21 July 2023

Mr. Scott Sokolowski
Remedial Project Manager
Naval Facilities Engineering Command, Mid Atlantic
9324 Virginia Avenue, Building Z-144
Norfolk, VA 23511-3095

Subject: **US NAVY CONTRACT NO. N40085-16-D-2288**
CONTRACT TASK ORDER NO. 4042
2023 FIRST QUARTER SVECS OPERATIONS REPORT - SITE 1
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT, BETHPAGE, NY

Dear Mr. Sokolowski:

An electronic copy of the *2023 First Quarter Operations Report, Soil Vapor Extraction Containment System, Site 1, Former Drum Marshalling Yard, Naval Weapons Industrial Reserve Plant, Bethpage, New York,* has been submitted to your attention.

Please contact me at rgregory@komangs.com or 610.400.0636 if you have any questions or comments regarding this submittal.

Sincerely,
KOMAN Government Solutions, LLC (KGS)

Robert G. Gregory
Project Manager

Cc: Mr. Vin Varricchio (NWIRP Bethpage Facility Management) – 2 hard copies, 2 CDs
Mr. Jason Pelton (NYSDEC) – 1 Electronic Copy
Ms. Kristin Granzen (NYSDEC) – 1 Electronic Copy
Mr. Matthew Travis (NYSDEC) – 1 Electronic Copy
Mr. William Cords (NAVAIR) – 1 Electronic Copy
Mr. James Sullivan (NYSDOH) – 1 Electronic Copy
Ms. Monica Marrow (Jacobs - NIRIS) – 1 hard copy, DDS Form, 1 CD
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Quarterly Operations Report
First Quarter 2023

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

Contract No. N40085-16-D-2288
Contract Task Order No. N4008517F4042

June 2023

Prepared for:

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

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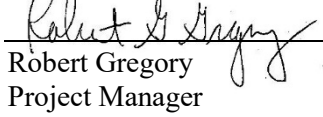
06/02/2023

Patrick Schauble
Program Manager
Date



06/02/2023

Robert Gregory
Project Manager
Date

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APPENDICES

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
lbs	pounds
NAVFAC	Naval Facilities Engineering Systems Command
Navy	United States 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
PCB	polychlorinated biphenyls
PCE	tetrachloroethene
PID	photoionization detector
scfm	standard cubic feet per minute
SVE	soil vapor extraction
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.
$\mu g/m^3$	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 First Quarter 2023 Operations Report 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 United States Department of the Navy (Navy), Naval Facilities Engineering Systems Command (NAVFAC), Mid-Atlantic, under Contract No. N40085-16-D-2288, Contract Task Order (CTO) No. N4008517F4042. This First Quarter 2023 Operations Report details activities that occurred from January 2023 to March 2023. Data were 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.

- *Final Tier II Sampling and Analysis Plan, Operations, Maintenance, and Monitoring of the SVECS, Site 1, Naval Weapons Industrial Reserve Plant, Bethpage, New York* prepared by KGS in January 2023.

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 was 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 ($\mu g/m^3$) 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 as provided in *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH, 2006). Updates to the evaluation matrices were established in May 2017 (NYSDOH, 2017). The 2017 updates lowered the sub-slab soil vapor screening value for TCE from 250 $\mu g/m^3$ to 60 $\mu g/m^3$; the screening values for PCE and 1,1,1-TCA remained at 1,000 $\mu g/m^3$ (NYSDOH, 2017). 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 have 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 $\mu g/m^3$ of TCE, 381 $\mu g/m^3$ of PCE, and 20,634 $\mu g/m^3$ of 1,1,1-TCA. The maximum concentrations of VOCs in the soil gas samples were 180,000 $\mu g/m^3$ of TCE, 1,200 $\mu g/m^3$ of PCE, and 90,000 $\mu g/m^3$ 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 (SVE) 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 $\mu g/m^3$. A secondary objective of this project is to address soil vapor with a TCE concentration greater than 5 $\mu g/m^3$. 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 a vacuum of up to 20 i.w. in order to extract the targeted flow rates. The 12 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 discharge lines 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 (SVE-107D, SVE-108D, SVE-109D, SVE-110D, and SVE-111D) were installed in October 2011 to address potential VOCs under Plant No. 3 and the South Warehouse. These five wells were connected directly to pipeline leading to the Treatment Building downstream of the FMS; no sampling ports were established for these wells. During the Second Quarter 2022, six additional SVEWs (SVE-112D, SVE-113D, SVE-114D, SVE-115D, SVE-116D and SVE-117D) were brought online to address residual VOC concentrations in the central area of Site 1. A separate FMS was constructed in 2022 for these six SVEWs that includes sampling ports for each well. Sampling of these additional SVEWs began in September 2022. A site plan depicting all SVEW 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**.

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 NYSDOH-certified, National Environmental Laboratory Accreditation Conference (NELAC)-certified, and Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)-accredited laboratory, Eurofins Air Toxics, LLC located in Folsom, California, 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 residential 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. Soil vapor 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 soil vapor 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 [PID] 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 the First Quarter 2023 reporting period:

- On 22 March 2023, goosenecks were installed at the two Site 1 vent wells and the flush-mount pad for SVE-115D was brought up to the grade of the new pavement.

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 18 active 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 18 SVEWs and the 18 SVPMs to monitor the SVECS vacuum field, and soil gas sampling from the 18 SVPMs is conducted annually (generally in the winter) to evaluate the effectiveness of the SVECS. The first annual soil gas sampling event was conducted in the winter 2012-2013. The eleventh annual sampling event was conducted in February 2023.

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 accepted by the NYSDEC in the February 2010 DAR permit equivalent application. In September 2011, the Navy submitted an evaluation proposing revised discharge goals (TtNUS, 2011), which NYSDEC concurred with in October 2011. A copy of this documentation is included as **Appendix A**.

Summaries of the monthly treatment system influent and effluent vapor sampling results for January, February, and March (First Quarter) are 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 the computed 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)** during the current reporting period.

All raw analytical data are 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, six deep, and six newly installed SVEWs. The samples are collected for the purpose of tracking and documenting the performance of the SVECS (TtEC, 2010).

Table 4 presents the data collected on 24 February 2023 (First Quarter 2023) for the active 18 SVEWs.

Analytical results of select VOCs (1,1,1-TCA, PCE, and TCE) detected at the 18 SVEWs active during the First Quarter are presented on **Figure 5**. Historical analytical results of quarterly vapor samples

collected from December 2009 through the First Quarter 2023 for the initial 12 SVEWs and the additional 6 SVEWs are presented in **Table 5**.

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

Soil vapor pressure readings are collected quarterly from the 18 active SVEWs and 18 SVPMs to monitor the SVECS vacuum field. Soil vapor pressure readings from these locations were collected on 22 and 24 February. Results of the First Quarter vapor pressure monitoring event are presented in **Table 6**.

The vapor pressure readings collected from the SVEWs ranged between -3.0 to -12.0 i.w., indicating that a vacuum has been established along the fence line. The vapor pressure readings collected from the SVPMs ranged between 0.00 to -0.35 i.w., indicating that a vacuum has been established in the residential neighborhood except for the outermost two clusters of SVPMs (SVPM2006 and SVPM2007) where no vacuum influence was measured. Pressure readings from the 18 SVPMs are presented on **Figure 6**.

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 SVPM locations. The annual 2023 SVPM samples were collected on 22 February 2023.

3.4.1 2023 Vapor Quality Results

Annual vapor samples were collected on 22 February 2023 from the 18 SVPM locations. Validated analytical results for samples collected in February 2023 are summarized in **Table 7**. The data validation report for the SVPM analytical data is presented in **Appendix B**.

As shown on **Table 7**, 1,1,1-TCA was detected at an estimated concentration (0.79 J µg/m^3) at only one of the 18 sampling locations during the 2023 sampling event. PCE was detected at 6 of the 18 sampling locations, ranging from 1.0 J µg/m^3 at SVPM-2006I and SVPM-2007S to 4.3 J µg/m^3 in the duplicate sample at SVPM-2002I; PCE was not detected in the parent sample at this location. TCE was detected at 17 of the 18 sampling locations, ranging from 1.1 J µg/m^3 at SVPM-2007I to 40 µg/m^3 at SVPM-2002D. All detected concentrations were below the NYSDOH sub-slab screening value of 1,000 µg/m^3 for 1,1,1-TCA, 1,000 µg/m^3 for PCE, and 60 µg/m^3 for TCE.

3.4.2 Historical Vapor Quality Results

Table 8 presents historical vapor quality analytical results collected from the 18 SVPM locations, beginning in October 2008 and including the most recent results obtained in February 2023. Historical trend graphs showing the SVPM concentrations over time can be found in **Appendix C**. As indicated, concentrations observed in February 2023 have dropped substantially from initial concentrations observed in October 2008, and were similar to those observed in March 2022 with the following minor exceptions noted:

- TCE at SVPM-2002I decreased from 10 µg/m^3 to 4.1 µg/m^3 and 3.6 µg/m^3 in the parents and duplicate samples, respectively,
- TCE at SVPM-2003I decreased from 18 µg/m^3 to 2.5 J µg/m^3,
- TCE at SVPM-2006I decreased from 35 µg/m^3 to 23 µg/m^3, and

- TCE at SVPM-2006D decreased from 29 µg/m^3 to 19 µg/m^3.

In 2008, 1,1,1-TCA was detected at all 18 locations, with concentrations ranging from 1.4 µg/m^3 (SVPM-2004S) to 52,000 µg/m^3 (SVPM-2002I); concentrations exceeded the NYSDOH sub-slab screening value at that time of 1,000 µg/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 µg/m^3, well below the NYSDOH sub-slab screening value of 1,000 µg/m^3. Since 2013, 1,1,1-TCA has been sporadically detected at three locations (SVPM-2006D, SVPM-2007I, and SVPM-2007D) at estimated concentrations less than 1.0 µg/m^3, well below the NYSDOH sub-slab screening value of 1,000 µg/m^3. In 2023, 1,1,1-TCA was detected at 1 of the 18 sampling locations (0.79 J µg/m^3 at SVPM-2007D).

In 2008, PCE was detected at all 18 locations, with concentrations ranging from 1.8 µg/m^3 (SVPM-2004S) to 5,000 µg/m^3 (SVPM-2001I); concentrations exceeded the NYSDOH sub-slab screening value of 1,000 µg/m^3 at two locations (SVPM-2001S and SVPM-2001I). In 2013, PCE concentrations ranged from non-detectable levels at seven locations to 2.3 J µg/m^3 (SVPM-2004D), and no locations exceeded the NYSDOH sub-slab screening value of 1,000 µg/m^3. Since 2013, PCE has been detected at all locations during at least one event with a maximum concentration of 10 µg/m^3 (SVPM-2001D) in 2016 that is well below the NYSDOH sub-slab screening value of 1,000 µg/m^3. In 2023, PCE was detected at 6 of the 18 sampling locations, with concentrations ranging from 1.0 J µg/m^3 at SVPM-2006I and SVPM-2007S to 4.3 J µg/m^3 in the duplicate sample at SVPM-2002I. All PCE concentrations measured in 2023 remain well below the screening value of 1,000 µg/m^3.

In 2008, TCE was detected at all 18 locations, with concentrations ranging from 1.0 µg/m^3 (SVPM-2004S) to 89,000 µg/m^3 (SVPM-2002I); concentrations exceeded the (current at the time) 2006 NYSDOH sub-slab screening value of 250 µg/m^3 at nine locations (SVPM-2001S, SVPM-2001I, SVPM-2001D, SVPM-2002S, SVPM-2002I, SVPM-2002D, SVPM-2003D, SVPM-2004I, and SVPM-2004D). Following the NYSDOH 2017 update to the sub-slab screening values, which reduced the value for TCE from 250 µg/m^3 to 60 µg/m^3, TCE was measured at two SVPMs (SVPM-2006I in January 2016 and SVPM-2006D in September 2016 through February 2018) at concentrations greater than the updated screening level. In 2023, TCE was detected at 17 of the 18 sampling locations, with concentrations ranging from 1.1 J µg/m^3 at SVPM-2007I to 40 µg/m^3 at SVPM-2002D, all of which are less than the 2017 NYSDOH screening value of 60 µg/m^3.

3.5 Soil Vapor Quality Concentration Trends

Historical vapor analytical results for 18 SVEWs (SVE-101I through SVE-106D and SVE-112D through SVE-117D) through the First Quarter are presented in **Table 5**. In addition, concentration trends of select VOCs for the SVECS combined influent (1,1,1-TCA, PCE, TCE, and total VOCs) and each of the 18 SVEWs (1,1,1-TCA, PCE, and TCE) are presented in **Appendix D**. Concentration trends observed in 18 SVEWs through the First Quarter 2023 are discussed below.

- Combined Influent: Overall VOC concentrations in the combined influent decreased during the First Quarter 2023 relative to the Fourth Quarter 2022, with total VOC concentrations of 1,049 µg/m^3 in January (**Table 1**), 989 µg/m^3 in February (**Table 2**), and 1,017 µg/m^3 in March (**Table 3**). TCE, PCE and 1,1,1-TCA concentrations remain approximately one to two orders of

magnitude below baseline concentrations measured in December 2009 (42,000 µg/m^3 TCE, 7,900 µg/m^3 PCE, and 13,000 µg/m^3 1,1,1-TCA).

- SVE-101I: Concentrations of two VOCs measured at this location (30 µg/m^3 TCE and 7.7 µg/m^3 1,1,1-TCA) increased in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5)**. The concentration of PCE decreased from 3.0 J µg/m^3 to 2.7 J µg/m^3. All concentrations typically one to two orders of magnitude below baseline concentrations measured in December 2009 (180,000 µg/m^3 TCE, 1,700 µg/m^3 PCE, and 51,000 µg/m^3 1,1,1-TCA).

- SVE-101D: Concentrations of two VOCs measured at this location (1,800 µg/m^3 TCE and 20 µg/m^3 PCE) decreased in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). The concentration of 1,1,1-TCA increased from 14 µg/m^3 to 380 µg/m3. All concentrations remain approximately two orders of magnitude below baseline concentrations measured in December 2009 (100,000 µg/m^3 TCE, 3,200 µg/m^3 PCE, and 26,000 µg/m^3 1,1,1-TCA).

- SVE-102I: Concentrations measured at this location (2.4 J µg/m^3 TCE, 1.2 J µg/m^3 PCE, and non-detect 1,1,1-TCA) decreased in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). All concentrations remain one to two orders of magnitude below the maximum concentrations measured in June 2010 (300 µg/m^3 TCE, 17 µg/m^3 PCE, and 13 µg/m^3 1,1,1-TCA).

- SVE-102D: Concentrations measured at this location (30 µg/m^3 TCE and 8.7 µg/m^3 PCE, and non-detect 1,1,1-TCA) decreased in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). All concentrations are below baseline concentrations measured in December 2009 (440 µg/m^3 TCE, 10 µg/m^3 PCE, and 130 µg/m^3 1,1,1-TCA).

- SVE-103I: Concentrations measured at this location in the First Quarter 2023 varied without a consistent pattern relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). TCE decreased from 2.1 J µg/m^3 to non-detect, PCE increased from 2.7 J µg/m^3 to 12 µg/m^3, and 1,1,1-TCA remained non-detect. All concentrations remain below the baseline concentrations measured in December 2009 (900 µg/m^3 TCE, 580 µg/m^3 PCE, and 900 µg/m^3 1,1,1-TCA).

- SVE-103D: Concentrations measured at this location (non-detect TCE, 1.6 J µg/m^3 PCE, and non-detect 1,1,1-TCA) decreased or remained constant in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). All concentrations remain one to three orders of magnitude below baseline concentrations measured in December 2009 (3,100 µg/m^3 TCE, 20,000 µg/m^3 PCE, and 3,000 µg/m^3 1,1,1-TCA).

- SVE-104I: Concentrations measured at this location in the First Quarter 2023 varied without a consistent pattern relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). TCE decreased from 11 µg/m^3 to non-detect, PCE increased from 0.98 J µg/m^3 to 8.0 µg/m^3, and 1,1,1-TCA remained non-detect. All concentrations are one to three orders of magnitude below baseline concentrations measured in December 2009 (710 µg/m^3 TCE, 3,100 µg/m^3 PCE, and 730 µg/m^3 1,1,1-TCA).

- SVE-104D: Concentrations measured at this location (non-detect TCE, 9.1 µg/m^3 PCE, and non-detect 1,1,1-TCA) decreased in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). All concentrations remain one to four orders of magnitude below baseline concentrations measured in December 2009 (4,600 µg/m^3 TCE, 20,000 µg/m^3 PCE, and 3,600 µg/m^3 1,1,1-TCA).

- SVE-105I: Concentrations measured at this location in the First Quarter 2023 varied without a consistent pattern relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). TCE decreased from 6.1 µg/m^3 to non-detect, PCE increased from 12 µg/m^3 to 20 µg/m^3, and 1,1,1-TCA remained non-detect. All concentrations remain below baseline concentrations measured in December 2009 (76 µg/m^3 TCE, 70 µg/m^3 PCE, and 9.9 µg/m^3 1,1,1-TCA).

- SVE-105D: Concentrations measured at this location (non-detect TCE, 1.8 J µg/m^3 PCE, and non-detect 1,1,1-TCA) either decreased or remained constant in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). All remain two to three orders of magnitude below baseline concentrations measured in December 2009 (1,700 µg/m^3 TCE, 2,100 µg/m^3 PCE, and 550 µg/m^3 1,1,1-TCA).

- SVE-106I: Concentrations measured at this location (2.8 J µg/m^3 TCE, 8.3 µg/m^3 PCE, and non-detect 1,1,1-TCA) either increased or remained constant in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). There has been some fluctuation of measured concentrations following a substantial increase in concentrations measured during and immediately following a soil remediation/excavation event in 2020, with decreasing or stable trends following the event. Baseline concentrations were established at this site in December 2009 (1,900 µg/m^3 TCE, 390 µg/m^3 PCE, and 220 µg/m^3 1,1,1-TCA).

- SVE-106D: Concentrations measured at this location (21 µg/m^3 TCE, 23 µg/m^3 PCE, and 1.1 J µg/m^3 1,1,1-TCA) increased in the First Quarter 2023 relative to concentrations measured in the Fourth Quarter 2022 (**Table 5**). There has been some fluctuation of measured concentrations following a substantial increase in concentrations measured during and immediately following a soil remediation/excavation event in 2020, with decreasing or stable trends following the event. All concentrations are approximately two orders of magnitude below baseline concentrations measured in December 2009 (3,400 µg/m^3 TCE, 720 µg/m^3 PCE, and 340 µg/m^3 1,1,1-TCA).

In September 2022, six new SVEWs (SVE-112D, SVE-113D, SVE-114D, SVE-115D, SVE-116D, and SVE-117D) were integrated into the SVECS and brought online. Samples were collected from each of these wells on four separate dates in 2022 (**Table 5**) to establish a range of baseline concentrations at the time of system integration. The initial baseline VOC concentrations were established on 6 September 2022 (**Table 5**). First Quarter 2023 samples were collected on 24 February; with a few exceptions, concentrations of VOCs generally decreased from the Fourth Quarter 2022 to the First Quarter 2023.

- SVE-112D: TCE concentrations decreased from an average concentration of 104 µg/m^3 in the Fourth Quarter 2022 to 14 µg/m^3 in the First Quarter 2023; PCE concentrations decreased from an average concentration of 95.5 µg/m^3 in the Fourth Quarter 2022 to 12 µg/m^3 in the First Quarter 2023; and 1,1,1-TCA concentrations decreased from an average concentration of 8 µg/m^3

in the Fourth Quarter 2022 to 1.2 J µg/m^3 in the First Quarter 2023. All concentrations are below baseline concentrations measured in September 2022 (160 µg/m^3 TCE, 160 µg/m^3 PCE, and 16 µg/m^3 1,1,1-TCA) (**Table 5**).

- SVE-113D: TCE concentrations increased from an average concentration of 36.3 µg/m^3 in the Fourth Quarter 2022 to 51 µg/m^3 in the First Quarter 2023; PCE concentrations decreased from an average concentration of 54 µg/m^3 in the Fourth Quarter 2022 to 40 µg/m^3 in the First Quarter 2023; and 1,1,1-TCA concentrations decreased from an average concentration of 10 µg/m^3 in the Fourth Quarter 2022 to 3.1 J µg/m^3 in the First Quarter 2023. Concentrations of PCE and 1,1,1-TCA are below baseline concentrations measured in September 2022 (72 µg/m^3 PCE and 24 µg/m^3 1,1,1-TCA) while the concentration of TCE measured in February 2023 is the highest concentration measured to date (**Table 5**).

- SVE-114D: TCE concentrations decreased from an average concentration of 3,875 µg/m^3 in the Fourth Quarter 2022 to 1,600 µg/m^3 in the First Quarter 2023; PCE concentrations decreased from an average concentration of 668 µg/m^3 in the Fourth Quarter 2022 to 250 µg/m^3 in the First Quarter 2023; and 1,1,1-TCA concentrations decreased from an average concentration of 1,175 µg/m^3 in the Fourth Quarter 2022 to 550 µg/m^3 in the First Quarter 2023. All concentrations are below baseline concentrations measured in September 2022 (3,900 µg/m^3 TCE, 1,400 µg/m^3 PCE, and 1,100 µg/m^3 1,1,1-TCA) (**Table 5**).

- SVE-115D: TCE concentrations decreased from an average concentration of 130 µg/m^3 in the Fourth Quarter 2022 to 29 µg/m^3 in the First Quarter 2023; PCE concentrations decreased from an average concentration of 173 µg/m^3 in the Fourth Quarter 2022 to 9.4 µg/m^3 in the First Quarter 2023; and 1,1,1-TCA concentrations decreased from an average concentration of 15.3 µg/m^3 in the Fourth Quarter 2022 to 2.8 J µg/m^3 in the First Quarter 2023. All concentrations are below baseline concentrations measured in September 2022 (200 µg/m^3 TCE, 190 µg/m^3 PCE, and 21 µg/m^3 1,1,1-TCA) (**Table 5**).

- SVE-116D: TCE concentrations increased from an average concentration of 520 µg/m^3 in the Fourth Quarter 2022 to 820 µg/m^3 in the First Quarter 2023; PCE concentrations decreased from an average concentration of 5,450 µg/m^3 in the Fourth Quarter 2022 to 4,500 µg/m^3 in the First Quarter 2023 and has been stable since October 2022; and 1,1,1-TCA concentrations increased from an average concentration of 423 µg/m^3 in the Fourth Quarter 2022 to 580 µg/m^3 in the First Quarter 2023. The PCE concentration is below the baseline concentration measured in September 2022 (7,800 µg/m^3); the concentrations of TCE and 1,1,1-TCA are the highest concentrations measured to date (**Table 5**).

- SVE-117D: TCE concentrations increased from an average concentration of 142 µg/m^3 in the Fourth Quarter 2022 to 650 µg/m^3 in the First Quarter 2023; PCE concentrations decreased slightly from an average concentration of 61 µg/m^3 in the Fourth Quarter 2022 to 54 µg/m^3 in the First Quarter 2023 and has been stable since October 2022; and 1,1,1-TCA concentrations increased from an average concentration of 5.8 µg/m^3 in the Fourth Quarter 2022 to 200 µg/m^3 in the First Quarter 2023. The PCE concentration is below the baseline concentration measured in

September 2022 (86 µg/m^3), the concentrations of TCE and 1,1,1-TCA are the highest concentrations measured to date (**Table 5**).

4.0 CONCLUSIONS AND RECOMMENDATIONS

As stated in Section 1.3, the objectives of the Site 1 SVECS are 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 designed. Influent vapor analytical data with concentrations of TCE above the project action level (greater than 250 $\mu g/m^3$) 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. Periodic system adjustments should be performed to focus on areas of elevated VOCs in soil vapor while maintaining a consistent vacuum field in the off-property area.

5.0 REFERENCES

KOMAN Government Solutions, LLC. (KGS). 2023. *Final Tier II Sampling and Analysis Plan, Operations, Maintenance, and Monitoring of the SVECS, Site 1, Naval Weapons Industrial Reserve Plant, Bethpage, New York.* January.

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

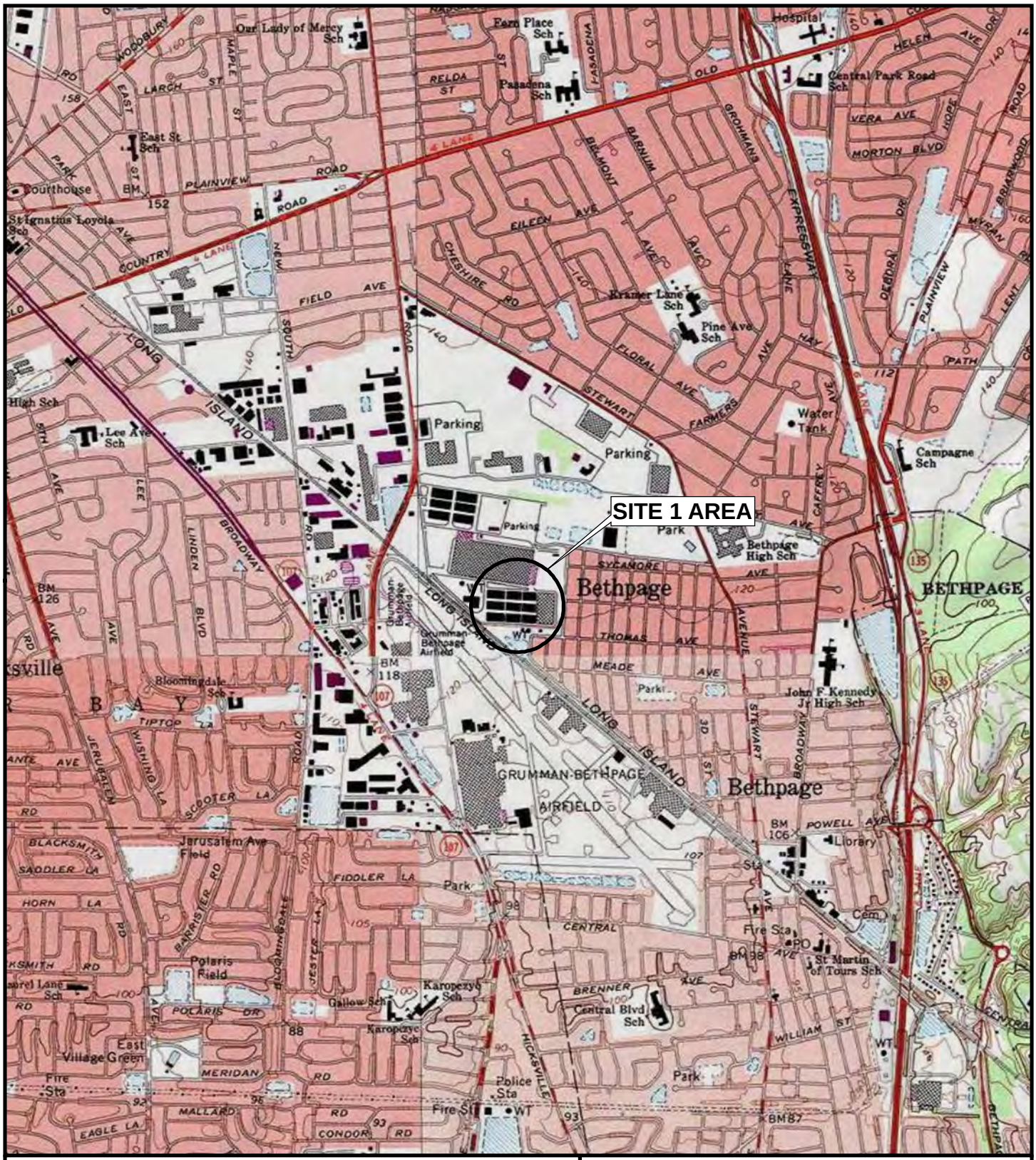
NYSDOH. 2017. May 2017: Updates to Soil Vapor / Indoor Air Decision Matrices. https://www.health.ny.gov/environmental/indoors/vapor_intrusion/update.htm

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.

FIGURES



Quadrangle Location Map

Map Reference: Copyright© 2013 National Geographic Society, i-cubed
USGS 7.5 Minutes Quadrangles: Amityville, Freeport, Hicksville, Huntington, New York

Site Location Map

Department of the Navy
Naval Facilities Engineering Systems Command, Mid-Atlantic

Site 1, Former Drum Marshalling Area
Naval Weapons Industrial Reserve Plant
Bethpage, New York

KOMAN Government Solutions, LLC
180 Gordon Drive, Suite 110, Exton, PA 19341

0 1,000 2,000
Feet

Date: 09/15/2022

Figure 1

KGS TRINITY

File: 0922_BethpageSite1_F1_SLM.mxd

ASSEMBLY POINT

SITE ENTRANCE

EMERGENCY EVACUATION/EGRESS ROUTE TO MAIN ROAD-OLD SOUTH OYSTER BAY ROAD

N

Old South Oyster Bay Road

PLANT 3

SITE 1

Sycamore Ave

11th ST

10th ST

9th ST

8th ST

Maple Ave

TREATMENT BUILDING

BUILDING 03-35

BUILDING 10

WAREHOUSE I

WAREHOUSE J

WAREHOUSE K

WAREHOUSE L

WAREHOUSE M

WAREHOUSE E

WAREHOUSE F

WAREHOUSE G

WAREHOUSE H

WAREHOUSE N

WAREHOUSE A

WAREHOUSE B

WAREHOUSE C

WAREHOUSE D

Site 1 Area and Vicinity

Department of the Navy
Naval Facilities Engineering Systems Command, Mid-Atlantic

Site 1, Former Drum Marshalling Area
Naval Weapons Industrial Reserve Plant
Bethpage, New York

KOMAN Government Solutions, LLC
180 Gordon Drive, Suite 110, Exton, PA 19341

SCALE IN FEET	DATE	FIGURE	
0 200	09/09/2022	2	KGS

BETHPAGE_0922_F2_Site1_Area_Vicinity.dwg

N

SITE 1

SITE 4

PLANT 3

SVE-106D
SVE-106I
SVE-112D
SVE-115D
SVE-105I
SVE-105D
SVE-113D
SVE-104D
SVE-116D
SVE-104I
SVE-114D
SVE-103D
SVE-103I
SVE-117D
SVE-101D
SVE-101I
SVE-102D
SVE-102I
SVE-107D
SVE-108D
SVE-109D
SVE-110D
SVE-111D

SVPM-2004D
SVPM-2004I
SVPM-2004S
SVPM-2001S
SVPM-2001I
SVPM-2001D
SVPM-2006S
SVPM-2006I
SVPM-2006D
SVPM-2007I
SVPM-2007D
SVPM-2007S
SVPM-2002D
SVPM-2002I
SVPM-2002S
SVPM-2003D
SVPM-2003S
SVPM-2003I

Sycamore Ave
Maple Ave
11th ST
10th ST
9th ST

TRAP & CLEANOUT #5
TRAP & CLEANOUT #4
TRAP & CLEANOUT #3
TRAP & CLEANOUT #2
TRAP & CLEANOUT #1

TREATMENT BUILDING
FLOW MONITORING STATION
BUILDING 10

WAREHOUSE I
WAREHOUSE J
WAREHOUSE K
WAREHOUSE L
WAREHOUSE M
WAREHOUSE E
WAREHOUSE F
WAREHOUSE G
WAREHOUSE H
WAREHOUSE N
WAREHOUSE A
WAREHOUSE B
WAREHOUSE C
WAREHOUSE D

LEGEND

- FORMER NWIRP BOUNDARY
- CURRENT NWIRP BOUNDARY
- SOIL VAPOR PRESSURE MONITOR (SVPM)
- SVE CONTAINMENT WELL LOCATION
- SOIL VAPOR EXTRACTION WELL (SVEW)

Site Plan – Existing Layout,
Soil Vapor Extraction Containment System

Department of the Navy
Naval Facilities Engineering Systems Command, Mid-Atlantic

Site 1, Former Drum Marshalling Area
Naval Weapons Industrial Reserve Plant
Bethpage, New York

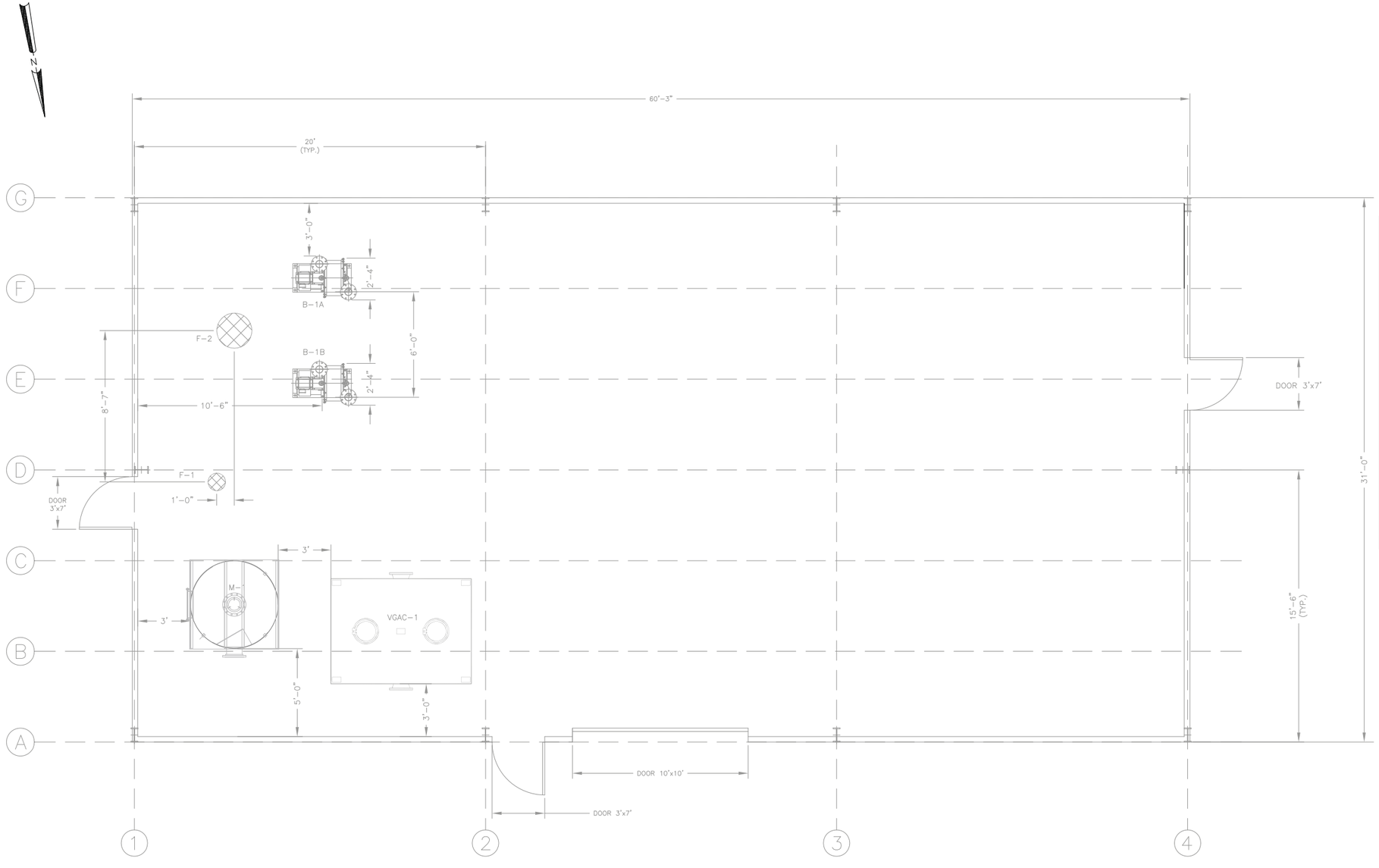
KOMAN Government Solutions, LLC
180 Gordon Drive, Suite 110, Exton, PA 19341

SCALE IN FEET	DATE	FIGURE	
0 160	09/15/2022	3	KGS

BETHPAGE_0922_SVESiteLayout.dwg

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, 460V, 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

3 0 3 6

1" = 3'

TETRA TECH ENGINEERING CORPORATION PC

DESIGN BY: SGP | DR. BY: | CH. ENG: | DRC. SP

SUPV: | SUBMITTED BY: (FIRM NAME) (TITLE) (DATE)

SOLICITATION NO. | HD: | MD: | DR: | PIC: | OFFICER IN CHARGE

REV	DESCRIPTION	PREP BY	DATE	APPRVD
0	ISSUED FOR CONSTRUCTION	DLB	10-14-09	SGP

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
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

APPROVED | DATE | EFANE FOR COMMANDER, NAVFAC

SEAL AREA

THIS DRAWING PRODUCED ON AUTOCAD
DO NOT REVISE MANUALLY

SAT TO DATE

CODE I.D. NO.

SCALE : AS SHOWN

SPEC. NO.

