PCE (1.5 J $\mu\text{g}/\text{m}^3$), and cis-1,2-DCE (260 $\mu\text{g}/\text{m}^3$) increased in January 2016 and remained elevated in October 2016 and January 2017 from concentrations observed in January 2015 (non-detectable levels of TCE, PCE, and cis-1,2-DCE). Concentrations of TCE, PCE, and 1,1,1-TCA in January 2017 remained below the baseline concentrations observed in October 2008 (71 $\mu\text{g}/\text{m}^3$ TCE, 29 $\mu\text{g}/\text{m}^3$ PCE, and 22 $\mu\text{g}/\text{m}^3$ 1,1,1-TCA). Cis-1,2-DCE was observed in January and October 2016, as well as January 2017. (260 $\mu\text{g}/\text{m}^3$ during each of the three events) were well above the baseline concentration observed in October 2008 (45 $\mu\text{g}/\text{m}^3$), however they below the maximum concentration observed in January

2017 ($340 \mu\text{g}/\text{m}^3$). 1,1,1-TCA has not been detected at this location since the baseline event in October 2008.

- SVPM-2006D: Concentrations of TCE ($59 \mu\text{g}/\text{m}^3$), PCE ($2.0 \mu\text{g}/\text{m}^3$), and cis-1,2-DCE ($400 \mu\text{g}/\text{m}^3$) increased in January and remained elevated in October 2016, as well as in January 2017. Concentrations in January 2017 remained below initial concentrations observed in October 2008 for PCE and 1,1,1-TCA ($11 \mu\text{g}/\text{m}^3$ PCE, and $35 \mu\text{g}/\text{m}^3$ 1,1,1-TCA) and near the initial concentration observed in 2008 for TCE ($61 \mu\text{g}/\text{m}^3$). Cis-1,2-DCE concentration observed in January 2017 is above the initial baseline concentration reported in October 2008 ($89 \mu\text{g}/\text{m}^3$), and the highest concentration ($400 \mu\text{g}/\text{m}^3$) since to date. The concentration of 1,1,1-TCA ($0.59 \mu\text{g}/\text{m}^3$) observed in January 2017 was well below the baseline concentration ($35 \mu\text{g}/\text{m}^3$).

As shown on **Figure 3**, SVPM-2006I and SVPM-2006D are intermediate and deep wells, respectively, located along 10th Street, between Sycamore Avenue and Maple Avenue to the east of the site. Recent data indicates increasing contaminant concentration trends at these locations, especially for cis-1,2-DCE, and TCE though all concentrations remain below the respective PALs. The ratio of cis-1,2-DCE to other contaminants (e.g. TCE) at these SVPMs is considerably greater than at other locations to the north, south, or west of these SVPMs, suggesting a possible off-site source to the east of 10th Street. Concentrations observed in January 2017 are similar to those observed in September 2016 and confirm this recent trend.

4.0 CONCLUSIONS AND RECOMMENDATIONS

As stated previously, the intent of the Site 1 SVECS is to prevent further off-site migration of VOC contaminated soil vapor and to the extent practical, capture soil vapor with elevated TCE concentrations. Based on the presence of a vacuum field and the reduction of VOC concentrations to less than the screening values in the off-property area, the SVECS is functioning as intended. Influent vapor analytical data with concentrations of TCE greater than 250 µg/L indicate that the SVECS should continue to be operated on a full-time basis to achieve continued capture of contaminated soil vapor. Monthly monitoring of the combined influent and effluent as well as quarterly monitoring of individual SVEWs should continue. Quarterly and annual monitoring of the SVPMs should also continue in order to ensure that a measurable vacuum field is being established and that the area is being effectively treated. In addition, further investigation will be conducted by others to further evaluate recent increasing concentration trends in SVPM-2006I and SVPM-2006D and to determine if another source of VOCs in soil vapor is present.

5.0 REFERENCES

New York State Department of Health (NYSDOH). 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. October.

Tetra Tech EC, Inc. (TtEC). 2010. *Final Operation & Maintenance Plan for Soil Vapor Extraction Containment System, Site 1, Former Drum Marshalling Yard at Naval Weapons Industrial Reserve Plant, Bethpage, New York*. June.

Tetra Tech NUS, Inc. (TtNUS). 2011. *Modification to Existing Soil Vapor Extraction Containment System at Site 1 – Former Drum Marshalling Area, Installation of Soil Vapor Extraction Wells SVE-107D to -111D, NWIRP Bethpage, Bethpage, New York*. September.

TtNUS. 2012. *Final Supplemental Offsite Soil Vapor Intrusion Monitoring Plan for the Soil Vapor Extraction Containment System, Site 1, Former Drum Marshalling Yard at Naval Weapons Industrial Reserve Plant, Bethpage, New York*. February.

TABLES

Table 1
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Vapor Monitoring Results
January 2017

Compound	Concentration (ug/m ³)				Emission Rate ^{(1),(2)}				Monthly Mass Recovery ⁽³⁾ (lbs)
	Influent #1	Influent #2	Average	Effluent	Prior to Treatment		Following Treatment		
					(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
1,1,1-Trichloroethane	300	280	290	0	0.0003	3.0014	0.0000	0.0000	0.2549
1,1-Dichloroethane	11	11	11	0	0.0000	0.1138	0.0000	0.0000	0.0097
1,1-Dichloroethene	1.3 J	1.5 J	1.4 J	0.95 J	0.0000	0.0145	0.0000	0.0098	0.0012
1,2-Dichloroethane	0	0.85 J	0.4 J	0	0.0000	0.0044	0.0000	0.0000	0.0004
cis-1,2-Dichloroethene	130	120	125	7.9	0.0001	1.2937	0.0000	0.0818	0.1099
Tetrachloroethene	1500	1500	1500	0	0.0018	15.5245	0.0000	0.0000	1.3185
trans-1,2-Dichloroethene	2.4 J	1.9 J	2.2	0	0.0000	0.0223	0.0000	0.0000	0.0019
Trichloroethene	1100	1100	1100	0	0.0013	11.3847	0.0000	0.0000	0.9669
Vinyl Chloride	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Total VOCs	3045	3015	3030	8.9 J	0.0036	31.3593	0.0000	0.0916	2.6634

Notes:

All samples were analyzed for site-specific VOCs by modified method TO-15.

Average Monthly Vapor Temp (°F) = 90
Average Monthly Flowrate (cfm) = 329
Average Monthly Flowrate (scfm) = 316
Operational Hours for the month = 744

(1) Emissions (lbs/hr) = Concentration (ug/m³)*(lb/454000000ug)*(0.3048^3m³/ft³)*exhaust flow (scfm)*(60min/hour)

(2) Emissions (lbs/yr) = Emissions (lbs/hour)*(8760hours/yr)

(3) Monthly Mass Removal = AVERAGE FLOWRATE (scfm) * 0.3048^3m³/ft³ * INF AVG CONC (ug/m³) * (lb/454000000ug) * 60 min/hr * OPERATIONAL TIME (hr)

Table 2
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Vapor Monitoring Results
February 2017

Compound	Concentration (ug/m ³)				Emission Rate ^{(1),(2)}				Monthly Mass Recovery ⁽³⁾ (lbs)
	Influent #1	Influent #2	Average	Effluent	Prior to Treatment		Following Treatment		
					(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
1,1,1-Trichloroethane	330	320	325	0	0.0004	3.3354	0.0000	0.0000	0.2559
1,1-Dichloroethane	12	13	13	0	0.0000	0.1283	0.0000	0.0000	0.0098
1,1-Dichloroethene	1.7 J	1.7 J	1.7 J	0	0.0000	0.0174	0.0000	0.0000	0.0013
1,2-Dichloroethane	0.87 J	0.61 J	0.7 J	0	0.0000	0.0076	0.0000	0.0000	0.0006
cis-1,2-Dichloroethene	110	110	110	2.6 J	0.0001	1.1289	0.0000	0.0267	0.0866
Tetrachloroethene	1200	1200	1200	0	0.0014	12.3154	0.0000	0.0000	0.9447
trans-1,2-Dichloroethene	3.3	2.7 J	3.0	0	0.0000	0.0308	0.0000	0.0000	0.0024
Trichloroethene	950	1000	975	0	0.0011	10.0063	0.0000	0.0000	0.7676
Vinyl Chloride	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Total VOCs	2608	2648	2628	2.6 J	0.0031	26.9701	0.0000	0.0267	2.0689

Notes:

All samples were analyzed for site-specific VOCs by modified method TO-15.

Average Monthly Vapor Temp (°F) = 87
Average Monthly Flowrate (cfm) = 325
Average Monthly Flowrate (scfm) = 313
Operational Hours for the month = 672

(1) Emissions (lbs/hr) = Concentration (ug/m³)*(lb/454000000ug)*(0.3048^3m³/ft³)*exhaust flow (scfm)*(60min/hour)

(2) Emissions (lbs/yr) = Emissions (lbs/hour)*(8760hours/yr)

(3) Monthly Mass Removal = AVERAGE FLOWRATE (scfm) * 0.3048^3m³/ft³ * INF AVG CONC (ug/m³) * (lb/454000000ug) * 60 min/hr * OPERATIONAL TIME (hr)

Table 3
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Vapor Monitoring Results
March 2017

Compound	Concentration (ug/m ³)				Emission Rate ^{(1),(2)}				Monthly Mass Recovery ⁽³⁾ (lbs)
	Influent #1	Influent #2	Average	Effluent	Prior to Treatment		Following Treatment		
					(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
1,1,1-Trichloroethane	310	310	310	0	0.0004	3.2302	0.0000	0.0000	0.2729
1,1-Dichloroethane	16	16	16	0.94 J	0.0000	0.1667	0.0000	0.0098	0.0141
1,1-Dichloroethene	1.6 J	1.7 J	1.7 J	0	0.0000	0.0172	0.0000	0.0000	0.0015
1,2-Dichloroethane	0	0.65 J	0.3 J	0	0.0000	0.0034	0.0000	0.0000	0.0003
cis-1,2-Dichloroethene	270	280	275	11	0.0003	2.8655	0.0000	0.1146	0.2421
Tetrachloroethene	1400	1400	1400	0	0.0017	14.5879	0.0000	0.0000	1.2323
trans-1,2-Dichloroethene	4.8	5.3	5.1	0	0.0000	0.0526	0.0000	0.0000	0.0044
Trichloroethene	900	930	915	0	0.0011	9.5342	0.0000	0.0000	0.8054
Vinyl Chloride	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Total VOCs	2902	2944	2923	11.9	0.0035	30.4577	0.0000	0.1244	2.5729

Notes:

All samples were analyzed for site-specific VOCs by modified method TO-15.

Average Monthly Vapor Temp (°F) = 94
Average Monthly Flowrate (cfm) = 334
Average Monthly Flowrate (scfm) = 318
Operational Hours for the month = 740

(1) Emissions (lbs/hr) = Concentration (ug/m³) * (lb/454000000ug) * (0.3048^3m³/ft³) * exhaust flow (scfm) * (60min/hour)

(2) Emissions (lbs/yr) = Emissions (lbs/hour) * (8760hours/yr)

(3) Monthly Mass Removal = AVERAGE FLOWRATE (scfm) * 0.3048^3m³/ft³ * INF AVG CONC (ug/m³) * (lb/454000000ug) * 60 min/hr * OPERATIONAL TIME (hr)

Table 4
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
First Quarter 2017 Vapor Analytical Results Summary of SVE Wells

Sample ID	SVE 101I	SVE 101D	SVE 102I	SVE 102D	SVE 103I	SVE 103D	SVE 104I	SVE 104D	SVE 105I	SVE 105D	SVE 106I	SVE 106D
Sample Date	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17	01/17/17
Analysis by TO-15 ($\mu\text{g}/\text{m}^3$)												
1,1,1-Trichloroethane	1100	15	0.54 J	2.7 J	0.73 J	11 J	ND	88	5.6	23	5.5	10
1,1-Dichloroethane	17	2.2 J	ND	0.8 J	ND	ND	ND	11	2.2 J	19	2.4 J	17
1,1-Dichloroethene	4.5 J	0.80 J	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND
1,2-Dichloroethane	3.1 J	ND	ND	0.75 J	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	21	ND	5.2	1.8 J	210	ND	400	2.6 J	19	3.2	20
Tetrachloroethene	29	240	1.6 J	26	70	13000	0.68 J	1400	26	69	4.9	24
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	6.5	ND	1.2 J	ND	2.1 J
Trichloroethene	3400	760	8.4	44	20	620	ND	290	50	140	53	170
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All samples were analyzed for site-specific VOCs by modified method TO-15.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

ND = Not detected above method detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 1011																													
	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	51000	3900	2600	450	850	300	1	0.7 J	0.7 J	1500	1500	3200	4400	3400	1900	2200	2900	2600	1200	1600	2500	2000	720	520	2200	2700	3000	ND	ND	1100
1,1-Dichloroethane	1200	65	34	14	31	5	0.8 J	0.4 J	0.4 J	28	28	61	76	62	35	36	57	50	22	29	51	39	15	10	42	45	38	ND	ND	17
1,1-Dichloroethene	250	ND	ND	4	8	ND	0.7 J	0.4 J	0.5 J	7.6 J	10	ND	15 J	ND	12 J	8.9 J	16 J	11 J	7.9 J	6.2 J	21	11 J	ND	ND	ND	ND	6.9 J	ND	ND	4.5 J
1,2-Dichloroethane	NR	30	ND	4	8	ND	0.9	0.5 J	0.5 J	6.9 J	6.4 J	11 J	14 J	12 J	10 J	8.6 J	9.2 J	7.5 J	4.4 J	9.2 J	12 J	9.8 J	5.2 J	3.8	15	9.0 J	ND	ND	ND	3.1 J
cis-1,2-Dichloroethene	480	59	ND	9	15	3	0.7 J	ND	0.4 J	7.1 J	7.4 J	20 J	22 J	14 J	6.2 J	11 J	22 J	12 J	4.2 J	8.8 J	24	9.4 J	4.6 J	3.8	9.2 J	6.0 J	ND	ND	ND	ND
Tetrachloroethene	1700	410	260	36	63	10	1	ND	2	48	46	93	120	80	49	79	100	80	34	67	83	54	31	31	74	83	82	ND	ND	29
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	0.7 J	0.4 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	180000	18000	14000	1200	2400	560	1	0.6 J	0.6 J	4200	4300	7200	12000	8100	5200	5400	8900	7100	3300	4400	6900	5300	2500	1600	7600	8200	7100	ND	ND	3400
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.5 J	0.3 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method
 detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 101D																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/22/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	26000	130	53	ND	ND	ND	3	8	0.8 J	ND	3.1 J	9.9	11	ND	ND	5.6	16	14	12	20	19	12	ND	22	22	27	22	ND	20	15
1,1-Dichloroethane	660	3.9	ND	ND	ND	ND	2	0.9 J	0.5 J	ND	ND	1.0 J	1.1 J	1.1 J	ND	ND	1.5 J	1.4 J	1.2 J	0.89 J	1.4 J	ND	ND	2.5 J	2.8 J	2.3 J	1.7 J	ND	3.1	2.2 J
1,1-Dichloroethene	180	2	ND	ND	ND	ND	ND	0.7 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	1.0 J	0.75 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.76 J	0.80 J	
1,2-Dichloroethane	NR	0.5	ND	ND	ND	ND	2	0.5 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	220	8.5	7.5	ND	3	ND	2	2	0.5 J	ND	ND	2.1 J	3.2	ND	ND	ND	3.0 J	4.5	3.5	1.5 J	4.1	2.3 J	ND	3.3	5.9	5.8	6.4	ND	31	21
Tetrachloroethene	3200	1200	1200	ND	4	ND	26	210	2	ND	79	150	170	130	0.92 J	73	330	340	270	240	260	200	1.0 J	230	250	310	220	ND	300	240
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	2	0.6 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	100000	1600	310	3	1	ND	3	120	1 J	ND	200	400	350	120	ND	56	540	680	330	180	410	190	1.7 J	450	1000	2200	990	ND	970	760
Vinyl Chloride	ND	ND	ND	ND	ND	ND	1	0.4 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 1021																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/22/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	02/05/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	ND	ND	13	3	ND	NA	2	3	2	ND	0.60 J	3.3 J	ND	ND	ND	1.6 J	ND	ND	0.95 J	10	4.0 J	0.82 J	1.6 J	12	2.8 J	0.87 J	ND	1.3 J	1.2 J	0.54 J
1,1-Dichloroethane	ND	ND	ND	ND	ND	NA	0.8 J	0.5 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	NA	0.7 J	0.4 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	ND	ND	NA	0.8	0.4 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	NA	0.7 J	0.5 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.4	1.4	17	6	NR	NA	3	6	6	ND	1.6 J	6.4	1.5 J	2.4 J	1.4 J	3.3 J	2.6 J	ND	ND	10	4.8 J	1.5 J	2.5 J	13	6.6	2.4 J	ND	2.9 J	3.2 J	1.6 J
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	NA	0.7 J	0.4 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5.6	3.8	300	88	3	NA	34	76	52	10	26	99	10	10	15	49	21	7.6	8.0	84	39	8.0	22	120	40	12	ND	21	24	8.4
Vinyl Chloride	ND	ND	ND	ND	ND	NA	0.5 J	0.4 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 102D																													
	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/24/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	130	53	14	7	2	2	6	4	5	1.4 J	1.2 J	3.9 J	ND	ND	ND	2.3 J	3.1 J	ND	1.6 J	4.5	5.1	2.6 J	ND	5.2	4.9	3.5 J	1.1 J	6.6	3.8 J	2.7 J
1,1-Dichloroethane	ND	2.7	ND	ND	ND	ND	1	0.6 J	0.7 J	ND	ND	0.51 J	0.95 J	ND	ND	ND	0.69 J	ND	0.44 J	ND	ND	ND	ND	ND	1.0 J	0.81 J	ND	0.93 J	0.95 J	0.8 J
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	1	0.6 J	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	0.9	0.5 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene	ND	1.4	ND	ND	0.9	ND	1	0.5 J	0.9	ND	ND	1.1 J	4.1	ND	ND	ND	3.4	ND	2.8 J	0.89 J	3.6	1.6 J	ND	4.2	9.3	8.9	4.4	13	10	5.2
Tetrachloroethene	10	31	31	19	3	9	25	23	39	5.9	6.5	24	25	0.96 J	1.4 J	14	28	2.6 J	9.6	16	20	11	3.8 J	22	41	42	18	51	37	26
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	1	0.5 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	440	390	190	110	17	21	89	81	87	34	58	170	140	6.5	ND	88	160	3.9 J	39	79	92	36	20	160	180	120	38	150	74	44
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.6	0.4 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 1031																														
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17	
Analysis by TO-15 (µg/m ³)																															
1,1,1-Trichloroethane	900	ND	ND	ND	ND	ND	0.9 J	6	6	ND	1.6 J	9.2	ND	ND	1.4 J	4.7 J	2.8 J	0.92 J	ND	4.6	4.9	ND	1.3 J	6.6	3.6 J	1.2 J	0.76 J	6.0	2.2 J	0.73 J	
1,1-Dichloroethane	26	ND	ND	ND	ND	ND	0.6 J	2	2	ND	0.75 J	1.5 J	0.77 J	ND	ND	1.5 J	1.3 J	ND	ND	0.89 J	2.0 J	ND	0.68 J	ND	1.4 J	ND	ND	1.9 J	1.1 J	ND	
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	0.6 J	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	0.7 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene	58	ND	ND	1	ND	1	0.5 J	16	12	18	16	19	6.0	2.4 J	5.0	11	15	6.9	3.4	4.2	6.1	ND	11	9.3	7.3	13	2.7 J	5.2	2.2 J	1.8 J	
Tetrachloroethene	580	ND	ND	ND	ND	2	1 J	420	590	140	200	430	120	40	78	220	200	97	40	150	130	8.6	130	290	210	450	71	200	99	70	
trans-1,2-Dichloroethene	580	ND	ND	ND	ND	ND	0.6 J	1	1	ND	ND	ND	ND	ND	ND	0.85 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND
Trichloroethene	900	0.9	ND	ND	ND	ND	0.9 J	100	97	29	47	130	48	16	35	95	78	46	20	47	50	4.9 J	37	92	74	70	17	67	34	20	
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.4 J	0.4 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 103D																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	3000	1100	230	ND	13	ND	2 J	20	31	7.4 J	6.9 J	22	190	ND	150	170	200	550	400	25	38	ND	310	26	30 J	ND	38	ND	16 J	11 J
1,1-Dichloroethane	82	69	ND	ND	2	2	1 J	4	9	1.6 J	1.5 J	1.9 J	10 J	ND	10	10 J	20 J	50	48	ND	7.8 J	ND	24	ND	ND	ND	ND	ND	6.2 J	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	1 J	2	6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	1 J	1 J	6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	420	1500	370	ND	92	ND	1 J	360	160	290	230	300	750	ND	550	700	2600	2100	1800	280	490	ND	930	310	530	ND	310	ND	340	210
Tetrachloroethene	20000	28000	16000	9	1500	ND	3	1600	6700	3800	3200	4700	4600	1.6 J	3300	4900	17000	15000	8600	6600	8900	ND	5800	8900	17000	ND	7500	ND	12000	13000
trans-1,2-Dichloroethene	ND	24	ND	ND	1	ND	1 J	3	7 J	ND	ND	ND	8.8 J	ND	5.7 J	8.8 J	18 J	32	18	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	3100	1600	640	7	92	ND	2 J	290	240	180	200	480	440	6.0	360	660	2100	1400	900	530	680	ND	580	640	1200	ND	300	ND	730	620
Vinyl Chloride	ND	5.9	ND	ND	2	ND	0.8 J	4	5 J	ND	ND	ND	ND	ND	1.9 J	ND	14 J	ND	2.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method
 detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 104I																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/24/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	730	4.2	ND	4	NR	NA	1 J	4	2	ND	ND	8.3	ND	ND	ND	3.1 J	2.6 J	ND	9.6	17	15	7.0	1.5 J	8.3	4.0 J	4.6	0.48 J	6.9	6.5	ND
1,1-Dichloroethane	24	0.54	ND	ND	ND	NA	1 J	0.6 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4	8.7	7.7	6.6	ND	ND	ND	2.9 J	ND	ND	3.6	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	NA	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	ND	ND	NA	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	110	14	ND	2	0.8	NA	0.9 J	2	3	0.90 J	ND	5.0	ND	2.7 J	ND	3.3	5.3	ND	94	160	160	130	7.3	4.2	6.6	54	0.92 J	2.1 J	110	ND
Tetrachloroethene	3100	210	68	96	16	NA	2 J	54	33	12	ND	86	1.6 J	4.8 J	2.3 J	30	36	ND	69	210	190	91	13	82	66	79	10	80	530	0.68 J
trans-1,2-Dichloroethene	15	ND	ND	ND	ND	NA	1 J	0.5 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8 J	2.1 J	1.4 J	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND
Trichloroethene	710	44	60	72	12	NA	2 J	44	25	9.6	ND	73	ND	3.1 J	ND	30	31	ND	39	110	120	43	17	85	54	35	7.6	83	110	ND
Vinyl Chloride	ND	0.47	ND	ND	ND	NA	0.7 J	0.3 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Quarterly Vapor Monitoring Results of SVE Wells
Through First Quarter 2017

Sample ID	SVE 104D																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/22/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	3600	3000	860	ND	270	ND	370	620	440	520	580	620	920	820	0.89 J	500	600	340	84	930	880	1.7 J	350	480	790	760	460	460	710	88
1,1-Dichloroethane	290	350	140	ND	66	ND	56	110	77	87	95	100	190	160	ND	95	130	56	22	120	130	ND	72	77	120	91	54	73	110	11
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	3	7 J	7 J	3.0 J	5.0 J	ND	11 J	ND	ND	ND	ND	4.3 J	1.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.6 J	1.2 J
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	1 J	5 J	5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	2400	6600	3500	ND	1200	ND	1000	3600	2100	2200	2800 J	2200	4200	3700	8.6	2000	3200	1600	460	3300	4400	21	1500	2500	3600	3200	1900	2400	3800	400
Tetrachloroethene	20000	39000	21000	ND	2400	ND	1400	5800	6300	3800	4300	4600	4500	4200	69	2600	3900	2500	780	8200	8000	120	2200	5100	10000	7700	4500	9400	15000	1400
trans-1,2-Dichloroethene	130	70	30	ND	13	ND	14	25	22	26	31	27	55	40	ND	24	40	15	3.5	34	53	ND	18	39	49	38	30	38	67	6.5
Trichloroethene	4600	6000	2400	ND	470	ND	420	1600	1300	1400	1400	1700	2300	2100	14	1200	1600	1100	430	2000	2100	19	1100	1200	2200	1600	750	1400	2200	290
Vinyl Chloride	ND	12	ND	ND	ND	ND	2	5	5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method
detection limit

Table 5
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Quarterly Vapor Monitoring Results of SVE Wells
Through First Quarter 2017

Sample ID	SVE 1051																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	9.9	11	29	ND	24	1	1 J	21	31	11	13	26	22	22	11	24	18	32	26	17	20	20	25	29	30	12	5.0	16	11	5.6
1,1-Dichloroethane	ND	5.7	13	ND	6	ND	0.6 J	5	7	4.2	5.6	5.6	10	12	8.8	8.0	7.4	24	6.8	7.0	8.2	8.6	22	15	28	17	1.5 J	2.8	3.4	2.2 J
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	0.6 J	0.6 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	0.7 J	0.6 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	6.6	20	ND	ND	ND	1	10	16	8.1	9.7	13	16	13	14	14	7.4	17	6.2	9.5	12	7.5	31	28	23	17	1.8 J	7.9	5.0	2.6 J
Tetrachloroethene	70	9.1	240	ND	55	5	2	95	100	31	43	100	77	66	38	91	57	77	48	73	85	51	43	87	66	44	27	64	46	26
trans-1,2-Dichloroethene	ND	ND	1.6	ND	ND	ND	0.5 J	1	1	ND	ND	1.5 J	ND	ND	ND	ND	1.0 J	1.6 J	ND	ND	2.8 J	ND	ND	ND	2.3 J	ND	ND	0.83 J	ND	ND
Trichloroethene	76	6.3	370	ND	120	7	1	170	200	110	140	260	180	160	94	220	140	180	190	140	200	130	160	290	240	84	39	250	160	50
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.4 J	0.4 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method
detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 105D																													
	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	12/02/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	550	47	320	1000	590	ND	1 J	490	930	350	320	270	380	430	160	110	120	190	ND	92	79	4.3 J	16	35	52	62	68	47	29	23
1,1-Dichloroethane	300	28	270	250	ND	ND	0.6 J	74	150	69	78	72	110	110	46	45	70	46	ND	36	28	ND	4.7	12	30	21	15	22	23	19
1,1-Dichloroethene	3.9	ND	ND	2	4	4	0.6 J	6 J	ND	ND	ND	ND	ND	ND	ND	ND	1.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	4	5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene	61	36	85	300	ND	ND	0.7 J	150	380	190	220	150	210	200	73	76	85	46	ND	50	36	ND	3.6	16	22	18	26	31	19	19
Tetrachloroethene	2100	1.1	650	270	420	ND	2	240	330	140	220	270	350	330	100	140	260	300	ND	140	120	2.1 J	18	76	130	140	130	150	110	69
trans-1,2-Dichloroethene	19	1.1	3.1	3	ND	ND	0.6 J	7 J	3 J	ND	ND	ND	ND	ND	1.4 J	2.4 J	3.6	1.3 J	ND	1.3 J	1.9 J	ND	ND	ND	ND	ND	ND	1.8 J	2.0 J	1.2 J
Trichloroethene	1700	68	200	1100	1400	1	2	3000	7000	3600	4500	2200	3800	3800	1400	900	1200	1900	8.5	650	520	15	75	250	400	410	350	360	210	140
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.4 J	4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 1061																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	220	8.6	ND	4	ND	NA	6	3	7	1.0 J	2.2 J	11	ND	ND	ND	ND	18	1.4 J	3.8 J	8.9	2.2 J	ND	8.0	29	30	2.8 J	1.5 J	12	7.5	5.5
1,1-Dichloroethane	120	ND	ND	1	ND	NA	1	0.5 J	1	0.62 J	0.70 J	1.6 J	2.5 J	1.9 J	ND	ND	3.8	ND	17	3.9	1.1 J	ND	18	2.6 J	3.4	1.2 J	ND	ND	1.3 J	2.4 J
1,1-Dichloroethene	ND	ND	ND	ND	ND	NA	0.6 J	2	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	0.8	ND	NA	0.6 J	0.5 J	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	46	ND	ND	4	ND	NA	6	0.5 J	4	1.6 J	2.3 J	7.5	5.4	3.7	ND	ND	8.3	ND	23	11	3.1 J	ND	23	6.6	4.9	3.2	0.84 J	3.8	3.1 J	3.2
Tetrachloroethene	390	35	ND	15	ND	NA	15	7	19	4.3 J	7.2	27	14	7.0	0.73 J	ND	19	4.2 J	6.2	11	2.9 J	ND	14	39	49	11	5.1 J	20	6.7	4.9
trans-1,2-Dichloroethene	7.9	ND	3.1	0.9	ND	NA	0.8	0.5 J	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	1900	41	ND	140	10	NA	210	92	190	69	110	260	180	110	5.5	ND	210	28	70	110	16	0.87 J	130	560	660	200	40	190	71	53
Vinyl Chloride	ND	ND	ND	0.5	ND	NA	0.4 J	0.3 J	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method

detection limit

Table 5
 Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Quarterly Vapor Monitoring Results of SVE Wells
 Through First Quarter 2017

Sample ID	SVE 106D																													
Sample Date	12/21/09	03/31/10	06/09/10	09/16/10	12/08/10	03/30/11	06/28/11	09/06/11	10/14/11	02/10/12	05/11/12	09/11/12	12/05/12	01/15/13	05/16/13	08/27/13	11/08/13	01/30/14	04/10/14	07/29/14	10/02/14	01/12/15	05/07/15	08/12/15	10/29/15	01/13/16	04/21/16	09/13/16	11/16/16	01/17/17
Analysis by TO-15 (µg/m ³)																														
1,1,1-Trichloroethane	340	32	30	20	12	9	20	23	29	ND	11	26	18	ND	ND	27	25	5.8	6.3	14	28	ND	26	ND	ND	11	7.2	30	14	10
1,1-Dichloroethane	250	6.3	ND	5	2	5	4	3	3	ND	3.0	4.3	5.8	ND	ND	4.9	11	3.7	3.3	5.1	8.9	ND	2.6 J	ND	ND	2.7 J	13	6.8	21	17
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	0.5 J	0.7 J	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	NR	ND	ND	ND	ND	ND	ND	0.6 J	0.7 J	ND	ND	ND	ND	ND	ND	ND	2.5 J	ND	ND	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene	79	13	11	13	2	11	11	5	4	ND	4.1	7.1	8.2	ND	ND	10	15	2.8 J	3.9	8.4	15	ND	36	ND	ND	3.2	24	14	22	20
Tetrachloroethene	720	65	70	ND	13	19	41	8	66	ND	28	62	48	ND	1.3 J	50	58	16	17	22	60	ND	110	ND	1.4 J	33	27	57	33	24
trans-1,2-Dichloroethene	15	ND	ND	ND	ND	ND	0.6 J	0.8	0.9	ND	ND	ND	ND	ND	ND	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.63 J	1.3 J	2.1 J
Trichloroethene	3400	600	900	230	130	170	210	260	320	ND	180	380	300	ND	ND	460	440	160	84	170	370	0.56 J	71	1.6 J	ND	280	170	450	210	170
Vinyl Chloride	ND	1.6	ND	ND	ND	ND	ND	0.4 J	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method
 detection limit

Table 6
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
First Quarter 2017 Off-site Soil Vapor Monitoring of SVPMs

SVPM/ SVEW Location	Vacuum Reading (i.w.)	Valve Position (% open)
Monitoring Date:	1/17/17	1/17/17
BPS1-SVPM2001S	0.04	--
BPS1-SVPM2001I	0.08	--
BPS1-SVPM2001D	0.00	--
BPS1-SVPM2002S	0.06	--
BPS1-SVPM2002I	0.10	--
BPS1-SVPM2002D	0.12	--
BPS1-SVPM2003S	0.02	--
BPS1-SVPM2003I	0.04	--
BPS1-SVPM2003D	0.06	--
BPS1-SVPM2004S	0.02	--
BPS1-SVPM2004I	0.04	--
BPS1-SVPM2004D	0.03	--
BPS1-SVPM2006S	0.02	--
BPS1-SVPM2006I	0.02	--
BPS1-SVPM2006D	0.02	--
BPS1-SVPM2007S	0.02	--
BPS1-SVPM2007I	0.02	--
BPS1-SVPM2007D	0.01	--
SV-101I	3.8	40
SV-101D	16.5	50
SV-102I	5.4	40
SV-102D	10.0	50
SV-103I	2.8	40
SV-103D	15.0	40
SV-104I	3.8	40
SV-104D	5.5	40
SV-105I	2.6	40
SV-105D	5.5	40
SV-106I	4.0	40
SV-106D	19.5	50

Notes:

i.w. = inches of water column

SVEW = soil vapor extraction well

SVPM = soil vapor pressure monitor

* Indicates a positive pressure reading was measured as opposed to a negative pressure (vacuum) reading.

Vacuum readings for the SVPMs were measured using a portable Magnehelic® Differential Pressure Gauge 2000-0, with a range of 0-0.50 i.w. Vacuum readings for SVEWs were recorded from dedicated in-line pressure gauges.

Table 7
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Quarterly Off-site Soil Vapor Monitoring of SVPs
Through First Quarter 2017

SVP/ SVEW Location	Third Quarter 2012	Fourth Quarter 2012	First Quarter 2013		Second Quarter 2013	Third Quarter 2013	Fourth Quarter 2013	First Quarter 2014		Second Quarter 2014	Third Quarter 2014			Fourth Quarter 2014	First Quarter 2015		Second Quarter 2015	Third Quarter 2015	Fourth Quarter 2015	First Quarter 2016		Second Quarter 2016	Third Quarter 2016		Fourth Quarter 2016	First Quarter 2017	
	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.) Pre-Vapor Sample Collection	Vacuum Reading (i.w.) Post-Vapor Sample Collection	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.) Pre-Vapor Sample Collection	Vacuum Reading (i.w.) Post-Vapor Sample Collection	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.) Pre-Vapor Sample Collection	Vacuum Reading (i.w.) Post-Vapor Sample Collection	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.)	Vacuum Reading (i.w.) Pre-Vapor Sample Collection	Vacuum Reading (i.w.) Post-Vapor Sample Collection	Vacuum Reading (i.w.)	Vacuum Reading (i.w.) Pre-Vapor Sample Collection	Vacuum Reading (i.w.) Post-Vapor Sample Collection	Vacuum Reading (i.w.)	Vacuum Reading (i.w.) Pre-Vapor Sample Collection
Monitoring Date:	10/10/2012	12/6/2012	1/15/13	1/16/13	5/29/13	8/27/13	11/8/13	1/29/14	1/30/14	4/10/14	7/29/14	8/1/14	10/2/14	1/13/15	1/14/15	5/6/15	8/12/15	10/29/15	1/13/16	1/14/16	4/21/16	9/12/16	9/13/16	11/16/16	1/16/17	1/17/17	
BPS1-SVPM2001S	0.01	0.02	0.01	0.01	0.02	0.08	0.06	0.01	0.02	*0.02	*0.02	*0.02	0.09	0.01	0.08	0.02	0.08	0.07	0.03	0.08	0.06	0.04	0.04	0.06	0.04	0.04	
BPS1-SVPM2001I	0.01	0.02	0.02	0.01	0.10	0.12	0.10	0.04	0.04	0.12	*0.01	0.01	0.14	0.05	0.11	0.04	0.11	0.08	0.04	0.12	0.08	0.06	0.08	0.10	0.08	0.08	
BPS1-SVPM2001D	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	*0.01	*0.01	*0.01	*0.01	0.10	*0.01	*0.01	0.03	0.01*	0.01*	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	
BPS1-SVPM2002S	0.02	0.01	0.02	0.02	0.06	0.12	0.10	0.08	0.03	0.10	*0.01	0.01	0.09	*0.01	0.11	0.15	0.06	0.06	0.05	0.09	0.06	0.06	0.06	0.06	0.06	0.06	
BPS1-SVPM2002I	0.11	0.10	0.01	0.02	0.10	0.18	0.16	0.06	0.08	0.18	0.14	0.14	0.18	0.21	0.13	0.13	0.10	0.12	0.04	0.04	0.10	0.10	0.10	0.10	0.10	0.10	
BPS1-SVPM2002D	0.12	0.10	0.01	0.01	0.10	0.18	0.16	0.01	*0.01	*0.02	0.00	0.00	0.06	*0.01	0.14	0.13	0.14	0.13	0.13	0.18	0.06	0.12	0.14	0.12	0.14	0.12	
BPS1-SVPM2003S	0.01	0.01	0.03	0.02	0.04	*0.02	0.02	0.06	*0.01	*0.01	0.02	0.04	*0.01	*0.01	0.02	0.03	*0.01	0.04	0.04	0.04	0.02	0.04	0.02	0.04	0.02	0.02	
BPS1-SVPM2003I	0.04	0.02	0.03	0.04	0.10	0.04	0.04	0.02	0.02	0.04	0.02	0.04	*0.02	0.06	0.02	0.05	0.04	0.04	0.03	0.04	0.04	0.04	0.00	0.04	0.04	0.04	
BPS1-SVPM2003D	0.04	0.02	0.01	0.04	0.05	0.04	0.04	0.02	*0.01	0.04	0.04	*0.01	0.03	*0.01	0.02	0.04	0.05	0.04	0.04	0.05	0.04	0.04	0.06	0.06	0.04	0.06	
BPS1-SVPM2004S	0.04	0.04	0.03	0.02	0.03	0.04	0.02	0.04	0.00	0.04	*0.02	*0.01	*0.01	0.04	0.05	0.03	0.03	0.04	0.04	0.05	0.04	0.02	0.02	0.01	0.04	0.02	
BPS1-SVPM2004I	0.04	0.04	0.02	0.01	0.04	0.04	0.02	0.02	*0.01	0.04	*0.01	0.02	*0.01	0.10	0.05	0.05	*0.01	0.06	0.05	0.09	0.01	0.04	0.04	0.02	0.04	0.04	
BPS1-SVPM2004D	0.06	0.04	0.03	0.01	0.04	0.04	0.04	0.02	0.04	0.02	*0.01	0.02	0.08	0.04	0.06	0.02	0.05	0.05	0.04	0.12	0.04	0.06	0.04	0.04	0.04	0.03	
BPS1-SVPM2006S	0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.00	*0.01	0.02	0.02	0.01	*0.03	0.01	0.01	0.02	0.01	0.02	0.01	0.04	0.02	0.01	0.01	0.01	0.01	0.02	
BPS1-SVPM2006I	0.01	0.01	0.01	0.01	0.01	*0.01	*0.01	0.00	*0.01	0.01	0.01	0.01	0.00	0.02	0.01	0.02	0.01	0.02	0.03	0.05	0.02	0.01	0.01	0.00	0.01	0.02	
BPS1-SVPM2006D	0.02	0.02	0.01	0.01	0.02	*0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.01	0.02	0.02	0.04	0.04	0.01	0.01	0.00	0.01	0.02	
BPS1-SVPM2007S	0.01	0.01	0.01	0.01	0.04	0.00	*0.01	0.01	0.02	0.00	0.02	0.02	0.00	*0.01	0.02	0.01	0.02	0.02	0.04	0.04	0.04	0.02	0.02	0.00	0.01	0.02	
BPS1-SVPM2007I	0.01	0.01	0.01	0.01	0.04	*0.01	*0.02	0.02	0.01	*0.01	0.02	0.02	0.00	0.01	0.02	0.00	0.02	0.01	0.06	0.05	0.04	0.01	0.02	0.00	0.02	0.02	
BPS1-SVPM2007D	0.01	0.01	0.01	0.01	0.02	*0.01	0.04	0.02	0.02	*0.01	0.01	0.01	0.00	0.01	0.01	0.02	0.02	0.00	0.05	0.05	0.02	0.00	0.02	0.01	0.01	0.01	
SV-101I	5	7	10	--	6.0	5.1	4.8	5.0	--	7.1	8.0	--	4.5	6.0	--	7.0	4.8	3.6	7.5	7.0	2.9	2.4	2.4	4.5	3.3	3.8	
SV-101D	10	16	16	--	16.0	23.5	24.5	17.0	--	22.5	16.0	--	16.0	14.0	--	13.0	11.0	13.0	17.0	16.0	15.2	10.5	10.5	12.2	13.5	16.5	
SV-102I	5	3	16	--	3.0	6.9	6.5	4.4	--	8.7	5.0	--	6.0	6.5	--	2.0	2.4	3.4	4.5	5.0	4.4	4.6	4.6	4.1	5.8	5.4	
SV-102D	10	18	10	--	22.0	26.6	22.3	15.0	--	26.0	15.0	--	17.0	17.5	--	13.5	10.5	10.5	8.0	6.0	9.3	10.5	10.5	8.5	6.0	10.0	
SV-103I	5	2	20	--	4.0	3.5	3.1	6.6	--	5.6	2.0	--	3.0	4.5	--	6.1	4.0	3.7	6.5	6.5	2.5	2.2	2.2	2.0	2.8	2.8	
SV-103D	8	24	10	--	24.2	27.7	20.8	15.0	--	24.5	16.0	--	16.0	19.0	--	24.0	14.5	12.8	11.0	11.0	11.0	8.0	8.0	12.0	15.5	15.0	
SV-104I	8	6	20	--	4.0	3.5	3.1	10.0+	--	10.0+	10.0	--	10.0	10.0+	--	4.0	3.0	4.6	9.0	9.5	3.4	2.8	3.4	8.1	1.4	3.8	
SV-104D	11	10	10	--	10.0	9.0	8.0	10.0	--	11.5	6.0	--	6.0	10.5	--	16.0	14.0	8.9	10.0	10.3	12.0	14.0	14.0	8.5	6.0	5.5	
SV-105I	5	9	16	--	7.5	4.3	3.6	5.0	--	8.2	3.0	--	2.5	7.0	--	7.5	4.5	3.8	3.0	2.5	4.1	1.4	1.8	1.8	4.6	2.6	
SV-105D	8	7	8	--	8.0	5.0	4.0	15.5	--	30	6.0	--	3.0	23.5	--	28.5	11.5	12.0	5.5	5.5	13.0	10.0	10.0	7.0	6.5	5.5	
SV-106I	5	8	16	--	8.0	4.0	3.6	10.0+	--	10.0+	6.0	--	7.5	10.0+	--	6.2	2.4	3.7	1.5	5.5	5.4	3.2	3.2	2.7	4.0	4.0	
SV-106D	8	12	10	--	11.0	7.0	6.0	6.5	--	16.0	6.0	--	5.0	10.0	--	17.0	25.5	18.5	26.0	26.5	11.8	13.5	13.5	13.5	17.5	19.5	

Notes:
i.w. = inches of water column
SVEW = soil vapor extraction well
SVP = soil vapor pressure monitor
* Indicates a positive pressure reading was measured as opposed to a negative pressure (vacuum) reading.
Vacuum readings for the SVPs were measured using a portable Magnehelic® Differential Pressure Gauge 2000-0, with a range of 0-0.50 i.w. Vacuum readings for SVEWs were recorded from dedicated in-line vacuum gauges.

