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**Subject: US NAVY CONTRACT NO. N40085-16-D-2288
CONTRACT TASK ORDER NO. 0005
FIRST QUARTER 2023 OPERATIONS REPORT
GWTP GM-38 AREA REMEDIATION
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT, BETHPAGE, NY**

Dear Mr. Sokolowski:

An electronic copy of the *First Quarter 2023 Operations Report, Groundwater Treatment Plant, GM-38 Area Groundwater Remediation, Naval Weapons Industrial Reserve Plant, Bethpage, New York*, has been submitted to your attention via email.

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)

A handwritten signature in black ink that reads 'Robert G. Gregory'.

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**Quarterly Operations Report
First Quarter 2023**

**Groundwater Treatment Plant
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant
Bethpage, New York**

**Contract No. N40085-16-D-2288
Contract Task Order No. 0005**

June 2023

Prepared for:



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06/08/2023

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Acronyms and Abbreviations

%	percent
AOP	Advanced Oxidation Process
ARAR	Applicable or Relevant and Appropriate Requirement
AS	air stripper
ASE	air stripper effluent
BFE	bag filter effluent
bgs	below ground surface
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
DAR	Division of Air Resources
DCA	dichloroethane
DCE	dichloroethene
DMR	Discharge Monitoring Report
DO	dissolved oxygen
DoD	Department of Defense
DTW	depth to water
EB	equipment blank
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Accreditation Program
GOCO	Government Owned Contractor Operated
gpm	gallon per minute
GWTP	groundwater treatment plant
KGS	KOMAN Government Solutions, LLC
HMI	human-machine interface
IRP	Installation Restoration Program
J	estimated
L	liter
lb	pound
LGAC	liquid phase granular activated carbon
mg/L	milligrams per liter
MS/MSD	matrix spike/matrix spike duplicate
NAVFAC	Naval Facilities Engineering Systems Command
Navy	United States Department of the Navy
NELAC	National Environmental Laboratory Accreditation Conference

NG	Northrop Grumman
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
ORP	oxidation-reduction potential
OU	operable unit
PCE	tetrachloroethene
PLC	programmable logic controller
QA/QC	quality assurance/quality control
ROD	Record of Decision
RPD	relative percent difference
SC	specific conductivity
scfm	standard cubic feet per minute
SIM	selection ion monitoring
SPDES	State Pollution Discharge Elimination System
TB	trip blank
TCE	trichloroethene
TE	treated effluent
Tetra Tech	Tetra Tech, Inc.
TSS	total suspended solids
TtEC	Tetra Tech EC, Inc.
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VGAC	vapor phase granular activated carbon
VOC	volatile organic compound

1.0 INTRODUCTION

KOMAN Government Solutions, LLC (KGS) has prepared this Quarterly Operations Report for the GM-38 Area Groundwater Treatment Plant (GWTP) 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 No. 0005. 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 & Monitoring Plan for Groundwater Treatment Plant GM-38 Area Groundwater Remediation, 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 Sampling and Analysis Plan, Operations, Maintenance, and Monitoring of the Groundwater Treatment Plant, GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, New York* prepared by KGS in 2022.

1.1 Background

NWIRP Bethpage is located in east central Nassau County, Long Island, New York, approximately 30 miles east of New York City (**Figure 1**) and is currently listed by New York State Department of Environmental Conservation (NYSDEC) as an “inactive hazardous waste site” (#1-30-003B). In the late 1990s, the Navy’s property totaled approximately 109.5 acres and was 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 GM-38 Area refers to a cluster of monitoring wells installed in the 1990s by NG. The GM-38 Area is approximately 8,500 feet south, southeast, and hydraulically downgradient of NWIRP Bethpage. The GWTP is located within a utility easement with a street address of 100 Broadway, Bethpage, New York.

The “hot spot” cleanup remedy for the GM-38 Area groundwater was originally set forth in Record of Decision (ROD) documents for Operable Unit (OU) 2 Groundwater for the NG and NWIRP Sites (New York State Registry Site Numbers 1-30-003A & 1-30-003B, respectively) issued by NYSDEC Division of Environmental Remediation in March 2001 and for the NWIRP Bethpage Site by NAVFAC in April 2003 (Revision 1). The selected remedy was chosen in accordance with the New York State Environmental Conservation Law (ECL) and the Navy’s Installation Restoration Program (IRP). It is also consistent with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended, 42 U.S.C. §§ 9601-9675.

1.2 GWTP Overview

Currently, groundwater is extracted from recovery wells RW-1 and RW-4. Pumping at RW-3 was suspended from July 2015 to June 2018, and then again in April 2021 when the new recovery well RW-4 was brought online. All extracted groundwater is treated in the GWTP. The treatment process consists of flow equalization, air stripping and vapor-phase carbon treatment, bag filtration, and liquid-phase carbon treatment. In addition, an Advanced Oxidation Process (AOP) unit has been installed at the GWTP and is intended to remove residual concentrations of 1,4-dioxane from the GWTP effluent prior to discharge. The AOP commissioning process began in April 2021, and was conducted by others under separate contract. KGS assumed operational responsibility for the AOP unit on 1 July 2022.

The GWTP was originally equipped with a pH adjustment system utilizing sodium hydroxide; however, it was subsequently determined that pH adjustment was not necessary. The equipment has been taken off-line and sodium hydroxide sent off site for beneficial reuse. A process flow diagram is presented as

Figure 2. The treated water is either re-injected into injection well IW-1 or discharged into the Nassau County Recharge Basin #495. Under CERCLA, the Navy is required to meet the effluent requirements in the NYSDEC State Pollution Discharge Elimination System (SPDES) Permit Equivalent Application as an Applicable or Relevant and Appropriate Requirement (ARAR).

The GWTP was designed to operate at an average flow rate of 1,100 gallons per minute (gpm), as measured by the average discharge flow rate. It was determined that this flow rate would be optimal with respect to effective containment of the higher concentration of contamination in the GM-38 Area groundwater. During the current reporting period, recovery wells RW-1 and RW-4 were utilized for groundwater extraction. RW-1 operated at an average flow rate of approximately 495 gpm, 492 gpm, and 499 gpm during January, February, and March 2023, respectively. RW-4 operated at an average flow rate of approximately 495 gpm, 480 gpm, and 487 gpm during January, February, and March, respectively.

Volatile Organic Compounds (VOCs) in the influent groundwater consist of trichloroethene (TCE), tetrachloroethene (PCE), vinyl chloride (VC), cis-1,2-dichloroethene (DCE), 1,2-dichloroethane (DCA), benzene, toluene, total xylenes, and 1,4-dioxane.

The air stripper (AS) is a structural aluminum tower that is packed with 3.5-inch diameter polypropylene Jaeger Tripack. Groundwater is pumped to the AS distribution port and sprayed over the column of Jaeger Tripack at a design flow rate of approximately 1,100 gpm. Previously, 100 gpm of recirculated water was also rerouted through the AS, but as of October 2010, recirculation was no longer deemed necessary to the operation of the system. An induced draft countercurrent flow of air entered the AS below the base of the packing material at an initial rate of 8,000 standard cubic feet per minute (scfm); the rate was reduced to 6,000 scfm in February 2023 to evaluate treatment efficiencies and total energy costs associated with VOC treatment by the AS versus by the AOP unit. The large surface area of the packing material allows for a mass transfer of the VOCs from the groundwater into the air stream. The VOCs in the off-gas, except for VC, are removed via two 20,000-pound (lb) vapor phase granular activated carbon (VGAC) units (VGAC-1 and VGAC-2). VC is oxidized into potassium chloride and carbon dioxide via treatment in a 20,000-lb vessel (VGAC-3) containing zeolite impregnated with potassium permanganate. The potassium chloride remains in the pore structure of the zeolite substrate. The treated off-gas is discharged from the stack.

Water treated by the AS is subsequently processed through the AOP unit, followed by processing through three 8,000-lb liquid phase granular activated carbon (LGAC) units in parallel prior to discharge in the recovery basin (or injection well, if necessary).

The GWTP is controlled by a programmable logic controller (PLC)-based digital and analog control system, with instrumentation that monitors pH, pressure, tank level, flow and differential pressure transmitters, water level in recovery wells, and motor operational status. The information in the PLC is made available to an operator via a human-machine interface (HMI) program. By using this program, the status of the GWTP can be displayed in real time and adjusted, if necessary, by the operator. The AOP unit has a standalone PLC to control its internal functions. The GWTP and AOP control systems are interlocked such that shut down of the AOP unit will result in shut down of the GWTP, and vice versa, to ensure that effluent is fully treated prior to discharge.

A 2014 evaluation of the GM-38 Area, conducted in order to better determine the capture zone of the recovery wells, recommended that use of recovery well RW-3 be discontinued (“*Capture Zone Evaluation and Path Forward, GM-38 Area Groundwater Treatment Plant*” [Tetra Tech, Inc. [Tetra Tech], 2014]). The report was sent to NYSDEC in March 2014 and recommended ceasing operation of recovery well RW-3 and increasing the pumping rate of recovery well RW-1. These system modifications would maintain the existing GWTP pumping rate of 1,000 to 1,100 gpm while maintaining the desired capture zone of the GWTP (Tetra Tech, 2014). NYSDEC concurred with the implementation of this path forward and associated system modifications on 20 April 2015. On 1 July 2015, in accordance with the approved path forward, recovery well RW-3 was taken off-line. The flowrate of recovery well RW-1 was increased from approximately 800 gpm to approximately 1,000 gpm. Pumping

at RW-3 was once again resumed in June 2018 to address persistent VOC concentrations at this well. Pumping at RW-3 was suspended in April 2021 to facilitate startup and integration of RW-4 into the system. During the current reporting period, the pumping rates at both RW-1 and RW-4 were each set at approximately 500 gpm.

2.0 GWTP OPERATIONS AND MAINTENANCE

While designed to run autonomously, the GWTP requires regular visits by an operator to record and adjust operational parameters and to perform scheduled maintenance. The GWTP 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 GWTP were performed during the operator's visits. These activities include general site inspections, collection of operational data (water and vapor flowrates, differential pressures across the AS, carbon units, bag filter units and blower discharge pressures, tank levels, and totalizer readings), measurement of water levels in the recovery wells, adjustment of pump set points, collection of vapor and process water samples, changing bag filters, switching lead/lag pump assignments, and preventive maintenance of system equipment.

2.2 Non-routine Maintenance / Site Activities

Various non-routine maintenance were performed in the current reporting period as noted below.

The increased sediment load that had been conveyed to the GWTP following incorporation of RW-4 was addressed during the Second Quarter 2022 when RW-4 was redeveloped by others under separate contract. All redevelopment water was collected in the GWTP and subsequently transported offsite for disposal by others under separate contract. Groundwater from RW-4 was used to flush the pipeline connecting RW-4 to the GWTP; flush water was collected in the GWTP and subsequently transported offsite for disposal by others under separate contract. Sediment from flushing was accumulated at the GWTP, containerized, and disposed of by others under separate contract during the First Quarter 2023.

The chronology of non-routine activities at the GWTP during the current reporting period is presented below:

- 18 January – Backwashed LGACs #100 and #200.
- 3 February – Operator replaced 12 intake air filters.
- 6 February – Annual backflow inspection of the plant RPZ valve conducted.
- 6 February – Electrical engineer onsite to evaluate electrical service connections.
- 9 February – Air stripper flow reduced from 8,400 scfm to 6,000 scfm.
- 21 March – Backwashed LGACs #100, #200, and #300.
- 28 March – Reprogrammed the GWTP PLC to pumping rates to be automatically adjusted to achieve a targeted water level in the equalization tank. The prior configuration targeted flow rates which resulted in intermittent cycling of the extraction system pumps.

3.0 GWTP MONITORING

The objective of the GWTP is to remove contaminant mass and reduce elevated VOC levels to levels similar to those in the surrounding aquifer. It is anticipated that GWTP operation will minimize contaminant impacts on water supply wells and currently unaffected portions of the groundwater aquifer. The GWTP is not intended to remediate groundwater contamination in the local aquifer to non-detectable levels (TtEC, 2010). Various process samples (water and vapor) are collected on a monthly basis to monitor GWTP efficiency and to ensure compliance with Federal and State effluent discharge and air emission requirements. In addition, groundwater samples are collected semi-annually to monitor water quality and determine the effectiveness of the remediation activities and monitor the hydraulic containment and capture of impacted groundwater by the recovery wells.

3.1 Process Water Quality Monitoring

Processed groundwater is analyzed to comply with calculations submitted by the Navy and documented in the NYSDEC SPDES Permit Equivalent Application for applicable effluent limitations and monitoring requirements. These results are also submitted to NYSDEC on a monthly basis in the form of a Discharge Monitoring Report (DMR). A copy of the current NYSDEC effluent limitations, monitoring constituents, and the completed reporting forms for the First Quarter 2023 are included in **Appendix A**.

Monthly aqueous samples are collected from the active recovery wells (RW-1 and RW-4), and the treated effluent (TE) discharge line. In addition, various intermediary process system samples are collected monthly, consisting of air stripper effluent (ASE), bag filter effluent (BFE), and effluent samples (LC1, LC2, and LC3) of each of the three LGAC units. The analytical results of monthly process water samples collected during the First Quarter are presented in **Table 1**.

3.2 Air Quality Monitoring

Treated off-gas discharged at the stack of the GWTP is subject to emissions limitations. Original discharge goals were derived from calculations submitted by the Navy and approved by the NYSDEC Division of Air Resources (DAR) in July 2009. In November 2011, the Navy submitted an evaluation proposing revised discharge goals, which NYSDEC approved in October 2013. A copy of this documentation is included as **Appendix B**.

Sampling of the stack emissions is required for NYSDEC compliance; however, process vapor samples are also collected using 6-liter (L) summa canisters at various locations to monitor for breakthrough of the VGAC units. The analytical results of monthly influent and effluent vapor samples as well as midfluent samples (VC12 and VC23) collected during the First Quarter are presented in **Table 2**. Air emissions calculations using the stack vapor concentrations along with discharge flowrates are presented in **Table 3**. All constituents were within the regulatory requirements during the First Quarter, as demonstrated by the calculated emission rates.

3.3 Groundwater Quality Monitoring

The groundwater monitoring system at the GM-38 Groundwater Remediation Area consists of 14 monitoring wells, four recovery wells (RW-1, RW-2, RW-3, and RW-4), and one injection well (IW-1). Well locations are depicted on **Figure 3**. Recovery well RW-4, brought on-line in April 2021, is located approximately one mile to the west of the GWTP (**Figure 4**). Although RW-2 was installed in 2005, a pump was never installed in this well and the well is not operated as a recovery well in response to concerns expressed by the Bethpage Water District. As mentioned in Section 1.2, pumping at RW-3 was suspended between July 2015 and June 2018. RW-3 was reactivated on 1 June 2018 to address persistent VOC concentrations at this location and was subsequently replaced with Well RW-4 in April 2021. Well RW-1 was offline during the months of October and November 2020 as a result of a rehabilitation and

redevelopment effort conducted at that time. In addition, RW-4 underwent redevelopment during April and May 2022; the well was offline during this timeframe.

Depth to water (DTW) measurements are collected from 12 of the monitoring wells on a quarterly basis. Prior to 2014, water quality samples were collected from eight of the monitoring wells on a quarterly basis; beginning in 2014, the sample collection frequency was reduced to semi-annually, with sample collection generally in the March (First Quarter) and September (Third Quarter) timeframes. The monitoring network includes well clusters located near the recovery wells RW-1 and RW-3 and injection well IW-1 as described below and as shown on **Figure 3**. Two additional wells, GM-38D and GM-38D2, located at the corner of Arthur Avenue and Broadway, are monitored by others.

Semi-annual groundwater samples for 2023 were collected from eight monitoring wells (RW1-MW1, RW1-MW3, RW2-MW1, RW3-MW1, RW3-MW2, RW3-MW3, RW3-MW4, and TP-01) and from two recovery wells (RW-1 and RW-4). Samples are collected from monitoring wells using bladder pumps in accordance with United States Environmental Protection Agency (USEPA) low-flow sampling methodologies. Samples were collected from recovery wells RW-1 and RW-4 using the dedicated extraction pumps as it is normally done during routine O&M sampling.

Results of the groundwater samples collected from RW-1 and RW-4 for the First Quarter sampling event are presented in Section 3.3.1 below.

Descriptions of monitoring well locations are as follows:

Recovery Well 1 (RW-1) Monitoring Wells

The RW-1 cluster consists of three monitoring wells screened between 395 and 435 feet below ground surface (bgs). RW1-MW1 is located approximately 140 feet northwest of RW-1 and RW1-MW2 is located approximately 50 feet north of RW-1. RW1-MW3 is located approximately 400 feet northeast of RW-1, on the eastern side of Seaford Oyster Bay Expressway. All three wells are hydraulically monitored while only RW1-MW1 and RW1-MW3 are also monitored for water quality.

Recovery Well 2 (RW-2) Monitoring Wells

The RW-2 cluster consists of three monitoring wells screened between 470 and 510 feet bgs. RW2-MW1 is located approximately 60 feet northwest of RW-2, RW2-MW2 is located approximately 100 feet west of RW-2, and RW2-MW3 is located approximately 20 feet west of RW-2. All three wells are hydraulically monitored while only RW2-MW1 is monitored for water quality.

Recovery Well 3 (RW-3) Monitoring Wells

The RW-3 cluster consists of four monitoring wells. RW3-MW2 and RW3-MW4 are screened between 475 and 495 feet bgs. RW3-MW1 and RW3-MW3 are screened between 330 and 350 feet bgs and 320 and 340 feet bgs, respectively. RW3-MW1 and RW3-MW2 are located approximately 280 feet west of RW-3, at the intersection of Arthur Avenue and Leroy Avenue. RW3-MW3 and RW3-MW4 are located approximately 400 feet north of the intersection of Sophia Street and Broadway. All four wells are both hydraulically monitored and monitored for water quality.

TP-01

TP-01 is screened between 450 and 470 feet bgs and is located approximately 25 feet north of the GWTP building, inside the fenced area. It is hydraulically monitored to observe the change in water levels associated with the influence from the pumping rates at the neighboring public water supply well field adjacent to the hot spot area and is also monitored for water quality.

Injection Well 1 (IW-1) Monitoring Well

There is one monitoring well associated with injection well IW-1. IW1-MW1 is screened between 20 and 150 feet bgs, is located approximately 20 feet south of IW-1 and is only hydraulically monitored on a quarterly basis.

3.3.1 Groundwater Quality Results

Groundwater samples for the April 2023 semi-annual event were collected on 11 and 12 April 2023. DTW measurements were used to calculate the groundwater elevations shown in **Table 4**. Field parameters measured during the well purging, which consisted of pH, specific conductivity (SC), temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity, are summarized in **Table 5**. Following stabilization of field parameters, groundwater samples were collected. Copies of the field logs and chain of custody documentation are presented in **Appendix C**.

Groundwater samples were submitted to a laboratory accredited in accordance with the National Environmental Laboratory Accreditation Conference (NELAC) requirements and the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP). The samples were sent to ALS Environmental, located in Rochester, NY. The samples were analyzed for VOCs via USEPA Method 624.1, mercury via USEPA Method 245.1, and total suspended solids (TSS) via USEPA Method SM 2540D-2015. For the recovery wells, 1,4-dioxane was analyzed via USEPA Method 8270D Selective Ion Monitoring (SIM). Validated analytical results for the April 2023 semi-annual groundwater monitoring event and the April 2023 recovery well analytical results are summarized in **Table 6**. Analytical results for the recovery wells and monitoring wells are shown by well location on **Figures 5 and 6**, respectively. Historical analytical results for the groundwater monitoring wells up to and including the First Quarter 2023 results are presented in **Table 7**. Data validation reports are presented in **Appendix D**. Raw analytical data are provided under separate cover.

3.3.2 Quality Assurance/Quality Control Sampling

Quality assurance/quality control (QA/QC) samples were collected during the semi-annual groundwater monitoring event in accordance with the Final Sampling and Analysis Plan (KGS, 2023). These samples consisted of field duplicates (collected from RW3-MW3), matrix spike/matrix spike duplicate (MS/MSD) samples, equipment rinsate blank (EB) collected at a rate of one per sampling event, and trip blanks (TB) submitted at a rate of one per cooler.

The EB contained trace amounts of TCE, however, the sample results for TCE were greater than two times the EB contamination and no qualification was required. Mercury and TSS were not detected in either the EB or in the method blank; no qualification was required.

The TB samples were free of contamination; no qualification was required.

The MS/MSD recoveries for all analyses were within the laboratory QC limits; no qualification was required.

For field duplicates, the precision between the parent sample and its duplicate is evaluated by calculating the relative percent difference (RPD). RPDs for the First Quarter 2023 sampling event are presented in the data validation report in **Appendix D**. RPDs for VOC compounds were all less than 50 percent (%). Mercury was not detected in the parent/duplicate pairs; no qualification was required. TSS was detected in the parent sample at a concentration of 2.0 milligrams per liter (mg/L) and in the associated duplicate sample at a concentration of 1.6 mg/L resulting in a %RPD for the pair of 22.2%; no qualification was required. This overall consistency between the parent and duplicate samples verify that proper sample collection methods were followed.

3.3.3 Groundwater Concentration Trends

Groundwater analytical concentration trends of select VOCs (cis-1,2-DCE, PCE, TCE, and VC) for recovery wells RW-1 and RW-4 sampled during the First Quarter 2023 monitoring event are presented on **Figures 7 through 9**.

Figure 7 presents concentrations measured at recovery well RW-1. TCE concentrations have decreased from initial concentrations in early 2010 (747 micrograms per liter [$\mu\text{g/L}$] measured in April 2010), remaining below 300 $\mu\text{g/L}$ since the latter half of 2012. TCE concentrations remained stable in the First Quarter 2023 ranging between 45.5 $\mu\text{g/L}$ (minimum value in historical dataset) in February to 48.1 $\mu\text{g/L}$ in January. PCE concentrations have decreased from an initial concentration in February 2010 (180 $\mu\text{g/L}$) to a range of 13.4 $\mu\text{g/L}$ (January) to 14.1 $\mu\text{g/L}$ (March) in the First Quarter and have remained below 20 $\mu\text{g/L}$ since April 2020. Concentrations of cis-1,2-DCE have followed a similar trend, decreasing from a maximum of 160 $\mu\text{g/L}$ in February 2010 to a minimum concentration of 2.79 $\mu\text{g/L}$ in November 2022. cis-1,2-DCE ranged from 2.84 $\mu\text{g/L}$ (January) to 2.92 $\mu\text{g/L}$ (February) in the First Quarter 2023. Measured concentrations of cis-1,2-DCE have remained below 5.0 $\mu\text{g/L}$ since February 2019. VC concentrations have remained below 5.0 $\mu\text{g/L}$ since the final quarter of 2011 and below 1.0 $\mu\text{g/L}$ since June 2013. VC was not detected during the First Quarter 2023.

Figure 8 and **Figure 9** present concentrations measured at recovery well RW-4. Well RW-4 was brought online in place of well RW-3 in April 2021. Sampling of the well was initiated in May 2021 following stabilization of the pumping rate via the wireless communication with the GWTP. No samples were collected from RW-4 in May 2022; the well was offline because of redevelopment of the well. TCE and PCE have decreased from maximum concentrations in October 2021 (708 $\mu\text{g/L}$ and 6.97 $\mu\text{g/L}$, respectively). Measured TCE concentrations in the First Quarter 2023 ranged from 554 $\mu\text{g/L}$ in March to 611 $\mu\text{g/L}$ in January. Measured PCE concentrations in the First Quarter 2023 ranged from 5.77 $\mu\text{g/L}$ in January to 6.19 $\mu\text{g/L}$ in February. Concentrations of cis-1,2-DCE have also decreased from a maximum concentration of 1.90 $\mu\text{g/L}$ detected in September 2021. Measured cis-1,2-DCE concentrations ranged from 1.29 $\mu\text{g/L}$ in March to 1.74 $\mu\text{g/L}$ in February 2023. VC has not been detected during any sampling event.

Groundwater analytical concentration trends of select VOCs (cis-1,2-DCE, PCE, TCE, and VC) for the eight monitoring wells sampled during the First Quarter 2023 are presented on **Figures 10 through 17** and are discussed below.

Figure 10 presents concentrations measured at RW1-MW1. TCE concentrations have varied widely since the initial sampling in May 2005 (53.6 $\mu\text{g/L}$). The TCE concentration measured in April 2023 (47.9 $\mu\text{g/L}$) was less than the maximum concentration observed in September 2013 (175 $\mu\text{g/L}$) and less than the concentration reported in May 2005. Concentrations of cis-1,2-DCE have remained consistently below 5.0 $\mu\text{g/L}$ since September 2018 except for one instance in September 2021, when a slightly increased concentration of 7.06 $\mu\text{g/L}$ was measured. This concentration is well below the initial concentration observed in May 2005 (78.6 $\mu\text{g/L}$) and has since decreased for the April 2023 sampling event (2.98 $\mu\text{g/L}$). PCE concentrations have remained consistently below 1.0 $\mu\text{g/L}$; PCE was detected at an estimated concentration of 0.290 $\mu\text{g/L}$ in April 2023. VC has not been detected since the September 2011 sampling event.