CONSTRN. CONTR. NO.
N62473-10-D-3211

NAVFAC DRAWING NO.
Figure 4

SHEET OF

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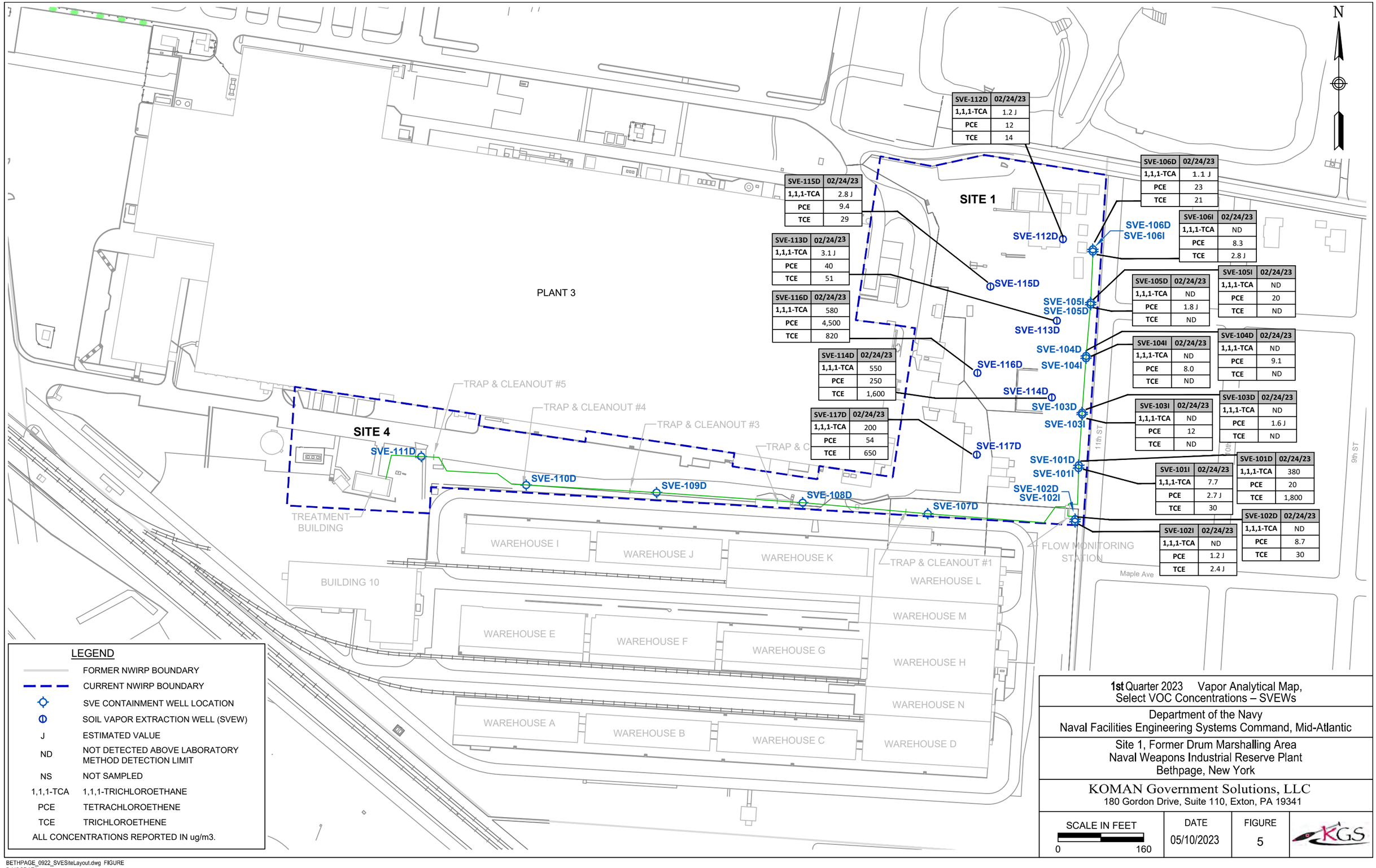


SVE-112D	02/24/23
1,1,1-TCA	1.2 J
PCE	12
TCE	14

SVE-115D	02/24/23
1,1,1-TCA	2.8 J
PCE	9.4
TCE	29

SVE-106D	02/24/23
1,1,1-TCA	1.1 J
PCE	23
TCE	21

SVE-106I	02/24/23
1,1,1-TCA	ND
PCE	8.3
TCE	2.8 J

SVE-113D	02/24/23
1,1,1-TCA	3.1 J
PCE	40
TCE	51

SVE-105D	02/24/23
1,1,1-TCA	ND
PCE	1.8 J
TCE	ND

SVE-105I	02/24/23
1,1,1-TCA	ND
PCE	20
TCE	ND

SVE-116D	02/24/23
1,1,1-TCA	580
PCE	4,500
TCE	820

SVE-104I	02/24/23
1,1,1-TCA	ND
PCE	8.0
TCE	ND

SVE-104D	02/24/23
1,1,1-TCA	ND
PCE	9.1
TCE	ND

SVE-114D	02/24/23
1,1,1-TCA	550
PCE	250
TCE	1,600

SVE-103I	02/24/23
1,1,1-TCA	ND
PCE	12
TCE	ND

SVE-103D	02/24/23
1,1,1-TCA	ND
PCE	1.6 J
TCE	ND

SVE-117D	02/24/23
1,1,1-TCA	200
PCE	54
TCE	650

SVE-101I	02/24/23
1,1,1-TCA	7.7
PCE	2.7 J
TCE	30

SVE-101D	02/24/23
1,1,1-TCA	380
PCE	20
TCE	1,800

SVE-102I	02/24/23
1,1,1-TCA	ND
PCE	1.2 J
TCE	2.4 J

SVE-102D	02/24/23
1,1,1-TCA	ND
PCE	8.7
TCE	30

LEGEND

	FORMER NWIRP BOUNDARY
	CURRENT NWIRP BOUNDARY
	SVE CONTAINMENT WELL LOCATION
	SOIL VAPOR EXTRACTION WELL (SVEW)
J	ESTIMATED VALUE
ND	NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMIT
NS	NOT SAMPLED
1,1,1-TCA	1,1,1-TRICHLOROETHANE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE

ALL CONCENTRATIONS REPORTED IN ug/m3.

1st Quarter 2023 Vapor Analytical Map,
Select VOC Concentrations – SVEWs

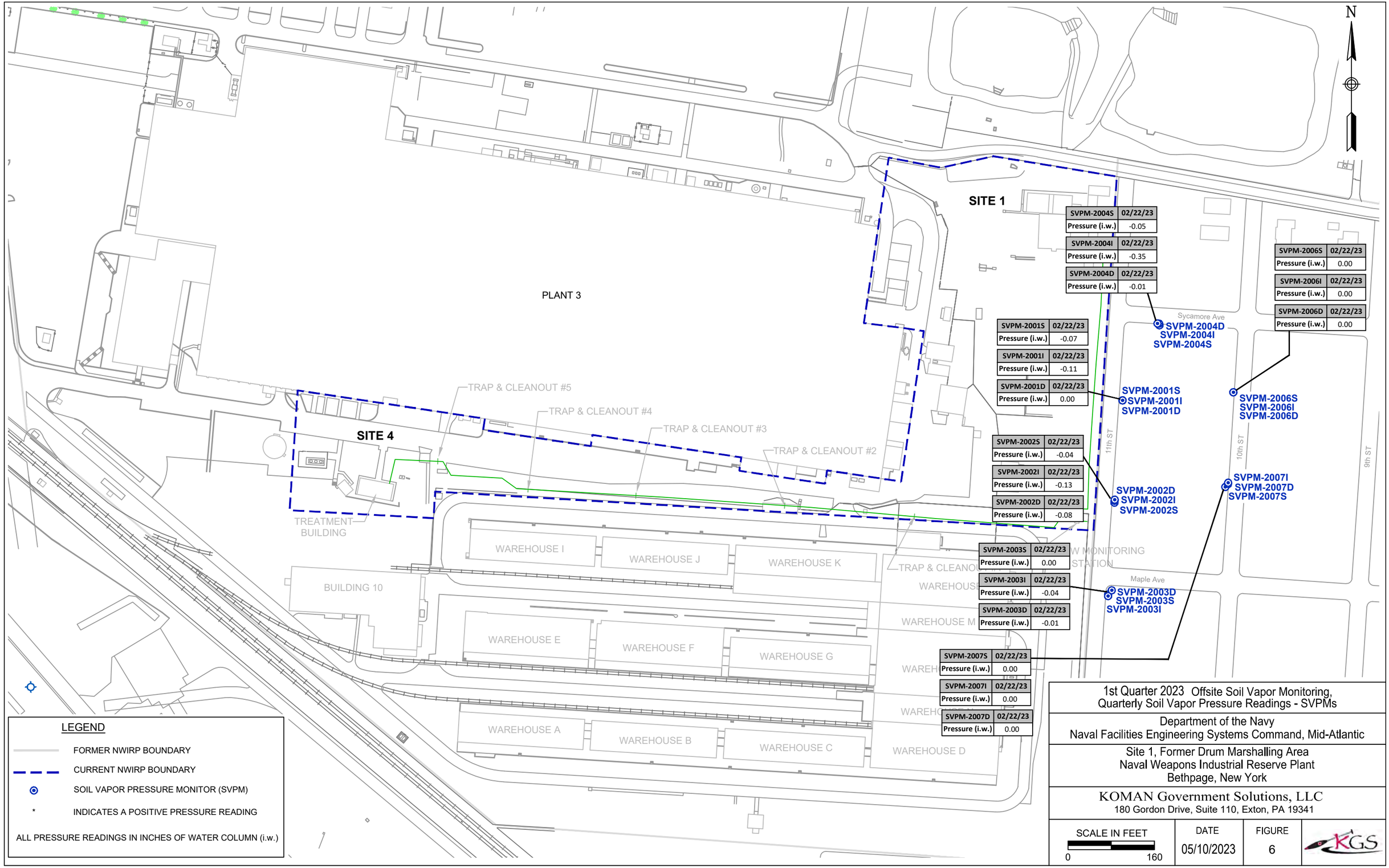
Department of the Navy
Naval Facilities Engineering Systems Command, Mid-Atlantic

Site 1, Former Drum Marshalling Area
Naval Weapons Industrial Reserve Plant
Bethpage, New York

KOMAN Government Solutions, LLC
180 Gordon Drive, Suite 110, Exton, PA 19341

SCALE IN FEET	DATE	FIGURE
0 160	05/10/2023	5

BETHPAGE_0922_SVESiteLayout.dwg FIGURE
5_VOCDATA



1st Quarter 2023 Offsite Soil Vapor Monitoring,
Quarterly Soil Vapor Pressure Readings - SVPMs

Department of the Navy
Naval Facilities Engineering Systems Command, Mid-Atlantic

Site 1, Former Drum Marshalling Area
Naval Weapons Industrial Reserve Plant
Bethpage, New York

KOMAN Government Solutions, LLC
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SCALE IN FEET	DATE	FIGURE	
0 160	05/10/2023	6	KGS

BETHPAGE_0922_SVESiteLayout.dwg

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 2023

Compound	Concentration (ug/m^3)				Emission Rate [1],[2]				Monthly Mass Recovery [3]
					Prior to Treatment		Following Treatment		
	Influent #1	Influent #2	Average	Effluent	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	(lbs)
1,1,1-Trichloroethane	150	140	145	0.0	0.0003	2.5144	0.0000	0.0000	0.2135
1,1-Dichloroethane	5.2	4.9	5.05	1.9 J	0.0000	0.0876	0.0000	0.0329	0.0074
1,1-Dichloroethene	0.68 J	0.77 J	0.7	0.0	0.0000	0.0126	0.0000	0.0000	0.0011
1,2-Dichloroethane	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
cis-1,2-Dichloroethene	70	64	67	23	0.0001	1.1618	0.0000	0.3988	0.0987
Tetrachloroethene	320	310	315	0.0	0.0006	5.4622	0.0000	0.0000	0.4639
trans-1,2-Dichloroethene	1.2 J	1.1 J	1.15	1.2 J	0.0000	0.0199	0.0000	0.0208	0.0017
Trichloroethene	520	510	515	0.0	0.0010	8.9303	0.0000	0.0000	0.7585
Vinyl Chloride	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
Total VOCs	1067	1031	1049	26.1	0.0021	18.1887	0.0001	0.4526	1.5448

Notes:

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

Average Monthly Vapor Temp (ºF) = 97
Average Monthly Flowrate (cfm) = 558
Average Monthly Flowrate (scfm) = 529
Operational Hours for the month = 744

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

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

(3) Monthly Mass Removal = AVERAGE FLOWRATE (scfm) * 0.3048^3m^3/ft^3 * INF AVG CONC (ug/m^3) * (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 2023

Compound	Concentration (ug/m^3)				Emission Rate [1],[2]				Monthly Mass Recovery [3]
					Prior to Treatment		Following Treatment		
	Influent #1	Influent #2	Average	Effluent	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	(lbs)
1,1,1-Trichloroethane	130	140	135	0.0	0.0003	2.1948	0.0000	0.0000	0.1684
1,1-Dichloroethane	4.6	4.7	4.65	3.6 J	0.0000	0.0756	0.0000	0.0585	0.0058
1,1-Dichloroethene	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
1,2-Dichloroethane	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
cis-1,2-Dichloroethene	81	84	82.5	41	0.0002	1.3413	0.0001	0.6666	0.1029
Tetrachloroethene	360	360	360	0	0.0007	5.8527	0.0000	0.0000	0.4490
trans-1,2-Dichloroethene	1.9 J	1.8 J	1.85	2.4 J	0.0000	0.0301	0.0000	0.0390	0.0023
Trichloroethene	400	410	405	0	0.0008	6.5843	0.0000	0.0000	0.5051
Vinyl Chloride	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
Total VOCs	978	1001	989	47.0	0.0018	16.0788	0.0001	0.7641	1.2334

Notes:

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

Average Monthly Vapor Temp (ºF) =	96
Average Monthly Flowrate (cfm) =	522
Average Monthly Flowrate (scfm) =	496
Operational Hours for the month =	672

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

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

(3) Monthly Mass Removal = AVERAGE FLOWRATE (scfm) * 0.3048^3m^3/ft^3 * INF AVG CONC (ug/m^3) * (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 2023

Compound	Concentration (ug/m^3)				Emission Rate [1],[2]				Monthly Mass Recovery [3]
					Prior to Treatment		Following Treatment		
	Influent #1	Influent #2	Average	Effluent	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)	(lbs)
1,1,1-Trichloroethane	120	130	125	0.0	0.0002	2.0134	0.0000	0.0000	0.1710
1,1-Dichloroethane	4.8	5.0	4.9	4.1	0.0000	0.0789	0.0000	0.0660	0.0067
1,1-Dichloroethene	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
1,2-Dichloroethane	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
cis-1,2-Dichloroethene	110	110	110	56	0.0002	1.7718	0.0001	0.9020	0.1505
Tetrachloroethene	400	410	405	0.0	0.0007	6.5234	0.0000	0.0000	0.5540
trans-1,2-Dichloroethene	2.0 J	1.5 J	1.75	3.1	0.0000	0.0282	0.0000	0.0499	0.0024
Trichloroethene	370	370	370	0.0	0.0007	5.9596	0.0000	0.0000	0.5062
Vinyl Chloride	0.0	0.0	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000
Total VOCs	1007	1027	1017	63.2	0.0019	16.3753	0.0001	1.0180	1.3908

Notes:

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

Average Monthly Vapor Temp (ºF) =	96
Average Monthly Flowrate (cfm) =	517
Average Monthly Flowrate (scfm) =	491
Operational Hours for the month =	744

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

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

(3) Monthly Mass Removal = AVERAGE FLOWRATE (scfm) * 0.3048^3m^3/ft^3 * INF AVG CONC (ug/m^3) * (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 2023 Vapor Monitoring 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	SVE 112D	SVE 113D	SVE 114D	SVE 115D	SVE 116D	SVE 117D
Sample Date	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23	02/24/23
Analysis by TO-15 (µg/m^3)																		
1,1,1-Trichloroethane	7.7	380	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1 J	1.2 J	3.1 J	550	2.8 J	580	200
1,1-Dichloroethane	ND	6.8	ND	0.75 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	34	4.0
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8 J	0.74 J
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	3.5 J	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6 J	12	ND	1100	21
Tetrachloroethene	2.7 J	20	1.2 J	8.7	12	1.6 J	8.0	9.1	20	1.8 J	8.3	23	12	40	250	9.4	4500	54
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND
Trichloroethene	30	1800	2.4 J	30	ND	ND	ND	ND	ND	ND	2.8 J	21	14	51	1600	29	820	650
Vinyl Chloride	ND	ND	ND	ND	ND	ND	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.

µg/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 2023

Sample ID	SVE 101I																												
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**
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
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
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
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
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
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
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
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
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

Sample Date	**09/13/16**	**11/16/16**	**01/17/17**	**04/26/17**	**08/15/17**	**12/11/17**	**02/06/18**	**05/03/18**	**08/02/18**	**11/05/18**	**02/05/19**	**05/02/19**	**08/12/19**	**12/20/19**	**02/27/20**	**05/07/20**	**08/12/20**	**11/06/20**	**03/05/21**	**05/14/21**	**08/26/21**	**11/17/21**	**03/04/22**	**06/13/22**	**08/05/22**	**10/06/22**	**02/24/23**
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	ND	ND	1100	1400	2700	4300	3600	950	1900	2500	1500	920	1400	2000	2000	1100	2000	1900	1700	1300	2000	2300	1400	1800	2500	0.80 J	7.7
1,1-Dichloroethane	ND	ND	17	22	47	59	43	16	25	35	22	15	21	34	32	16	29	32	25	26	37	36	24	31	36	ND	ND
1,1-Dichloroethene	ND	ND	4.5 J	6.0 J	8.0 J	ND	8.2 J	ND	ND	ND	ND	ND	ND	10 J	8.0 J	4.7 J	3.8 J	ND	4.4 J	4.5 J	8.6 J	9.9 J	5.9 J	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	3.1 J	4.2 J	7.0 J	11 J	8.6 J	4.5 J	10.0 J	ND	6.9	7.0 J	5.6 J	7.3 J	8.0 J	4.3 J	8.0 J	7.4 J	6.1 J	3.3 J	6.8 J	7.0 J	ND	6.8 J	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	4.0 J	7.0 J	7.0 J	6.6 J	3.2 J	7.0 J	ND	ND	5.0 J	5.1 J	4.4 J	ND	ND	ND	6.5 J	3.9 J	ND	6.9 J	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	29	41	87	130	100	42	74	91	56	40	60	73	60	31	78	88	48	39	80	82	28	60	75	3.0 J	2.7 J
trans-1,2-Dichloroethene	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	ND	ND
Trichloroethene	ND	ND	3400	4100	7600	13000	11000	3600	5300	7500	5100	3600	4000	6100	6600	3300	6100	7400	4700	4200	6600	6900	3800	5800	7000	18	30
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method detection limit

NS = Not sampled

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 2023

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
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
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
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
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
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
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
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
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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	ND	20	15	5.0	22	20	12	9.3	ND	9.8	5.9	2.1 J	14	22	6.8	7.8	3.0 J	3.5 J	3.2 J	2.2 J	4.0	3.4 J	7.2	3.1 J	7.4	14	380
1,1-Dichloroethane	ND	3.1	2.2 J	0.85 J	3.0 J	2.3 J	2.4 J	1.8 J	ND	0.88 J	0.72 J	ND	ND	4.9	0.83 J	0.72 J	ND	ND	ND	ND	0.66 J	ND	ND	1.0 J	1.6 J	2.1 J	6.8
1,1-Dichloroethene	ND	0.76 J	0.80 J	ND	ND	ND	0.60 J	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	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	ND	31	21	3.9	14	12	19	4.4	ND	2.5 J	1.6 J	ND	ND	13	2.0 J	0.99 J	3.1 J	2.2 J	3.3	3.0	4.2	2.8	6.3	6.8	8	13	3.5 J
Tetrachloroethene	ND	300	240	66	250	190	220	190	ND	210	240	51	190	210	220	160	16	28	22	13	27	24	16	32	45	46	20
trans-1,2-Dichloroethene	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	ND	ND
Trichloroethene	ND	970	760	260	1100	880	900	780	ND	700	270	50	190	240	190	210	180	290	240	180	210	200	240	250	670	2500	1800
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

Sample ID	SVE 102I																												
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
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
1,1-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
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
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
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
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
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
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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	1.3 J	1.2 J	0.54 J	ND	6.4	0.95 J	ND	ND	7.4	1.8 J	ND	ND	8.8	ND	ND	ND	7.7	1.0 J	ND	ND	4.0	ND	ND	2.1 J	3.2 J	0.72 J	ND
1,1-Dichloroethane	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	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	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4	ND	ND
Tetrachloroethene	2.9 J	3.2 J	1.6 J	1.4 J	7.8	2.7 J	1.4 J	1.8 J	8.1	3.4 J	1.5 J	3.8 J	11	ND	1.5 J	ND	9.6	3.8 J	ND	ND	6.8	ND	ND	3.7 J	17	2.4 J	1.2 J
trans-1,2-Dichloroethene	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	ND	ND
Trichloroethene	21	24	8.4	12	74	15	7.9	14	72	24	7.8	15	100	0.75 J	10	11	71	20	2.4 J	4.1	62	5.6	4.5	34	130	3.7	2.4 J
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

Sample ID	SVE 102D																												
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
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
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
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
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
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
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
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
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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	6.6	3.8 J	2.7 J	1.8 J	3.6 J	1.8 J	1.8 J	ND	2.4 J	2.2 J	1.2 J	ND	3.0 J	1.1 J	1.0 J	ND	3.6 J	1.9 J	0.85 J	ND	2.0 J	1.3 J	ND	1.2 J	7.4	3.2 J	ND
1,1-Dichloroethane	0.93 J	0.95 J	0.8 J	0.50 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.75 J
1,1-Dichloroethene	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	ND	ND
1,2-Dichloroethane	ND	ND	0.75 J	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	13	10	5.2	2.6 J	2.2 J	1.3 J	1.8 J	ND	0.86 J	ND	2.3 J	ND	ND	0.92 J	ND	ND	3.0 J	2.1 J	ND	ND	0.77 J	ND	2.4 J	1.3 J	ND	14	4.1
Tetrachloroethene	51	37	26	15	17	15	18	6.2	12	13	9.4	2.3 J	13	8.7	7	3.9 J	18	16	5.1	4.3 J	11	11	6.4	7.2	8	27	8.7
trans-1,2-Dichloroethene	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	ND	ND
Trichloroethene	150	74	44	48	80	43	61	15	50	54	22	19	79	36	28	17	150	80	12	22	75	36	28	45	86	98	30
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter

NR = Not Recorded

NA = Data not available

ND = Not detected above method detection limit

NS = Not sampled

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 2023

Sample ID	SVE 103I																												
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
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
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
1,1-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
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
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
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
trans-1,2-Dichloroethene	580	ND	ND	ND	ND	ND	0.6 J	1	1	ND	ND	ND	ND	ND	ND	ND	0.85 J	ND	ND	ND	ND	ND	ND	ND	ND	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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	6.0	2.2 J	0.73 J	ND	6.0	0.94 J	0.77 J	ND	5.8	2.4 J	1.0 J	ND	11	5.1	ND	4.8	6.7	5.9	2.3 J	1.5 J	12	8.6	3.8	3.4 J	8.1	ND	ND
1,1-Dichloroethane	1.9 J	1.1 J	ND	ND	1.8 J	ND	ND	ND	1.5 J	ND	ND	1.0 J	1.8 J	2.7 J	ND	0.67 J	ND	ND	ND	ND	1.3 J	1.0 J	ND	ND	1.0 J	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	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	5.2	2.2 J	1.8 J	1.3 J	5.8	0.75 J	1.4 J	1.6 J	3.4	2.9	3.4	2.3 J	5.6	8.6	1.8 J	3.2	1.7 J	1.2 J	ND	1.1 J	18	8.2	31	2.3 J	2.6 J	ND	ND
Tetrachloroethene	200	99	70	36	180	56	56	70	200	120	150	69	510	190	100	1200	190	200	140	88	1400	930	320	250	330	2.7 J	12
trans-1,2-Dichloroethene	1.3 J	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	67	34	20	9.9	63	21	19	17	54	36	24	18	90	89	23	29	33	38	16	10	77	66	26	26	48	2.1 J	ND
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

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
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
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
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
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
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
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
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
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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	ND	16 J	11 J	23 J	22	8.2 J	63	47	35	33 J	18 J	19	48	48	150	170	29	15	8.8	5.9	110	83	370	6.7	10	ND	ND
1,1-Dichloroethane	ND	6.2 J	ND	4.3 J	ND	ND	4.5 J	ND	ND	ND	ND	2.7 J	ND	12 J	14 J	15 J	5	4.1	2.7 J	2.5 J	10	9.4	25	3.2	2.8	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 J	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	ND	340	210	250	180	130	320	210	190	340	200	160	140	330	310	400	120	9.1	10	16	420	380	1700	62	20	ND	ND
Tetrachloroethene	ND	12000	13000	7500	6800	9200	8000	7700	6900	12000	8000	4400	8400	9000	22000	15000	680	530	530	460	2500	2500	3700	660	800	6	1.6 J
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	7.8	30	1.5 J	ND	ND	ND
Trichloroethene	ND	730	620	320	440	420	380	340	340	460	260	180	380	560	420	410	57	65	38	40	200	190	540	31	52	1.4 J	ND
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

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
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
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
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
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
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
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
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	ND	1.8 J	2.1 J	1.4 J	ND	ND	ND	ND	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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	6.9	6.5	ND	1.2 J	7.8	1.7 J	1.3 J	1.4 J	9.1	3.1 J	1.7 J	1.9 J	14	1.2 J	1.3 J	1.8 J	68	25	11	5.3	11	6.6	2.2 J	3.5 J	4.7	ND	ND
1,1-Dichloroethane	ND	3.6	ND	ND	1.3 J	ND	ND	ND	1.4 J	ND	ND	ND	ND	ND	ND	ND	6.4 J	ND	ND	ND	0.90 J	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	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	2.1 J	110	ND	4.1	31	6.7	4.6	12	27	20	18	17	28	13	7.4	1.8 J	18	10	20	8.0	26	17	2.8	9.3	7.8	ND	ND
Tetrachloroethene	80	530	0.68 J	21	190	90	20	34	96	76	46	34	130	20	21	11	3900	3900	1400	320	300	230	34	220	230	0.98 J	8.0
trans-1,2-Dichloroethene	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7 J	ND	ND	ND
Trichloroethene	83	110	ND	15	87	22	11	15	63	33	14	24	73	13	10	9.3	170	150	42	17	40	30	9.5	18	21	11	ND
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

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**
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
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
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
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
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
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
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
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
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

Sample Date	**09/13/16**	**11/16/16**	**01/17/17**	**04/26/17**	**08/15/17**	**12/11/17**	**02/06/18**	**05/03/18**	**08/02/18**	**11/05/18**	**02/05/19**	**05/02/19**	**08/12/19**	**12/20/19**	**02/27/20**	**05/07/20**	**08/12/20**	**11/06/20**	**03/05/21**	**05/14/21**	**08/26/21**	**11/17/21**	**03/04/22**	**06/13/22**	**08/05/22**	**10/06/22**	**02/24/23**
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	460	710	88	260	390	290	440	520	510	100	480	410	460	360	320	270	630	510	750	460	800	800	280	550	580	1.3 J	ND
1,1-Dichloroethane	73	110	11	31	60	44	67	57	59	15	54	50	47	73	37	18	76	41	36	34	40	39	16	30	25	ND	ND
1,1-Dichloroethene	ND	7.6 J	1.2 J	2.9 J	3.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.2 J	ND	5.8 J	ND	ND	ND	5.7 J	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	2400	3800	400	1000	2200	1600	2500	2200	2300	700	2500	1900	1800	3000	1600	830	3400	2400	2300	2200	2400	2400	700	1800	1600	12	ND
Tetrachloroethene	9400	15000	1400	3000	5900	7600	6000	6500	6800	1500	6500	4400	4800	3200	3600	2000	8800	8700	7700	4800	7400	8900	3600	7200	6400	18	9.1
trans-1,2-Dichloroethene	38	67	6.5	16	30	22	37	39	37	9.3	43	36	30	45	27	20	36	38	50	33	51	50	13	35	38	ND	ND
Trichloroethene	1400	2200	290	600	980	860	1100	870	870	210	790	740	780	690	600	370	1000	1100	1000	770	1200	1200	400	760	660	6.4	ND
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

Sample ID	SVE 105I																												
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
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
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
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
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
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
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
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
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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	16	11	5.6	4.8	13	5.6	4.9	3.5 J	8.7	10	4.6	3.3 J	21	4.8	2.3 J	88	40	15	3.4 J	4.1	14	11	4.2	6.0	8.9	ND	ND
1,1-Dichloroethane	2.8	3.4	2.2 J	2.7 J	2.1 J	0.98 J	3.5	0.99 J	1.2 J	1.6 J	1.3 J	4.8	3.4	1.8 J	0.86 J	ND	9.9	2.3 J	0.79 J	0.54 J	1.4 J	1.1 J	ND	ND	0.99 J	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	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	7.9	5.0	2.6 J	4.2	5.1	1.9 J	5.0	2.5 J	1.9 J	3.7	2.1 J	7.5	6.2	3.2	ND	ND	0.98 J	ND	ND	ND	0.55 J	ND	ND	ND	ND	ND	ND
Tetrachloroethene	64	46	26	17	50	27	21	17	23	46	20	13	38	15	11	9.3	41	34	10	15	30	28	11	14	24	12	20
trans-1,2-Dichloroethene	0.83 J	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	ND
Trichloroethene	250	160	50	38	140	58	40	30	60	110	36	32	130	41	17	18	67	38	9.8	12	32	30	9.6	12	18	6.1	ND
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

Sample ID	SVE 105D																												
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**	**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**
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
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
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
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
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
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
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
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
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

Sample Date	**09/13/16**	**11/16/16**	**01/17/17**	**04/26/17**	**08/15/17**	**12/11/17**	**02/06/18**	**05/03/18**	**08/02/18**	**11/05/18**	**02/05/19**	**05/02/19**	**08/12/19**	**12/20/19**	**02/27/20**	**05/07/20**	**08/12/20**	**11/06/20**	**03/05/21**	**05/14/21**	**08/26/21**	**11/17/21**	**03/04/22**	**06/13/22**	**08/05/22**	**10/06/22**	**02/24/23**
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	47	29	23	38	33	24	28	13	ND	27	61	75	54	66	26	15	200	52	11	8.3	10	9.0	2.2 J	5.2	8.2	ND	ND
1,1-Dichloroethane	22	23	19	21	12	14	12	12	ND	14	16	22	20	25	13	3.7	79	20	8.4	4.9	3.8	3.0	ND	1.2 J	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	31	19	19	32	20	13	17	22	ND	18	24	32	36	27	26	4.1	9.3	7.2	3.8	2.5 J	1.5 J	ND	ND	ND	ND	ND	ND
Tetrachloroethene	150	110	69	70	120	130	97	48	ND	140	140	85	78	100	94	39	31	45	20	18	25	33	20	18	20	3.9 J	1.8 J
trans-1,2-Dichloroethene	1.8 J	2.0 J	1.2 J	1.6 J	ND	ND	ND	ND	ND	0.88 J	0.92 J	ND	ND	1.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	360	210	140	200	310	170	160	57	ND	140	170	220	190	180	110	83	470	210	48	29	31	37	11	12	17	ND	ND
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

Sample ID	SVE 106I																												
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
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
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
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
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
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
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
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
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
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

Sample Date	09/13/16	11/16/16	01/17/17	04/26/17	08/15/17	12/11/17	02/06/18	05/03/18	08/02/18	11/05/18	02/05/19	05/02/19	08/12/19	12/20/19	02/27/20	05/07/20	08/12/20	11/06/20	03/05/21	05/14/21	08/26/21	11/17/21	03/04/22	06/13/22	08/05/22	10/06/22	02/24/23
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	12	7.5	5.5	2.0 J	11	4.8	0.91 J	2.0 J	8.8	4.2	0.78 J	1.9 J	14	34	880	7.0 J	27	11	2.5 J	4.0	16	2.7 J	ND	6.1	19	ND	ND
1,1-Dichloroethane	ND	1.3 J	2.4 J	0.56 J	5.4	1.9 J	ND	1.6 J	0.69 J	ND	1.2 J	ND	ND	5.6	260	ND	3.2 J	0.96 J	ND	ND	1.0 J	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	3.8	3.1 J	3.2	1.5 J	14	3.9	0.57 J	2.2 J	1.7 J	1.5 J	3.4	1.8 J	1.4 J	5.8	6600	41	86	23	7	11	21	2.8	ND	5.9	13	ND	ND
Tetrachloroethene	20	6.7	4.9	3.9 J	16	8.3	2.5 J	4.5 J	12	9.9	3.1 J	3.1 J	20	20	96000	5500	1400	480	100	150	380	61	ND	110	280	2.3 J	8.3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33 J	ND	ND	ND	ND	ND	ND	3.4	ND	1.5 J	ND	ND	ND
Trichloroethene	190	71	53	59	170	83	39	45	88	79	43	44	150	100	9300	180	310	160	45	62	180	33	ND	70	180	ND	2.8 J
Vinyl Chloride	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	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

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**
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
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
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
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
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
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
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
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
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

Sample Date	**09/13/16**	**11/16/16**	**01/17/17**	**04/26/17**	**08/15/17**	**12/11/17**	**02/06/18**	**05/03/18**	**08/02/18**	**11/05/18**	**02/05/19**	**05/02/19**	**08/12/19**	**12/20/19**	**02/27/20**	**05/07/20**	**08/12/20**	**11/06/20**	**03/05/21**	**05/14/21**	**08/26/21**	**11/17/21**	**03/04/22**	**06/13/22**	**08/05/22**	**10/06/22**	**02/24/23**
Analysis by TO-15 (µg/m^3)																											
1,1,1-Trichloroethane	30	14	10	7.6	18	8.3	4.6	2.2 J	14	12	10	8.0	30	250	500	46	7.5	3.0 J	0.92 J	1.2 J	5.2	4.1 J	0.94 J	2.0 J	8.2	ND	1.1 J
1,1-Dichloroethane	6.8	21	17	2.6 J	11	7.1	1.6 J	2.8 J	6.1	7.9	7.3	2.2 J	2.5 J	36	260	12 J	ND	0.73 J	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	25 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	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	ND	ND
cis-1,2-Dichloroethene	14	22	20	5.6	24	13	5.0	4.6	16	21	22	7.5	16	15	3700	240	1.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	57	33	24	17	44	39	15	9.5	26	37	26	15	37	35	25000	4800	27	26	13	13	26	30	13	13	30	5.1	23
trans-1,2-Dichloroethene	0.63 J	1.3 J	2.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	450	210	170	190	300	220	140	89	210	220	170	170	420	290	4400	730	37	15	6.4	12	21	23	6.0	13	33	2.7 J	21
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

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 2023

Sample ID	SVE 112D					SVE 113D					SVE 114D					SVE 115D					SVE 116D					SVE 117D				
Sample Date	09/06/22	10/06/22	10/11/22	11/08/22	02/24/23	09/06/22	10/06/22	10/11/22	11/08/22	02/24/23	09/06/22	10/06/22	10/11/22	11/08/22	02/24/23	09/06/22	10/06/22	10/11/22	11/08/22	02/24/23	09/06/22	10/06/22	10/11/22	11/08/22	02/24/23	09/06/22	10/06/22	10/11/22	11/08/22	02/24/23
Analysis by TO-15 (µg/m^3)																														
1,1,1-Trichloroethane	16	5.8	6.1	3.7	1.2 J	24	5.9	7.2	4.6	3.1 J	1,100	1,200	1,200	1200	550	21	16	8.3	16	2.8 J	510	380	400	400	580	8.1	5.7	5.3	4.0	200
1,1-Dichloroethane	ND	ND	ND	ND	ND	4.8	1.6 J	1.1 J	0.85 J	ND	18	18	16	17	8.8	3.2	5.0	2.1 J	4.5	ND	86	66	57	59	34	7.4	4.4	3.1	2.8	4.0
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1 J	ND	4.4 J	ND	ND	ND	ND	ND	ND	ND	3.6 J	ND	4.6 J	3.8 J	ND	ND	ND	ND	0.74 J
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	8.2	4.2	4.1	2.7	ND	1.8 J	1.7 J	1.9 J	1.7 J	1.6 J	150	18	15	12	12	3.4	2.8 J	1.1 J	2.1 J	ND	1,800	940	990	1000	1100	9.5	24	21	22	21
Tetrachloroethene	160	82	87	53	12	72	48	54	42	40	1,400	490	470	310	250	190	220	110	170	9.4	7,800	4700	4800	4500	4500	86	59	55	42	54
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	18	19	22	21	ND	ND	ND	ND	ND
Trichloroethene	160	100	94	60	14	39	34	46	26	51	3,900	4,200	4,000	3400	1600	200	150	77	93	29	700	480	480	420	820	180	160	130	97	650
Vinyl Chloride	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	ND	ND	ND	ND	ND

Notes:

µg/m^3= micrograms per cubic meter
NR = Not Recorded
NA = Data not available
ND = Not detected above method detection limit
NS = Not sampled

Table 6
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY First Quarter 2023 Off-Site Soil Vapor Pressure Monitoring of SVPMs

SVPM/ SVEW Location	Pressure Reading (i.w.)	Valve Position (% open)
Monitoring Date:	***2/22/23***	***2/22/23***
BPS1-SVPM2001S	-0.07	--
BPS1-SVPM2001I	-0.11	--
BPS1-SVPM2001D	0.00	--
BPS1-SVPM2002S	-0.04	--
BPS1-SVPM2002I	-0.13	--
BPS1-SVPM2002D	-0.08	--
BPS1-SVPM2003S	0.00	--
BPS1-SVPM2003I	-0.04	--
BPS1-SVPM2003D	-0.01	--
BPS1-SVPM2004S	-0.05	--
BPS1-SVPM2004I	-0.35	--
BPS1-SVPM2004D	-0.01	--
BPS1-SVPM2006S	0.00	--
BPS1-SVPM2006I	0.00	--
BPS1-SVPM2006D	0.00	--
BPS1-SVPM2007S	0.00	--
BPS1-SVPM2007I	0.00	--
BPS1-SVPM2007D	0.00	--
Monitoring Date:	***2/24/23***	***2/24/23***
SVE-101I	-5.0	40
SVE-101D	-11.0	40
SVE-102I	-3.5	50
SVE-102D	-7.0	40
SVE-103I	-3.0	40
SVE-103D	-7.0	40
SVE-104I	-3.0	40
SVE-104D	-5.0	40
SVE-105I	-3.5	40
SVE-105D	-4.0	50
SVE-106I	-9.0	40
SVE-106D	-12.0	40
SVE-112D	-8.0	40
SVE-113D	-8.0	40
SVE-114D	-9.0	40
SVE-115D	NM	40
SVE-116D	-8.0	40
SVE-117D	-8.0	40

Notes:
i.w. = inches of water column
SVEW = soil vapor extraction well
SVPM = soil vapor pressure monitor
NM = not measured

Pressure 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
Annual Off-Site Vapor Analytical Results Summary of SVPMs
February 2023

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 2007I	SVPM 2007D
Sample Date		02/22/23	02/22/23	02/22/23	02/22/23	02/22/23	2/22/2023 Duplicate	02/22/23	02/22/23	02/22/23	02/22/23	02/22/23	02/22/23	2/22/2023 Duplicate	02/22/23	02/22/23	02/22/23	02/22/23	02/22/23	02/22/23	02/22/23
Analysis by TO-15 (µg/m^3)																					
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	**0.79 J**
1,1-Dichloroethane	--	ND	ND	ND	ND	ND	ND	**0.70 J**	ND	ND	ND	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	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**130**	**120**	ND	ND	ND
Tetrachloroethene	**1,000**	ND	ND	ND	ND	ND	**4.3 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.0 J**	**1.1 J**	**1.0 J**	**2.1 J**	**1.8 J**
trans-1,2-Dichloroethene	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2 J**	**0.70 J**	ND	ND	ND
Trichloroethene	**60**	**1.8 J**	**1.6 J**	**9.6 J**	**2.1 J**	**4.1**	**3.6**	**40**	**3.2 J**	**2.5 J**	**3.1 J**	**1.4 J**	ND	ND	**1.4 J**	**1.5 J**	**23**	**19**	**1.2 J**	**1.1 J**	**1.2 J**
Vinyl Chloride	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/m^3 = 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, 2017) air guideline value for subslab.