Table 8
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Annual Off-site Vapor Analytical Results Summary of SVPMs
January 2017

Sample ID	Screening Value ⁽¹⁾	SVPM 2001S	SVPM 2001I		SVPM 2001D	SVPM 2002S	SVPM 2002I	SVPM 2002D	SVPM 2003S	SVPM 2003I	SVPM 2003D	SVPM 2004S	SVPM 2004I	SVPM 2004D	SVPM 2006S		SVPM 2006I	SVPM 2006D	SVPM 2007S	SVPM 2007IR	SVPM 2007D
		01/16/17	01/16/17	1/16/2017 Duplicate	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	1/16/2017 Duplicate	01/16/17	01/16/17	01/16/17	01/16/17
Analysis by TO-15 (µg/m³)																					
1,1,1-Trichloroethane	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.78 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	--	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	--	ND	ND	ND	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	2.2 J	260	400	ND	ND	ND
Tetrachloroethene	1,000	ND	0.78 J	ND	1.9 J	ND	0.67 J	7.3	ND	0.59 J	ND	ND	ND	0.75 J	0.96 J	0.77 J	1.5 J	2.0 J	0.81 J	1.7 J	0.73 J
trans-1,2-Dichloroethene	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6	4.7	ND	ND	ND
Trichloroethene	250	ND	0.87 J	0.78 J	2.2 J	ND	2.4 J	20	ND	ND	ND	ND	ND	ND	ND	0.99 J	44	59	ND	ND	ND
Vinyl Chloride	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m³ = micrograms per cubic meter

J = Estimated value

ND = Not detected above laboratory method detection limit (MDL)

SVPM = soil vapor pressure monitor

Bolded value indicates detected analyte.

All samples were analyzed for site-specific VOCs by modified method TO-15. Site specific compound specified in the *Final Supplemental Offsite Soil Vapor Intrusion Monitoring Plan for the Soil Vapor Extraction Containment System Site 1 – Former Drum Marshalling Area, NWIRP Bethpage, New York* (Tetra Tech 2012).

(1) Screening Value is the New York State Department of Health (NYSDOH) air guideline value for subslab.

Table 9
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Off-site Vapor Analytical Results Summary of SVPMs
Through January 2017

Sample ID	Screening Value ⁽²⁾	SVPM 2001S							SVPM 2001I							SVPM 2001D											
		Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	1/16/2017 Duplicate	Oct 2008	01/15/13	1/15/13 - Duplicate	01/29/14	01/13/15	1/13/15 - Duplicate	01/14/16	09/12/16	9/12/16 - Duplicate	01/16/17	
Analysis by TO-15 (µg/m³)																											
1,1,1-Trichloroethane ⁽¹⁾	1,000	1,300	ND	ND	ND	ND	ND	ND	1,700	ND	ND	ND	ND	ND	ND	ND	1,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane ⁽¹⁾	--	11	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene ⁽¹⁾	--	9.2 J	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J
cis-1,2-Dichloroethene ⁽¹⁾	--	20	ND	ND	ND	ND	ND	ND	94	ND	ND	ND	ND	ND	ND	ND	73	ND	ND	ND	ND	ND	6.3	ND	ND	1.9 J	1.9 J
Tetrachloroethene ⁽¹⁾	1,000	4,000	ND	1.3 J	ND	ND	1.1 J	ND	5,000	ND	1.9 J	ND	1.2 J	3.6 J	0.78 J	ND	720	ND	ND	0.53 J	ND	ND	10	ND	2.3 J	1.9 J	
trans-1,2-Dichloroethene ⁽¹⁾	--	7.9 J	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene ⁽¹⁾	250	1,700	ND	ND	ND	ND	1.8 J	ND	2,700	ND	ND	ND	ND	5.0	0.87 J	0.78 J	1,500	ND	ND	ND	ND	ND	3.9 J	ND	4.0 J	2.2 J	
Vinyl Chloride ⁽¹⁾	--	NS	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 9
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Off-site Vapor Analytical Results Summary of SVPMS
Through January 2017

Sample ID	Screening Value ⁽²⁾	SVPM 2002S								SVPM 2002I								SVPM 2002D							
		Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	1/14/16 - Duplicate	09/12/16	01/16/17	Oct 2008	01/15/13	01/29/14	1/29/14 - Duplicate	01/13/15	01/14/16	09/12/16	01/16/17	Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	
Analysis by TO-15 (µg/m ³)																									
1,1,1-Trichloroethane ⁽¹⁾	1,000	21,000	ND	ND	ND	ND	ND	ND	ND	52,000	ND	ND	ND	ND	ND	ND	ND	27,000	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane ⁽¹⁾	--	170	ND	ND	ND	ND	ND	ND	ND	680	ND	ND	ND	ND	ND	ND	ND	490	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene ⁽¹⁾	--	220	ND	ND	ND	ND	ND	ND	ND	890	ND	ND	ND	ND	ND	ND	ND	480	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene ⁽¹⁾	--	49 J	ND	ND	ND	ND	ND	ND	ND	170	ND	ND	ND	ND	ND	ND	ND	130	ND	ND	ND	ND	ND	ND	
Tetrachloroethene ⁽¹⁾	1,000	420	ND	2.2 J	ND	ND	ND	0.94 J	ND	740	ND	1.8 J	ND	ND	ND	ND	0.67 J	48 J	ND	1.8 J	ND	ND	2.8 J	7.3	
trans-1,2-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene ⁽¹⁾	250	34,000	ND	1.1 J	ND	ND	ND	2.5 J	ND	89,000	12	1.8 J	1.4 J	ND	ND	ND	2.4 J	26,000	ND	ND	ND	ND	28	20	
Vinyl Chloride ⁽¹⁾	--	NS	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	

Table 9
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Off-site Vapor Analytical Results Summary of SVPMS
Through January 2017

Sample ID	Screening Value ⁽²⁾	SVPM 2003S							SVPM 2003I							SVPM 2003D							
		Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	
Analysis by TO-15 (µg/m ³)																							
1,1,1-Trichloroethane ⁽¹⁾	1,000	66	ND	ND	ND	ND	ND	ND	170 J	ND	ND	ND	ND	ND	ND	720 J	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	0.49 J	ND	ND	ND	ND	ND	ND	8.6	ND	ND	ND	ND	ND	0.78 J	
1,1-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	
Tetrachloroethene ⁽¹⁾	1,000	19	1.6 J	ND	ND	ND	2.7 J	ND	14	0.97 J	1.5 J	ND	0.89 J	5.5	0.59 J	8.9	ND	2.4 J	ND	ND	5.3	ND	
trans-1,2-Dichloroethene ⁽¹⁾	--	ND	2.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene ⁽¹⁾	250	20	4.9	ND	ND	ND	4.7	ND	82	ND	0.73 J	ND	ND	10	ND	710	ND	ND	ND	ND	10	ND	
Vinyl Chloride ⁽¹⁾	--	NS	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	

Table 9
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Off-site Vapor Analytical Results Summary of SVPMS
Through January 2017

Sample ID	Screening Value ⁽²⁾	SVPM 2004S							SVPM 2004I							SVPM 2004D							
		Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	
Analysis by TO-15 (µg/m ³)																							
1,1,1-Trichloroethane ⁽¹⁾	1,000	1.4	ND	ND	ND	ND	ND	ND	460	ND	ND	ND	ND	ND	ND	480	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	44	ND	ND	ND	ND	ND	ND	74	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	7.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane ⁽¹⁾	--	0.25 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethene ⁽¹⁾	1,000	1.8	1.0 J	1.3 J	ND	ND	2.2 J	ND	1,000	0.68 J	2.9 J	ND	0.83 J	2.0 J	ND	580	2.3 J	1.5 J	7.1	3.6 J	3.0 J	0.75 J	
trans-1,2-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene ⁽¹⁾	250	1.0	ND	ND	ND	ND	2.5 J	ND	550	ND	3.7 J	ND	ND	6.8	ND	600	ND	0.80 J	1.5 J	ND	6.5	ND	
Vinyl Chloride ⁽¹⁾	--	NS	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	

Table 9
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Off-site Vapor Analytical Results Summary of SVPMs
Through January 2017

Sample ID	Screening Value ⁽²⁾	SVPM 2006S								SVPM 2006I								SVPM 2006D								
		Oct 2008	01/16/13	01/30/14	01/13/15	01/14/16	09/12/16	01/16/17	1/16/2017 Duplicate	Oct 2008	01/16/13	01/30/14	01/13/15	01/14/16	1/14/16 - Duplicate	09/12/16	01/16/17	Oct 2008	01/16/13	01/30/14	01/13/15	01/14/16	09/12/16	9/12/16 - Duplicate	01/16/17	
Analysis by TO-15 (µg/m ³)																										
1,1,1-Trichloroethane ⁽¹⁾	1,000	12	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	35	ND	ND	ND	ND	ND	ND	0.59 J	ND
1,1-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	0.62	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene ⁽¹⁾	--	4.1	5.4	ND	ND	3.4	3.4	2.8	2.2 J	45	340	10	ND	260	280	260	260	89	190	22	180	320	320	390	400	
Tetrachloroethene ⁽¹⁾	1,000	14	1.0 J	1.4 J	ND	ND	3.8 J	0.96 J	0.77 J	29	1.9 J	1.5 J	ND	2.2 J	2.1 J	5.1	1.5 J	11	1.4 J	ND	1.7 J	1.9 J	3.9 J	5.3 J	2.0 J	
trans-1,2-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	4.6	ND	ND	3.4	3.6	4.0	3.6	2.7	2.2 J	ND	2.0 J	3.3	3.5	4.4	4.7	
Trichloroethene ⁽¹⁾	250	32	ND	0.80 J	ND	1.6 J	8.2	ND	0.99 J	71	47	2.9 J	ND	48	61	57	44	61	17	2.1 J	30	47	61 J	84 J	59	
Vinyl Chloride ⁽¹⁾	--	NS	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	

Table 9
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Historical Off-site Vapor Analytical Results Summary of SVPMs
Through January 2017

Sample ID	Screening Value ⁽²⁾	SVPM 2007S								SVPM 2007I/IR							SVPM 2007D									
		Oct 2008	01/16/13	01/30/14	01/14/15	1/14/15 - Duplicate	01/14/16	09/12/16	01/16/17	Oct 2008	01/16/13	01/30/14	01/14/15	01/14/16	09/13/16	01/16/17	Oct 2008	01/16/13	1/16/13 - Duplicate	01/30/14	1/30/14 - Duplicate	01/14/15	01/14/16	09/13/16	01/16/17	
Analysis by TO-15 (µg/m ³)																										
1,1,1-Trichloroethane ⁽¹⁾	1,000	150	ND	ND	ND	ND	ND	ND	ND	260	ND	ND	ND	ND	ND	ND	870	1.3 J	1.1 J	ND	ND	ND	0.87 J	ND	ND	
1,1-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0 J	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene ⁽¹⁾	--	0.26 J	ND	ND	ND	ND	ND	ND	ND	0.69 J	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethene ⁽¹⁾	--	ND	13	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND	4.4 J	ND	ND	ND	ND	9.8	11	2.0 J	ND	ND	3.1	ND	ND	
Tetrachloroethene ⁽¹⁾	1,000	13	1.1 J	1.4 J	ND	ND	0.89 J	6.8	0.81 J	25	1.8 J	ND	2.3 J	2.3 J	ND	1.7 J	5.3 J	2.2 J	1.8 J	1.2 J	ND	ND	2.0 J	ND	0.73J	
trans-1,2-Dichloroethene ⁽¹⁾	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene ⁽¹⁾	250	29	5.0	2.5 J	ND	ND	ND	3.9 J	ND	87	ND	ND	ND	1.9 J	9.8	ND	400	5.5 J	2.9 J	ND	ND	ND	2.7 J	8.2	ND	
Vinyl Chloride ⁽¹⁾	--	NS	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

µg/m³ = micrograms per cubic meter

J = Estimated value

ND = Not detected above laboratory method detection limit (MDL)

NS = Not sampled

SVPM = soil vapor pressure monitor

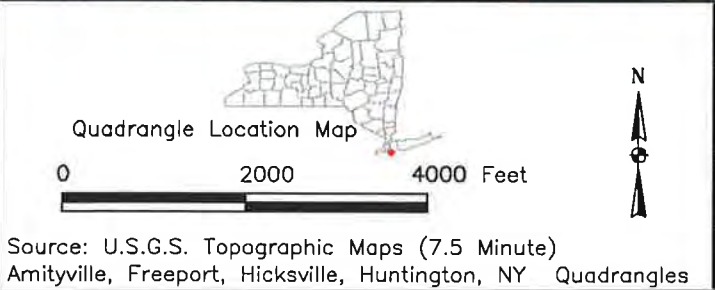
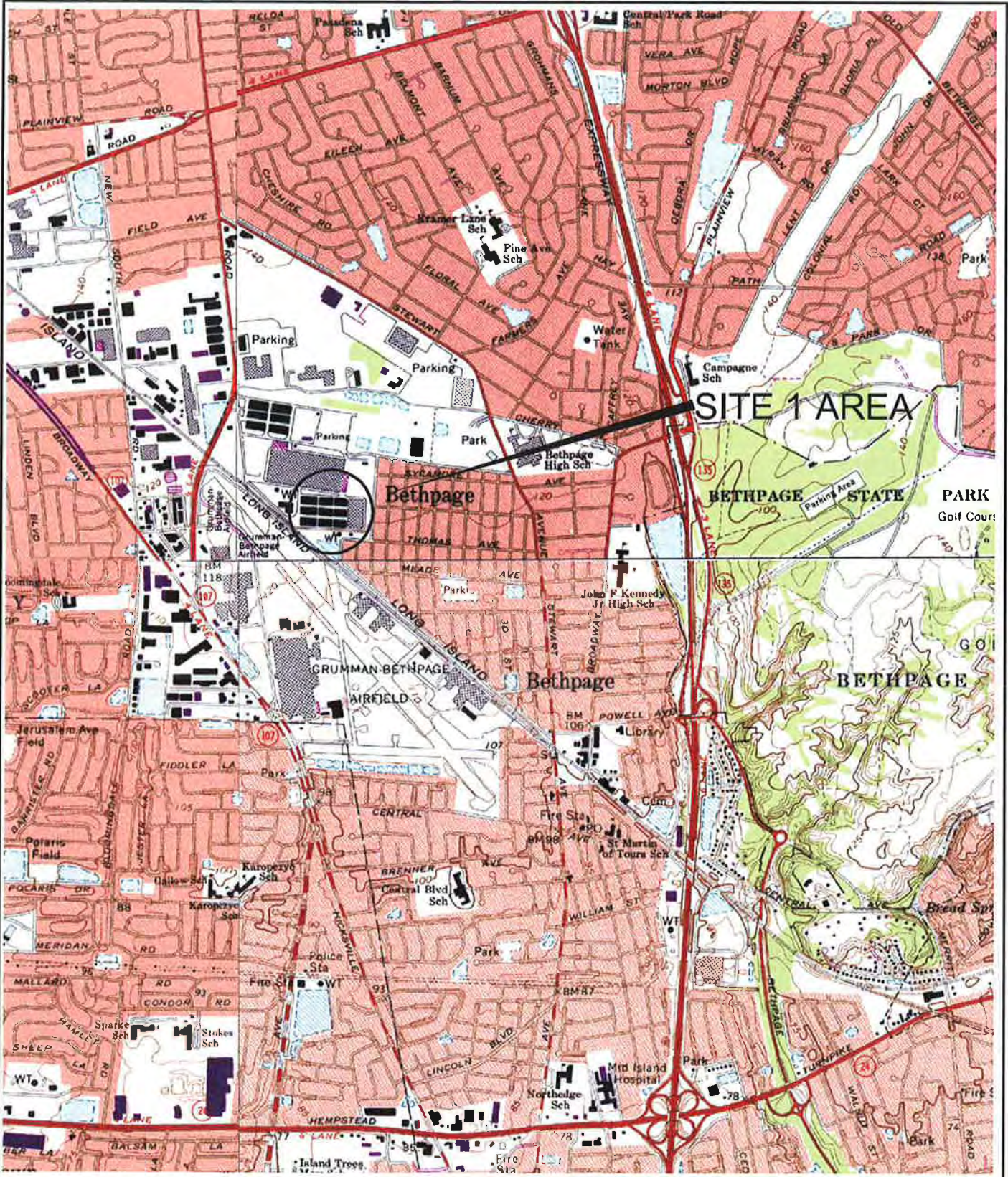
Bolded value indicates detected analyte.

(1) Site specific compound specified in the *Final Supplemental Offsite Soil Vapor Intrusion Monitoring Plan for the Soil Vapor Extraction Containment System Site 1 – Former Drum Marshalling Area, NWIRP Bethpage, New York* (Tetra Tech 2012).

(2) Screening Value is the New York State Department of Health (NYSDOH) air guideline value for subslab.

(3) October 2008 data taken from *Site 1 Phase II Soil Vapor Report* (Tetra Tech 2009).

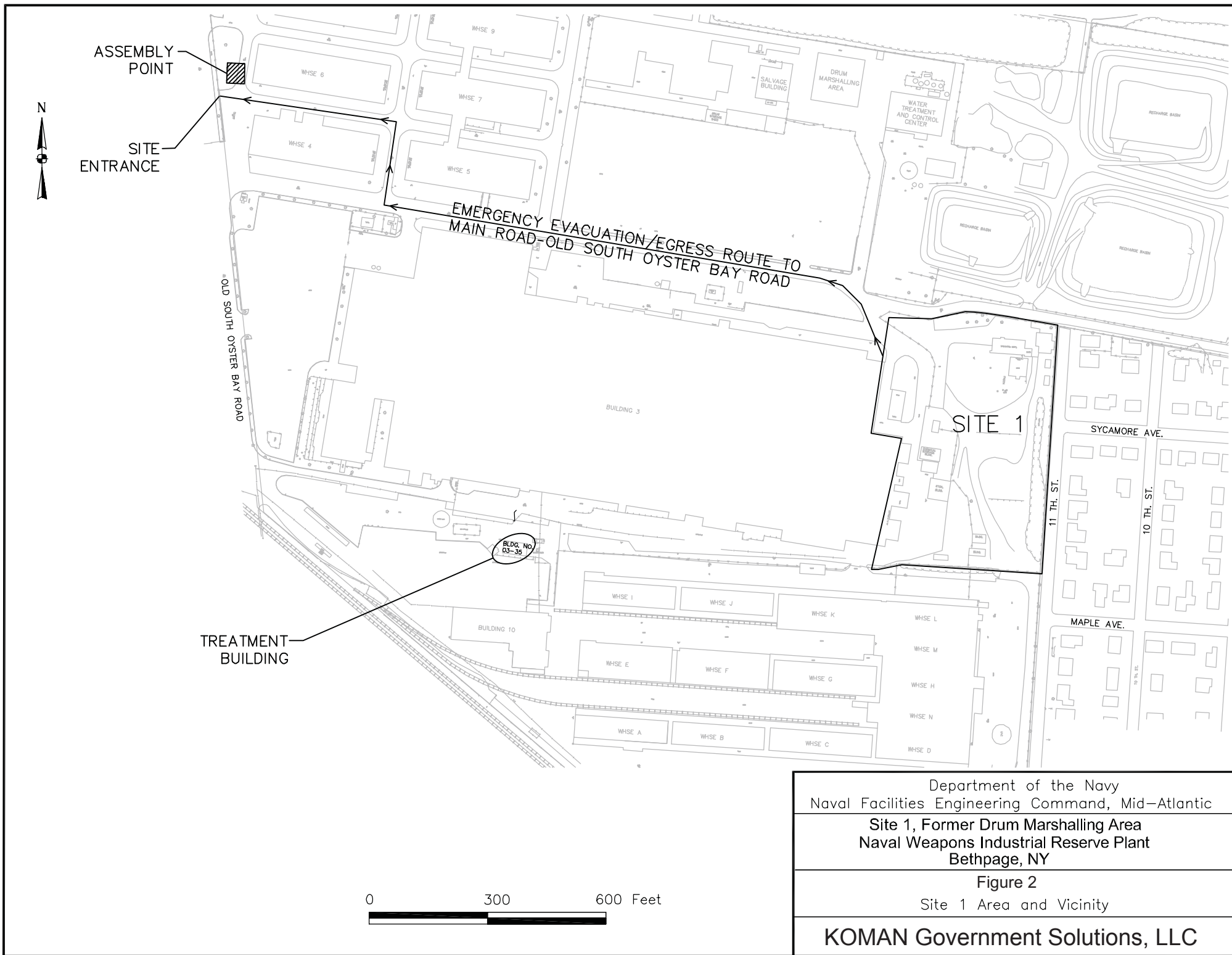
FIGURES



Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
Site 1, Former Drum Marshalling Area
Naval Weapons Industrial Reserve Plant
Bethpage, NY

Figure 1: Site Location Map

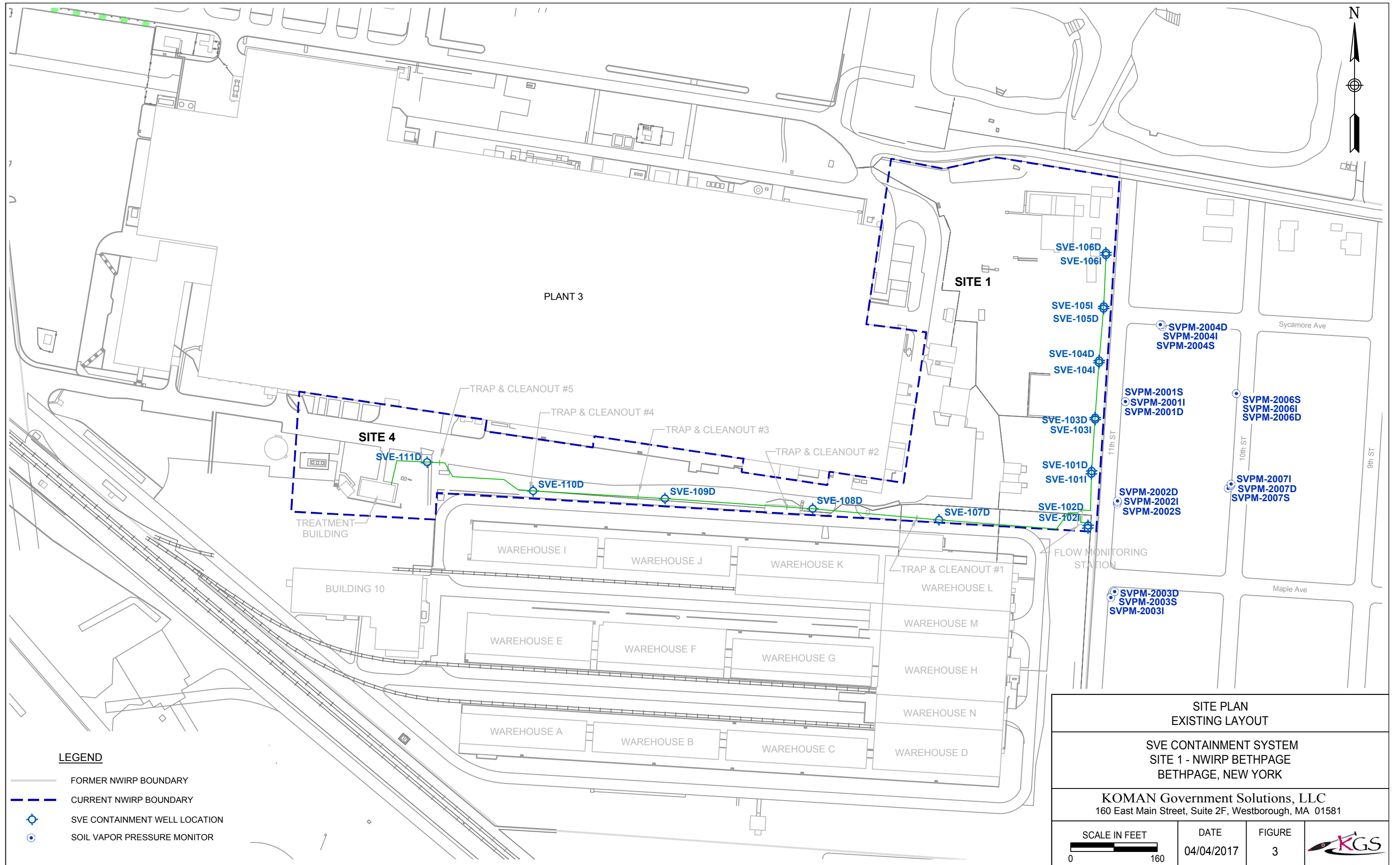
KOMAN Government Solutions, LLC



Department of the Navy
 Naval Facilities Engineering Command, Mid-Atlantic
 Site 1, Former Drum Marshalling Area
 Naval Weapons Industrial Reserve Plant
 Bethpage, NY

Figure 2
 Site 1 Area and Vicinity

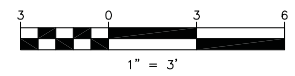
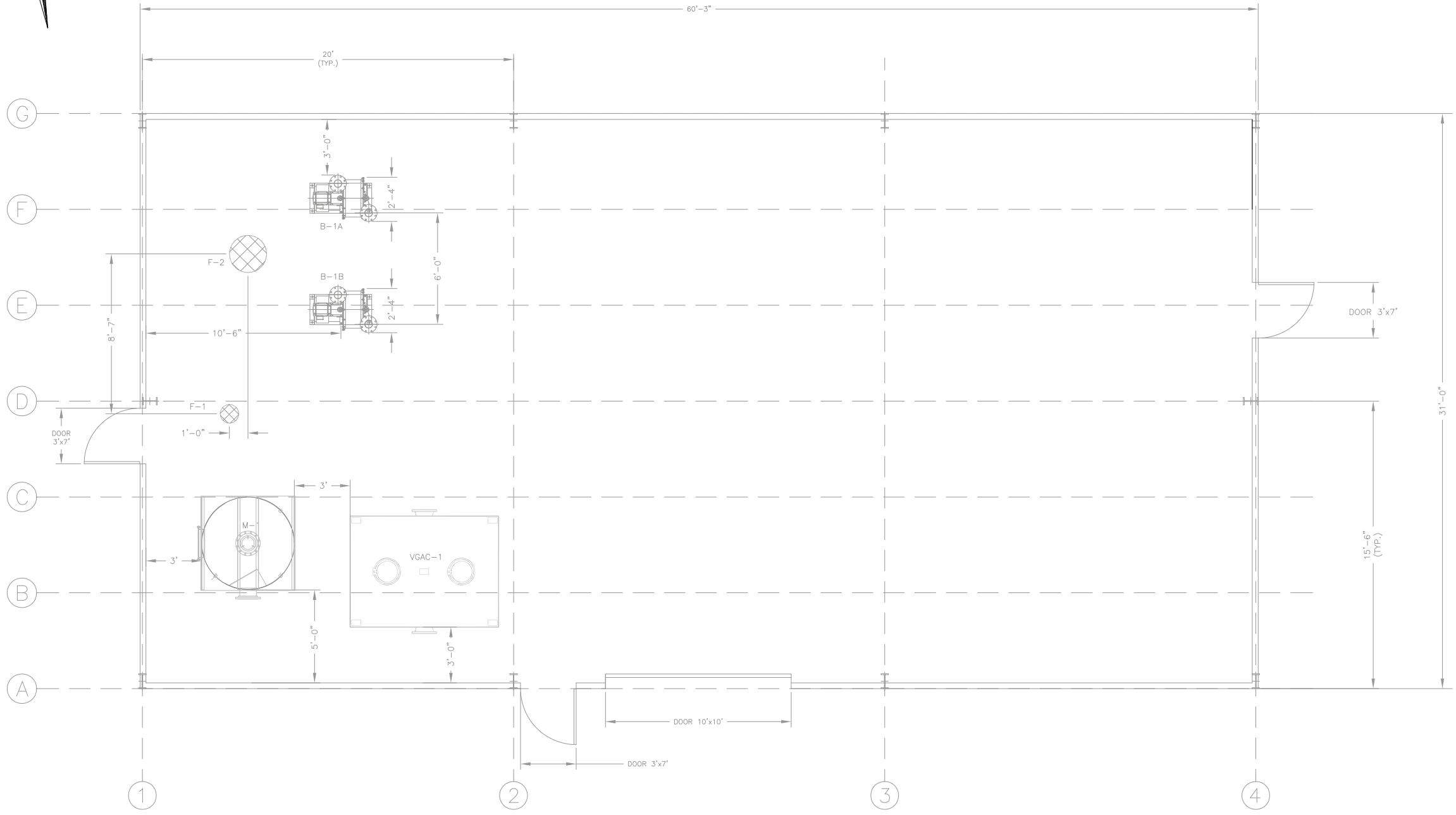
KOMAN Government Solutions, LLC



LEGEND

- FORMER NWIRP BOUNDARY
- - - CURRENT NWIRP BOUNDARY
- ⊕ SVE CONTAINMENT WELL LOCATION
- ⊙ SOIL VAPOR PRESSURE MONITOR

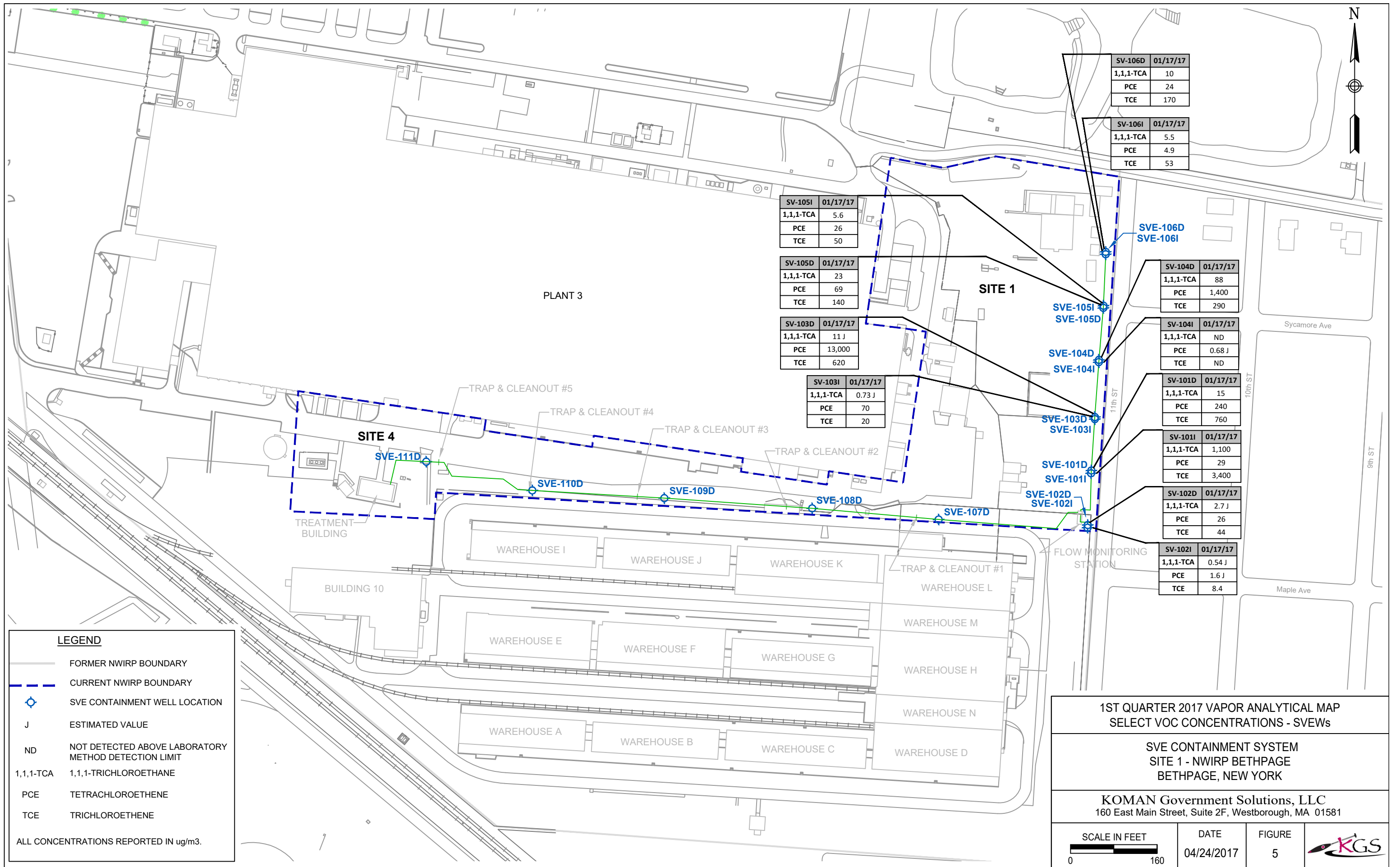
<p>SITE PLAN EXISTING LAYOUT</p>			
<p>SVE CONTAINMENT SYSTEM SITE 1 - NWIRP BETHPAGE BETHPAGE, NEW YORK</p>			
<p>KOMAN Government Solutions, LLC 160 East Main Street, Suite 2F, Westborough, MA 01581</p>			
<p>SCALE IN FEET</p>	<p>DATE</p> <p>04/04/2017</p>	<p>FIGURE</p> <p>3</p>	



NOTES:
 1. ALL MAN DOORS AND OVERHEAD DOORS ARE EXISTING. MAN DOORS ARE APPROXIMATELY 7'X3'. OVERHEAD DOOR IS APPROXIMATELY 10'X10'.