Figure 11 presents concentrations measured at RW1-MW3. TCE concentrations have consistently remained below 5.0 $\mu\text{g/L}$ since monitoring was initiated in January 2010; TCE was detected in April 2023 at a concentration of 3.27 $\mu\text{g/L}$. Concentrations of cis-1,2-DCE and PCE have consistently remained below 1.0 $\mu\text{g/L}$ since January 2010. VC has not been detected during any sampling event.

Figure 12 presents concentrations measured at RW2-MW1. TCE concentrations have varied since the initial sampling in May 2005 (37.6 $\mu\text{g/L}$). TCE was detected at a concentration of 5.95 $\mu\text{g/L}$ in April 2023. The concentration of cis-1,2-DCE measured in April 2023 (9.74 $\mu\text{g/L}$) was above the initial

concentration observed in May 2005 (non-detect) but below the maximum concentration observed in March 2016 (15.3 µg/L). PCE and VC have not been detected during any sampling event.

Figure 13 presents concentrations measured at RW3-MW1. TCE concentrations have decreased since reaching a maximum in November 2010 (77.6 µg/L). The TCE concentration in April 2023 (16.9 µg/L) was also below the initial concentration observed in January 2010 (35.0 µg/L). Cis-1,2-DCE has not been detected since September 2014. PCE concentrations have remained consistently near or below 2.0 µg/L since May 2005, with a concentration of 2.50 J µg/L measured in October 2020, equal to the previous maximum in March 2016. The measured concentration of PCE in April 2023 was 1.08 J µg/L. VC has not been detected during any sampling event.

Figure 14 presents concentrations measured at RW3-MW2. The TCE concentration observed in April 2023 (56.9 µg/L) was below the initial concentration observed in January 2010 (160 µg/L) and below the maximum concentration observed in April 2010 (211 µg/L). A decreasing trend in the measured concentration of TCE from 131 µg/L (September 2019) to a minimum concentration of 48.2 µg/L in October 2022 is noted, with a minor increase to the measured value in April 2023. Concentrations of cis-1,2-DCE at this location have consistently remained below 2.0 µg/L with a measured concentration of 0.290 J µg/L in April 2023. PCE has been detected at this location at trace levels throughout most of the period of record, with concentrations ranging from non-detect in October 2022 to 0.66 J µg/L in March 2016; the concentration of PCE measured in April 2023 was 0.270 J µg/L. VC has not been detected during any sampling event.

Figure 15 presents concentrations measured at RW3-MW3. TCE concentrations have decreased since the maximum concentration was observed in June 2013 (410 µg/L). The TCE concentration measured in April 2023 (146 µg/L) was well below both the initial concentration observed in January 2010 (350 µg/L) and the maximum concentration measured in June 2013. Concentrations of cis-1,2-DCE have remained near or below 2.0 µg/L since March 2012. PCE concentrations have remained below 1.0 µg/L for all events. VC has not been detected during any sampling event.

Figure 16 presents concentrations measured at RW3-MW4. TCE concentrations have decreased since the initial sampling event in January 2010 (21 µg/L), with a concentration of 5.18 µg/L in April 2023. cis-1,2-DCE has been detected infrequently since the initial sampling event in January 2010 (0.46 µg/L) and was not detected in April 2023. PCE was detected for the first time in September 2015 at a concentration of 0.31 J µg/L but has not been detected since the March 2016 sampling event. VC has not been detected during any sampling event.

Figure 17 presents concentrations measured at TP-01. TCE concentrations have steadily decreased since the sampling event in March 2018. The TCE concentration observed in April 2023 (7.72 µg/L) is well below the initial and maximum concentration observed in January 2010 (65 µg/L) and is the lowest concentration measured to date. Concentrations of cis1,2-DCE have generally decreased from an initial value of 190 µg/L in January 2010 to the current minimum concentration measured in April 2023 (0.470 J µg/L). PCE had remained below 1.0 µg/L since September 2013 and had not been detected since March 2017 until a detection of 0.680 J µg/L in March 2021; concentrations have increased to the current measurement of 1.70 J µg/L in April 2023. VC has not been detected during any sampling event.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The objective of the groundwater treatment system at GM-38 is to remove contaminant mass and reduce elevated VOC concentrations to levels similar to those in the surrounding aquifer, and in doing so minimize the impacts on downgradient water supply wells and currently unaffected portions of the aquifer. Based on the removal of VOCs by the GWTP and decreasing contaminant concentration trends observed in the recovery wells and several of the monitoring wells, progress toward these goals is indicated. Based on the concentrations in the groundwater wells, the GWTP should continue to be operated. Groundwater sampling frequency for the eight monitoring wells is currently performed on a semi-annual basis in accordance with the O&M Manual. Water levels for the 12 monitoring wells continue to be measured on a quarterly basis.

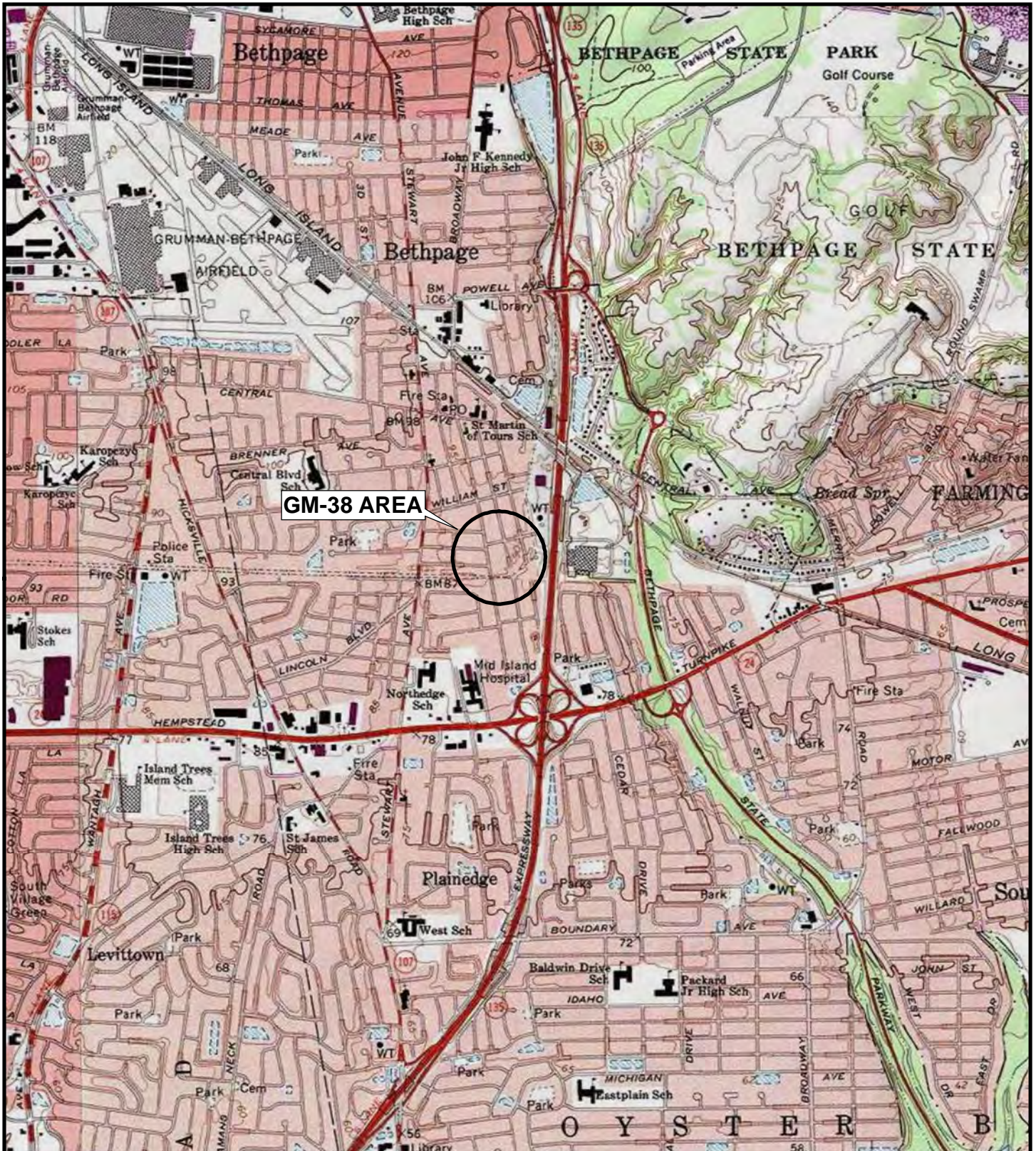
5.0 REFERENCES

KOMAN Government Solutions, LLC (KGS), 2022. *Final Sampling and Analysis Plan, Operation, Maintenance, and Monitoring of the Groundwater Treatment Plant, GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, NY.* December.

Tetra Tech, Inc. (Tetra Tech), 2014. *Capture Zone Evaluation and Path Forward, GM-38 Area Groundwater Treatment Plant, Naval Weapons Industrial Reserve Plant, Bethpage, New York.* March.

Tetra Tech EC, Inc. (TtEC), 2010. *Final Operation, Maintenance & Monitoring Plan for Groundwater Treatment Plant GM-38 Area Groundwater Remediation, Naval Weapons Industrial Reserve Plant, Bethpage, New York.* April.

FIGURES



GM-38 AREA



File: 1022_Bethpage_GM38_F1_SLM.mxd

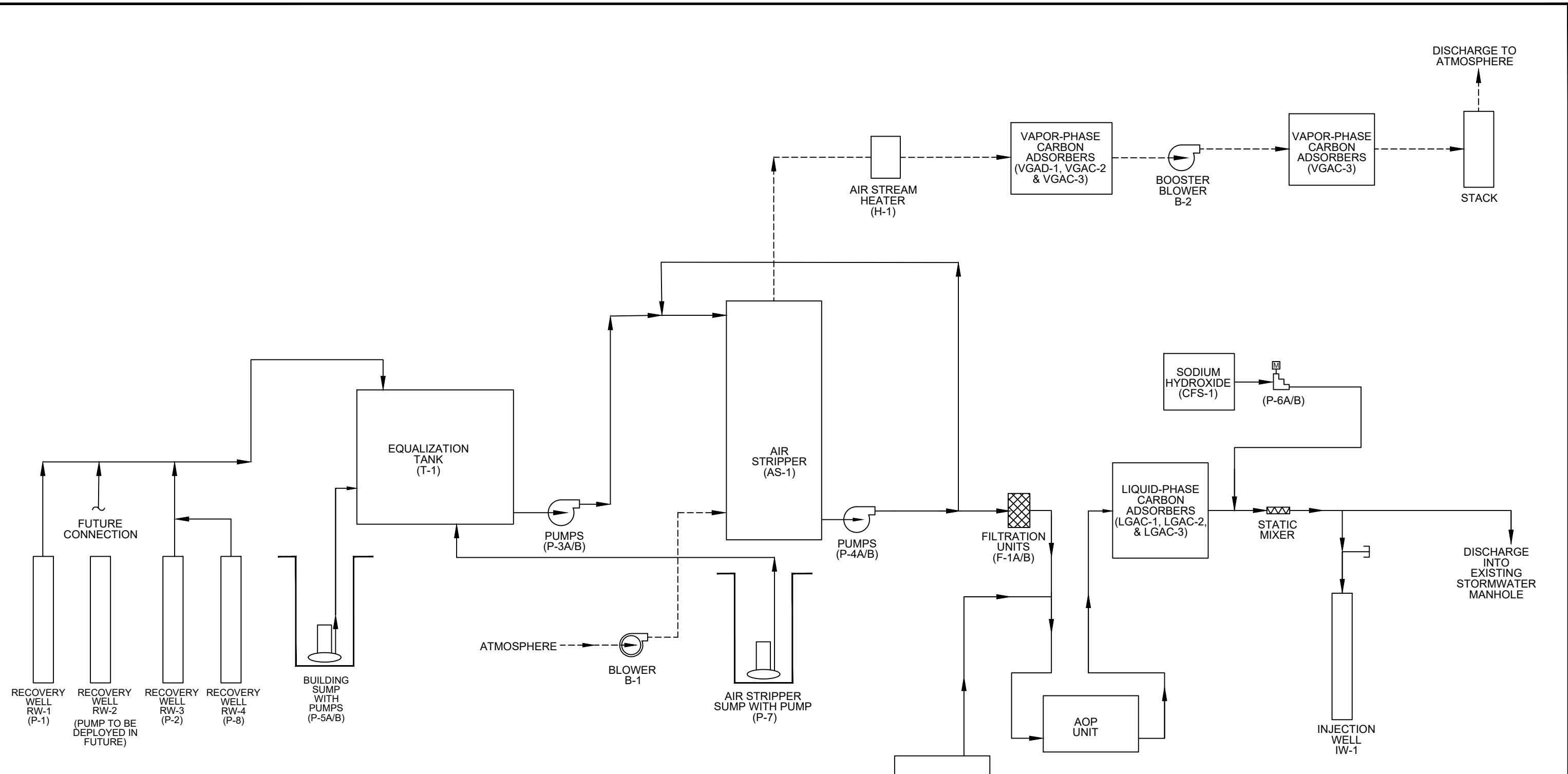


Quadrangle Location Map



Site Location Map	
Department of the Navy Naval Facilities Engineering Systems Command, Mid-Atlantic	
GM-38 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: 10/21/2022
Figure 1	

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



RECOVERY WELL RW-1 (P-1)

RECOVERY WELL RW-2 (PUMP TO BE DEPLOYED IN FUTURE)

RECOVERY WELL RW-3 (P-2)

RECOVERY WELL RW-4 (P-8)

BUILDING SUMP WITH PUMPS (P-5A/B)

EQUALIZATION TANK (T-1)

PUMPS (P-3A/B)

AIR STRIPPER (AS-1)

PUMPS (P-4A/B)

FILTRATION UNITS (F-1A/B)

AOP UNIT

HYDROGEN PEROXIDE

LIQUID-PHASE CARBON ADSORBERS (LGAC-1, LGAC-2, & LGAC-3)

STATIC MIXER

DISCHARGE INTO EXISTING STORMWATER MANHOLE

INJECTION WELL IW-1

ATMOSPHERE

BLOWER B-1

AIR STRIPPER SUMP WITH PUMP (P-7)

AIR STREAM HEATER (H-1)

VAPOR-PHASE CARBON ADSORBERS (VGAD-1, VGAC-2 & VGAC-3)

BOOSTER BLOWER B-2

VAPOR-PHASE CARBON ADSORBERS (VGAC-3)

STACK

DISCHARGE TO ATMOSPHERE

SODIUM HYDROXIDE (CFS-1) (P-6A/B)

LEGEND

----- VAPOR PIPING

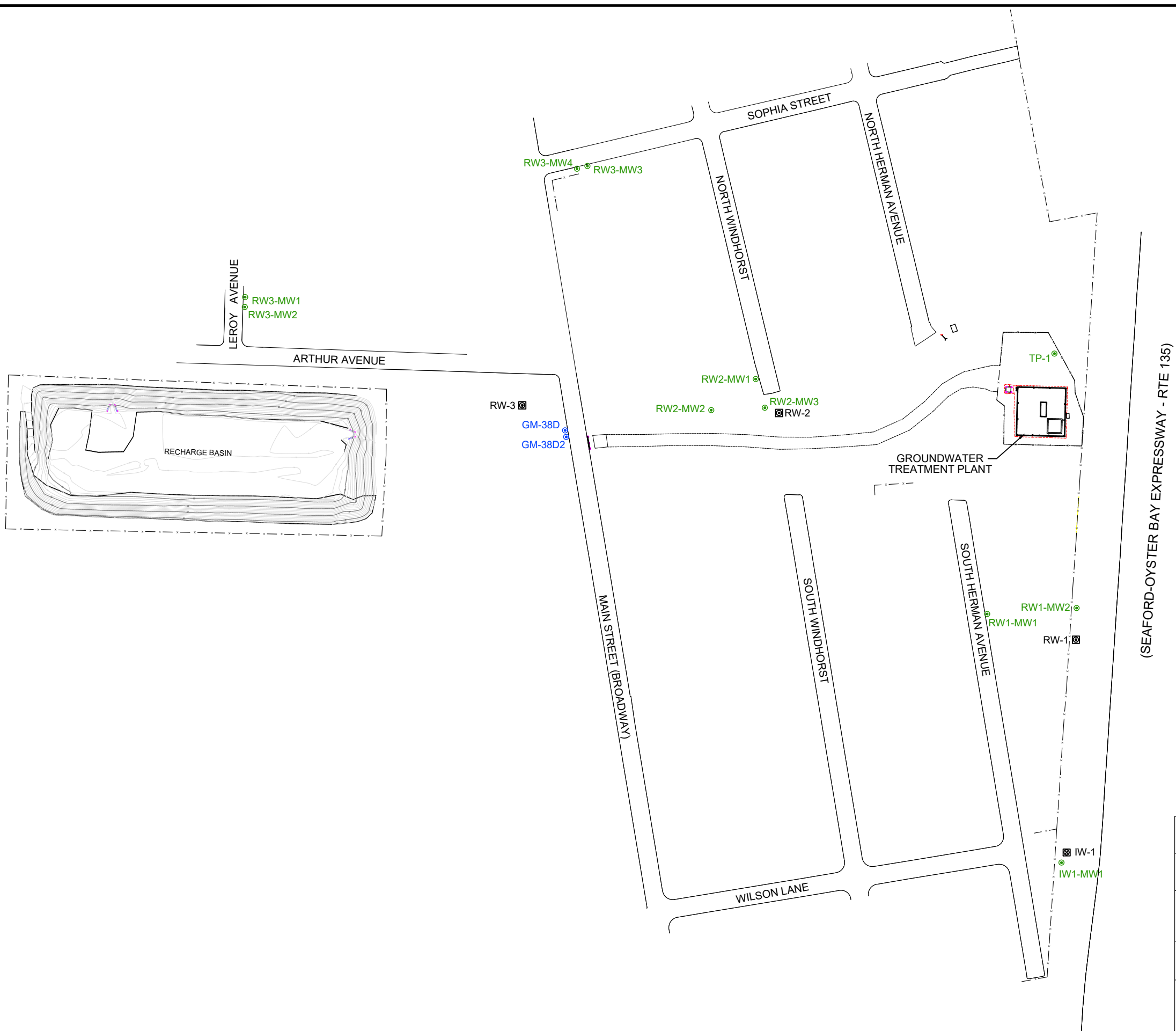
———— LIQUID PIPING

Process Flow Diagram			
Department of the Navy Naval Facilities Engineering Systems Command, Mid-Atlantic			
GM-38 Area Naval Weapons Industrial Reserve Plant Bethpage, New York			
KOMAN Government Solutions, LLC 180 Gordon Drive, Suite 110, Exton, PA 19341			
SCALE SEE BARSCALE	DATE 10/21/2022	FIGURE 2	

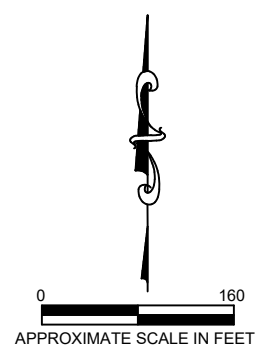
SOURCE:
TETRA TECH ENGINEERING CORPORATION, PC, 2006
UPDATED BY KGS, JANUARY 2022.

Legend

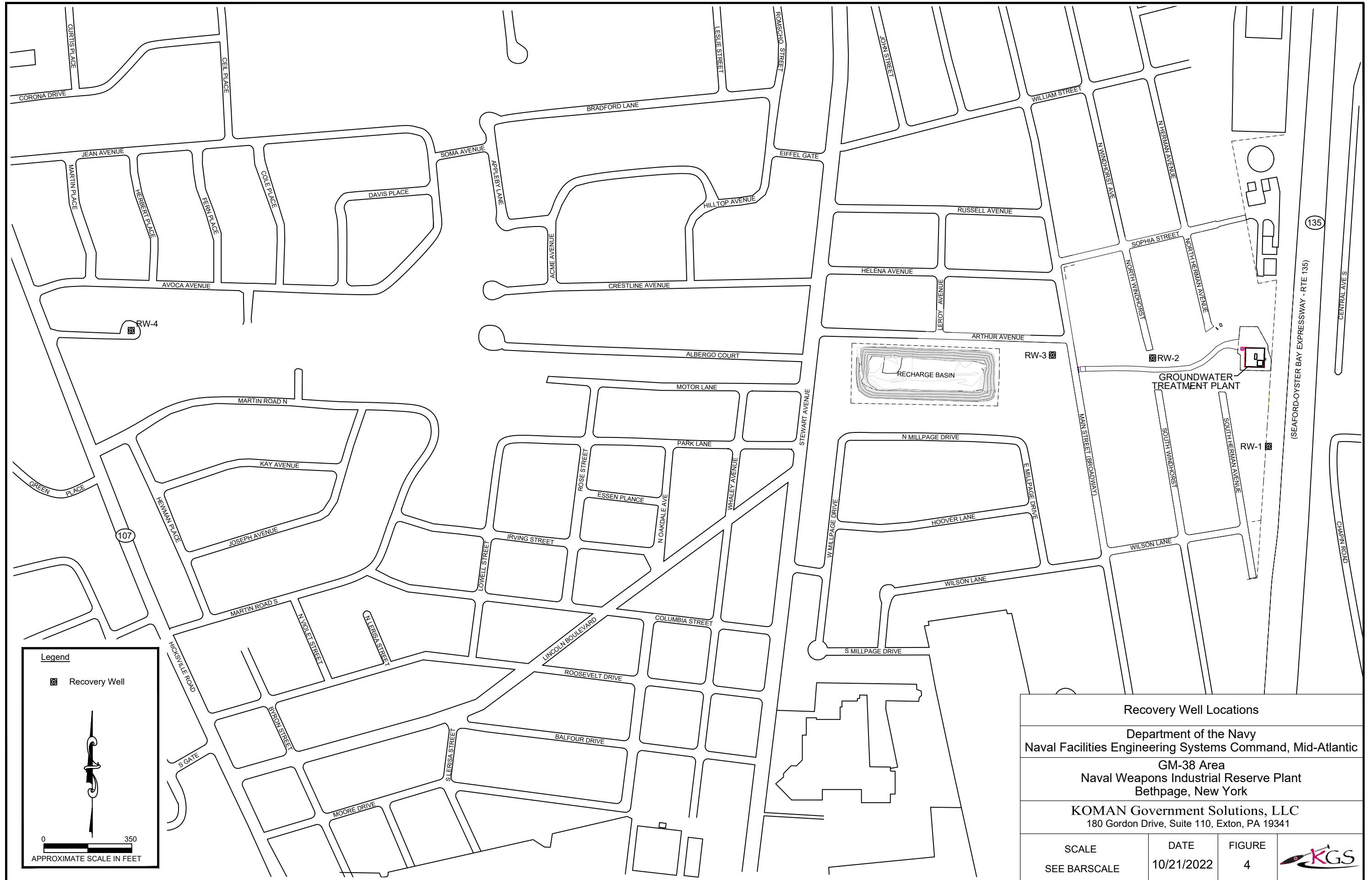
- Monitoring Well (Monitored by Navy)
- Monitoring Well (Monitored by Northrop Grumman)
- ⊠ Recovery Well
- ⊠ Injection Well



(SEAFORD-OYSTER BAY EXPRESSWAY - RTE 135)


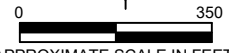


Site Map			
Department of the Navy Naval Facilities Engineering Systems Command, Mid-Atlantic			
GM-38 Area Naval Weapons Industrial Reserve Plant Bethpage, New York			
KOMAN Government Solutions, LLC 180 Gordon Drive, Suite 110, Exton, PA 19341			
SCALE SEE BARSCALE	DATE 10/21/2022	FIGURE 3	




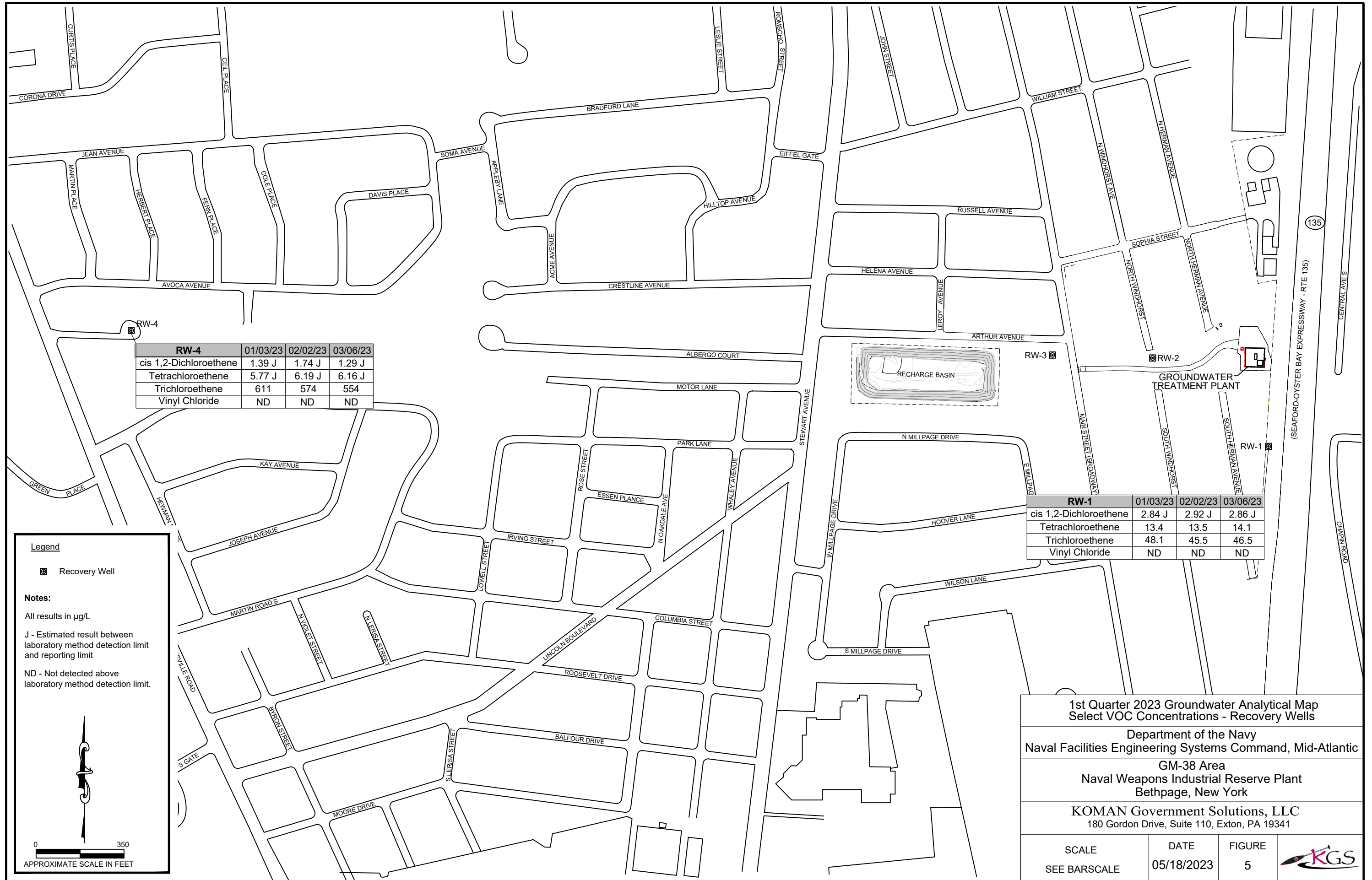
Legend

☒ Recovery Well

0 350
APPROXIMATE SCALE IN FEET

Recovery Well Locations			
Department of the Navy Naval Facilities Engineering Systems Command, Mid-Atlantic			
GM-38 Area Naval Weapons Industrial Reserve Plant Bethpage, New York			
KOMAN Government Solutions, LLC 180 Gordon Drive, Suite 110, Exton, PA 19341			
SCALE SEE BARSCALE	DATE 10/21/2022	FIGURE 4	

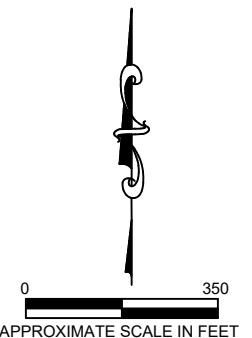


RW-4	01/03/23	02/02/23	03/06/23
cis 1,2-Dichloroethene	1.39 J	1.74 J	1.29 J
Tetrachloroethene	5.77 J	6.19 J	6.16 J
Trichloroethene	611	574	554
Vinyl Chloride	ND	ND	ND

RW-1	01/03/23	02/02/23	03/06/23
cis 1,2-Dichloroethene	2.84 J	2.92 J	2.86 J
Tetrachloroethene	13.4	13.5	14.1
Trichloroethene	48.1	45.5	46.5
Vinyl Chloride	ND	ND	ND

Legend
 Recovery Well

Notes:
 All results in µg/L
 J - Estimated result between laboratory method detection limit and reporting limit
 ND - Not detected above laboratory method detection limit.