Table 8
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 February 2023

Sample ID	Screening Value (2)	SVPM 2001S												
Sample Date		Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23
Analysis by TO-15 (µg/m³)														
1,1,1-Trichloroethane (1)	1,000	**1,300**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane (1)	--	**11**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (1)	--	**9.2 J**	ND	ND	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
cis-1,2-Dichloroethene (1)	--	**20**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (1)	1,000	**4,000**	ND	**1.3 J**	ND	ND	**1.1 J**	ND	ND	ND	ND	**0.80 J**	ND	ND
trans-1,2-Dichloroethene (1)	--	**7.9 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (1)	60	**1,700**	ND	ND	ND	ND	**1.8 J**	ND	ND	ND	**11**	**0.88 J**	ND	**1.8 J**
Vinyl Chloride (1)	--	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID	SVPM 2001I																
Sample Date	Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	1/16/2017 Duplicate	02/05/18	02/04/19	2/4/2019 Duplicate	02/26/20	2/26/2020 Duplicate	03/04/21	03/03/22	3/3/2022 Duplicate	02/22/23
Analysis by TO-15 (µg/m³)																	
1,1,1-Trichloroethane (1)	**1,700**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane (1)	**29**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (1)	**16**	ND	ND	ND	ND	ND	ND	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
cis-1,2-Dichloroethene (1)	**94**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (1)	**5,000**	ND	**1.9 J**	ND	**1.2 J**	**3.6 J**	**0.78 J**	ND	ND	**1.2 J**	ND	ND	ND	**0.64 J**	ND	ND	ND
trans-1,2-Dichloroethene (1)	**16**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (1)	**2,700**	ND	ND	ND	ND	**5.0**	**0.87 J**	**0.78 J**	ND	**1.6 J**	ND	ND	ND	**0.95 J**	ND	**3.2 J**	**1.6 J**
Vinyl Chloride (1)	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID	SVPM 2001D															
Sample Date	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	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23
Analysis by TO-15 (µg/m³)																
1,1,1-Trichloroethane (1)	**1,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane (1)	**26**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (1)	**17**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.3 J**	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (1)	**73**	ND	ND	ND	ND	ND	**6.3**	ND	ND	**1.9 J**	**1.4 J**	**1.2 J**	ND	ND	ND	ND
Tetrachloroethene (1)	**720**	ND	ND	**0.53 J**	ND	ND	**10**	ND	**2.3 J**	**1.9 J**	**4.3 J**	**3.3 J**	ND	ND	ND	ND
trans-1,2-Dichloroethene (1)	**11**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (1)	**1,500**	ND	ND	ND	ND	ND	**3.9 J**	ND	**4.0 J**	**2.2 J**	**4.6**	**4.8 J**	**20**	**5.9 J**	**17 J**	**9.6 J**
Vinyl Chloride (1)	NS	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)

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, 2017) air guideline value for subslab.

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

Table 8
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 February 2023

Sample ID	Screening Value [2]	SVPM 2002S														
Sample Date		Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	1/14/16 - Duplicate	09/12/16	01/16/17	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23
Analysis by TO-15 (µg/m³)																
1,1,1-Trichloroethane [1]	1,000	**21,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane [1]	--	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene [1]	--	220	ND	ND	ND	ND	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
cis-1,2-Dichloroethene [1]	--	**49 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene [1]	1,000	**420**	ND	**2.2 J**	ND	ND	ND	**0.94 J**	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene [1]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene [1]	60	**34,000**	ND	**1.1 J**	ND	ND	ND	**2.5 J**	ND	ND	ND	ND	**0.98 J**	**4.6**	**2.1 J**	**89,000**
Vinyl Chloride [1]	--	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS

Sample ID	SVPM 2002I																				
Sample Date	Oct 2008	01/15/13	01/29/14	1/29/14 - Duplicate	01/13/15	01/14/16	09/12/16	01/16/17	02/05/18	2/5/2018 Duplicate	02/04/19	02/26/20	03/04/21	3/4/2021 Duplicate	03/03/22	02/22/23	2/22/23 - Duplicate
Analysis by TO-15 (µg/m³)																	
1,1,1-Trichloroethane [1]	**52,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane [1]	**680**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene [1]	**890**	ND	ND	ND	ND	ND	ND	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
cis-1,2-Dichloroethene [1]	**170**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene [1]	**740**	ND	**1.8 J**	ND	ND	ND	ND	**0.67 J**	ND	ND	ND	ND	**0.68 J**	ND	**1.1 J**	ND	**4.3 J**
trans-1,2-Dichloroethene [1]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene [1]	**89,000**	**12**	**1.8 J**	**1.4 J**	ND	ND	ND	**2.4 J**	**4.5**	**3.4 J**	**4.1**	ND	**2.4 J**	**2.3 J**	**10**	**4.1**	**3.6**
Vinyl Chloride [1]	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID	SVPM 2002D												
Sample Date	Oct 2008	01/15/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23
Analysis by TO-15 (µg/m³)													
1,1,1-Trichloroethane [1]	**27,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane [1]	**490**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.70 J**
1,1-Dichloroethene [1]	**480**	ND	ND	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
cis-1,2-Dichloroethene [1]	**130**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene [1]	**48 J**	ND	**1.8 J**	ND	ND	**2.8 J**	**7.3**	**1.0 J**	**1.3 J**	ND	**0.88 J**	ND	ND
trans-1,2-Dichloroethene [1]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene [1]	**26,000**	ND	ND	ND	ND	**28**	**20**	**42**	**51**	**32**	**28**	**44**	**40**
Vinyl Chloride [1]	NS	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)

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, 2017) air guideline value for subslab.

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

Table 8
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 February 2023

Sample ID	**Screening Value (2)**	**SVPM 2003S**													**SVPM 2003I**													**SVPM 2003D**												
Sample Date		**Oct 2008**	**01/16/13**	**01/29/14**	**01/13/15**	**01/14/16**	**09/12/16**	**01/16/17**	**02/05/18**	**02/04/19**	**02/26/20**	**03/04/21**	**03/03/22**	**02/22/23**	**Oct 2008**	**01/16/13**	**01/29/14**	**01/13/15**	**01/14/16**	**09/12/16**	**01/16/17**	**02/05/18**	**02/04/19**	**02/26/20**	**03/04/21**	**03/03/22**	**02/22/23**	**Oct 2008**	**01/16/13**	**01/29/14**	**01/13/15**	**01/14/16**	**09/12/16**	**01/16/17**	**02/05/18**	**02/04/19**	**02/26/20**	**03/04/21**	**03/03/22**	**02/22/23**
Analysis by TO-15 ($\mu g/m^3$)																																								
1,1,1-Trichloroethane (1)	**1,000**	**66**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**170 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**720 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane (1)	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.49 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.6**	ND	ND	ND	ND	ND	**0.78 J**	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (1)	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**23**	ND	ND	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	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (1)	**1,000**	**19**	**1.6 J**	ND	ND	ND	**2.7 J**	ND	ND	ND	ND	ND	ND	ND	**14**	**0.97 J**	**1.5 J**	ND	**0.89 J**	**5.5**	**0.59 J**	ND	**1.0 J**	ND	**0.84 J**	**1.2 J**	ND	**8.9**	ND	**2.4 J**	ND	ND	**5.3**	ND	ND	ND	ND	**1.0 J**	**1.7 J**	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (1)	**60**	**20**	**4.9**	ND	ND	ND	**4.7**	ND	ND	ND	ND	**0.97 J**	**2.8 J**	**3.2 J**	**82**	ND	**0.73 J**	ND	ND	**10**	ND	ND	ND	ND	**1.4 J**	**18**	**2.5 J**	**710**	ND	ND	ND	ND	**10**	ND	**0.43 J**	ND	ND	**3.0 J**	**4.7**	**3.1 J**
Vinyl Chloride (1)	--	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

$\mu g/m^3$ = 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, 2017) air guideline value for subslab.

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

Table 8
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 February 2023

Sample ID	Screening Value [2]	SVPM 2004S													SVPM 2004I														SVPM 2004D												
Sample Date		Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23	Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23	2/22/23 Duplicate	Oct 2008	01/16/13	01/29/14	01/13/15	01/14/16	09/12/16	01/16/17	02/05/18	02/04/19	02/26/20	03/04/21	03/03/22	02/22/23
Analysis by TO-15 ($\mu g/m^3$)																																								
1,1,1-Trichloroethane [1]	**1,000**	**1.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**460**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**480**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane [1]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**74**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene [1]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.1**	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
1,2-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	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	**4.6**	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
Tetrachloroethene [1]	**1,000**	**1.8**	**1.0 J**	**1.3 J**	ND	ND	**2.2 J**	ND	ND	ND	ND	ND	ND	ND	**1,000**	**0.68 J**	**2.9 J**	ND	**0.83 J**	**2.0 J**	ND	ND	ND	ND	ND	ND	ND	ND	**580**	**2.3 J**	**1.5 J**	**7.1**	**3.6 J**	**3.0 J**	**0.75 J**	**1.4 J**	**1.5 J**	ND	**3.2 J**	ND	ND
trans-1,2-Dichloroethene [1]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.9**	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
Trichloroethene [1]	**60**	**1.0**	ND	ND	ND	ND	**2.5 J**	ND	ND	ND	ND	**0.65 J**	ND	**1.4 J**	**550**	ND	**3.7 J**	ND	ND	**6.8**	ND	ND	ND	ND	**0.79 J**	**2.9 J**	ND	ND	**600**	ND	**0.80 J**	**1.5 J**	ND	**6.5**	ND	ND	ND	ND	ND	**4.0**	**1.4 J**
Vinyl Chloride [1]	--	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Sample ID	Screening Value [2]	SVPM 2006S																SVPM 2006I																SVPM 2006D																			
Sample Date		Oct 2008	01/16/13	01/30/14	01/13/15	01/14/16	09/12/16	01/16/17	1/16/2017 Duplicate	02/05/18	02/04/19	02/26/20	03/04/21	3/4/2021 Duplicate	03/03/22	02/22/23	Oct 2008	01/16/13	01/30/14	01/13/15	01/14/16	1/14/16 - Duplicate	09/12/16	01/16/17	02/06/18	02/04/19	02/26/20	03/04/21	03/03/22	3/3/2022 Duplicate	02/22/23	Oct 2008	01/16/13	01/30/14	01/13/15	01/14/16	09/12/16	9/12/16 - Duplicate	01/16/17	02/05/18	2/5/2018 Duplicate	02/04/19	02/26/20	2/26/2020 Duplicate	03/04/21	03/03/22	02/22/23
Analysis by TO-15 (µg/m³)																																																			
1,1,1-Trichloroethane [1]	**1,000**	**12**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	**0.59 J**	ND	ND	ND	ND	ND	ND	**0.90 J**	ND	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	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	ND	ND	ND	ND	ND	ND	ND	**0.62**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	ND	ND	ND	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	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**	**1.6 J**	ND	ND	ND	ND	ND	ND	**45**	**340**	**10**	ND	**260**	**280**	**260**	**260**	**240**	**130**	**66**	**150**	**200**	**200**	**130**	**89**	**190**	**22**	**180**	**320**	**320**	**390**	**400**	**310 J**	**430 J**	**200**	**200**	**200**	**180**	**180**	**120**
Tetrachloroethene [1]	**1,000**	**14**	**1.0 J**	**1.4 J**	ND	ND	**3.8 J**	**0.96 J**	**0.77 J**	ND	ND	ND	**0.61 J**	**0.69 J**	ND	ND	**29**	**1.9 J**	**1.5 J**	ND	**2.2 J**	**2.1 J**	**5.1**	**1.5 J**	ND	**1.2 J**	ND	**1.0 J**	ND	ND	**1.0 J**	**11**	**1.4 J**	ND	**1.7 J**	**1.9 J**	**3.9 J**	**5.3 J**	**2.0 J**	**1.9 J**	**2.3 J**	**1.4 J**	ND	ND	**2.0 J**	ND	**1.1 J**
trans-1,2-Dichloroethene [1]	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4 J**	**4.6**	ND	ND	**3.4**	**3.6**	**4.0**	**3.6**	**2.8 J**	**1.7 J**	ND	**1.1 J**	**3.1**	**2.4 J**	**1.2 J**	**2.7**	**2.2 J**	ND	**2.0 J**	**3.3**	**3.5**	**4.4**	**4.7**	**2.4 J**	**5.4 J**	**2.2 J**	ND	**2.4 J**	ND	**2.0 J**	**0.70 J**
Trichloroethene [1]	**60**	**32**	ND	**0.80 J**	ND	**1.6 J**	**8.2**	ND	**0.99 J**	**0.93 J**	ND	ND	ND	ND	**2.6 J**	**1.5 J**	**71**	**47**	**2.9 J**	ND	**48**	**61**	**57**	**44**	**50**	**28**	ND	**23**	**35**	**35**	**23**	**61**	**17**	**2.1 J**	**30**	**47**	**61 J**	**84 J**	**59**	**68**	**78**	**32**	**34**	**34**	**20**	**29**	**19**
Vinyl Chloride [1]	--	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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J = Estimated value

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Analysis by TO-15 (µg/m³)																																										
1,1,1-Trichloroethane [1]	**1,000**	**150**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	ND	ND	ND	**0.60 J**	ND	**0.38 J**	ND	ND	**870**	**1.3 J**	**1.1 J**	ND	ND	ND	**0.87 J**	ND	ND	**0.95 J**	**0.81 J**	ND	**0.66 J**	ND	**0.79 J**
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	ND	ND	ND	**3.0 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene [1]	--	**0.26 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.69 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	ND	ND	ND	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	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	**8.6**	ND	ND	ND	ND	ND	ND	ND	**4.4 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**9.8**	**11**	**2.0 J**	ND	ND	**3.1**	ND	ND	ND	ND	**16**	ND	**2.1 J**	ND
Tetrachloroethene [1]	**1,000**	**13**	**1.1 J**	**1.4 J**	ND	ND	**0.89 J**	**6.8**	**0.81 J**	ND	**1.1 J**	ND	**1.2 J**	ND	**1.0 J**	**25**	**1.8 J**	ND	**2.3 J**	**2.3 J**	ND	**1.7 J**	**2.2 J**	**1.5 J**	**2.0 J**	ND	**2.2 J**	**2.5 J**	**2.1 J**	**5.3 J**	**2.2 J**	**1.8 J**	**1.2 J**	ND	ND	**2.0 J**	ND	**0.73 J**	**1.8 J**	ND	ND	**3.0 J**	**2.4 J**	**1.8 J**
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	ND	ND	ND	ND	ND	ND	**1.3 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene [1]	**60**	**29**	**5.0**	**2.5 J**	ND	ND	ND	**3.9 J**	ND	ND	**0.76 J**	ND	**0.95 J**	**3.5 J**	**1.2 J**	**87**	ND	ND	ND	**1.9 J**	**9.8**	ND	ND	ND	ND	ND	**0.74 J**	ND	**1.1 J**	**400**	**5.5 J**	**2.9 J**	ND	ND	ND	**2.7 J**	**8.2**	ND	ND	**1.0 J**	**14**	ND	**3.5 J**	**1.2 J**
Vinyl Chloride [1]	--	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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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@ttnus.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
FOIlable
Region 1, Nassau (C), Oyster Bay (T)

Thanks,

Steven M. Scharf, P.E.
Project Engineer
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Division of Environmental Remediation
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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 ($\mu g/m^3$)		Current Discharge Goal (pound/hour)[3]
	Concentration ($\mu g/m^3$)[1]	Loading (pound/ hour)[1]	Concentration ($\mu g/m^3$)	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 ($\mu g/m^3$)	Loading (pounds/ hour)		Concentration at 500 CFM ($\mu g/m^3$)	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 $\mu g/m^3$.
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
ec/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-OU1-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 / /

State Facility Certification

I certify that this facility will be operated in conformance with all provisions of existing regulations.

Responsible Official	Title
Signature	Date / /

Section II - Identification Information

Title V Facility Permit N/A			State Facility Permit N/A	
❑ New	❑ Significant Modification	❑ Administrative Amendment	❑ New	❑ Modification
❑ Renewal	❑ Minor Modification	General Permit Title:	General Permit Title:	
☒ Application involves construction of new facility		❑ Application involves construction of new emission unit(s)		

Owner/Firm

Name	US Navy / NAVFAC Midlant		
Street Address	9742 Maryland Ave, Bldg Z-144		
City Norfolk	State VA	Country US	Zip 23511-3095
Owner Classification ☒ Federal ❑ State ❑ Municipal ❑ Corporation/Partnership ❑ Individual			Taxpayer ID

Facility

❑ Confidential

Name	Naval Weapons Industrial Reserve Plant (NWIRP) Site 1	
Location Address	Bethpage	
❑ City / ☒ Town / ❑ Village	Oyster Bay, New York	Zip 11714

Project Description

❑ Continuation Sheet(s)

Vapor phase granular activated carbon to remove VOCs from soil gas

Owner/Firm Contact Mailing Address

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

Facility Contact Mailing Address

Name (Last, First, Middle Initial)			Phone No. ( )
Affiliation	Title		Fax No. ( )
Street Address			
City	State	Country	Zip

New York State Department of Environmental Conservation
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Section III - Facility Information

Classification

☐ Hospital ☐ Residential ☐ Educational/Institutional ☐ Commercial ☒ Industrial ☐ Utility

Affected States (Title V Only) N/A

☐ Vermont ☐ Massachusetts ☐ Rhode Island ☐ Pennsylvania Tribal Land:_____
☐ New Hampshire ☐ Connecticut ☐ New Jersey ☐ Ohio Tribal Land:_____

SIC Codes

9999												

Facility Description ☐ Continuation Sheet(s)

Soil vapor remediation by SVE followed by vapor phase GAC

Compliance Statements (Title V Only) N/A

I certify that as of the date of this application the facility is in compliance with all applicable requirements: ☐ YES ☐ NO

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 in compliance with all applicable requirements complete the following:

- ☐ 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.
- ☐ 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.
- ☐ 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 N/A ☐ Continuation Sheet(s)

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

Facility State Only Requirements ☐ 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

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Section III - Facility Information (continued)

Facility Compliance Certification N/A ❑ Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

❑ Applicable Federal Requirement ❑ State Only Requirement	❑ Capping	CAS No. - -	Contaminant Name

Monitoring Information

❑ Ambient Air Monitoring ❑ Work Practice Involving Specific Operations ❑ Record Keeping/Maintenance Procedures

Description

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description

Facility Emissions Summary ☒ Continuation Sheet(s)

CAS No.	Contaminant Name	PTE (lbs/yr)	PTE Range Code	Actual (lbs/yr)
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	1,322		
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 (Vinylidine Chloride)	16		

New York State Department of Environmental Conservation
Air Permit Application

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Section III - Facility Information

Facility Emissions Summary (continuation)

CAS No.	Contaminant Name	PTE (lbs/yr)	PTE Range Code	Actual (lbs/yr)
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		
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New York State Department of Environmental Conservation
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Section IV - Emission Unit Information

Emission Unit Description

❑ Continuation Sheet(s)

EMISSION UNIT: 1-00EU1 Effluent from first soil vapor extraction blower (BL-1)

Vapor Phase Granular Activated Carbon Unit. The emission point is stack 00ST-2

Building

❑ Continuation Sheet(s)

Building	Building Name	Length (ft)	Width (ft)	Orientation
03-35	Treatment Building	60	40	0

Emission Point

❑ Continuation Sheet(s)

EMISSION PT.: 00ST2

Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section	
					Length (in)	Width (in)
	36	6	8	70		
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

❑ Continuation Sheet(s)

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
BL 1/2	1				048	Granular Act. Carbon	Tetrasolv Filtration

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

New York State Department of Environmental Conservation
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Section IV - Emission Unit Information (continued)

Process Information

❑ Continuation Sheet(s)

EMISSION UNIT 1-00EU1 PROCESS SVE

Description

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 00STA. 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.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description

❑ Confidential
☒ Operating at Maximum Capacity
❑ 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

❑ Confidential
❑ Operating at Maximum Capacity
❑ 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

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Section IV - Emission Unit Information (continued)

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements ❑ 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 ❑ Continuation Sheet(s)									
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
-													
-													
-													
-													

Emission Unit Compliance Certification ❑ Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
6	NYCRR	212	-						

❑ Applicable Federal Requirement ❑ State Only Requirement ❑ Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
1-00EU1	00ST2	SVE		00079-01-6	Trichloroethylene

Monitoring Information

- ❑ Continuous Emission Monitoring
- ☒ Intermittent Emission Testing
- ❑ Ambient Air Monitoring
- ❑ Monitoring of Process or Control Device Parameters as Surrogate
- ❑ Work Practice Involving Specific Operations
- ❑ Record Keeping/Maintenance Procedures

Description

Monthly grab samples analyzed for VOCs from the VGAC unit influent and effluent

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.
23	Concentration	

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
36,000		255	micrograms per cubic meter

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
01	Instantaneous	05	Monthly	10	Upon Request

New York State Department of Environmental Conservation
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Section IV - Emission Unit Information (continued)

Determination of Non-Applicability (Title V Only) N/A ❑ 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	❑ Applicable Federal Requirement ❑ 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	❑ Applicable Federal Requirement ❑ State Only Requirement
-				

Description

Process Emissions Summary ☒ 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 (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (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 (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
~~0.00~~ BRT	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 (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
0.13	1,181			02		

New York State Department of Environmental Conservation
Air Permit Application

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Section IV - Emission Unit Information (continued)

EMISSION UNIT i-OOEU1	Emission Unit Emissions Summary			☒ Continuation Sheet(s)
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 (Vinylidine 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-Dichloroethene			
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

☐ Continuation Sheet(s)

For any emission units which are not in compliance 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

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Section IV - Emission Unit Information

EMISSION UNIT	Emission Unit Emissions Summary (continuation)			
1-00EU1				
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
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Section IV - Emission Unit Information (continued)

Request for Emission Reduction Credits ❑ Continuation Sheet(s)

EMISSION UNIT -

Emission Reduction Description

Contaminant Emission Reduction Data

Baseline Period ___/___/___ to ___/___/___

Reduction	
Date	Method
/ /	

CAS No.	Contaminant Name	ERC (lbs/yr)	
		Netting	Offset
- -			
- -			
- -			

Facility to Use Future Reduction

Name | APPLICATION ID - - /

Location Address

❑ City / ❑ Town / ❑ Village | State | Zip

Use of Emission Reduction Credits ❑ Continuation Sheet(s)

EMISSION UNIT -

Proposed Project Description

Contaminant Emissions Increase Data

CAS No.	Contaminant Name	PEP (lbs/yr)
- -		

Statement of Compliance

❑ 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

❑ City / ❑ Town / ❑ Village | State | Zip

Emission Unit	CAS No.	Contaminant Name	ERC (lbs/yr)	
			Netting	Offset
-	- -			
-	- -			
-	- -			

DEC ID
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Supporting Documentation

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

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APPENDIX B

DATA VALIDATION REPORTS AND VALIDATED DATA SUMMARY - SVPMs

DATA VALIDATION REPORT (DVR)
VOLATILE ORGANIC COMPOUNDS
DoD Level 2B Review

Project Name: Naval Weapons Industrial Reserve Plant, Site 1

Location: 999 S. Oyster Bay Rd, Bethpage, NY

SDG #: 2302684

Client: KOMAN Government Solutions, LLC

Date: 5/05/2023

Laboratory: Eurofins Air Toxics, LLC

Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for twenty (20) air samples and one (1) field blank were analyzed for Volatiles by TO-15.

2. The samples were collected on 2/22/2023. The samples were submitted to Eurofins Air Toxics, LLC, Folsom, CA on 2/24/2023 for analysis.

3. 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	Matrix	Sample Status
BPS1-SVPM2003S-022223	2302684-01A	2/22/2023	Air	
BPS1-SVPM2003I-022223	2302684-02A	2/22/2023	Air	
BPS1-SVPM2003D-022223	2302684-03A	2/22/2023	Air	
BPS1-SVPM2002S-022223	2302684-04A	2/22/2023	Air	
BPS1-SVPM2002I-022223	2302684-05A	2/22/2023	Air	
BPS1-SVPM2002D-022223	2302684-06A	2/22/2023	Air	
BPS1-SVPM2001S-022223	2302684-07A	2/22/2023	Air	
BPS1-SVPM2001I-022223	2302684-08A	2/22/2023	Air	
BPS1-SVPM2001D-022223	2302684-09A	2/22/2023	Air	
BPS1-SVPM2004S-022223	2302684-10A	2/22/2023	Air	
BPS1-SVPM2004I-022223	2302684-11A	2/22/2023	Air	
BPS1-SVPM2004D-022223	2302684-12A	2/22/2023	Air	
BPS1-SVPM2006S-022223	2302684-13A	2/22/2023	Air	
BPS1-SVPM20061-022223	2302684-14A	2/22/2023	Air	
BPS1-SVPM2006D-022223	2302684-15A	2/22/2023	Air	
BPS1-SVPM2007S-022223	2302684-16A	2/22/2023	Air	
BPS1-SVPM2007I-022223	2302684-17A	2/22/2023	Air	
BPS1-SVPM2007D-022223	2302684-18A	2/22/2023	Air	
BPS1-DUP01-022223	2302684-19A	2/22/2023	Air	Field Duplicate of sample BPS1-SVPM2002I-022223
BPS1-DUP02-022223	2302684-20A	2/22/2023	Air	Field Duplicate of sample BPS1-SVPM20041-022223
BPS1-FB01-022223	2302684-21A	2/22/2023	Air	Field Blank

Sample Conditions/Problems:

1. The Traffic Reports/Chain-of-Custody Records, Sampling Report and/or Laboratory Case Narrative did not indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data. No qualifications were required.

2. The laboratory noted the following in the narrative: "Sample BPS1-SVPM2001D-022223 was received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits."

Holding Times:

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

Continuing Calibration Verification (CCV):

1. CCV analyzed on 03/07/2023 @ 12:14PM (msd3.i) exhibited acceptable %Rs for all compounds. No qualifications were required.

2. CCV analyzed on 03/08/2023 @ 08:51AM (msd3.i) exhibited acceptable %Rs for all compounds. No qualifications were required.

Surrogates:

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

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

1. Method Blank (2302684-22A) analyzed on 3/07/2023 was free of contamination. No qualifications were required.

2. Method Blank (2302684-22B) analyzed on 3/08/2023 was free of contamination. No qualifications were required.

3. Field Blank (BPS1-FB-01-022223) (2302684-21A) analyzed on 3/08/2023 was free of contamination. No qualifications were required.

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

1. Laboratory Control Sample/Laboratory Control Sample Duplicate (2302684-24A) were analyzed on 03/07/2023. All %RECs and RPDs were within the laboratory control limits. No qualifications were required.

2. Laboratory Control Sample/Laboratory Control Sample Duplicate (2302684-24B) were analyzed on 03/07/2023. All %RECs and RPDs were within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample BPS1-DUP-01-022223 (2302684-19A) was collected as field duplicate for sample BPS1-SVPM2002I-022223 (2302684-05A). Tetrachloroethene was detected in the field duplicate sample but was non-detected in the field sample. RPDs were inside the control limits (<30%).

	BPS1-SVPM2002I-022223	BPS1-DUP01-022223	
	2302684-05A	2302684-19A	
Analyte	Result ($\mu g/m^3$)	Result ($\mu g/m^3$)	RPD (%)
Trichloroethene	4.1	3.6	13.0

	BPS1-SVPM2002I-022223	BPS1-DUP01-022223	
	2302684-05A	2302684-19A	
Analyte	Result (µg/m^3)	Result (µg/m^3)	RPD (%)
Tetrachloroethene	ND	4.3	NC

ND – Not detected. NC – Not calculated.

Results for tetrachloroethene were qualified as estimated (UJ/J) in the field duplicate pair (BPS1-SVPM2002I-022223 and BPS1-DUP01-022223).

2. Sample BPS1-DUP02-022223 (2302684-20A) was collected as field duplicate for sample BPS1-SVPM2004I-022223 (2302684-11A). The field duplicate pair was non-detect for VOCs. No qualifications were required.

Sample Duplicate (SD):

1. Sample duplicate was performed on sample BPS1-SVPM2003S-022223 (2302684-01A). RPDs were ≤ 30%. No qualifications were required.

2. Sample duplicate was performed on sample BPS1-SVPM2002D-022223 (2302684-06A). RPDs were ≤ 30%. No qualifications were required.

Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

1. All sample results were reported within the linear calibration range. No qualifications were required.

Comments:

1. Validation qualifiers (if required) were entered into the EDD for SDG: 2302684.

2. Summary of the qualified data are listed in the Qualification Summary Table for SDG: 2302684.

3. Summary of all the data are listed in the Data Summary Table for SDG: 2302684.

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QUALIFICATION SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Analyte	Unit	Reported Result	Lab Qualifier	Validated Value	DV Qualifier	Reason Code
BPS1-SVPM2002I-022223	2302684-05A	TO-15	Tetrachloroethene	UG_M3		ND,U		UJ	FD
BPS1-DUP01-022223	2302684-19A	TO-15	Tetrachloroethene	UG_M3	4.3	J	4.3	J	FD

NOTE: Only results that had qualifications added after validation are listed in this table.

Reason Codes
FD - Qualification due to field duplicate criteria exceedance.

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Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier	LOD	LOQ
BPS1-SVPM2003S-022223	2302684-01A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-SVPM2003S-022223	2302684-01A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.7
BPS1-SVPM2003S-022223	2302684-01A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2003S-022223	2302684-01A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2003S-022223	2302684-01A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2003S-022223	2302684-01A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.4	4.5
BPS1-SVPM2003S-022223	2302684-01A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2003S-022223	2302684-01A	Trichloroethene	TO-15	2/22/2023	3.2	UG/M3	J	2.7	3.6
BPS1-SVPM2003S-022223	2302684-01A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.3	1.7
BPS1-SVPM2003I-022223	2302684-02A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.7	3.3
BPS1-SVPM2003I-022223	2302684-02A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.2	2.5
BPS1-SVPM2003I-022223	2302684-02A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2003I-022223	2302684-02A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.5
BPS1-SVPM2003I-022223	2302684-02A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2003I-022223	2302684-02A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.1	4.1
BPS1-SVPM2003I-022223	2302684-02A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2003I-022223	2302684-02A	Trichloroethene	TO-15	2/22/2023	2.5	UG/M3	J	2.4	3.3
BPS1-SVPM2003I-022223	2302684-02A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2003D-022223	2302684-03A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.7	3.3
BPS1-SVPM2003D-022223	2302684-03A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.2	2.5
BPS1-SVPM2003D-022223	2302684-03A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2003D-022223	2302684-03A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.5
BPS1-SVPM2003D-022223	2302684-03A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2003D-022223	2302684-03A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.1	4.1
BPS1-SVPM2003D-022223	2302684-03A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2003D-022223	2302684-03A	Trichloroethene	TO-15	2/22/2023	3.1	UG/M3	J	2.4	3.3
BPS1-SVPM2003D-022223	2302684-03A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2002S-022223	2302684-04A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.7	3.5
BPS1-SVPM2002S-022223	2302684-04A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2002S-022223	2302684-04A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.5
BPS1-SVPM2002S-022223	2302684-04A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002S-022223	2302684-04A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.5

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Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier	LOD	LOQ
BPS1-SVPM2002S-022223	2302684-04A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.2	4.3
BPS1-SVPM2002S-022223	2302684-04A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.5
BPS1-SVPM2002S-022223	2302684-04A	Trichloroethene	TO-15	2/22/2023	2.1	UG/M3	J	2.6	3.4
BPS1-SVPM2002S-022223	2302684-04A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2002I-022223	2302684-05A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-SVPM2002I-022223	2302684-05A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2002I-022223	2302684-05A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002I-022223	2302684-05A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2002I-022223	2302684-05A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002I-022223	2302684-05A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,UJ	3.3	4.4
BPS1-SVPM2002I-022223	2302684-05A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002I-022223	2302684-05A	Trichloroethene	TO-15	2/22/2023	4.1	UG/M3		2.6	3.5
BPS1-SVPM2002I-022223	2302684-05A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.7
BPS1-SVPM2002D-022223	2302684-06A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-SVPM2002D-022223	2302684-06A	1,1-Dichloroethane	TO-15	2/22/2023	0.70	UG/M3	J	1.3	2.6
BPS1-SVPM2002D-022223	2302684-06A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002D-022223	2302684-06A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2002D-022223	2302684-06A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002D-022223	2302684-06A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.3	4.4
BPS1-SVPM2002D-022223	2302684-06A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2002D-022223	2302684-06A	Trichloroethene	TO-15	2/22/2023	40	UG/M3		2.6	3.5
BPS1-SVPM2002D-022223	2302684-06A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.7
BPS1-SVPM2001S-022223	2302684-07A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-SVPM2001S-022223	2302684-07A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.4	2.7
BPS1-SVPM2001S-022223	2302684-07A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2001S-022223	2302684-07A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2001S-022223	2302684-07A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2001S-022223	2302684-07A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.4	4.5
BPS1-SVPM2001S-022223	2302684-07A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2001S-022223	2302684-07A	Trichloroethene	TO-15	2/22/2023	1.8	UG/M3	J	2.7	3.6
BPS1-SVPM2001S-022223	2302684-07A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.3	1.7
BPS1-SVPM2001I-022223	2302684-08A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.5

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Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier	LOD	LOQ
BPS1-SVPM2001I-022223	2302684-08A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2001I-022223	2302684-08A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2001I-022223	2302684-08A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2001I-022223	2302684-08A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2001I-022223	2302684-08A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.3	4.4
BPS1-SVPM2001I-022223	2302684-08A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2001I-022223	2302684-08A	Trichloroethene	TO-15	2/22/2023	1.6	UG/M3	J	2.6	3.5
BPS1-SVPM2001I-022223	2302684-08A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.7
BPS1-SVPM2001D-022223	2302684-09A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	12	24
BPS1-SVPM2001D-022223	2302684-09A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	8.8	18
BPS1-SVPM2001D-022223	2302684-09A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	13	17
BPS1-SVPM2001D-022223	2302684-09A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	13	18
BPS1-SVPM2001D-022223	2302684-09A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	13	17
BPS1-SVPM2001D-022223	2302684-09A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	22	29
BPS1-SVPM2001D-022223	2302684-09A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	13	17
BPS1-SVPM2001D-022223	2302684-09A	Trichloroethene	TO-15	2/22/2023	9.6	UG/M3	J	18	23
BPS1-SVPM2001D-022223	2302684-09A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	8.3	11
BPS1-SVPM2004S-022223	2302684-10A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.5
BPS1-SVPM2004S-022223	2302684-10A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2004S-022223	2302684-10A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2004S-022223	2302684-10A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2004S-022223	2302684-10A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2004S-022223	2302684-10A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.3	4.4
BPS1-SVPM2004S-022223	2302684-10A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2004S-022223	2302684-10A	Trichloroethene	TO-15	2/22/2023	1.4	UG/M3	J	2.6	3.5
BPS1-SVPM2004S-022223	2302684-10A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2004I-022223	2302684-11A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.7
BPS1-SVPM2004I-022223	2302684-11A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.4	2.8
BPS1-SVPM2004I-022223	2302684-11A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2004I-022223	2302684-11A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.1	2.8
BPS1-SVPM2004I-022223	2302684-11A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2004I-022223	2302684-11A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.4	4.6

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Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier	LOD	LOQ
BPS1-SVPM2004I-022223	2302684-11A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2004I-022223	2302684-11A	Trichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.7	3.6
BPS1-SVPM2004I-022223	2302684-11A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.3	1.7
BPS1-SVPM2004D-022223	2302684-12A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.5
BPS1-SVPM2004D-022223	2302684-12A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2004D-022223	2302684-12A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2004D-022223	2302684-12A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2004D-022223	2302684-12A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2004D-022223	2302684-12A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.3	4.4
BPS1-SVPM2004D-022223	2302684-12A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2004D-022223	2302684-12A	Trichloroethene	TO-15	2/22/2023	1.4	UG/M3	J	2.6	3.5
BPS1-SVPM2004D-022223	2302684-12A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.7
BPS1-SVPM2006S-022223	2302684-13A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-SVPM2006S-022223	2302684-13A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.7
BPS1-SVPM2006S-022223	2302684-13A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2006S-022223	2302684-13A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2006S-022223	2302684-13A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2006S-022223	2302684-13A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.4	4.5
BPS1-SVPM2006S-022223	2302684-13A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2006S-022223	2302684-13A	Trichloroethene	TO-15	2/22/2023	1.5	UG/M3	J	2.7	3.6
BPS1-SVPM2006S-022223	2302684-13A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.3	1.7
BPS1-SVPM2006I-022223	2302684-14A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.7	3.5
BPS1-SVPM2006I-022223	2302684-14A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2006I-022223	2302684-14A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.5
BPS1-SVPM2006I-022223	2302684-14A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2006I-022223	2302684-14A	cis-1,2-Dichloroethene	TO-15	2/22/2023	130	UG/M3		1.9	2.5
BPS1-SVPM2006I-022223	2302684-14A	Tetrachloroethene	TO-15	2/22/2023	1.0	UG/M3	J	3.2	4.3
BPS1-SVPM2006I-022223	2302684-14A	trans-1,2-Dichloroethene	TO-15	2/22/2023	1.2	UG/M3	J	1.9	2.5
BPS1-SVPM2006I-022223	2302684-14A	Trichloroethene	TO-15	2/22/2023	23	UG/M3		2.6	3.4
BPS1-SVPM2006I-022223	2302684-14A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2006D-022223	2302684-15A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-SVPM2006D-022223	2302684-15A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.7

NWIRP BETHPAGE, BETHPAGE, NY
SITE 1
DATA SUMMARY TABLE
AIR
SDGs: 2302684

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier	LOD	LOQ
BPS1-SVPM2006D-022223	2302684-15A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2006D-022223	2302684-15A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-SVPM2006D-022223	2302684-15A	cis-1,2-Dichloroethene	TO-15	2/22/2023	120	UG/M3		2.0	2.6
BPS1-SVPM2006D-022223	2302684-15A	Tetrachloroethene	TO-15	2/22/2023	1.1	UG/M3	J	3.4	4.5
BPS1-SVPM2006D-022223	2302684-15A	trans-1,2-Dichloroethene	TO-15	2/22/2023	0.70	UG/M3	J	2.0	2.6
BPS1-SVPM2006D-022223	2302684-15A	Trichloroethene	TO-15	2/22/2023	19	UG/M3		2.7	3.6
BPS1-SVPM2006D-022223	2302684-15A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.3	1.7
BPS1-SVPM2007S-022223	2302684-16A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.7	3.3
BPS1-SVPM2007S-022223	2302684-16A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.2	2.5
BPS1-SVPM2007S-022223	2302684-16A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2007S-022223	2302684-16A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.5
BPS1-SVPM2007S-022223	2302684-16A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2007S-022223	2302684-16A	Tetrachloroethene	TO-15	2/22/2023	1.0	UG/M3	J	3.1	4.1
BPS1-SVPM2007S-022223	2302684-16A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.8	2.4
BPS1-SVPM2007S-022223	2302684-16A	Trichloroethene	TO-15	2/22/2023	1.2	UG/M3	J	2.4	3.3
BPS1-SVPM2007S-022223	2302684-16A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2007I-022223	2302684-17A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.5
BPS1-SVPM2007I-022223	2302684-17A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2007I-022223	2302684-17A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2007I-022223	2302684-17A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2007I-022223	2302684-17A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2007I-022223	2302684-17A	Tetrachloroethene	TO-15	2/22/2023	2.1	UG/M3	J	3.3	4.4
BPS1-SVPM2007I-022223	2302684-17A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2007I-022223	2302684-17A	Trichloroethene	TO-15	2/22/2023	1.1	UG/M3	J	2.6	3.5
BPS1-SVPM2007I-022223	2302684-17A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-SVPM2007D-022223	2302684-18A	1,1,1-Trichloroethane	TO-15	2/22/2023	0.79	UG/M3	J	1.8	3.6
BPS1-SVPM2007D-022223	2302684-18A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-SVPM2007D-022223	2302684-18A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2007D-022223	2302684-18A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-SVPM2007D-022223	2302684-18A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-SVPM2007D-022223	2302684-18A	Tetrachloroethene	TO-15	2/22/2023	1.8	UG/M3	J	3.3	4.4
BPS1-SVPM2007D-022223	2302684-18A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6