PROCESS EQUIPMENT LIST		
ITEM NUMBER	NUMBER REQUIRED	NAME/DESCRIPTION
M-1	1	MOISTURE SEPARATOR -CONFIGURATION: VERTICAL, CYLINDRICAL -MATERIAL OF CONSTRUCTION: CARBON STEEL EPOXY INTERIOR COATING, PAINT EXTERIOR COATING -CAPACITY: 400 GALLON CONDENSATE COLLECTION -DIMENSIONS: 5 FT DIA X 6 FEET HT, 718 GALLON
F-1	1	MAKE-UP AIR FILTER -CONFIGURATION: INTAKE FILTER/SILENCER COMBINATION HOUSING -MATERIAL OF CONSTRUCTION: CARBON STEEL, CORROSION RESISTANCE COATING -CAPACITY: 500 CFM AT 20 IW, 4 INCH FLANGED CONNECTION
F-2	1	BLOWER AIR FILTER -CONFIGURATION: INLINE VACUUM SERVICE FILTER -MATERIAL OF CONSTRUCTION: CARBON STEEL, CORROSION RESISTANCE COATING -CAPACITY: 1,200 CFM AT 35 IW, 10 INCH FLANGED CONNECTION
B-1A, B-1B	2	SOIL VAPOR EXTRACTION BLOWER -CONFIGURATION: HORIZONTAL CENTRIFUGAL -RATING: 600 CFM AT 40 IW -MOTOR: 7.5 HP, 480V, 3PH, 60HZ ODP
VGAC-1	1	VAPOR-PHASE GRANULAR ACTIVATED CARBON -CONFIGURATION: RECTANGULAR TANK -MATERIAL OF CONSTRUCTION: CARBON STEEL EPOXY INTERIOR COATING, EPOXY EXTERIOR COATING -RATING: 1,600 CFM AT 3 IW, 2,000 CFM AT 6 IW -CAPACITY: 5,000 LBS CARBON -DIMENSIONS: 6' X 8' FOOTPRINT, 6' 8" HT

TETRA TECH ENGINEERING CORPORATION PC	
SUBMITTED BY: _____ (PRINT NAME) DATE: _____ (DATE) DRAWN BY: _____ (PRINT NAME) DATE: _____ (DATE) CHECKED BY: _____ (PRINT NAME) DATE: _____ (DATE) OFFICE IN CHARGE: _____ APPROVED: _____ DATE: _____	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND, MID-ATLANTIC NAVAL WEAPONS INDUSTRIAL RESERVE PLANT BETHPAGE, NEW YORK SITE 1, FORMER DRUM MARSHALLING AREA SOIL VAPOR EXTRACTION CONTAINMENT SYSTEM LAYOUT PLAN EPMFC FOR COMMANDER, NAVFAC
APPROVED: _____ DATE: _____ PREP BY: DLB DATE: 10-14-09 DESCRIPTION: ISSUED FOR CONSTRUCTION	SEAL AREA SAT TO: _____ DATE: _____ CODE I.D. NO.: _____ SCALE: AS SHOWN SPEC. NO.: _____ CONSTR. CONTR. NO.: N62473-10-D-3211 NAVFAC DRAWING NO.: Figure 4
THIS DRAWING PRODUCED ON AUTOCAD DO NOT REVISE MANUALLY THIS DOCUMENT IS THE PROPERTY OF NAVAL FACILITIES ENGINEERING COMMAND, PREPARED BY TETRA TECH ENGINEERING CORPORATION PC, AND IS PROVIDED UPON THE CONDITION THAT IT WILL NOT BE REPRODUCED, COPIED, OR ISSUED TO A THIRD PARTY, AND WILL BE USED SOLELY FOR THE ORIGINAL INTENDED PURPOSE AND SOLELY FOR THE EXECUTION OR REVIEW OF THE ENGINEERING CONSTRUCTION OF THE PROJECT. IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.	
SHEET OF DIS. SH. NO. 1-3	



SV-106D	01/17/17
1,1,1-TCA	10
PCE	24
TCE	170

SV-106I	01/17/17
1,1,1-TCA	5.5
PCE	4.9
TCE	53

SV-105I	01/17/17
1,1,1-TCA	5.6
PCE	26
TCE	50

SV-105D	01/17/17
1,1,1-TCA	23
PCE	69
TCE	140

SV-103D	01/17/17
1,1,1-TCA	11 J
PCE	13,000
TCE	620

SV-103I	01/17/17
1,1,1-TCA	0.73 J
PCE	70
TCE	20

SV-104D	01/17/17
1,1,1-TCA	88
PCE	1,400
TCE	290

SV-104I	01/17/17
1,1,1-TCA	ND
PCE	0.68 J
TCE	ND

SV-101D	01/17/17
1,1,1-TCA	15
PCE	240
TCE	760

SV-101I	01/17/17
1,1,1-TCA	1,100
PCE	29
TCE	3,400

SV-102D	01/17/17
1,1,1-TCA	2.7 J
PCE	26
TCE	44

SV-102I	01/17/17
1,1,1-TCA	0.54 J
PCE	1.6 J
TCE	8.4

LEGEND

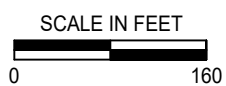
- FORMER NWIRP BOUNDARY
- - - CURRENT NWIRP BOUNDARY
- ⊕ SVE CONTAINMENT WELL LOCATION
- J ESTIMATED VALUE
- ND NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMIT
- 1,1,1-TCA 1,1,1-TRICHLOROETHANE
- PCE TETRACHLOROETHENE
- TCE TRICHLOROETHENE

ALL CONCENTRATIONS REPORTED IN ug/m3.

1ST QUARTER 2017 VAPOR ANALYTICAL MAP
SELECT VOC CONCENTRATIONS - SVEWS

SVE CONTAINMENT SYSTEM
SITE 1 - NWIRP BETHPAGE
BETHPAGE, NEW YORK

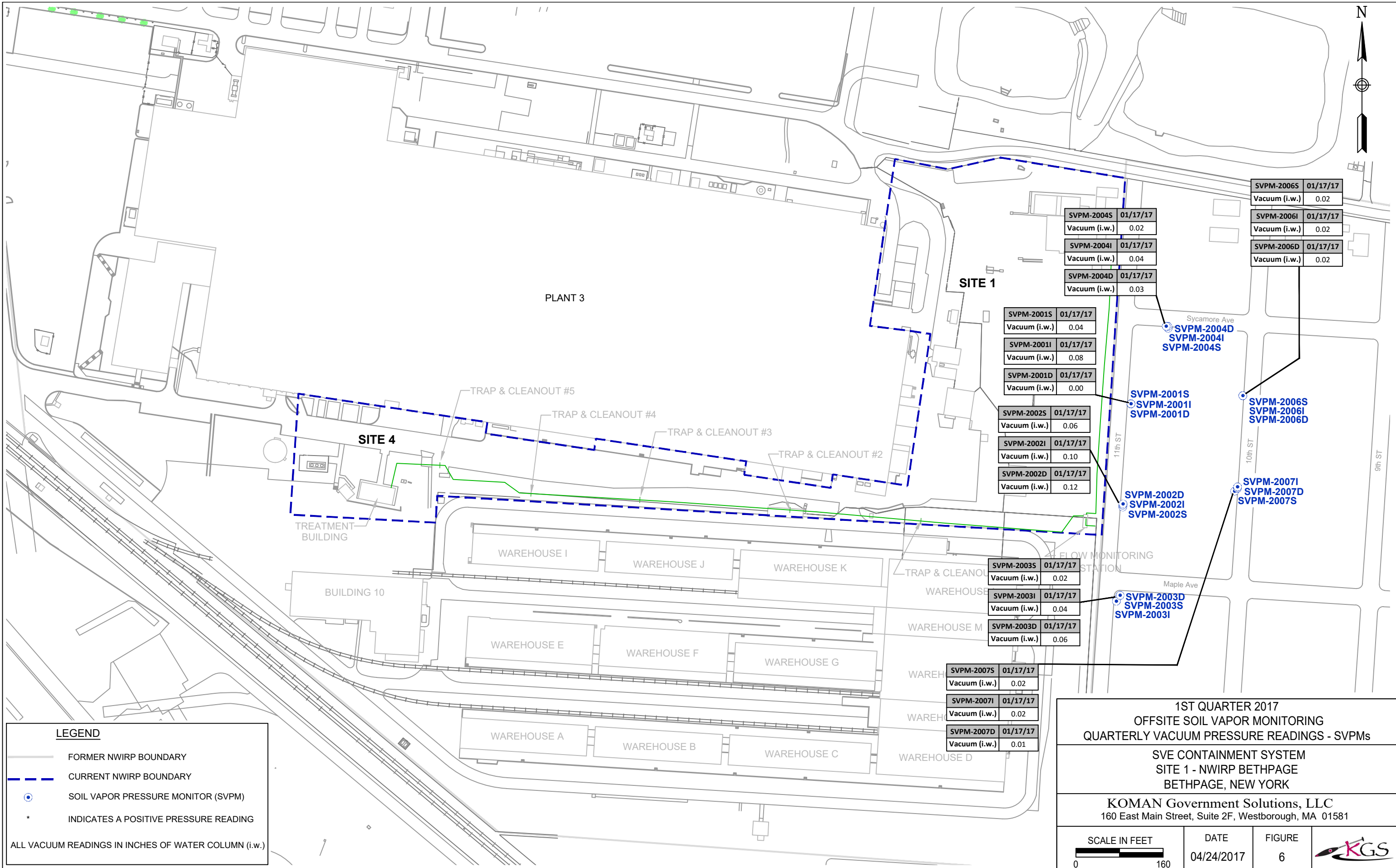
KOMAN Government Solutions, LLC
160 East Main Street, Suite 2F, Westborough, MA 01581



DATE
04/24/2017

FIGURE
5





LEGEND

- FORMER NWIRP BOUNDARY
- - - CURRENT NWIRP BOUNDARY
- SOIL VAPOR PRESSURE MONITOR (SVPM)
- * INDICATES A POSITIVE PRESSURE READING

ALL VACUUM READINGS IN INCHES OF WATER COLUMN (i.w.)

SVPM-2004S	01/17/17	Vacuum (i.w.)	0.02
SVPM-2004I	01/17/17	Vacuum (i.w.)	0.04
SVPM-2004D	01/17/17	Vacuum (i.w.)	0.03
SVPM-2001S	01/17/17	Vacuum (i.w.)	0.04
SVPM-2001I	01/17/17	Vacuum (i.w.)	0.08
SVPM-2001D	01/17/17	Vacuum (i.w.)	0.00
SVPM-2002S	01/17/17	Vacuum (i.w.)	0.06
SVPM-2002I	01/17/17	Vacuum (i.w.)	0.10
SVPM-2002D	01/17/17	Vacuum (i.w.)	0.12
SVPM-2003S	01/17/17	Vacuum (i.w.)	0.02
SVPM-2003I	01/17/17	Vacuum (i.w.)	0.04
SVPM-2003D	01/17/17	Vacuum (i.w.)	0.06
SVPM-2007S	01/17/17	Vacuum (i.w.)	0.02
SVPM-2007I	01/17/17	Vacuum (i.w.)	0.02
SVPM-2007D	01/17/17	Vacuum (i.w.)	0.01
SVPM-2006S	01/17/17	Vacuum (i.w.)	0.02
SVPM-2006I	01/17/17	Vacuum (i.w.)	0.02
SVPM-2006D	01/17/17	Vacuum (i.w.)	0.02
SVPM-2006S	01/17/17	Vacuum (i.w.)	0.02
SVPM-2006I	01/17/17	Vacuum (i.w.)	0.02
SVPM-2006D	01/17/17	Vacuum (i.w.)	0.02
SVPM-2007I	01/17/17	Vacuum (i.w.)	0.02
SVPM-2007D	01/17/17	Vacuum (i.w.)	0.01
SVPM-2007S	01/17/17	Vacuum (i.w.)	0.02

**1ST QUARTER 2017
OFFSITE SOIL VAPOR MONITORING
QUARTERLY VACUUM PRESSURE READINGS - SVPMs**

**SVE CONTAINMENT SYSTEM
SITE 1 - NWIRP BETHPAGE
BETHPAGE, NEW YORK**

KOMAN Government Solutions, LLC
160 East Main Street, Suite 2F, Westborough, MA 01581

SCALE IN FEET 0 160	DATE 04/24/2017	FIGURE 6	
------------------------	--------------------	-------------	--

APPENDIX A

**NYSDEC AIR DISCHARGE LIMIT
DOCUMENTATION**

From: Steven Scharf [<mailto:sxscharf@gw.dec.state.ny.us>]
Sent: Thursday, October 06, 2011 11:57 AM
To: Fly, Lora B CIV NAVFAC MIDLANT, IPTNE
Cc: John Swartwout; Walter Parish; Steven Karpinski; John cofman; klumpe@steelequities.com;
David.Brayack@tnus.com
Subject: NWIRP Plant 3 Site 1 SVE Modification Plan

Lora,

The New York State Department of Environmental Conservation (NYSDEC), in conjunction with the New York State Department of Health (NYSDOH), have reviewed the Navy Submittal entitled:

" Modification to existing Soil vapor Extraction (SVE) Containment System At Site 1-Former Drum Marshaling Area, Installation of Soil Vapor Extraction Wells SVE-107D to 111D, NWIRP Bethpage, September 2011."

Based on this Departmental review, and the follow up October 6, 2011 tele-conference, this modification work plan is acceptable and can be used for immediate implementation. The NWIRP Site 1 SVE system has redundant blowers and overcapacity, even with the additional SVE wells being added. should the Navy and the new property owner, Steel Equities Inc., for the former Plant 3 complex come to agreement to add SVE piping from the former Plant 3, this would be acceptable. Appropriate plans, consistent with the covenants and restrictions to the deed, should be submitted accordingly.

A letter will not follow this e-mail. If you have any questions, please contact me directly.

Electronic Documentation Information
NWIRP Bethpage
130003B-OU1-OMM
FOIable
Region 1, Nassau (C), Oyster Bay (T)

Thanks,

Steven M. Scharf, P.E.
Project Engineer
New York State Department of
Environmental Conservation
Division of Environmental Remediation
Remedial Action, Bureau A
625 Broadway
Albany, NY 12233-7015
(518)402-9620
Fax: (518)402-9022

4.0 PROPOSED REVISIONS TO VAPOR DISCHARGE GOALS

To determine the continued need for off gas treatment, the quality of the influent vapor stream was initially estimated based on soil gas results and compared to discharge goals. Vapor phase treatment was initially installed for the system based on projected relatively high concentrations of several chemicals including 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and tetrachloroethene (PCE). Since the December 2009 startup, VOC concentrations in the extracted vapors have decreased by approximately 98.3 percent and it is uncertain as to whether vapor phase treatment is still required. Presented below are the December 2009 and March 2011 influent (untreated) VOC concentrations and loadings and current discharge goals.

Parameter	December 2009 Influent VOCs		March 2011 Influent VOCs ($\mu\text{g}/\text{m}^3$)		Current Discharge Goal (pound/hour) ⁽³⁾
	Concentration ($\mu\text{g}/\text{m}^3$) ¹	Loading (pound/hour) ¹	Concentration ($\mu\text{g}/\text{m}^3$)	Loading (pound/hour) ⁽²⁾	
TCA	13,000	0.074	150	0.00023	0.13
TCE	42,000	0.26	460	0.00069	0.07
PCE	7,900	0.029	440	0.00066	0.0009

⁽¹⁾ Initial VOC Loading Rates are from baseline data taken in December 2009. The flow meter was not yet installed when this data was taken, so a value of 385 CFM (flow rate in January 2010) was used to estimate system loading.

⁽²⁾ Calculated using a flow rate of 400 CFM.

⁽³⁾ Current discharge goals were based on calculated VOC concentrations using soil gas data from the fence line investigation, a flow rate of 600 CFM, and an assumed treatment efficiency for each VOC of 80 to 90 percent. Based on this evaluation, the existing treatment is no longer required to meet discharge goals.

A DAR-1 Model Analysis was then conducted using the August 2010 influent vapor concentrations of TCA, TCE, and PCE at a flow rate of 500 CFM. The calculated results were then used to back calculate proposed discharge goals based on an allowance of 100% of the annual guideline concentrations (see Appendix E). The following table provides a summary of the proposed discharge goals.

Parameter	August 2010 Influent VOCs (370 CFM – Actual)		Percent AGC Using August 2010 Data	Proposed Discharge Goals	
	Concentration ($\mu\text{g}/\text{m}^3$)	Loading (pounds/ hour)		Concentration at 500 CFM ($\mu\text{g}/\text{m}^3$)	Loading (pounds/ hour)
TCA	868	0.0009	0.0004	None ¹	225
TCE	4,170	0.0039	19.4	11,000	0.02
PCE	5,780	0.0057	14.2	22,000	0.04

⁽¹⁾ Greater than 100,000 $\mu\text{g}/\text{m}^3$.

AGC - Annual Guideline Concentration

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Remedial Action A
625 Broadway, 11th Floor
Albany, New York 12233-7015
Phone: (518) 402-9625 • Fax: (518) 402-9022



Website: www.dec.state.ny.us

February 5, 2010

Lora Fly, Project Manager
Naval Facilities Engineering Command-Midlant
9742 Maryland Avenue
Norfolk, VA 23511-3095

RE: Naval Weapons Industrial Research Plant(NWIRP)
Site-Bethpage, NYSDEC No. 1-30-003B.

Dear Ms. Fly:

Tetra Tech FW, on behalf of the Department of the Navy (Navy), has submitted the enclosed New York State Department of Environmental Conservation (NYSDEC) Division of Air Resources (DAR) Air Permit Application as a permit equivalent. This DAR Air permit equivalent is for the soil vapor extraction system at Site 1 of Plant 3 of the former Naval Weapons Industrial Reserve Plant (NWIRP) site in Bethpage, NY. The NYSDEC Division of Environmental Remediation (DER) has reviewed the permit equivalent and, by means of this letter approves the Site 1 remedy air discharge for immediate operation.

The NWIRP Site 1 SVE system utilizes the reasonably available control technology (RACT) with activated carbon. The air discharge will be periodically monitored at start up and will be added for routine monitoring in the operation, maintenance and monitoring (OMM) plan, to be submitted shortly for Departmental review.

If you have any questions, please contact me at your earliest convenience at (518)402-9620.

Sincerely,

Steven M. Scharf, P.E.
Project Engineer
Division of Environmental Remediation
Bureau of Remedial Action A

Enclosure

cc/w/enc: J. Swartwout/S. Scharf/File
W. Parish, Region 1 NYSDEC
A. J. Shah, Region 1 NYSDEC
S. Patselos, Tetra Tech FW
J. Cofman, Northrop Grumman

E docs: Region 1, Nassau, Oyster Bay (T): NWIRP Bethpage 130003B-OUI-OMM

New York State Department of Environmental Conservation Air Permit Application



DEC ID									
-	-	-	-	-	-	-	-	-	-

APPLICATION ID														
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OFFICE USE ONLY									
/	/	/	/	/	/	/	/	/	/

Section I - Certification

Title V Certification	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information [required pursuant to 6 NYCRR 201-6.3(d)] I believe the information is, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.	
Responsible Official	Title
Signature	Date <u> </u> / <u> </u> / <u> </u>

State Facility Certification	
I certify that this facility will be operated in conformance with all provisions of existing regulations.	
Responsible Official	Title
Signature	Date <u> </u> / <u> </u> / <u> </u>

Section II - Identification Information

Title V Facility Permit <u>N/A</u> <input type="checkbox"/> New <input type="checkbox"/> Significant Modification <input type="checkbox"/> Renewal <input type="checkbox"/> Minor Modification	<input type="checkbox"/> Administrative Amendment General Permit Title: _____	State Facility Permit <u>N/A</u> <input type="checkbox"/> New <input type="checkbox"/> Modification General Permit Title: _____
<input checked="" type="checkbox"/> Application involves construction of new facility		<input type="checkbox"/> Application involves construction of new emission unit(s)

Owner/Firm			
Name <u>US Navy / NAVFAC Midlant</u>			
Street Address <u>9742 Maryland Ave, Bldg Z-144</u>			
City <u>Norfolk</u>	State <u>VA</u>	Country <u>US</u>	Zip <u>23511-3095</u>
Owner Classification <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Corporation/Partnership	<input type="checkbox"/> State <input type="checkbox"/> Individual	<input type="checkbox"/> Municipal	Taxpayer ID
Facility			<input type="checkbox"/> Confidential
Name <u>Naval Weapons Industrial Reserve Plant (NWIRP) Site 1</u>			
Location Address <u>Bethpage</u>			
<input type="checkbox"/> City / <input checked="" type="checkbox"/> Town / <input type="checkbox"/> Village <u>Oyster Bay, New York</u>			Zip <u>11714</u>
Project Description			<input type="checkbox"/> Continuation Sheet(s)
<u>Vapor phase granular activated carbon to remove VOCs from soil gas</u>			

Owner/Firm Contact Mailing Address			
Name (Last, First, Middle Initial) <u>Fly, Lora</u>		Phone No. <u>(757) 444-0781</u>	
Affiliation <u>Department of the Navy</u>		Title <u>Remedial PM</u>	
Street Address <u>9742 Maryland Ave, Bldg Z-144</u>		Fax No. ()	
City <u>Norfolk</u>	State <u>VA</u>	Country <u>US</u>	Zip <u>23511-3095</u>
Facility Contact Mailing Address			
Name (Last, First, Middle Initial)		Phone No. ()	
Affiliation		Title	
Street Address		Fax No. ()	
City	State	Country	Zip

**New York State Department of Environmental Conservation
Air Permit Application**



DEC ID									
-	-	-	-	-	-	-	-	-	-

Section III - Facility Information

Classification						
<input type="checkbox"/> Hospital	<input type="checkbox"/> Residential	<input type="checkbox"/> Educational/Institutional	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Industrial	<input type="checkbox"/> Utility	

Affected States (Title V Only) <i>N/A</i>						
<input type="checkbox"/> Vermont	<input type="checkbox"/> Massachusetts	<input type="checkbox"/> Rhode Island	<input type="checkbox"/> Pennsylvania	Tribal Land: _____		
<input type="checkbox"/> New Hampshire	<input type="checkbox"/> Connecticut	<input type="checkbox"/> New Jersey	<input type="checkbox"/> Ohio	Tribal Land: _____		

SIC Codes									
9999									

Facility Description		<input type="checkbox"/> Continuation Sheet(s)
<i>Soil vapor remediation by SVE followed by vapor phase GAC.</i>		

Compliance Statements (Title V Only) <i>N/A</i>	
<p>I certify that as of the date of this application the facility is in compliance with all applicable requirements: <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If one or more emission units at the facility are not in compliance with all applicable requirements at the time of signing this application (the 'NO' box must be checked), the noncomplying units must be identified in the "Compliance Plan" block on page 8 of this form along with the compliance plan information required. For all emission units at this facility that are operating <u>in compliance</u> with all applicable requirements complete the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> This facility will continue to be operated and maintained in such a manner as to assure compliance for the duration of the permit, except those units referenced in the compliance plan portion of Section IV of this application. <input type="checkbox"/> For all emission units, subject to any applicable requirements that will become effective during the term of the permit, this facility will meet all such requirements on a timely basis. <input type="checkbox"/> Compliance certification reports will be submitted at least once a year. Each report will certify compliance status with respect to each requirement, and the method used to determine the status. 	

Facility Applicable Federal Requirements <i>N/A</i>								<input type="checkbox"/> Continuation Sheet(s)	
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

Facility State Only Requirements								<input type="checkbox"/> Continuation Sheet(s)	
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

New York State Department of Environmental Conservation Air Permit Application



DEC ID											
-											

Section III - Facility Information (continued)

Facility Compliance Certification										N/A	<input type="checkbox"/> Continuation Sheet(s)
Rule Citation											
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause		
<input type="checkbox"/> Applicable Federal Requirement	<input type="checkbox"/> Capping		CAS No.			Contaminant Name					
<input type="checkbox"/> State Only Requirement											
Monitoring Information											
<input type="checkbox"/> Ambient Air Monitoring	<input type="checkbox"/> Work Practice Involving Specific Operations					<input type="checkbox"/> Record Keeping/Maintenance Procedures					
Description											
Work Practice		Process Material				Reference Test Method					
Type	Code	Description									
Parameter				Manufacturer Name/Model No.							
Code		Description									
Limit		Limit Units									
Upper	Lower	Code	Description								
Averaging Method			Monitoring Frequency			Reporting Requirements					
Code	Description		Code	Description		Code	Description				

Facility Emissions Summary					<input checked="" type="checkbox"/> Continuation Sheet(s)
CAS No.	Contaminant Name	PTE		Actual (lbs/yr)	
		(lbs/yr)	Range Code		
NY075 - 00 - 5	PM-10				
NY075 - 00 - 0	PARTICULATES				
7446 - 09 - 5	SULFUR DIOXIDE				
NY210 - 00 - 0	OXIDES OF NITROGEN				
630 - 08 - 0	CARBON MONOXIDE				
7439 - 92 - 1	LEAD				
NY998 - 00 - 0	VOC	1,222			
NY100 - 00 - 0	HAP	1,813			
00071 - 55 - 6	1,1,1-Trichloroethane (Methyl Chloroform)	591			
00127 - 18 - 4	Tetrachloroethylene	8			
00079 - 01 - 6	Trichloroethylene	1,181			
00075 - 34 - 3	1,1-Dichloroethane	11			
00075 - 35 - 4	1,1-Dichloroethylene (Vinylidene Chloride)	16			

New York State Department of Environmental Conservation
Air Permit Application



DEC ID											
-	-	-	-	-	-	-	-	-	-	-	-

Section III - Facility Information

Facility Emissions Summary (continuation)				
CAS No.	Contaminant Name	PTE		Actual (lbs/yr)
		(lbs/yr)	Range Code	
00540-59-0	cis-1,2-Dichloroethene	5		
00107-06-2	1,2-Dichloroethane	0		
00156-60-5	trans-1,2-Dichloroethene	0		
00075-01-4	Vinyl Chloride	0		
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

New York State Department of Environmental Conservation
Air Permit Application



DEC ID									
-	-	-	-	-	-	-	-	-	-

Section IV - Emission Unit Information

Emission Unit Description										<input type="checkbox"/> Continuation Sheet(s)
EMISSION UNIT	1	-	0	0	E	U	1	Effluent from first soil vapor extraction blower (BL-1)		
Vapor Phase Granular Activated Carbon Unit. The emission point is stack COST-2										

Building					<input type="checkbox"/> Continuation Sheet(s)	
Building	Building Name			Length (ft)	Width (ft)	Orientation
03-35	Treatment Building			60	40	0

Emission Point							<input type="checkbox"/> Continuation Sheet(s)
EMISSION PT.	COST-2						
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section		
	36	6	8	70	Length (in)	Width (in)	
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal	
	1,000			03-35	100'		

EMISSION PT.						
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section	
					Length (in)	Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal

Emission Source/Control								<input type="checkbox"/> Continuation Sheet(s)
Emission Source		Date of Construction	Date of Operation	Date of Removal	Control Type		Manufacturer's Name/Model No.	
ID	Type				Code	Description		
BL1/2	1				048	Granular Act. Carbon	Tetrasolv Filtration	
Design Capacity		Design Capacity Units			Waste Feed		Waste Type	
Code	Description	Code	Description	Code	Description	Code	Description	
Emission Source		Date of Construction	Date of Operation	Date of Removal	Control Type		Manufacturer's Name/Model No.	
ID	Type				Code	Description		
Design Capacity		Design Capacity Units			Waste Feed		Waste Type	
Code	Description	Code	Description	Code	Description	Code	Description	

New York State Department of Environmental Conservation
Air Permit Application



DEC ID									
-									

Section IV - Emission Unit Information (continued)

Process Information						<input type="checkbox"/> Continuation Sheet(s)	
EMISSION UNIT 4-00EU1					PROCESS SVE		
Description							
<p>The Soil Vapor Extraction System will consist of 12 SVE wells (6 intermediate and 6 deep), a moisture separator, and 2 soil vapor extraction blowers (BL-1 and BL-2) which both vent to a vapor phase granular activated carbon unit for treatment prior to discharge from stack 00ST2. The VGAC unit will be a 5,000 pound unit filled with Tetrasolv Virgin Carbon. The VGAC unit has been designed to operate nominally at 600 cfm, with a maximum of 1,000 cfm.</p>							
Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units				
	Quantity/Hr	Quantity/Yr	Code	Description			
<input type="checkbox"/> Confidential <input checked="" type="checkbox"/> Operating at Maximum Capacity <input type="checkbox"/> Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location			
	Hrs/Day	Days/Yr					
		24	365	03-35	Main		
Emission Source/Control Identifier(s)							
BL-1	BL-2						
EMISSION UNIT					PROCESS		
Description							
Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units				
	Quantity/Hr	Quantity/Yr	Code	Description			
<input type="checkbox"/> Confidential <input type="checkbox"/> Operating at Maximum Capacity <input type="checkbox"/> Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location			
	Hrs/Day	Days/Yr					
Emission Source/Control Identifier(s)							

New York State Department of Environmental Conservation
Air Permit Application



DEC ID									
-	-	-	-	-	-	-	-	-	-

Section IV - Emission Unit Information (continued)

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements										<input type="checkbox"/> Continuation Sheet(s)	
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause		
-															
-															
-															
-															

Emission Unit	Emission Point	Process	Emission Source	Emission Unit State Only Requirements										<input type="checkbox"/> Continuation Sheet(s)	
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause		
-															
-															
-															
-															

Emission Unit Compliance Certification										<input type="checkbox"/> Continuation Sheet(s)
Rule Citation										
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause	
G	NYCRR	212	-							
<input type="checkbox"/> Applicable Federal Requirement			<input type="checkbox"/> State Only Requirement			<input type="checkbox"/> Capping				
Emission Unit	Emission Point	Process	Emission Source	CAS No.			Contaminant Name			
1-00EU1	00ST3	SVE		00079-01-6			Trichloroethylene			
Monitoring Information										
<input type="checkbox"/> Continuous Emission Monitoring <input checked="" type="checkbox"/> Intermittent Emission Testing <input type="checkbox"/> Ambient Air Monitoring					<input type="checkbox"/> Monitoring of Process or Control Device Parameters as Surrogate <input type="checkbox"/> Work Practice Involving Specific Operations <input type="checkbox"/> Record Keeping/Maintenance Procedures					
Description										
Monthly grab samples analyzed for VOCs from the VGAC unit influent and effluent										
Work Practice		Process Material				Reference Test Method				
Type	Code	Description								
		Parameter				Manufacturer Name/Model No.				
Code		Description								
23		Concentration								
Limit			Limit Units							
Upper		Lower		Code	Description					
36,000				255	micrograms per cubic meter					
Averaging Method			Monitoring Frequency			Reporting Requirements				
Code	Description		Code	Description		Code	Description			
01	Instantaneous		05	Monthly		10	Upon Request			

New York State Department of Environmental Conservation
Air Permit Application



DEC ID									
-	-	-	-	-	-	-	-	-	-

Section IV - Emission Unit Information (continued)

Determination of Non-Applicability (Title V Only) <i>N/A</i>										<input type="checkbox"/> Continuation Sheet(s)	
Rule Citation											
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause		
Emission Unit		Emission Point		Process	Emission Source		<input type="checkbox"/> Applicable Federal Requirement <input type="checkbox"/> State Only Requirement				
Description											
Rule Citation											
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause		
Emission Unit		Emission Point		Process	Emission Source		<input type="checkbox"/> Applicable Federal Requirement <input type="checkbox"/> State Only Requirement				
Description											
Process Emissions Summary										<input checked="" type="checkbox"/> Continuation Sheet(s)	
EMISSION UNIT		1-00EU1						PROCESS		SVE	
CAS No.	Contaminant Name			% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined			
00071-55-6	1,1,1-Trichloroethane					80	0.34	02			
PTE			Standard Units	PTE How Determined		Actual					
(lbs/hr)	(lbs/yr)	(standard units)				(lbs/hr)	(lbs/yr)				
0.07	591			02							
EMISSION UNIT		1-00EU1						PROCESS		SVE	
CAS No.	Contaminant Name			% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined			
00127-18-4	Tetrachloroethylene					80	0.00	02			
PTE			Standard Units	PTE How Determined		Actual					
(lbs/hr)	(lbs/yr)	(standard units)				(lbs/hr)	(lbs/yr)				
0.00 8RT	8			02							
EMISSION UNIT		1-00EU1						PROCESS		SVE	
CAS No.	Contaminant Name			% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined			
00079-01-6	Trichloroethylene					80	0.67	02			
PTE			Standard Units	PTE How Determined		Actual					
(lbs/hr)	(lbs/yr)	(standard units)				(lbs/hr)	(lbs/yr)				
0.13	1,181			02							

New York State Department of Environmental Conservation
Air Permit Application



DEC ID									
-									

Section IV - Emission Unit Information (continued)

EMISSION UNIT		Emission Unit Emissions Summary				<input checked="" type="checkbox"/> Continuation Sheet(s)
i-00EU1						
CAS No.		Contaminant Name				
00075-34-3		1,1-Dichloroethane				
ERP (lbs/yr)	PTE Emissions			Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
	BRT	11				
CAS No.		Contaminant Name				
00075-35-4		1,1-Dichloroethylene (Vinylidene Chloride)				
ERP (lbs/yr)	PTE Emissions			Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
	BRT	16				
CAS No.		Contaminant Name				
00540-59-0		cis-1,2-Dichloroethane				
ERP (lbs/yr)	PTE Emissions			Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
	BRT	5				
CAS No.		Contaminant Name				
00107-06-2		1,2-Dichloroethane				
ERP (lbs/yr)	PTE Emissions			Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
	BRT	BRT				

Compliance Plan N/A												<input type="checkbox"/> Continuation Sheet(s)
For any emission units which are <u>not in compliance</u> at the time of permit application, the applicant shall complete the following												
Consent Order		Certified progress reports are to be submitted every 6 months beginning ___ / ___ / ___										
Emission Unit	Process	Emission Source	Applicable Federal Requirement									
			Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
Remedial Measure / Intermediate Milestones										R/I	Date Scheduled	

New York State Department of Environmental Conservation
Air Permit Application



DEC ID									
-	-	-	-	-	-	-	-	-	-

Section IV - Emission Unit Information

EMISSION UNIT		Emission Unit Emissions Summary (continuation)			
1-00E41					
CAS No.		Contaminant Name			
00156-60-5		trans-1,2-Dichloroethene			
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
BRT		BRT			
CAS No.		Contaminant Name			
00075-01-4		Vinyl Chloride			
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
BRT		BRT			
CAS No.		Contaminant Name			
-					
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
CAS No.		Contaminant Name			
-					
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
CAS No.		Contaminant Name			
-					
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
CAS No.		Contaminant Name			
-					
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
CAS No.		Contaminant Name			
-					
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	
CAS No.		Contaminant Name			
-					
ERP (lbs/yr)	PTE Emissions		Actual		
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	

**New York State Department of Environmental Conservation
Air Permit Application**



DEC ID									
-									

Section IV - Emission Unit Information (continued)

Request for Emission Reduction Credits						<input type="checkbox"/> Continuation Sheet(s)			
EMISSION UNIT									
Emission Reduction Description									
Contaminant Emission Reduction Data									
Baseline Period						Reduction			
/ / to / /						Date		Method	
						/ /			
CAS No.			Contaminant Name			ERC (lbs/yr)			
						Netting		Offset	
-									
-									
-									
Facility to Use Future Reduction									
Name					APPLICATION ID				
					- / - / / / / / / / / / /				
Location Address									
<input type="checkbox"/> City / <input type="checkbox"/> Town / <input type="checkbox"/> Village					State			Zip	

Use of Emission Reduction Credits						<input type="checkbox"/> Continuation Sheet(s)			
EMISSION UNIT									
Proposed Project Description									
Contaminant Emissions Increase Data									
CAS No.			Contaminant Name			PEP (lbs/yr)			
-									
Statement of Compliance									
<input type="checkbox"/> All facilities under the ownership of this "ownership/firm" are operating in compliance with all applicable requirements and state regulations including any compliance certification requirements under Section 114(a)(3) of the Clean Air Act Amendments of 1990, or are meeting the schedule of a consent order.									
Source of Emission Reduction Credit - Facility									
Name					PERMIT ID				
					- / - / / / / / / / / / /				
Location Address									
<input type="checkbox"/> City / <input type="checkbox"/> Town / <input type="checkbox"/> Village					State			Zip	
Emission Unit		CAS No.		Contaminant Name		ERC (lbs/yr)			
						Netting		Offset	
-		-							
-		-							
-		-							



DEC ID										
-										

Supporting Documentation	
<input type="checkbox"/> P.E. Certification (form attached)	
<input type="checkbox"/> List of Exempt Activities (form attached)	
<input type="checkbox"/> Plot Plan	
<input type="checkbox"/> Methods Used to Determine Compliance (form attached)	
<input checked="" type="checkbox"/> Calculations	
<input type="checkbox"/> Air Quality Model (____ / ____ / ____)	
<input type="checkbox"/> Confidentiality Justification	
<input type="checkbox"/> Ambient Air Monitoring Plan (____ / ____ / ____)	
<input type="checkbox"/> Stack Test Protocols/Reports (____ / ____ / ____)	
<input type="checkbox"/> Continuous Emissions Monitoring Plans/QA/QC (____ / ____ / ____)	
<input type="checkbox"/> MACT Demonstration (____ / ____ / ____)	
<input type="checkbox"/> Operational Flexibility: Description of Alternative Operating Scenarios and Protocols	
<input type="checkbox"/> Title IV: Application/Registration	
<input type="checkbox"/> ERC Quantification (form attached)	
<input type="checkbox"/> Use of ERC(s) (form attached)	
<input type="checkbox"/> Baseline Period Demonstration	
<input type="checkbox"/> Analysis of Contemporaneous Emission Increase/Decrease	
<input type="checkbox"/> LAER Demonstration (____ / ____ / ____)	
<input type="checkbox"/> BACT Demonstration (____ / ____ / ____)	
<input type="checkbox"/> Other Document(s):	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)
	(____ / ____ / ____)

APPENDIX B

DATA VALIDATION REPORT AND VALIDATED DATA SUMMARY - SVPMs

DATA USABILITY SUMMARY REPORT (DUSR)
VOLATILE ORGANIC COMPOUNDS
USEPA Region II –Data Validation

Project Name: Naval Weapons Industrial Reserve Plant, Site 1
Location: 999 Oyster Bay Rd, Bethpage, NY
Project Number: 2601-007
SDG #: 1701254
Client: KOMAN Government Solutions, LLC.
Date: 02/15/2017
Laboratory: Air Toxics Ltd.
Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for twenty (20) air samples and 2 (two) field blank samples were analyzed for Volatiles by TO-15 in accordance to NYSDEC, Analytical Services Protocol (ASP) Format.
2. The samples were collected on 01/16-17/2017. The samples were submitted to Air Toxics Ltd., Folsom, CA on 01/17/2017 for analysis.
3. The USEPA Region-II SOP # HW-31, Revision 4, October 2006, Validating Air Samples Volatile Organic Analysis of Ambient Air in Canister by Method TO-15 was used in evaluating the Volatiles data in this summary report.
4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (see discussion below).

Samples:

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Collection Date	Analysis	Matrix	Sample Status
BPS1-SVPM2001S-011617	1701254-01A	1/16/2017	VOA	Air	
BPS1-SVPM2001I-011617	1701254-02A	1/16/2017	VOA	Air	
BPS1-SVPM2001D-011617	1701254-03A	1/16/2017	VOA	Air	
BPS1-SVPM2002S-011617	1701254-04A	1/16/2017	VOA	Air	
BPS1-SVPM2002I-011617	1701254-05A	1/16/2017	VOA	Air	
BPS1-SVPM2002D-011617	1701254-06A	1/16/2017	VOA	Air	
BPS1-SVPM2003S-011617	1701254-07A	1/16/2017	VOA	Air	
BPS1-SVPM2003I-011617	1701254-08A	1/16/2017	VOA	Air	
BPS1-SVPM2003D-011617	1701254-09A	1/16/2017	VOA	Air	
BPS1-SVPM2004S-011617	1701254-10A	1/16/2017	VOA	Air	
BPS1-SVPM2004I-011617	1701254-11A	1/16/2017	VOA	Air	
BPS1-SVPM2004D-011617	1701254-12A	1/16/2017	VOA	Air	
BPS1-SVPM2006S-011617	1701254-13A	1/16/2017	VOA	Air	
BPS1-SVPM2006I-011617	1701254-14A	1/16/2017	VOA	Air	
BPS1-SVPM2006D-011617	1701254-15A	1/16/2017	VOA	Air	
BPS1-SVPM2007S-011617	1701254-16A	1/16/2017	VOA	Air	
BPS1-SVPM2007IR-011717	1701254-17A	1/17/2017	VOA	Air	
BPS1-SVPM2007D-011717	1701254-18A	1/17/2017	VOA	Air	
BPS1-DUP01-011617	1701254-19A	1/16/2017	VOA	Air	Field Duplicate of sample BPS1-SVPM2002D-011617
BPS1-DUP02-011617	170125420A	1/16/2017	VOA	Air	Field Duplicate of sample BPS1-SVPM2006D-011617
BPS1-FB2001-011617	1701254-21A	1/16/2017	VOA	Air	Field Blank
BPS1-FB2002-011717	1701254-22A	1/17/2017	VOA	Air	Field Blank

Sample Conditions/Problems:

1. The Traffic Reports/Chain-of-Custody Records, Sampling Report and/or Laboratory Case Narrative did indicate that there were the following problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data:
 - a. "Sample BPS1-SVPM2001S-011617 was inadvertently pressurized to 15 psi, rather than 5 psi. The analysis proceeded and the reporting limits have been adjusted accordingly." No qualifications were required.
 - b. "There was a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC)

for sample BPS1-SVPM2001S-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002D-011617, and BPS1-SVPM2006S-011617. A leak test indicated that the valve was functioning properly.” No qualifications were required.