**1st Quarter 2023 Groundwater Analytical Map
 Select VOC Concentrations - Recovery Wells**

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

GM-38 Area
 Naval Weapons Industrial Reserve Plant
 Bethpage, New York

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

SCALE	DATE	FIGURE	
SEE BARSCALE	05/18/2023	5	

Legend

- Monitoring Well (Monitored by Navy)
- Monitoring Well (Monitored by Northrop Grumman)
- ☒ Recovery Well
- ☒ Injection Well
- J Estimated value
- ND Not Detected above laboratory method detection limit

DCE Dichloroethene
PCE Tetrachloroethane
TCE Trichloroethane
VC Vinyl Chloride

Notes:
All concentrations reported in µg/L.

RW3-MW4		04/11/2023	
cis-1,2-DCE	ND		
PCE	ND		
TCE	5.18		
VC	ND		

RW3-MW3		04/11/2023		Duplicate	
cis-1,2-DCE	0.440 J			0.480 J	
PCE	0.400 J			0.520 J	
TCE	146			144	
VC	ND			ND	

RW3-MW2		04/11/2023	
cis-1,2-DCE	0.290 J		
PCE	0.270 J		
TCE	56.9		
VC	ND		

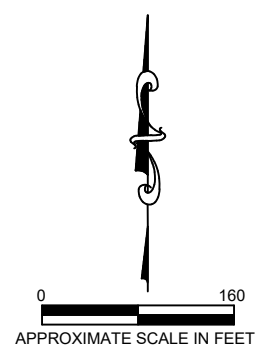
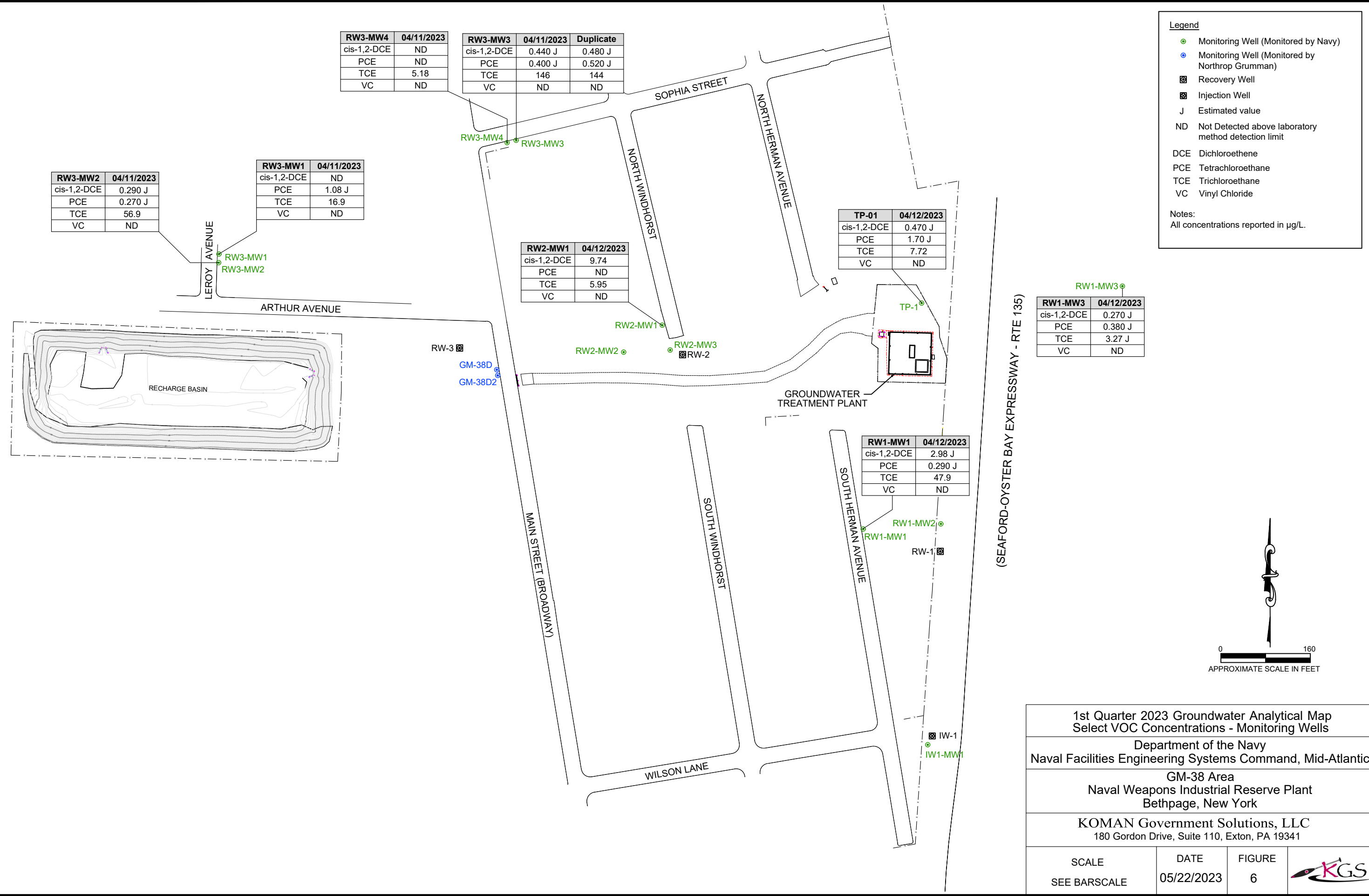
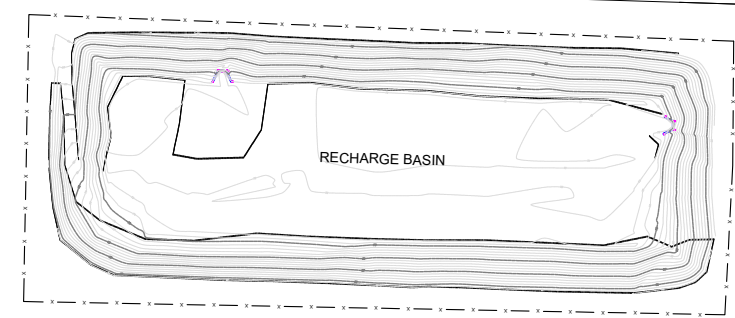
RW3-MW1		04/11/2023	
cis-1,2-DCE	ND		
PCE	1.08 J		
TCE	16.9		
VC	ND		

RW2-MW1		04/12/2023	
cis-1,2-DCE	9.74		
PCE	ND		
TCE	5.95		
VC	ND		

TP-01		04/12/2023	
cis-1,2-DCE	0.470 J		
PCE	1.70 J		
TCE	7.72		
VC	ND		

RW1-MW3		04/12/2023	
cis-1,2-DCE	0.270 J		
PCE	0.380 J		
TCE	3.27 J		
VC	ND		

RW1-MW1		04/12/2023	
cis-1,2-DCE	2.98 J		
PCE	0.290 J		
TCE	47.9		
VC	ND		



1st Quarter 2023 Groundwater Analytical Map Select VOC Concentrations - Monitoring Wells			
Department of the Navy Naval Facilities Engineering Systems Command, Mid-Atlantic			
GM-38 Area Naval Weapons Industrial Reserve Plant Bethpage, New York			
KOMAN Government Solutions, LLC 180 Gordon Drive, Suite 110, Exton, PA 19341			
SCALE SEE BARSCALE	DATE 05/22/2023	FIGURE 6	