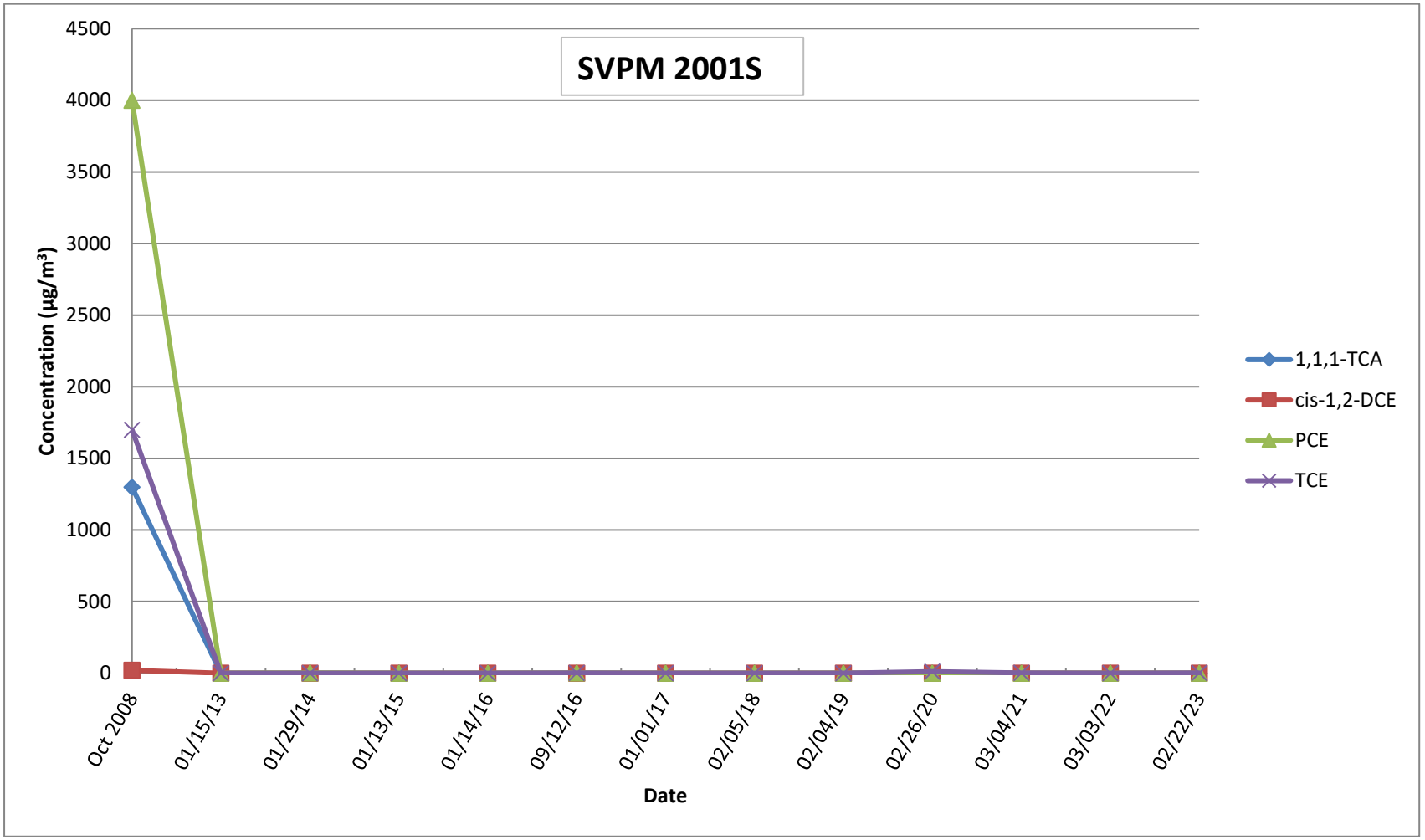
NWIRP BETHPAGE, BETHPAGE, NY
SITE 1
DATA SUMMARY TABLE
AIR
SDGs: 2302684

Sample Name	Lab ID	Analytical Name	Analytical Method	Sample Date	Result	Unit	Qualifier	LOD	LOQ
BPS1-SVPM2007D-022223	2302684-18A	Trichloroethene	TO-15	2/22/2023	1.2	UG/M3	J	2.6	3.5
BPS1-SVPM2007D-022223	2302684-18A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.7
BPS1-DUP01-022223	2302684-19A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.5
BPS1-DUP01-022223	2302684-19A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-DUP01-022223	2302684-19A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-DUP01-022223	2302684-19A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-DUP01-022223	2302684-19A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-DUP01-022223	2302684-19A	Tetrachloroethene	TO-15	2/22/2023	4.3	UG/M3	J	3.3	4.4
BPS1-DUP01-022223	2302684-19A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-DUP01-022223	2302684-19A	Trichloroethene	TO-15	2/22/2023	3.6	UG/M3		2.6	3.5
BPS1-DUP01-022223	2302684-19A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-DUP02-022223	2302684-20A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.5
BPS1-DUP02-022223	2302684-20A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.6
BPS1-DUP02-022223	2302684-20A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-DUP02-022223	2302684-20A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-DUP02-022223	2302684-20A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-DUP02-022223	2302684-20A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.3	4.4
BPS1-DUP02-022223	2302684-20A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	1.9	2.6
BPS1-DUP02-022223	2302684-20A	Trichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.6	3.5
BPS1-DUP02-022223	2302684-20A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.2	1.6
BPS1-FB01-022223	2302684-21A	1,1,1-Trichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.8	3.6
BPS1-FB01-022223	2302684-21A	1,1-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	1.3	2.7
BPS1-FB01-022223	2302684-21A	1,1-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-FB01-022223	2302684-21A	1,2-Dichloroethane	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.7
BPS1-FB01-022223	2302684-21A	cis-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-FB01-022223	2302684-21A	Tetrachloroethene	TO-15	2/22/2023		UG/M3	ND,U	3.4	4.5
BPS1-FB01-022223	2302684-21A	trans-1,2-Dichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.0	2.6
BPS1-FB01-022223	2302684-21A	Trichloroethene	TO-15	2/22/2023		UG/M3	ND,U	2.7	3.5
BPS1-FB01-022223	2302684-21A	Vinyl Chloride	TO-15	2/22/2023		UG/M3	ND,U	1.3	1.7

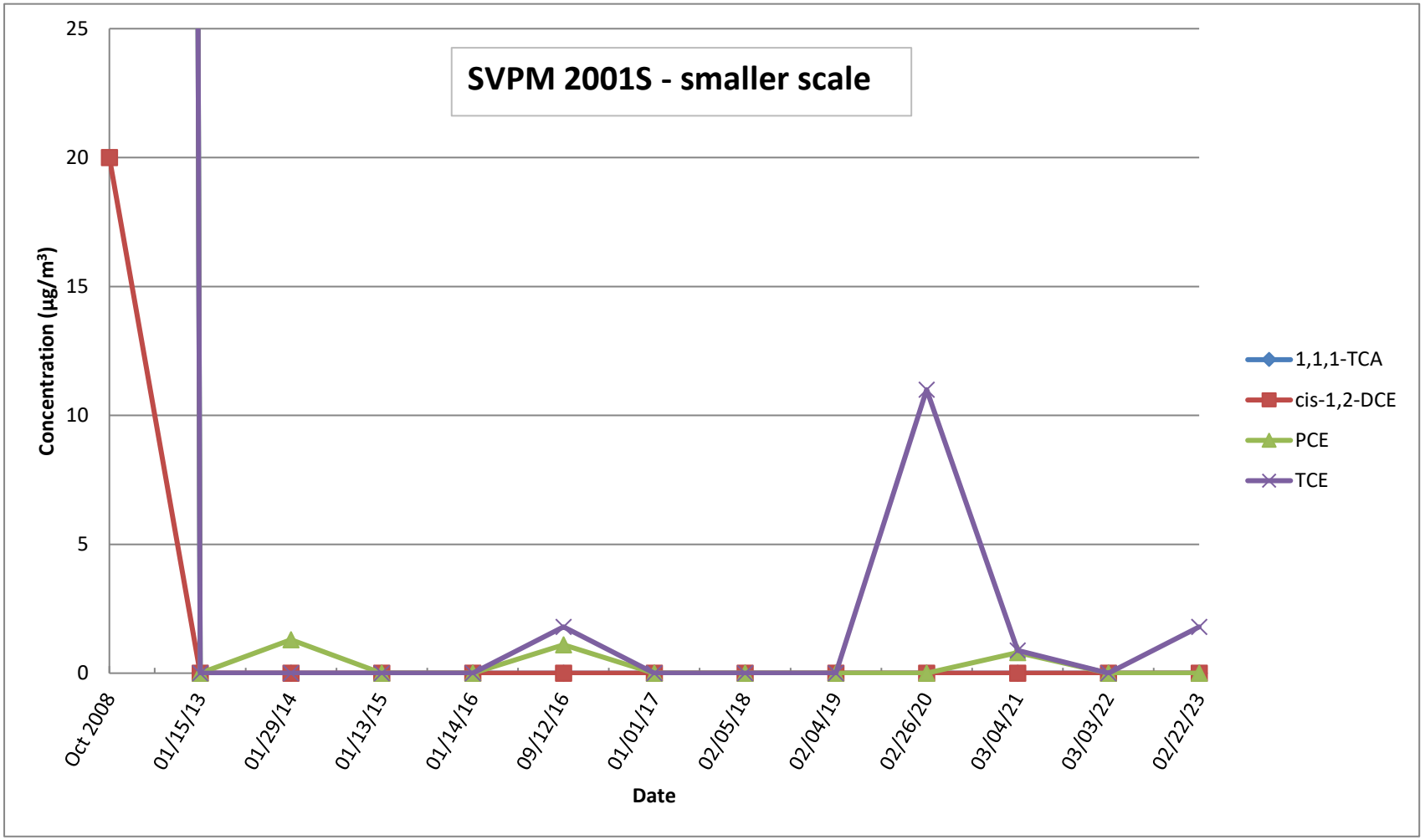
APPENDIX C

VAPOR CONCENTRATION TREND GRAPHS 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



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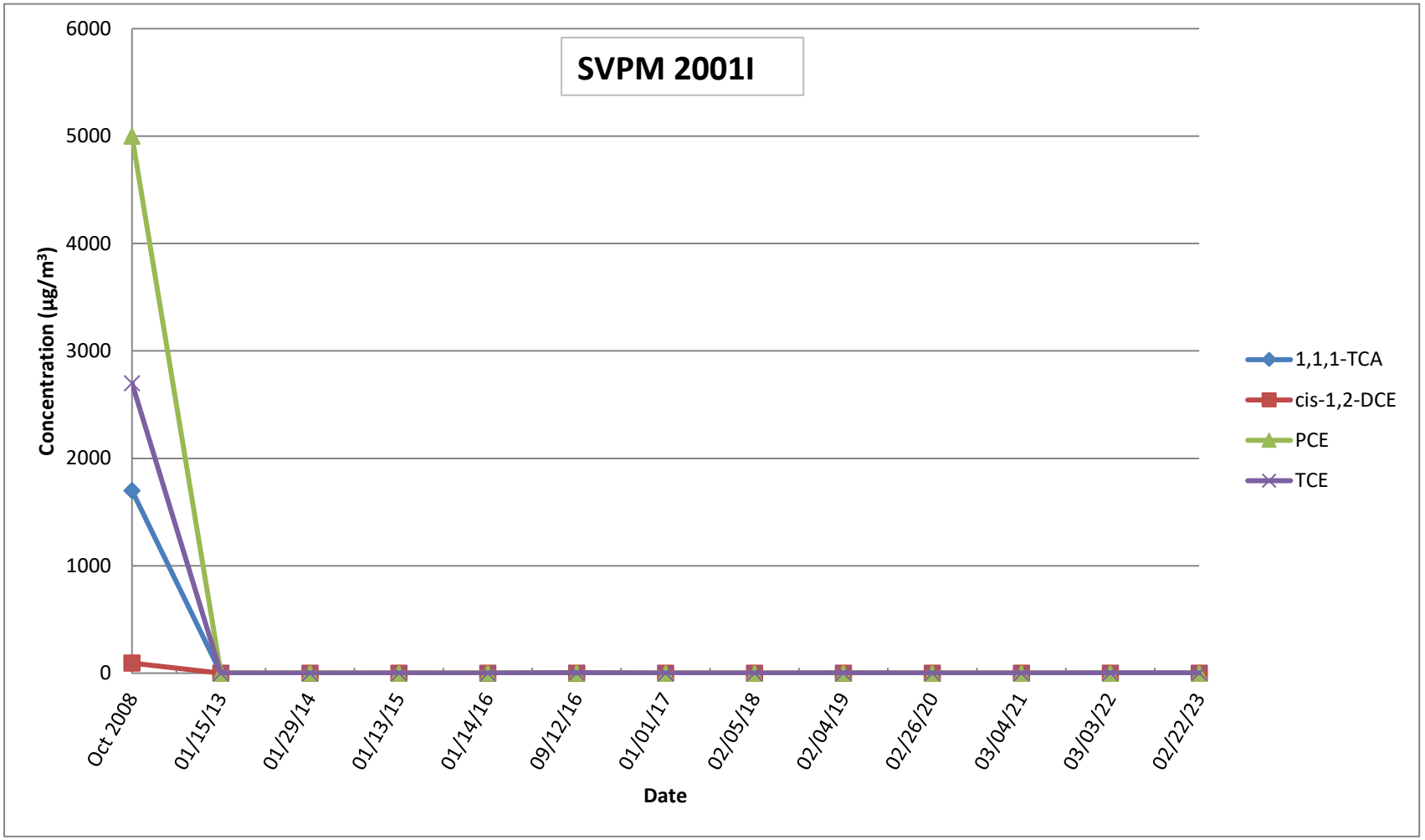
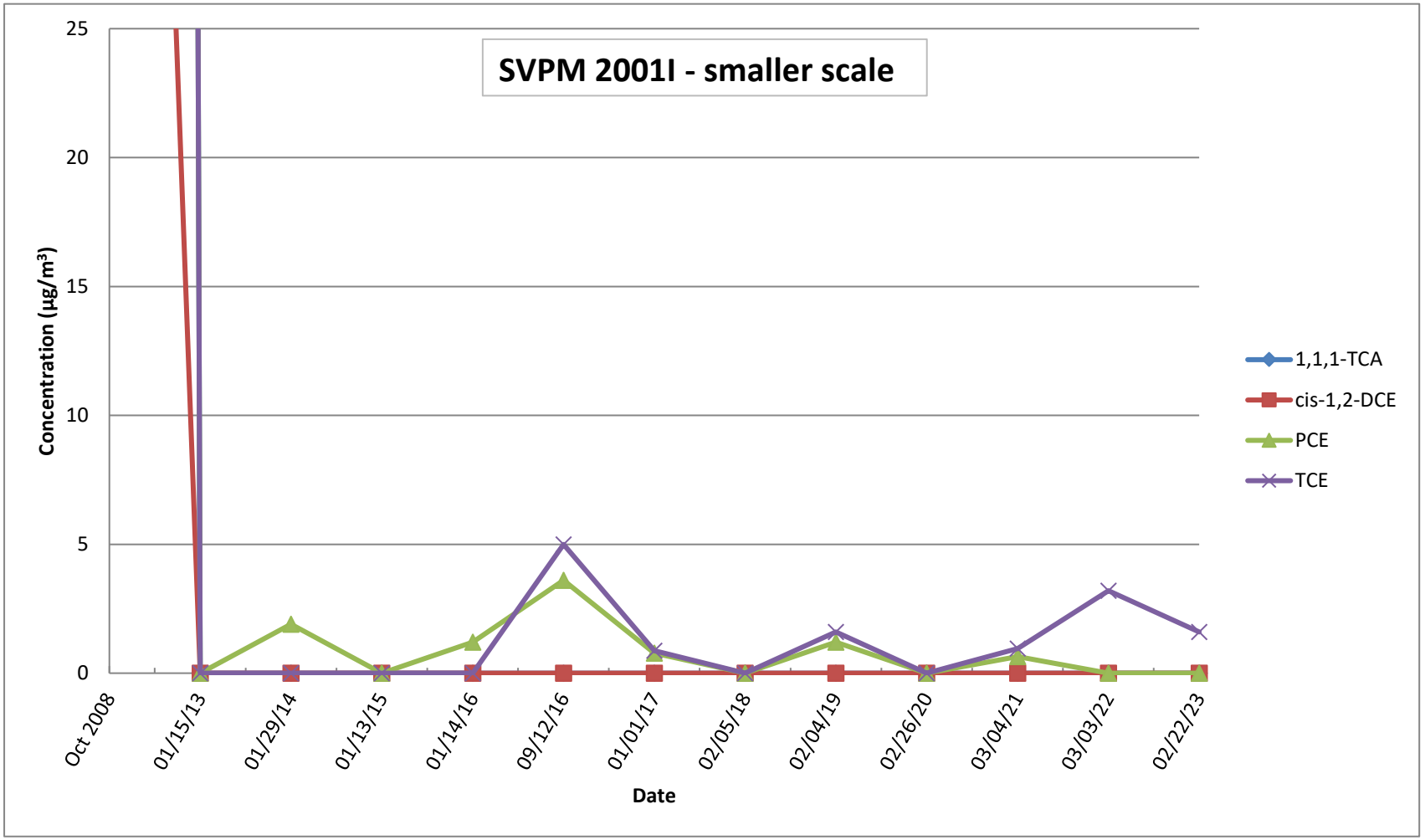
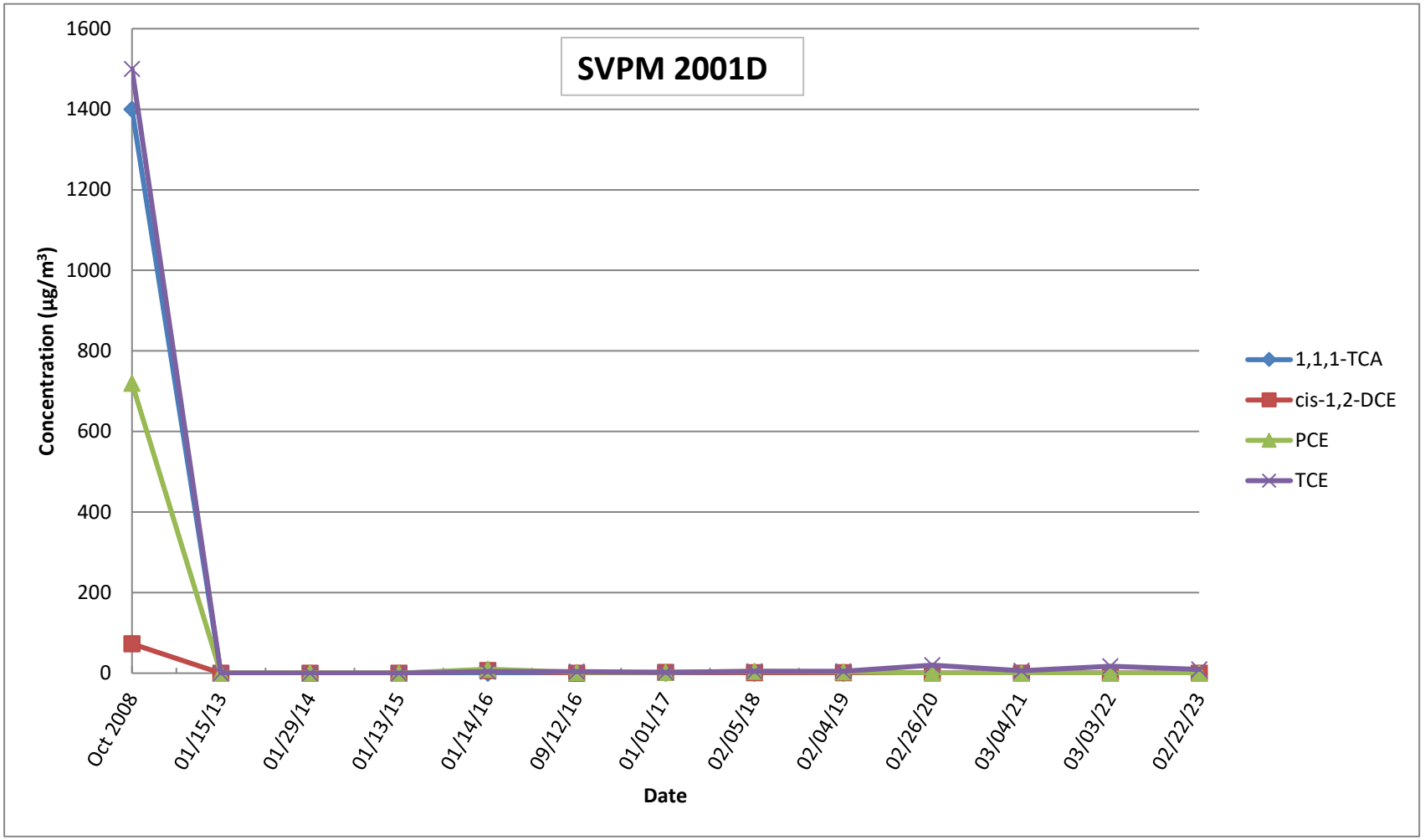
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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



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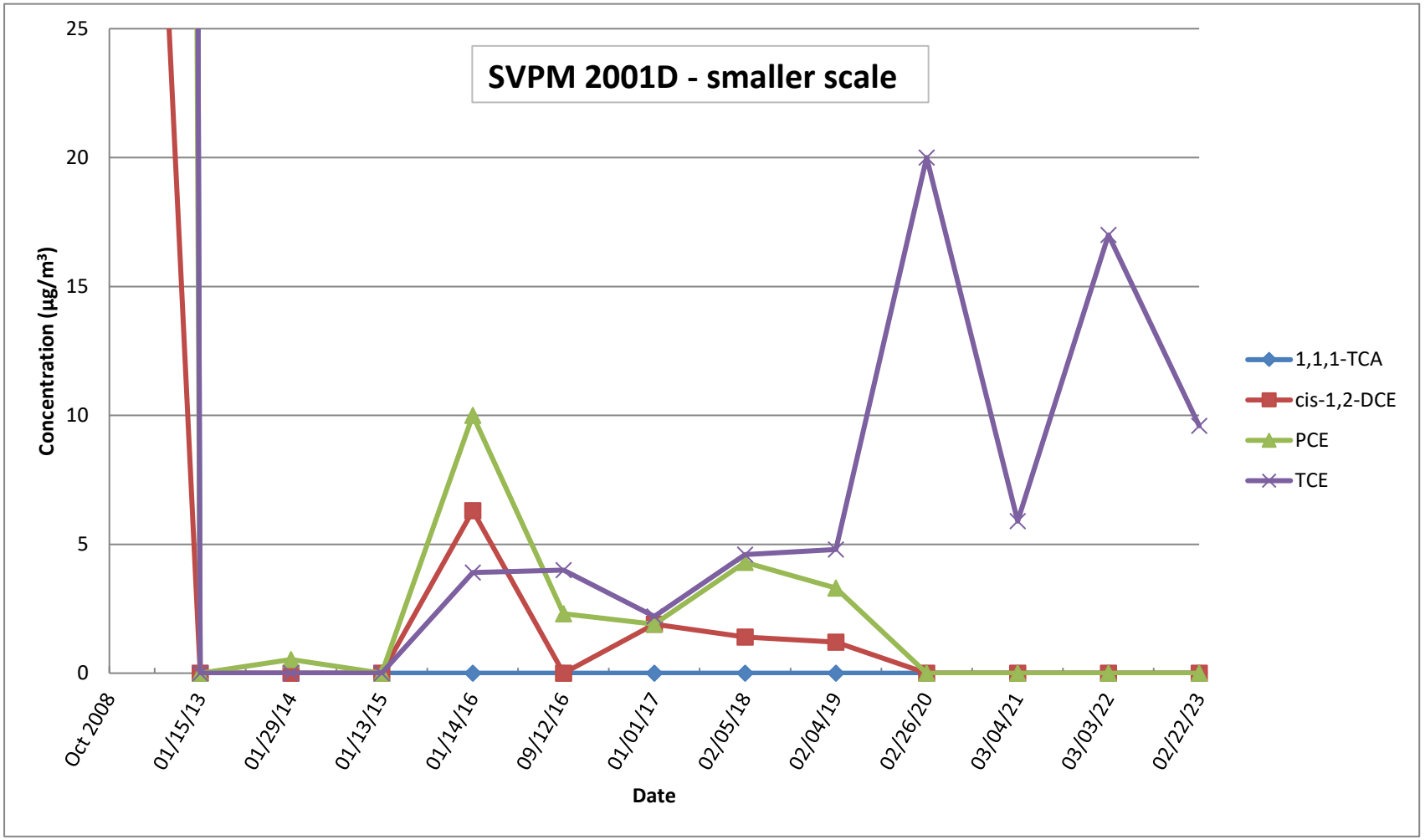
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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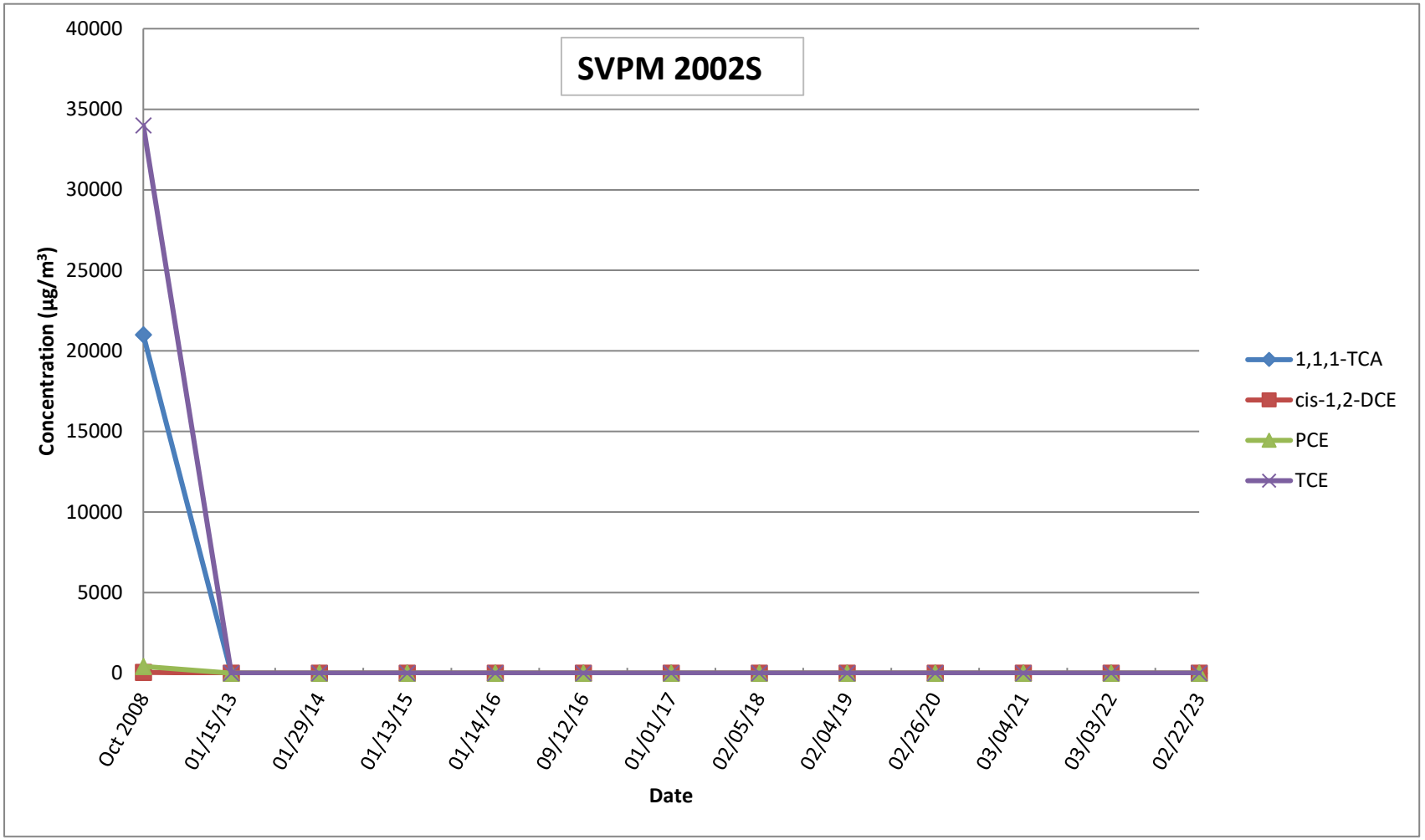
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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Site 1, Former Drum Marshalling Yard
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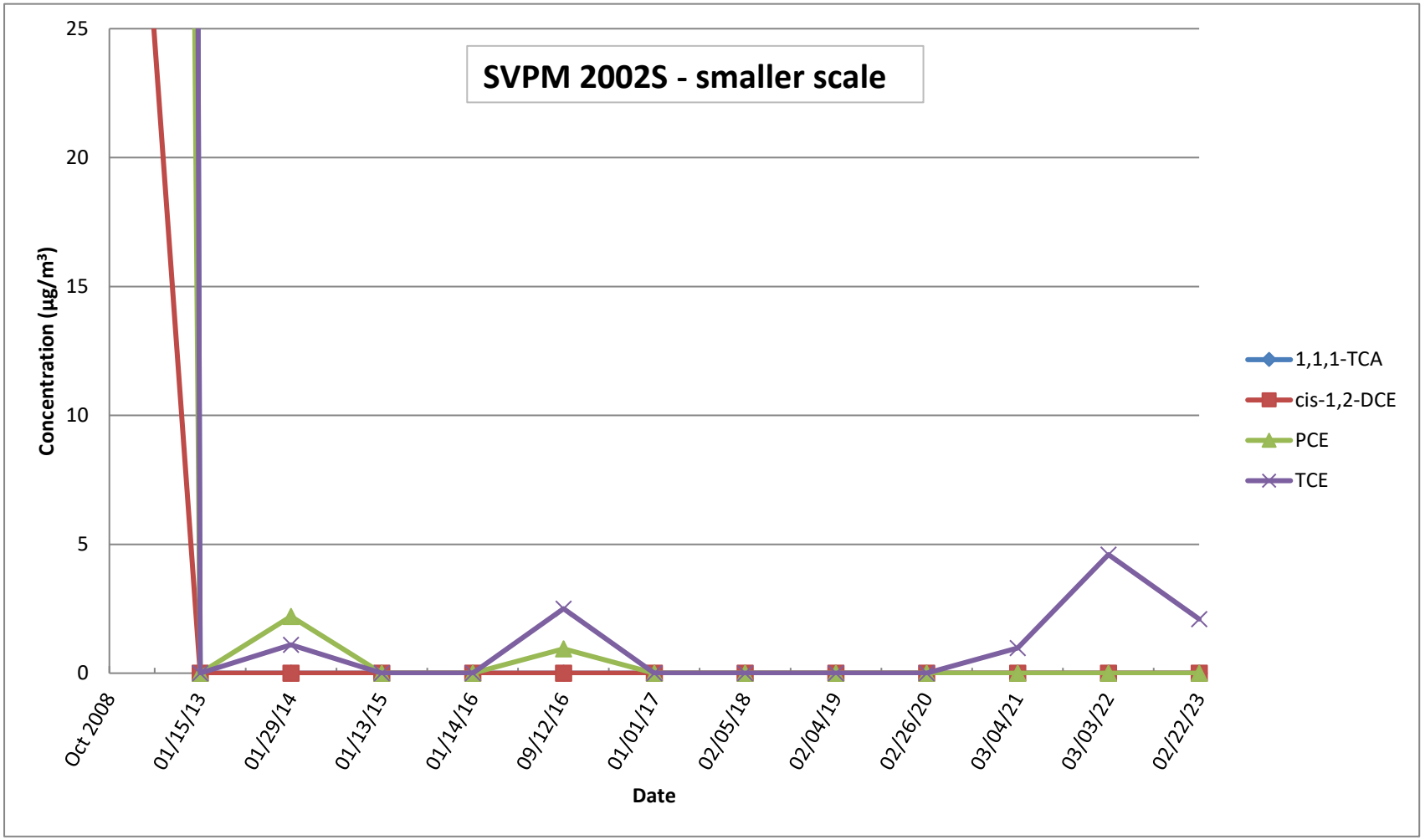
Concentration Trends of Select VOCs
SVPMs



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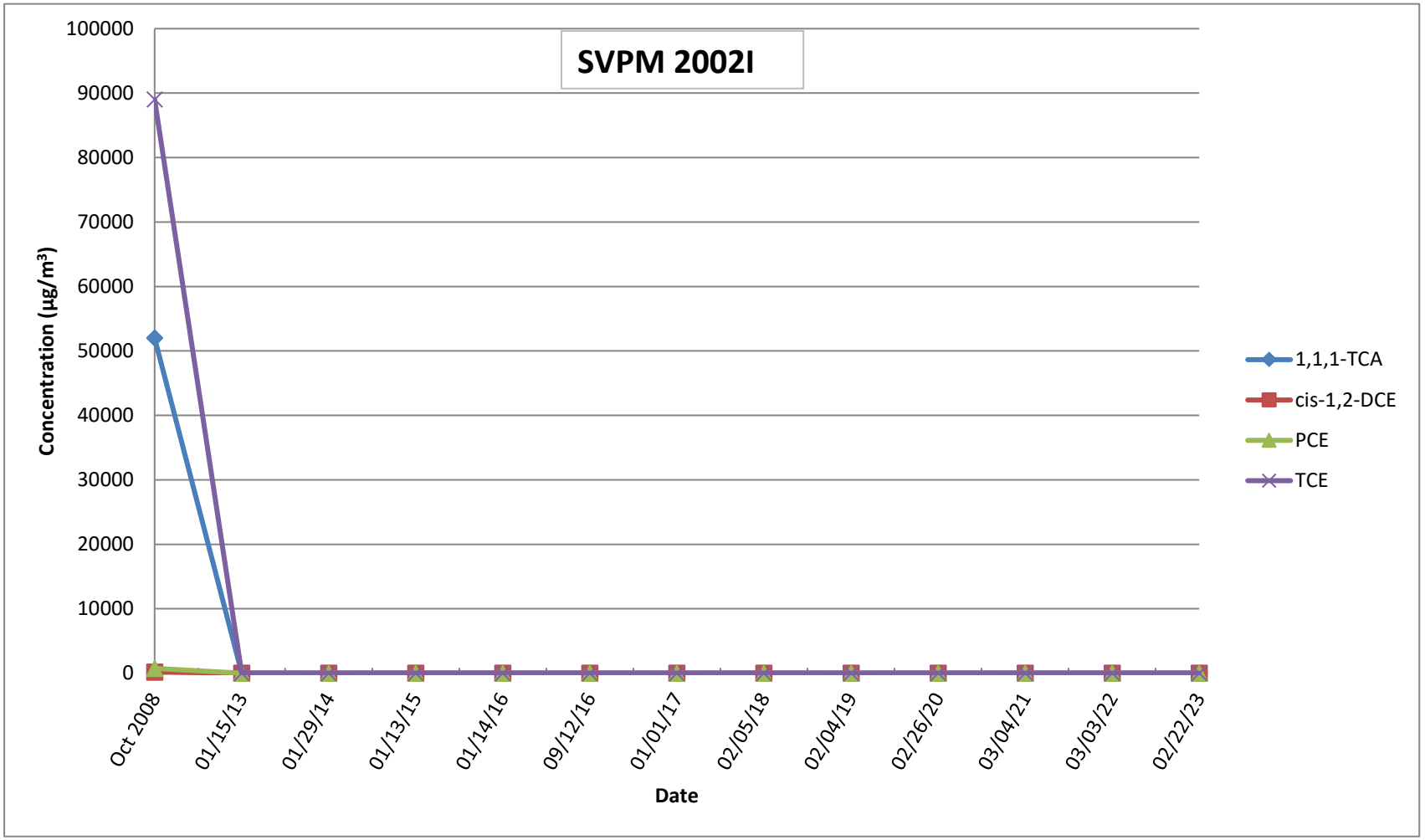
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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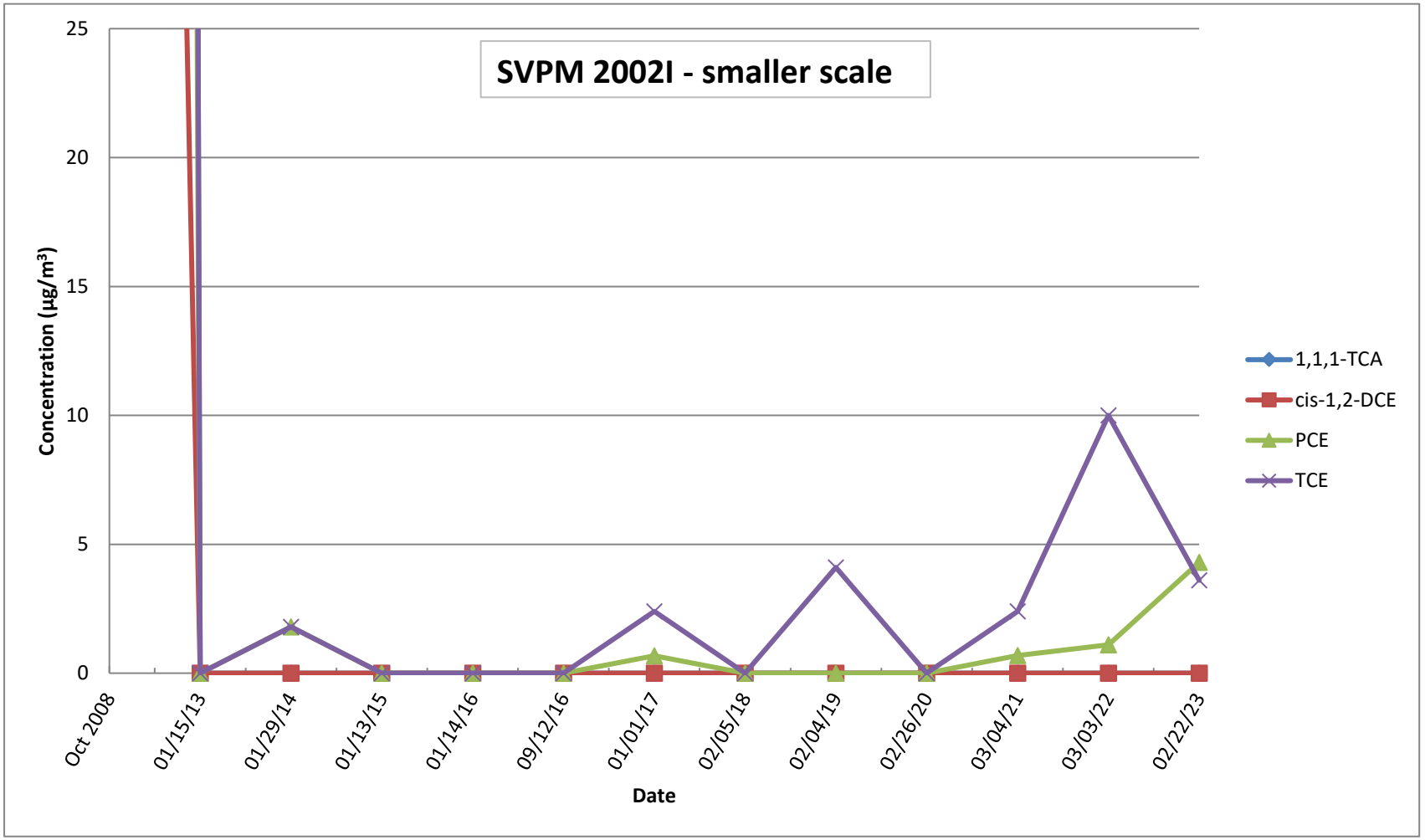
Concentration Trends of Select VOCs
SVPMs