- c. “Despite the use of flow controllers for sample collection, the final canister vacuum for samples BPS1-SVPM2001D-011617 and BPS1-SVPM2002D-011617 were measured at ambient pressure at the laboratory.” No qualifications were required.

Holding Times:

1. All air samples were analyzed within the method holding time for summa canisters (30 days). No qualifications were required.

GC/MS Tuning:

1. All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications were required.

Initial Calibration:

1. Initial calibration curve analyzed on 01/16/2017 (msda.i) exhibited acceptable %RSDs ($\leq 30.0\%$) for all compounds and average RRF values (≥ 0.050) for all compounds. No qualifications were required.

Continuing Calibration Verification (CCV):

1. CCV analyzed on 01/23/2017 @ 11:35AM (msda.i) exhibited acceptable %Ds ($\leq 30.0\%$) for all compounds. No qualifications were required.
2. CCV analyzed on 01/24/2017 @ 09:05AM (msda.i) exhibited acceptable %Ds ($\leq 30.0\%$) for all compounds. No qualifications were required.

Surrogates:

1. All surrogates %REC values for all water samples and associated QC were within the laboratory control limits. No qualifications were required.

Internal Standard (IS) Area Performance:

1. All samples exhibited acceptable area count for all three internal standards within the QC limits. No qualifications were required.

Method Blank (MB), Storage Blank (SB), Trip Blank (TB), Field Blank (FB), Rinsate Blank (RB), Equipment Blank (EB) and Canister Certification:

- Method Blank (1701254-23A) analyzed on 01/23/17 was free of contamination with the following exception(s):

Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
MB 1701254-23A	Acetone	2.2	11	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617	U
MB 1701254-23A	Benzene	0.24	1.2	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617	U U None U None U U U U U U U

- Method Blank (1701254-23B) analyzed on 01/24/17 was free of contamination. No qualifications were required.
- Field Blank (BPS1-FB2001-011617) (1701254-21A) analyzed on 01/24/2017 was free of contamination with the following exception(s):

Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
BPS1-FB2001-011617	2,2,4-Trimethylpentane	0.74	3.7	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617,	None U U None None None None None None None

Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
				BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	None None None U None None None None None
BPS1-FB2001-011617	Acetone	6.7	33.5	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	None None None None None None None None None None None None U U U U U U
BPS1-FB2001-011617	Benzene	1.1	5.5	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	None None None None None None None None None None None None U U U U U U
BPS1-FB2001-011617	Chloromethane	1.7	8.5	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617,	None



Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
				BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	
BPS1-FB2001-011617	Cyclohexane	0.51	2.55	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	None None None None None U None None None None None None None None None None None U None
BPS1-FB2001-011617	Ethanol	10	50	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617	U U U U U U U U U U U U U U U U U U U



Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
				BPS1-DUP01-011617	U
BPS1-FB2001-011617	Freon 11	1.2	6	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	U U
BPS1-FB2001-011617	Freon 12	2.7	13.5	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	U None U None None U U None
BPS1-FB2001-011617	Heptane	0.93	4.65	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617,	None None U None None None None U None None None None None



Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
				BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	None None None None None None
BPS1-FB2001-011617	Hexane	1.4	7	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	None None None None None None None U None None None None None None None None None None None None U None
BPS1-FB2001-011617	M,p-Xylene	0.87	4.35	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617, BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	U U U None U U U U None U U U U U U U U U U U U U U
BPS1-FB2001-011617	Toluene	2.4	12	BPS1-SVPM2001S-011617, BPS1-SVPM2001I-011617, BPS1-SVPM2001D-011617, BPS1-SVPM2002S-011617, BPS1-SVPM2002I-011617, BPS1-SVPM2002D-011617, BPS1-SVPM2003S-011617,	U U None U U U U



Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
				BPS1-SVPM2003I-011617, BPS1-SVPM2003D-011617, BPS1-SVPM2004S-011617, BPS1-SVPM2004I-011617, BPS1-SVPM2004D-011617, BPS1-SVPM2006S-011617, BPS1-SVPM2006I-011617, BPS1-SVPM2006D-011617, BPS1-SVPM2007S-011617, BPS1-DUP01-011617 BPS1-DUP01-011617	U U U U U U U U U U U

4. Field Blank (BPS1-FB2002-011717) (1701254-22A) analyzed on 01/25/2017 was free of contamination with the following exception(s):

Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
BPS1-FB2002-011617	1,2,4-Trimethylbenzene	0.53	2.65	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	None
BPS1-FB2002-011617	2,2,4-Trimethylpentane	1.2	6	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	None
BPS1-FB2002-011617	2-Butanone	2.2	11	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	None
BPS1-FB2002-011617	2-Propanol	1.7	8.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U None
BPS1-FB2002-011617	Acetone	9.7	48.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U
BPS1-FB2002-011617	Benzene	1.8	9	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U
BPS1-FB2002-011617	Cyclohexane	0.67	3.35	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	None
BPS1-FB2002-011617	Ethanol	9.9	49.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U
BPS1-FB2002-011617	Ethyl Benzene	0.53	2.65	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U
BPS1-FB2002-011617	Freon 11	1.7	8.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U
BPS1-FB2002-011617	Freon 12	2.5	12.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U
BPS1-FB2002-011617	Heptane	1.1	5.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	None
BPS1-FB2002-011617	Hexane	1.7	8.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	None
BPS1-FB2002-	M,p-Xylene	1.5	7.5	BPS1-SVPM2007IR-011717	U

Sample ID	Compound	Result (µg/m3)	Action Level (5x)* (µg/m3)	Sample(s) Affected	Action
011617				BPS1-SVPM2007D-011717	
BPS1-FB2002-011617	Toluene	2.7	13.5	BPS1-SVPM2007IR-011717 BPS1-SVPM2007D-011717	U

Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD):

1. Laboratory Control Samples (1701254-25A/AA) were analyzed on 01/23/2017. All %RECs and RPDs were within the laboratory control limits. No qualifications were required.
2. Laboratory Control Samples (1701254-25B/BB) were analyzed on 01/24/2017. All %RECs and RPDs were within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample BPS1-DUP01-011617 (1701254-19A) was collected as field duplicate for sample BPS1-SVPM2002D-011617 (1701254-06A). RPDs were within the control limits (<30%) with the following exception(s):

Field Sample	Compound	Analytical Method	Result	Units	Field Duplicate	Result	Units	RPD	Qualifier
BPS1-SVPM2002D-011617	1,2-Dichloroethane	TO-15	ND	µg/m ³	BPS1-DUP01-011617	0.59	µg/m ³	NC	UJ/J
BPS1-SVPM2002D-011617	2,2,4-Trimethylpentane	TO-15	0.54	µg/m ³	BPS1-DUP01-011617	0.50	µg/m ³	7.7	None
BPS1-SVPM2002D-011617	2-Butanone	TO-15	ND	µg/m ³	BPS1-DUP01-011617	1.7	µg/m ³	NC	UJ/J
BPS1-SVPM2002D-011617	2-Propanol	TO-15	1.6	µg/m ³	BPS1-DUP01-011617	1.8	µg/m ³	11.8	None
BPS1-SVPM2002D-011617	Chloroform	TO-15	4.6	µg/m ³	BPS1-DUP01-011617	3.2	µg/m ³	35.9	J
BPS1-SVPM2002D-011617	Ethyl Benzene	TO-15	ND	µg/m ³	BPS1-DUP01-011617	0.35	µg/m ³	NC	UJ/J
BPS1-SVPM2002D-011617	Methylene Chloride	TO-15	1.6	µg/m ³	BPS1-DUP01-011617	ND	µg/m ³	NC	J/UJ
BPS1-SVPM2002D-011617	o-Xylene	TO-15	ND	µg/m ³	BPS1-DUP01-011617	0.62	µg/m ³	NC	UJ/J
BPS1-SVPM2002D-011617	Tetrachloroethene	TO-15	7.3	µg/m ³	BPS1-DUP01-011617	5.5	µg/m ³	28.1	None
BPS1-SVPM2002D-011617	Tetrahydrofuran	TO-15	1.5	µg/m ³	BPS1-DUP01-011617	1.4	µg/m ³	6.9	None
BPS1-SVPM2002D-011617	Trichloroethene	TO-15	20	µg/m ³	BPS1-DUP01-011617	16	µg/m ³	22.2	None

2. Sample BPS1-DUP02-011617 (1701254-20A) was collected as field duplicate for sample BPS1-SVPM2006D-011617 (1701254-15A). RPDs were within the control limits (<30%) with the following exception(s):

Field Sample	Compound	Analytical Method	Result	Units	Field Duplicate	Result	Units	RPD	Qualifier
BPS1-SVPM2006D-011617	2-Propanol	TO-15	2.6	µg/m ³	BPS1-DUP02-011617	ND	µg/m ³	NC	J/UJ
BPS1-SVPM2006D-011617	Carbon Tetrachloride	TO-15	1.2	µg/m ³	BPS1-DUP02-011617	1.2	µg/m ³	0	None
BPS1-SVPM2006D-011617	Chloroform	TO-15	4.8	µg/m ³	BPS1-DUP02-011617	4.7	µg/m ³	2.1	None
BPS1-SVPM2006D-011617	Cis-1,2-Dichloroethene	TO-15	400	µg/m ³	BPS1-DUP02-011617	400	µg/m ³	0	None
BPS1-SVPM2006D-011617	Ethyl Benzene	TO-15	0.47	µg/m ³	BPS1-DUP02-011617	ND	µg/m ³	NC	J/UJ
BPS1-SVPM2006D-011617	Freon 113	TO-15	ND	µg/m ³	BPS1-DUP02-011617	0.80	µg/m ³	NC	UJ/J
BPS1-SVPM2006D-011617	Tetrachloroethene	TO-15	2.0	µg/m ³	BPS1-DUP02-011617	2.0	µg/m ³	0	None
BPS1-SVPM2006D-011617	Tetrahydrofuran	TO-15	0.61	µg/m ³	BPS1-DUP02-011617	ND	µg/m ³	NC	J/UJ
BPS1-SVPM2006D-011617	Trans-1,2-Dichloroethene	TO-15	4.7	µg/m ³	BPS1-DUP02-011617	4.1	µg/m ³	13.6	None
BPS1-SVPM2006D-011617	Trichloroethene	TO-15	59	µg/m ³	BPS1-DUP02-011617	61	µg/m ³	3.3	None

Sample Duplicate:

1. Sample duplicate was performed on sample BPS1-SVPM2001I-011617 (1701254-02A/AA). All RPDs were ≤ 30%. No qualifications were required.
2. Sample duplicate was performed on sample BPS1-SVPM2006S-011617 (1701254-13A/AA). All RPDs were ≤ 30%. No qualifications were required.

Target Compound Identification:

1. All Relative Retention Times (RRTs) of the reported compounds were within ± 0.06 RRT units of the standard (opening CCV).
2. Sample compound spectra were compared against the laboratory standard spectra.
3. No QC deviations were observed.

Compound Quantitation and Reported Detection Limits:

1. All sample results were reported within the linear calibration range. No qualifications were required.
2. Manual Calculation:

$$\text{Concentration } (\mu\text{g}/\text{m}^3) = \frac{\text{Result (ppbv)} \times \text{Molecular weight} \times \text{DF}}{24.46}$$

BPS1-SVPM2002D-011617 (1701254-06A)

Tetrachloroethene

Result (ppbv) = 0.70451

Molecular Weight @ 25°C=165.83

DF = 1.52

Concentration ($\mu\text{g}/\text{m}^3$) $\frac{0.70451 \times 165.83 \times 1.52}{24.45} = 7.26\mu\text{g}/\text{m}^3$

Compound	Laboratory ($\mu\text{g}/\text{m}^3$)	Validation ($\mu\text{g}/\text{m}^3$)	%D
Tetrachloroethene	7.3	7.3	0.0

Comments:

1. Volatile data package meet requirement for New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B Deliverables.
2. Validation qualifiers (if required) were entered into the EDD for SDG: 1701254.
3. Summary of the qualified data is listed in the Data Summary Table for SDG: 1701254.

**NWIRP BETHPAGE, BETHPAGE, NY****SITE 1****DATA SUMMARY TABLE****AIR****SDG: 1701254**

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier
BPS1-SVPM2001S-011617	1701254-01A	Freon 12	TO-15	20170116	2.1	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Freon 114	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Chloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Vinyl Chloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,3-Butadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Bromomethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Chloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Freon 11	TO-15	20170116	1.6	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Ethanol	TO-15	20170116	4.1	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Freon 113	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,1-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Acetone	TO-15	20170116	8.2	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	2-Propanol	TO-15	20170116	1.1	UG_M3	J
BPS1-SVPM2001S-011617	1701254-01A	Carbon Disulfide	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	3-Chloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Methylene Chloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Methyl tert-butyl ether	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	trans-1,2-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Hexane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,1-Dichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	2-Butanone (Methyl Ethyl Ketone)	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	cis-1,2-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Tetrahydrofuran	TO-15	20170116	5.1	UG_M3	
BPS1-SVPM2001S-011617	1701254-01A	Chloroform	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,1,1-Trichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Cyclohexane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Carbon Tetrachloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	2,2,4-Trimethylpentane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Benzene	TO-15	20170116	0.74	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,2-Dichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Heptane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Trichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,2-Dichloropropane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,4-Dioxane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Bromodichloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	cis-1,3-Dichloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	4-Methyl-2-pentanone	TO-15	20170116		UG_M3	U



NWIRP BETHPAGE, BETHPAGE, NY

SITE 1

DATA SUMMARY TABLE

AIR

SDG: 1701254

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier
BPS1-SVPM2001S-011617	1701254-01A	Toluene	TO-15	20170116	6.3	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	trans-1,3-Dichloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,1,2-Trichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Tetrachloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	2-Hexanone	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Dibromochloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,2-Dibromoethane (EDB)	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Chlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Ethyl Benzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	m,p-Xylene	TO-15	20170116	0.80	UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	o-Xylene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Styrene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Bromoform	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Cumene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,1,2,2-Tetrachloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Propylbenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	4-Ethyltoluene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,3,5-Trimethylbenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,2,4-Trimethylbenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,3-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,4-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	alpha-Chlorotoluene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,2-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	1,2,4-Trichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001S-011617	1701254-01A	Hexachlorobutadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Freon 12	TO-15	20170116	2.4	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Freon 114	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Chloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Vinyl Chloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,3-Butadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Bromomethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Chloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Freon 11	TO-15	20170116	1.3	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Ethanol	TO-15	20170116	5.0	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Freon 113	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,1-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Acetone	TO-15	20170116	10	UG_M3	U



NWIRP BETHPAGE, BETHPAGE, NY

SITE 1

DATA SUMMARY TABLE

AIR

SDG: 1701254

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier
BPS1-SVPM2001I-011617	1701254-02A	2-Propanol	TO-15	20170116	1.3	UG_M3	J
BPS1-SVPM2001I-011617	1701254-02A	Carbon Disulfide	TO-15	20170116	1.9	UG_M3	J
BPS1-SVPM2001I-011617	1701254-02A	3-Chloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Methylene Chloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Methyl tert-butyl ether	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	trans-1,2-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Hexane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,1-Dichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	2-Butanone (Methyl Ethyl Ketone)	TO-15	20170116	2.4	UG_M3	J
BPS1-SVPM2001I-011617	1701254-02A	cis-1,2-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Tetrahydrofuran	TO-15	20170116	9.5	UG_M3	
BPS1-SVPM2001I-011617	1701254-02A	Chloroform	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,1,1-Trichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Cyclohexane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Carbon Tetrachloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	2,2,4-Trimethylpentane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Benzene	TO-15	20170116	1.0	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,2-Dichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Heptane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Trichloroethene	TO-15	20170116	0.87	UG_M3	J
BPS1-SVPM2001I-011617	1701254-02A	1,2-Dichloropropane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,4-Dioxane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Bromodichloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	cis-1,3-Dichloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	4-Methyl-2-pentanone	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Toluene	TO-15	20170116	8.5	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	trans-1,3-Dichloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,1,2-Trichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Tetrachloroethene	TO-15	20170116	0.78	UG_M3	J
BPS1-SVPM2001I-011617	1701254-02A	2-Hexanone	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Dibromochloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,2-Dibromoethane (EDB)	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Chlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Ethyl Benzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	m,p-Xylene	TO-15	20170116	1.3	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	o-Xylene	TO-15	20170116	0.85	UG_M3	J
BPS1-SVPM2001I-011617	1701254-02A	Styrene	TO-15	20170116		UG_M3	U



NWIRP BETHPAGE, BETHPAGE, NY

SITE 1

DATA SUMMARY TABLE

AIR

SDG: 1701254

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier
BPS1-SVPM2001I-011617	1701254-02A	Bromofom	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Cumene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,1,2,2-Tetrachloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Propylbenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	4-Ethyltoluene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,3,5-Trimethylbenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,2,4-Trimethylbenzene	TO-15	20170116	0.51	UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,3-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,4-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	alpha-Chlorotoluene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,2-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	1,2,4-Trichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001I-011617	1701254-02A	Hexachlorobutadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Freon 12	TO-15	20170116	7.3	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Freon 114	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Chloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Vinyl Chloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,3-Butadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Bromomethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Chloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Freon 11	TO-15	20170116	1.4	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Ethanol	TO-15	20170116	26	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Freon 113	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,1-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Acetone	TO-15	20170116	11	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,2-Dichloroethane	TO-15	20170116	1.3	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	3-Chloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,3,5-Trimethylbenzene	TO-15	20170116	0.83	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	trans-1,2-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	2,2,4-Trimethylpentane	TO-15	20170116	3.9	UG_M3	
BPS1-SVPM2001D-011617	1701254-03A	1,1-Dichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	2-Butanone (Methyl Ethyl Ketone)	TO-15	20170116	2.4	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	2-Propanol	TO-15	20170116	6.7	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	4-Ethyltoluene	TO-15	20170116	1.6	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	Benzene	TO-15	20170116	7.4	UG_M3	
BPS1-SVPM2001D-011617	1701254-03A	1,1,1-Trichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Carbon Tetrachloride	TO-15	20170116		UG_M3	U



NWIRP BETHPAGE, BETHPAGE, NY

SITE 1

DATA SUMMARY TABLE

AIR

SDG: 1701254

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier
BPS1-SVPM2001D-011617	1701254-03A	Carbon Disulfide	TO-15	20170116	8.0	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	Chloroform	TO-15	20170116	4.5	UG_M3	
BPS1-SVPM2001D-011617	1701254-03A	Heptane	TO-15	20170116	8.4	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	cis-1,2-Dichloroethene	TO-15	20170116	1.9	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	1,2-Dichloropropane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,4-Dioxane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Bromodichloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	cis-1,3-Dichloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	4-Methyl-2-pentanone	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Cumene	TO-15	20170116	0.19	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	trans-1,3-Dichloropropene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,1,2-Trichloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Cyclohexane	TO-15	20170116	6.5	UG_M3	
BPS1-SVPM2001D-011617	1701254-03A	2-Hexanone	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Dibromochloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,2-Dibromoethane (EDB)	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Chlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Ethyl Benzene	TO-15	20170116	1.1	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	m,p-Xylene	TO-15	20170116	3.6	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Hexane	TO-15	20170116	49	UG_M3	
BPS1-SVPM2001D-011617	1701254-03A	Methyl tert-butyl ether	TO-15	20170116	0.95	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	Bromoform	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Methylene Chloride	TO-15	20170116	5.3	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	1,1,2,2-Tetrachloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	o-Xylene	TO-15	20170116	1.4	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	Propylbenzene	TO-15	20170116	0.38	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	Styrene	TO-15	20170116	0.57	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	1,2,4-Trimethylbenzene	TO-15	20170116	1.6	UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,3-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,4-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	alpha-Chlorotoluene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,2-Dichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	1,2,4-Trichlorobenzene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Hexachlorobutadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2001D-011617	1701254-03A	Tetrachloroethene	TO-15	20170116	1.9	UG_M3	J
BPS1-SVPM2001D-011617	1701254-03A	Tetrahydrofuran	TO-15	20170116	13	UG_M3	
BPS1-SVPM2001D-011617	1701254-03A	Toluene	TO-15	20170116	21	UG_M3	



NWIRP BETHPAGE, BETHPAGE, NY

SITE 1

DATA SUMMARY TABLE

AIR

SDG: 1701254

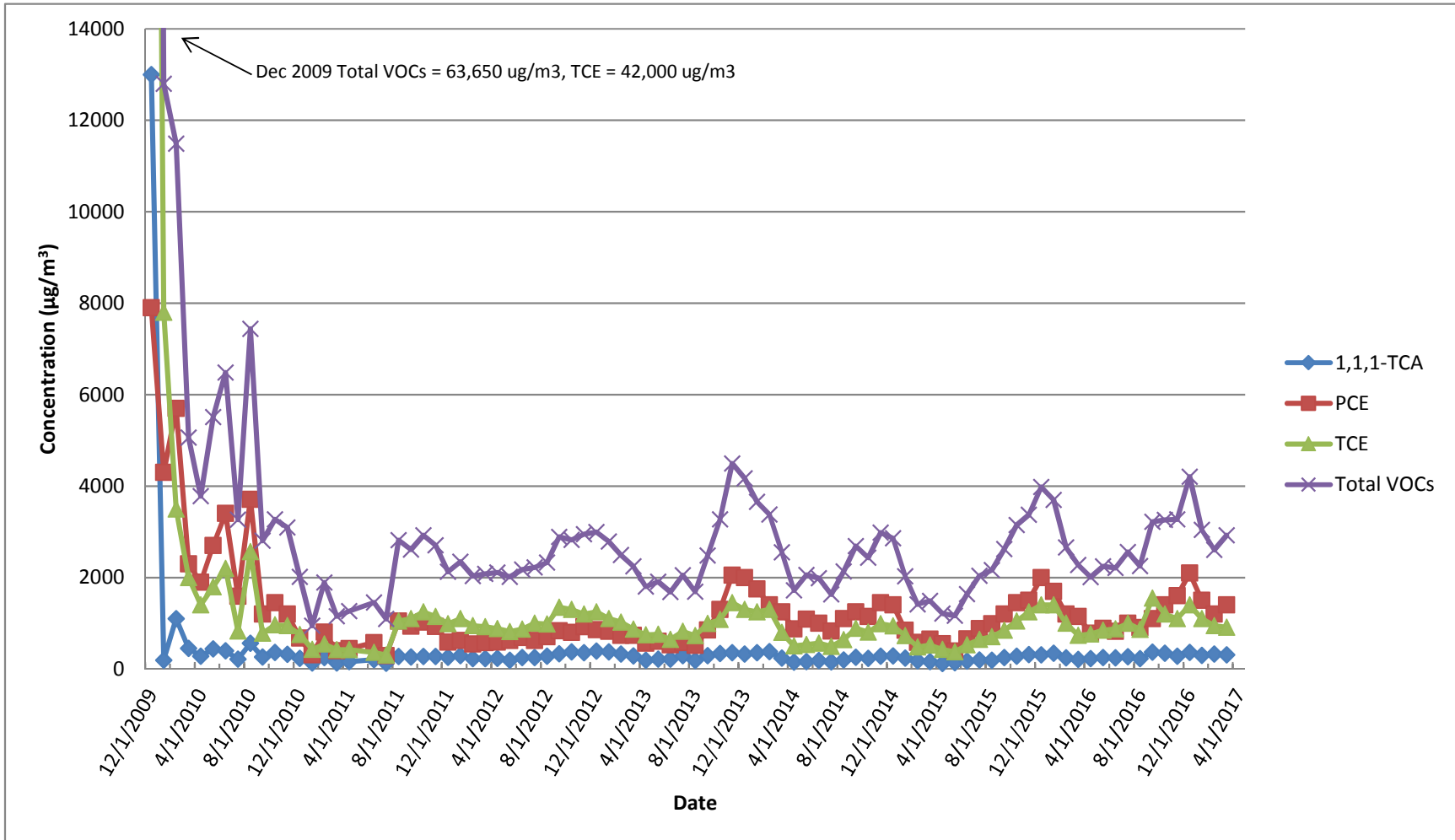
Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier
BPS1-SVPM2001D-011617	1701254-03A	Trichloroethene	TO-15	20170116	2.2	UG_M3	J
BPS1-SVPM2002S-011617	1701254-04A	Freon 12	TO-15	20170116	2.7	UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Freon 114	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Chloromethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Vinyl Chloride	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	1,3-Butadiene	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Bromomethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Chloroethane	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Freon 11	TO-15	20170116	1.1	UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Ethanol	TO-15	20170116	3.2	UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Freon 113	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	1,1-Dichloroethene	TO-15	20170116		UG_M3	U
BPS1-SVPM2002S-011617	1701254-04A	Acetone	TO-15	20170116	9.3	UG_M3	U

APPENDIX C

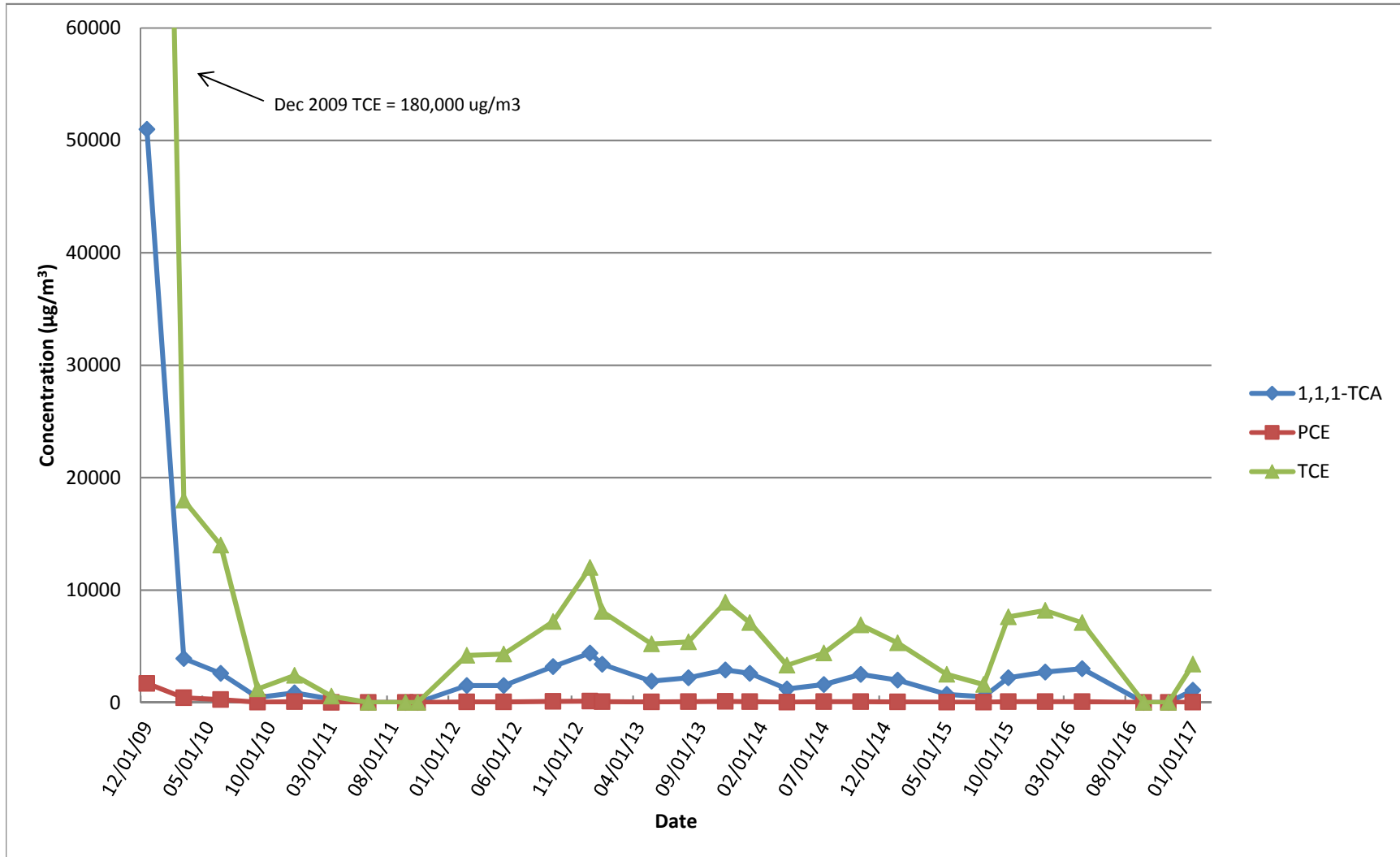
VAPOR CONCENTRATION TREND GRAPHS – SVEWs

**Soil Vapor Extraction Containment System
 Site 1, Former Drum Marshalling Yard
 Naval Weapons Industrial Reserve Plant - Bethpage, NY
 Vapor Concentration Trends of Select and Total VOCs
 SVEWs**

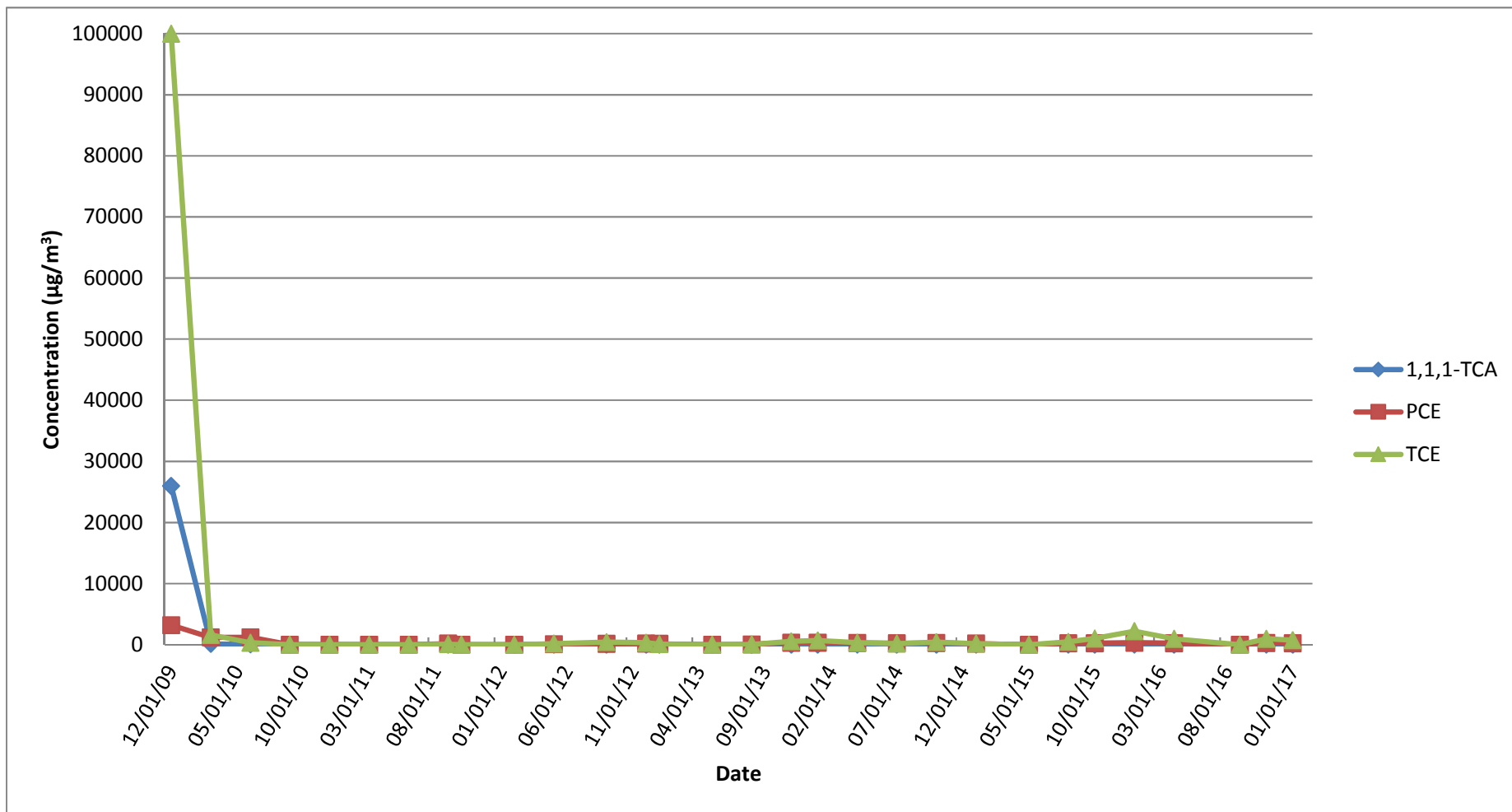
COMBINED INFLUENT



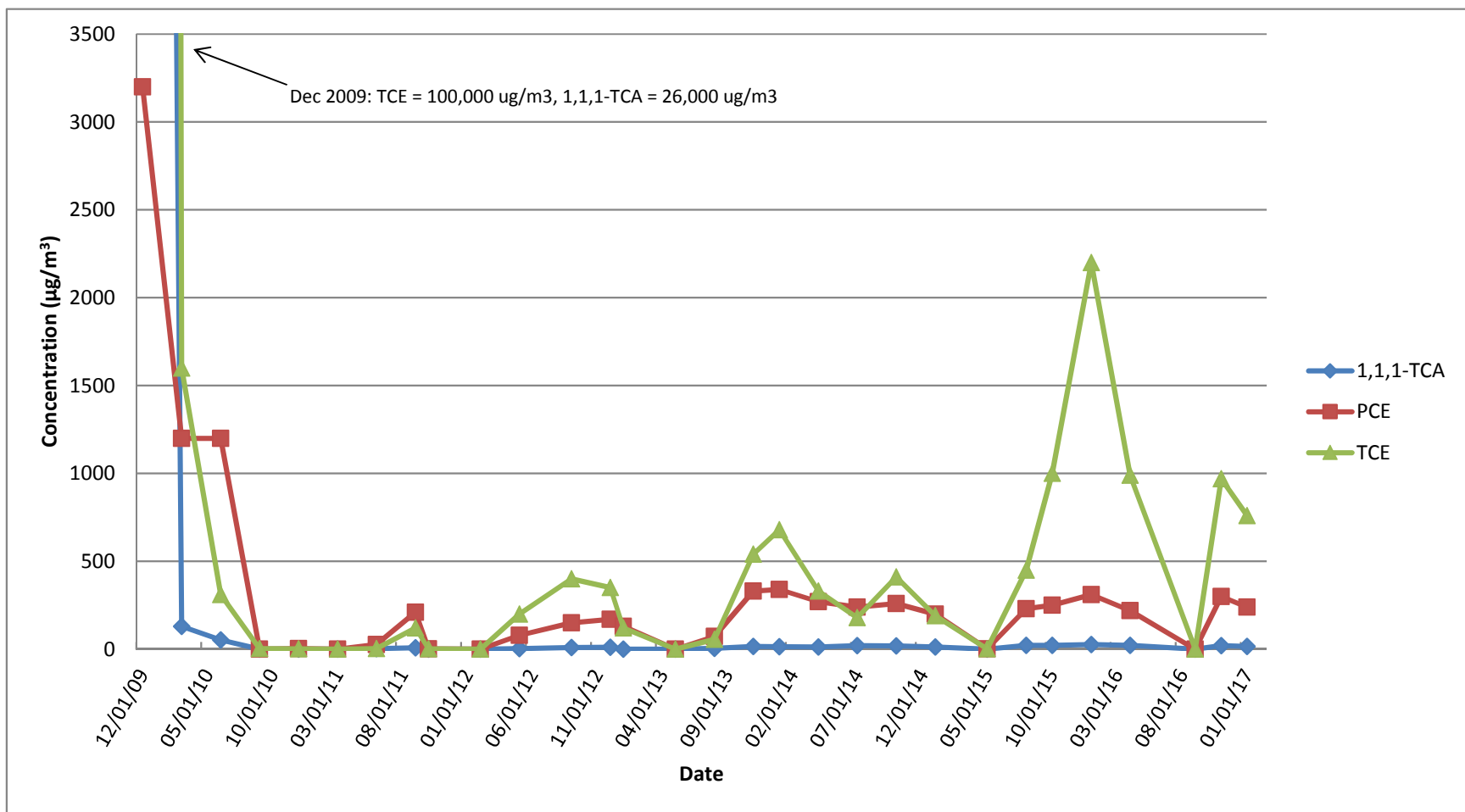
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-101I



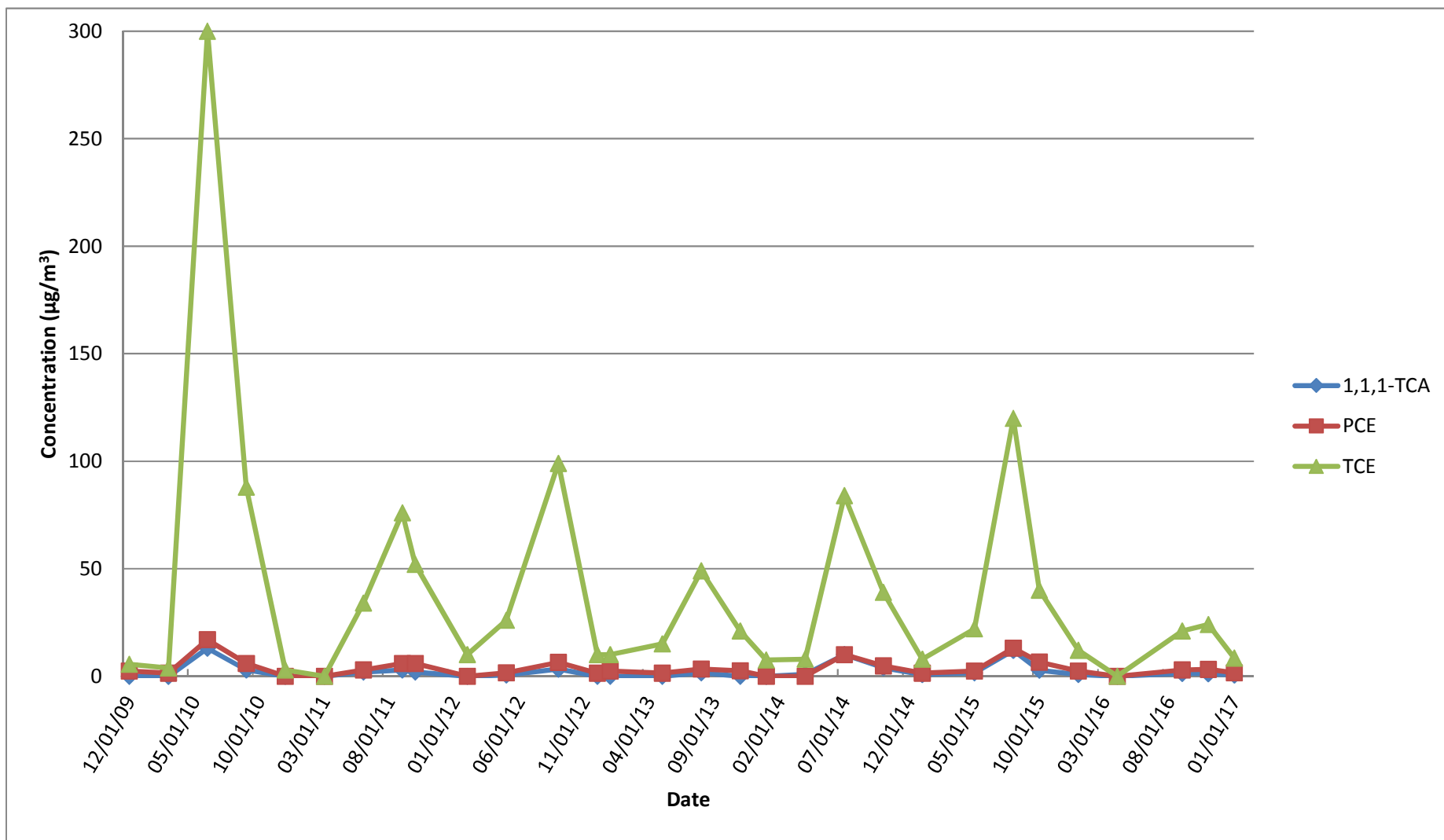
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-101D