Figure 7
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW1

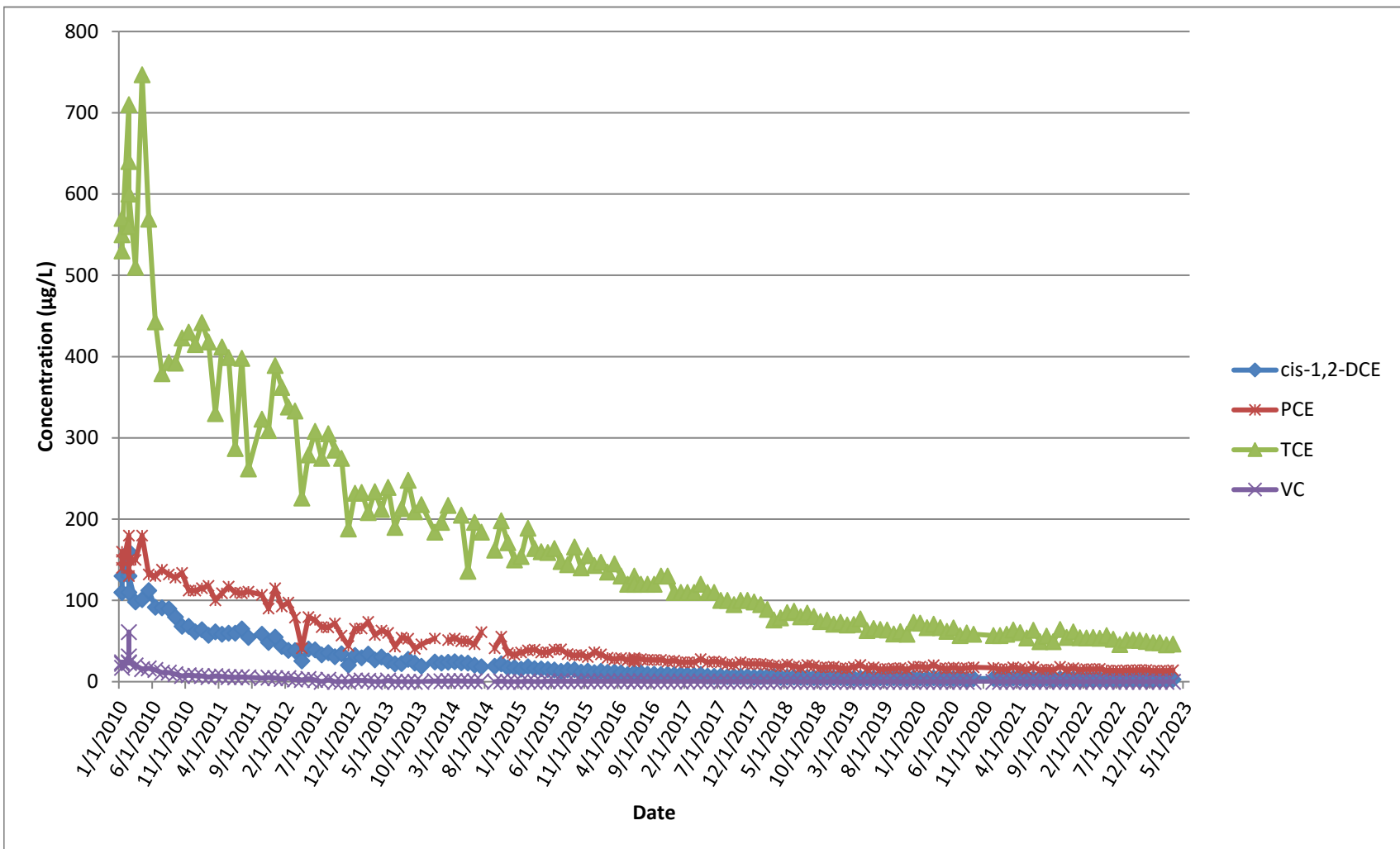


Figure 8
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW4

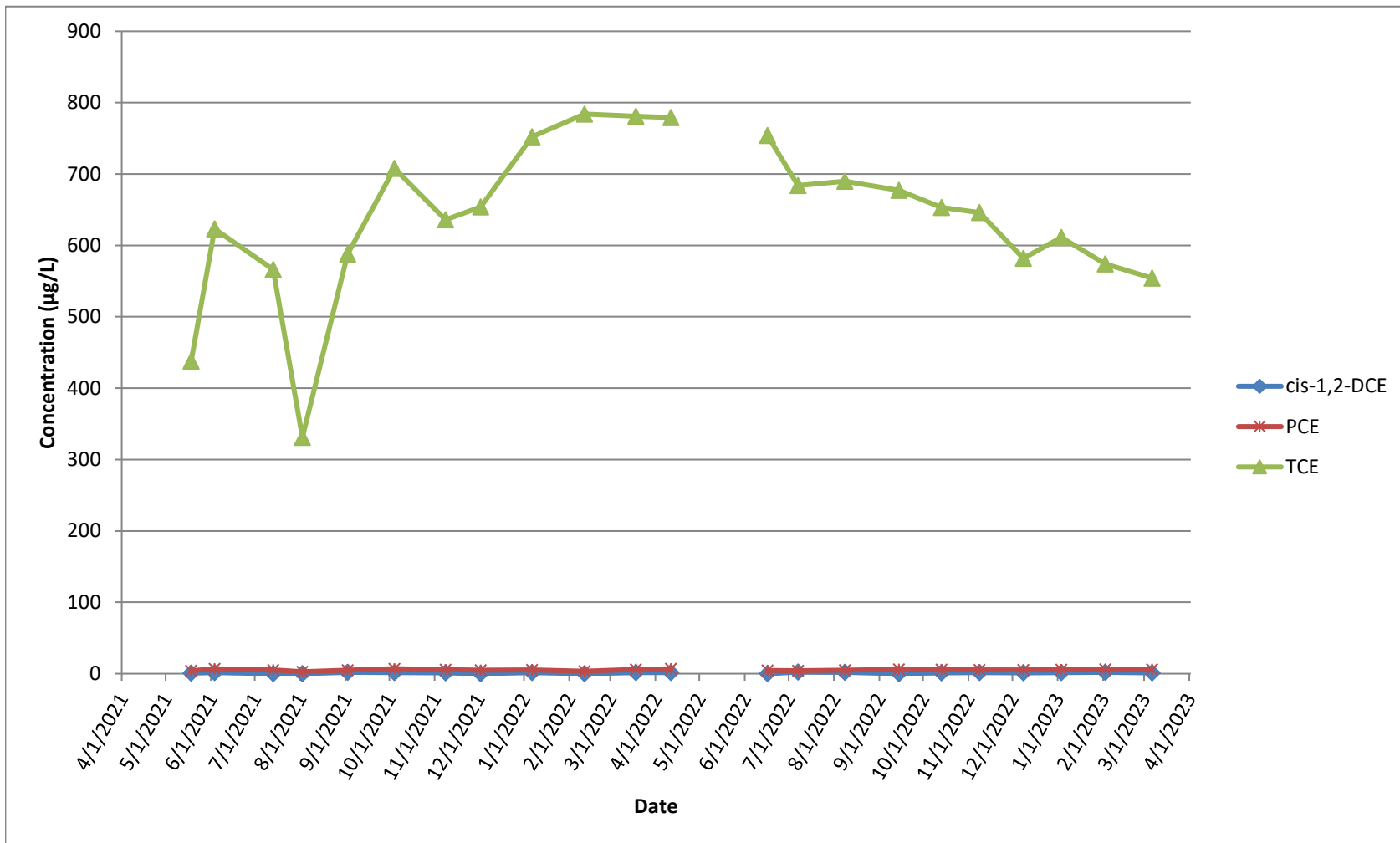


Figure 9
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW4

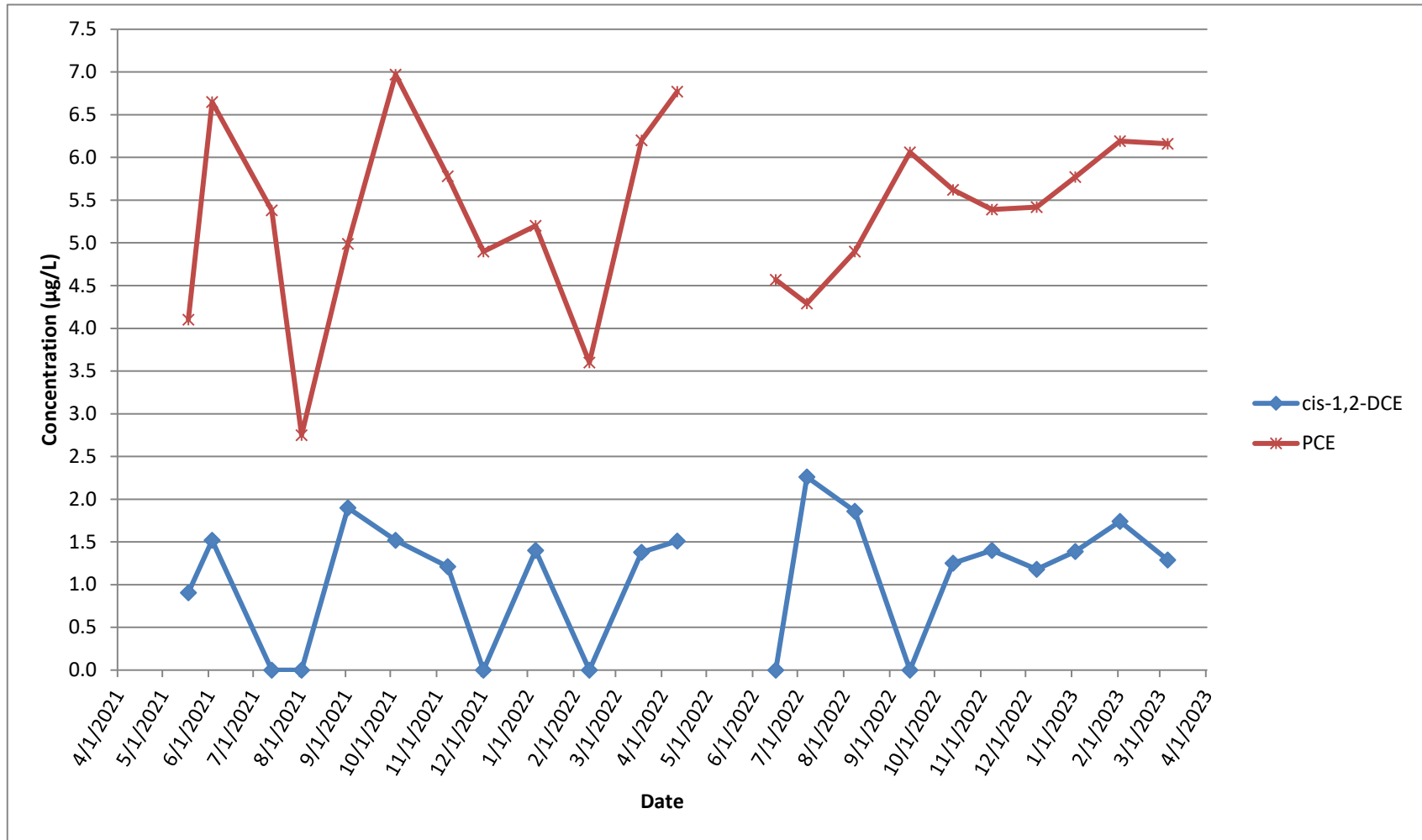


Figure 10
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW1-MW1

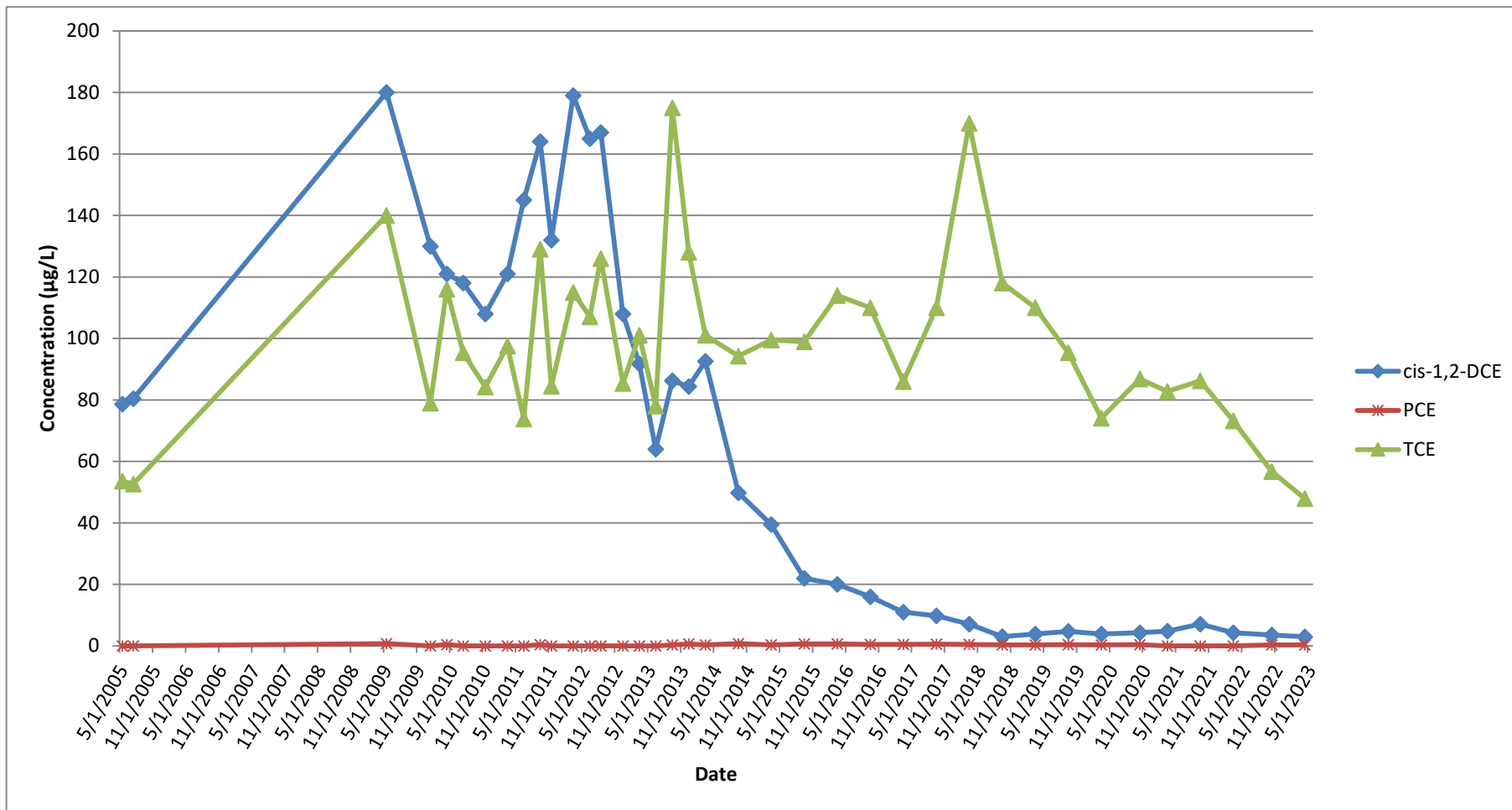


Figure 11
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW1-MW3

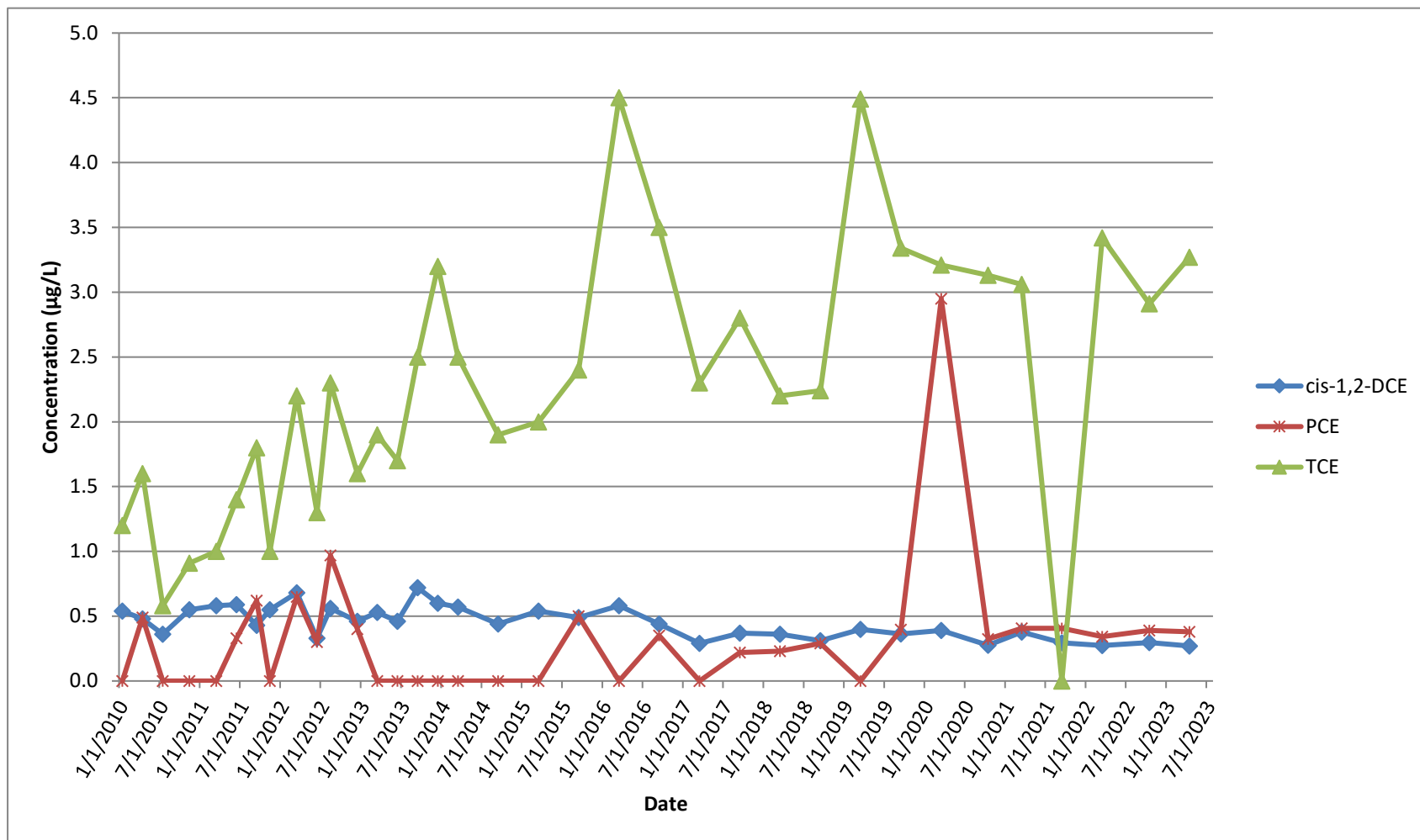


Figure 12
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW2-MW1

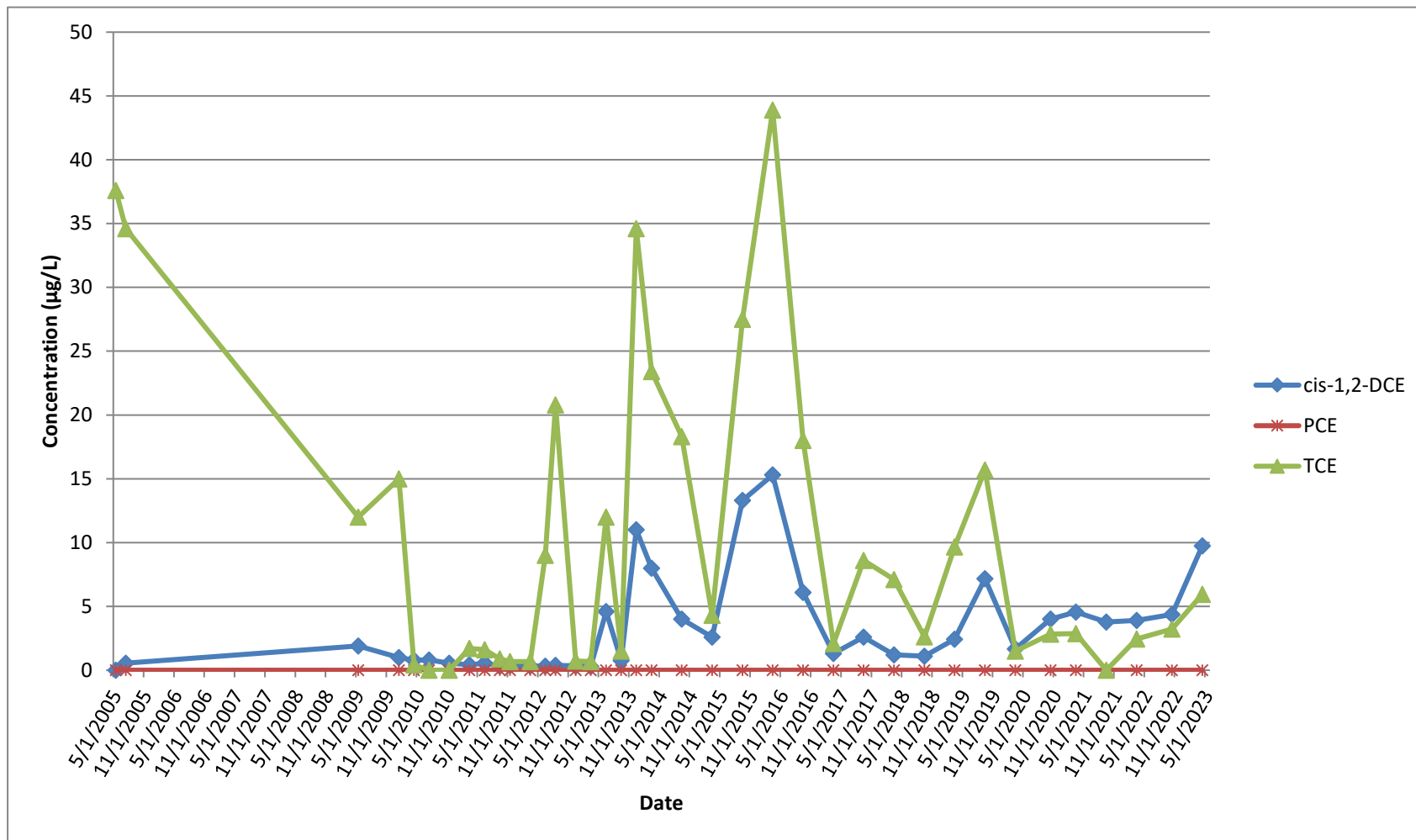


Figure 13
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW3-MW1

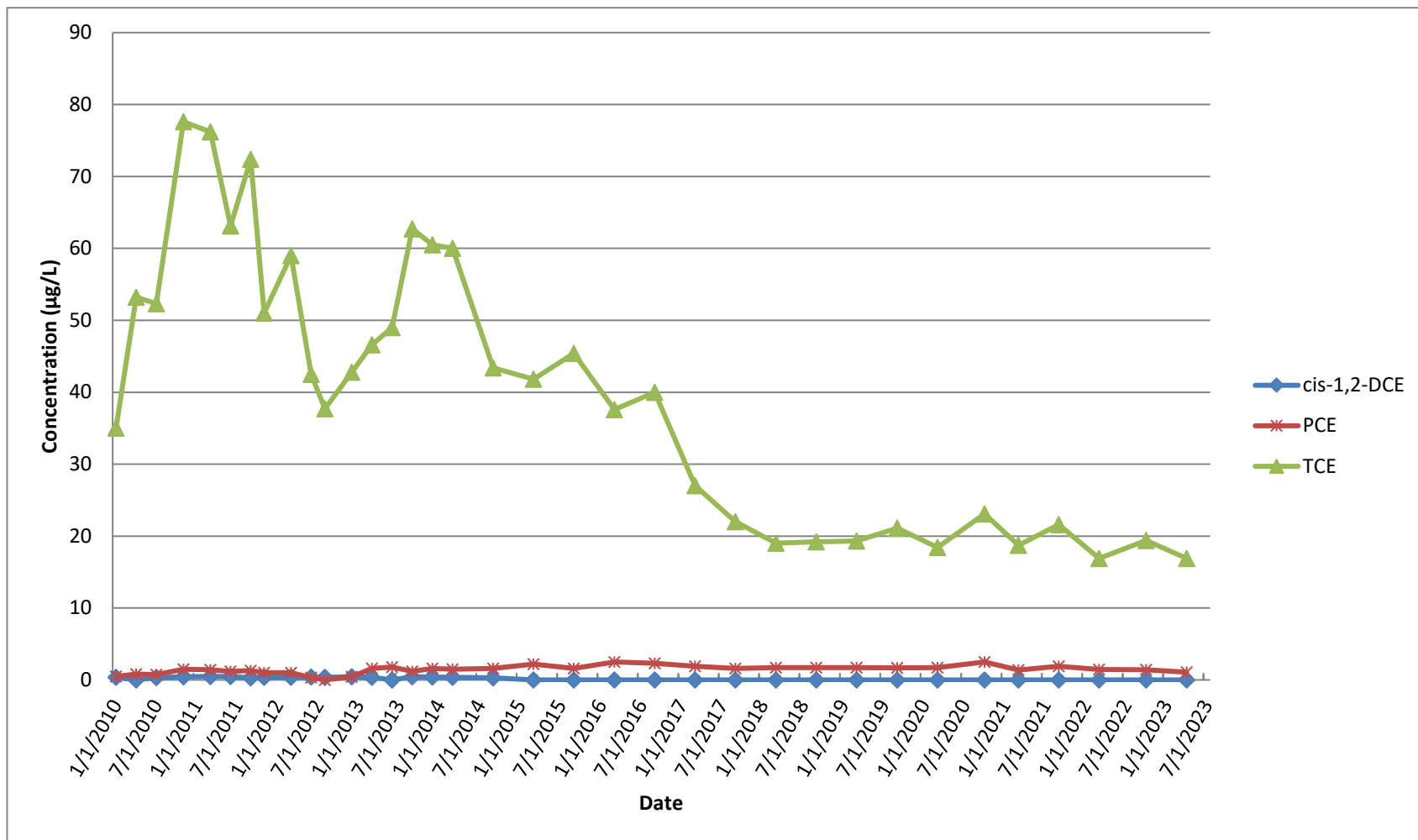


Figure 14
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW3-MW2

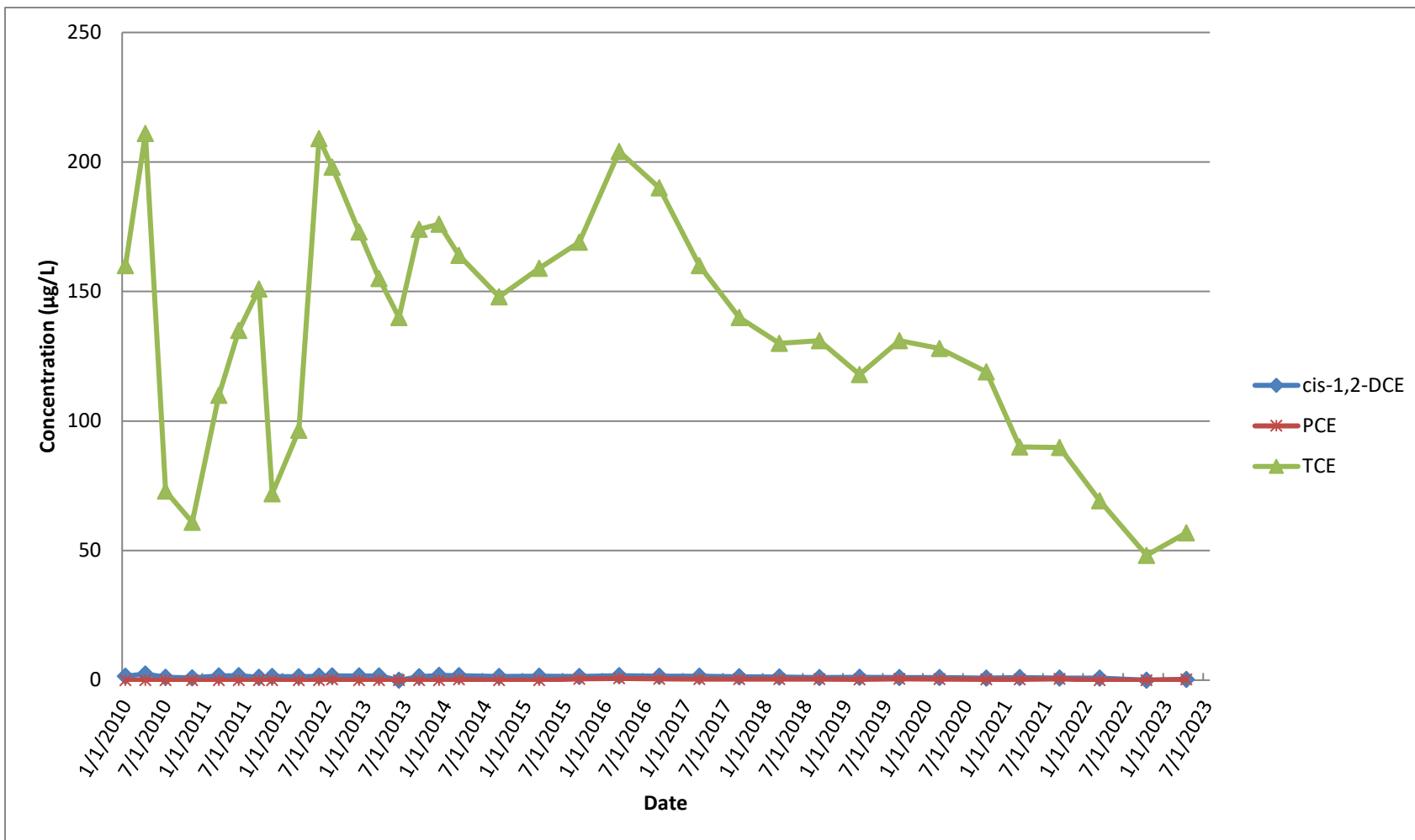


Figure 15
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW3-MW3

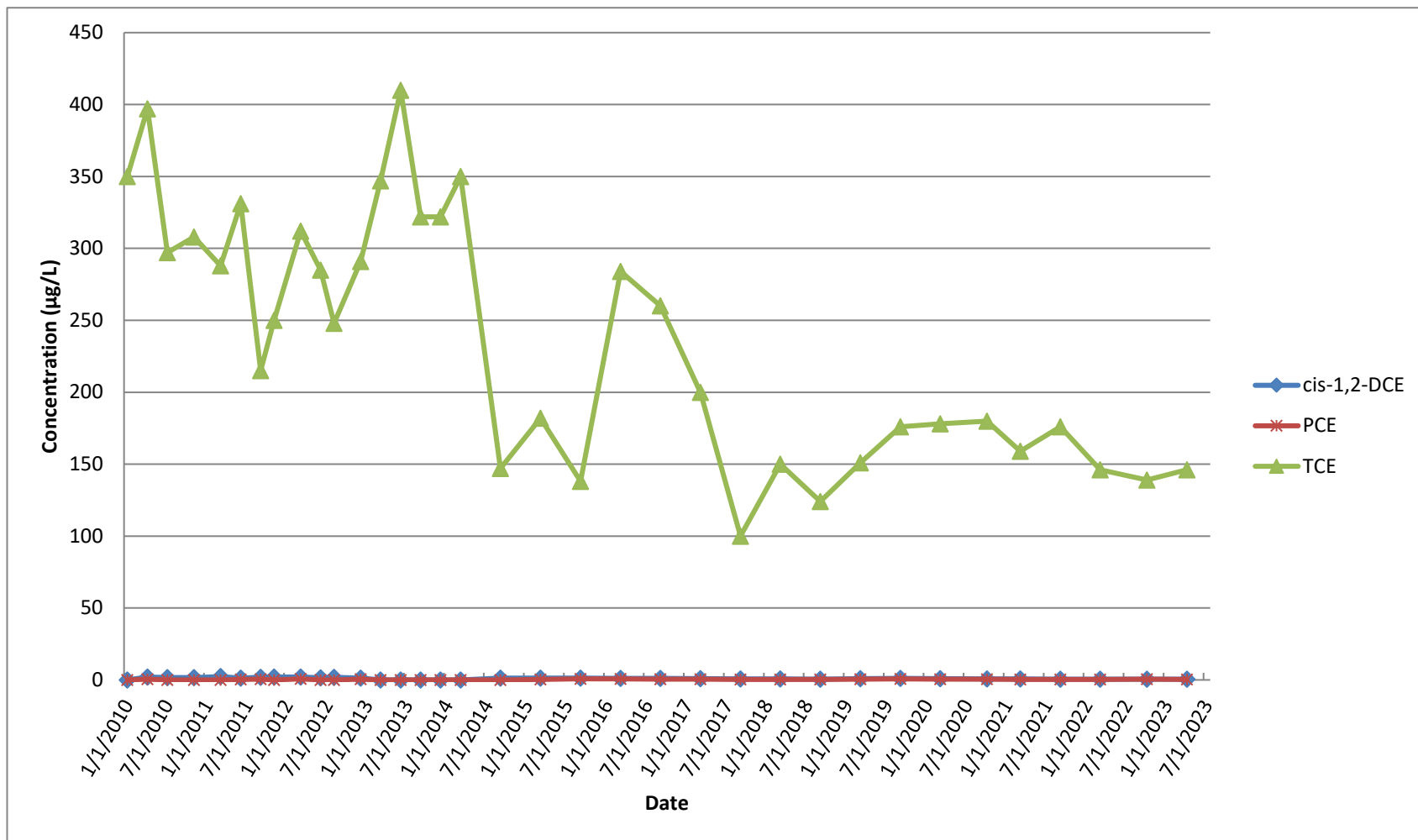


Figure 16
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
RW3-MW4

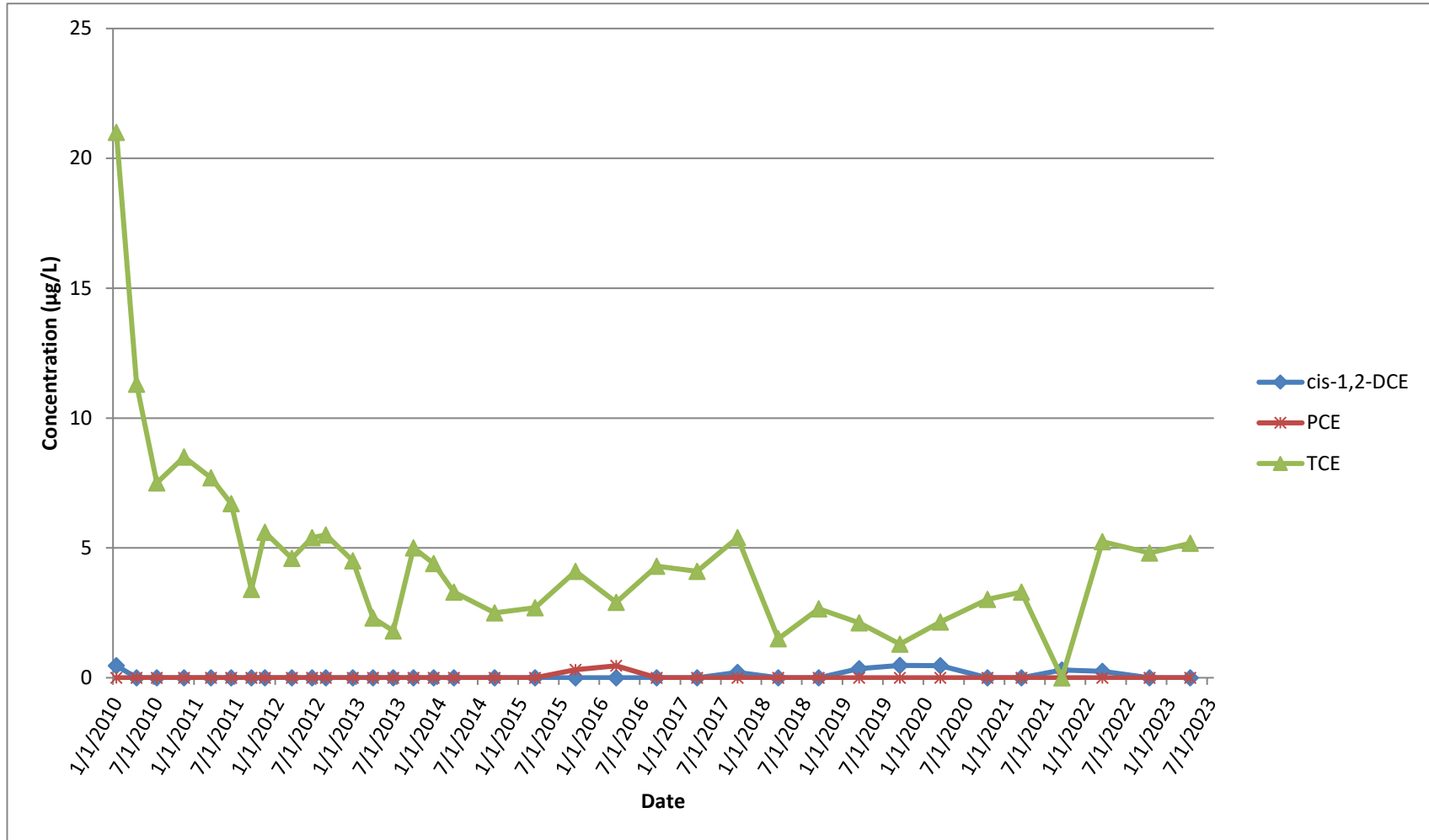
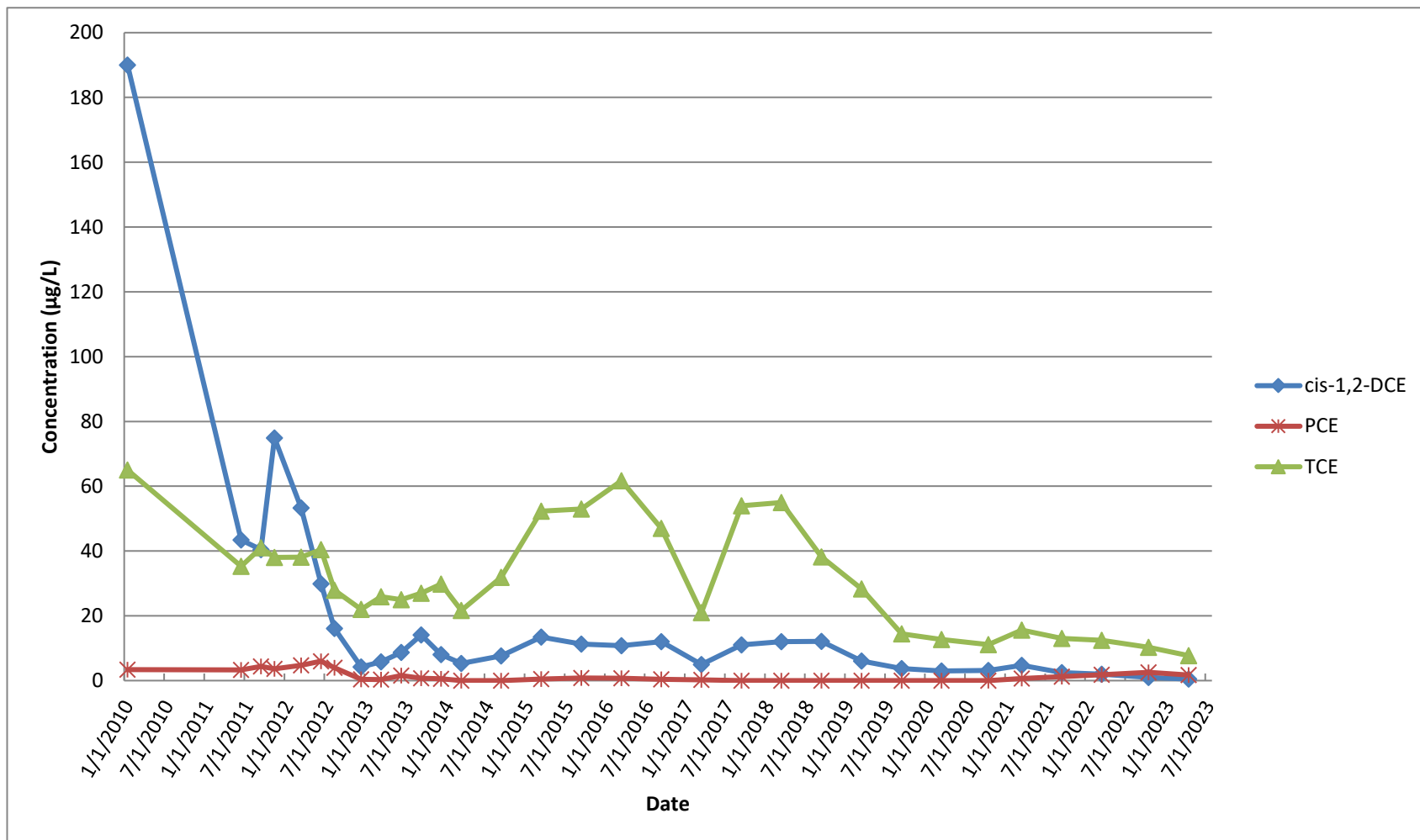