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Site 1, Former Drum Marshalling Yard
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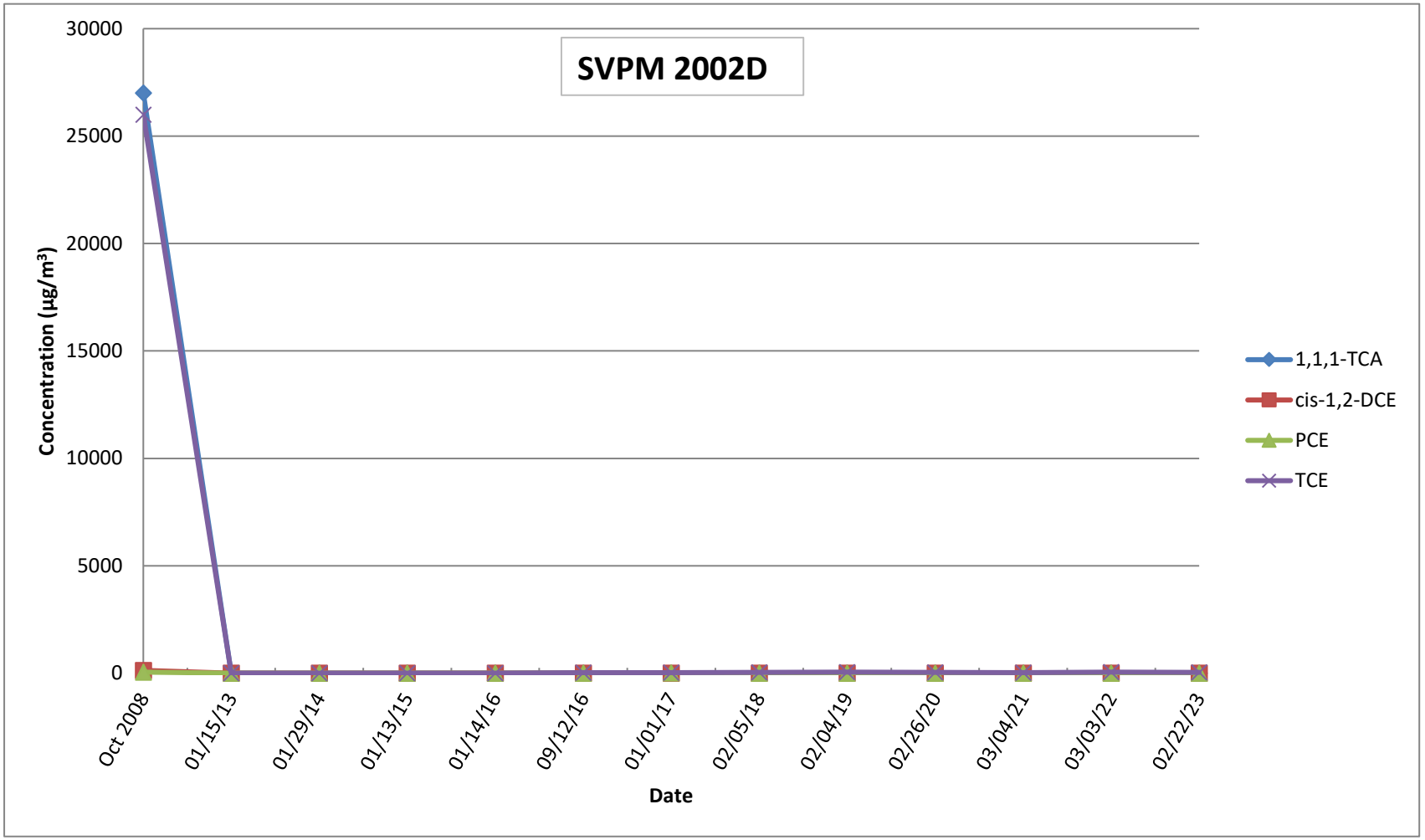
Concentration Trends of Select VOCs
SVPMs



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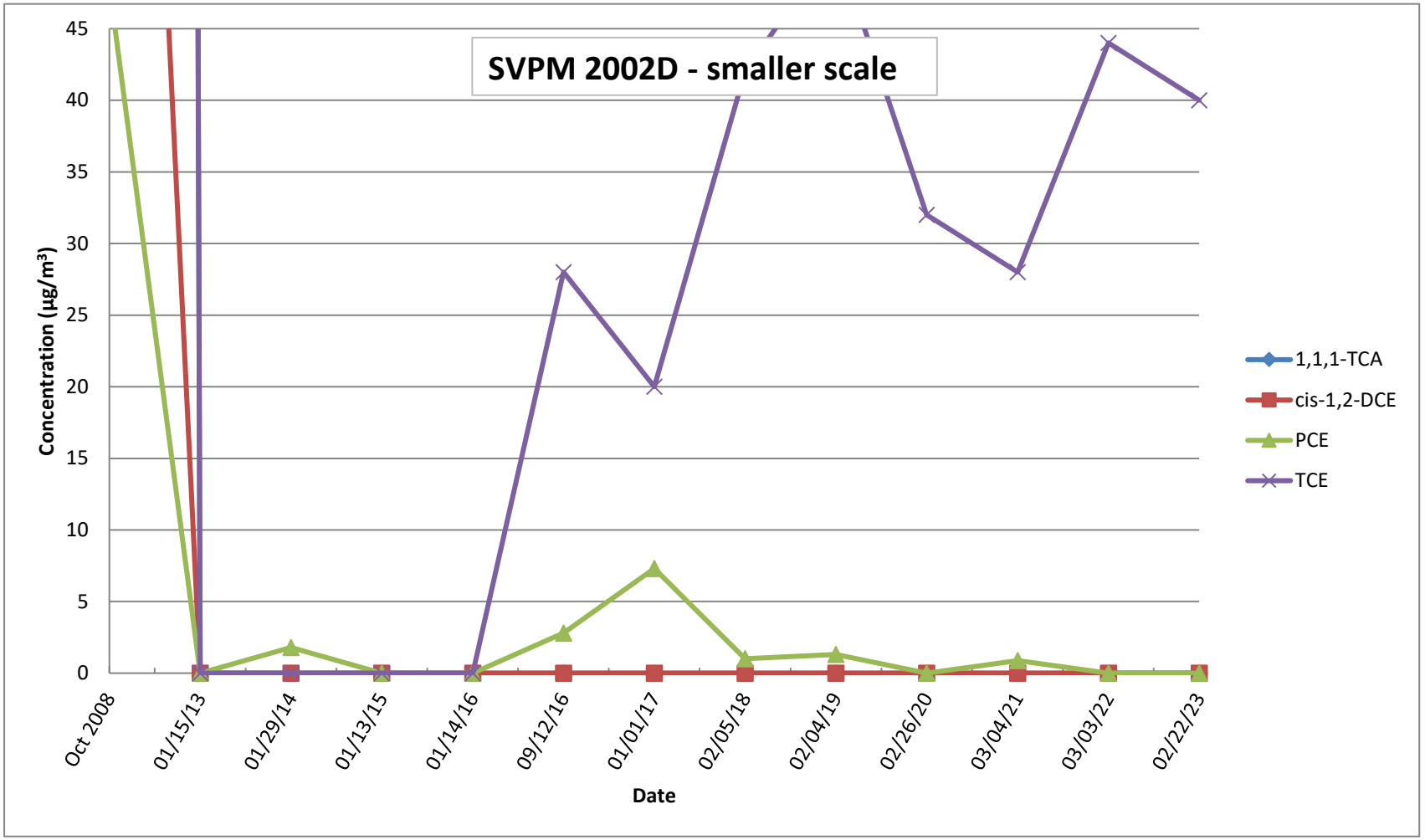
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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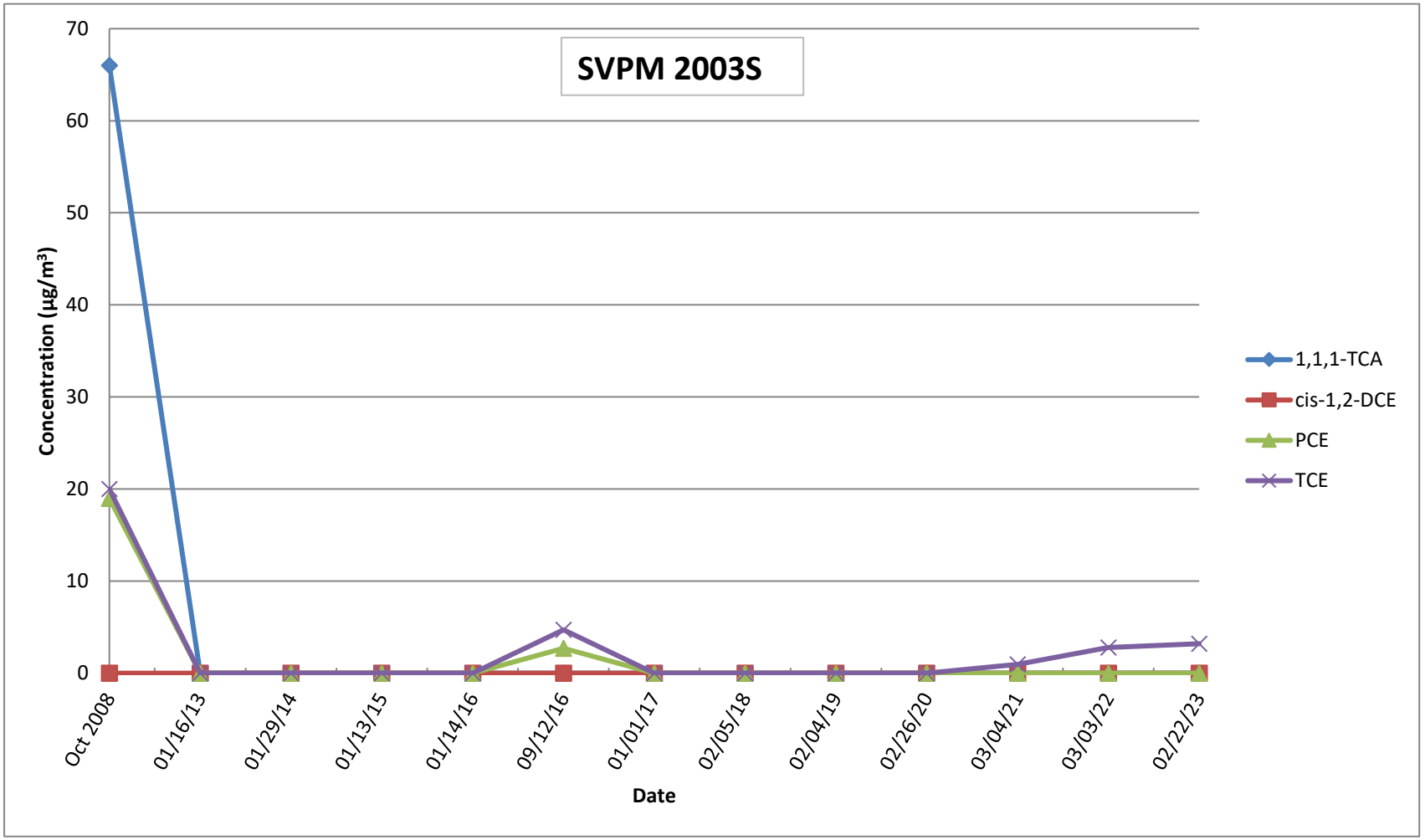
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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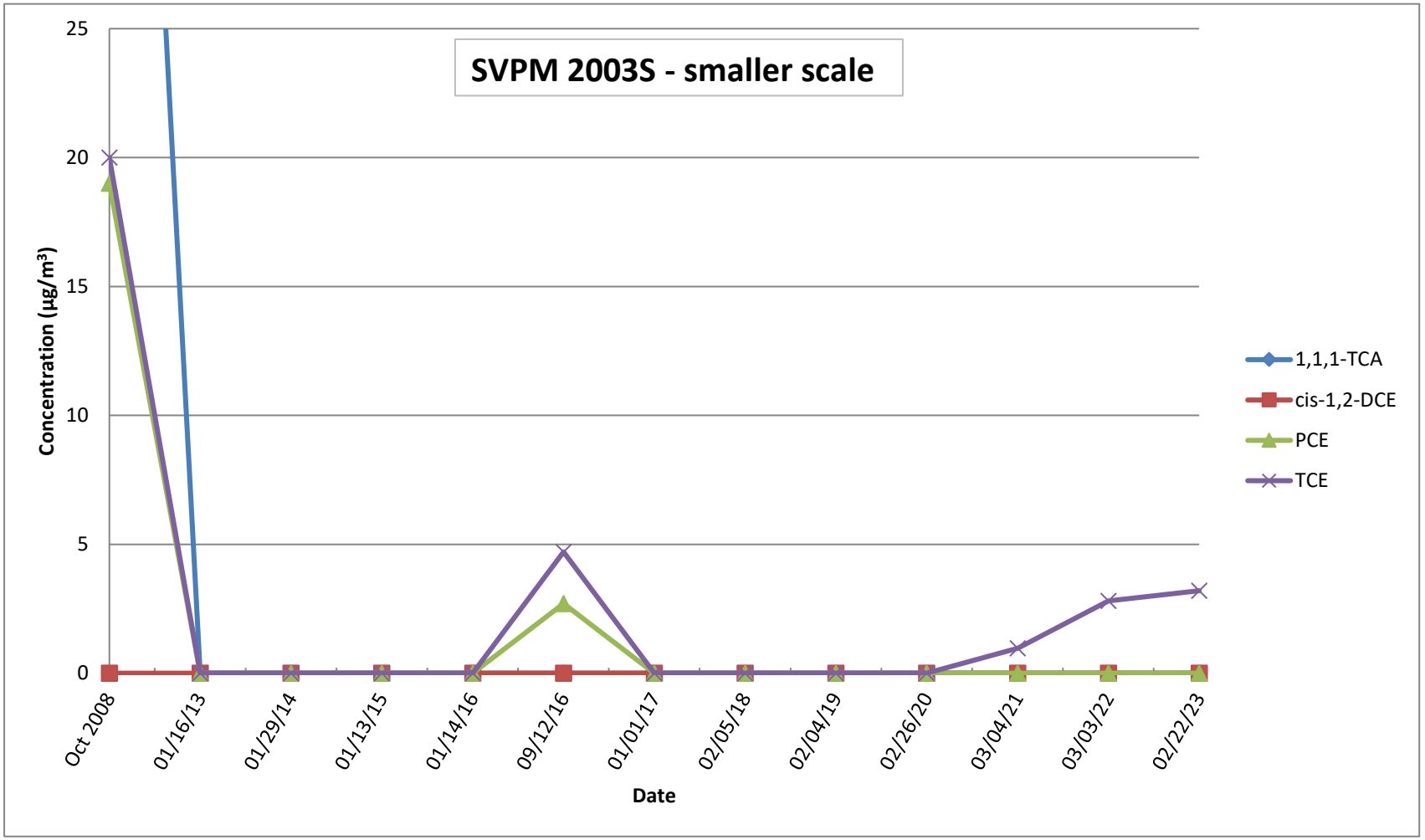
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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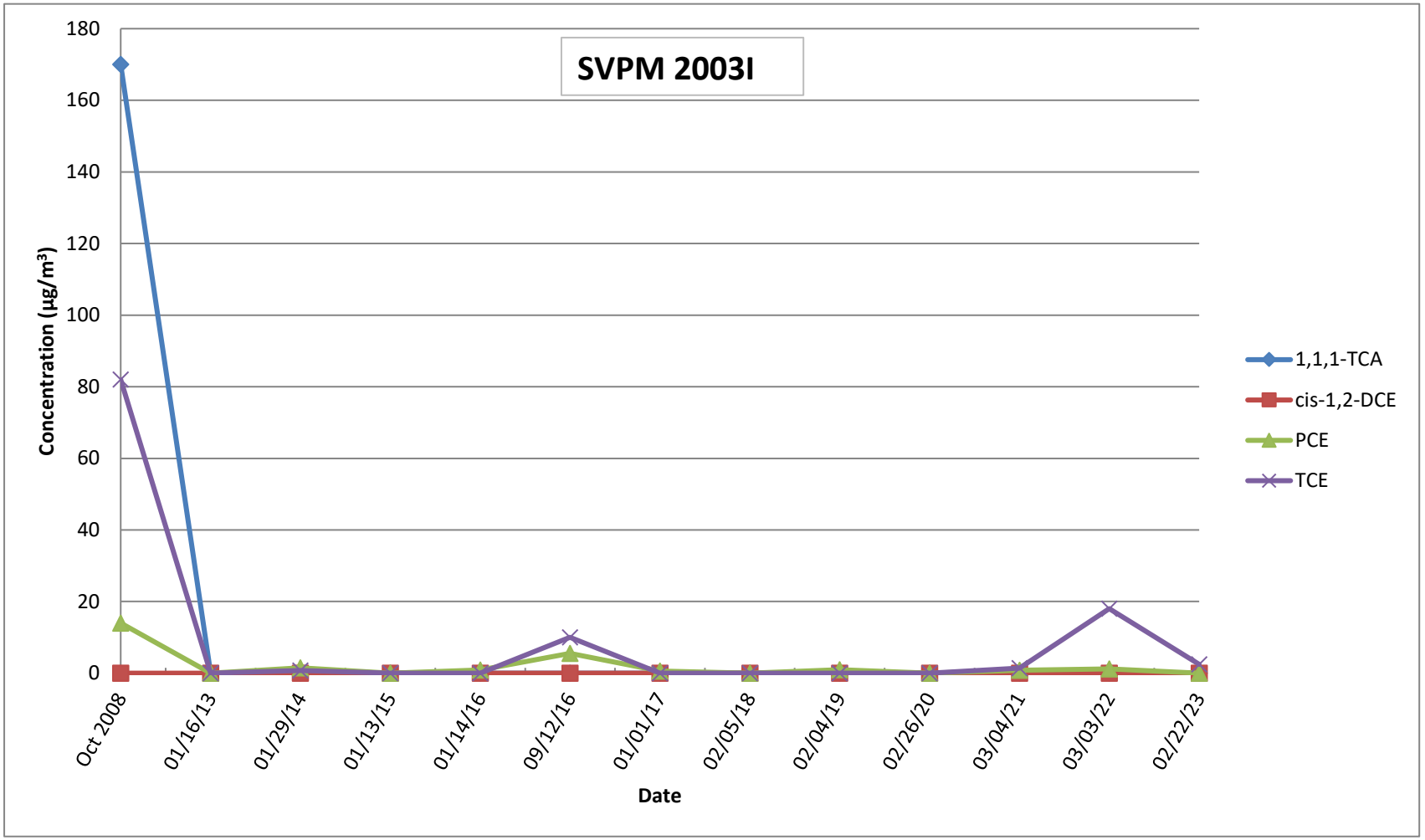
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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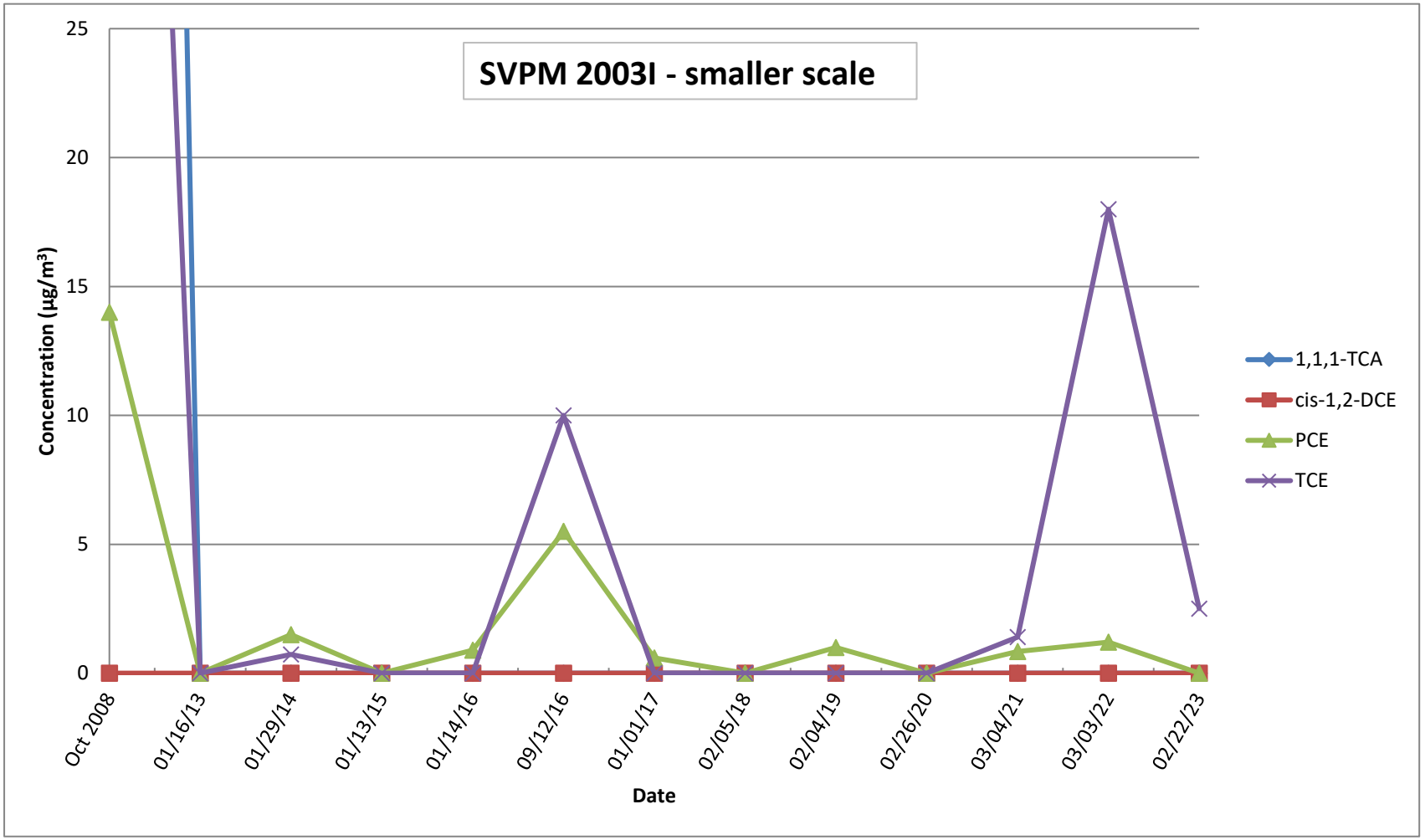
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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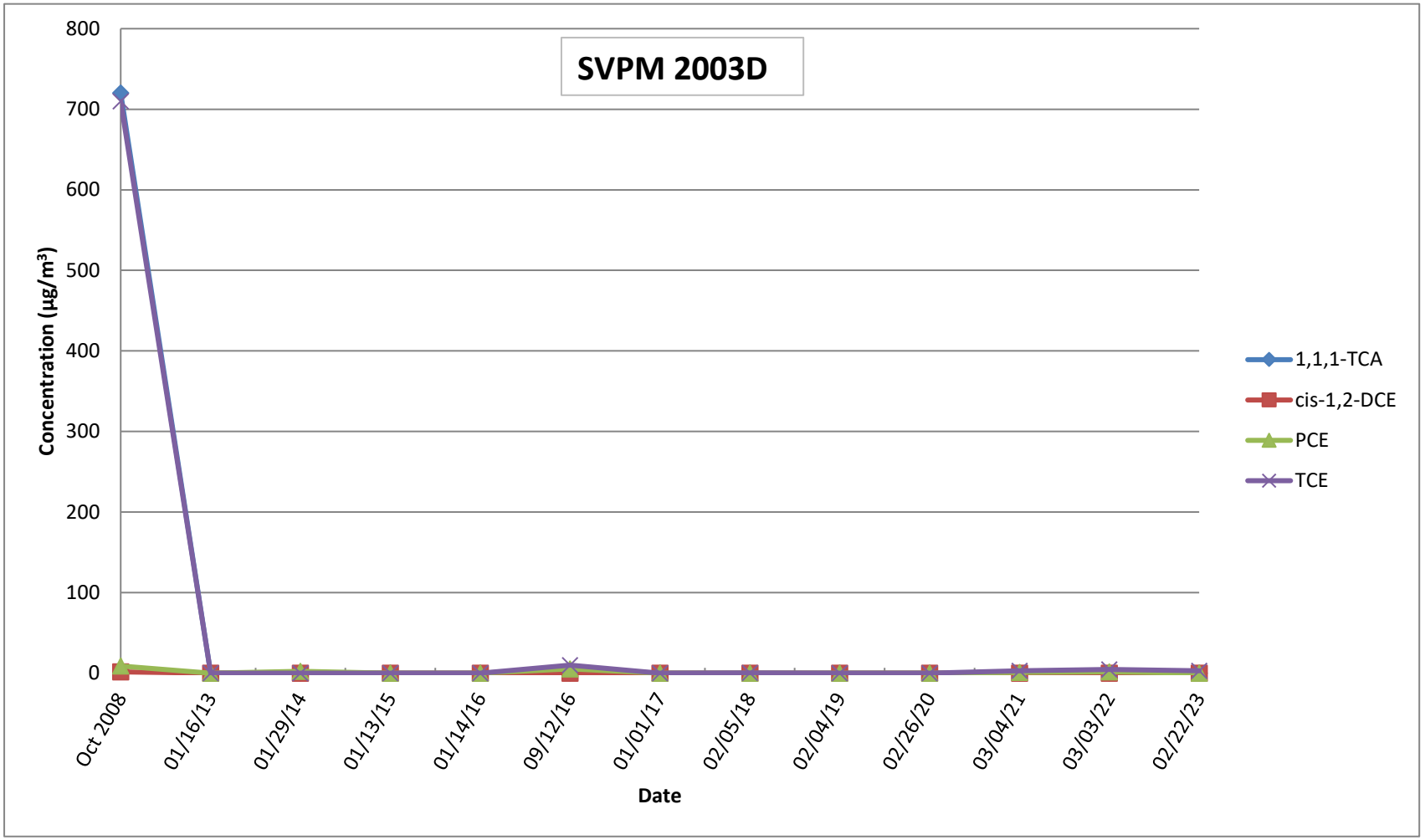
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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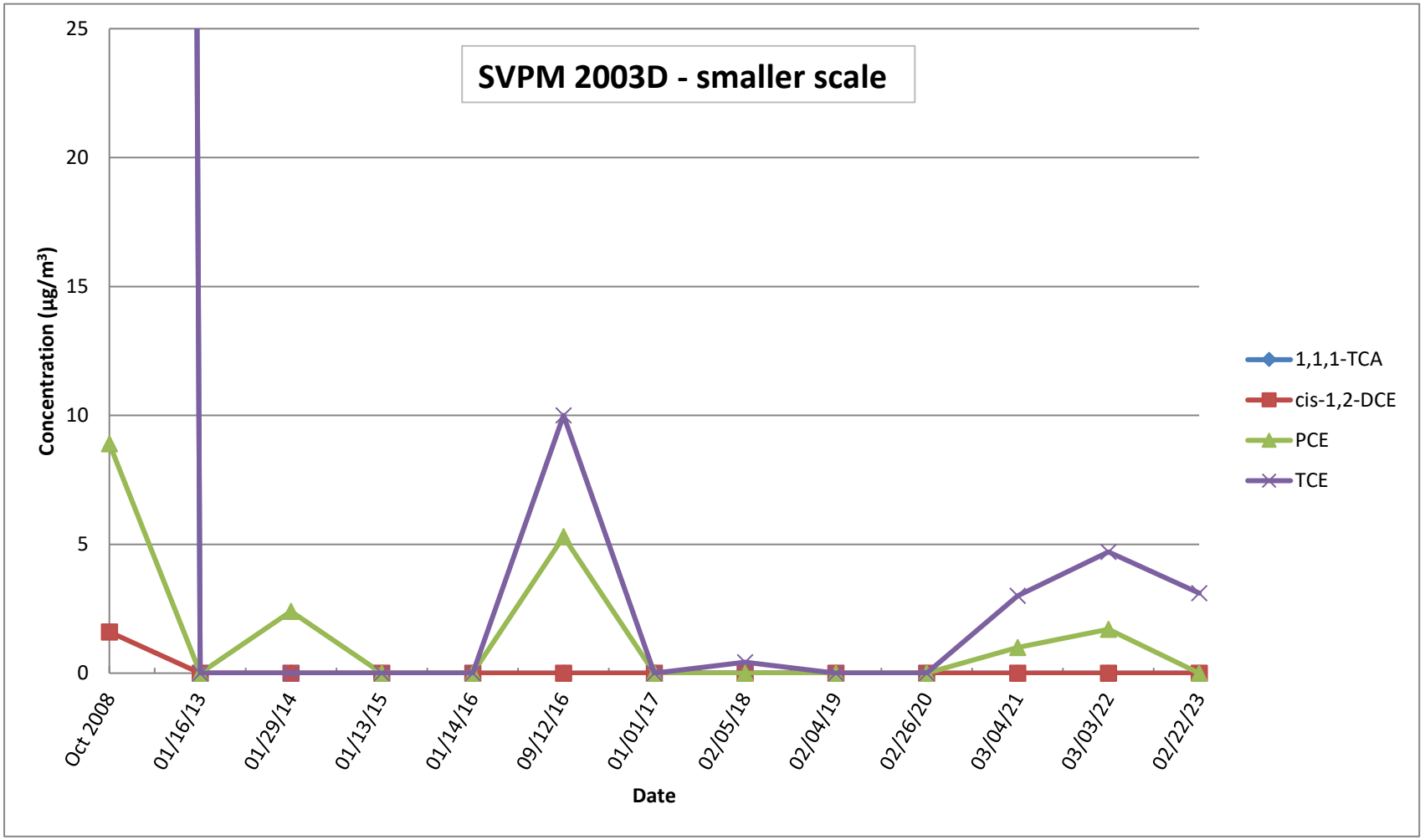
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
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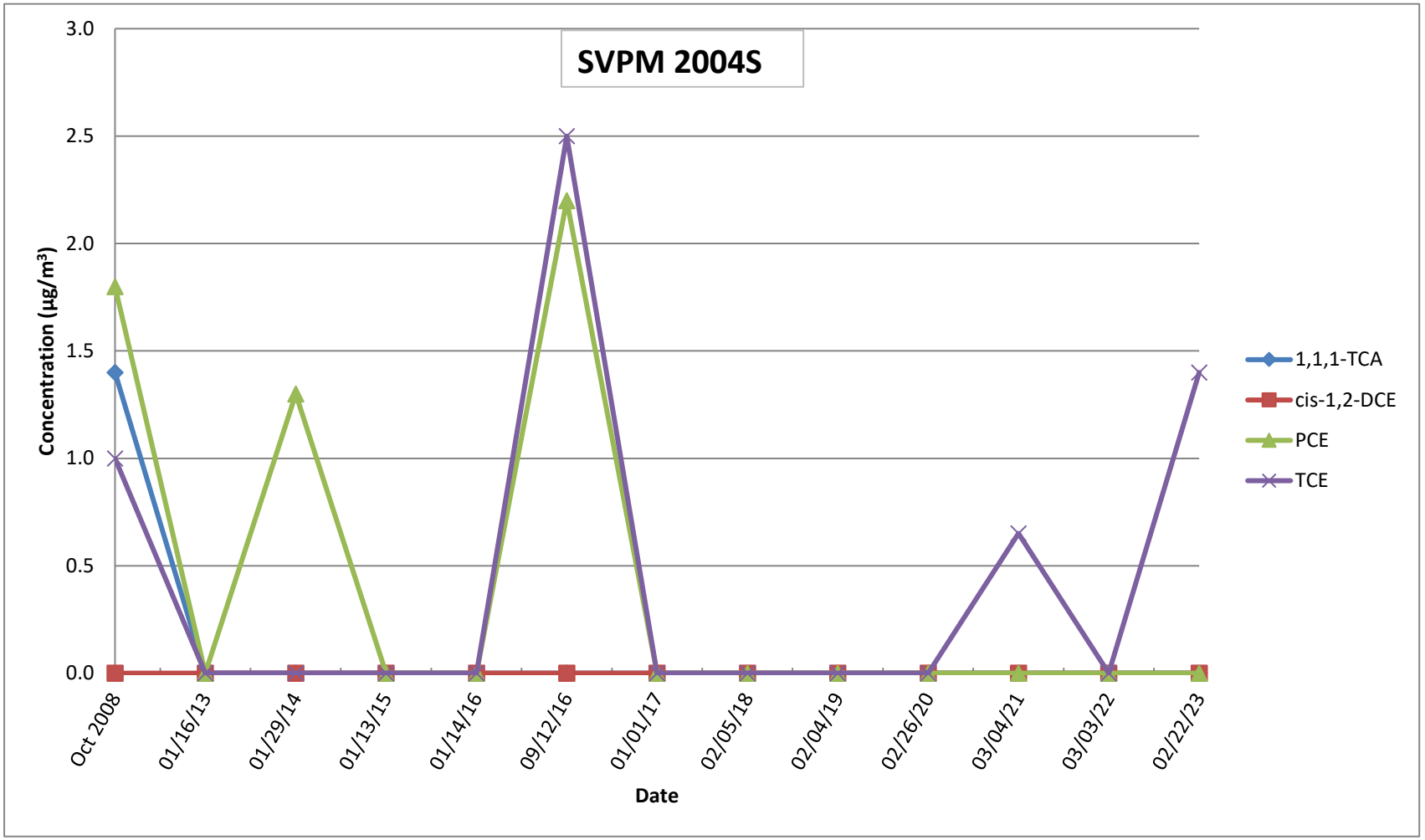

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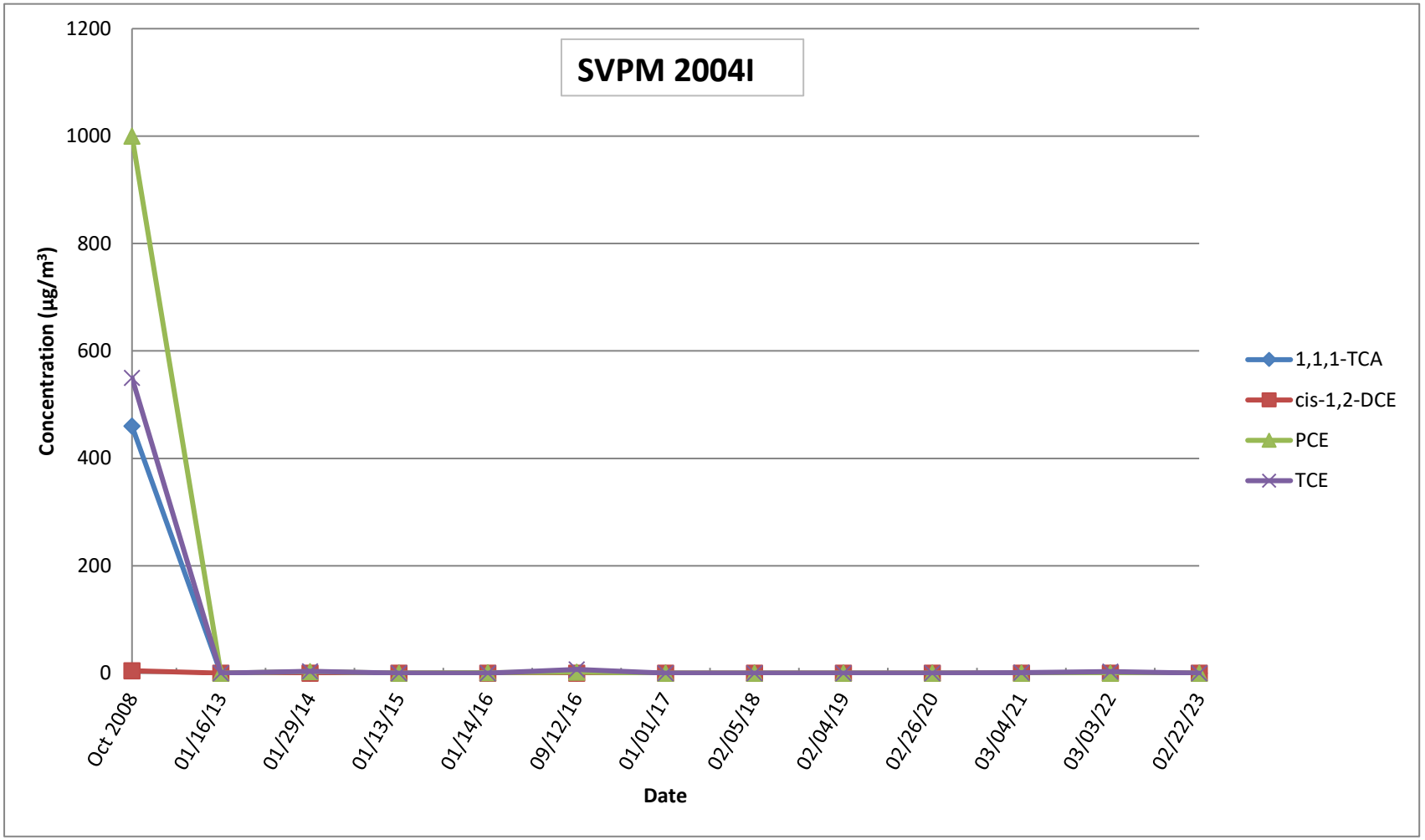
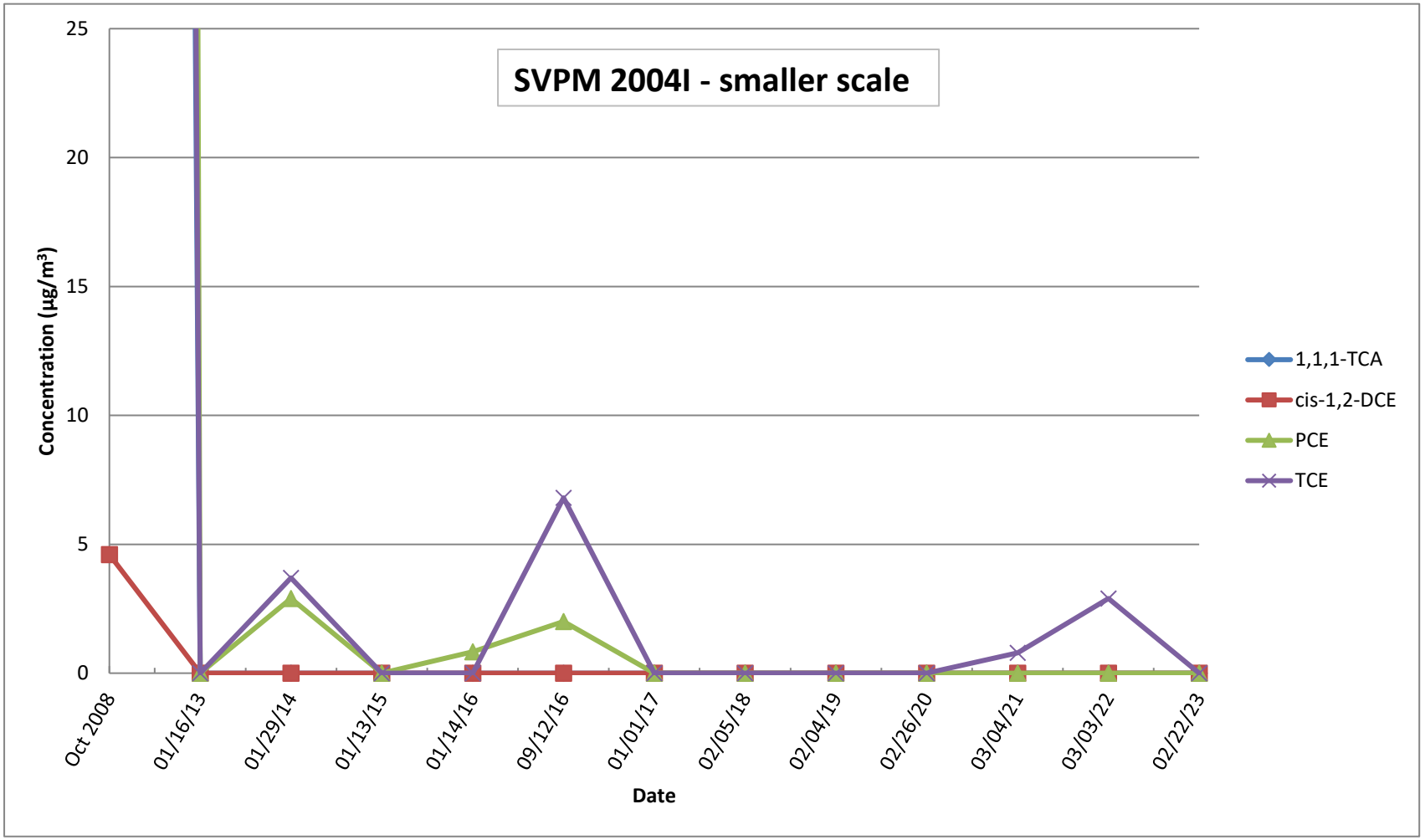
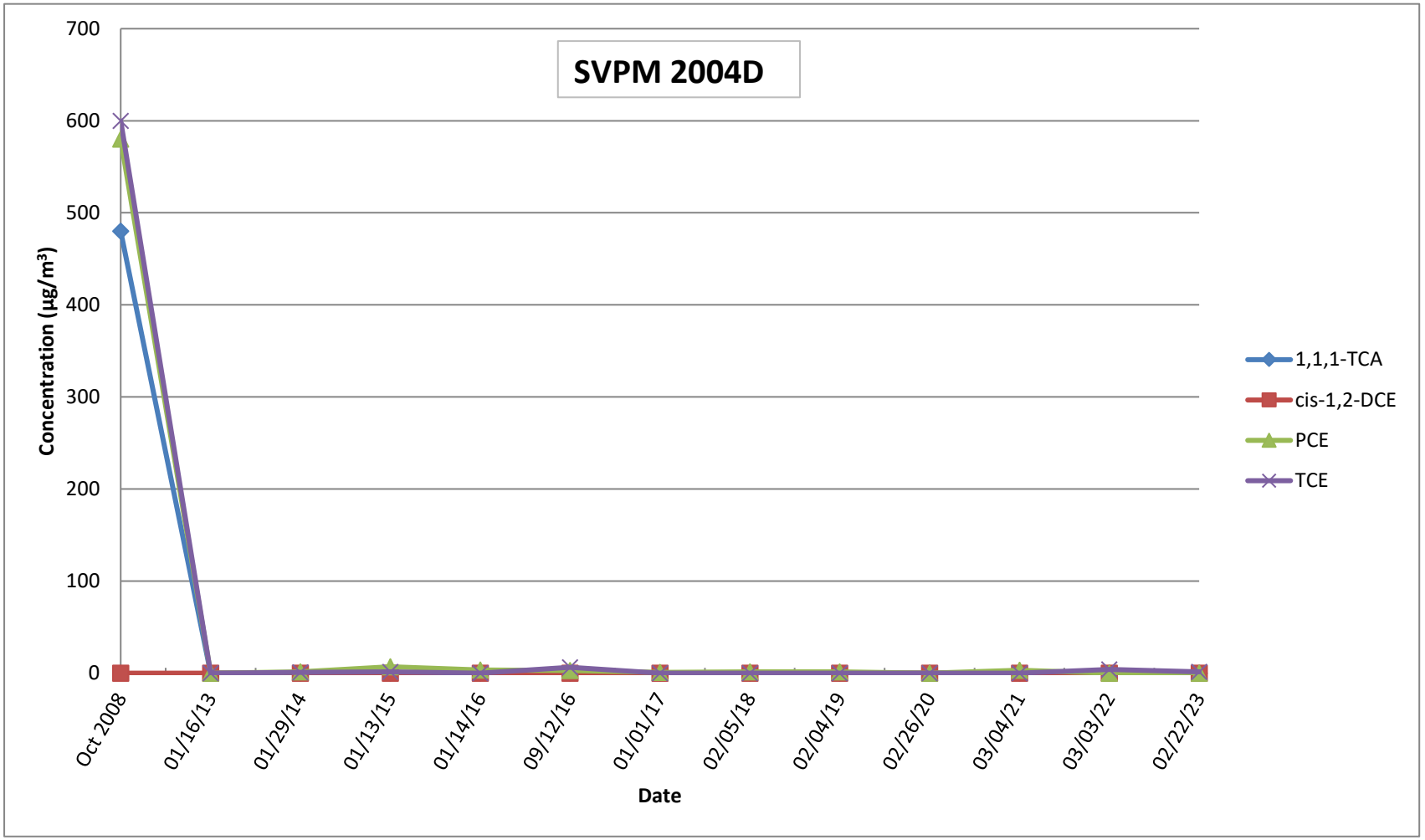
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