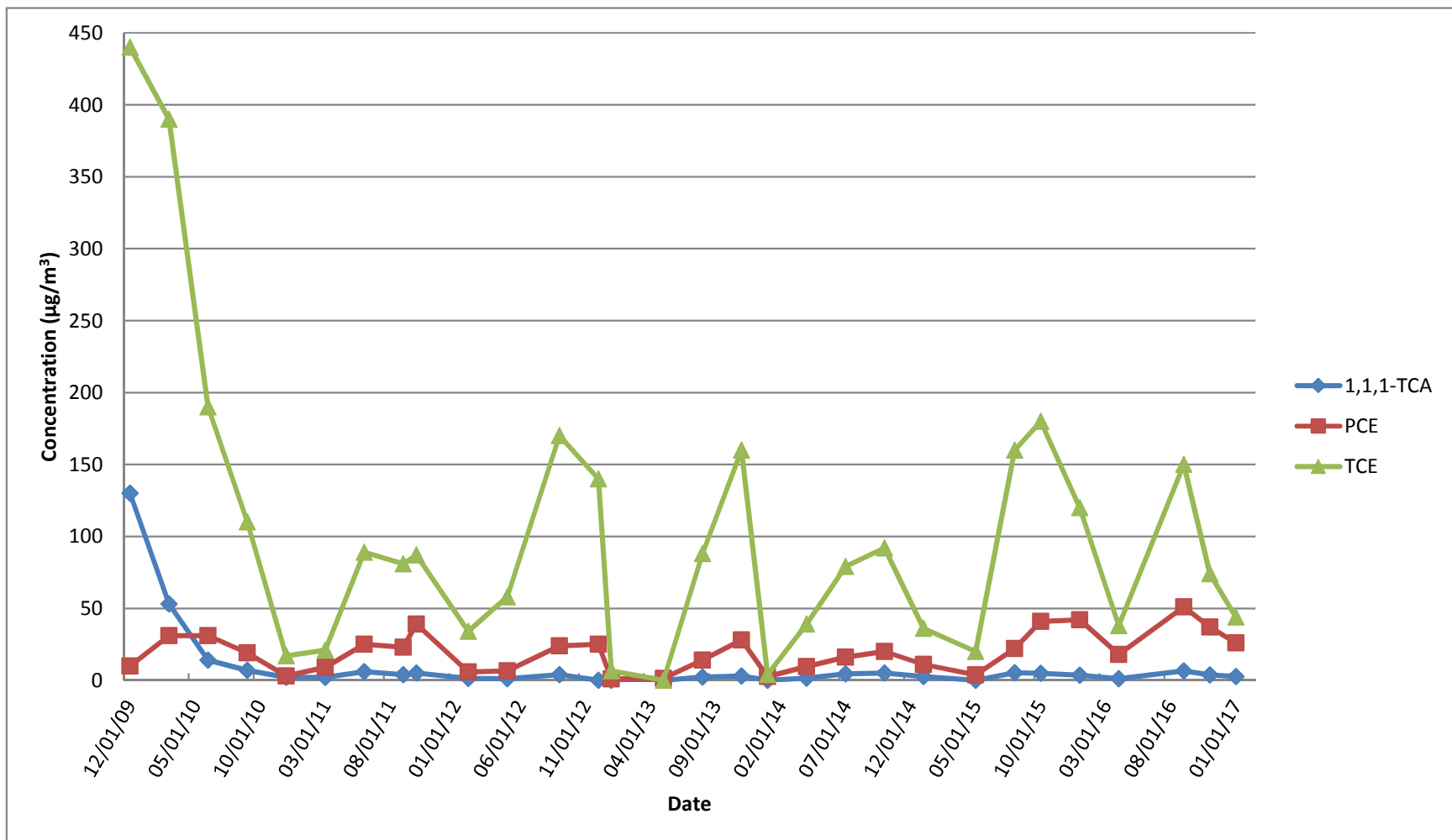
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-101D (smaller scale)



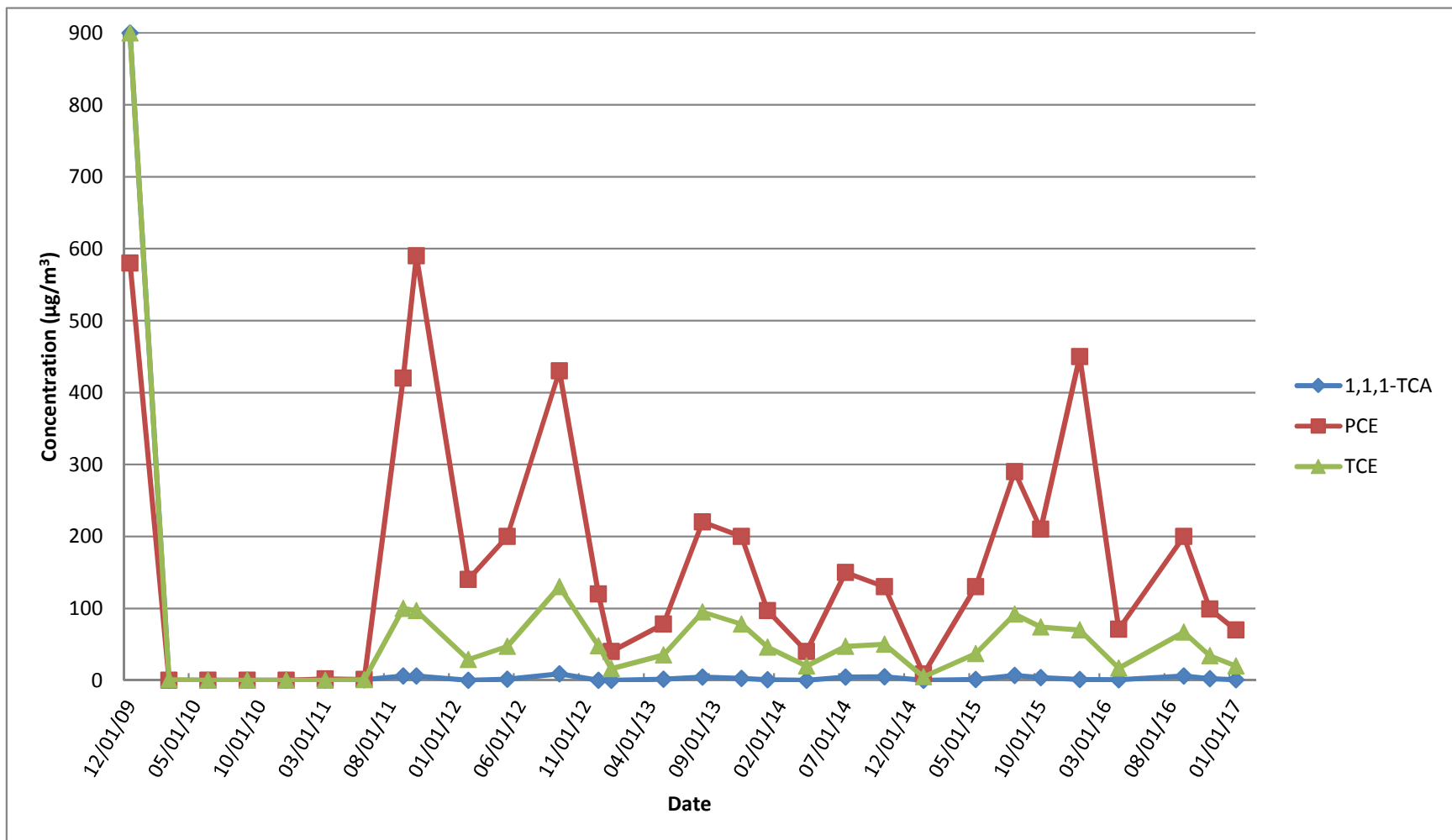
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV102I



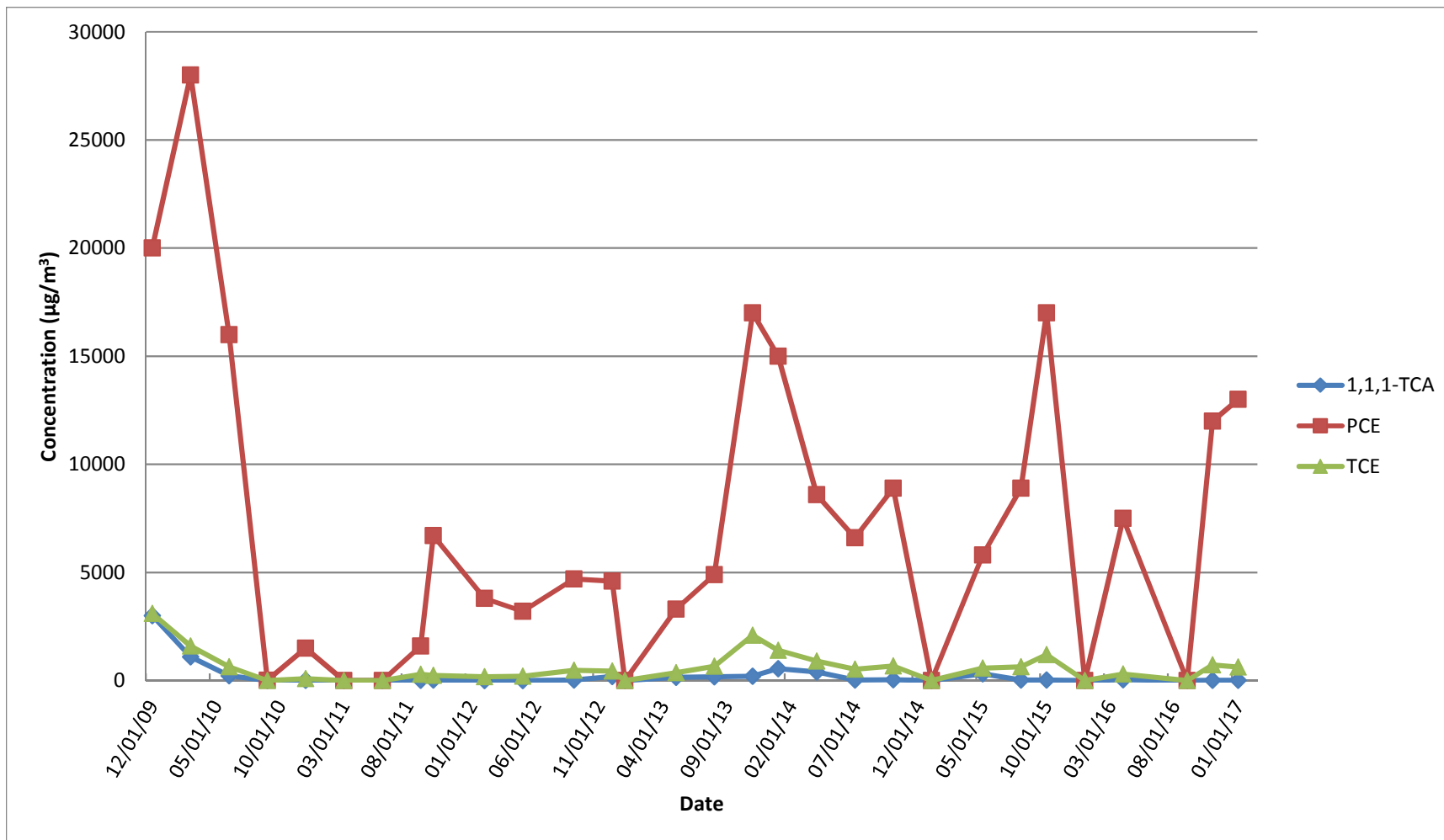
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEs
SV-102D



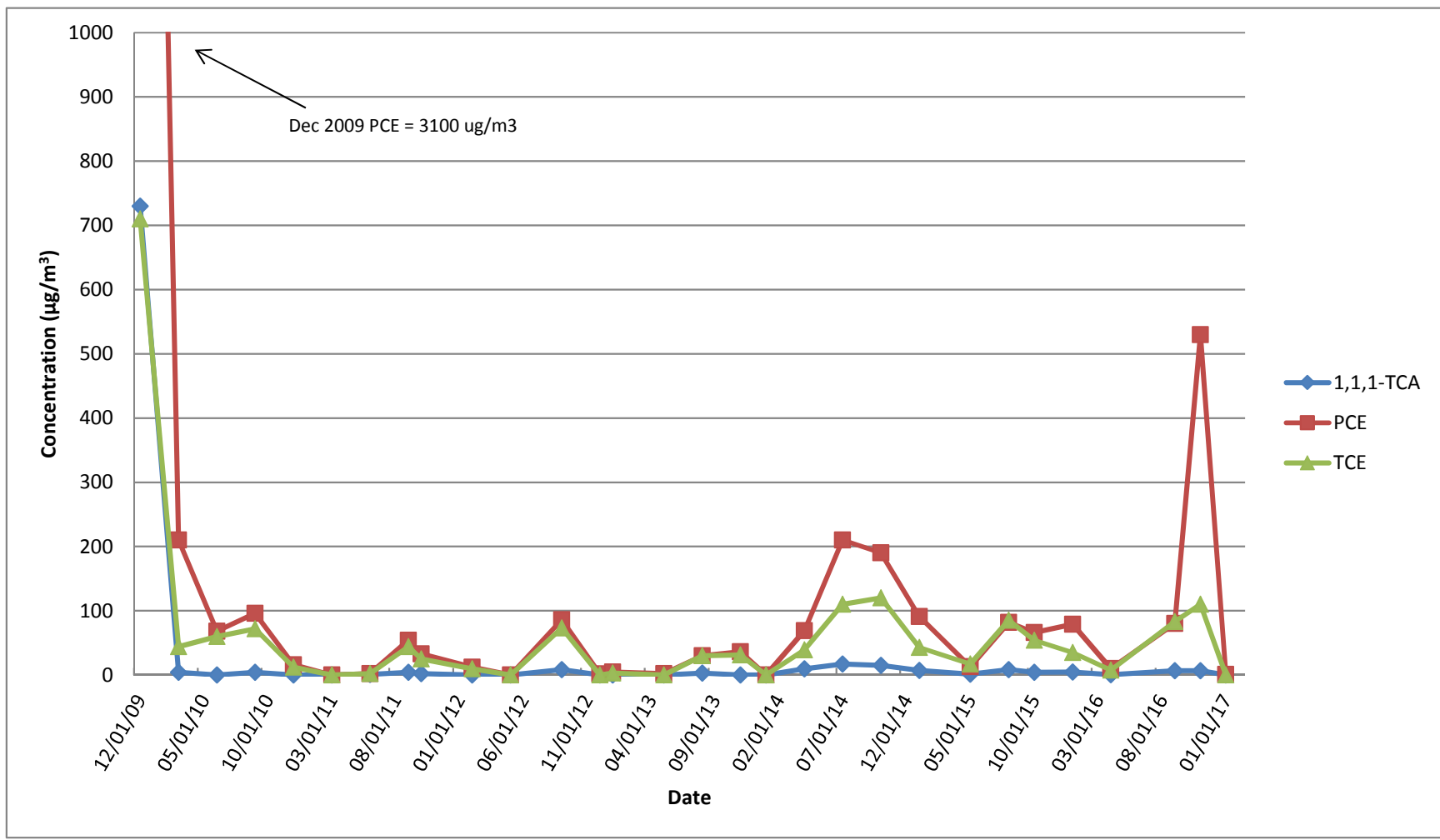
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-103I



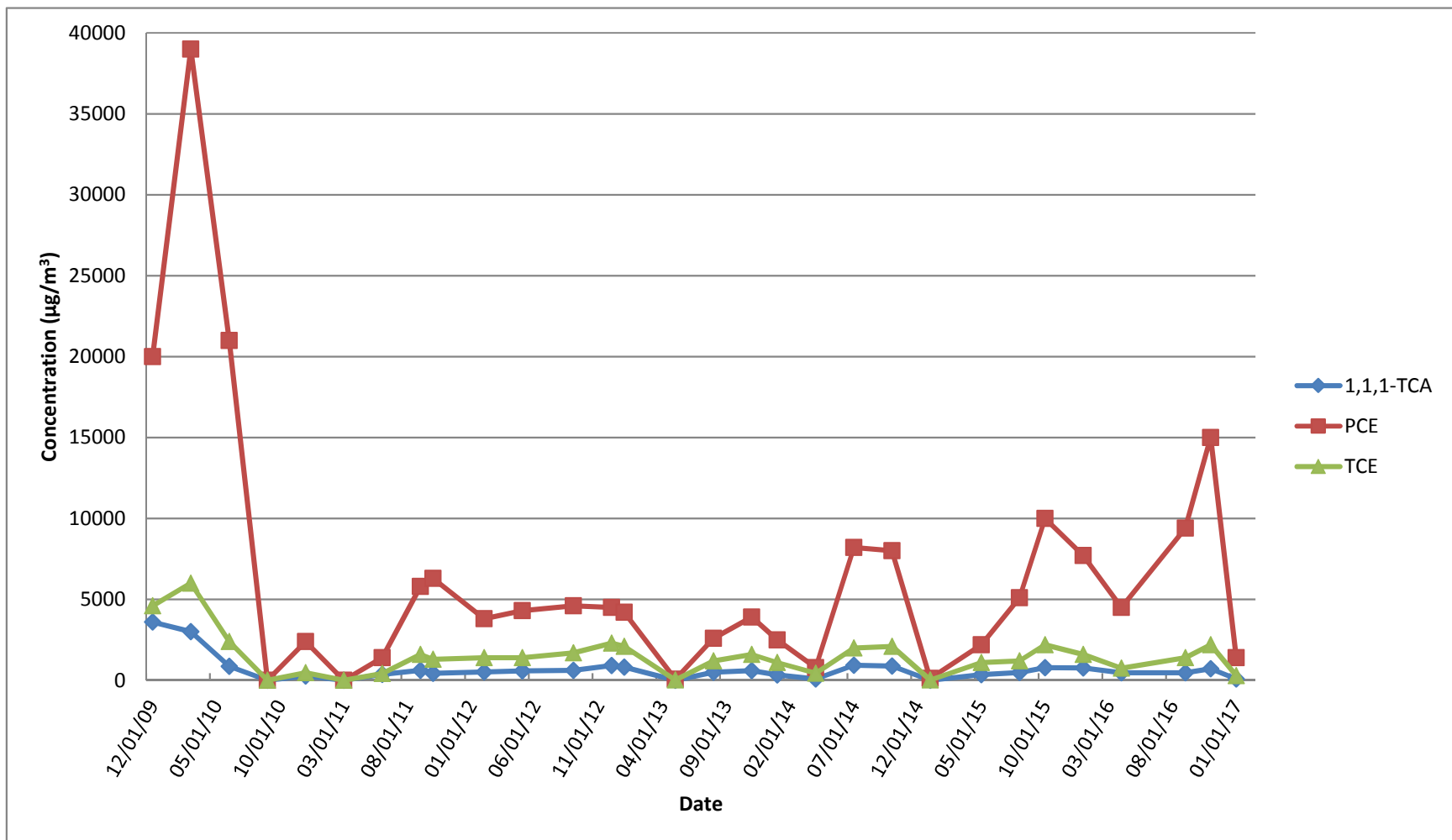
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV103D



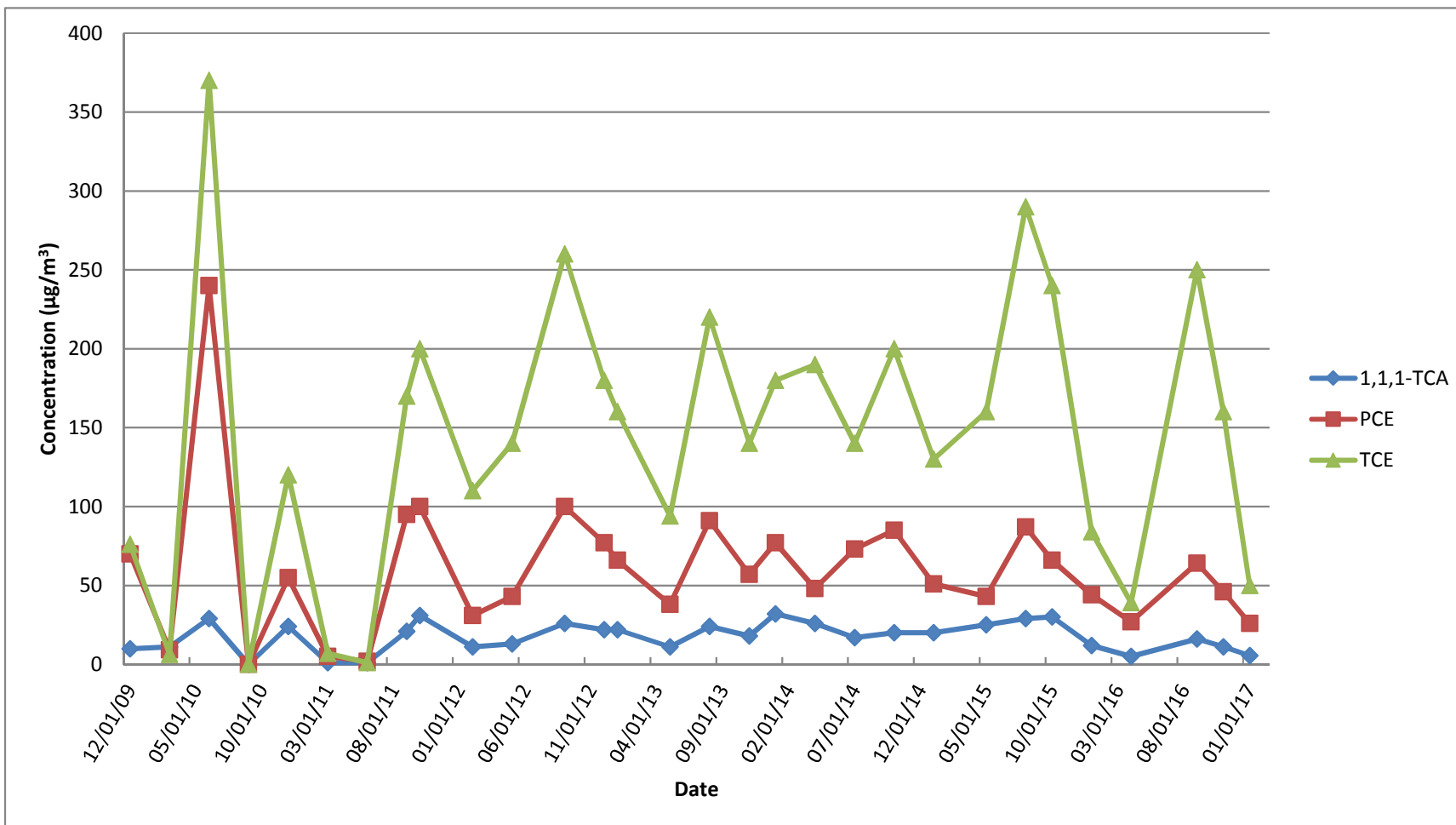
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV104I



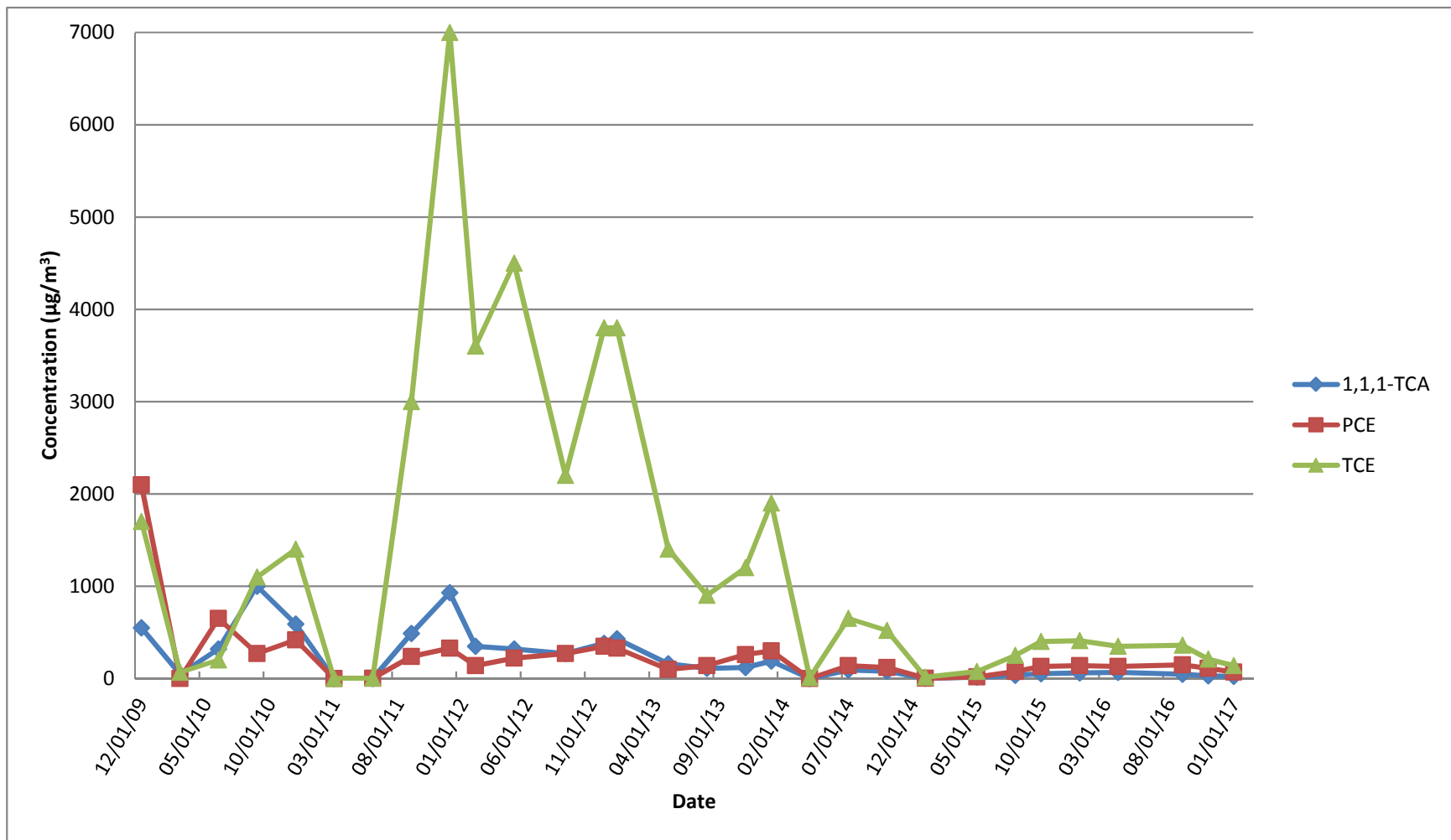
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-104D



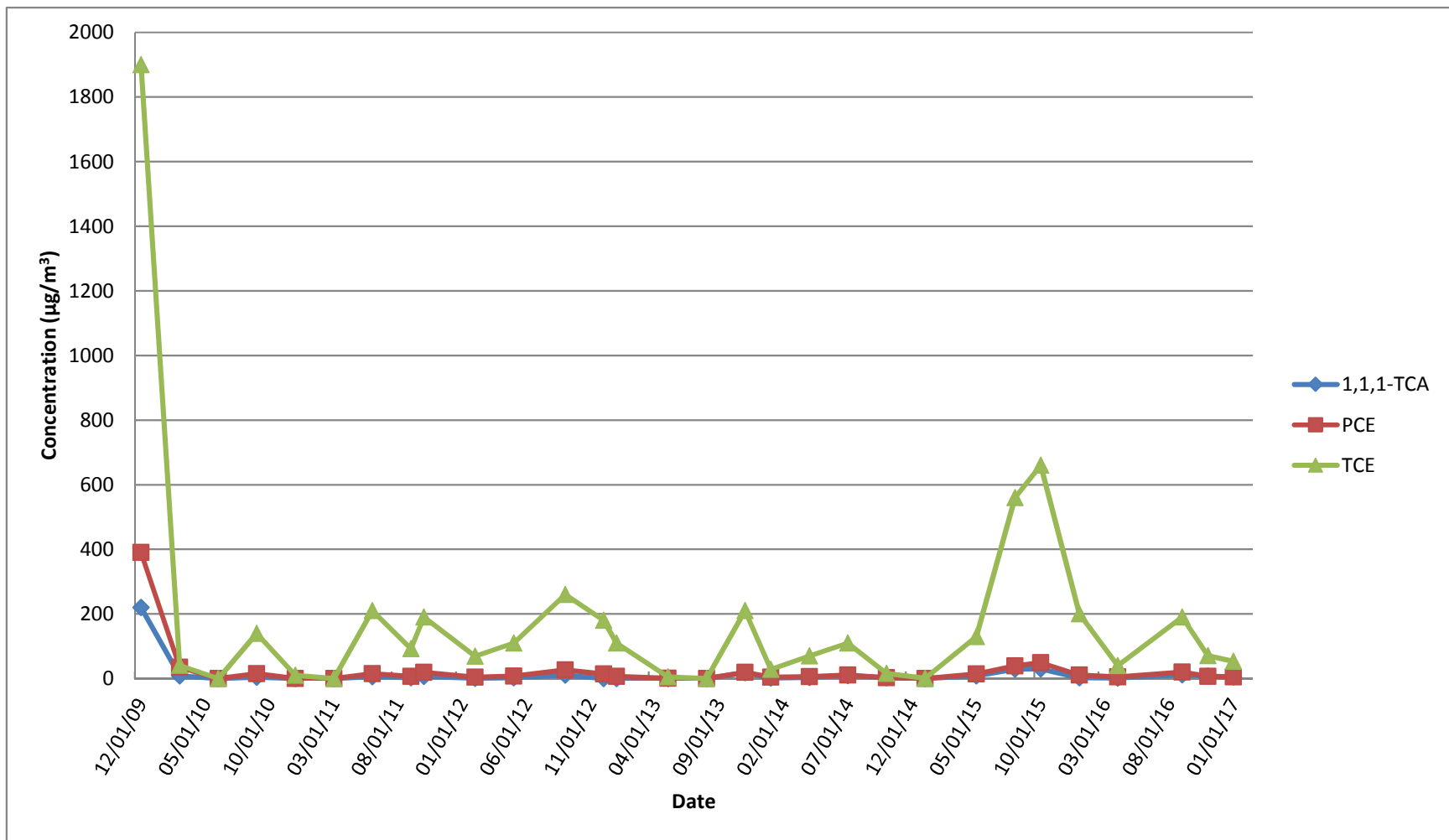
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEs
SV-105I



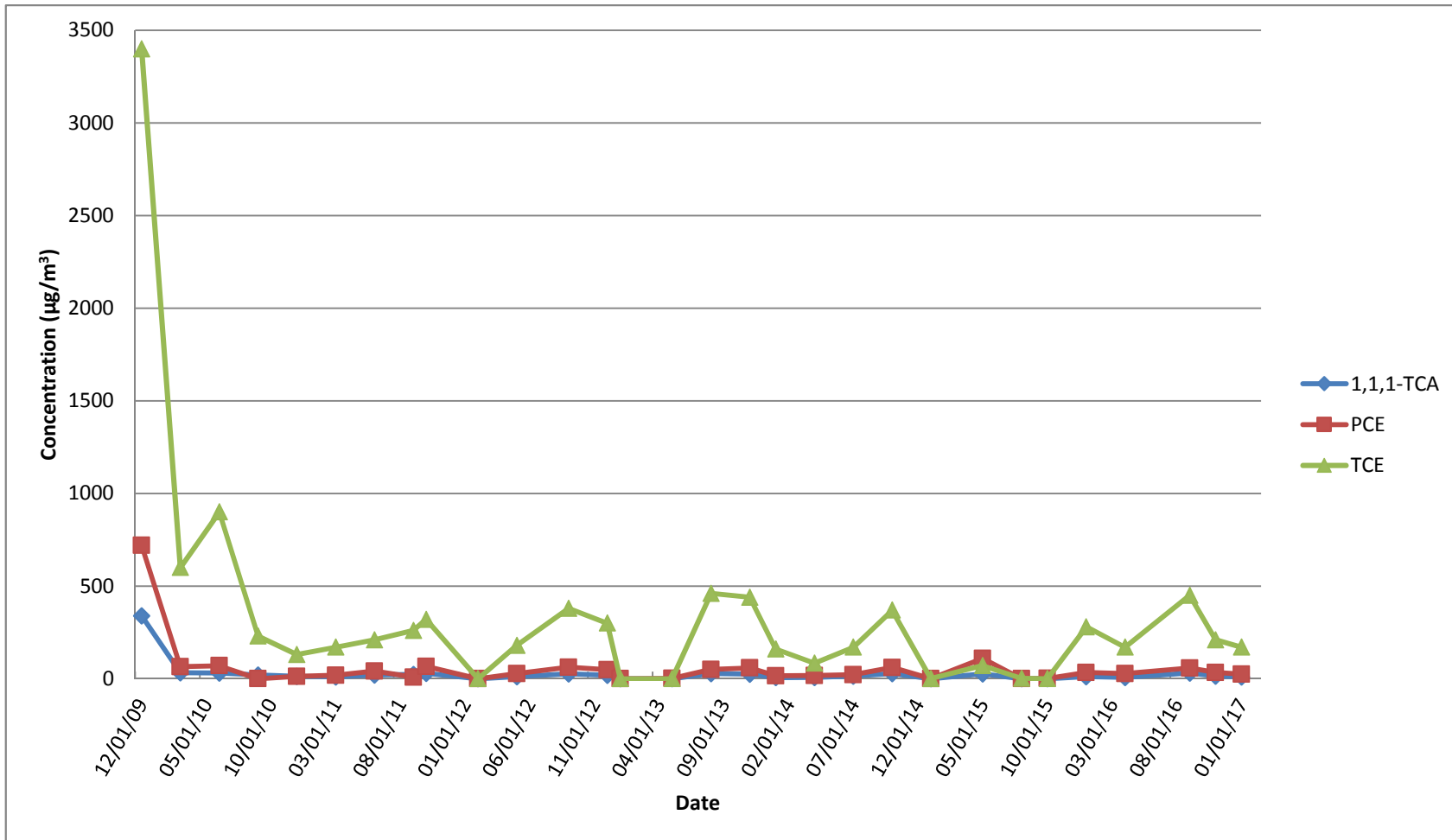
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-105D



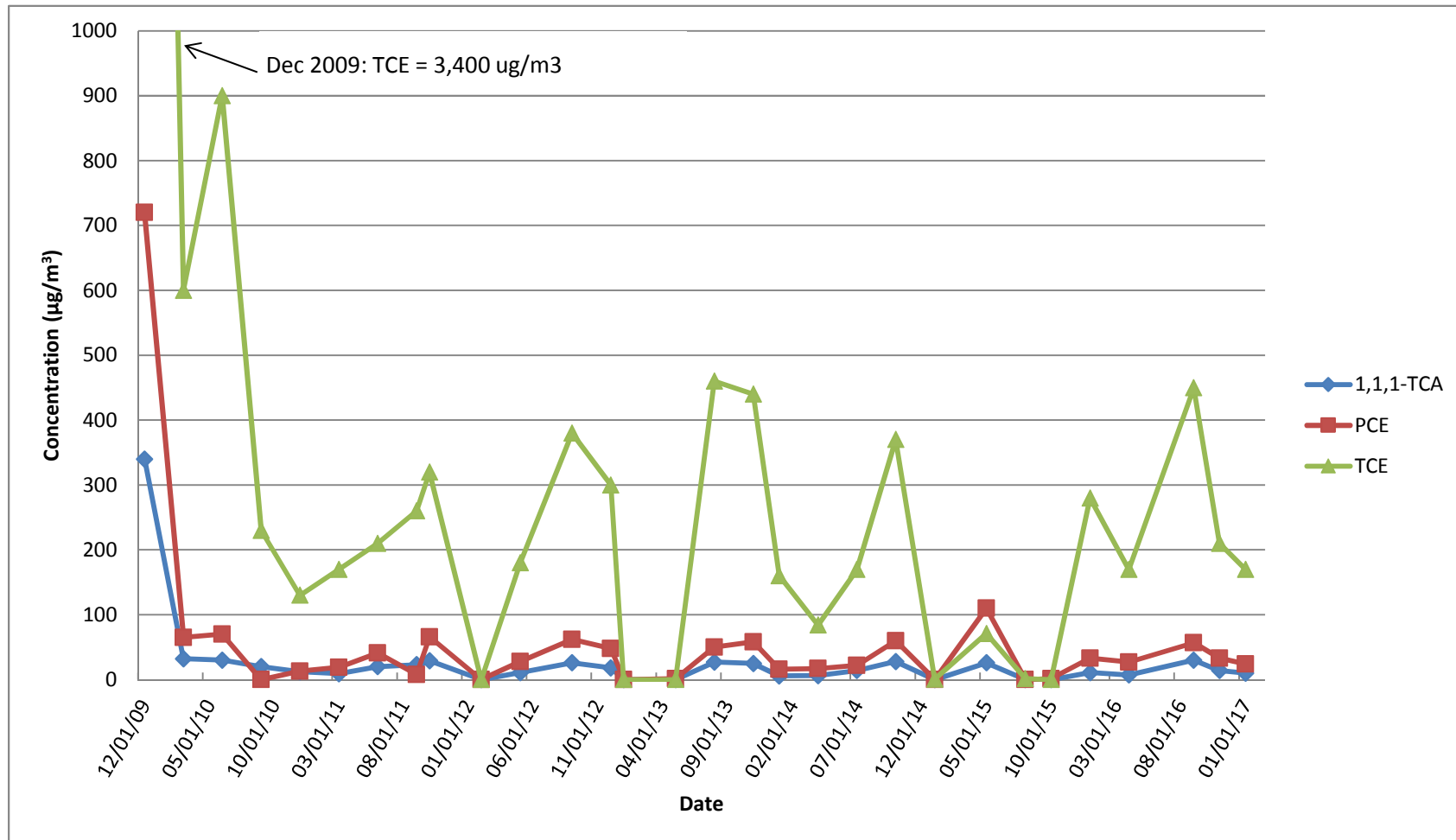
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-106I



Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-106D



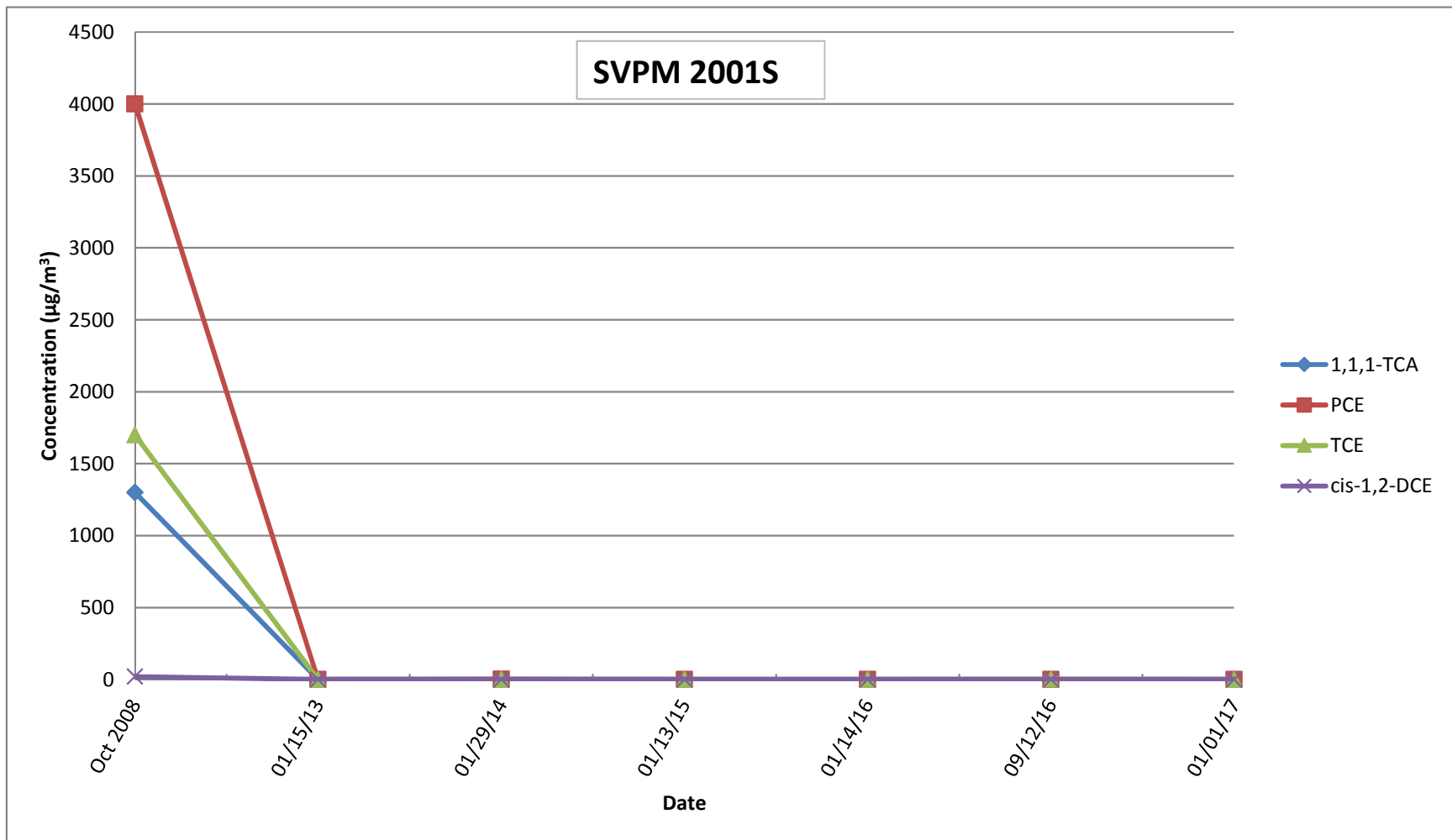
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs
SV-106D (smaller scale)



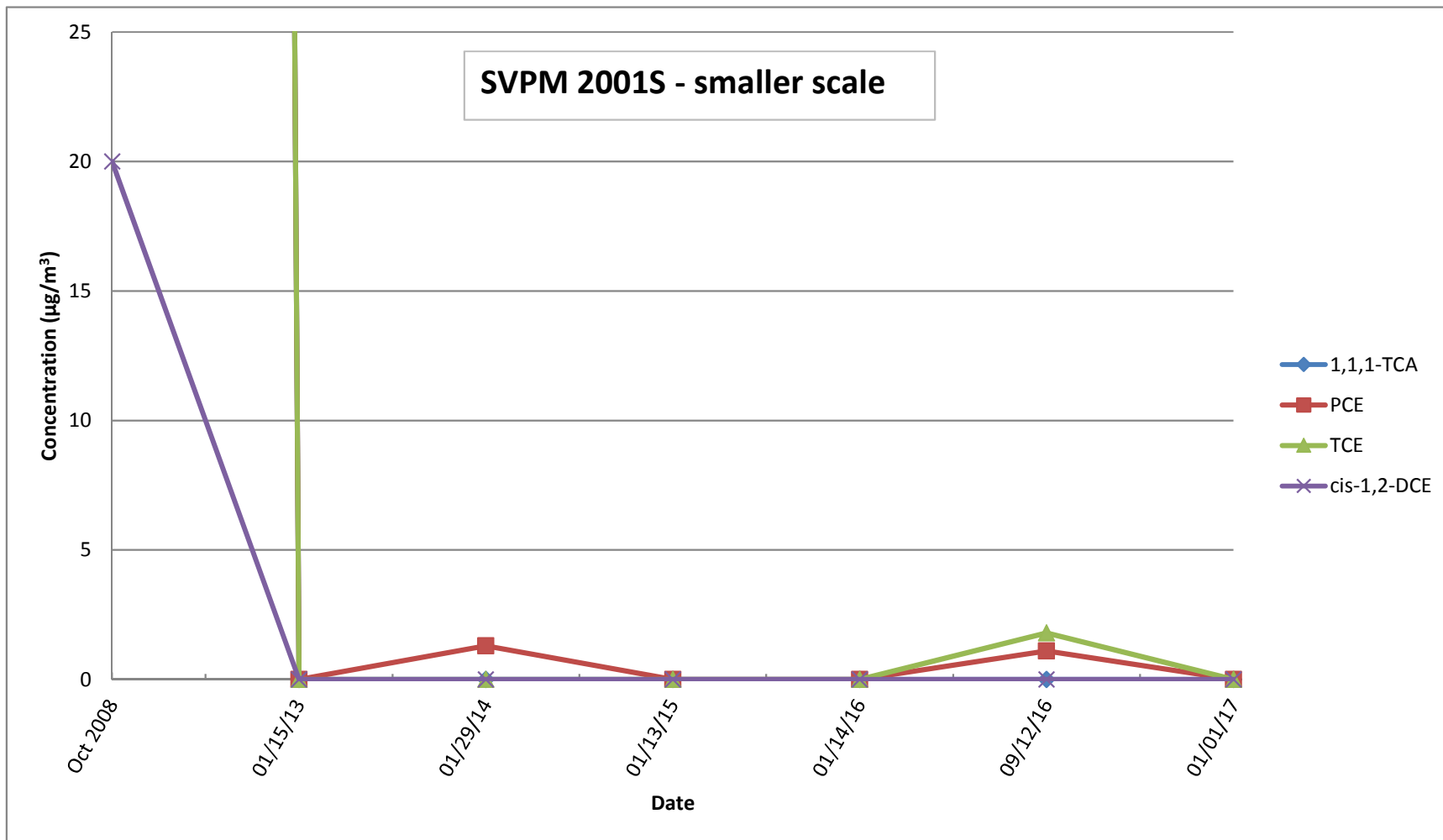
APPENDIX D

VAPOR CONCENTRATION TREND GRAPHS – SVPMs

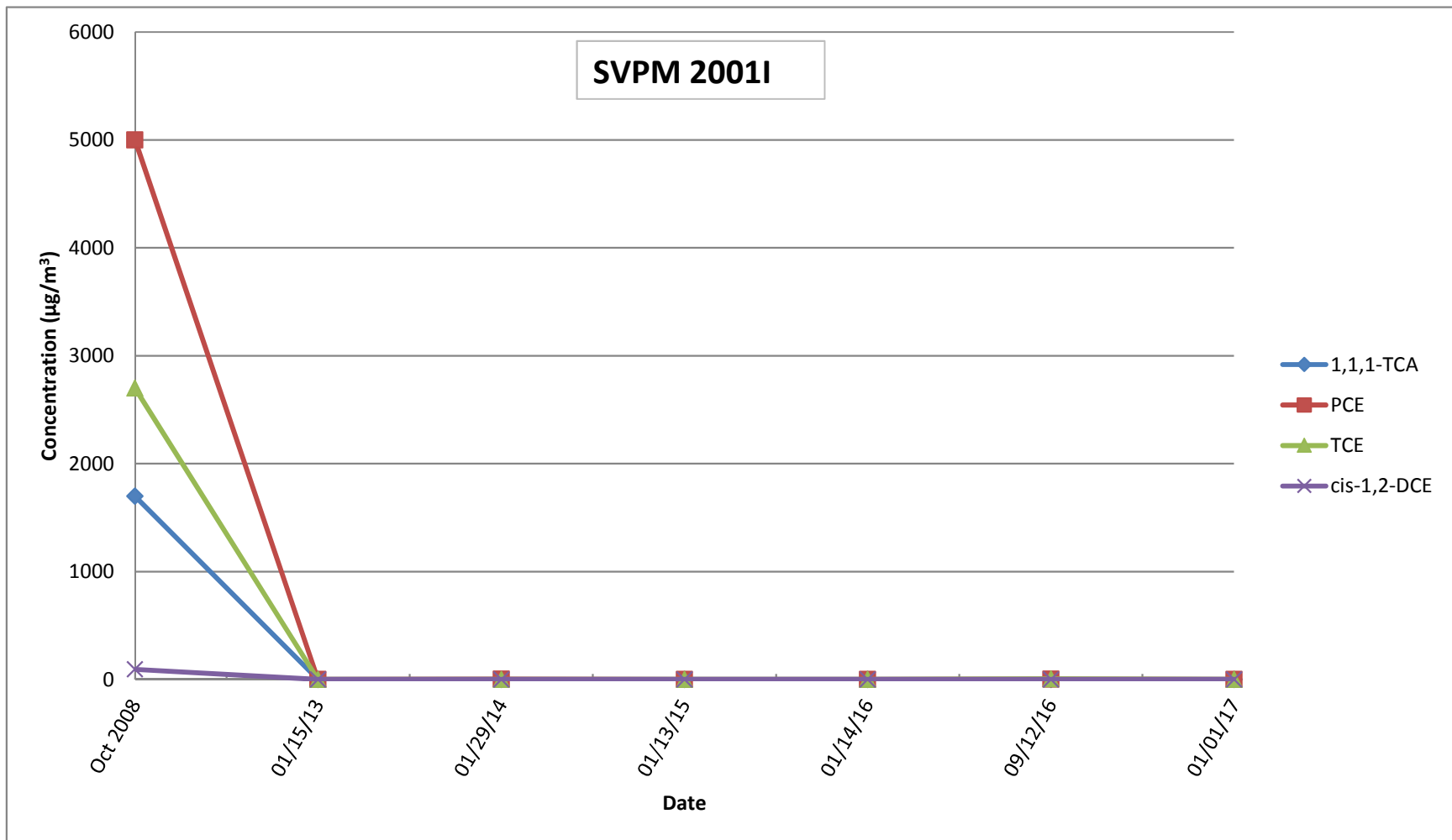
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



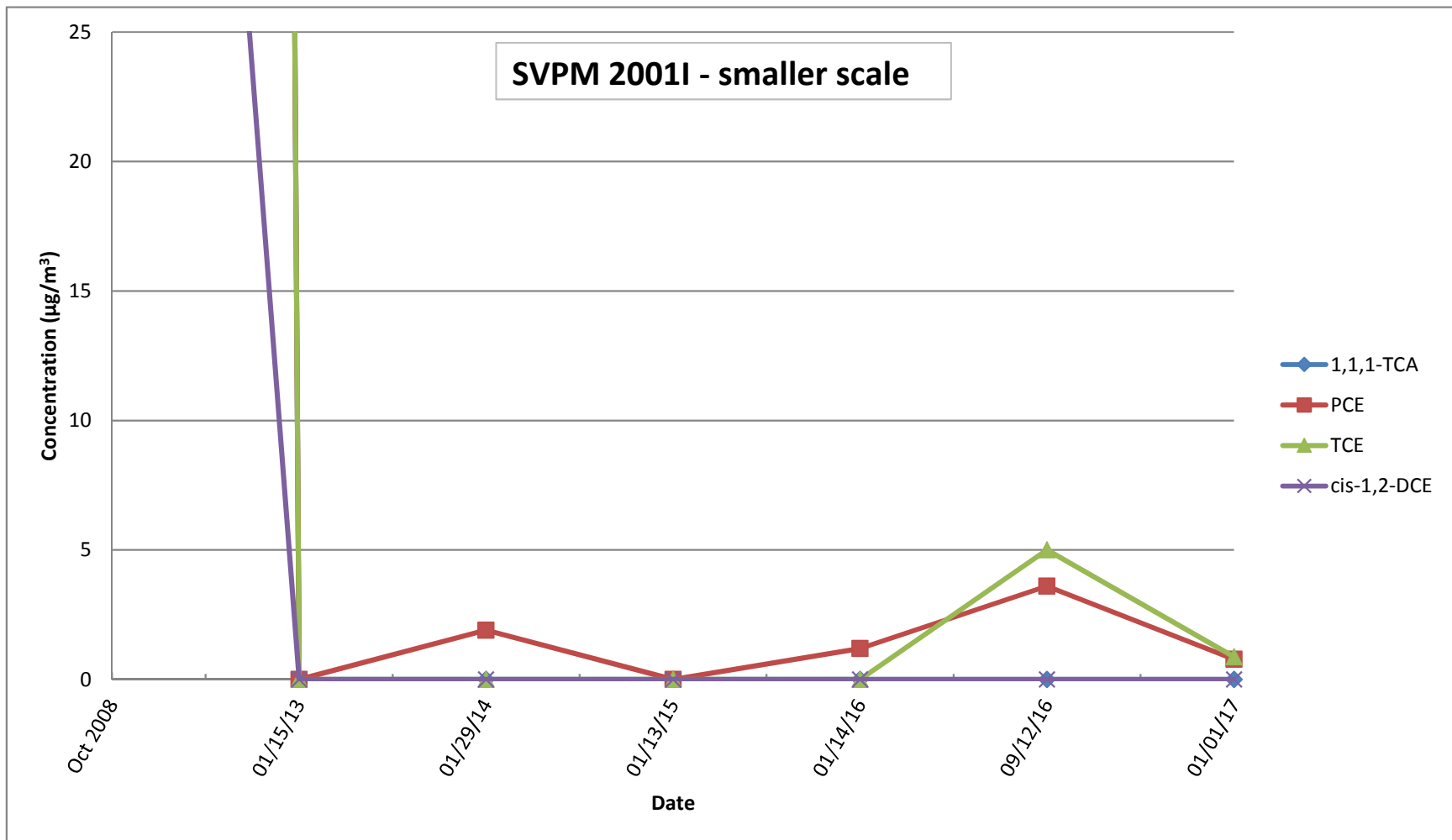
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



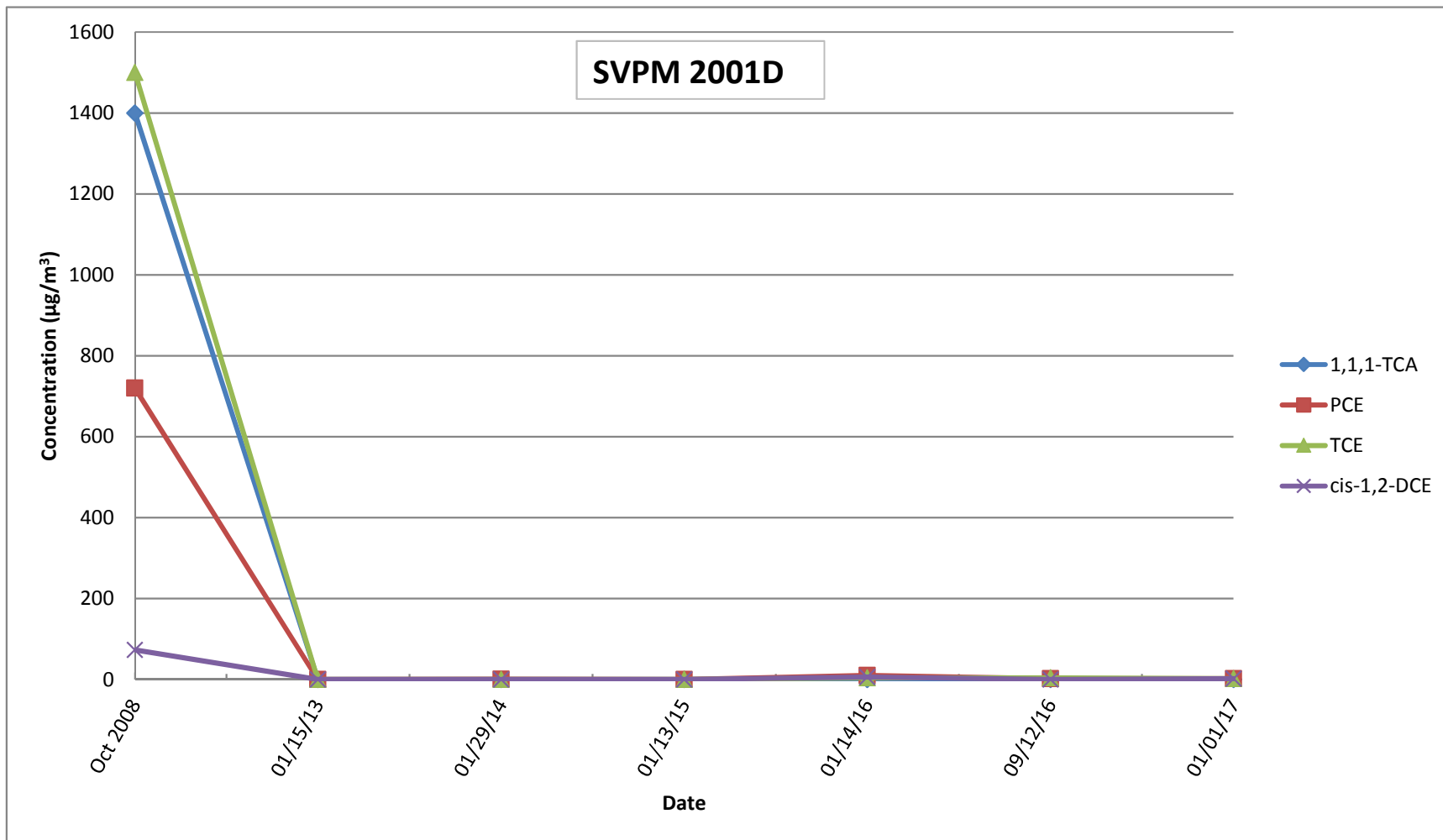
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



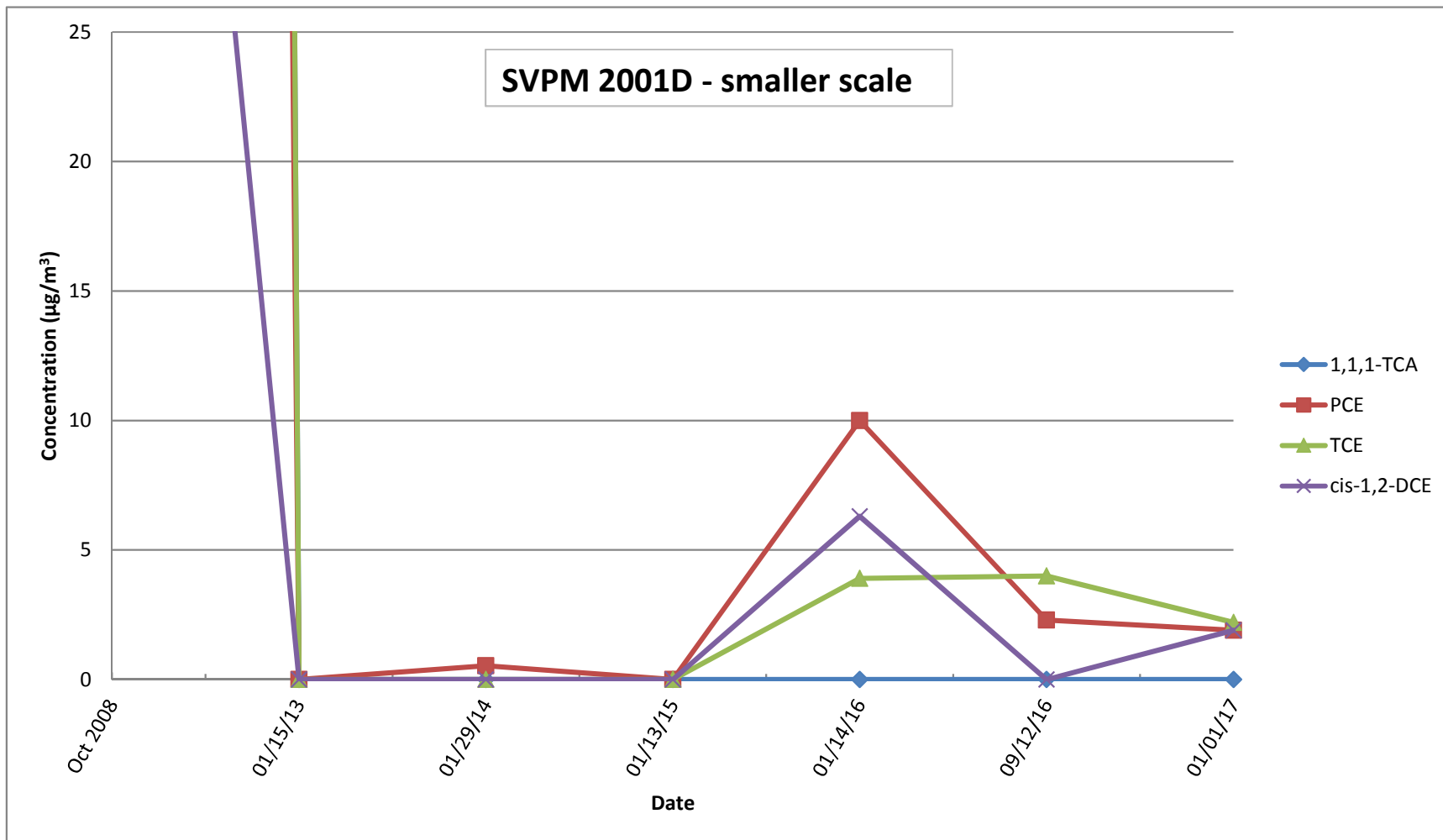
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



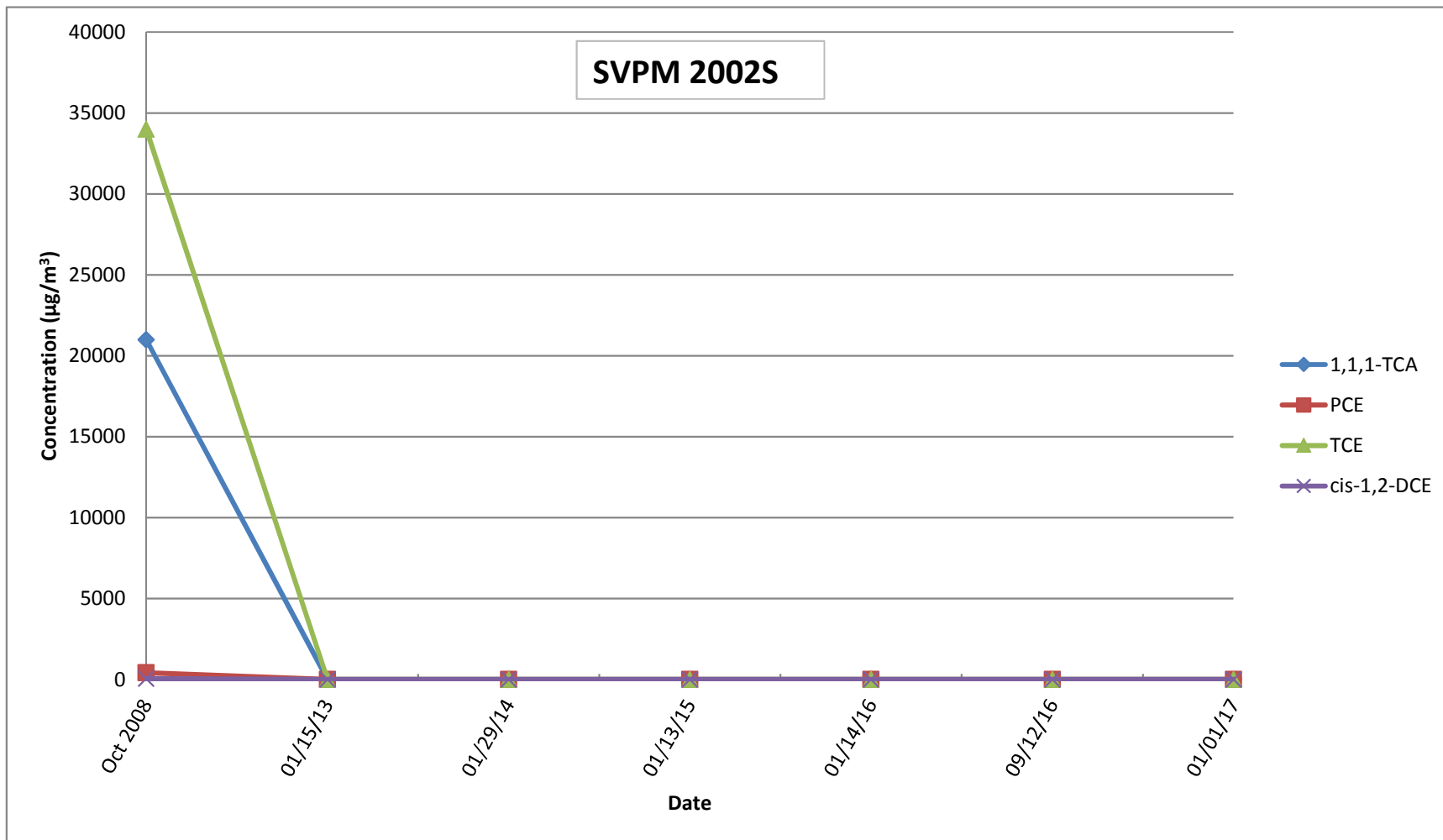
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



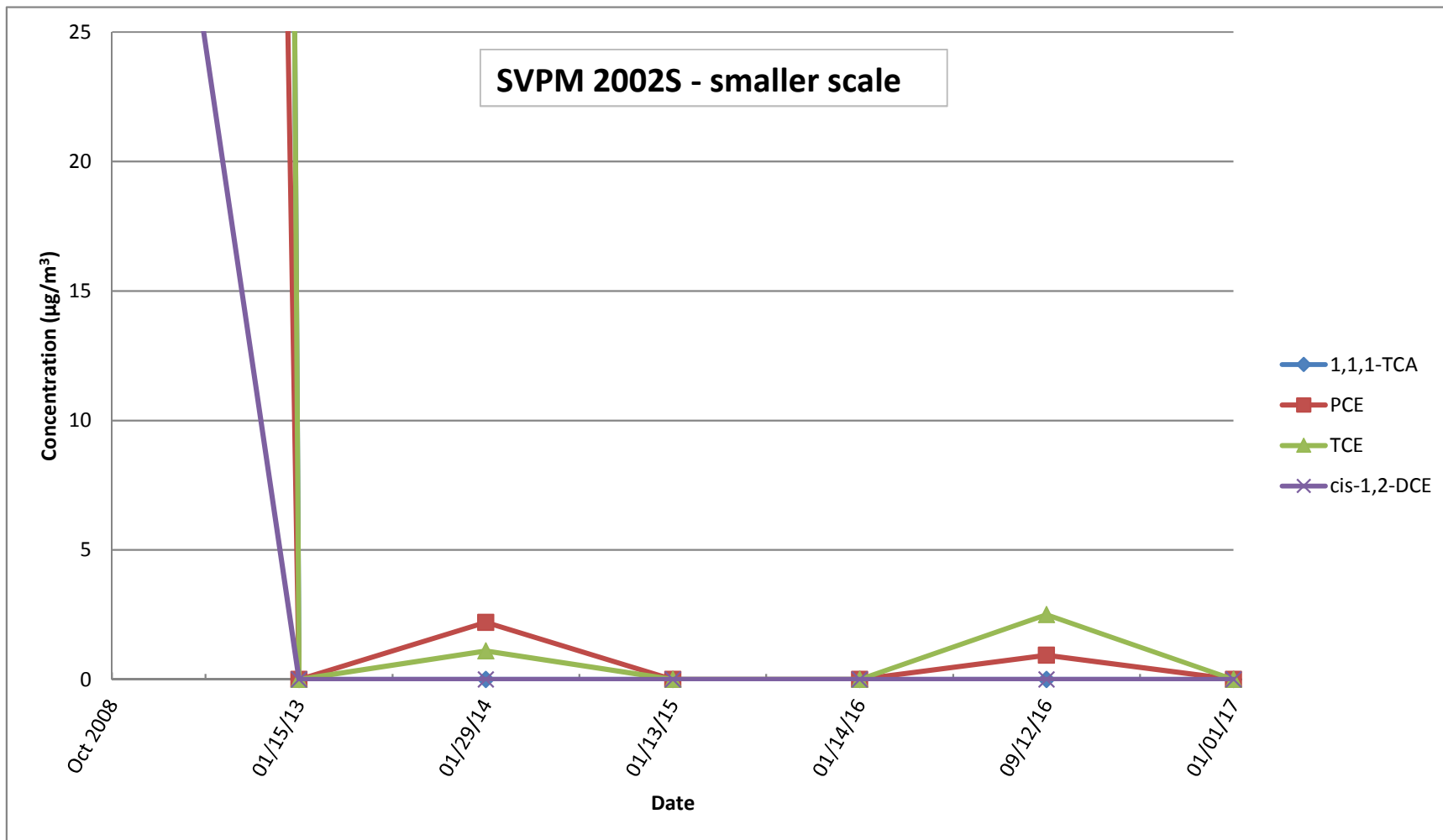
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



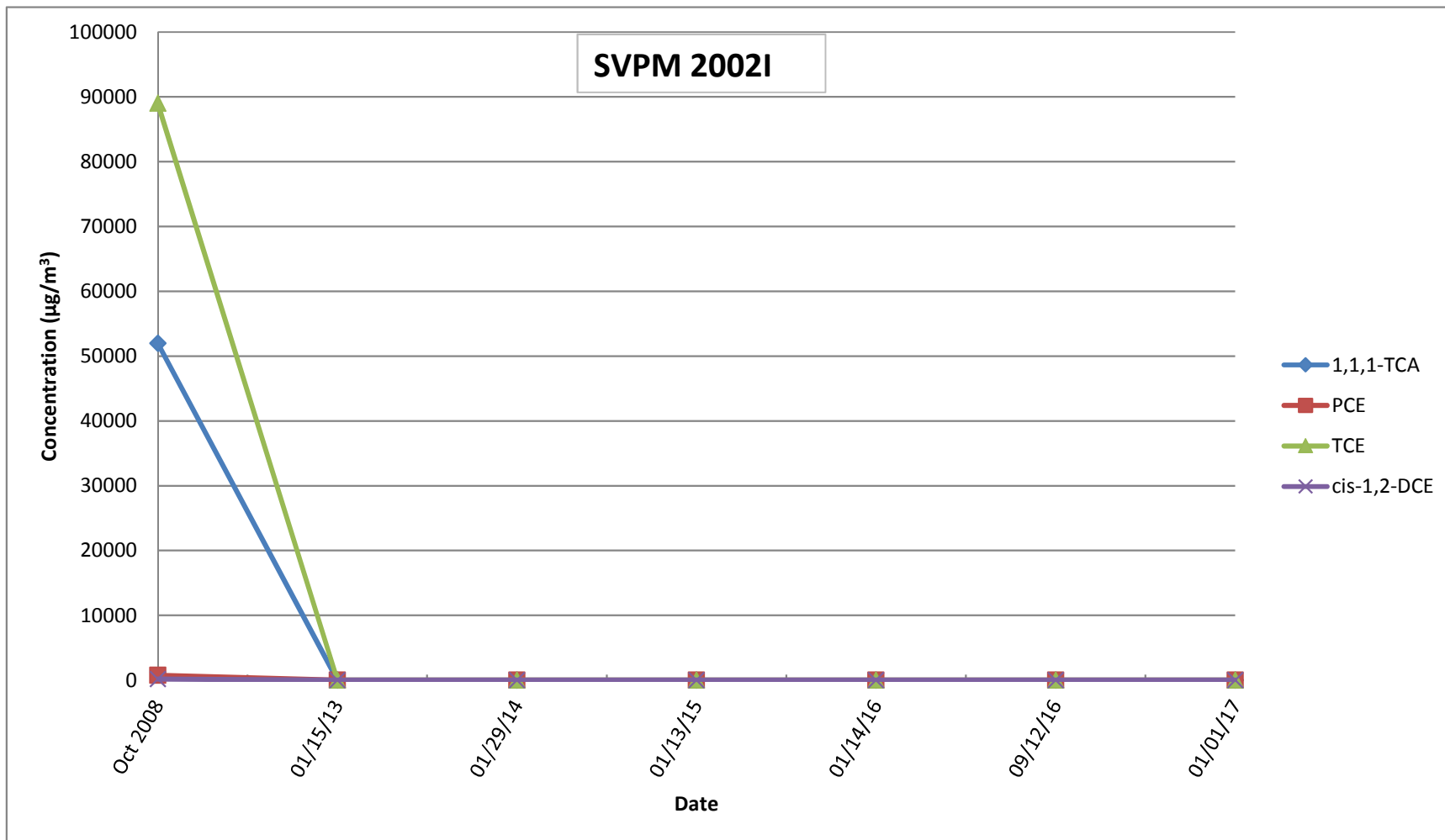
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



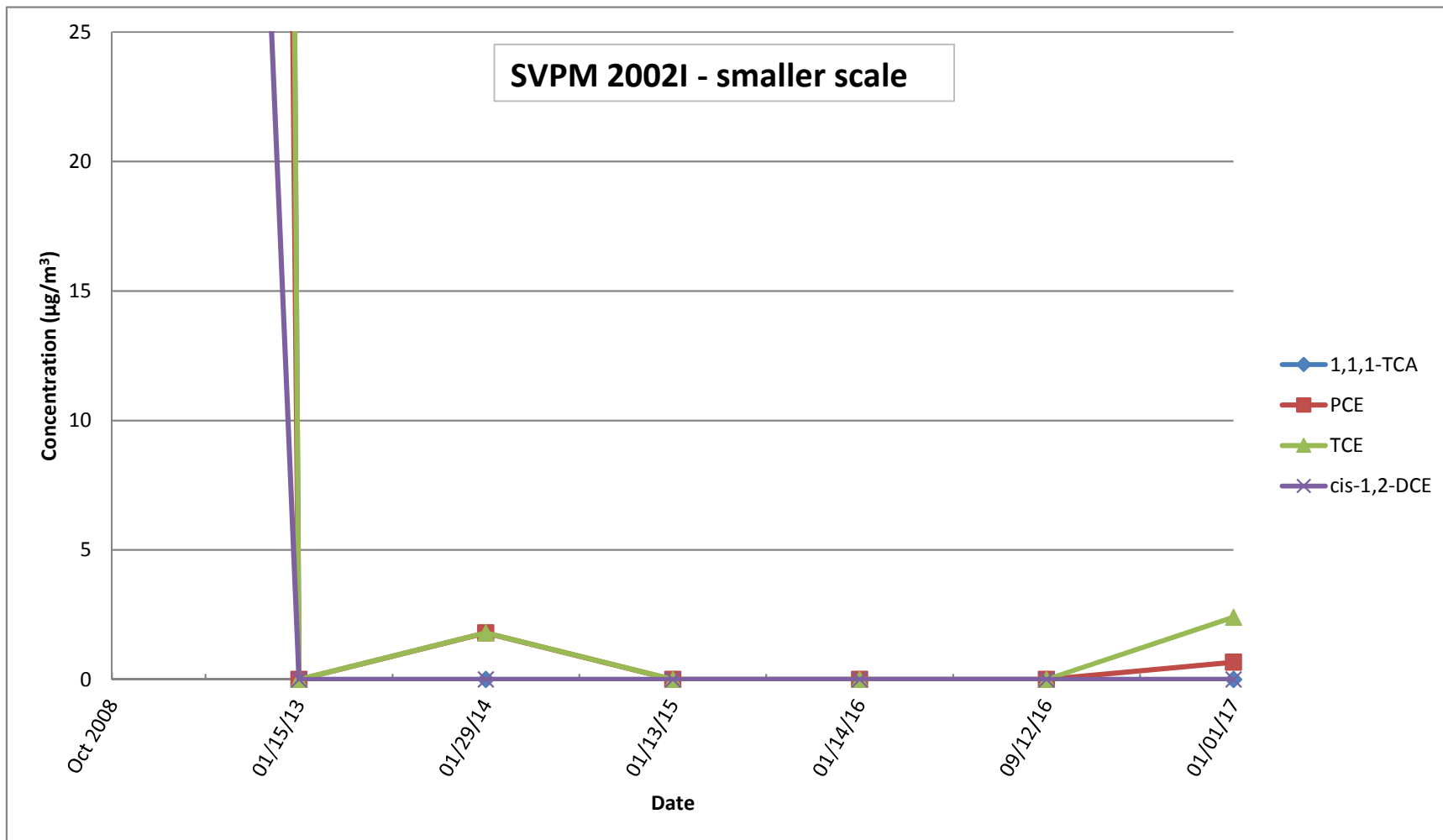
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