Figure 17
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs
TP-01



TABLES

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
First Quarter 2023

SPDES Parameters ¹	Daily Maximum Goal	Units	January 2023											
			RW-1	RW-3	RW-4	Combined Influent	Treated Effluent	Treated Effluent DUPLICATE	Air Stripper Effluent (ASE)	Bag Filter Effluent (BFE)	Liquid Carbon 1 Effluent (LC1)	Liquid Carbon 2 Effluent (LC2)	Liquid Carbon 3 Effluent (LC3)	AOP Influent
Process Stream														
Well Depth		ft	445	530	675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Screened Interval		ft	335-395 410-430	392-412 442-504	570-670	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sampling Date	N/A		1/3/23											
Average Flowrate	1100	GPM	495	0	495	990	1,025	NR	NR	979	NR	NR	NR	NR
Total Flow	N/A	gallons	22,074,233	0	22,041,933	44,116,167	45,662,167	NR	NR	43,616,933	NR	NR	NR	NR
pH	5.5 - 8.5	SU	5.49	NS	6.37	5.93	7.02	7.00	6.96	6.98	6.98	6.99	7.02	6.83
Chloroform	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	5	µg/L	0.906 J	NS	ND (1.0)	0.45 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	0.6	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	5	µg/L	0.517 J	NS	1.36 J	0.94 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis 1,2-Dichloroethene	5	µg/L	2.84 J	NS	1.39 J	2.12 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans 1,2-Dichloroethene	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5	µg/L	13.4	NS	5.77 J	9.6	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	5	µg/L	0.287 J	NS	ND (1.0)	0.14 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Trichloroethene	5	µg/L	48.1	NS	611	329.3	ND (1.0)	ND (1.0)	5.83	5.65	ND (1.0)	ND (1.0)	ND (1.0)	5.47
1,1,2-Trichlorotrifluoroethane	5	µg/L	ND (1.0)	NS	5.55 J	2.8 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl Chloride	2	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dioxane - 8270D	1	µg/L	1.6	NS	12	6.8	0.28	0.21	NS	NS	NS	NS	NS	7.1
Mercury	0.00025	mg/L	ND (0.00010)	NS	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	NS
Total Suspended Solids (TSS)	N/A	mg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NS

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
First Quarter 2023

SPDES Parameters ¹	Daily Maximum Goal	Units	February 2023											
			RW-1	RW-3	RW-4	Combined Influent	Treated Effluent	Treated Effluent DUPLICATE	Air Stripper Effluent (ASE)	Bag Filter Effluent (BFE)	Liquid Carbon 1 Effluent (LC1)	Liquid Carbon 2 Effluent (LC2)	Liquid Carbon 3 Effluent (LC3)	AOP Influent
Process Stream														
Well Depth		ft	445	530	675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Screened Interval		ft	335-395 410-430	392-412 442-504	570-670	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sampling Date	N/A		2/2/23											
Average Flowrate	1100	GPM	492	0	480	971	999	NR	NR	961	NR	NR	NR	NR
Total Flow	N/A	gallons	19,672,900	0	19,193,200	38,866,100	39,984,800	NR	NR	38,472,000	NR	NR	NR	NR
pH	5.5 - 8.5	SU	5.68	NS	6.28	5.98	6.69	6.68	6.68	6.88	6.67	6.68	6.68	6.67
Chloroform	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	5	µg/L	1.05 J	NS	ND (1.0)	0.53 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	0.6	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	5	µg/L	0.676 J	NS	1.64 J	1.15 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis 1,2-Dichloroethene	5	µg/L	2.92 J	NS	1.74 J	2.34 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans 1,2-Dichloroethene	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5	µg/L	13.5	NS	6.19 J	9.9	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	5	µg/L	0.418 J	NS	ND (1.0)	0.21 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Trichloroethene	5	µg/L	45.5	NS	574	306.5	ND (1.0)	ND (1.0)	4.41 J	4.25 J	ND (1.0)	ND (1.0)	ND (1.0)	3.98 J
1,1,2-Trichlorotrifluoroethane	5	µg/L	ND (1.0)	NS	6.97 J	3.4 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl Chloride	2	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dioxane - 8270D	1	µg/L	1.3	NS	11	6.1	0.23	0.22	NS	NS	NS	NS	NS	6.3
Mercury	0.00025	mg/L	ND (0.00010)	NS	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)
Total Suspended Solids (TSS)	N/A	mg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NS

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
First Quarter 2023

SPDES Parameters ¹	Daily Maximum Goal	Units	March 2023											
			RW-1	RW-3	RW-4	Combined Influent	Treated Effluent	Treated Effluent DUPLICATE	Air Stripper Effluent (ASE)	Bag Filter Effluent (BFE)	Liquid Carbon 1 Effluent (LC1)	Liquid Carbon 2 Effluent (LC2)	Liquid Carbon 3 Effluent (LC3)	AOP Influent
Process Stream														
Well Depth		ft	445	530	675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Screened Interval		ft	335-395 410-430	392-412 442-504	570-670	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sampling Date	N/A		3/6/23											
Average Flowrate	1100	GPM	499	0	487	986	1,008	NR	NR	966	NR	NR	NR	NR
Total Flow	N/A	gallons	22,152,000	0	21,636,100	43,788,100	44,754,700	NR	NR	42,904,800	NR	NR	NR	NR
pH	5.5 - 8.5	SU	5.71	NS	6.37	6.04	6.64	6.65	6.90	6.91	6.65	6.65	6.64	6.66
Chloroform	5	µg/L	ND (1.0)	NS	2.64 J	1.30 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	5	µg/L	0.952 J	NS	ND (1.0)	0.48 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	0.6	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	5	µg/L	0.621 J	NS	1.45 J	1.03 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis 1,2-Dichloroethene	5	µg/L	2.86 J	NS	1.29 J	2.08 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans 1,2-Dichloroethene	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5	µg/L	14.1	NS	6.16 J	10.2	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	5	µg/L	0.367 J	NS	ND (1.0)	0.19 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Trichloroethene	5	µg/L	46.5	NS	554	297.3	ND (1.0)	ND (1.0)	4.99 J	4.68 J	ND (1.0)	ND (1.0)	ND (1.0)	4.36 J
1,1,2-Trichlorotrifluoroethane	5	µg/L	ND (1.0)	NS	6.63 J	3.3 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl Chloride	2	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dioxane - 8270D	1	µg/L	2.0	NS	13	7.4	0.20	0.21	NS	NS	NS	NS	NS	7.2
Mercury	0.00025	mg/L	ND (0.00010)	NS	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)	NS
Total Suspended Solids (TSS)	N/A	mg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NS

Notes:

B - Method blank contamination

J - Estimated result between laboratory method detection limit and reporting limit

NA - Not Applicable

ND - Not detected above laboratory method detection limit. Limit of detection (LOD) given in parentheses.

NR - Not Recorded

NS - Not Sampled

gpm - gallons per minute

(1) Wastewater discharge equivalence permit renewed on 18 August 2017. Discharge limits established for 10 years. Chloroform, 1,4-dioxane and 1,1,2-trichlorotrifluoroethane are now monitored under the new permit.

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
First Quarter 2023

DAR Parameters	Discharge Goal ⁽³⁾	Units	January 2023				
			Influent (VC11)	Effluent	Effluent Duplicate	VC12	VC23
Process Stream							
Sampling Date			1/3/23				
Average Flowrate	N/A	CFM	NR	8,358			
Total Flow ⁽¹⁾	N/A	ft ³	NR	372,339,000	NR	NR	NR
Total Flow ⁽²⁾	N/A	m ³	NR	10,543,466	NR	NR	NR
1,2-Dichloroethane	N/A	µg/m ³	ND	2.0 J	1.8 J	ND	2.0 J
cis 1,2-Dichloroethene	≤ 100,000 ⁽⁴⁾	µg/m ³	31	48	49	ND	51
trans 1,2-Dichloroethene		µg/m ³	ND	1.4 J	ND	ND	1.6 J
1,2-Dichloroethene (total)	≤ 100,000	µg/m ³	ND	48	48	ND	52
Toluene	N/A	µg/m ³	ND	ND	ND	ND	ND
Total Xylene	N/A	µg/m ³	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	N/A	µg/m ³	ND	ND	ND	ND	ND
Trichloroethene	≤ 2600	µg/m ³	6400	1.4 J	1.4 J	20	1.9 J
Vinyl Chloride	≤ 560	µg/m ³	ND	ND	ND	ND	ND
Tetrachloroethene	≤ 5100	µg/m ³	160	ND	ND	4.6 J	ND

Notes:

NA - Not applicable

ND - Not detected

NR - Not recorded

SGC - Short-term Guideline Concentration

µg/m³ - micrograms per cubic meter

CFM - cubic feet per minute

DAR - Division of Air Resources

(1) Total Flow (ft³) = avg flowrate (cfm) * operational time (min)

(2) Total Flow (m³) = total flow (ft³) * (0.3048³)m³/ft³

(3) Discharge goal approved by NYSDEC's letter dated 10/31/2013.

(4) Discharge goal is for total 1,2-Dichloroethene.

Goals based on an assumed air flow rate of 8,000 CFM

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
First Quarter 2023

DAR Parameters	Discharge Goal ⁽³⁾	Units	February 2023				
			Influent (VCI1)	Effluent	Effluent Duplicate	VC12	VC23
Process Stream							
Sampling Date			2/2/23				
Average Flowrate	N/A	CFM	NR	6,819			
Total Flow ⁽¹⁾	N/A	ft ³	NR	272,891,933	NR	NR	NR
Total Flow ⁽²⁾	N/A	m ³	NR	7,727,439	NR	NR	NR
1,2-Dichloroethane	N/A	µg/m ³	ND	2.1 J	2.1 J	ND	2.0 J
cis 1,2-Dichloroethene	≤ 100,000 ⁽⁴⁾	µg/m ³	25	42	45	ND	43
trans 1,2-Dichloroethene		µg/m ³	ND	ND	ND	ND	1.4 J
1,2-Dichloroethene (total)	≤ 100,000	µg/m ³	ND	44	44	ND	45
Toluene	N/A	µg/m ³	ND	ND	ND	ND	ND
Total Xylene	N/A	µg/m ³	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	N/A	µg/m ³	ND	ND	ND	ND	ND
Trichloroethene	≤ 2600	µg/m ³	6600	ND	ND	14	1.6 J
Vinyl Chloride	≤ 560	µg/m ³	ND	ND	ND	ND	ND
Tetrachloroethene	≤ 5100	µg/m ³	150	ND	ND	4.8	ND

Notes:

NA - Not applicable

ND - Not detected

NR - Not recorded

SGC - Short-term Guideline Concentration

µg/m³ - micrograms per cubic meter

CFM - cubic feet per minute

DAR - Division of Air Resources

(1) Total Flow (ft³) = avg flowrate (cfm) * operational time (min)

(2) Total Flow (m³) = total flow (ft³) * (0.3048³)m³/ft³

(3) Discharge goal approved by NYSDEC's letter dated 10/31/2013.

(4) Discharge goal is for total 1,2-Dichloroethene.

Goals based on an assumed air flow rate of 8,000 CFM

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
First Quarter 2023

DAR Parameters	Discharge Goal ⁽³⁾	Units	March 2023				
			Influent (VCI1)	Effluent	Effluent Duplicate	VC12	VC23
Process Stream							
Sampling Date			3/6/23				
Average Flowrate	N/A	CFM	NR	6,076			
Total Flow ⁽¹⁾	N/A	ft ³	NR	269,774,400	NR	NR	NR
Total Flow ⁽²⁾	N/A	m ³	NR	7,639,160	NR	NR	NR
1,2-Dichloroethane	N/A	µg/m ³	ND	2.2 J	2.3 J	ND	2.1 J
cis 1,2-Dichloroethene	≤ 100,000 ⁽⁴⁾	µg/m ³	38	38	38	ND	42
trans 1,2-Dichloroethene		µg/m ³	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	≤ 100,000	µg/m ³	ND	38	38	ND	42
Toluene	N/A	µg/m ³	ND	ND	ND	ND	ND
Total Xylene	N/A	µg/m ³	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	N/A	µg/m ³	ND	ND	ND	ND	ND
Trichloroethene	≤ 2600	µg/m ³	7800	ND	ND	12	ND
Vinyl Chloride	≤ 560	µg/m ³	ND	ND	ND	ND	ND
Tetrachloroethene	≤ 5100	µg/m ³	220	ND	ND	5.5	ND

Notes:

NA - Not applicable

ND - Not detected

NR - Not recorded

SGC - Short-term Guideline Concentration

µg/m³ - micrograms per cubic meter

CFM - cubic feet per minute

DAR - Division of Air Resources

(1) Total Flow (ft³) = avg flowrate (cfm) * operational time (min)

(2) Total Flow (m³) = total flow (ft³) * (0.3048³)m³/ft³

(3) Discharge goal approved by NYSDEC's letter dated 10/31/2013.

(4) Discharge goal is for total 1,2-Dichloroethene.

Goals based on an assumed air flow rate of 8,000 CFM

Table 3
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Stack Emissions
First Quarter 2023

DAR Parameters	Discharge Goal ⁽¹⁾	Units	January 2023	February 2023	March 2023
Sampling Date			1/3/23	2/2/23	3/6/23
Average Flowrate	N/A	CFM	8,358	6,819	6,076
Total Flow	N/A	ft ³	372,339,000	272,891,933	269,774,400
Total Flow	N/A	m ³	10,543,466	7,727,439	7,639,160
Trichloroethene	≤ 0.09	lb/hr	0.00004	0.00000	0.00000
Vinyl Chloride	≤ 0.02	lb/hr	0.00000	0.00000	0.00000
1,2 Dichloroethene	≤ 11	lb/hr	0.00150	0.00112	0.00086
1,2-Dichloroethane	N/A	lb/hr	0.00006	0.00005	0.00005
Toluene	N/A	lb/hr	0.00000	0.00000	0.00000
Total Xylene	N/A	lb/hr	0.00000	0.00000	0.00000
1,1,2-Trichloroethane	N/A	lb/hr	0.00000	0.00000	0.00000
Tetrachloroethene	≤ 0.18	lb/hr	0.00000	0.00000	0.00000

Notes:

NA - Not applicable

lb/hr - pounds per hour

DAR - Division of Air Resources

CFM - Cubic feet per minute

Stack Emissions (lb/hr) = average flowrate (cfm) * (0.3048^{^3})m³/ft³ * conc.(ug/m³) * 1 lb/453592370 ug * 60 min/hr

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.

Goals based on an assumed air flow rate of 8,000 CFM

Table 4
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Level Measurements
First Quarter 2023

Monitoring Well ID	Date	Well Elevation (ft amsl)	Total Depth (ft)	Screen Interval (ft)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
RW1-MW1	3/21/2023	85.86	435	395-435	39.76	46.10
RW1-MW2	3/21/2023	87.35	435	395-435	41.43	45.92
RW1-MW3	3/21/2023	80.34	435	395-435	42.25	38.09
RW2-MW1	3/21/2023	90.75	510	470-510	42.34	48.41
RW2-MW2	3/21/2023	90.15	510	470-510	41.98	48.17
RW2-MW3	3/21/2023	89.75	510	470-510	41.55	48.20
RW3-MW1	3/21/2023	92.22	350	330-350	42.76	49.46
RW3-MW2	3/21/2023	91.98	495	475-495	43.51	48.47
RW3-MW3	3/21/2023	92.98	340	320-340	44.83	48.15
RW3-MW4	3/21/2023	92.92	495	475-495	40.38	52.54
TP-01	3/21/2023	85.91	470	450-470	34.25	51.66
IW1-MW1	3/21/2023	89.41	150	20-150	40.30	49.11
RW-1	NA	91.37	340	320-340	NA	NA
RW-3	NA	91.57	495	475-495	NA	NA
RW-4	NA	NA	675	570-670	NA	NA

Notes:

amsl - above mean sea level

ft - feet

NA - Not Applicable

NM - Not Measured

Table 5
Summary of Final Groundwater Chemistry Data
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Groundwater Chemistry Results
First Quarter 2023

Location	Temp (°C)	pH (SU)	S.C. (uS/cm ³)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color (Visual)
RW1-MW1	15.8	4.83	150.4	1.31	284.0	0.84	Clear
RW1-MW3	14.5	5.19	180.8	0.22	180.9	4.25	Clear
RW2-MW1	15.7	8.15	162.0	0.19	-29.3	2.91	Clear
RW3-MW1	14.2	4.52	160.4	5.70	325.1	0.50	Clear
RW3-MW2	13.8	4.55	83.8	5.62	318.2	6.56	Clear
RW3-MW3	14.8	4.63	127.0	2.85	299.2	6.30	Clear
RW3-MW4	14.4	4.42	131.8	1.77	335.8	0.30	Clear
TP-01	13.7	5.70	340.9	3.92	208.4	0.55	Clear

Notes:

S.C. = Specific Conductance
mS/cm = milliSiemens per centimeter
NTU = nephelometric turbidity units
mg/L = milligrams per liter
°C = degrees celsius
mV = millivolts
SU = standard units
ORP = oxidation/reduction potential

Table 6
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Detected Groundwater Analytical Results
First Quarter 2023

Sample ID	RW1-MW1	RW1-MW3	RW2-MW1	RW3-MW1	RW3-MW2	RW3-MW3	RW3-MW3	RW3-MW4	TP-01	RW-1	RW-4
Sample Date	4/12/2023	4/12/2023	4/12/2023	4/11/2023	4/11/2023	4/11/2023	4/11/2023	4/11/2023	4/12/2023	4/4/2023	4/4/2023
Comments							Duplicate				
VOCS (EPA 624.1) ug/L ⁽¹⁾											
Chloroform	ND	0.560 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	2.88 J	2.95 J	2.59 J	ND	0.280 J	1.03 J	1.04 J	3.27 J	0.630 J	1.01 J	ND
1,2-dichloroethane	ND	ND	0.460 J	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	0.990 J	0.780 J	0.680 J	ND	ND	0.770 J	0.840 J	0.760 J	0.250 J	0.505 J	1.25 J
cis-1,2-dichloroethene	2.98 J	0.270 J	9.74	ND	0.290 J	0.440 J	0.480 J	ND	0.470 J	2.90 J	1.20 J
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.290 J	0.380 J	ND	1.08 J	0.270 J	0.400 J	0.520 J	ND	1.70 J	13.2	5.40 J
1,1,1-trichloroethane	0.600 J	0.520 J	ND	ND	ND	ND	ND	0.550 J	ND	0.392 J	ND
1,1,2-trichloroethane	ND	0.330 J	ND	ND	ND	ND	ND	ND	ND	NS	NS
Trichloroethene	47.9	3.27 J	5.95	16.9	56.9	146	144	5.18	7.72	46.1	597
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane (EPA 8270D) ug/L	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7	13
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	1.0	ND	2.4	ND	3.5	2.0	1.6	ND	ND	ND	ND

Notes:

J = estimated value

ND = Not detected above laboratory method detection limit

mg/L = milligrams per liter

µg/L = micrograms per liter

NS = Not Sampled

(1) Samples were analyzed for TCL VOCs (including tentatively identified compounds [TICs]). Only those VOCs detected are presented above.

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW1-MW1															
Sample Date	5/4/2005	7/22/2005	5/27/2009	1/21/2010	4/21/2010	7/28/2010	11/10/2010	3/25/2011	6/14/2011 ⁽¹⁾	6/14/2011	9/28/2011	11/30/2011	3/8/2012	6/6/2012	6/6/2012	8/21/2012
Comments										Duplicate					Duplicate	
Well Depth (Ft)	435															
Screened Interval (Ft)	395-435															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	30 R
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
2-butanone	R	R	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	0.32J	ND	ND	ND	0.17J	ND	NR	NR	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	NR	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
Chloroform	ND	0.7J	1.1	ND	0.70J	0.65J	0.56J	0.55J	NR	NR	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	0.74J	0.79J	3.3	2.9J	2.8	2.8	3.0	3.6	1.6 J	4.2 J	4.0 J	4.1	5.2	4.8	4.3	5.3
1,2-dichloroethane	ND	ND	0.29J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	1.3	2.8	3.1	1.7J	1.9	1.7	1.7	1.9	0.85 J	2.1 J	2.3 J	2.1	2.7	2.5	2.3	2.8
cis-1,2-dichloroethene	78.6	80.4	180D	130	121	118	108	121	55.8 J	145 J	164	132	179	165	145	167
trans-1,2-dichloroethene	2.0	1.3J	2.8	4J	2.9	2.1	1.3	4.2	0.71 J	2.0 J	2.0 J	1.7	3.0	3.7	2.6	2.4
1,2-dichloropropane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
1,4-dioxane	1.75J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
2-hexanone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
styrene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	0.72J	ND	0.42J	ND	ND	ND	ND	ND	0.36 J	ND	ND	ND	ND	ND
Toluene	ND	0.33J	0.68	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	0.71J	ND	0.52J	0.43J	0.53J	0.79J	ND	0.63 J	1.1 J	0.66 J	0.96 J	0.98 J	0.89 J	0.99 J
1,1,2-trichloroethane	ND	ND	0.58J	NR	ND	ND	ND	ND	NR	NR	ND	0.33 J	ND	ND	ND	ND
Trichloroethene	53.6	52.7	140.0	79.0	116	95.4	84.2	97.6	26.6 J	73.8 J	129	84.5	115	107	102	126
Vinyl chloride	ND	ND	1.6	ND	ND	ND	0.17J	ND	ND	0.38 J	0.29 J	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	NR	NR	ND	0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	2.8	2.8	6.0	4.0	4.0	4.0	ND	6	ND	11	16	9	5	6

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW1-MW1															
Sample Date	12/4/2012	3/13/2013	6/19/2013 ⁽²⁾	9/17/2013	12/16/2013	3/24/2014	3/24/2014	9/22/2014	3/25/2015	9/15/2015	3/22/2016	9/14/2016	3/1/2017	9/12/2017	3/5/2018	9/11/2018
Comments							Duplicate									
Well Depth (Ft)	435															
Screened Interval (Ft)	395-435															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	NR	ND	ND	2.0 R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	0.55 J	0.39 J	ND	ND	0.48 J	0.48 J	0.50 J	0.58 J	0.55 J	0.500 J
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,3-dichlorobenzene	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	4.9	5.3	4.8 J	4.7 J	5.2	5.3	5.3	4.1 J	5.1	5.1	6.5	7.0	6.6	7.7	7.5	7.67
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.35 J	0.26 J	0.220 J
1,1-dichloroethene	2.0	2.8	ND	2.5	2.6	2.8	2.7	2.2 J	2.2 J	1.9	2.2	1.8	1.6	2.1	2.4	2.16
cis-1,2-dichloroethene	108	91.7	64	86.2 J	84.4	92.6 J	94.2	49.8	39.5	22.0	20.0	16	11	9.8	7.1	3.00
trans-1,2-dichloroethene	1.8	1.7	ND	ND	1.4	1.4	1.4	1.0	0.79 J	0.50 J	0.51 J	0.42 J	0.26 J	0.35 J	0.20 J	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,1,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	0.35 J	0.67 J	0.33 J	0.37 J	0.76 J	0.30 J	0.62 J	0.67 J	0.45 J	0.46 J	0.59 J	0.50 J	0.300 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.88 J	1.1	ND	1.2	1.5	ND	ND	ND	ND	ND	ND	1.0	0.94 J	1	1.2	0.920 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	85	101	78	175	128	101	103	94.3	99.5	98.9	114	110	86	110	170	118
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW1-MW1								
Sample Date	3/7/2019	9/26/2019	3/11/2020	10/6/2020	3/11/2021	9/29/2021	3/10/2022	10/5/2022	4/12/2023
Comments									
Well Depth (Ft)	435								
Screened Interval (Ft)	395-435								
VOCS (EPA 624) ug/L ⁽⁴⁾									
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	NR	ND	ND
Acetone	NR	NR	NR	NR	NR	NR	ND	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	ND	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	NR	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	0.573 J	ND	0.476 J	0.454 J	0.480 J	ND	ND	0.454 J	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	ND	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	ND	NR	NR
1,1-dichloroethane	7.89	6.30	6.26	5.54	4.23 J	4.90 J	4.18	3.39 J	2.88 J
1,2-dichloroethane	ND	0.227 J	ND	ND	ND	ND	0.119 J	ND	ND
1,1-dichloroethene	2.19 J	1.79 J	1.76 J	1.81 J	1.44 J	1.25 J	1.39	1.03 J	0.990 J
cis-1,2-dichloroethene	3.86 J	4.70 J	3.86 J	4.33 J	4.77 J	7.06 J	4.33	3.54 J	2.98 J
trans-1,2-dichloroethene	ND	ND	ND	ND	0.228 J	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	ND	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	ND	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	ND	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	ND	NR	NR
styrene	NR	NR	NR	NR	NR	NR	ND	NR	NR
1,1,1,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	0.323 BJ	0.401 J	0.308 J	0.395 J	ND	ND	ND	0.306 J	0.290 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	1.16 J	0.988 J	0.841 J	0.819 J	0.674 J	0.649 J	0.673 J	0.645 J	0.600 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	110	95.4	74.1	86.8	82.8	86.2	73.2	56.7	47.9
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	ND	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	3.7	ND	1.5	1.4	1.7	1.0