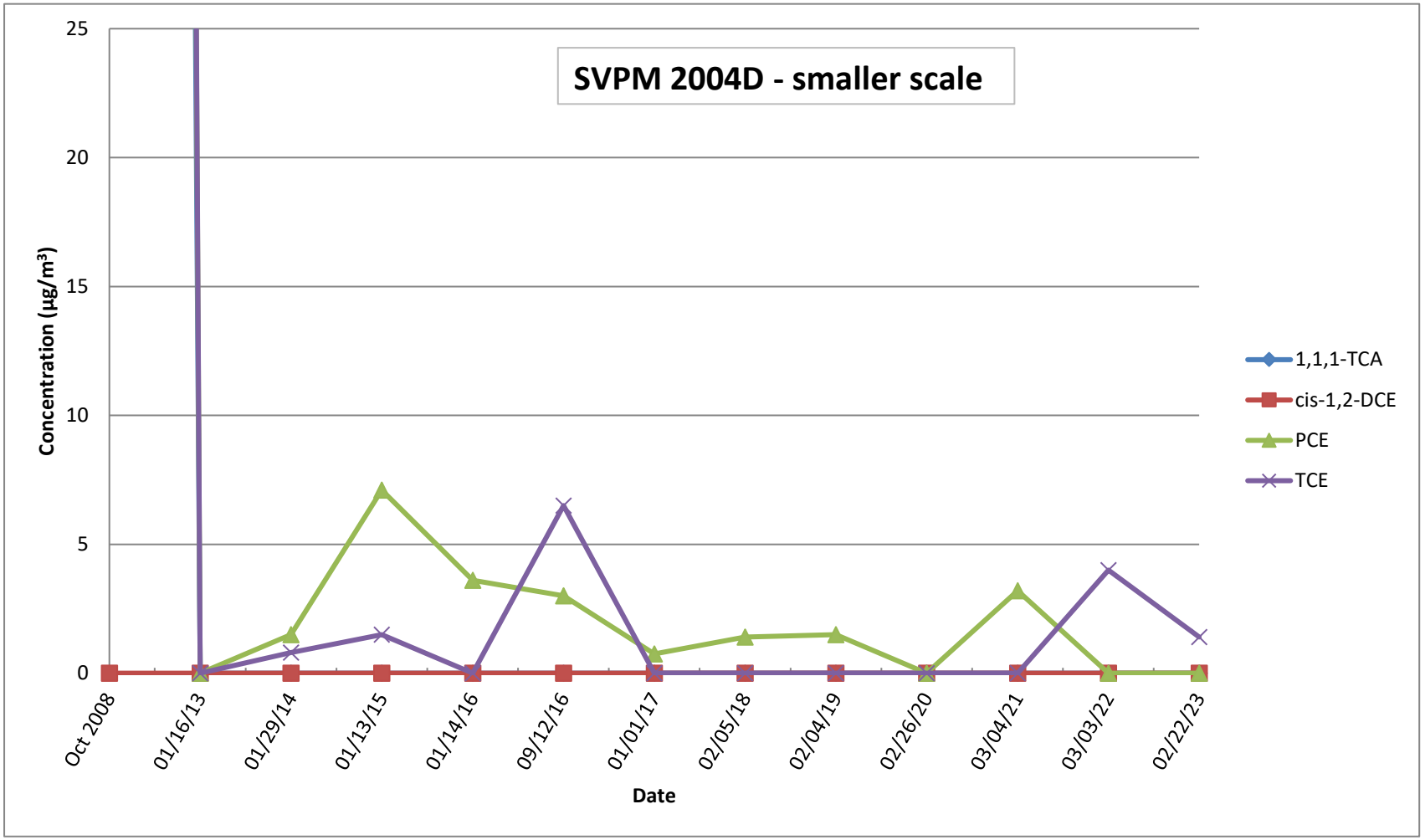
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



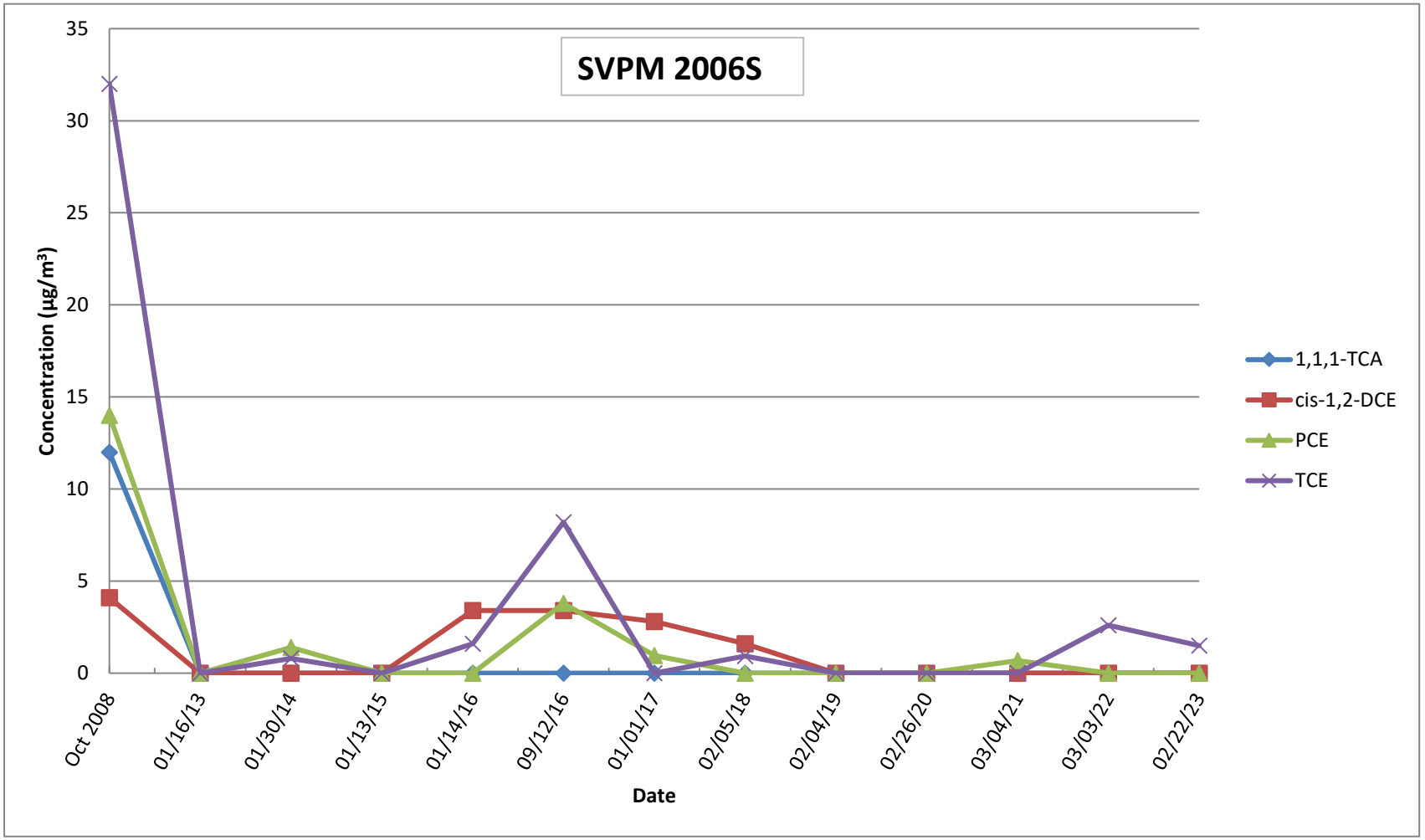
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



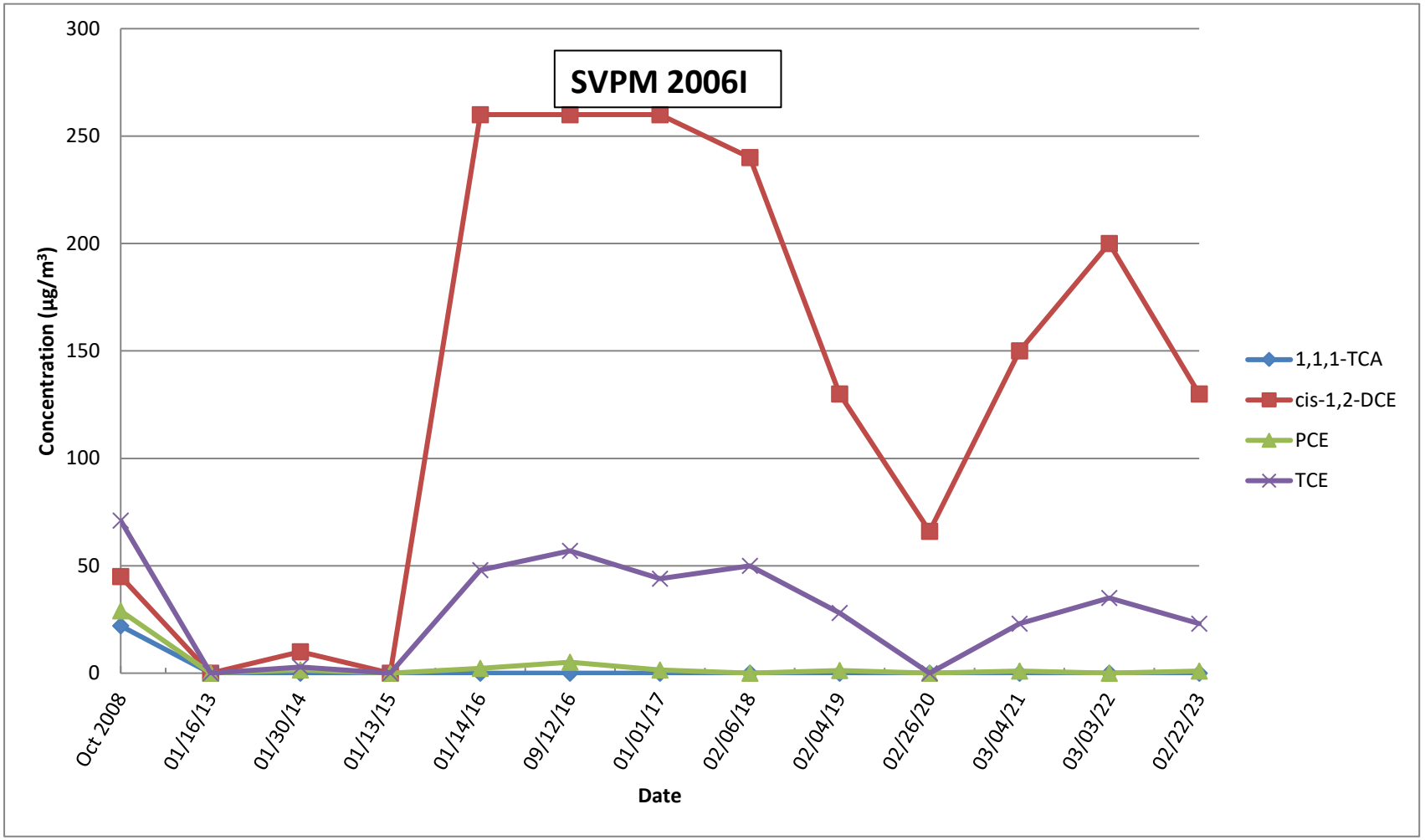
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



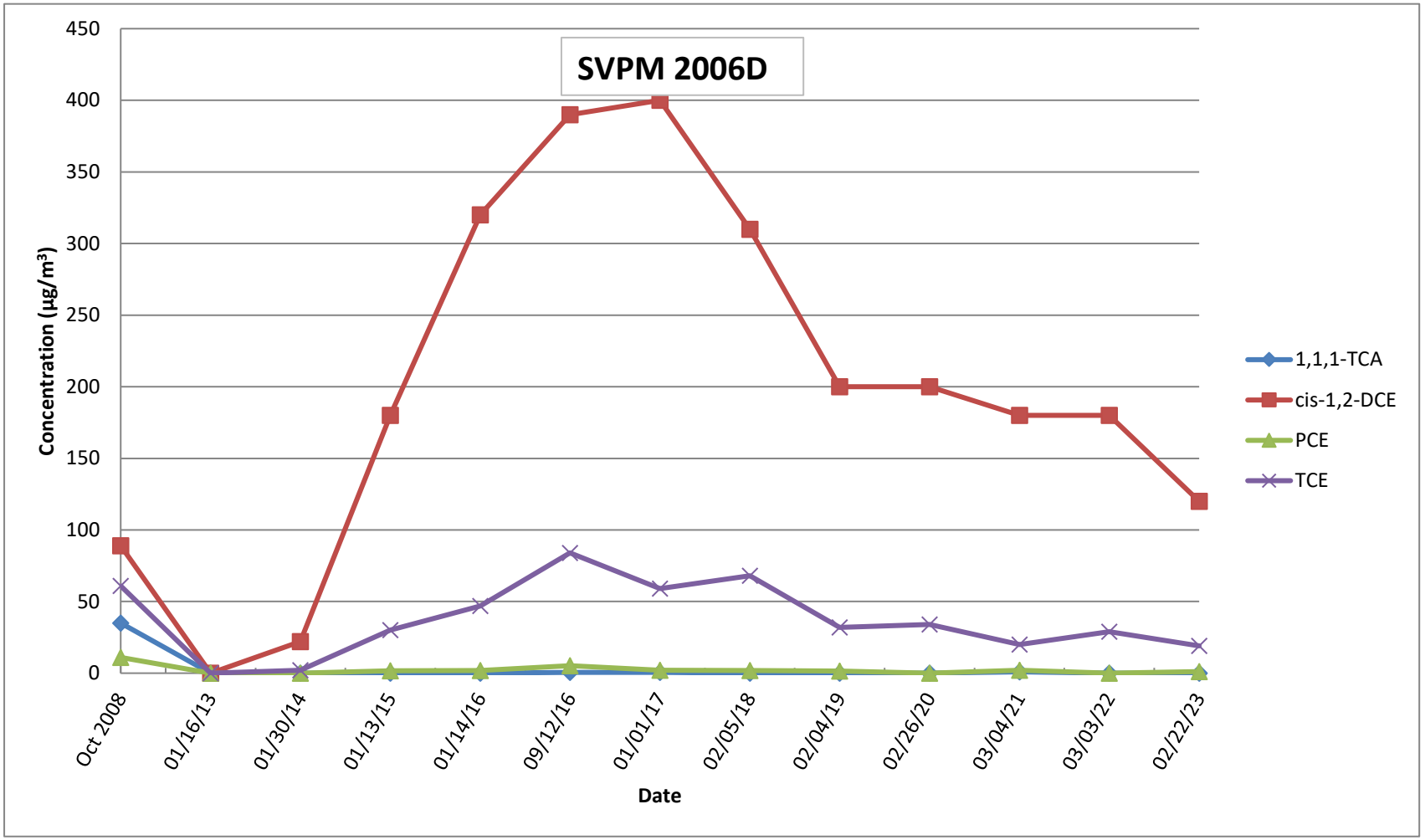
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



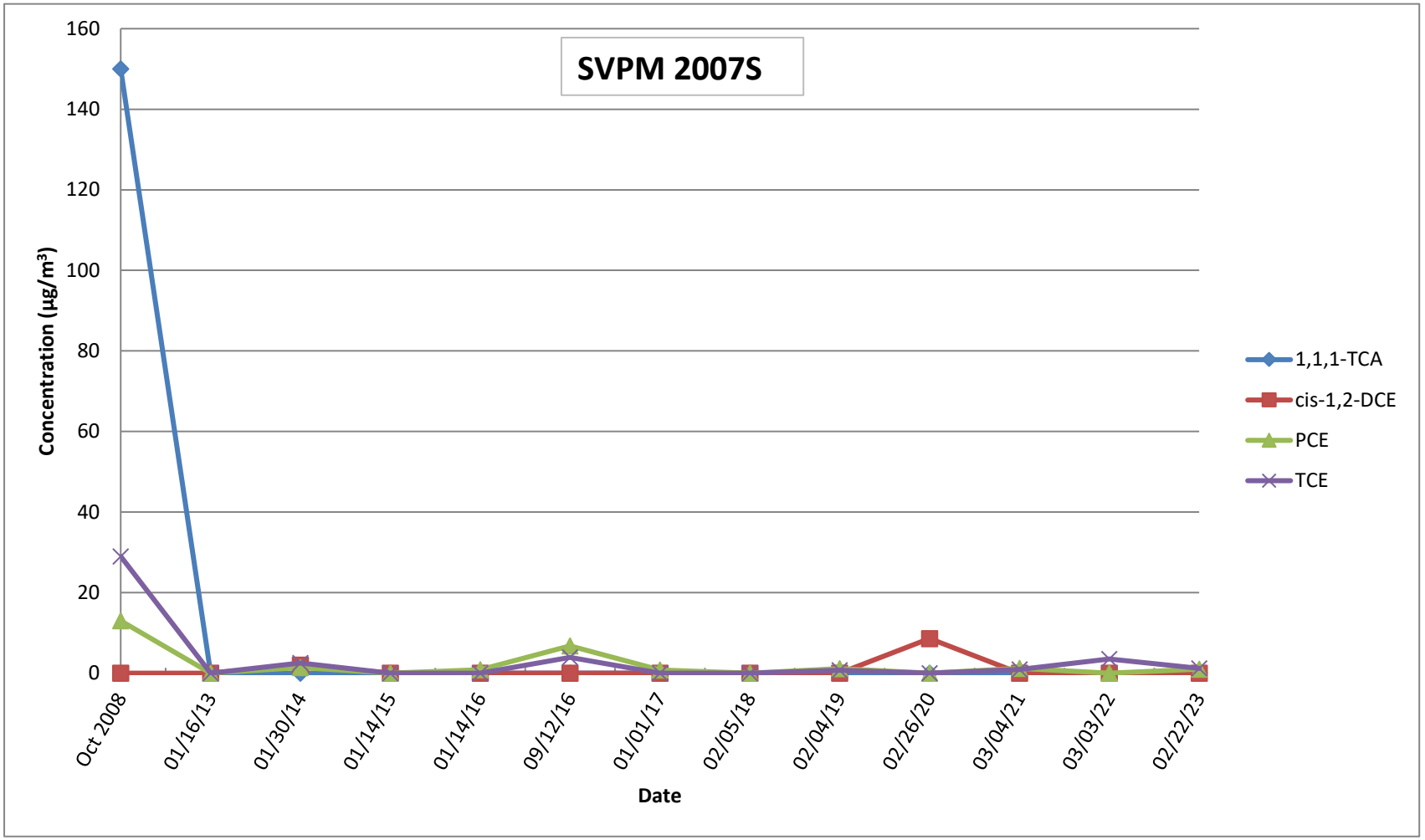
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



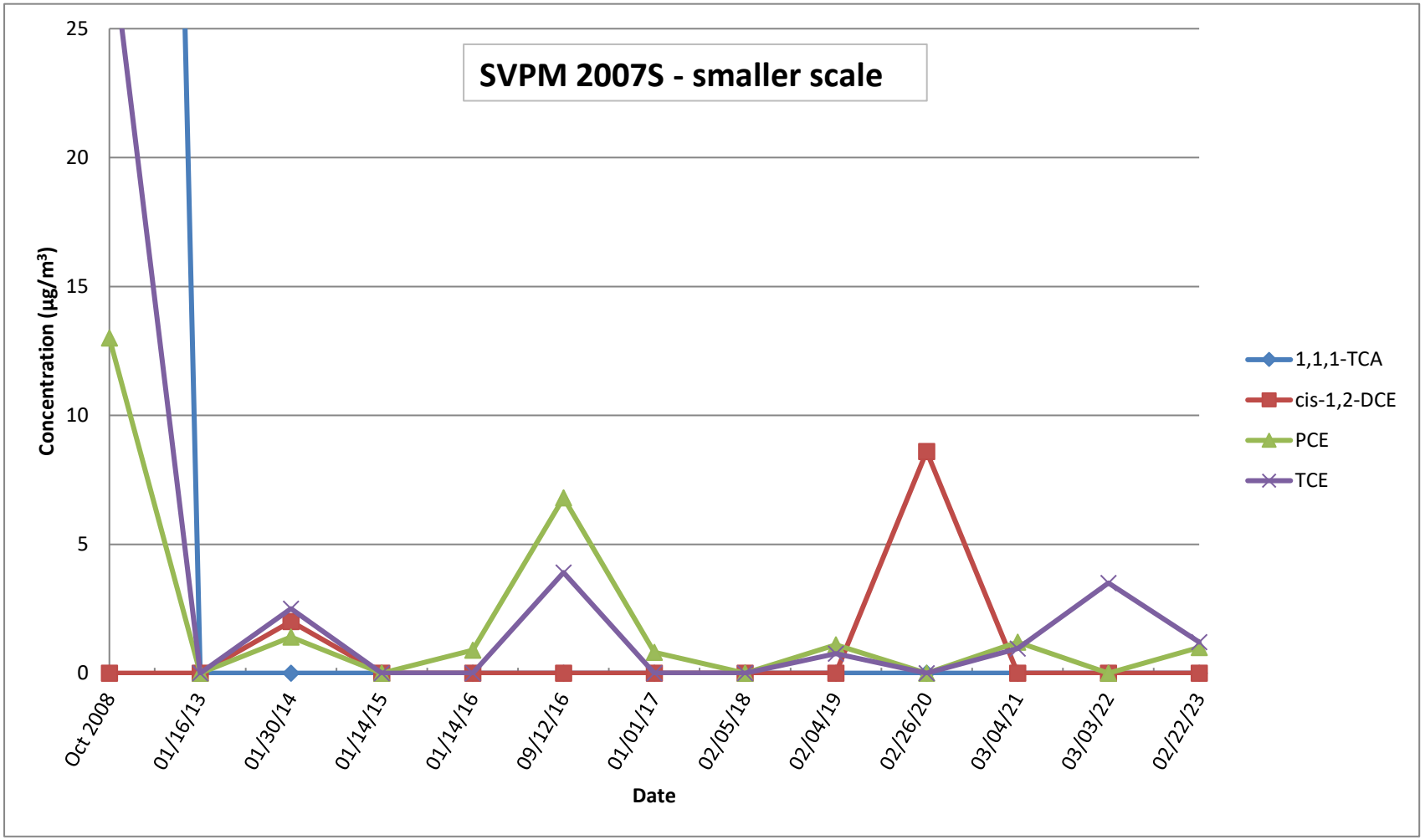
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



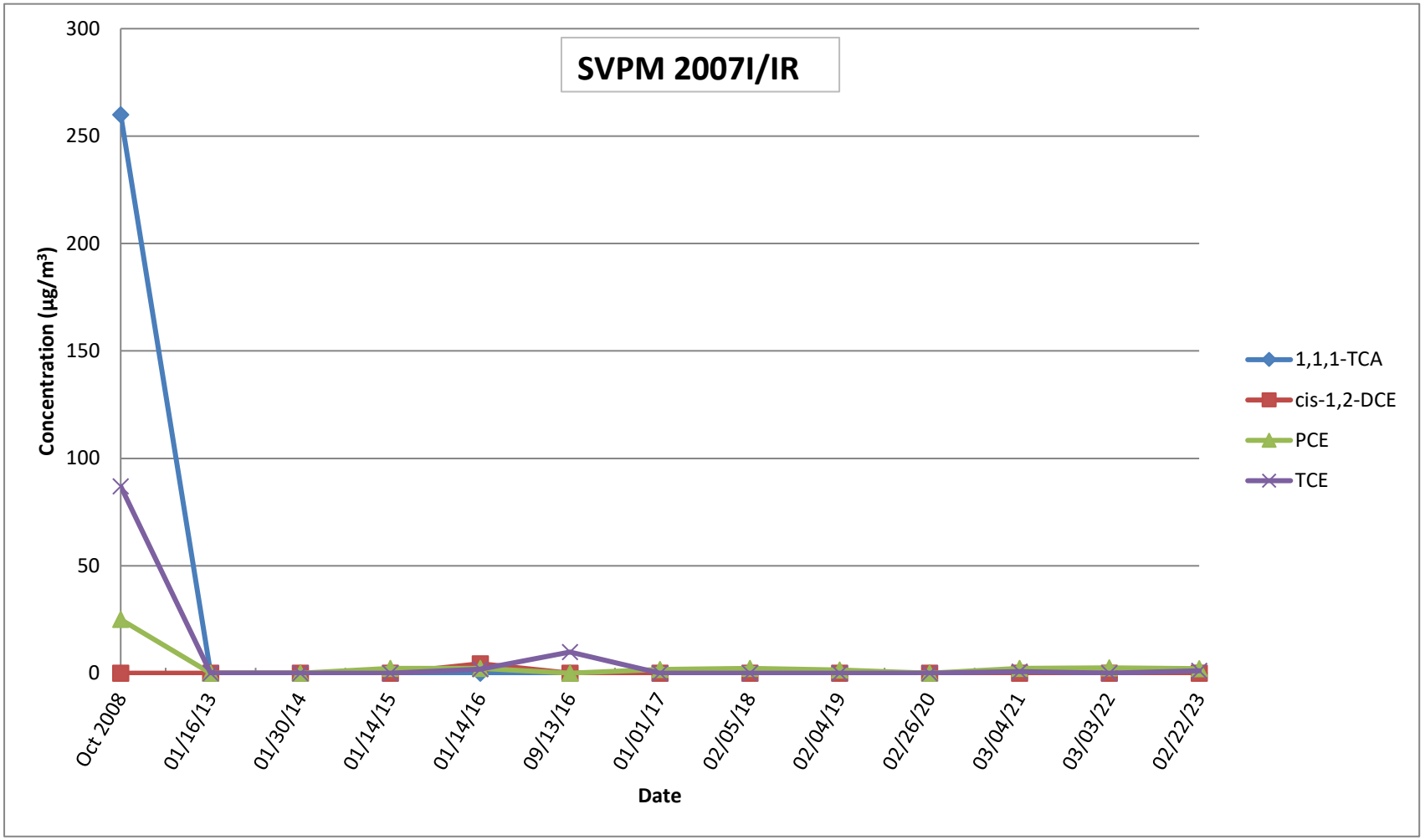
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



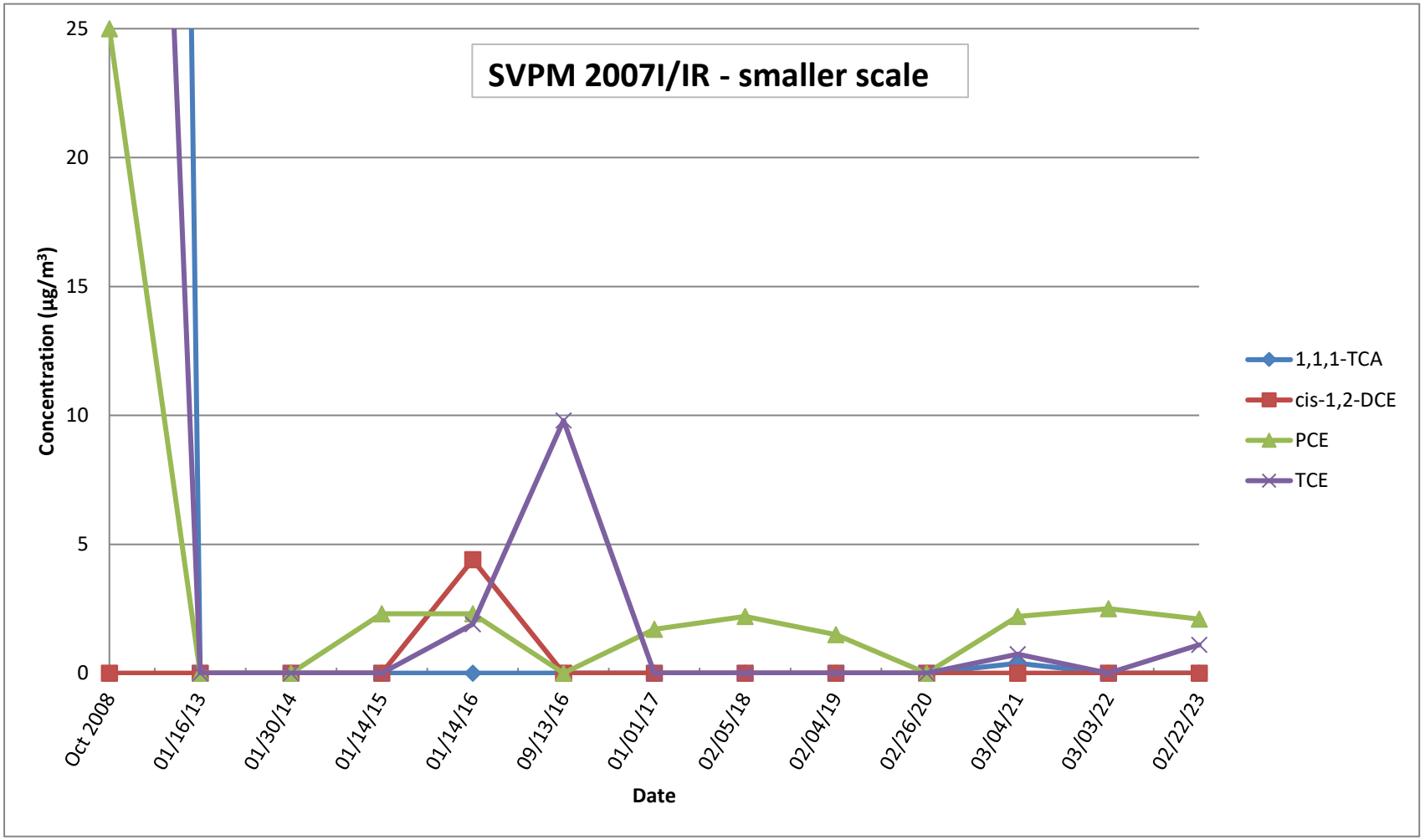
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



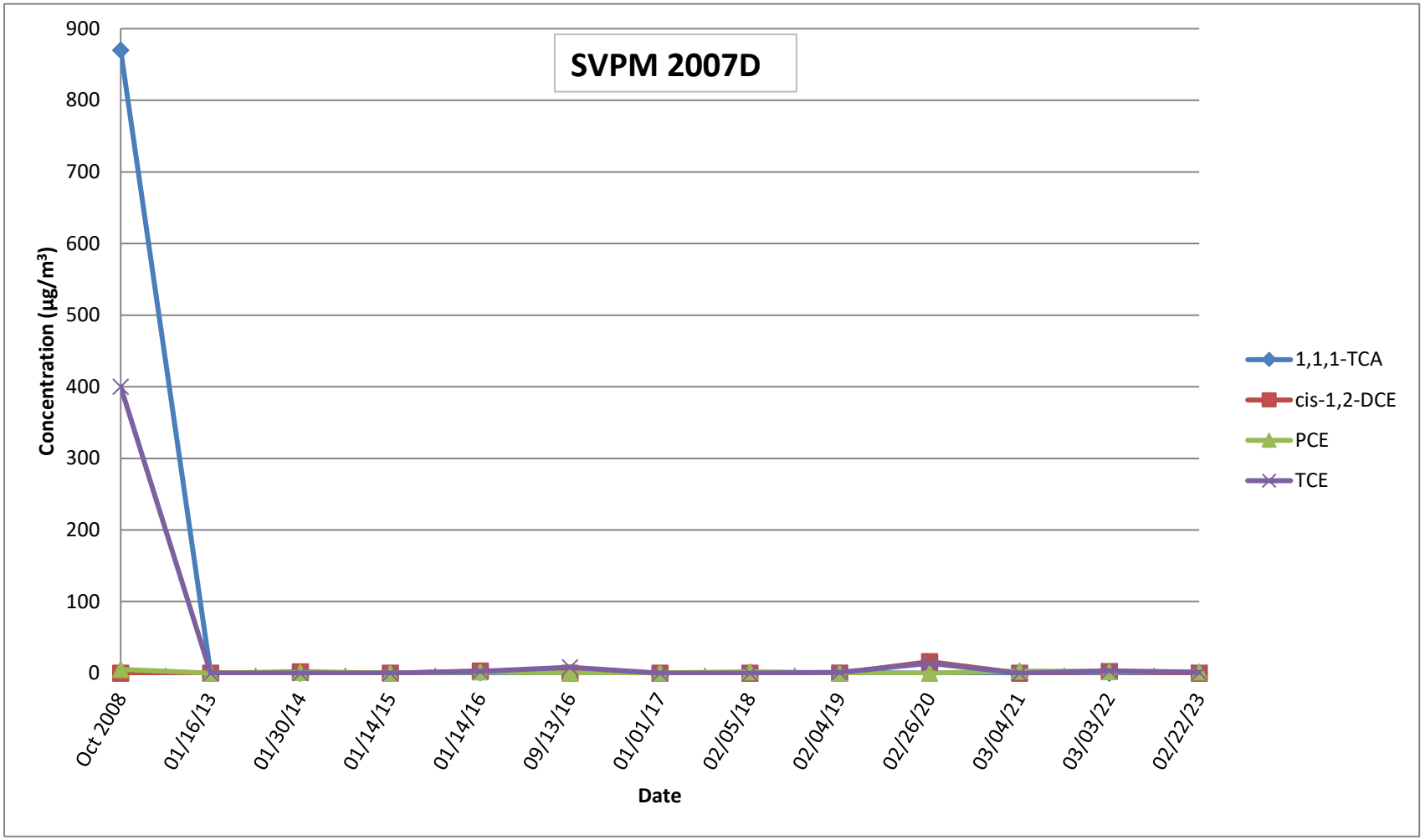
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