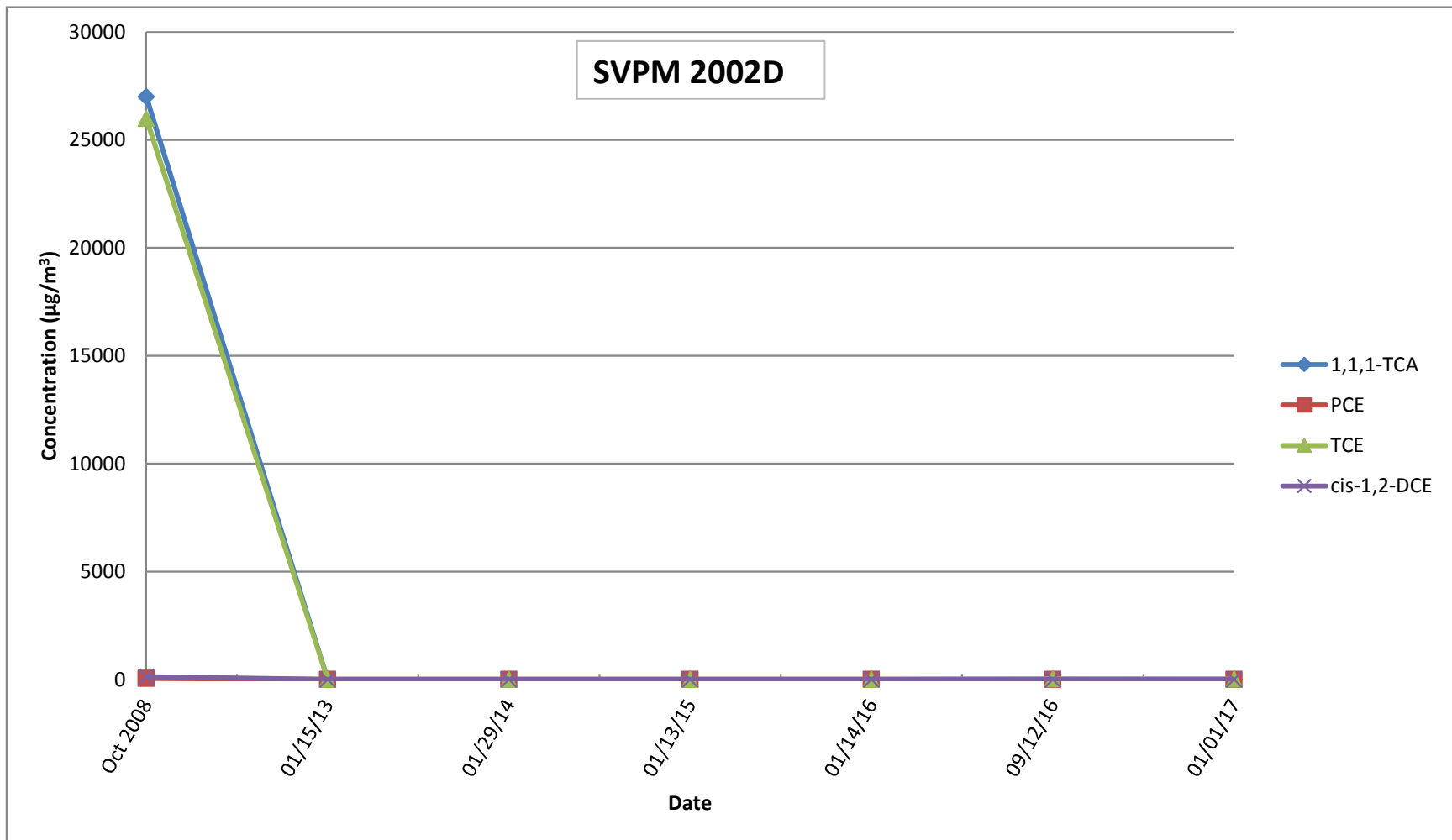
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



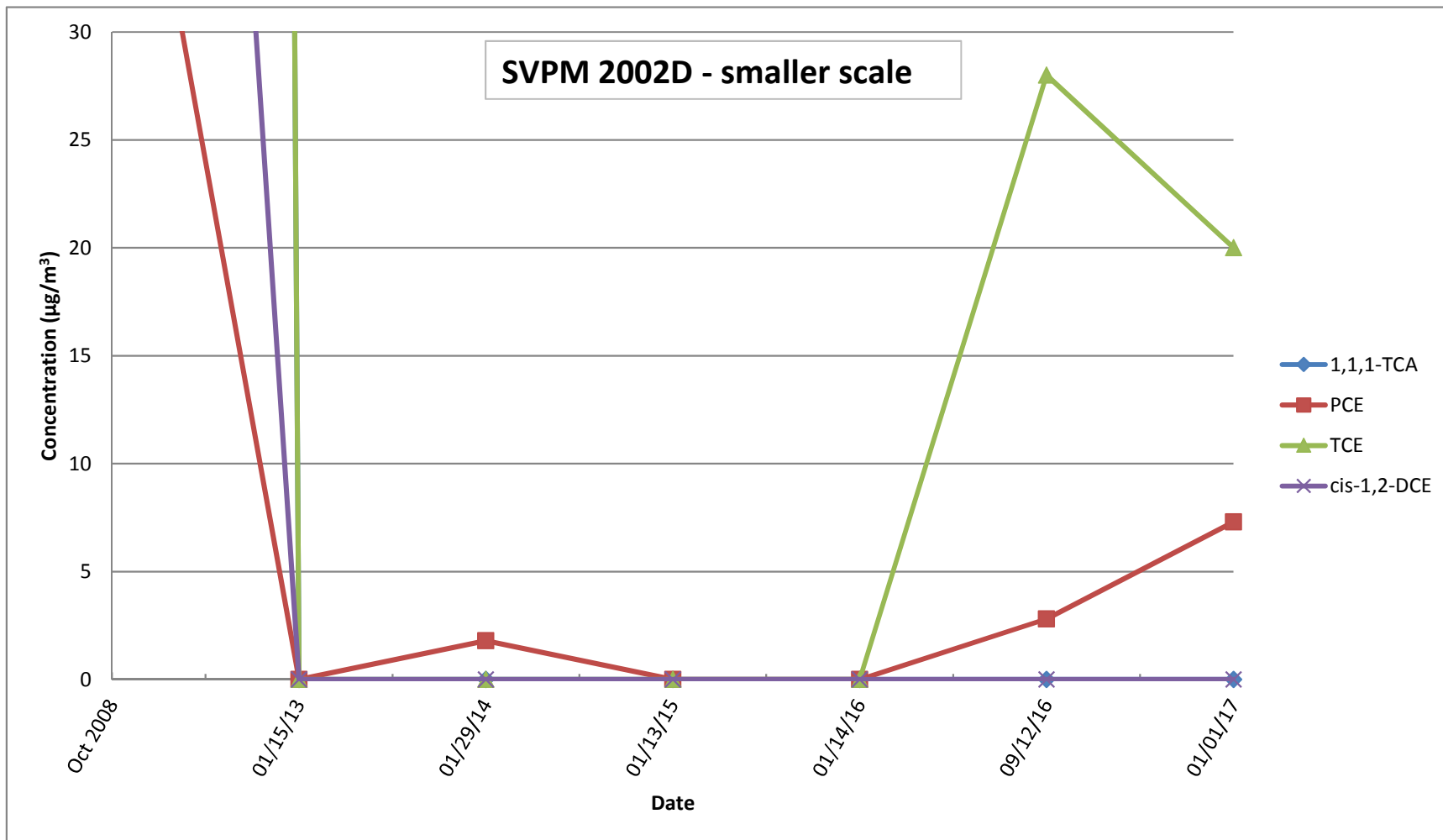
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



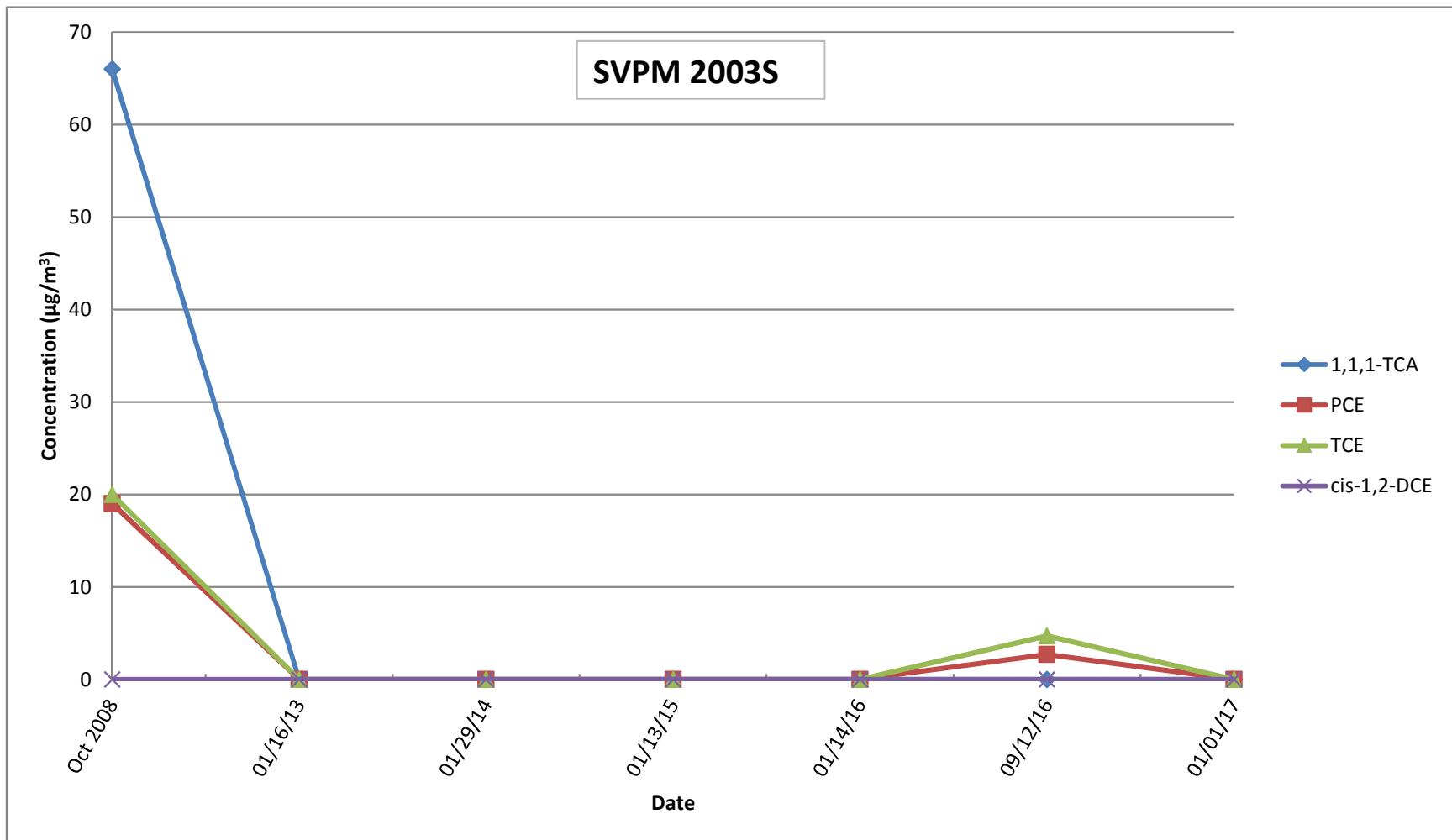
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



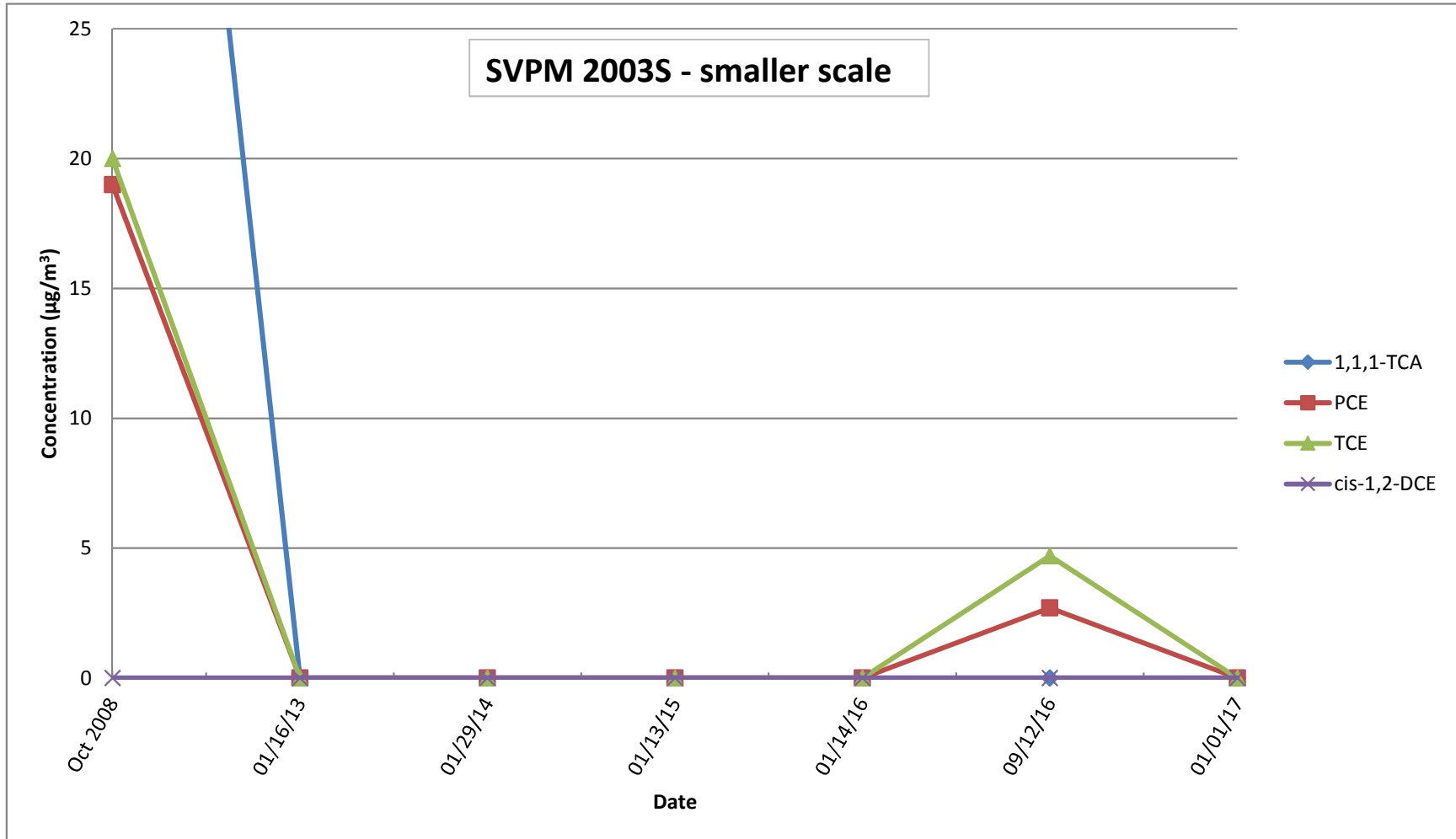
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



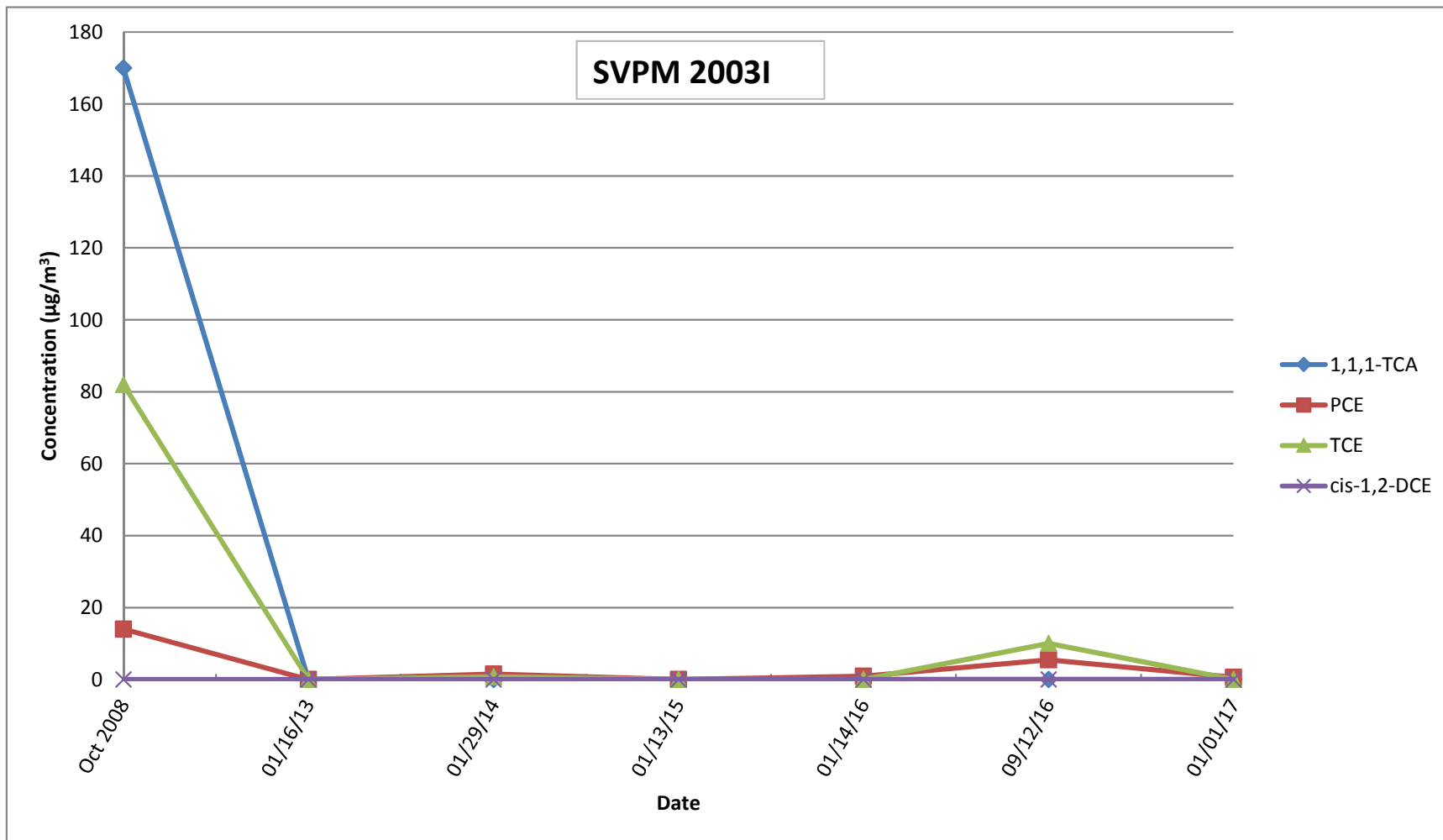
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



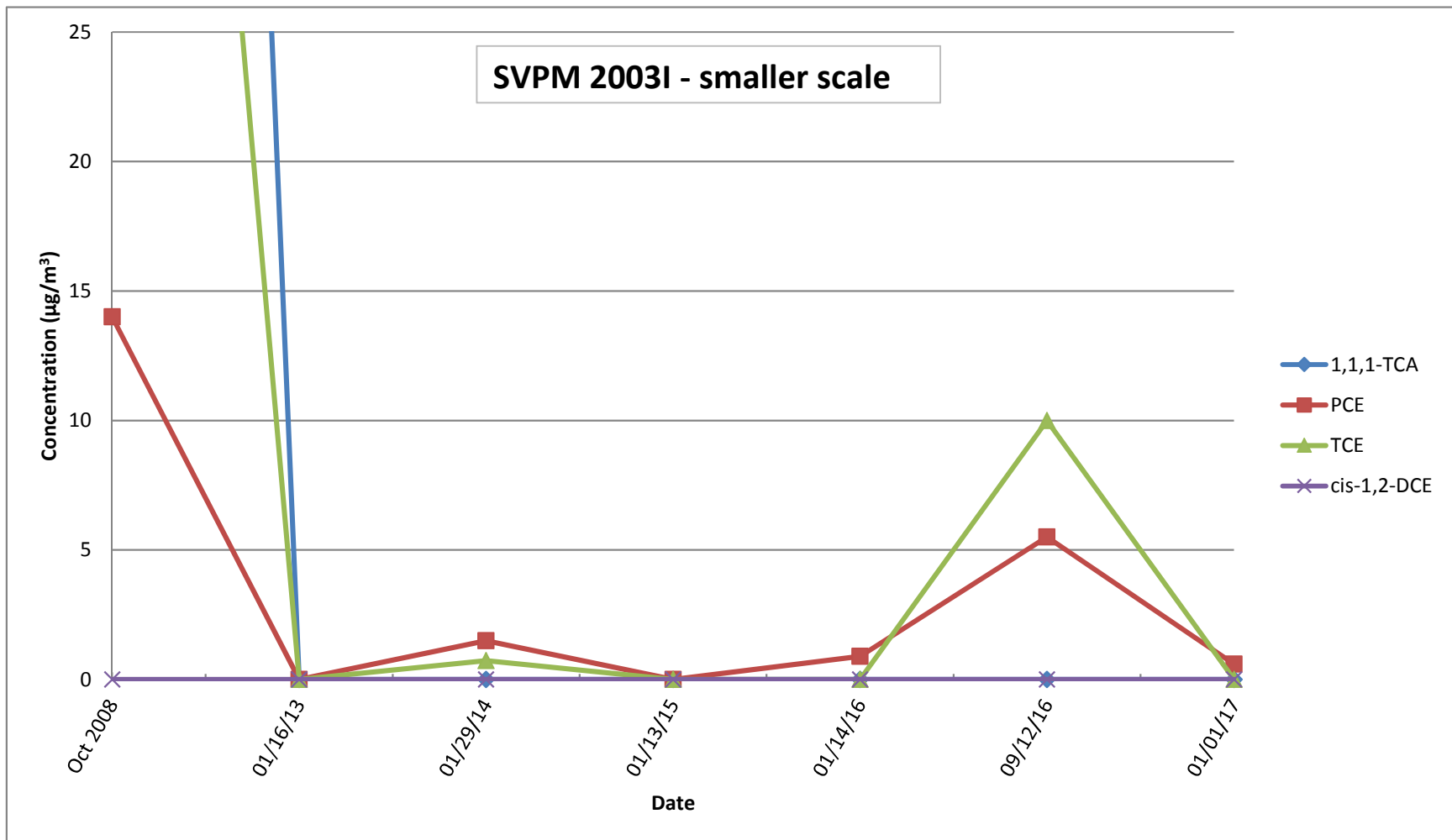
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



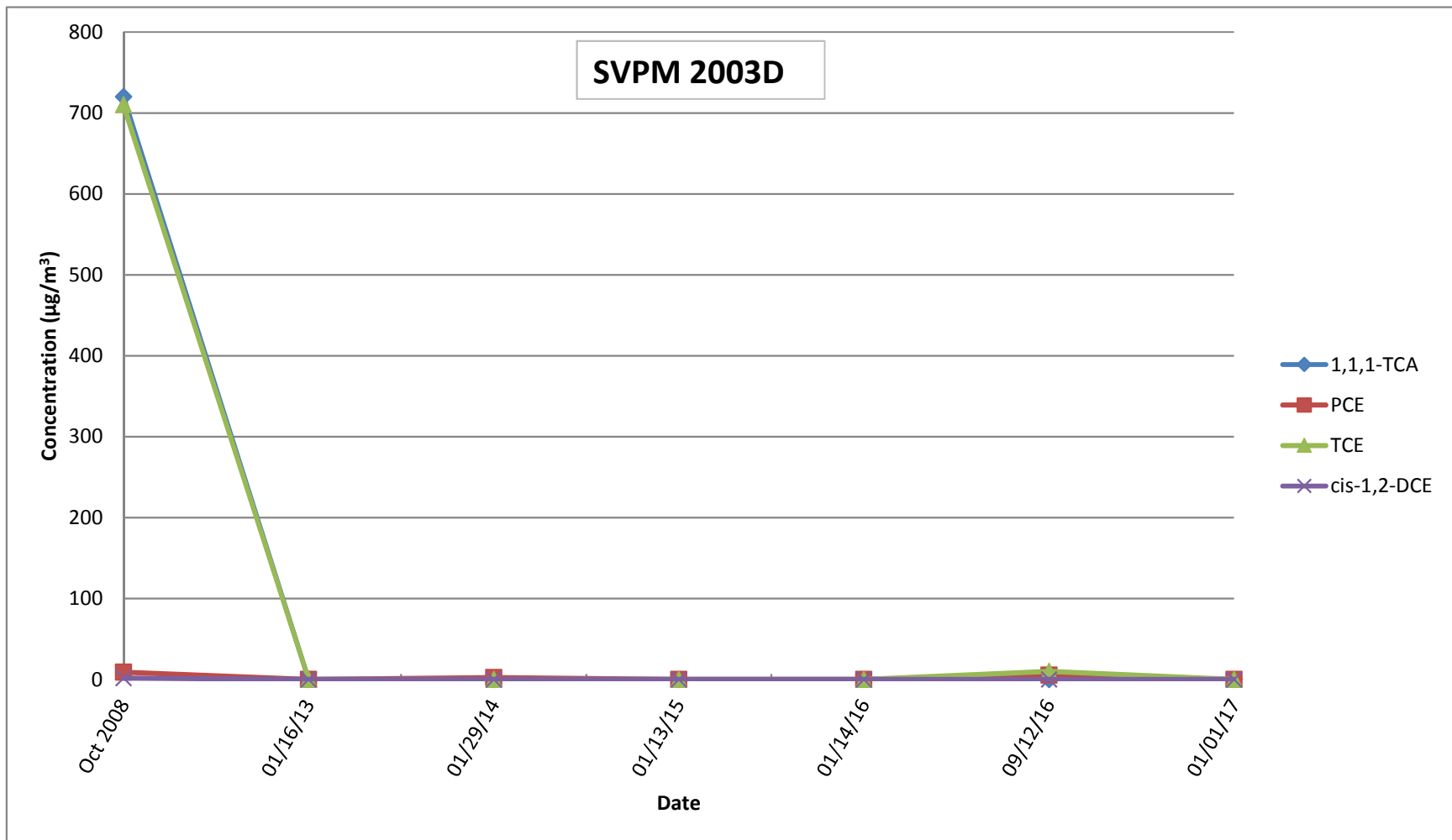
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



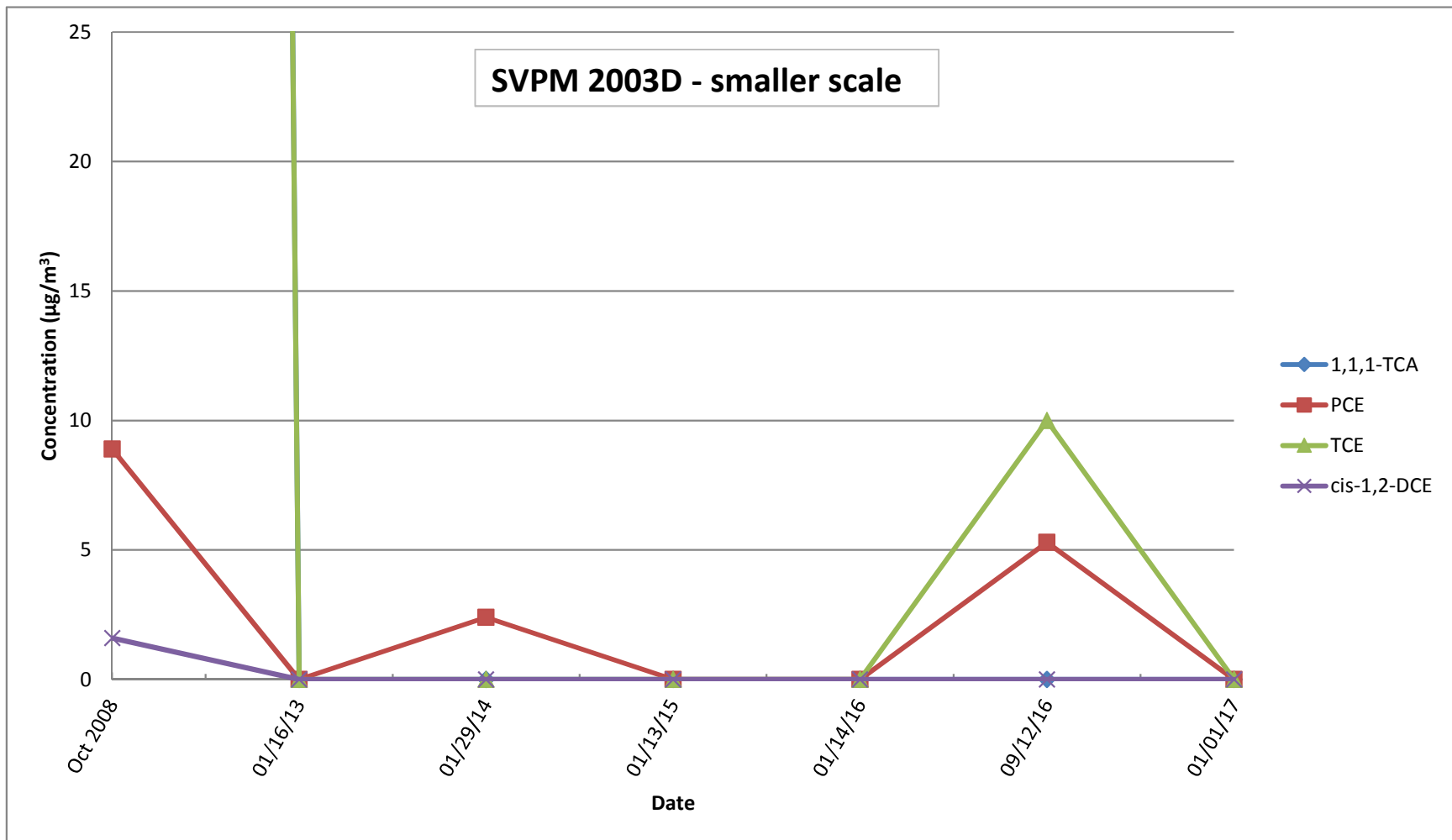
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



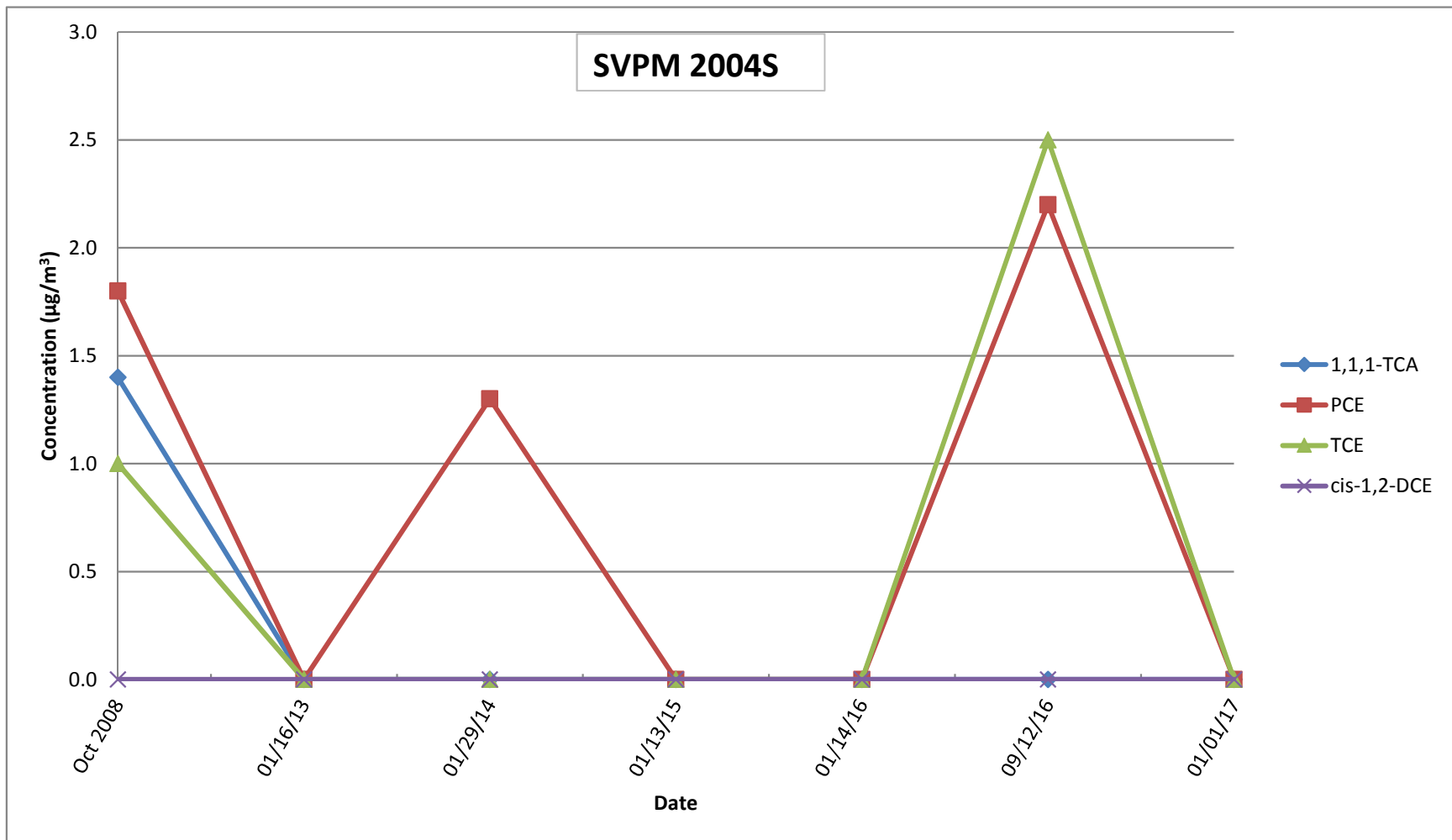
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



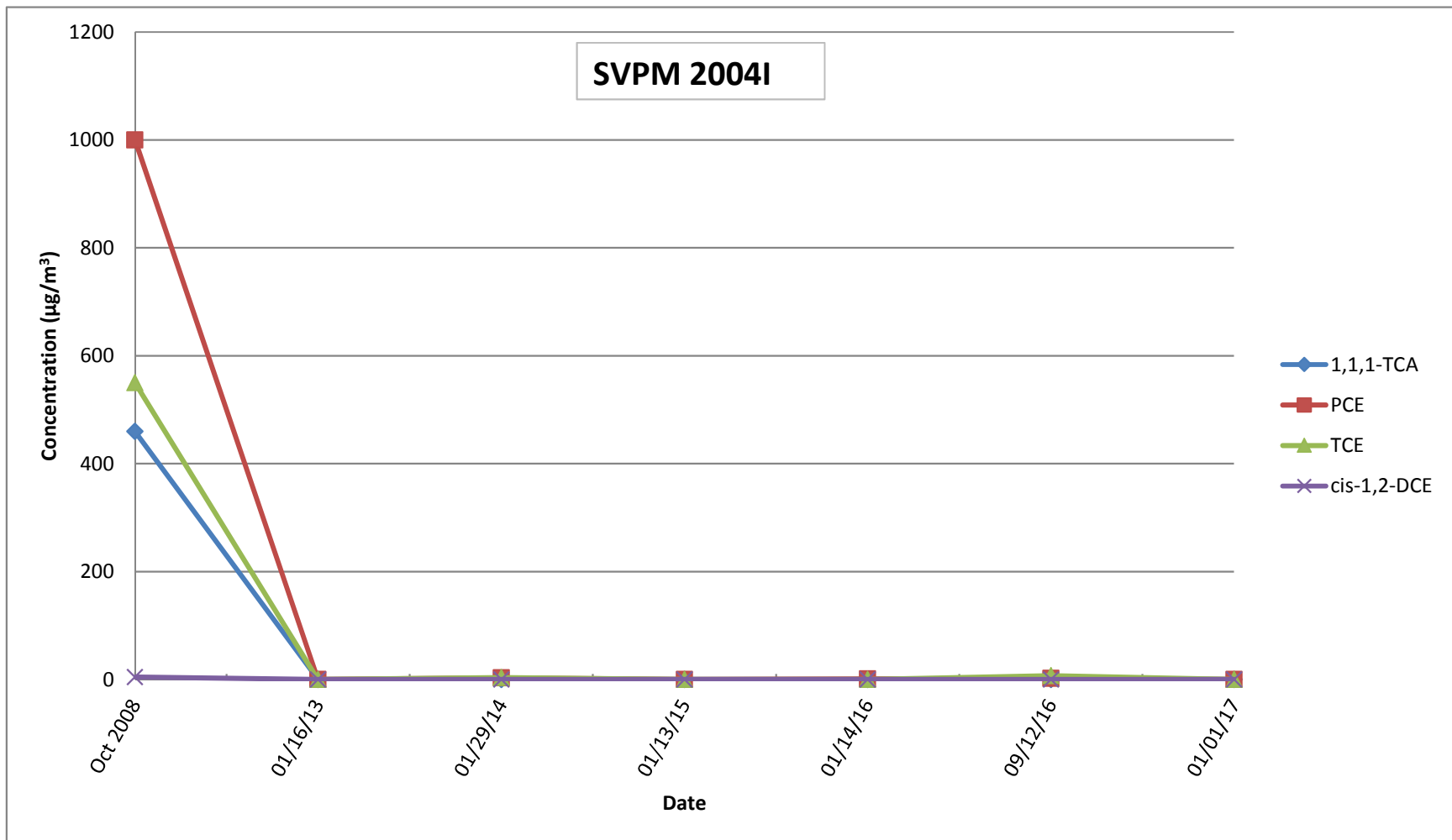
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



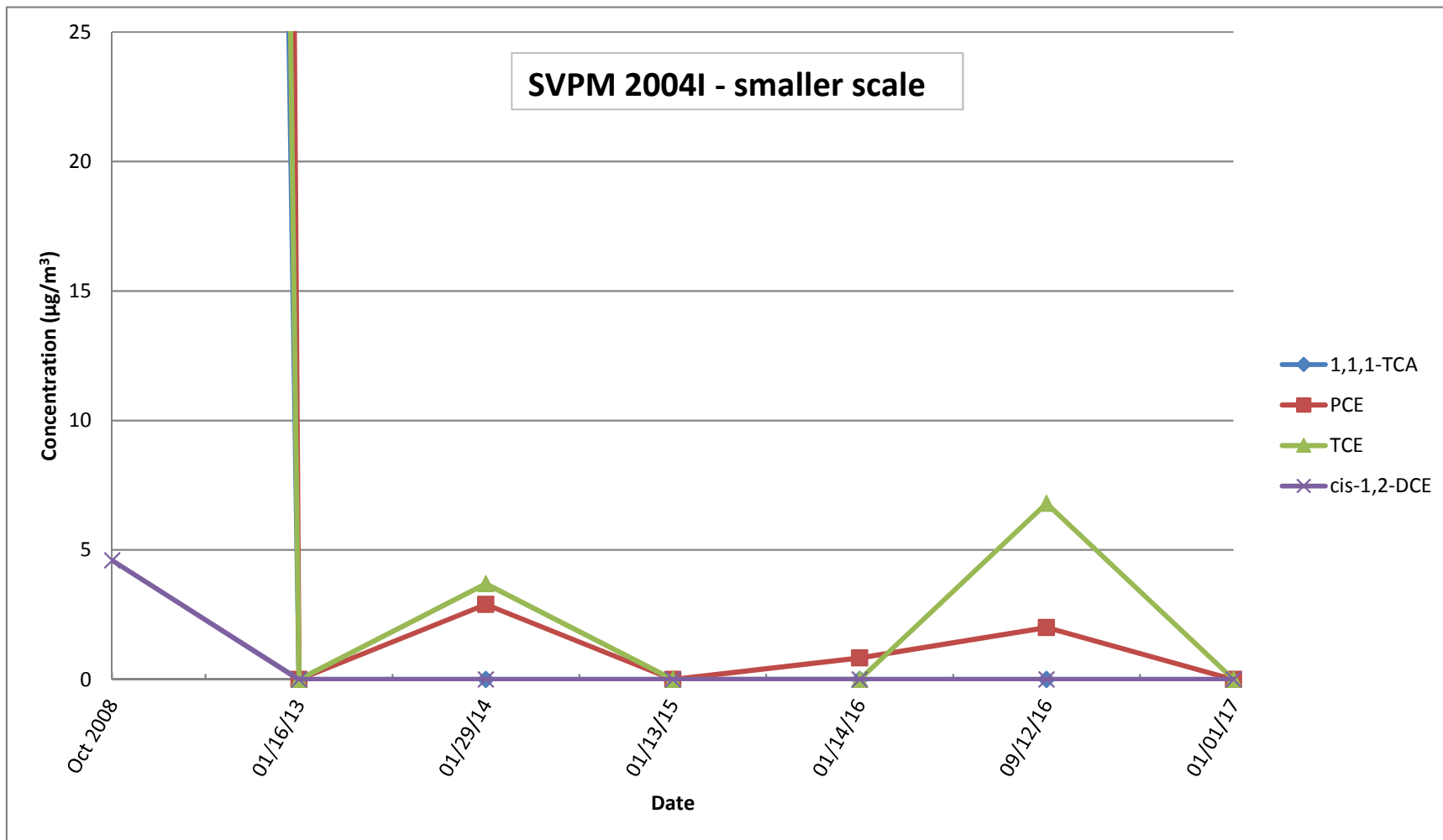
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