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW1-MW2				RW1-MW3											
	5/4/2005	7/22/2005	5/28/2009	6/18/2013 ⁽²⁾	1/20/2010	4/21/2010	7/29/2010	11/10/2010	3/25/2011	6/14/2011	9/28/2011	11/30/2011	3/8/2012	6/7/2012	8/22/2012	12/7/2012
Comments																
Well Depth (Ft)	435				435											
Screened Interval (Ft)	395-435				395-435											
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	30 R	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
2-butanone	R	R	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	ND	ND	ND	NR	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	NR	ND	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
Chloroform	ND	1.4	ND	ND	0.67J	0.80J	0.47J	0.69J	0.73J	NR	0.97 J	ND	0.73 J	0.64 J	ND	1.2 J
Chloromethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	4.6	5.5	3.4	3.9	2.4	4.6	1.5	2.3	2.4	9.3	10.1 J	2.1	8.4	5.7	9.4	9.3
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	3.2	12.3	ND	ND	0.42J	1.10	ND	0.28J	ND	1.8	2.2 J	ND	1.8	0.86 J	2.4	2.2
cis-1,2-dichloroethene	181.0	47.6	160.0	120	0.54J	0.48J	0.36J	0.55J	0.58J	0.59 J	0.43 J	0.55 J	0.68 J	0.33 J	0.56 J	0.46 J
trans-1,2-dichloroethene	2.5	7.6	2.5	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
1,4-dioxane	4.01	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
2-hexanone	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	1.0	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	ND	ND	ND	NR	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	0.23 J	ND	ND
1,2,4-trichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	134.0	19.0	5.9	ND	049J	ND	ND	ND	0.33 J	0.62 J	ND	0.65 J	0.30 J	0.97 J	0.40 J
Toluene	0.32J	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	1.3	1.0	ND	ND	0.41J	0.98J	ND	0.26J	0.33J	1.6	2.7 J	ND	ND	1.1 J	1.9	1.7
1,1,2-trichloroethane	ND	0.65J	ND	ND	0.62J	0.60J	0.36J	0.55J	0.41J	NR	0.57 J	0.63 J	0.70 J	0.61 J	0.56 J	0.54 J
Trichloroethene	158.0	198.0	200.0	64	1.2	1.6	0.58J	0.91J	1.0	1.4	1.8 J	1.0 J	2.2	1.3	2.3	1.6
Vinyl chloride	12.9	187.0	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	NR	0.20	NR	NR	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	4.0	NR	NR	8.0	<4.0	<4.0	<4.0	ND	ND	ND	5	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW1-MW3															
	3/14/2013	6/19/2013 ⁽²⁾	9/17/2013	12/17/2013	3/25/2014	9/23/2014	3/25/2015	9/14/2015	3/21/2016	9/14/2016	3/1/2017	9/13/2017	3/5/2018	9/12/2018	3/7/2019	9/26/2019
Comments																
Well Depth (Ft)	435															
Screened Interval (Ft)	395-435															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	0.41 J	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NR	NR
Chloroform	ND	0.82	ND	ND	0.74 J	0.67 J	0.79 J	ND	0.79 J	0.80 J	0.61 J	0.69 J	0.67 J	0.720 J	0.725 J	ND
Chloromethane	ND	ND	ND	ND	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND	D	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	8.5	10	9.7 J	8.1	8.6	6.1 J	8.1	7.7	7.4	7.0	4.5	4.4	4.1	3.47	4.14 J	2.86 J
1,2-dichloroethane	ND	0.18 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	1.7	1.8	1.6	1.9	2.1	1.6 J	2.3 J	2.3	2.5	1.7	1.1	1.2	0.97 J	0.950 J	1.08 J	0.888 J
cis-1,2-dichloroethene	0.53 J	0.46 J	0.72 J	0.60 J	0.57 J	0.44 J	0.54 J	0.49 J	0.58 J	0.44 J	0.29 J	0.37 J	0.36 J	0.310 J	0.398 J	0.363 J
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
2-hexanone	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	0.20 J	ND	ND	ND	ND	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	0.50 J	ND	0.35 J	ND	0.22 J	0.23 J	0.290 J	ND	0.397 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	1.4	1.8	1.5	2.0	1.7	1.2 J	1.5	1.6	2.1	1.6	1	1.1	0.87 J	0.810 J	1.27 J	0.711 J
1,1,2-trichloroethane	0.61 J	0.46 J	ND	0.55 J	0.46 J	0.46 J	0.43 J	0.44 J	0.47 J	0.41 J	0.51 J	0.35 J	0.37 J	0.400 J	0.296 J	0.284 J
Trichloroethene	1.9	1.7	2.5	3.2	2.5	1.9	2.0	2.4	4.5	3.5	2.3	2.8	2.2	2.24	4.49 J	3.34 J
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	ND	5	ND	ND	ND	ND	1.8	2.1	5.6	7.1	2.7	8.6	2.2

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW1-MW3							RW2-MW1													
	3/12/2020	10/6/2020	3/11/2021	9/29/2021	3/10/2022	10/5/2022	4/12/2023	5/4/2005	7/20/2005	5/27/2009	1/18/2010	4/21/2010	7/28/2010	11/3/2010	3/24/2011	6/14/2011	9/27/2011	11/29/2011	3/7/2012	6/6/2012	
Comments																					
Well Depth (Ft)	435							510													
Screened Interval (Ft)	395-435							470-510													
VOCS (EPA 624) ug/L ⁽⁴⁾																					
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	ND	NR	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acetone	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15J	0.69J	0.58J	0.30J	NR	0.22 J	0.27 J	0.22 J	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	R	R	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	NR	ND	ND	NR	NR	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	0.631 J	0.623 J	0.590 J	0.308 J	ND	0.583 J	0.560 J	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	0.38 J
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
dichlorodifluoromethane	NR	NR	NR	NR	ND	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	4.03 J	4.00 J	3.69 J	3.87 J	3.83	3.13 J	2.95 J	0.53J	0.93J	1.2J	0.82J	0.60J	0.58J	0.42J	ND	0.61 J	0.64 J	ND	0.50 J	4.2	
1,2-dichloroethane	ND	ND	ND	0.205 J	0.170 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	1.1 J	1.22 J	1.13 J	1.02 J	1.06	0.774 J	0.780 J	ND	0.58J	0.55J	0.63J	ND	ND	ND	ND	ND	ND	ND	ND	0.55 J	
cis-1,2-dichloroethene	0.39 J	0.275 J	0.377 J	0.295 J	0.273 J	0.297 J	0.270 J	ND	0.55J	1.9	1.0	0.78J	0.80J	0.55J	0.43J	0.56 J	0.32 J	0.39 J	0.34 J	0.32 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
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	5.34	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	ND	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	ND	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	ND	NR	NR	NR	NR	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Tetrachloroethene	0.295 J	0.324 J	0.407 J	0.406 J	0.343 J	0.389 J	0.380 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	0.85J	1.0	ND	0.52J	0.49J	0.50J	ND	NR	0.24 J	0.29 J	0.19 J	ND	ND
1,1,1-trichloroethane	0.754 J	0.817 J	0.641 J	0.753 J	0.767 J	0.606 J	0.520 J	ND	0.37J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	0.312 J	0.346 J	0.381 J	0.429 J	ND	0.323 J	0.330 J	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Trichloroethene	3.21 J	3.13 J	3.06 J	ND	3.42	2.91 J	3.27 J	37.6	34.6	12.0	15.0	0.42J	ND	ND	1.7	1.6	0.89 J	0.67 J	0.67 J	9.0	9.0
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	ND	NR	NR	NR	1.4J	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	NR	NR	0.05J	NR	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	2.3	3.9	3.8	ND	ND	ND	NR	NR	2260.0	NR	58.0	<4.0	<4.0	<4.0	181	5	36	6	25	25

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW2-MW1															
Sample Date	8/21/2012	12/7/2012	3/13/2013	6/17/2013 ⁽²⁾	9/17/2013	12/17/2013	12/17/2013	3/25/2014	9/23/2014	3/26/2015	9/14/2015	3/21/2016	3/21/2016	9/15/2016	3/1/2017	9/13/2017
Comments							Duplicate						Duplicate			
Well Depth (Ft)	510															
Screened Interval (Ft)	470-510															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	30 R	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene	ND	0.68 J	0.54 J	ND	0.59 J	ND	ND	0.21 J	0.21 J	0.56 J	ND	ND	0.18 J	ND	0.51 J	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	1.8 J	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.0 J	1.6 J	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	NR	ND	2.0 R	2.0 R	ND	ND	ND	ND	ND	ND	ND	NR	ND
Chloroform	ND	ND	ND	2.9	ND	ND	ND	2.8 J	1.5	0.46 J	2.2	3.4	3.5	2.4	0.25 J	2
Chloromethane	ND	ND	ND	ND	ND	ND	ND	0.68 J	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	4.8	0.58 J	0.52 J	7.0	ND	5.8	6.4	5.1	ND	2.1	6.3	8.7	8.5	6.4	1.7	6.6
1,2-dichloroethane	ND	ND	ND	1.3	ND	1.9 J	1.7 J	1.3	0.69 J	0.41 J	1.4	1.4	1.3	0.93 J	ND	0.71 J
1,1-dichloroethene	0.95 J	0.19 J	ND	1.9	ND	2.6	2.6	1.8	1.3 J	0.61 J	2.6	3.7	3.4	1.6	0.27 J	1.3
cis-1,2-dichloroethene	0.39 J	0.33 J	0.29 J	7.7	0.77 J	11.0 J	11.1 J	8.0	4.0	2.6	13.3	15.3	15.0	6.1	1.3	2.6
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
2-hexanone	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	0.27 J	ND	ND	0.31 J	ND	ND	ND	ND	0.26 J	ND	0.20 J	ND	ND	ND	ND
1,1,1-trichloroethane	0.33 J	ND	ND	0.84	ND	0.94 J	0.94 J	ND	0.39 J	ND	ND	ND	ND	0.56 J	ND	0.49 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	20.8	0.73 J	0.67 J	14	1.5	34.6	33.5	23.4	18.3	4.3	27.5	43.9	44.2	18	2.1	8.6
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	12	10	ND	13	12	30	24	12	6	17	11	24	26	3.8	13.8	8.7

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW2-MW1										RW2-MW2			RW2-MW3				
	3/5/2018	9/11/2018	3/7/2019	9/25/2019	3/12/2020	10/6/2020	3/11/2021	9/29/2021	3/9/2022	10/5/2022	4/12/2023	5/4/2005	7/21/2005	6/17/2013 ⁽²⁾	5/3/2005	7/20/2005	5/28/2009	6/18/2013 ⁽²⁾
Comments																		
Well Depth (Ft)	510										510			510				
Screened Interval (Ft)	470-510										470-510			470-510				
VOCS (EPA 624) ug/L ⁽⁴⁾																		
Acrolein	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	30 R	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	NR	NR	NR	NR	NR
Acetone	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	0.250 J	ND	ND	0.233 J	0.208 J	ND	ND	0.113 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	R	R	ND	R	R	ND	ND
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	ND	ND	NR	ND	ND	ND	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	ND	NR	NR	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	1.0	0.550 J	2.03 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	ND	NR
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	ND	NR
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	ND	NR
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	NR
1,1-dichloroethane	6.5	2.75	7.81	6.03	2.18 J	2.38	2.36 J	2.31 J	2.26	2.01 J	2.59 J	ND	0.78J	4.9	0.68J	0.31J	1.4	7.4
1,2-dichloroethane	0.39 J	0.330 J	0.552 J	0.627 J	0.26 J	0.393 J	0.372 J	0.474 J	0.356 J	ND	0.460 J	ND	ND	0.32 J	ND	ND	ND	ND
1,1-dichloroethene	1.5	0.470 J	1.67 J	1.87 J	0.269 J	0.532 J	0.479 J	0.554 J	0.413 J	0.366 J	0.680 J	ND	0.41J	0.72	ND	ND	0.42J	ND
cis-1,2-dichloroethene	1.2	1.09	2.42 J	7.18	1.66 J	4.01 J	4.56 J	3.77 J	3.90	4.36 J	9.74	0.33J	0.41J	4.6	0.40J	0.66J	2.3	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33J	0.53J	ND	ND	0.50J	0.39J	ND
1,1,1-trichloroethane	0.43 J	ND	0.761 J	0.712 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	D	ND	ND	ND	ND	ND	ND
Trichloroethene	7.1	2.61	9.65	15.7	1.49 J	2.82 J	2.86 J	ND	2.45	3.22 J	5.95	7.8	13.8	12	16.2	20.6	18.0	60
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	ND	NR
TSS (SM20 2540D) mg/L	12.1	7.6	24.2	14	36.2	116	2.7	18.3	ND	3.3	2.4	NR	NR	NR	NR	NR	14.8	NR

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW1															
Sample Date	1/19/2010	4/22/2010	7/29/2010	11/9/2010	3/25/2011	3/25/2011	6/14/2011	9/27/2011	11/30/2011	11/30/2011	3/7/2012	6/7/2012	8/22/2012	12/6/2012	3/14/2013	6/20/2013 ⁽²⁾
Comments						Duplicate				Duplicate						
Well Depth (Ft)	350															
Screened Interval (Ft)	330-350															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	30 R	ND	ND	NR
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
carbon disulfide	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	0.19J	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
Chloroform	ND	ND	ND	0.20J	ND	ND	NR	ND	ND	ND	ND	ND	ND	0.63 J	ND	ND
Chloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	1.6	1.5	1.7	1.4	1.3	1.3	1.1	1.0 J	0.96 J	0.93 J	0.90 J	0.80 J	0.87 J	0.98 J	1.2	ND
1,2-dichloroethane	0.27J	ND	ND	ND	ND	ND	ND	0.57 J	ND	ND	0.43 J	ND	ND	0.50 J	ND	ND
1,1-dichloroethene	1.2	1.3	1.2	1.2	1.2	1.1	0.85 J	0.65 J	0.64 J	0.66 J	0.47 J	0.19 J	0.54 J	0.65 J	0.68 J	ND
cis-1,2-dichloroethene	0.37J	ND	0.32J	0.45J	0.47J	0.45J	0.48 J	0.31 J	0.36 J	0.43 J	0.37 J	0.39 J	0.36 J	0.44 J	0.38 J	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
styrene	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	0.49J	0.81J	0.73J	1.5	1.4	1.6	1.2	1.3 J	1.0	1.1	1.0	0.33 J	ND	0.44 J	1.6	1.8 J
Toluene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	0.26 J	ND	ND	ND	ND
1,1,1-trichloroethane	ND	0.98J	0.84J	1.2	1.1	1.1	0.78 J	1.0 J	0.59 J	0.63 J	0.58 J	0.54 J	0.42 J	0.34 J	0.49 J	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	35.0	53.2	52.3	77.6	76.2	77.9	63.1	72.4 J	51.0	55.2	59.0	42.5	37.7	42.8	46.6	49
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	<4.0	<4.0	<4.0	<4.0	<4.0	5160	ND	ND	ND	NR	17	ND	ND	16	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW1															
Sample Date	6/20/2013 ⁽²⁾	9/18/2013	12/17/2013	3/25/2014	9/23/2014	3/25/2015	9/15/2015	3/22/2016	9/14/2016	3/2/2017	9/12/2017	3/6/2018	9/11/2018	3/5/2019	9/25/2019	3/11/2020
Comments	Duplicate															
Well Depth (Ft)	350															
Screened Interval (Ft)	330-350															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR
Acrylonitrile	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NR	NR	NR
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	ND	1.2 J	1.2	1.1	0.69 J	0.64 J	0.76 J	0.40 J	0.33 J	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
1,1-dichloroethene	ND	0.57 J	0.69 J	0.74 J	0.43 J	0.42 J	0.41 J	0.29 J	0.21 J	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	ND	0.43 J	0.41 J	0.38 J	0.30 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
2-hexanone	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	1.7 J	1.2	1.6	1.5	1.6	2.2	1.6	2.5	2.3	1.9	1.6	1.7	1.71	ND	1.69 J	1.73 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	0.61 J	0.66 J	0.66 J	0.39 J	0.35 J	0.36 J	0.30 J	0.21 J	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	48	62.7	60.5	60.0	43.4	41.8	45.4	37.6	40	27	22	19	19.2	19.3	21.1	18.4
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	0.04 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	9.5 J	ND	15	14	8	12	ND	ND	ND	3.3	2.9	1.3	3.3	16.4	16	15.3

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW1						RW3-MW2														
	10/6/2020	3/11/2021	9/29/2021	3/9/2022	10/4/2022	4/11/2023	1/19/2010	1/19/2010	4/22/2010	7/29/2010	11/9/2010	11/9/2010	3/25/2011	6/14/2011	9/27/2011	11/30/2011	3/8/2012	6/7/2012	8/22/2012	8/22/2012	
Comments								Duplicate													Duplicate
Well Depth (Ft)	350						495														
Screened Interval (Ft)	330-350						475-495														
VOCS (EPA 624) ug/L ⁽⁴⁾																					
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	NR	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acetone	NR	NR	NR	ND	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	ND	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	NR	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	0.23 J	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
dichlorodifluoromethane	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	ND	ND	ND	0.107 J	ND	ND	ND	ND	0.54J	ND	ND	ND	ND	0.52 J	0.37 J	ND	0.41 J	0.66 J	0.74 J	0.73 J	
1,2-dichloroethane	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	1.2	ND	ND	ND	ND	0.57 J	0.45 J	0.27 J	0.27 J	0.36 J	0.49 J	0.49 J	
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	1.5J	1.6J	2.4	1.1	0.92J	0.92J	1.6	1.7	1.1	1.4	1.3	1.5	1.6	1.5	
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	ND	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	ND	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	ND	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	2.50 J	1.38 J	1.91 J	1.44 J	1.41 J	1.08 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28 J	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.58J	ND	ND	ND	ND	0.39 J	0.43 J	ND	ND	0.54 J	0.52 J	0.49 J	
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25 J	0.27J	ND	NR	0.32 J	0.32 J	0.32 J	ND	ND	ND	
Trichloroethene	23.1	18.7	21.6	16.9	19.4	16.9	160	170	211	73	58.2	60.9	110	135	151	71.9	96.5	209	198	192	
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	NR	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	1.1	1.3	ND	ND	ND	ND	NR	NR	5.0	6.0	ND	10.0	10.0	7	6	ND	8	ND	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW2															
Sample Date	12/4/2012	12/4/2012	3/14/2013	6/20/2013 ⁽²⁾	9/17/2013	12/17/2013	3/25/2014	9/23/2014	9/23/2014	3/25/2015	9/14/2015	3/22/2016	9/14/2016	9/14/2016	3/2/2017	3/2/2017
Comments		Duplicate							Duplicate					Duplicate		Duplicate
Well Depth (Ft)	495															
Screened Interval (Ft)	475-495															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR
Chloroform	0.62 J	0.64 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27 J	0.24 J	0.23 J	0.26 J	0.24 J
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	0.69 J	0.71 J	0.68 J	ND	0.65 J	0.59 J	0.62 J	0.51 J	0.51 J	0.56 J	0.47 J	0.52 J	0.39 J	0.34 J	0.39 J	0.47 J
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	0.40 J	0.43 J	0.53 J	ND	0.29 J	0.45 J	0.44 J	0.38 J	0.33 J	0.33 J	0.30 J	0.46 J	0.31 J	0.37 J	0.25 J	ND
cis-1,2-dichloroethene	1.6	1.6	1.6	ND	1.3 J	1.9	1.7	1.4	1.3	1.5	1.4	1.7	1.5	1.5	1.5	1.3
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	0.69 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR
2-hexanone	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	ND	ND	0.29 J	ND	ND	ND	0.52 J	0.66 J	0.48 J	0.54 J	0.44 J	0.38 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.42 J	0.43 J	0.41 J	ND	0.47 J	0.50 J	0.43 J	0.36 J	0.39 J	0.38 J	0.41 J	0.47 J	0.44 J	0.47 J	0.41 J	0.34 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.32 J	0.31 J	0.21 J	0.32 J	0.24 J
Trichloroethene	173 J	171	155	140	174	176	164	148	151	159	169	204	190	190	160	150
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW2											
	9/12/2017	3/6/2018	9/11/2018	3/5/2019	9/25/2019	3/11/2020	10/6/2020	3/11/2021	9/29/2021	3/10/2022	10/4/2022	4/11/2023
Sample Date												
Comments												
Well Depth (Ft)	495											
Screened Interval (Ft)	475-495											
VOCS (EPA 624) ug/L ⁽⁴⁾												
Acrolein	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND
Acetone	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	0.24 J	0.23 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
1,1-dichloroethane	0.36 J	0.29 J	0.290 J	0.364 J	ND	0.203 J	0.287 J	0.279 J	0.350 J	0.371 J	0.299 J	0.280 J
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	0.26 J	ND	ND	0.256 J	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	1.3	1.2	0.990 J	1.10 J	0.994 J	1.00 J	0.809 J	1.05 J	0.828 J	0.774 J	ND	0.290 J
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	0.43 J	0.38 J	0.430 J	0.328 J	0.477 J	0.367 J	0.317 J	0.274 J	0.485 J	ND	ND	0.270 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.26 J	0.33 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	0.26 J	ND	ND	0.240 J	0.204 J	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	140	130	131	118	131	128	119	90.0	89.8	69.2	48.2	56.9
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	3.5

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW3															
Sample Date	1/20/2010	4/22/2010	4/22/2010	7/28/2010	11/3/2010 ⁽¹⁾	3/25/2011	6/15/2011	9/28/2011	11/29/2011	3/7/2012	3/7/2012	6/7/2012	8/22/2012	12/4/2012	3/14/2013	6/21/2013 ⁽²⁾
Comments			Duplicate								Duplicate					
Well Depth (Ft)	340															
Screened Interval (Ft)	320-340															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	150 R	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
carbon disulfide	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	0.40J	0.46J	ND	0.33J	NR	0.48 J	ND	0.42 J	0.42 J	2.3 J	ND	0.88 J	ND	ND
Chloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	ND	1.6	1.6	2.3	1.0	1.5	7.1	3.2 J	1.5	3.3	3.3	2.6 J	ND	4.2	4.5 J	ND
1,2-dichloroethane	ND	0.52J	0.54J	ND	ND	ND	0.37 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	ND	1.1	1.3	1.2	ND	0.96J	2.6	1.8 J	0.96 J	1.9	1.9	1.7 J	1.4 J	1.9	2.1 J	ND
cis-1,2-dichloroethene	ND	2.1	2.1	1.7	ND	2.3	1.2	1.9	2.1	2.1	2.1	1.4 J	1.8 J	1.2	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	3.2 J	ND
4-methyl-2-pentanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
styrene	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	0.45J	0.49J	ND	ND	ND	0.40 J	0.50 J	ND	0.72 J	0.69 J	ND	ND	0.43 J	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	0.95J	1.0J	0.72J	ND	0.62J	1.3	1.0 J	0.49 J	0.84 J	0.87 J	ND	ND	0.85 J	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	350	397	382	297	8.5	288	331	215 J	250	312	325	285	248	291	347	410
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	NR	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	4.0	5.0	<4.0	<4.0	<4.0	ND	ND	ND	ND	ND	13	10	5	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW3															
Sample Date	9/18/2013	12/17/2013	3/26/2014	9/23/2014	3/25/2015	3/25/2015	9/15/2015	3/21/2016	9/15/2016	3/2/2017	9/12/2017	9/12/2017	3/6/2018	3/6/2018	9/12/2018	9/12/2018
Comments						Duplicate						Duplicate		Duplicate		Duplicate
Well Depth (Ft)	340															
Screened Interval (Ft)	320-340															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	ND	2.0 R	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
Chloroform	ND	3.4 J	ND	0.27 J	0.40 J	0.33 J	ND	ND	0.48 J	0.45 J	0.35 J	0.27 J	0.33 J	0.37 J	0.400 J	0.400 J
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	ND	3.7 J	4.9 J	1.3 J	1.8	1.8	1.2	4.0	3.5	2.9	2.5	2.2	2.0	2.3	2.08	2.24
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.30 J	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	ND	ND	2.4 J	0.94 J	1.5 J	1.4 J	1.1	2.4	2.0	1.3	ND	0.78 J	1.1	1.2	1.00	1.14
cis-1,2-dichloroethene	ND	ND	ND	1.2	1.3	1.3	1.3	1.1	1.1	0.83 J	0.8 J	0.76 J	0.63 J	0.59 J	0.590 J	0.640 J
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	6.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	0.36 J	0.37 J	0.77 J	0.71 J	0.58 J	0.43 J	0.31 J	0.44 J	0.36 J	0.32 J	0.390 J	0.390 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	0.40 J	0.48 J	0.45 J	0.36 J	1.1	0.75 J	0.69 J	0.46 J	0.38 J	0.61 J	0.57 J	0.550 J	0.530 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	322	322	350	147	182	184	138	284	260	200	100	95	150	160	124	155
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	ND	ND	ND	ND	ND	1.1	2.4	3	1.9	4.7 J	2.8 J	5.7	6.0