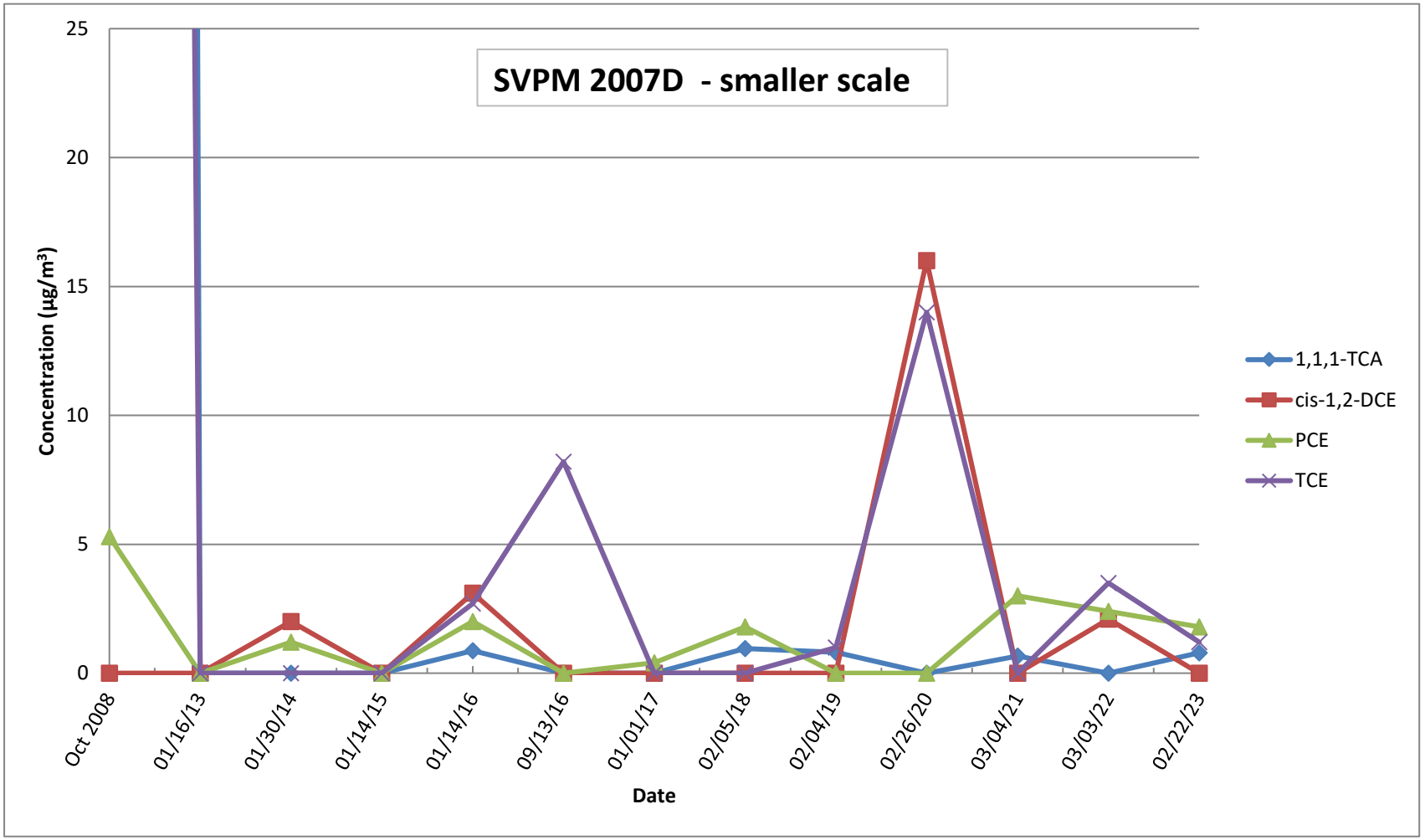
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVPMs



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

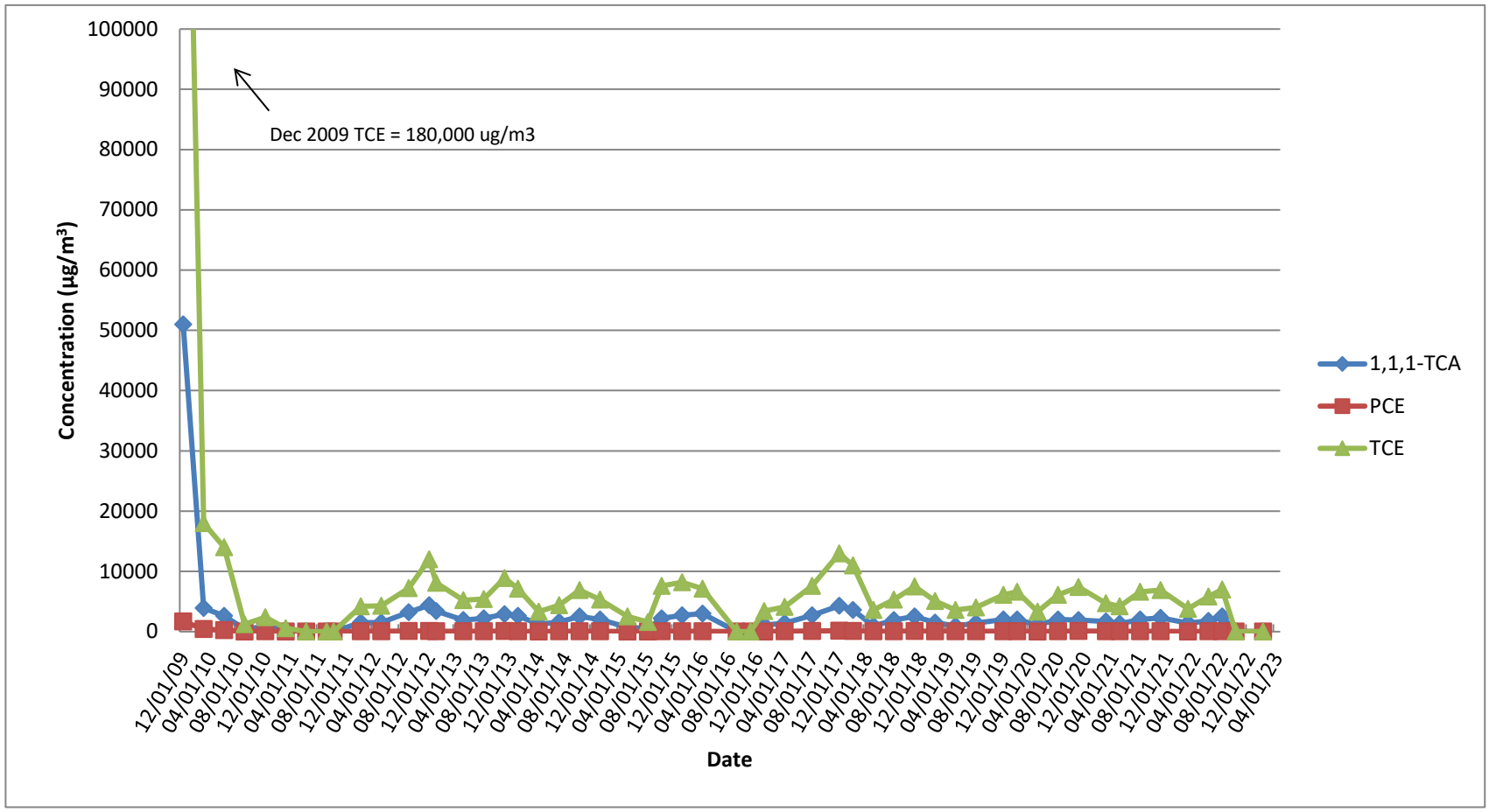


APPENDIX D

VAPOR CONCENTRATION TREND GRAPHS OF SELECT VOCs – SVEWs

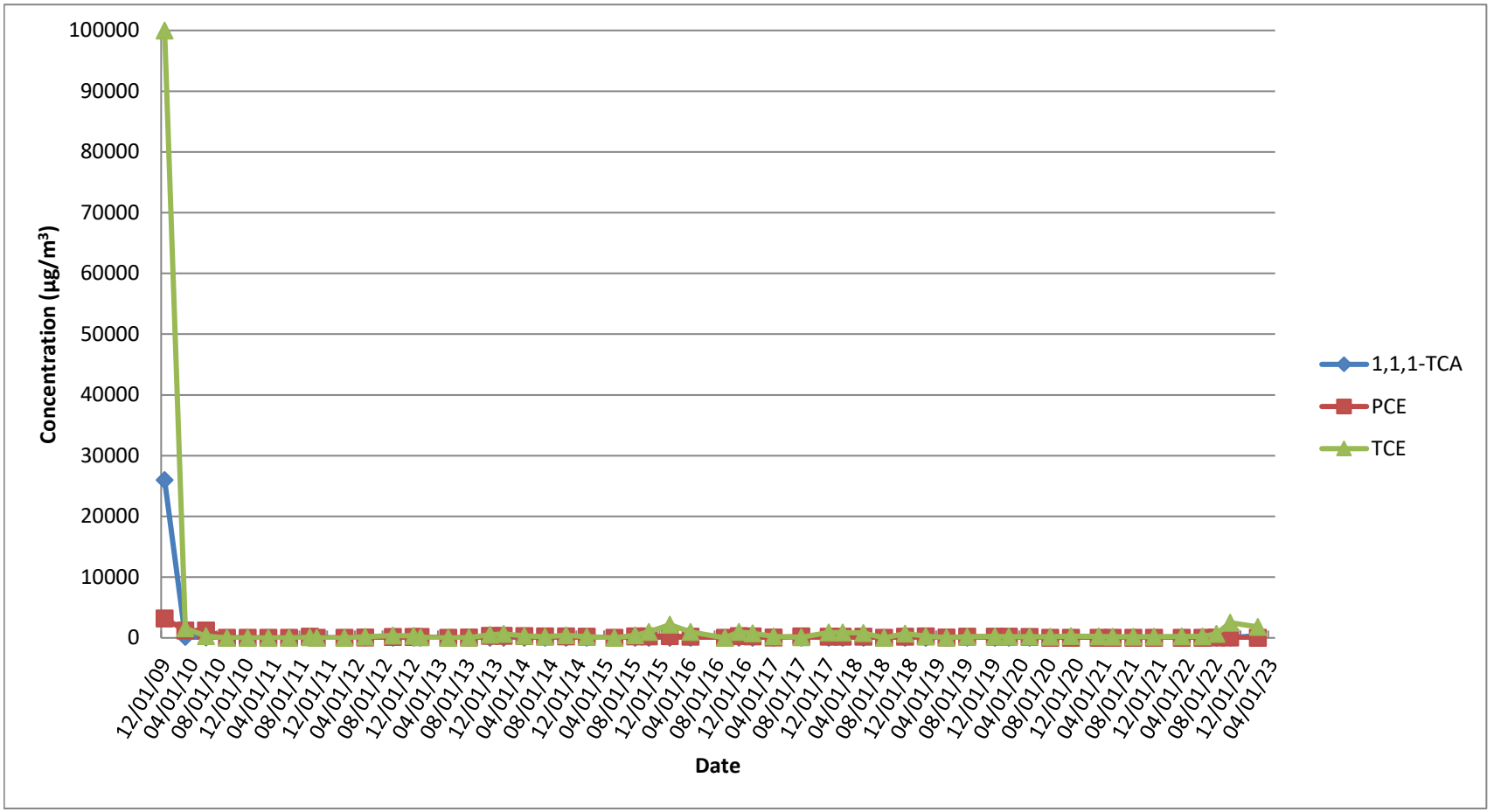
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-101I



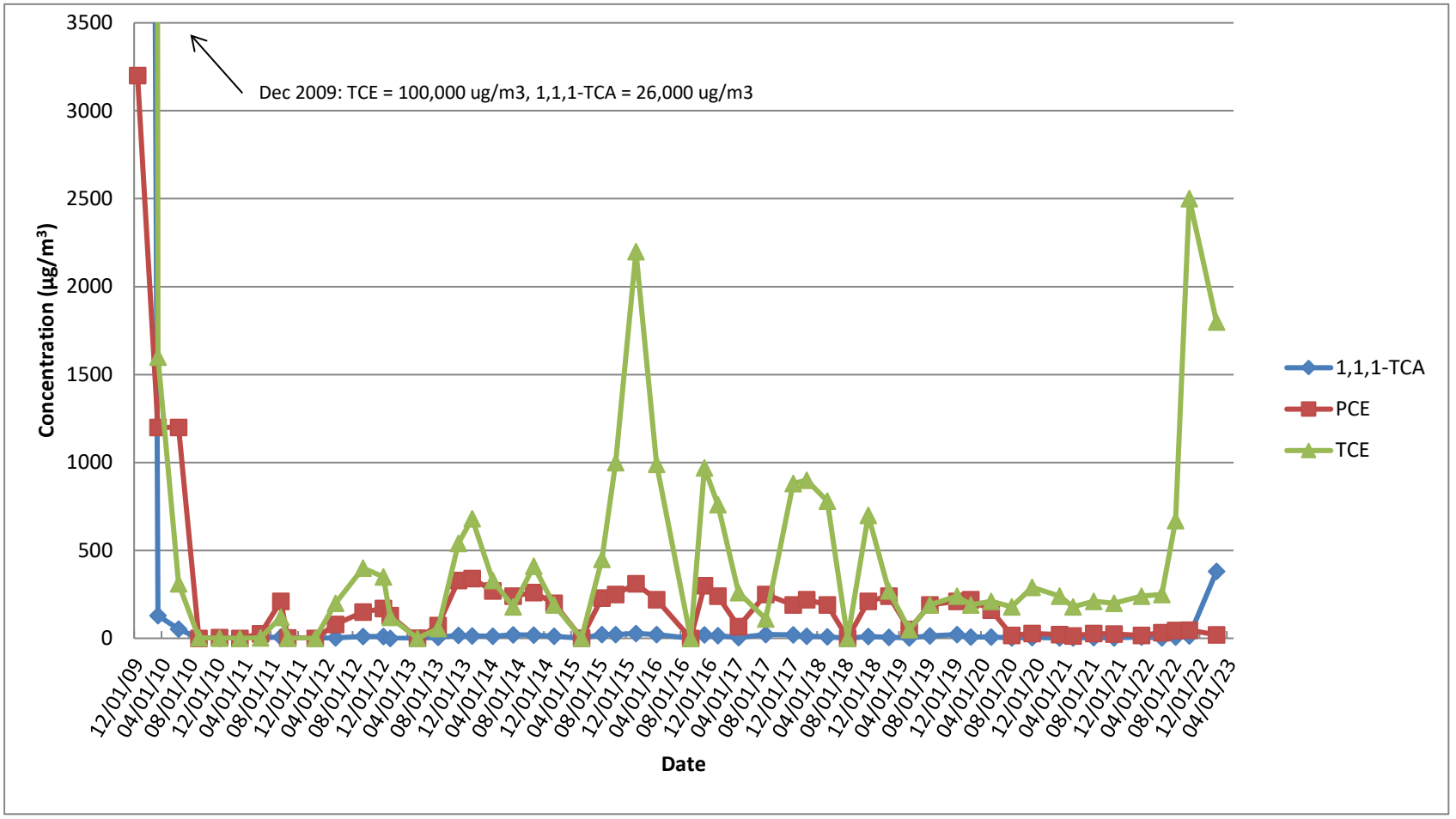
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-101D



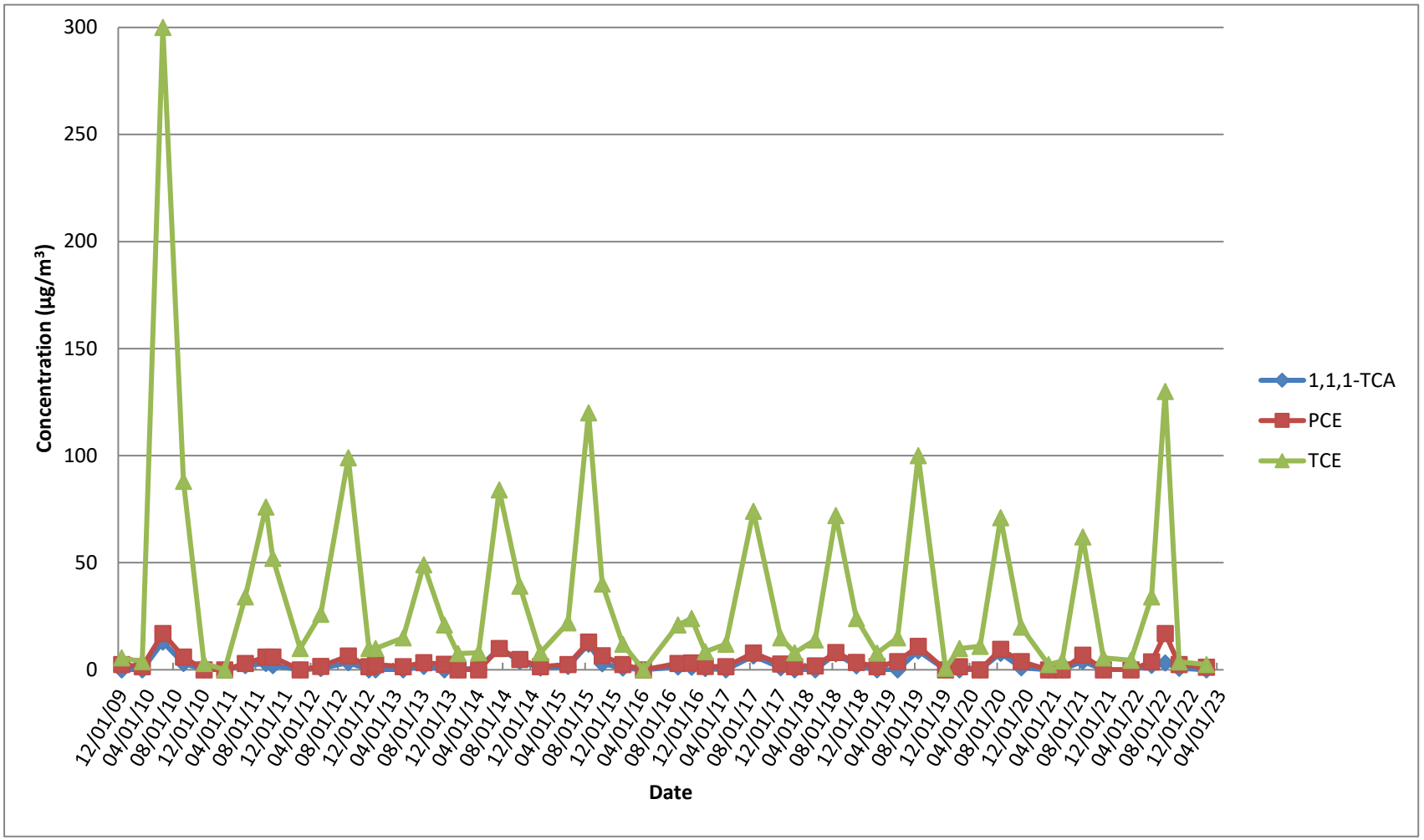
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-101D (smaller scale)



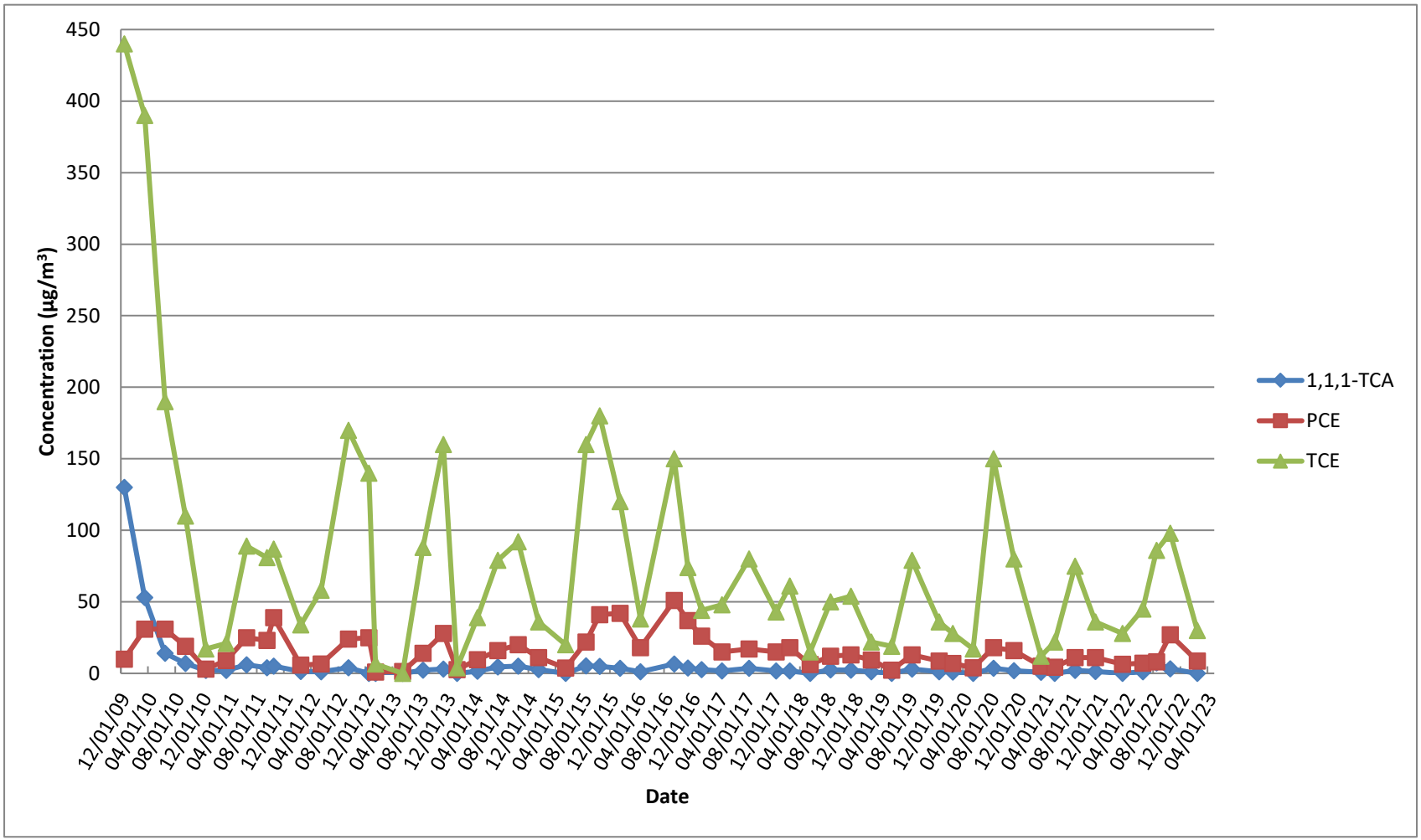
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-102I



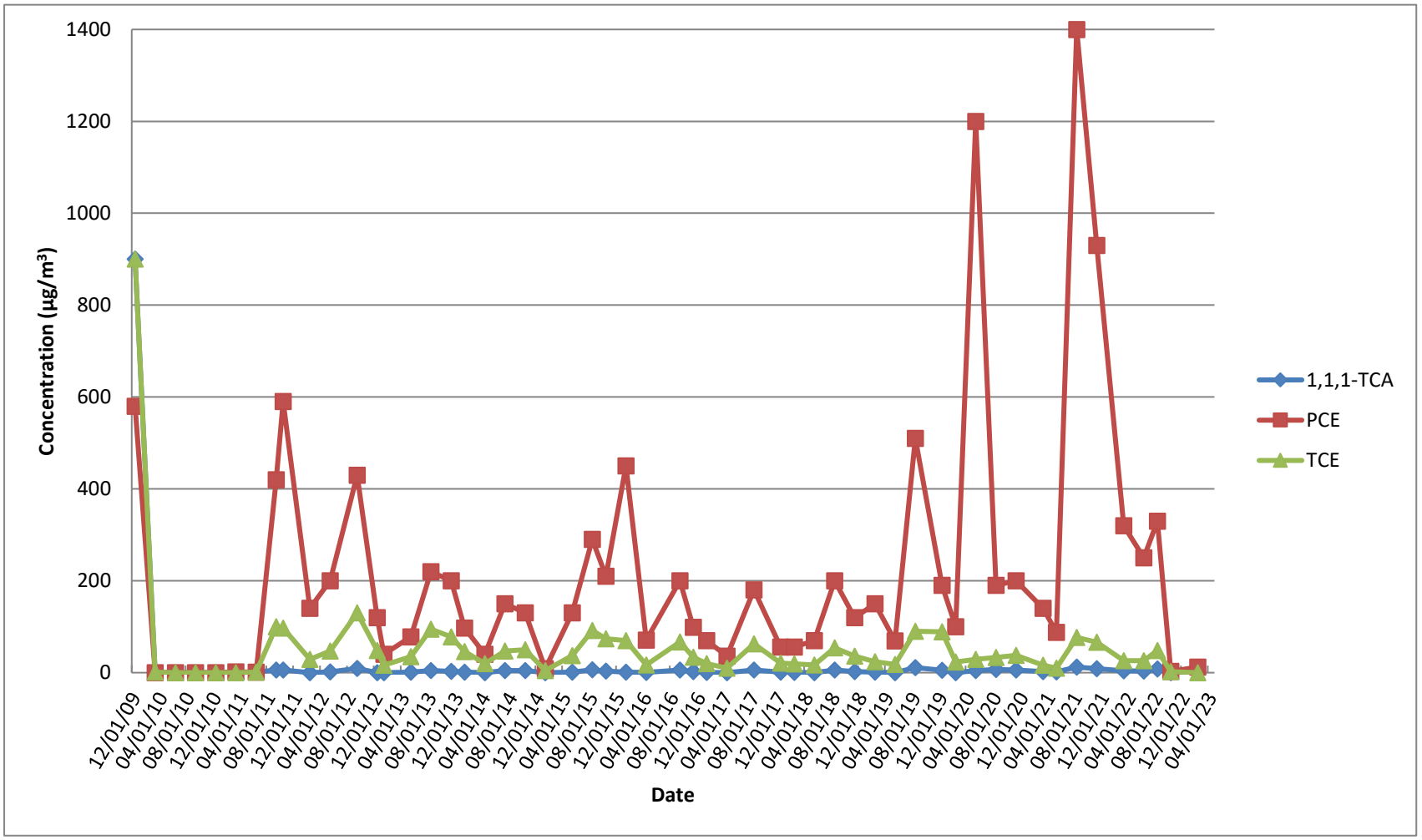
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-102D



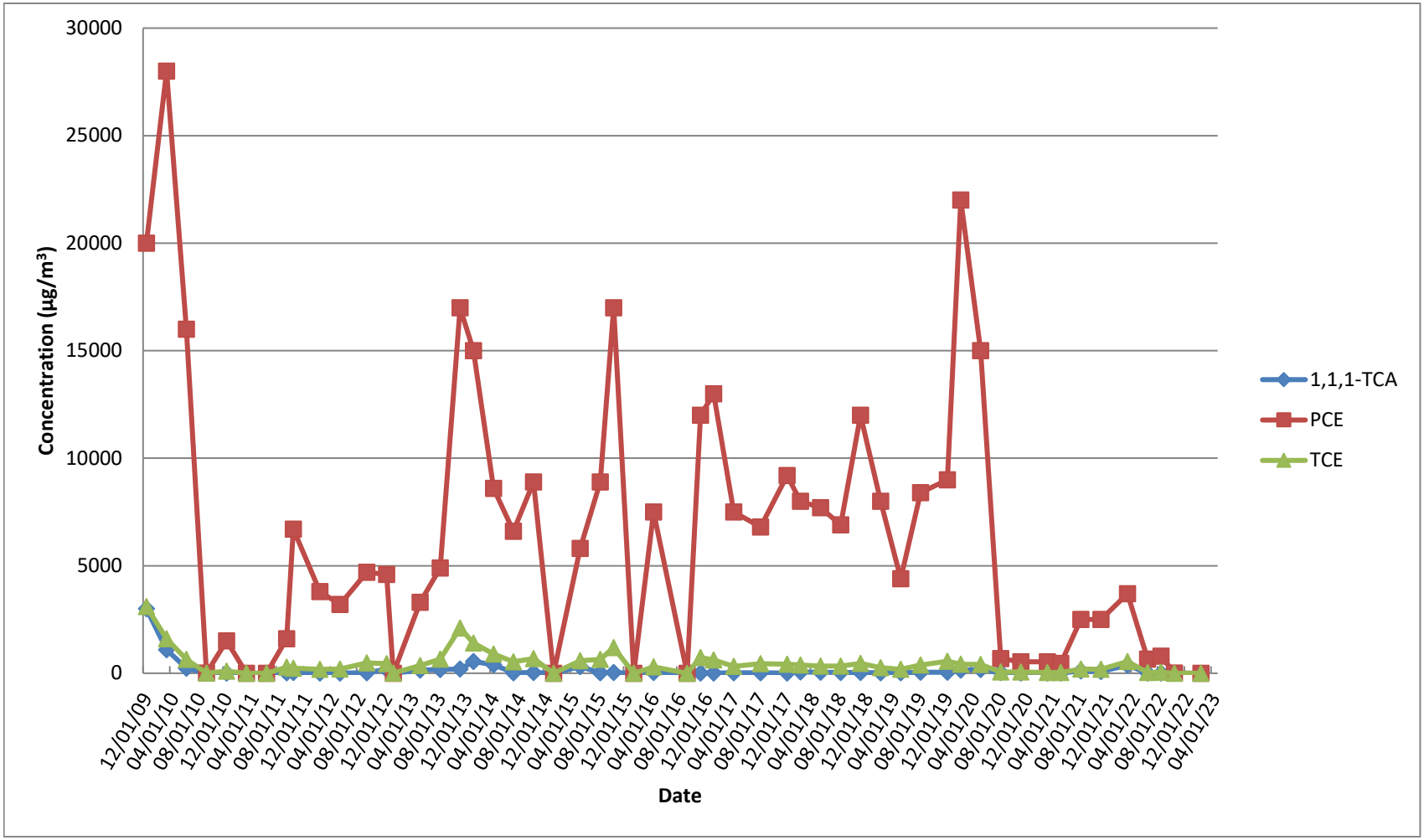
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-103I



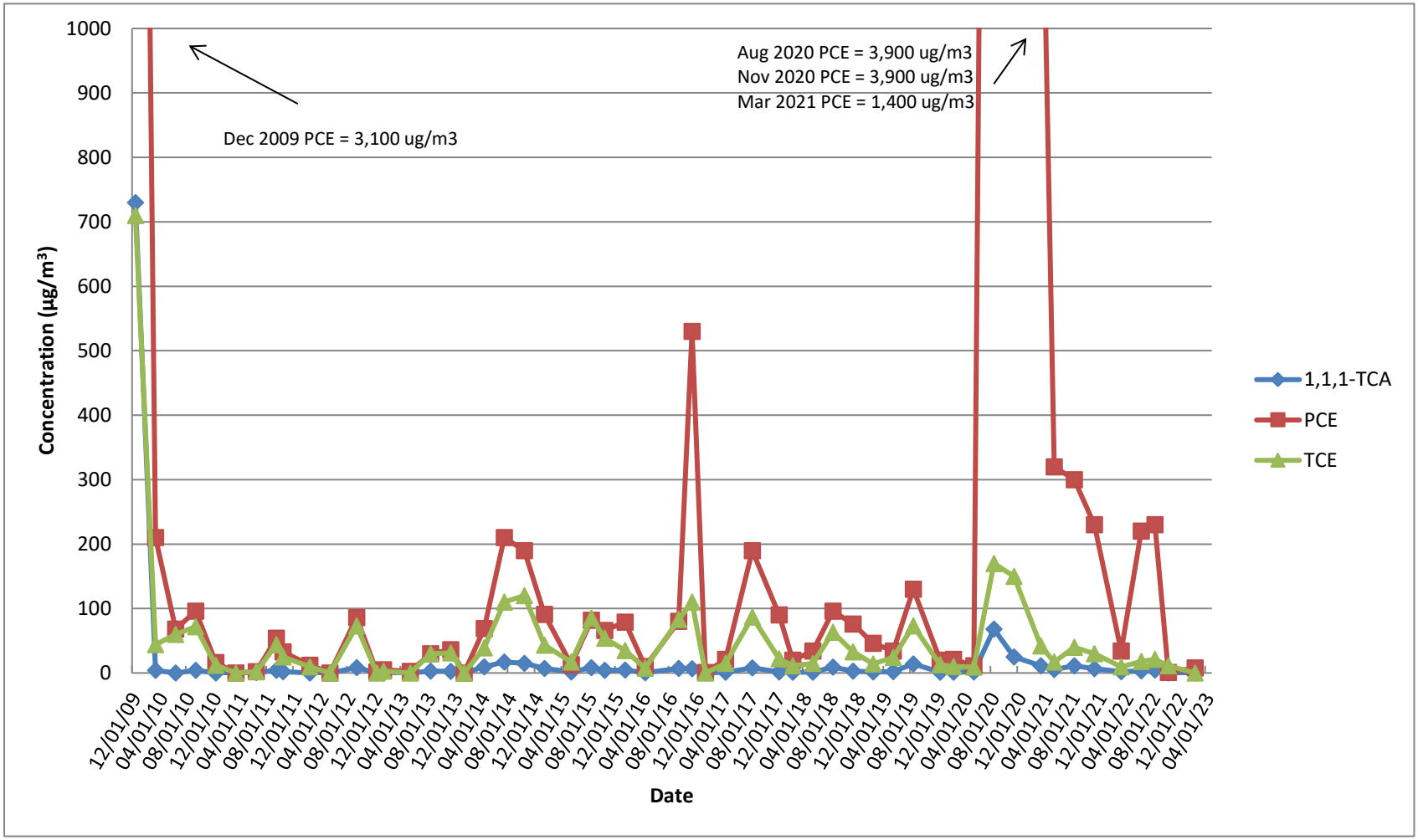
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-103D



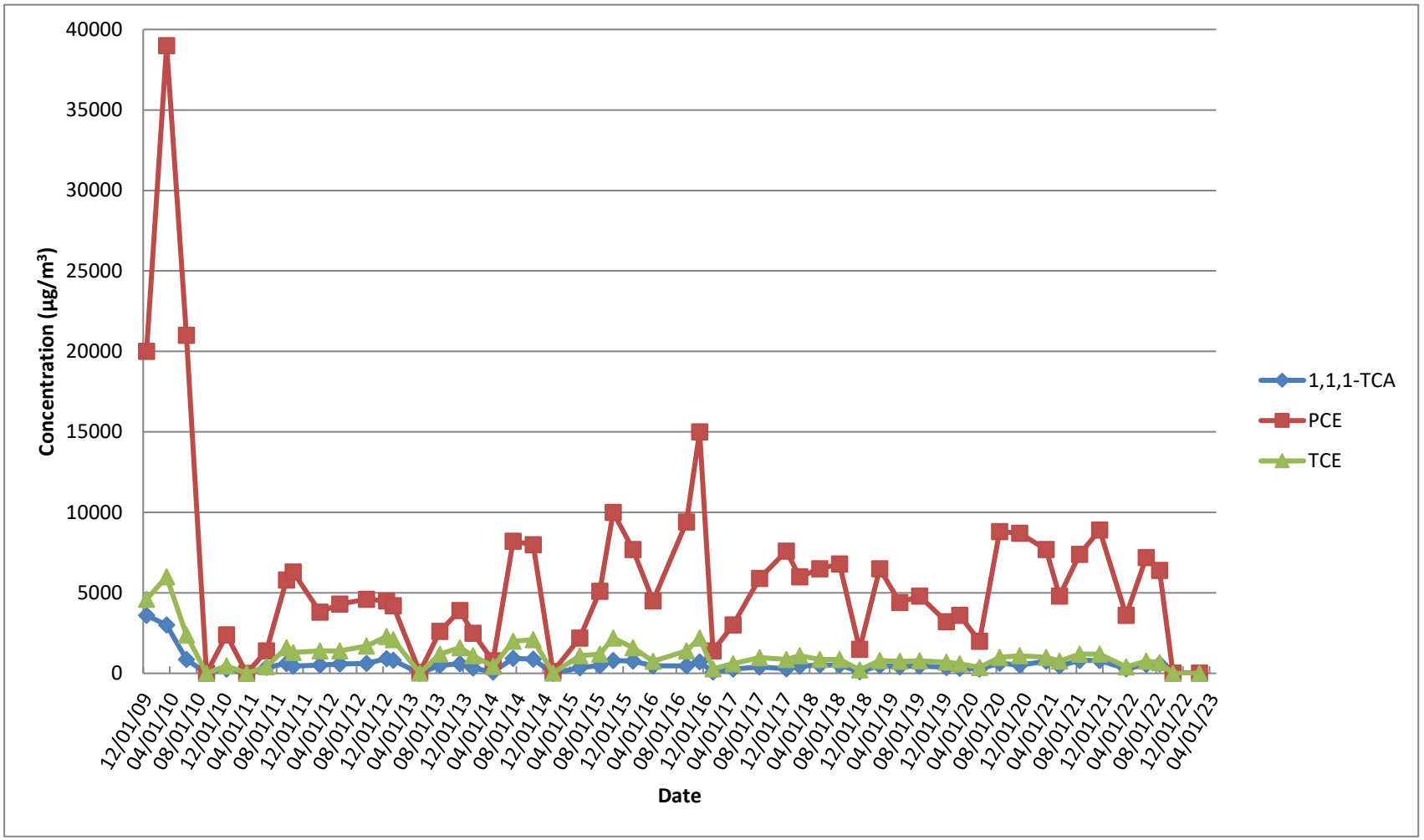
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-104I



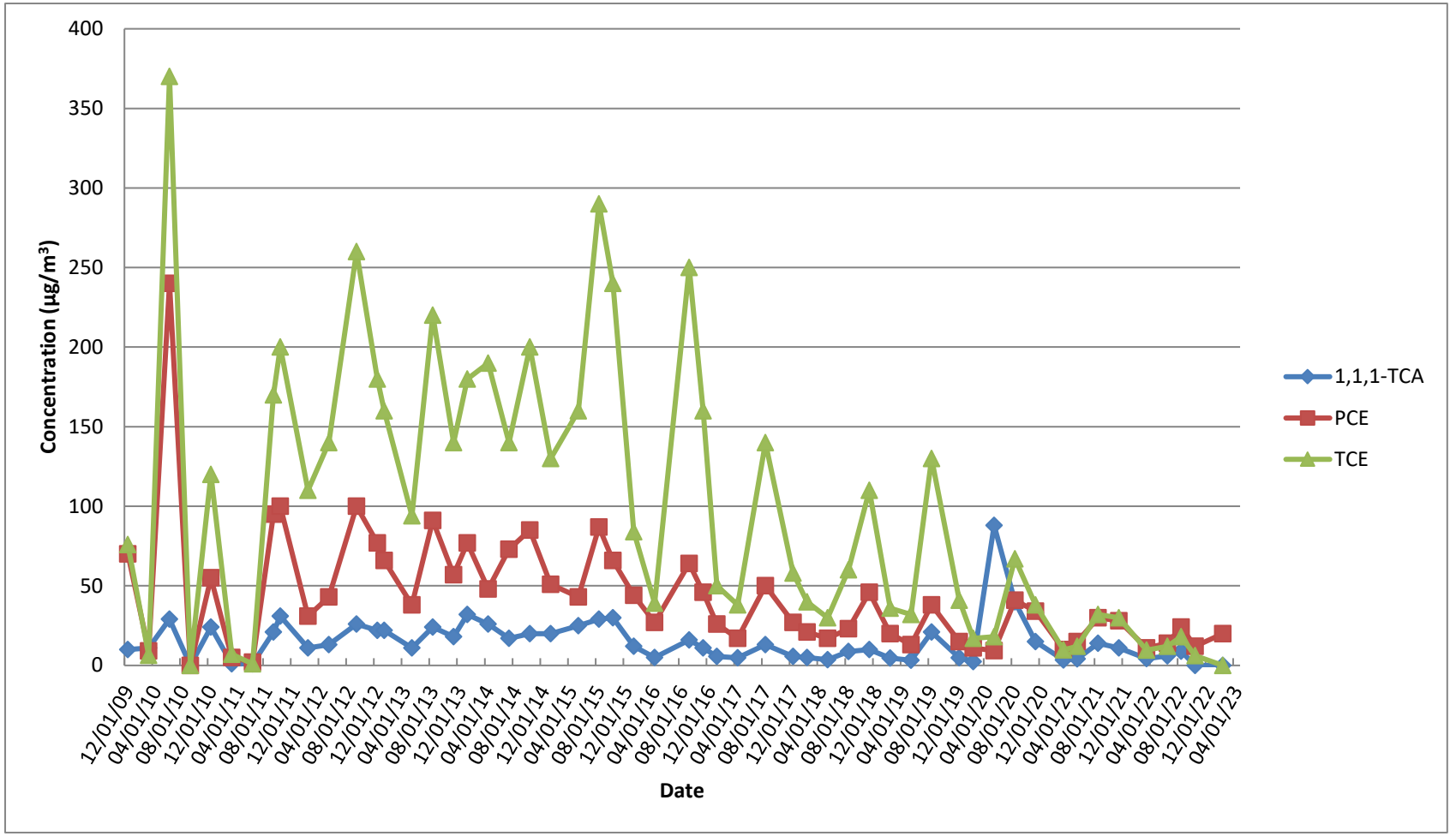
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-104D