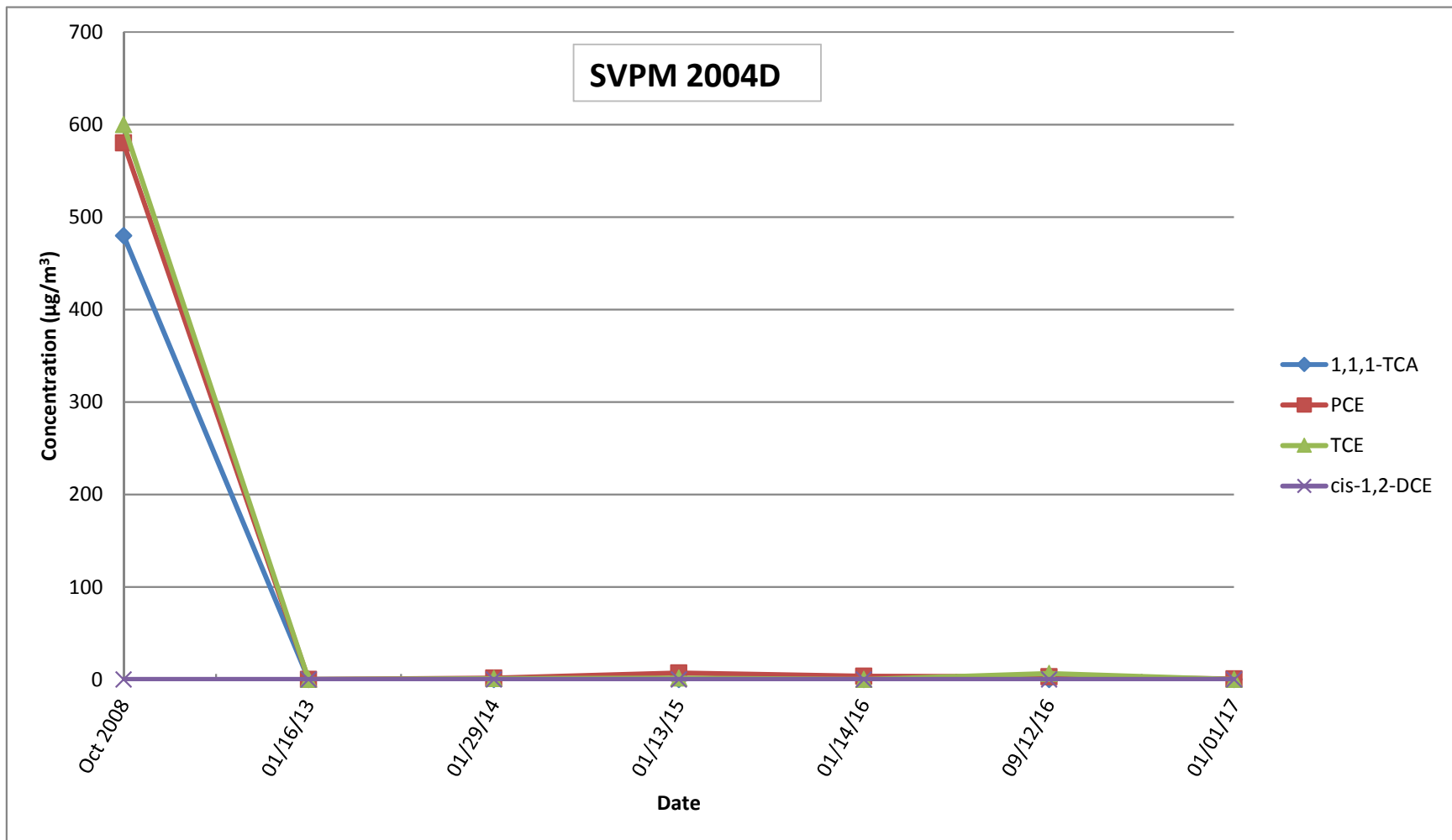
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



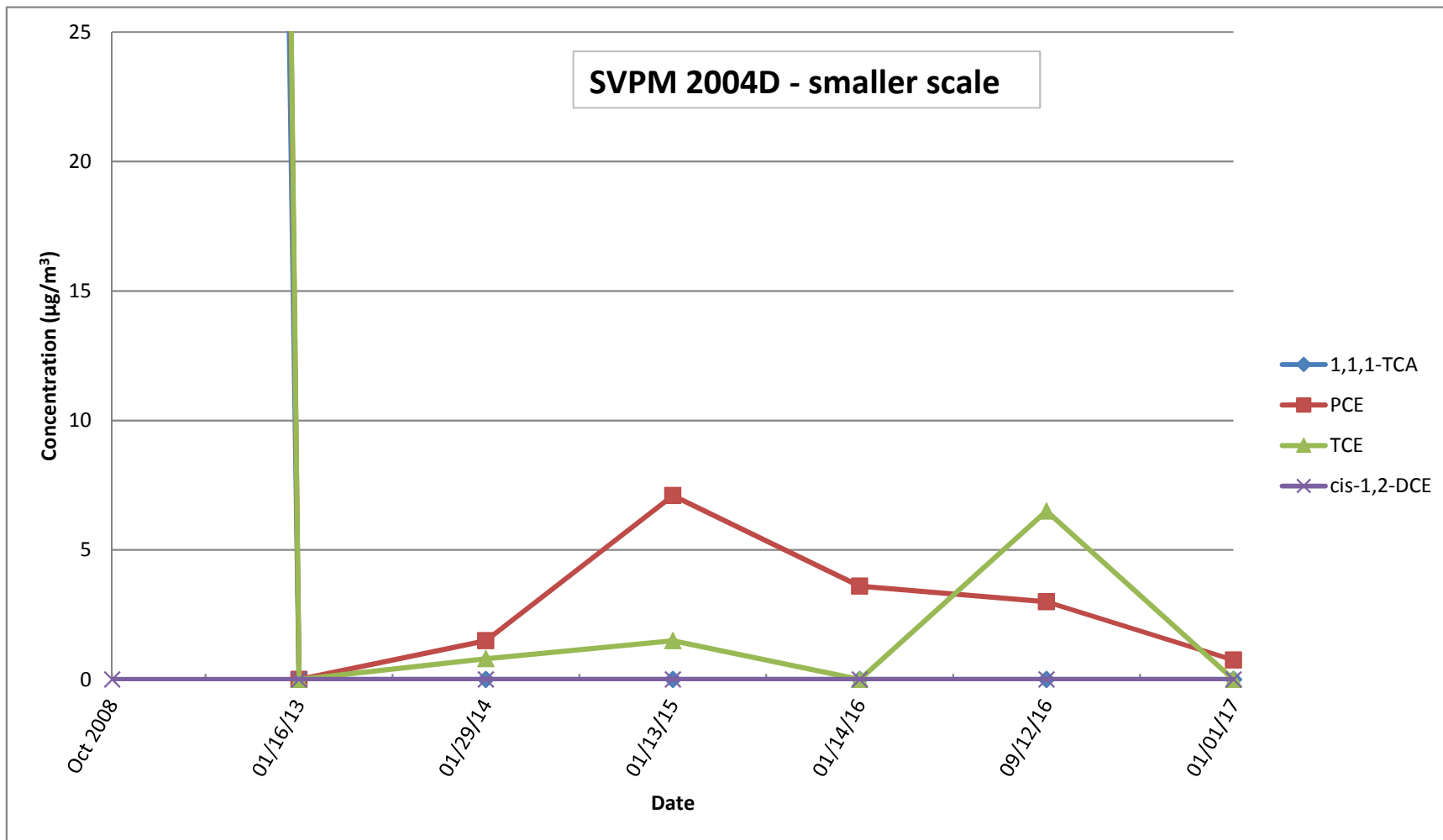
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



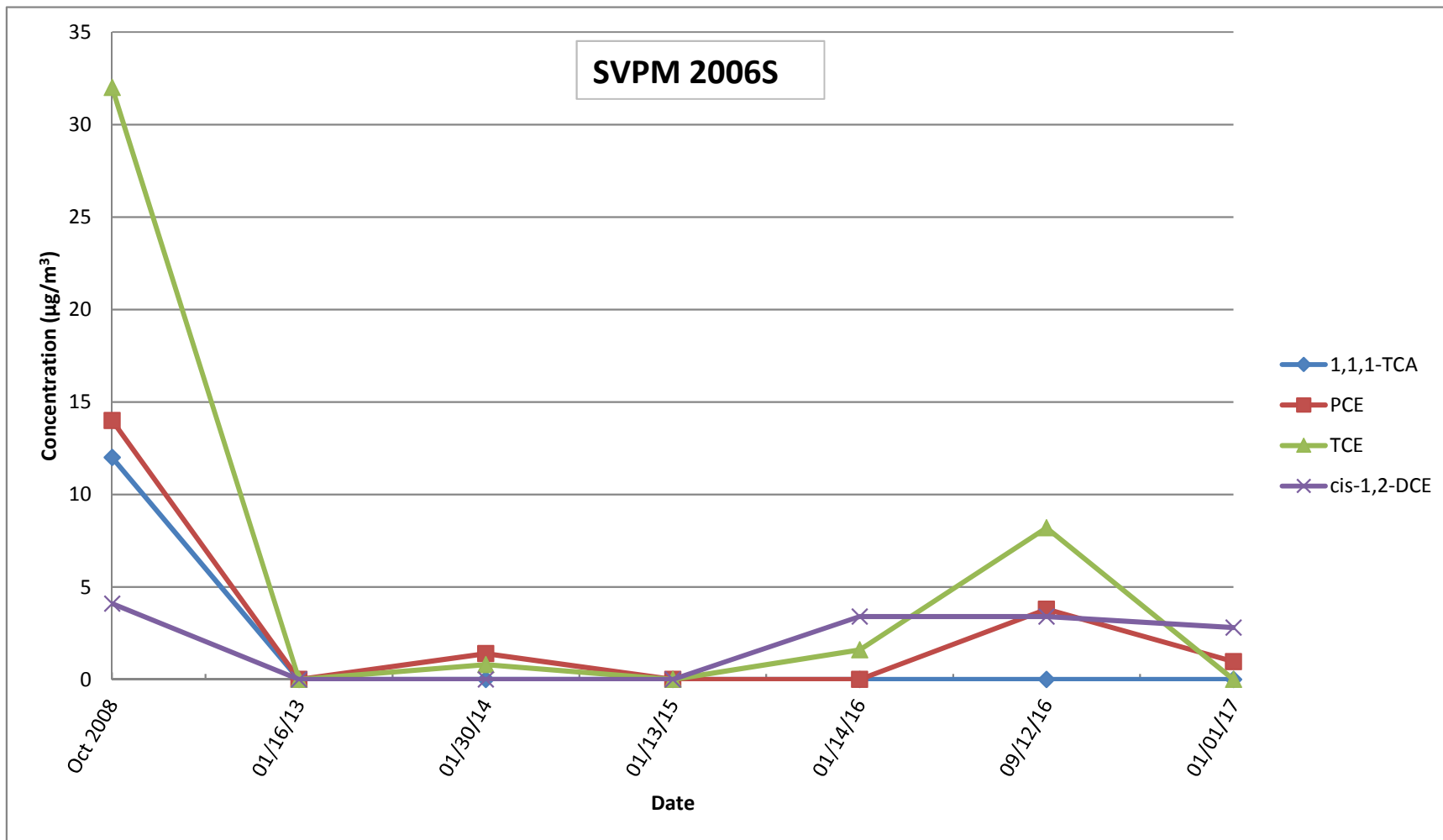
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



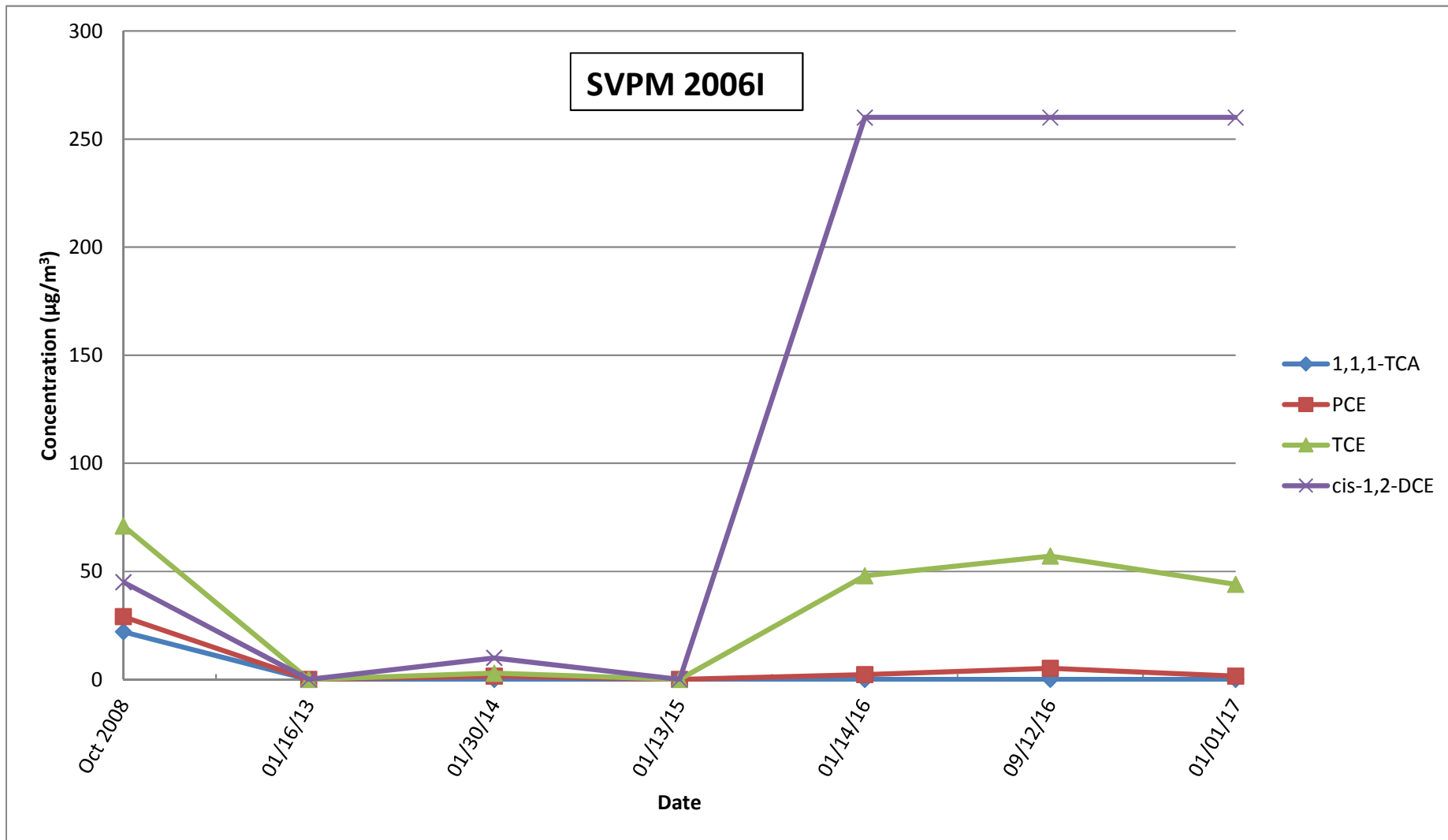
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



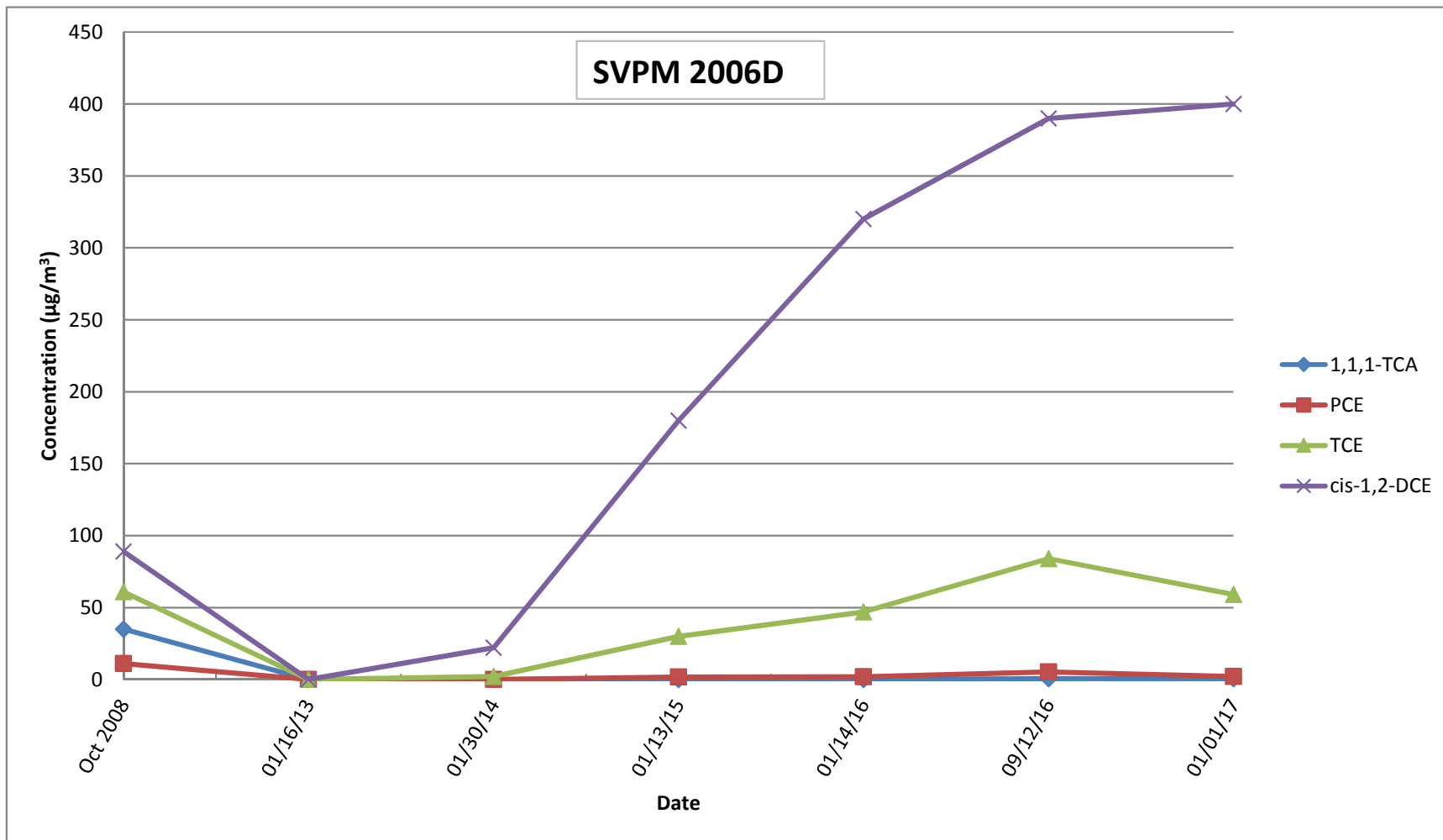
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



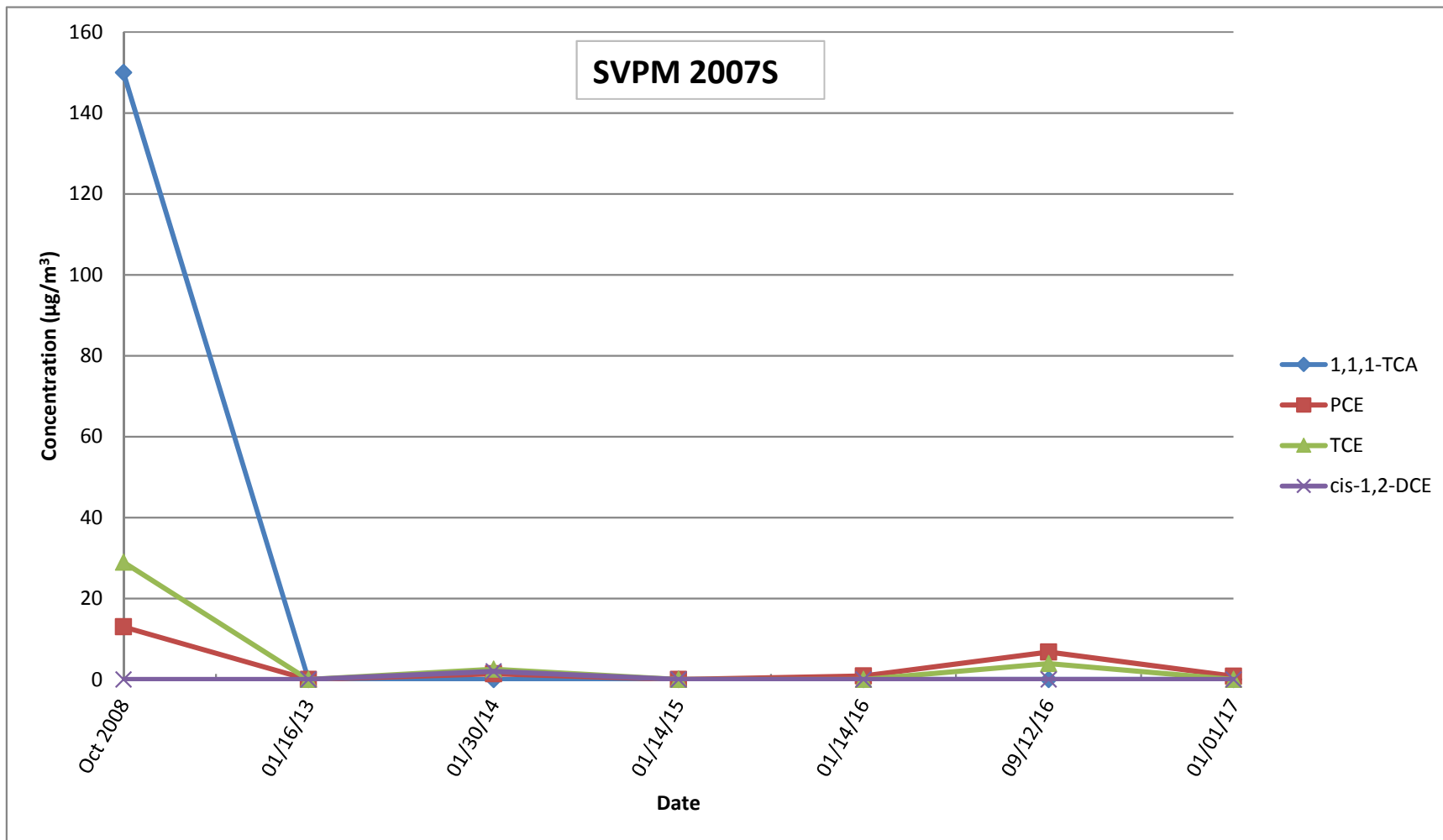
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



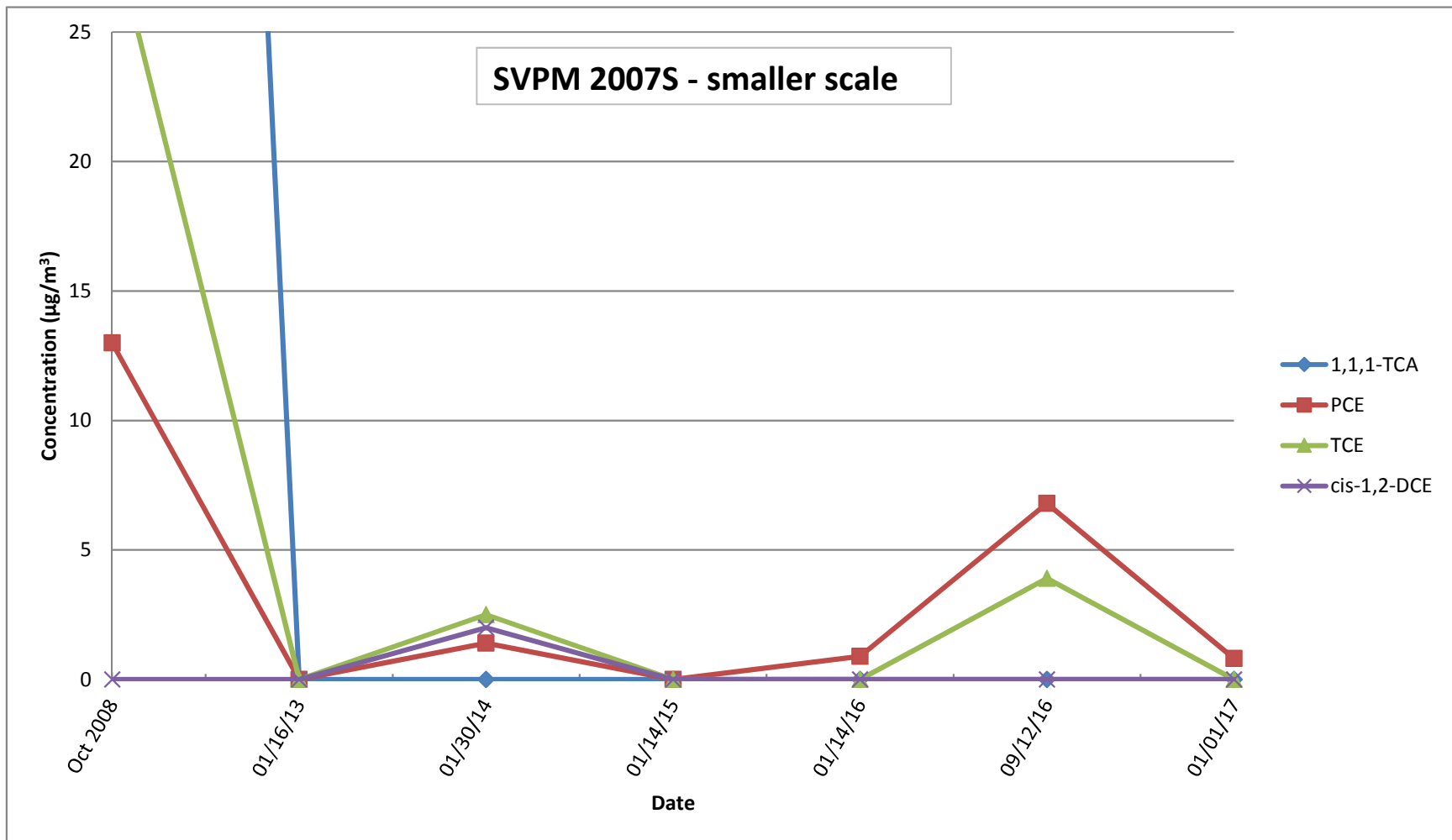
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



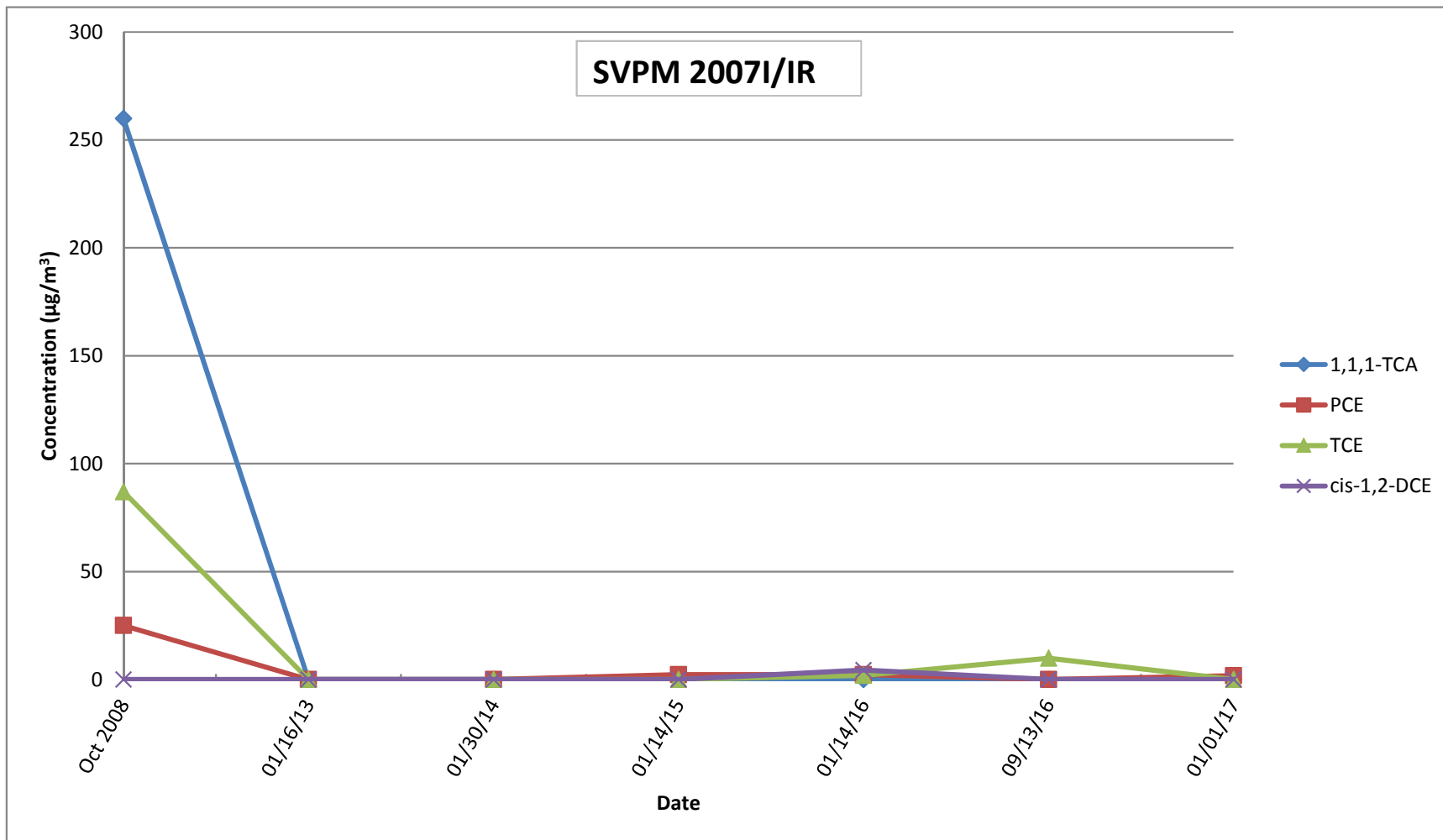
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



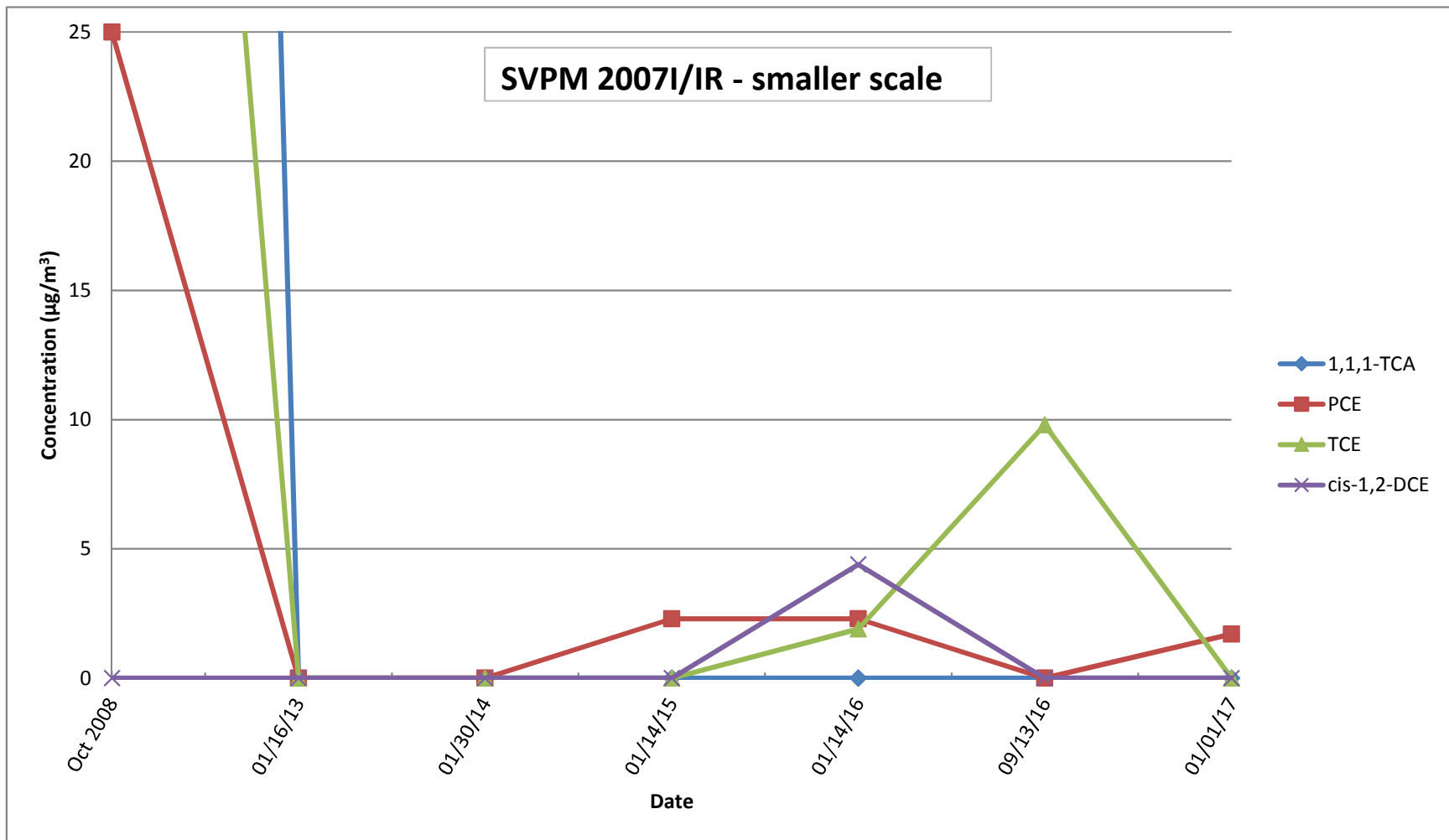
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



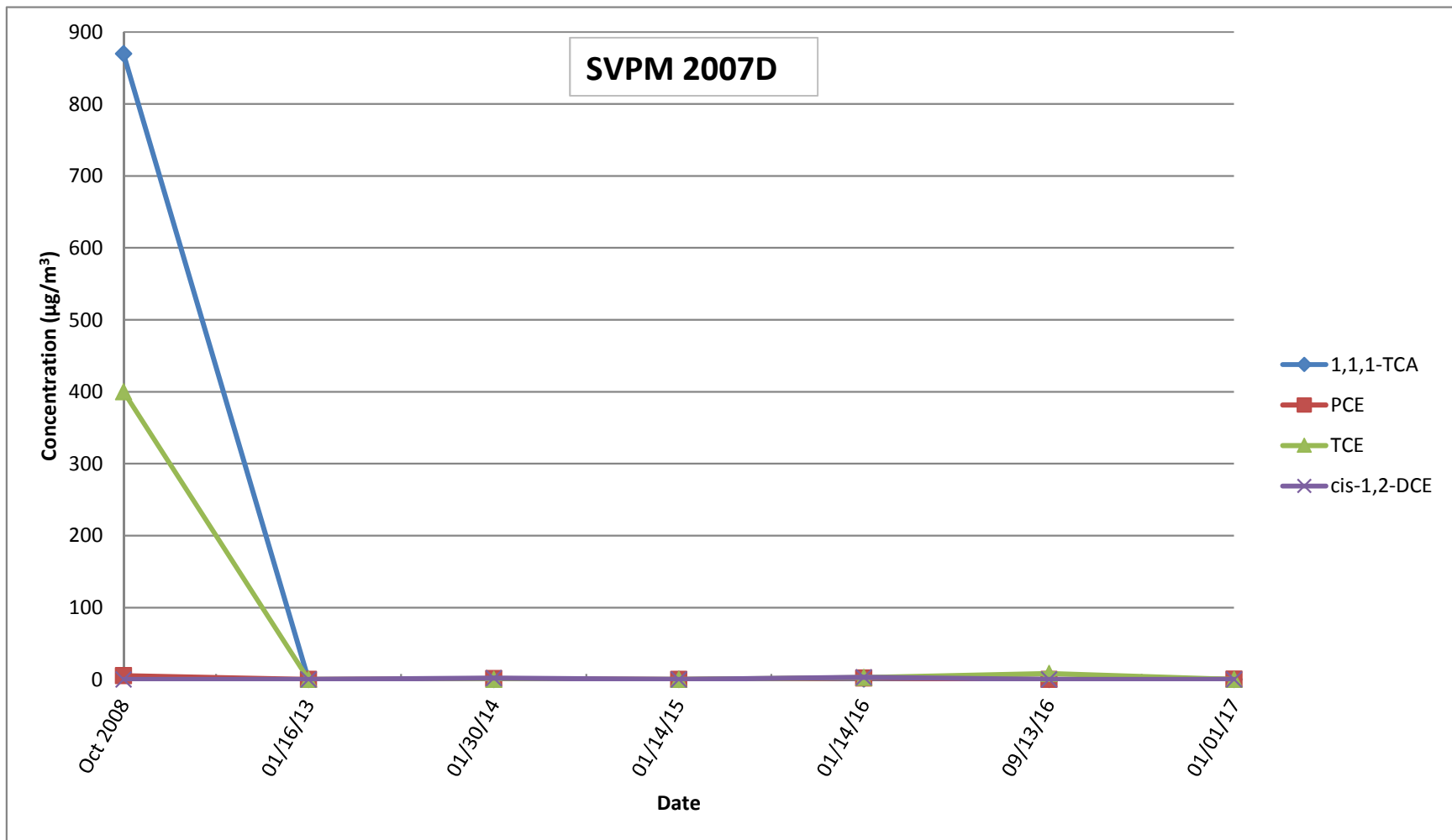
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs