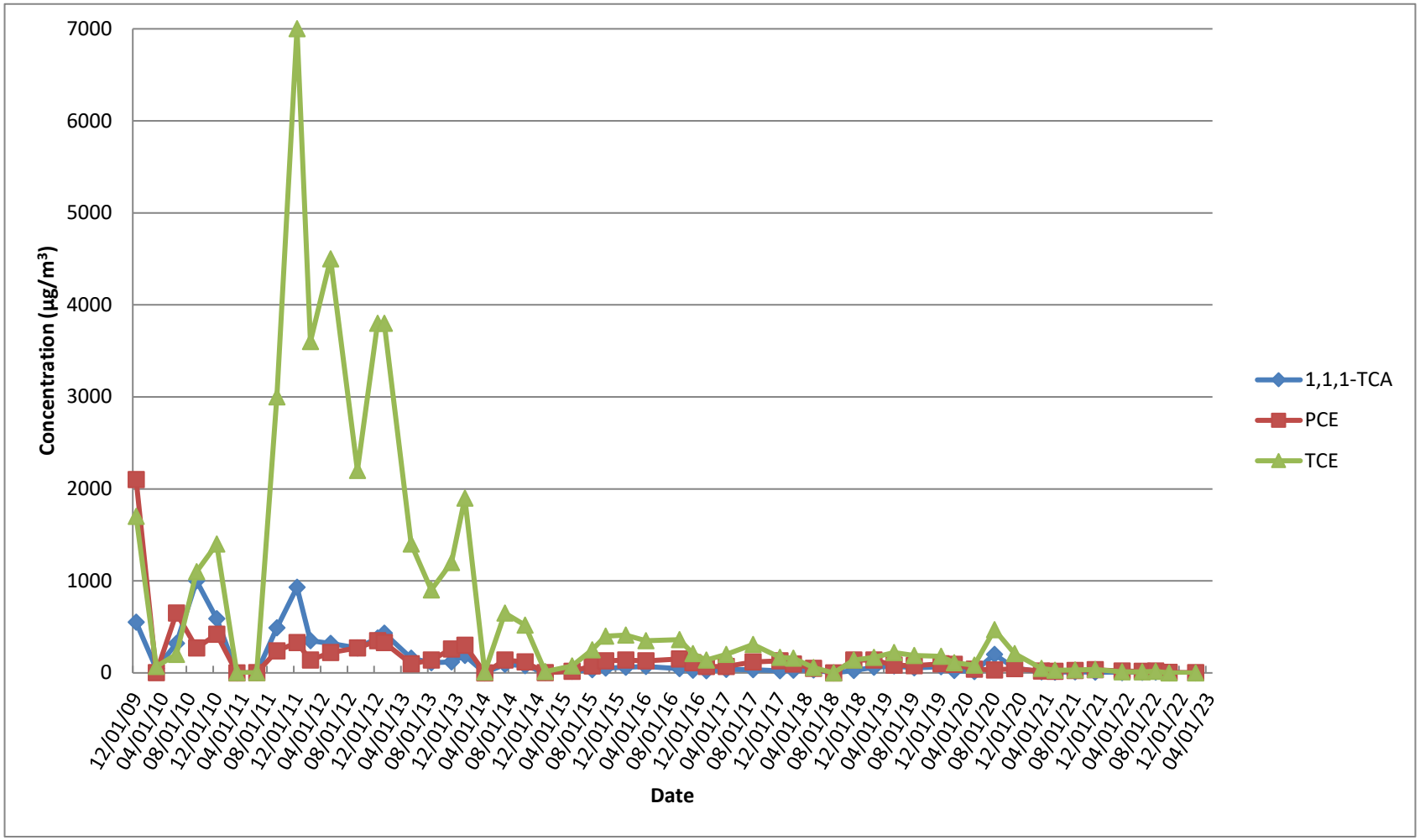
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-105I



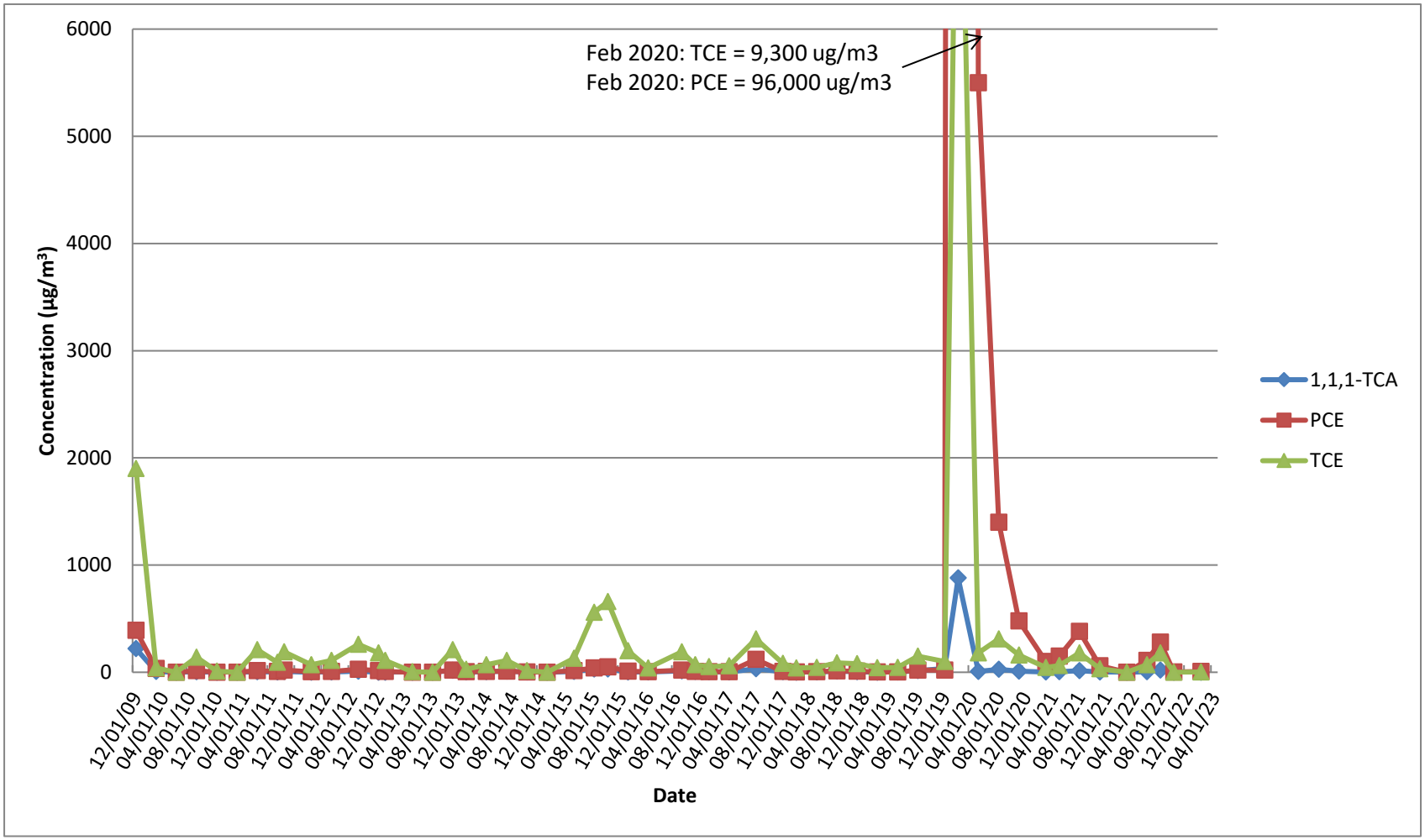
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-105D



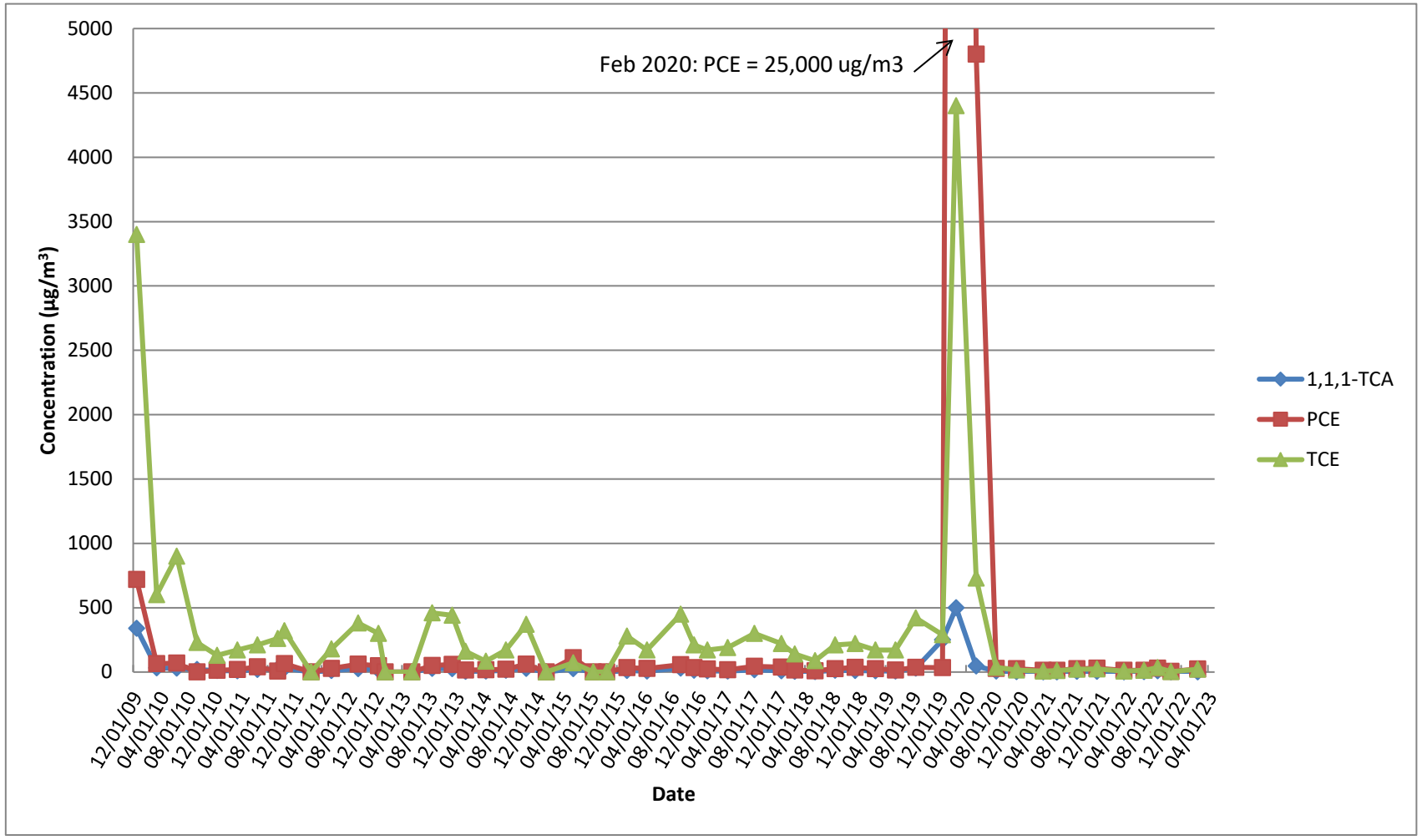
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-106I



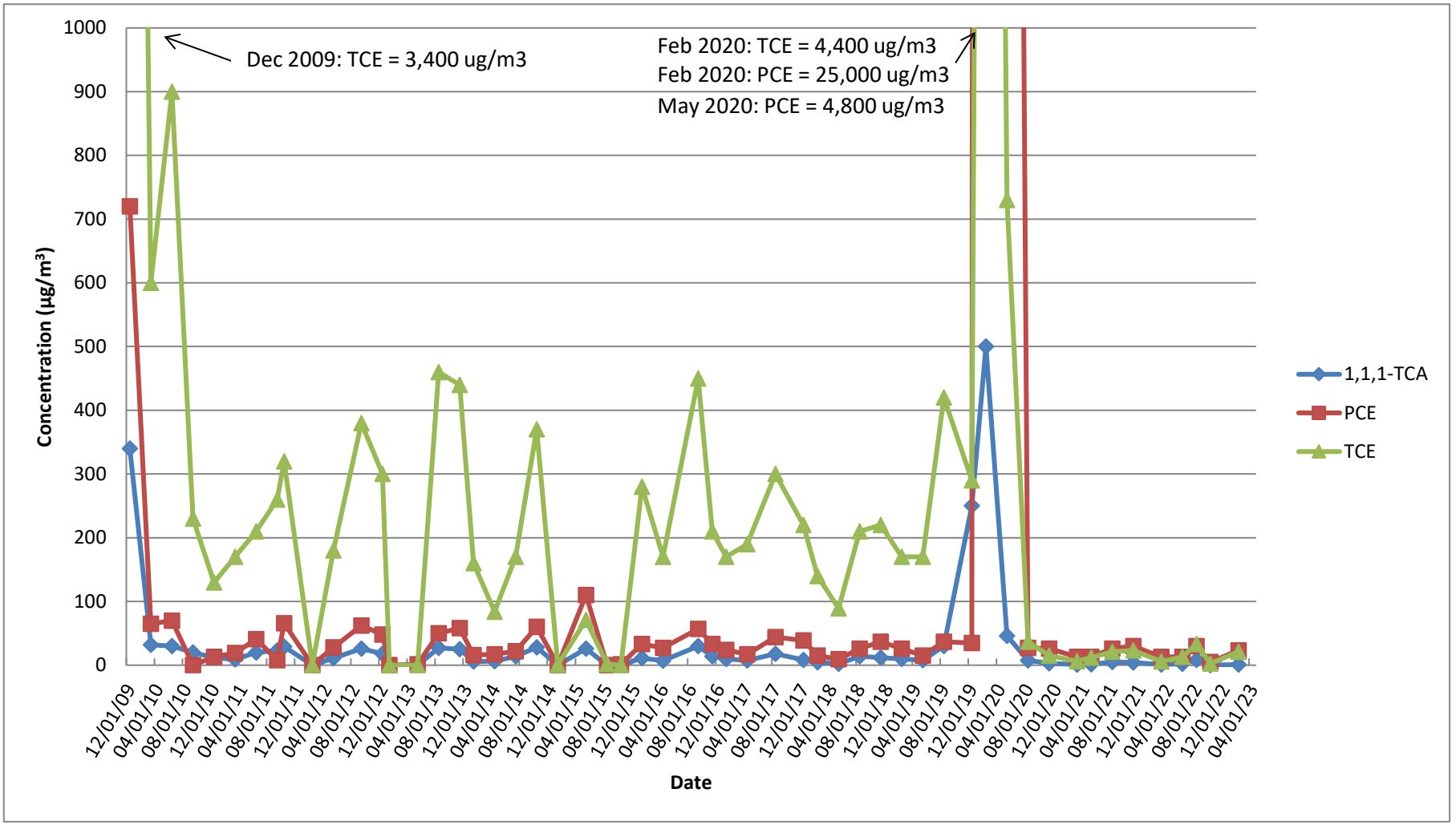
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-106D



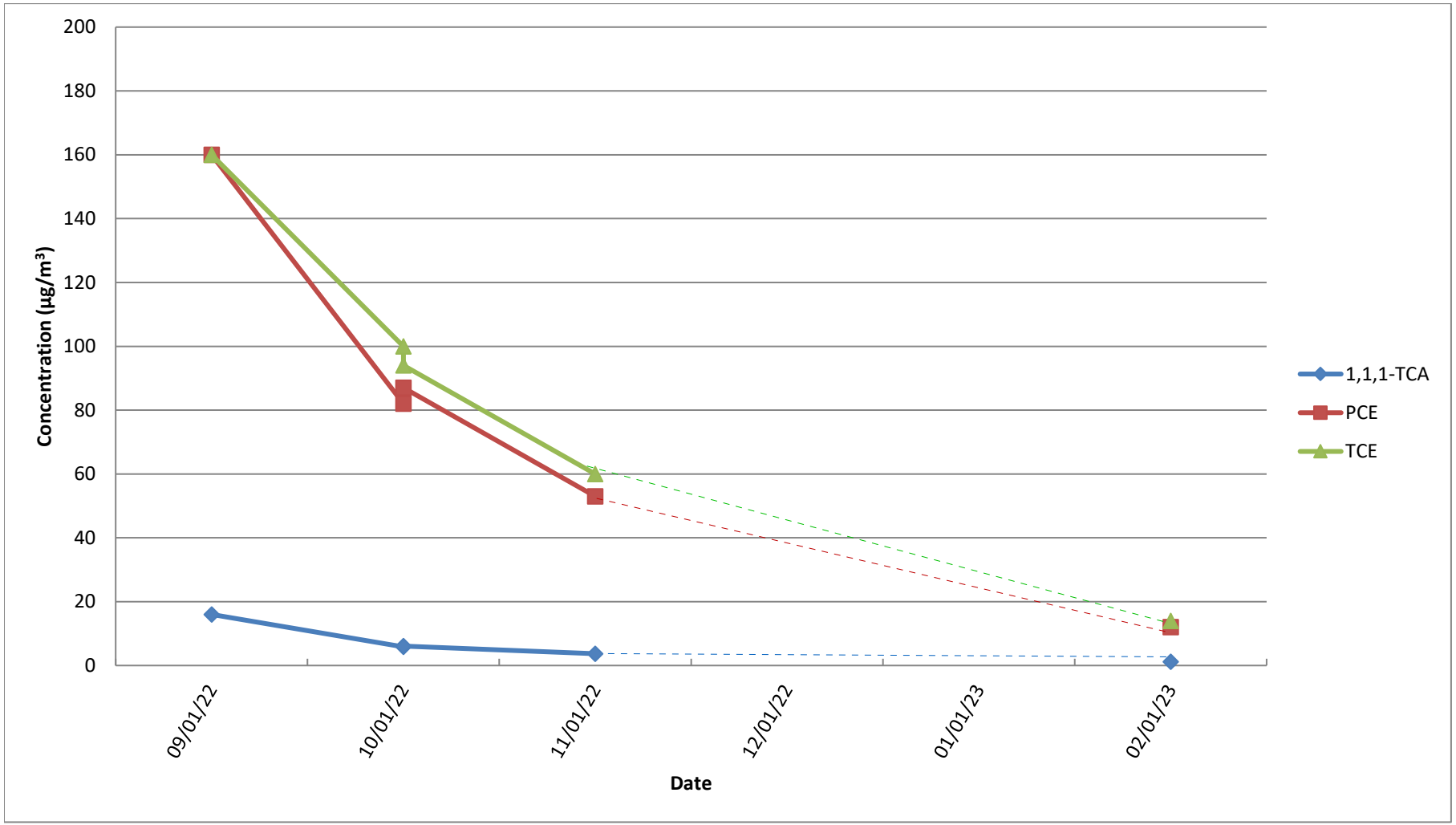
Soil Vapor Extraction Containment System
Site 1, Former Drum Marshalling Yard
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Concentration Trends of Select VOCs
SVEWs

SVE-106D (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

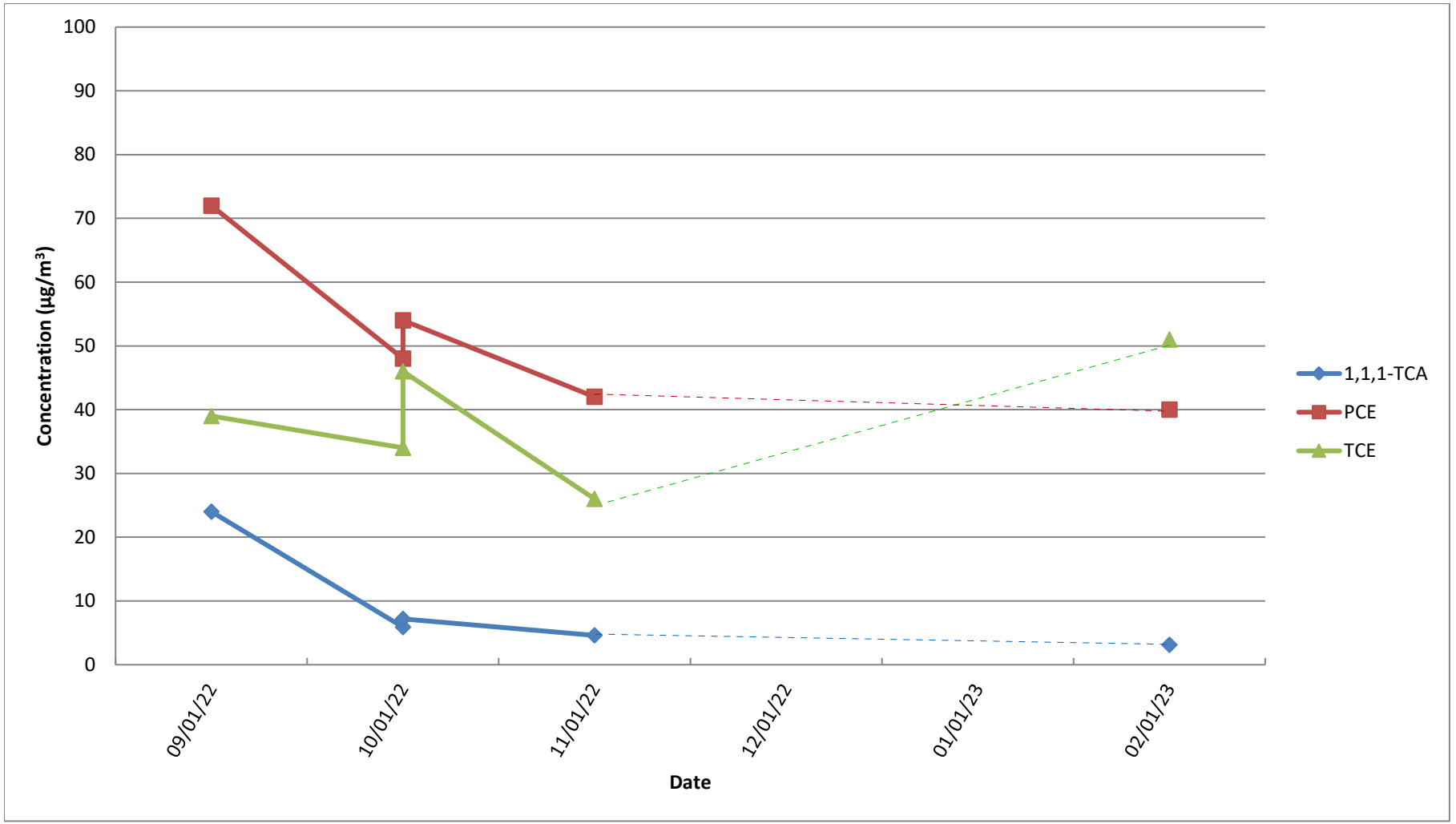
SVE-112D



Dashed Lines - No Samples Collected - Estimated Trend

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

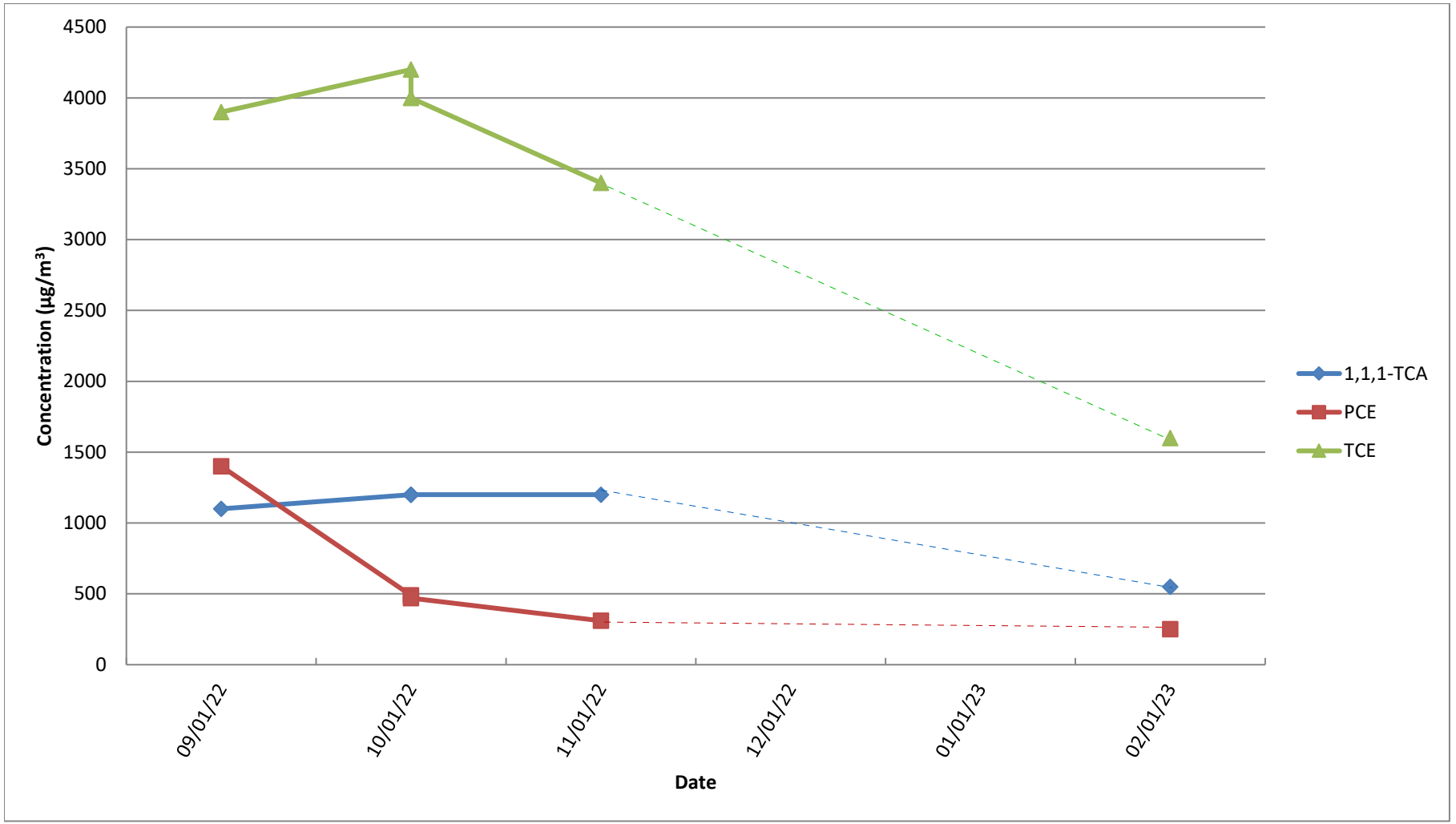
SVE-113D



Dashed Lines - No Samples Collected - Estimated Trend

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

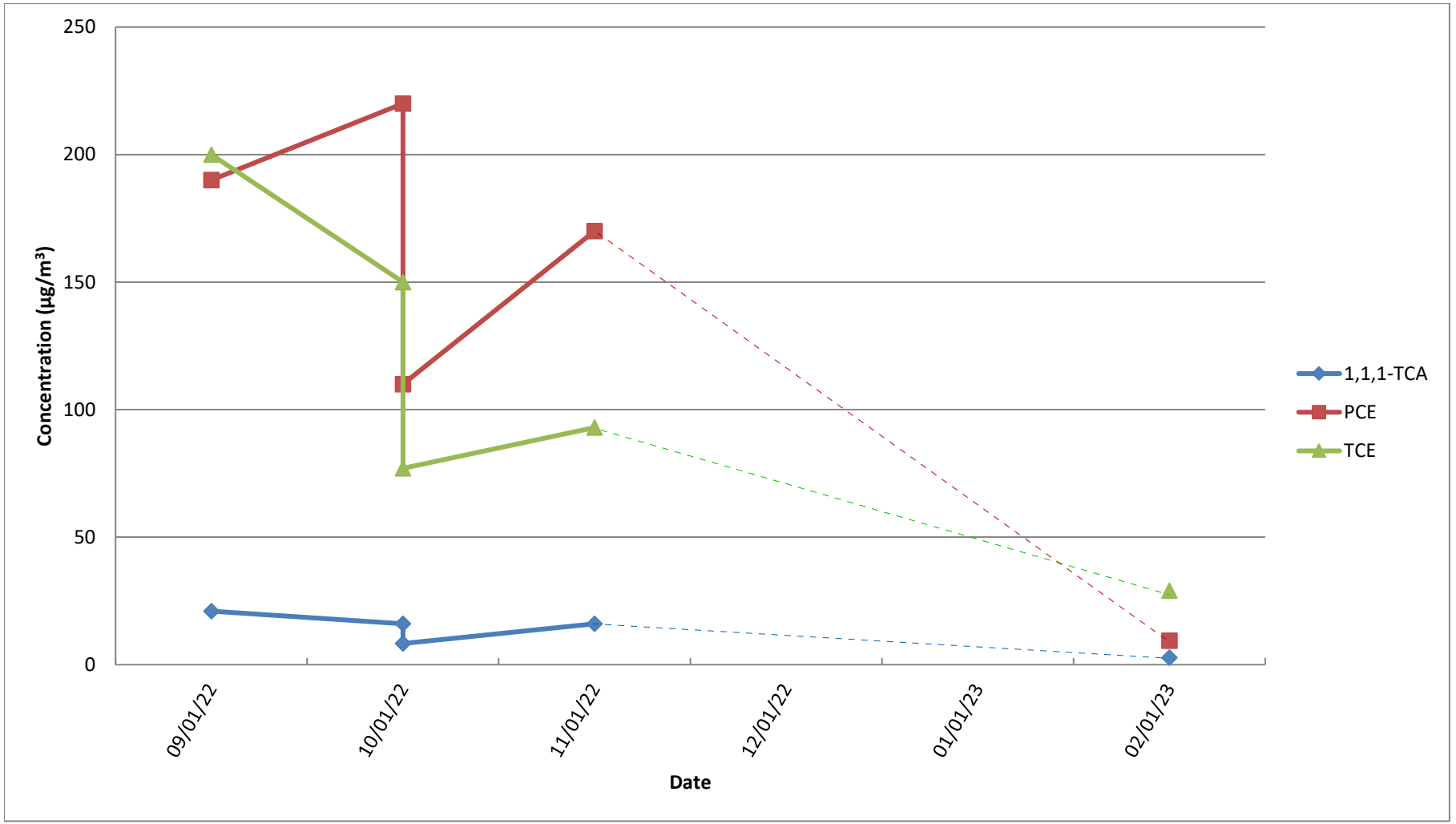
SVE-114D



Dashed Lines - No Samples Collected - Estimated Trend

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

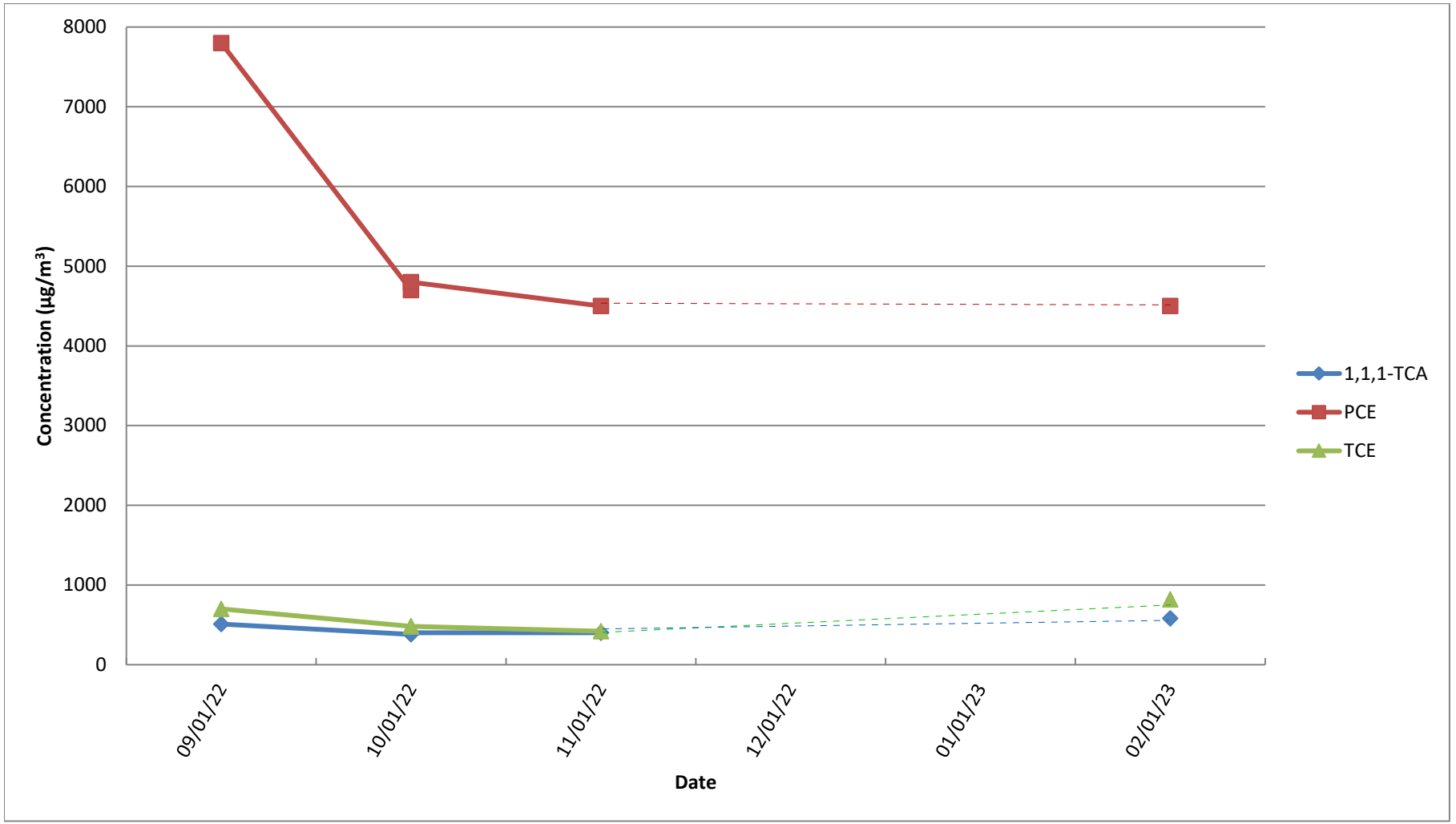
SVE-115D



Dashed Lines - No Samples Collected - Estimated Trend

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

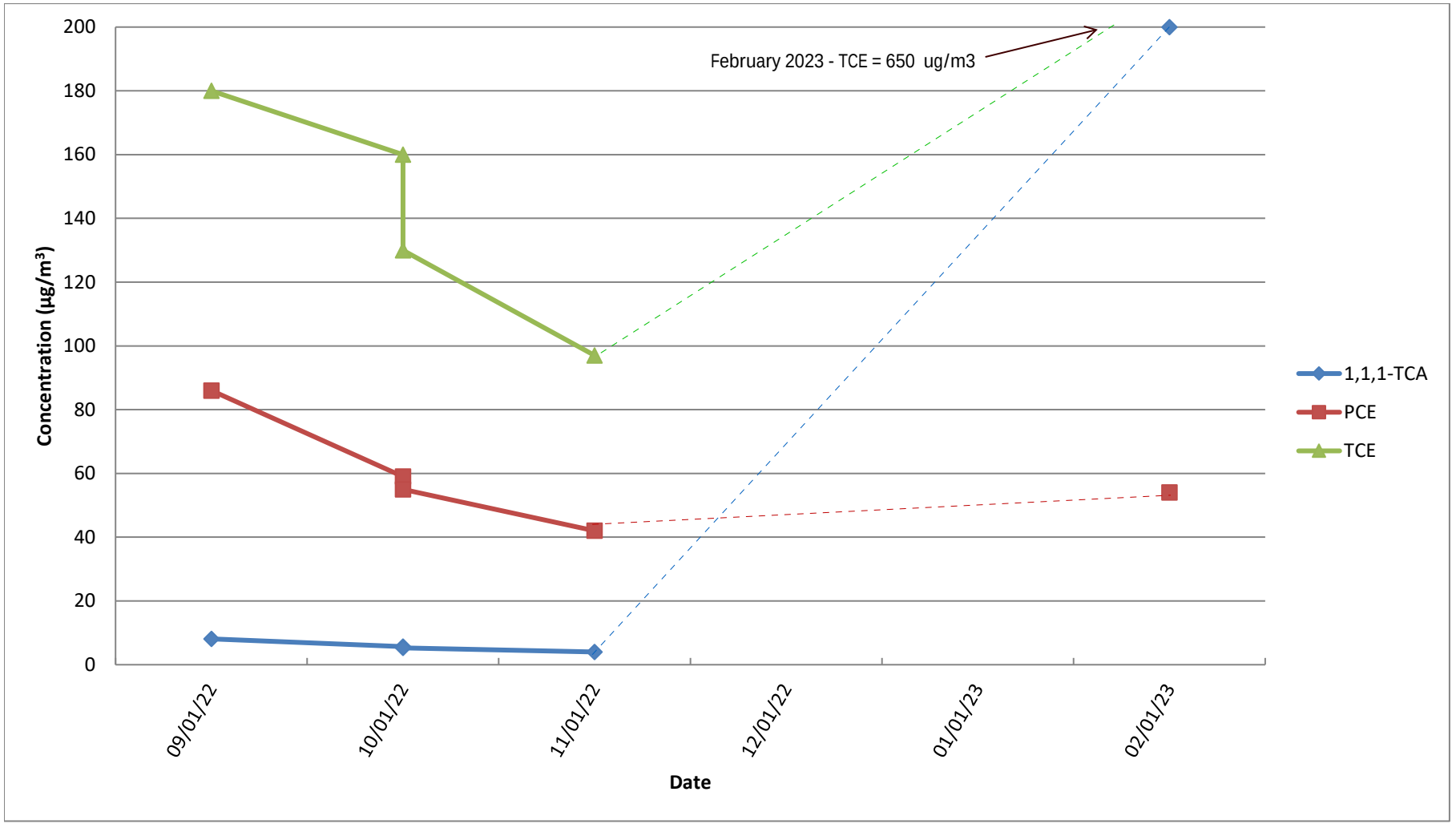
SVE-116D



Dashed Lines - No Samples Collected - Estimated Trend

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

SVE-117D



Dashed Lines - No Samples Collected - Estimated Trend