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW3																	
	3/5/2019	3/5/2019	9/25/2019	9/25/2019	3/11/2020	3/11/2020	10/6/2020	10/6/2020	3/11/2021	3/11/2021	9/29/2021	9/29/2021	3/9/2022	3/9/2022	10/4/2022	10/4/2022	4/11/2023	4/11/2023
Sample Date		Duplicate		Duplicate		Duplicate		Duplicate		Duplicate		Duplicate		Duplicate		Duplicate		Duplicate
Comments																		
Well Depth (Ft)	340																	
Screened Interval (Ft)	320-340																	
VOCS (EPA 624) ug/L ⁽⁴⁾																		
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND
Acetone	NR	NR	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	0.420 J	0.370 J	ND	ND	0.269 J	0.324 J	0.328 J	0.342 J	0.364 J	0.334 J	ND	ND	ND	ND	ND	0.291 J	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
1,1-dichloroethane	2.21 J	1.97 J	1.85 J	1.80 J	2.01 J	2.06 J	1.78 J	1.90 J	1.59 J	1.50 J	1.73 J	1.66 J	1.56	1.61	1.09 J	1.09 J	1.03 J	1.04 J
1,2-dichloroethane	ND	ND	0.255 J	ND	ND	0.223 J	ND	ND	ND	ND	ND	ND	0.159 J	0.150 J	ND	ND	ND	ND
1,1-dichloroethene	1.17 J	1.14 J	1.52 J	1.36 J	1.13 J	1.26 J	1.38 J	1.39 J	0.880 J	0.970 J	1.01 J	1.13 J	0.925 J	1.01	0.741 J	0.706 J	0.770 J	0.840 J
cis-1,2-dichloroethene	0.840 J	0.805 J	1.07 J	1.05 J	0.91 J	0.983 J	0.803 J	0.840 J	0.655 J	0.686 J	0.578 J	0.777 J	0.595 J	0.581 J	0.480 J	0.508 J	0.440 J	0.480 J
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	0.672 J	0.727 J	0.446 J	0.471 J	0.533 J	0.545 J	0.429 J	0.517 J	0.411 J	0.493 J	0.336 J	0.302 J	0.533 J	0.432 J	0.400 J	0.520 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.594 J	0.599 J	0.518 J	0.467 J	0.472 J	0.388 J	0.402 J	0.384 J	ND	0.273 J	0.438 J	0.286 J	0.32 J	0.302 J	0.235 J	0.268 J	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	151	147	176	172	178 J-	183	180	180	159	159	176	179	146 J	149 J	139	136	146	144
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	0.88 J	0.122 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	5.1	1.6	2.6 J	1.7	2.3	2.3	6.5	5.9	1.2	1.6	3.2	2.7	ND	ND	ND	ND	2.0	1.6

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW4															
Sample Date	1/20/2010	4/22/2010	7/28/2010	7/28/2010	11/3/2010 ⁽¹⁾	3/24/2011	6/15/2011	9/28/2011	11/29/2011	3/7/2012	6/7/2012	8/22/2012	12/4/2012	3/14/2013	6/21/2013 ⁽²⁾	9/17/2013
Comments				Duplicate												
Well Depth (Ft)	495															
Screened Interval (Ft)	475-495															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	30 R	ND	ND	NR	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
Benzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
carbon disulfide	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
Chloroform	ND	ND	ND	ND	0.32J	ND	NR	0.87 J	ND	0.38 J	ND	ND	0.71 J	ND	1.2	ND
Chloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	2.5	0.6	0.54J	0.50J	1.8	0.81	0.78 J	5.4 J	0.84 J	1.8	0.50 J	ND	1.2	3.8	4.6	2.9
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J	ND
1,1-dichloroethene	1.0	ND	ND	ND	0.86J	ND	0.20 J	0.53 J	ND	0.21 J	ND	ND	0.19 J	0.38 J	0.42 J	ND
cis-1,2-dichloroethene	0.46J	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
styrene	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND	0.67J	ND	ND	0.66 J	ND	ND	ND	ND	ND	ND	0.29 J	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	21	11	7.5	8.0	308	7.7	6.7	3.4 J	5.6	4.6	5.4	5.5	4.5	2.3	1.8	5.0
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xlenes (total)	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	16.0	<4.0	<4.0	<4.0	<4.0	ND	11	6	5	ND	ND	ND	22	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	RW3-MW4																			
Sample Date	12/17/2013	3/26/2014	9/23/2014	3/25/2015	9/15/2015	3/21/2016	9/15/2016	3/2/2017	9/12/2017	3/6/2018	9/12/2018	3/5/2019	9/25/2019	3/11/2020	10/5/2020	3/11/2021	9/29/2021	3/9/2022	10/4/2022	4/11/2023
Comments																				
Well Depth (Ft)	495																			
Screened Interval (Ft)	475-495																			
VOCS (EPA 624) ug/L ⁽⁴⁾																				
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Acetone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	ND	1.2 J	0.38 J	1.2	ND	0.64 J	ND	ND	0.21 J	0.47 J	ND	0.996 J	ND	0.954 J	ND	0.367 J	ND	ND	0.475 J	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
1,1-dichloroethane	4.9	5.5	2.7 J	6.9	0.88 J	4.9	2.0	1.5	2.6	3.9	1.47	6.22	5.72	6.99	1.50 J	3.03 J	4.60 J	3.81	3.41 J	3.27 J
1,2-dichloroethane	ND	0.37 J	ND	ND	ND	ND	ND	ND	ND	ND	0.235 J	0.253 J	ND	ND	ND	ND	ND	0.109 J	ND	ND
1,1-dichloroethene	0.39 J	0.95 J	0.37 J	1.3 J	0.21 J	0.85 J	0.40 J	0.27 J	0.41 J	0.70 J	0.340 J	0.981 J	1.37 J	1.70 J	0.409 J	0.842 J	1.22 J	1.00 J	0.765 J	0.760 J
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.21 J	ND	ND	0.351 J	0.475 J	0.465 J	ND	ND	0.304 J	0.243 J	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Methylene chloride	ND	ND	ND	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	0.31 J	0.46 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.39 J	0.48 J	ND	0.60 J	ND	0.48 J	0.24 J	ND	0.26 J	0.40 J	ND	0.481 J	0.668 J	0.727 J	ND	0.422 J	0.624 J	0.686 J	0.591 J	0.550 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	4.4	3.3	2.5	2.7	4.1	2.9	4.3	4.1	5.4	1.5	2.66	2.12 J	1.30 J	2.15 J	3.02 J	3.30 J	ND	5.24	4.80 J	5.18
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	9	5	5	ND	ND	1.4	ND	1.3	ND	ND	1.3	2.7	2.6	2.2	2.2	ND	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	TP-01															
Sample Date	1/21/2010	6/15/2011	9/27/2011	9/27/2011	11/30/2011	3/8/2012	6/6/2012	8/22/2012	12/4/2012	3/13/2013	3/13/2013	6/17/2013 ⁽²⁾	9/17/2013	9/17/2013	12/16/2013	3/25/2014
Comments				Duplicate							Duplicate			Duplicate		
Well Depth (Ft)	470															
Screened Interval (Ft)	450-470															
VOCS (EPA 624) ug/L ⁽⁴⁾																
Acrolein	NR	NR	ND	ND	ND	ND	ND	30 R	ND	ND	ND	NR	ND	ND	ND	ND
Acrylonitrile	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Acetone	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND	ND	ND
Bromoform	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	ND	ND	ND	ND	ND	ND	ND	2.0 R	2.0 R	NR	ND	ND	ND	ND
Chloroform	ND	NR	0.68 J	0.74 J	ND	0.74 J	0.82 J	ND	2.5 J	1.2	1.1	11	5.2 J	ND	7.4	6.8 J
Chloromethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	3.6J	5.0	3.7	3.7	2.9	3.7	3.7	3.4	1.1	1.5	1.4	3.2	2.1 J	2.8	1.5	ND
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.35 J	0.36 J	0.37 J	0.30 J	ND	ND	ND	ND
1,1-dichloroethene	ND	1.7	1.1	1.0	1.0	1.2	1.4	1.1	0.23 J	0.44 J	0.42 J	0.77	0.66 J	0.74 J	0.33 J	0.22 J
cis-1,2-dichloroethene	190	43.4	40.4	40.2	74.9	53.3	29.9	16.1	4.2	5.8	5.8	8.7	14.1 J	14.7	8.0	5.3
trans-1,2-dichloroethene	3.0J	1.1	1.0 J	0.92 J	1.1	0.87 J	0.79 J	0.35 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	3.4J	3.3	4.4	4.4	3.6	4.7	6.0	4.0	0.42 J	0.34 J	0.32 J	1.6	0.77 J	1.5 J	0.57 J	ND
Toluene	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	0.63 J	0.73 J	0.76 J	0.29 J	0.57 J	1.1 J	0.86 J	ND	0.35 J	0.35 J	0.62	0.66 J	0.66 J	0.50 J	ND
1,1,2-trichloroethane	ND	NR	0.31 J	0.31 J	0.32 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	65	35.3	41.0	39.6	38.0	38.1	40.4	27.9	22.0	25.9	25.4	25	27.0	26.7	29.8	21.7
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	63	18	NR	ND	7	6	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	TP-01																		
	9/22/2014	3/25/2015	9/14/2015	9/14/2015	3/21/2016	9/14/2016	3/1/2017	9/13/2017	3/5/2018	9/11/2018	3/6/2019	9/25/2019	3/12/2020	10/6/2020	3/11/2021	9/29/2021	3/10/2022	10/4/2022	4/12/2023
Comments				Duplicate															
Well Depth (Ft)	470																		
Screened Interval (Ft)	450-470																		
VOCS (EPA 624) ug/L ⁽⁴⁾																			
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	0.53 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	2.0 R	ND	ND	ND	NR	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	ND	NR
Chloroform	1.9	2.6	1.3	1.3	1.7	1.6	1.2	6.3	2.0	1.08	0.684 J	ND	ND	0.292 J	1.17 J	0.478 J	ND	0.645 J	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-dichloroethane	1.3 J	2.5	2.1	2.0	1.8	2.1	0.78 J	1.3	1.2	1.24	0.717 J	0.381 J	0.335 J	0.363 J	0.629 J	0.533 J	0.895 J	0.853 J	0.630 J
1,2-dichloroethane	0.67 J	0.88 J	0.82 J	0.82 J	0.86 J	0.70 J	0.45 J	0.79	0.79 J	0.650 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	0.47 J	1.2 J	0.77 J	0.83 J	0.75 J	0.68 J	0.23 J	0.36 J	0.46 J	0.420 J	ND	ND	ND	ND	0.301 J	0.221 J	0.339 J	0.347 J	0.250 J
cis-1,2-dichloroethene	7.6	13.4	11.3	11.6	10.8	12	5	11	12	12.1	6.01	3.75 J	3.01 J	3.14 J	4.73 J	2.51 J	1.99	0.991 J	0.470 J
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Methylene chloride	ND	ND	ND	ND	0.37 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	0.48 J	0.82 J	0.88 J	0.72 J	0.37 J	0.22 J	ND	ND	ND	ND	ND	ND	ND	0.680 J	1.21 J	1.84 J	2.53 J	1.70 J
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND	ND	0.49 J	0.25 J	0.29 J	0.27 J	ND	ND	ND	ND	ND	ND	ND	ND	0.333 J	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	31.9	52.3	53.0	53.9	61.7	47	21	54	55	38.2	28.3	14.4	12.7	11.1	15.6	13	12.4	10.3	7.72
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	1.0	ND	1.7	ND	ND	ND

Table 7
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Summary of Historical Groundwater Analytical Results
Through First Quarter 2023

Sample ID	IW-1 MW-1		IW-1	RW-3 ⁽³⁾				
	5/3/2005	6/18/2013 ⁽²⁾		5/27/2009	9/15/2015	3/22/2016	9/15/2016	3/2/2017
Comments								
Well Depth (Ft)	150		230	530				
Screened Interval (Ft)	20-150		200-230	392-412				
VOCS (EPA 624) ug/L⁽⁴⁾								
Acrolein	NR	NR	NR	ND	ND	ND	ND	ND
Acrylonitrile	NR	NR	NR	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone	R	ND	ND	NR	NR	NR	NR	NR
carbon disulfide	ND	NR	ND	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	ND	ND	ND	NR	ND
Chloroform	0.94J	ND	0.98J	ND	0.46 J	0.26 J	ND	0.28 J
Chloromethane	ND	ND	ND	ND	ND	ND	NR	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR
1,2-dibromo-3-chloro-propane	ND	NR	ND	NR	NR	NR	NR	NR
1,2-dibromomethane	ND	NR	ND	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	NR	NR	ND	NR	NR	NR	NR	NR
1,1-dichloroethane	0.39J	0.51	0.22J	1.9	2.1	1.8	1.4 J	1.5
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	ND	ND	ND	1.9	2.5	1.5	1.3 J	1.4
cis-1,2-dichloroethene	ND	ND	ND	1.6	2.4	1.4	1.6 J	1.9
trans-1,2-dichloroethene	ND	ND	ND	ND	0.23 J	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND
2-hexanone	ND	ND	ND	NR	NR	NR	NR	NR
isopropylbenzene	NR	NR	ND	NR	NR	NR	NR	NR
methyl acetate	NR	NR	ND	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	0.64 J	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	NR	NR	NR	NR	NR
styrene	ND	NR	ND	NR	NR	NR	NR	NR
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR
Tetrachloroethene	ND	0.55	ND	0.68 J	0.79 J	0.64 J	0.60 J	0.65 J
Toluene	ND	ND	0.19J	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.47	0.92	0.49J	0.96 J	1.3	0.95 J	ND	0.83 J
1,1,2-trichloroethane	ND	ND	ND	0.30 J	0.49 J	0.29 J	ND	0.45 J
Trichloroethene	ND	ND	0.17J	237	371	230	230	220
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	NR	ND	NR	NR	NR	NR	NR
Mercury (EPA 245.1) ug/L	NR	NR	0.20	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	2.4	ND	ND	ND	2.4	8.1

Note:

VOC analysis changed from SW846 8260B to EPA Method 624 in January 2010.

D = Dilution

J = estimated value

J- =biased low estimated value

ND = not detected

NR = not reported / required

R = rejected

mg/L - milligrams per liter

µg/L - micrograms per liter

(1) Analytical results presented above for samples collected from RW3-MW3 and RW3-MW4 in November 2010 are not consistent with historical trends, indicating samples may have been switched. For trend analysis, concentrations for RW3-MW3 were used for RW3-MW4 for November 2010 and vice versa.

(2) VOCs were analyzed by USEPA Method 524.2 (as opposed to Method 624) in June 2013 to correlate with samples collected under the Bethpage Regional Plume Comprehensive Groundwater Sampling Plan conducted in June 2013.

(3) RW-3, previously an active extraction well sampled on a monthly basis, was taken off-line on 7/1/15. While off-line, RW-3 was sampled semi-annually in conjunction with the semi-annual LTM events.

(4) Samples were analyzed for TCL VOCs, including tentatively identified compounds (TICs), beginning in March 2016. No TICs were detected, unless otherwise indicated.

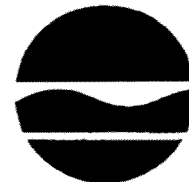
Data prior to June 2011 were collected by others.

APPENDIX A

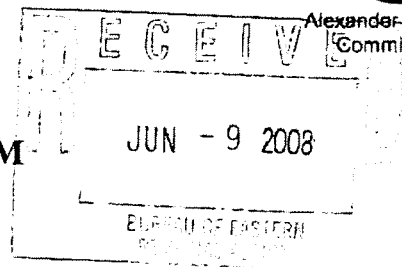
**NYSDEC EFFLUENT LIMITATIONS AND MONITORING
REQUIREMENTS AND
JANUARY - MARCH 2023 DMRS**

**New York State Department of Environmental Conservation
Division of Water**

Bureau of Water Permits, 4th Floor
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 • FAX: (518) 402-9029
Website: www.dec.state.ny.us



Alexander-B. Grannis
Commissioner



MEMORANDUM

TO: Steven Scharf, DER
FROM: Jean Occidental, DOW, Bureau of Water Permits JO
SUBJECT: Naval Weapons Industrial Reserve Plant (NWIRP); DER Site # 1-01-001
DRAINAGE BASIN: na
DATE: June 6, 2008

In response to your request and the permittee's SPDES Permit Equivalent Application dated April 27, 2008, attached is the effluent criteria for the above noted groundwater remediation discharge.

The Division of Water does not have any regulatory authority over a discharge from a State, PRP, or Federal Superfund Site. The Division of Environmental Remediation will be responsible for ensuring compliance with the attached effluent criteria and approval of all engineering submissions. Additional Condition (1) identifies the contact to send all effluent results, engineering submissions, and modification requests. The Regional Water Engineer should be kept appraised of the status of these discharges and, in accordance with the attached criteria, receive a copy of the effluent results for informational purposes.

If you have any questions, please call me at (518) 402-8116.

Attachment

cc: (w/att) RWE, Region 1
C. Webber
BWP Permit Coordinator

Naval Weapons Industrial Reserve Plant

DER site # 1-01-001

Page 1 of 2

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning: April 1, 2009and lasting until: April 1, 2014

the discharges from the treatment facility to Groundwater shall be limited and monitored by the operator as specified below:

Outfall and Parameters	Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type
Treated Groundwater Remediation Discharge from: Recovery Wells 1, 2, and 3					
Flow	Monitor	1100	GPM	Continuous	Recorder
pH (range)	5.5 - 8.5		SU	Weekly	Grab
1,1-Dichloroethane	NA	5	µg/l	Monthly ¹	Grab
1,2-Dichloroethane	NA	0.6	µg/l	Monthly ¹	Grab
1,1-Dichloroethene	NA	5	µg/l	Monthly ¹	Grab
cis-1,2-Dichloroethene	NA	5	µg/l	Monthly ¹	Grab
trans-1,2-Dichloroethene	NA	5	µg/l	Monthly ¹	Grab
Tetrachloroethene	NA	5	µg/l	Monthly ¹	Grab
1,1,1-Trichloroethane	NA	5	µg/l	Monthly ¹	Grab
Trichloroethene	NA	5	µg/l	Monthly ¹	Grab
Vinyl chloride	NA	2	µg/l	Monthly ¹	Grab
Mercury	NA	0.25	µg/l	Monthly ¹	Grab

Footnotes:

- (1) The minimum measurement frequency shall be monthly following a period of 24 consecutive weekly sampling events showing no exceedances of the stated discharge limitations.

Naval Weapons Industrial Reserve Plant

DER site # 1-01-001

Page 1 of 2

Additional Conditions:

- (1) Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Steven Scharf
Division of Environmental Remediation
NYSDEC, 625 Broadway
Albany, NY 12233-7015
Phone: (518) 402-9620

With a copy sent to:

Regional Water Engineer
NYSDEC - Region 1
Building 40, SUNY Campus
Stony Brook, New York 11790-2356
Phone: (631) 444-0354

- (2) Only site generated wastewater is authorized for treatment and discharge.
- (3) Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.
- (4) Any use of corrosion/scale inhibitors, biocidal-type compounds, or other water treatment chemicals used in the treatment process must be approved by the department prior to use.
- (5) This discharge and administration of this discharge must comply with the substantive requirements of 6NYCRR Part 750.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau D

625 Broadway, 12th Floor, Albany, NY 12233-7013

P: (518) 402-9676 | F: (518) 402-9773

www.dec.ny.gov

August 31, 2017

Ms. Lora Fly
Remedial Project Manager
Naval Facilities Engineering Command
9324 Virginia Ave.
Bldg. Z-144, Code OPTE3-6
Norfolk, VA 23511

Re: SPDES Permit Equivalent Application,
Naval Weapons Industrial Reserve
Plant Site (NWIRP), Bethpage.
NYSDEC Site No 130003B

Lora:

The Department of the Navy (Navy) has requested to renew the State Pollutant Discharge Elimination System (SPDES) effluent for the GM-38 groundwater extraction and treatment system. The New York State Department Environmental Conservation (NYSDEC) has reviewed this request and has established discharge limits for the GM-38 system. These discharge limits, and associated reporting requirements, are detailed in the attached memorandum from the NYSDEC Division of Water.

Thanks and please do not hesitate to contact me at (518) 402-9478 or jason.pelton@dec.ny.gov with any questions.

Sincerely,

Jason M. Pelton
Project Manager
Remedial Section B, Remedial Bureau D
Division of Environmental Remediation

ec: B. Caldwell, EnSafe/Resolution Consultants
S. Edwards, NYSDEC
D. Hesler, NYSDEC
C. Haas, NYSDEC Region 1
W. Parish, NYSDEC Region 1
S. Karpinski, NYSDOH
J. DeFranco/J. Lovejoy, NCDOH
L. Thantu, USEPA Region 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Permits

625 Broadway, Albany, New York 12233-3505

P: (518) 402-8111 | F: (518) 402-9029

www.dec.ny.gov

MEMORANDUM

TO: Jason Pelton, DER
FROM: Robert Wither, Chief, South Permits Section, DOW
SUBJECT: Naval Weapons Industrial Reserve Plant, DER Site #1-30-003B
DATE: August 18, 2017

In response to your request received July 13, 2017, attached please find effluent limitations and monitoring requirements for the above noted remediation discharge.

The DOW does not have any regulatory authority over a discharge from a State, PRP, or Federal Superfund Site. DER will be responsible for ensuring compliance with the attached effluent limitations and monitoring requirements, and approval of all engineering submissions. Footnote 1 identifies the appropriate DER contact as the place to send all effluent results, engineering submissions, and modification requests. The Regional Water Engineer should be kept appraised of the status of this discharge and, in accordance with the attached criteria, receive a copy of the effluent results for informational purposes.

If you have any questions, please call me at 518-402-8123.

Attachment (Effluent Limitations and Monitoring Requirements)

cc: Cathy Haas, RWE, Region 1

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning **September 1, 2017** and lasting until **August 31, 2027** the discharges from the wastewater treatment facility to groundwater, Class GA shall be limited and monitored by the operator as specified below:

Outfall Number and Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Monthly Avg.	Daily Max		Measurement Frequency	Sample Type
Outfall 001 - Treated Remediation Discharge:					
Flow	Monitor	1100	GPM	Continuous	Recorder
pH (range)	5.5 - 8.5		SU	Monthly	Grab
1,1-Dichloroethane	NA	5	µg/l	Monthly	Grab
1,2-Dichloroethane	NA	0.6	µg/l	Monthly	Grab
1,1-Dichloroethene	NA	5	µg/l	Monthly	Grab
cis-1,2-Dichloroethene	NA	5	µg/l	Monthly	Grab
trans-1,2-Dichloroethene	NA	5	µg/l	Monthly	Grab
Tetrachloroethene	NA	5	µg/l	Monthly	Grab
1,1,1-Trichloroethane	NA	5	µg/l	Monthly	Grab
Trichloroethene	NA	5	µg/l	Monthly	Grab
Vinyl Chloride	NA	2	µg/l	Monthly	Grab
Mercury	NA	0.25	µg/l	Monthly	Grab
Chloroform	NA	5	µg/l	Monthly	Grab
Trichlorotrifluoroethane (Freon 113)	NA	5	µg/l	Monthly	Grab
1,4 Dioxane	NA	Monitor	µg/l	Monthly	Grab

Additional Conditions:

1. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Jason Pelton
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233- 7015
518-402-9870

With a copy sent to:

Regional Water Engineer, Region 1
NYSDEC
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790-3409

2. Only site generated wastewater is authorized for treatment and discharge.
3. Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.
4. Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except flow and pH.
5. Any use of corrosion/scale inhibitors, biocidal-type compounds, or other water treatment chemicals used in the treatment process must be approved by the department prior to use.
6. This discharge and administration of this discharge must comply with the substantive requirements of 6NYCRR Part 750.

JANUARY 2023



5 February 2023

Mr. Jason Pelton
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
625 Broadway
Albany, NY 12233-7252

**Subject: GROUNDWATER DISCHARGE MONITORING/AIR EMISSION REPORT
GM-38 AREA, NWIRP BETHPAGE, NY; DER SITE # 1-30-003B-OU 2
JANUARY 2023 REPORTING PERIOD**

Dear Mr. Pelton:

KOMAN Government Solutions, LLC (KGS) is submitting this monthly monitoring report of the groundwater discharge and air emission results for the Groundwater Treatment Plant (GWTP) located at the Former Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, NY, GM-38 Area. This report was prepared in accordance with GWTP operational requirements for DER Site # 1-30-003B-OU 2, and the SPDES Permit Equivalent # 13003B.

GWTP operational data from 1 January to 31 January 2023 are presented in Attachment A. The plant was down for approximately 1.5 hours during the reporting period as the result of the backwashing of the liquid-phase GAC (LGAC) vessels.

As indicated in Attachment A, all SPDES permitted aqueous constituents are in compliance with the established discharge limits, and all stack emissions are in compliance with established discharge goals during the current reporting period.

Please contact me at 610-400-0636 with any questions or concerns you may have regarding this report.

Sincerely,

KOMAN Government Solutions, LLC

A handwritten signature in black ink that reads 'Robert G. Gregory'.

Robert G. Gregory
Project Manager

Attachment A: Groundwater and Air Sampling Results for January 2023

cc: C. Haas, NYSDEC Region 1
C. Engelhardt, NYSDEC Region 1
J. Pilewski, NYSDEC – Region 1 Water Engineer
K. Granzen, NYSDEC
M. Travis, NYSDEC
J. Sullivan, NYSDOH
G. Ennis, Nassau County Department of Public Works
T. Licata, Town of Oyster Bay
M. Russo, Town of Oyster Bay
S. Sokolowski, NAVFAC Mid-Atlantic
V. Varricchio, NWIRP Bethpage Facilities Management
P. Schauble, KGS
GM-38 Copy

ATTACHMENT A
GROUNDWATER AND AIR SAMPLING RESULTS
JANUARY 2023

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Report
January 2023**

SPDES Parameters			January 2023				
Process Stream	Daily Treated Effluent Maximum ⁽¹⁾	Units	RW-1	RW-3	RW-4	Combined Influent (RW-1 + RW-3 + RW-4)	Treated Effluent
Well Depth	N/A	ft	445	530	675	N/A	N/A
Screened Interval	N/A	ft bgs	335-395 410-430	392-412 442-504	570-670	N/A	N/A
Sampling Date	N/A		1/3/23				
Effective Flowrate	1100	GPM	495	0	495	990	1,025
Total Flow	N/A	gallons	22,074,233	0	22,041,933	44,116,167	45,662,167
pH	5.5 - 8.5	SU	5.49	NS	6.37	5.93	7.02
Chloroform	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	5	µg/L	0.906 J	NS	ND (1.0)	0.45 J	ND (1.0)
1,2-Dichloroethane	0.6	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	5	µg/L	0.517 J	NS	1.36 J	0.94 J	ND (1.0)
cis 1,2-Dichloroethene	5	µg/L	2.84 J	NS	1.39 J	2.12 J	ND (1.0)
trans 1,2-Dichloroethene	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5	µg/L	13.4	NS	5.77 J	9.6	ND (1.0)
1,1,1-Trichloroethane	5	µg/L	0.287 J	NS	ND (1.0)	0.14 J	ND (1.0)
Trichloroethene	5	µg/L	48.1	NS	611	329.3	ND (1.0)
1,1,2-Trichlorotrifluoroethane	5	µg/L	ND (1.0)	NS	5.55 J	2.8 J	ND (1.0)
Vinyl Chloride	2	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dioxane - 8270D	1	µg/L	1.6	NS	12	6.8	0.28
Mercury	0.00025	mg/L	ND (0.00010)	NS	ND (0.00010)	ND (0.00010)	ND (0.00010)
Total Suspended Solids (TSS)	N/A	mg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)

Notes:

B - Method blank contamination

J - Estimated result between laboratory method detection limit and reporting limit

ND - Not detected above laboratory method detection limit. Limit of Detection (LOD) given in parentheses.

N/A - Not Applicable

NS - Not Sampled

(1) Wastewater discharge equivalence permit renewed on 18 August 2017. Discharge limits established for 10 years. Chloroform, 1,4-dioxane and 1,1,2-trichlorotrifluoroethane are now monitored under the new permit.

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
January 2023**

DAR Parameters			January 2023	
Process Stream	Units	Discharge Goal ⁽¹⁾	Influent	Effluent
Sampling Date			1/3/23	
Average Flowrate	CFM	N/A	NR	8,358
Total Flow	ft ³	N/A	NR	372,339,000
Total Flow	m ³	N/A	NR	10,543,466
1,2-Dichloroethane	µg/m ³	N/A	ND	2.0 J
cis 1,2-Dichloroethene	µg/m ³	≤ 100,000 ⁽²⁾	31	48
trans 1,2-Dichloroethene	µg/m ³		ND	1.4 J
1,2-Dichloroethene (total)	µg/m ³	≤ 100,000	ND	48
Toluene	µg/m ³	N/A	ND	ND
Total Xylene	µg/m ³	N/A	ND	ND
1,1,2-Trichloroethane	µg/m ³	N/A	ND	ND
Trichloroethene	µg/m ³	≤ 2600	6400	1.4 J
Vinyl Chloride	µg/m ³	≤ 560	ND	ND
Tetrachloroethene	µg/m ³	≤ 5100	160	ND

Notes:

CFM - cubic feet per minute

DAR - Division of Air Resources

J - Estimated result between laboratory method detection limit and reporting limit

N/A - Not Applicable

NR - Not recorded

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.

(2) Discharge goal is for total 1,2-Dichloroethene.

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
January 2023**

DAR Parameters	Units	Discharge Goal ⁽¹⁾	January 2023
Sampling Date			1/3/23
Average Flowrate	CFM	N/A	8,358
Total Flow	ft ³	N/A	372,339,000
Total Flow	m ³	N/A	10,543,466
Trichloroethene	lb/hr	≤ 0.09	0.00004
Vinyl Chloride	lb/hr	≤ 0.02	0.00000
1,2 Dichloroethene	lb/hr	≤ 11	0.00150
1,2-Dichloroethane	lb/hr	N/A	0.00006
Toluene	lb/hr	N/A	0.00000
Total Xylene	lb/hr	N/A	0.00000
1,1,2-Trichloroethane	lb/hr	N/A	0.00000
Tetrachloroethene	lb/hr	≤ 0.18	0.00000

Notes:

CFM - cubic feet per minute

DAR - Division of Air Resources

N/A - Not Applicable

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.

FEBRUARY 2023



6 March 2023

Mr. Jason Pelton
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
625 Broadway
Albany, NY 12233-7252

**Subject: GROUNDWATER DISCHARGE MONITORING/AIR EMISSION REPORT
GM-38 AREA, NWIRP BETHPAGE, NY; DER SITE # 1-30-003B-OU 2
FEBRUARY 2023 REPORTING PERIOD**

Dear Mr. Pelton:

KOMAN Government Solutions, LLC (KGS) is submitting this monthly monitoring report of the groundwater discharge and air emission results for the Groundwater Treatment Plant (GWTP) located at the Former Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, NY, GM-38 Area. This report was prepared in accordance with GWTP operational requirements for DER Site # 1-30-003B-OU 2, and the SPDES Permit Equivalent # 13003B.

GWTP operational data from 1 February to 28 February 2023 are presented in Attachment A. The plant was down for approximately 5.0 hours during the reporting period as the result of well RW-4 losing communication with the treatment plant.

As indicated in Attachment A, all SPDES permitted aqueous constituents are in compliance with the established discharge limits, and all stack emissions are in compliance with established discharge goals during the current reporting period.

Please contact me at 610-400-0636 with any questions or concerns you may have regarding this report.

Sincerely,

KOMAN Government Solutions, LLC

A handwritten signature in black ink that reads 'Robert G. Gregory'.

Robert G. Gregory
Project Manager

Attachment A: Groundwater and Air Sampling Results for February 2023

cc: C. Haas, NYSDEC Region 1
C. Engelhardt, NYSDEC Region 1
J. Pilewski, NYSDEC – Region 1 Water Engineer
K. Granzen, NYSDEC
M. Travis, NYSDEC
J. Sullivan, NYSDOH
G. Ennis, Nassau County Department of Public Works
T. Licata, Town of Oyster Bay
M. Russo, Town of Oyster Bay
S. Sokolowski, NAVFAC Mid-Atlantic
V. Varricchio, NWIRP Bethpage Facilities Management
P. Schauble, KGS
GM-38 Copy

ATTACHMENT A
GROUNDWATER AND AIR SAMPLING RESULTS
FEBRUARY 2023

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Report
February 2023**

SPDES Parameters			February 2023				
Process Stream	Daily Treated Effluent Maximum ⁽¹⁾	Units	RW-1	RW-3	RW-4	Combined Influent (RW-1 + RW-3 + RW-4)	Treated Effluent
Well Depth	N/A	ft	445	530	675	N/A	N/A
Screened Interval	N/A	ft bgs	335-395 410-430	392-412 442-504	570-670	N/A	N/A
Sampling Date	N/A		2/2/23				
Effective Flowrate	1100	GPM	492	0	480	971	999
Total Flow	N/A	gallons	19,672,900	0	19,193,200	38,866,100	39,984,800
pH	5.5 - 8.5	SU	5.68	NS	6.28	5.98	6.69
Chloroform	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	5	µg/L	1.05 J	NS	ND (1.0)	0.53 J	ND (1.0)
1,2-Dichloroethane	0.6	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	5	µg/L	0.676 J	NS	1.64 J	1.15 J	ND (1.0)
cis 1,2-Dichloroethene	5	µg/L	2.92 J	NS	1.74 J	2.34 J	ND (1.0)
trans 1,2-Dichloroethene	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5	µg/L	13.5	NS	6.19 J	9.9	ND (1.0)
1,1,1-Trichloroethane	5	µg/L	0.418 J	NS	ND (1.0)	0.21 J	ND (1.0)
Trichloroethene	5	µg/L	45.5	NS	574	306.5	ND (1.0)
1,1,2-Trichlorotrifluoroethane	5	µg/L	ND (1.0)	NS	6.97 J	3.4 J	ND (1.0)
Vinyl Chloride	2	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dioxane - 8270D	1	µg/L	1.3	NS	11	6.1	0.23
Mercury	0.00025	mg/L	ND (0.00010)	NS	ND (0.00010)	ND (0.00010)	ND (0.00010)
Total Suspended Solids (TSS)	N/A	mg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)

Notes:

B - Method blank contamination

J - Estimated result between laboratory method detection limit and reporting limit

ND - Not detected above laboratory method detection limit. Limit of Detection (LOD) given in parentheses.

N/A - Not Applicable

NS - Not Sampled

(1) Wastewater discharge equivalence permit renewed on 18 August 2017. Discharge limits established for 10 years. Chloroform, 1,4-dioxane and 1,1,2-trichlorotrifluoroethane are now monitored under the new permit.

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
February 2023**

DAR Parameters			February 2023	
Process Stream	Units	Discharge Goal ⁽¹⁾	Influent	Effluent
Sampling Date			2/2/23	
Average Flowrate	CFM	N/A	NR	6,819
Total Flow	ft ³	N/A	NR	272,891,933
Total Flow	m ³	N/A	NR	7,727,439
1,2-Dichloroethane	µg/m ³	N/A	ND	2.1 J
cis 1,2-Dichloroethene	µg/m ³	≤ 100,000 ⁽²⁾	25	42
trans 1,2-Dichloroethene	µg/m ³		ND	ND
1,2-Dichloroethene (total)	µg/m ³	≤ 100,000	ND	44
Toluene	µg/m ³	N/A	ND	ND
Total Xylene	µg/m ³	N/A	ND	ND
1,1,2-Trichloroethane	µg/m ³	N/A	ND	ND
Trichloroethene	µg/m ³	≤ 2600	6600	ND
Vinyl Chloride	µg/m ³	≤ 560	ND	ND
Tetrachloroethene	µg/m ³	≤ 5100	150	ND

Notes:

CFM - cubic feet per minute

DAR - Division of Air Resources

J - Estimated result between laboratory method detection limit and reporting limit

N/A - Not Applicable

NR - Not recorded

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.

(2) Discharge goal is for total 1,2-Dichloroethene.

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
February 2023**

DAR Parameters	Units	Discharge Goal ⁽¹⁾	February 2023
Sampling Date			2/2/23
Average Flowrate	CFM	N/A	6,819
Total Flow	ft ³	N/A	272,891,933
Total Flow	m ³	N/A	7,727,439
Trichloroethene	lb/hr	≤ 0.09	0.00000
Vinyl Chloride	lb/hr	≤ 0.02	0.00000
1,2 Dichloroethene	lb/hr	≤ 11	0.00112
1,2-Dichloroethane	lb/hr	N/A	0.00005
Toluene	lb/hr	N/A	0.00000
Total Xylene	lb/hr	N/A	0.00000
1,1,2-Trichloroethane	lb/hr	N/A	0.00000
Tetrachloroethene	lb/hr	≤ 0.18	0.00000

Notes:

CFM - cubic feet per minute

DAR - Division of Air Resources

N/A - Not Applicable

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.

MARCH 2023



10 April 2023

Mr. Jason Pelton
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
625 Broadway
Albany, NY 12233-7252

**Subject: GROUNDWATER DISCHARGE MONITORING/AIR EMISSION REPORT
GM-38 AREA, NWIRP BETHPAGE, NY; DER SITE # 1-30-003B-OU 2
MARCH 2023 REPORTING PERIOD**

Dear Mr. Pelton:

KOMAN Government Solutions, LLC (KGS) is submitting this monthly monitoring report of the groundwater discharge and air emission results for the Groundwater Treatment Plant (GWTP) located at the Former Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, NY, GM-38 Area. This report was prepared in accordance with GWTP operational requirements for DER Site # 1-30-003B-OU 2, and the SPDES Permit Equivalent # 13003B.

GWTP operational data from 1 March to 31 March 2023 are presented in Attachment A. The plant was down for approximately 4.0 hours during the reporting period as the result of backwashing the LGAC units and an air stripper high level alarm.

As indicated in Attachment A, all SPDES permitted aqueous constituents are in compliance with the established discharge limits, and all stack emissions are in compliance with established discharge goals during the current reporting period.

Please contact me at 610-400-0636 with any questions or concerns you may have regarding this report.

Sincerely,

KOMAN Government Solutions, LLC

A handwritten signature in black ink that reads 'Robert G. Gregory'.

Robert G. Gregory
Project Manager

Attachment A: Groundwater and Air Sampling Results for March 2023

cc: C. Haas, NYSDEC Region 1
C. Engelhardt, NYSDEC Region 1
J. Pilewski, NYSDEC – Region 1 Water Engineer
K. Granzen, NYSDEC
M. Travis, NYSDEC
J. Sullivan, NYSDOH
G. Ennis, Nassau County Department of Public Works
T. Licata, Town of Oyster Bay
M. Russo, Town of Oyster Bay
S. Sokolowski, NAVFAC Mid-Atlantic
V. Varricchio, NWIRP Bethpage Facilities Management
P. Schauble, KGS
GM-38 Copy

ATTACHMENT A
GROUNDWATER AND AIR SAMPLING RESULTS
MARCH 2023

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Report
March 2023**

SPDES Parameters			March 2023				
Process Stream	Daily Treated Effluent Maximum ⁽¹⁾	Units	RW-1	RW-3	RW-4	Combined Influent (RW-1 + RW-3 + RW-4)	Treated Effluent
Well Depth	N/A	ft	445	530	675	N/A	N/A
Screened Interval	N/A	ft bgs	335-395 410-430	392-412 442-504	570-670	N/A	N/A
Sampling Date	N/A		3/6/23				
Effective Flowrate	1100	GPM	499	0	487	986	1,008
Total Flow	N/A	gallons	22,152,000	0	21,636,100	43,788,100	44,754,700
pH	5.5 - 8.5	SU	5.71	NS	6.37	6.04	6.64
Chloroform	5	µg/L	ND (1.0)	NS	2.64 J	1.30 J	ND (1.0)
1,1-Dichloroethane	5	µg/L	0.952 J	NS	ND (1.0)	0.48 J	ND (1.0)
1,2-Dichloroethane	0.6	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethene	5	µg/L	0.621 J	NS	1.45 J	1.03 J	ND (1.0)
cis 1,2-Dichloroethene	5	µg/L	2.86 J	NS	1.29 J	2.08 J	ND (1.0)
trans 1,2-Dichloroethene	5	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5	µg/L	14.1	NS	6.16 J	10.2	ND (1.0)
1,1,1-Trichloroethane	5	µg/L	0.367 J	NS	ND (1.0)	0.19 J	ND (1.0)
Trichloroethene	5	µg/L	46.5	NS	554	297	ND (1.0)
1,1,2-Trichlorotrifluoroethane	5	µg/L	ND (1.0)	NS	6.63 J	3.3 J	ND (1.0)
Vinyl Chloride	2	µg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)
1,4-Dioxane - 8270D	1	µg/L	2.0	NS	13	7.4	0.20
Mercury	0.00025	mg/L	ND (0.00010)	NS	ND (0.00010)	ND (0.00010)	ND (0.00010)
Total Suspended Solids (TSS)	N/A	mg/L	ND (1.0)	NS	ND (1.0)	ND (1.0)	ND (1.0)

Notes:

B - Method blank contamination

J - Estimated result between laboratory method detection limit and reporting limit

ND - Not detected above laboratory method detection limit. Limit of Detection (LOD) given in parentheses.

N/A - Not Applicable

NS - Not Sampled

(1) Wastewater discharge equivalence permit renewed on 18 August 2017. Discharge limits established for 10 years. Chloroform, 1,4-dioxane, and 1,1,2-trichlorotrifluoroethane are now monitored under the new permit.

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
March 2023**

DAR Parameters			March 2023	
Process Stream	Units	Discharge Goal ⁽¹⁾	Influent	Effluent
Sampling Date			3/6/23	
Average Flowrate	CFM	N/A	NR	6,076
Total Flow	ft ³	N/A	NR	269,774,400
Total Flow	m ³	N/A	NR	7,639,160
1,2-Dichloroethane	µg/m ³	N/A	ND	2.2 J
cis 1,2-Dichloroethene	µg/m ³	≤ 100,000 ⁽²⁾	38	38
trans 1,2-Dichloroethene	µg/m ³		ND	ND
1,2-Dichloroethene (total)	µg/m ³	≤ 100,000	ND	38
Toluene	µg/m ³	N/A	ND	ND
Total Xylene	µg/m ³	N/A	ND	ND
1,1,2-Trichloroethane	µg/m ³	N/A	ND	ND
Trichloroethene	µg/m ³	≤ 2600	7800	ND
Vinyl Chloride	µg/m ³	≤ 560	ND	ND
Tetrachloroethene	µg/m ³	≤ 5100	220	ND

Notes:

CFM - cubic feet per minute

DAR - Division of Air Resources

J - Estimated result between laboratory method detection limit and reporting limit

N/A - Not Applicable

NR - Not recorded

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.

(2) Discharge goal is for total 1,2-Dichloroethene.

Goals based on an assumed air flow rate of 8,000 CFM.

**GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
March 2023**

DAR Parameters	Units	Discharge Goal ⁽¹⁾	March 2023
Sampling Date			3/6/23
Average Flowrate	CFM	N/A	6,076
Total Flow	ft ³	N/A	269,774,400
Total Flow	m ³	N/A	7,639,160
Trichloroethene	lb/hr	≤ 0.09	0.00000
Vinyl Chloride	lb/hr	≤ 0.02	0.00000
1,2 Dichloroethene	lb/hr	≤ 11	0.00086
1,2-Dichloroethane	lb/hr	N/A	0.00005
Toluene	lb/hr	N/A	0.00000
Total Xylene	lb/hr	N/A	0.00000
1,1,2-Trichloroethane	lb/hr	N/A	0.00000
Tetrachloroethene	lb/hr	≤ 0.18	0.00000

Notes:

CFM - cubic feet per minute

DAR - Division of Air Resources

N/A - Not Applicable

(1) Discharge goal as approved by NYSDEC's letter dated 31 October 2013.
Goals based on an assumed air flow rate of 8,000 CFM.

APPENDIX B

**NYSDEC AIR DISCHARGE LIMIT
DOCUMENTATION**

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Action Bureau A, 12th Floor
625 Broadway, Albany, New York 12233-7015
Phone: (518) 402-9620 FAX: (518) 402-9022



Joseph Martens
Commissioner

October 31, 2013

Lora Fly
Remedial Program Manager
NAVFAC Mid-Atlantic
Northeast IPT
9742 Maryland Avenue
Norfolk, VA, 23511-3095

RE: Northrop Grumman, Naval Weapons Industrial Reserve Plant (NWIRP) and Grumman Steel Los Sites, NYSDEC Site No.'s I-30-003 A & B.

Dear Ms. Fly:

Tetra Tech NUS Inc., on behalf of the Department of the Navy NAVFAC Midlantic, has submitted an application to remove the GM 38 Area Groundwater Extraction and Treatment system impregnated Xeolite™ resin from the air discharge treatment system. Currently, the air treatment system uses a combined activated carbon with permanganate impregnated resin treatment train. The New York State Department of Environmental Conservation (NYSDEC) has reviewed the Department of the Navy application and concurs with the findings presented.

The routine monitoring, as detailed in Table 1, clearly indicates that vinyl chloride, one of the main contaminants of concern, has diminished to almost non-detect, and discharge concentrations have dropped to below the limit to require air treatment for the other contaminants as well. However, NAVFAC Midlantic is still proposing activated carbon to reduce the other discharge contaminant levels. Therefore, the NYSDEC hereby approves the proposed changes to the GM 38 Area air treatment. The Xeolite™ resin beds will remain in place should reactivation, based on routine monitoring, be required.

If you have any questions in the interim, please contact me at (518)402-9620.

Sincerely,

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

EC: J. Swartwout
S. Scharf
W. Parish, Region 1
S. Karpinski, NYSDOH
E. Hannon, NGC
D. Stern, Arcadis
D. Brayack, TTNUS



NOR-01264

November 21, 2011

Mr. Stephen Scharf
New York Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Remedial Action A
625 Broadway, 11th Floor
Albany, New York 12233-7015

Reference: CLEAN Contract No. N62470-08-D-1001
Contract Task Order WE06

Subject: Proposed Modification to Discharge Limits for Off Gas Volatile Organic Compounds (VOCs)
for Air Stripping Tower
GM-38 Offsite Groundwater Treatment Plant,
NWIRP Bethpage, New York

Dear Mr. Scharf:

On behalf of the Navy, please find enclosed a copy of the subject document. This document presents an evaluation of current concentrations of off gas VOCs from the GM-38 groundwater treatment plant air-stripping tower (prior to treatment with granular activated carbon). Maximum emission rates were re-evaluated due to decreasing maximum concentrations of target VOCs in un-treated air stripper AS-1 off gas. In addition, breakthrough of target contaminants (e.g., cis-1,2-dichloroethene) is beginning to occur in the granular activated carbon bed. Maximum emission rates were re-evaluated to provide a determination if breakthrough of contaminants would trigger the need for a replacement of the granular activated carbon bed.

Existing Discharge Goals were established in the "Final Operation, Maintenance and Monitoring Plan for Groundwater Treatment Plant GM-38 Area Groundwater Remediation" prepared by Tetra Tech EC (April 2010). Existing goals were based on emission estimates for a 95% reduction (see Attachment A), instead of being based on the original DAR-1 analysis of air stripper off gas. Emission estimates were calculated using the air stripper design flow rate of 8,000 cubic feet per minute (cfm), and previous contaminant discharge rates in pounds per hour (lb/hr). Original emission estimates are provided in Attachment B.

Proposed Revised Discharge Goals were calculated using an average flow rate of 9,200 cfm, January to March 2011 VOC loading rates (taken from the Quarterly Operations Report First Quarter 2011 from ECOR Federal Services), and the Actual Annual % of Annual Guideline Concentrations (AGCs), taken from the revised DAR-1 Model Output. The revised DAR-1 Model Output is provided in Attachment C. Existing Discharge Goals and Proposed Revised Discharge Goals are compared in tabular format in the first page of the attachment. Proposed Revised Discharge Goals for trichloroethene (TCE) are the same as previous. The proposed limit for tetrachloroethene (PCE) is approximately 10 times the previous limit, and vinyl chloride is approximately 2 times the previous limit. Revised Discharge Goals for 1,2-dichloroethene (goals are the same for cis-1,2-dichloroethene) are 100 times greater than previously established limits. It is recommended that these revised limits replace previous discharge goals, and treatment of air stripper off gas by granular activated carbon is recommended to continue for TCE and PCE, with no treatment required for vinyl chloride and 1,2-dichloroethene.

If you have any questions please contact Ms. Lora Fly, NAVFAC Mid-LANT, at (757) 341-2012.

Sincerely,



David D. Brayack, P.E.
Project Manager

Enclosure: (1) Proposed Modification to Discharge Limits for Off Gas Volatile Organic Compounds
(VOCs) for Air Stripping Tower
GM-38 Offsite Groundwater Treatment Plant

Distribution:

Mid-Lant, Lora Fly
NYSDEC (Albany), Henry Wilkie
NYSDOH (Troy), Steve Karpinski
NAVAIR, Richard Smith
USEPA, Carol Stein
NGC, Kent Smith
Tetra Tech NUS, Dave Brayack
ECOR Solutions, Al Taormina
Administrative Record
Public Repository
Project File

Tetra Tech NUS, Inc.

5700 Lake Wright Drive, Suite 309, Norfolk, VA 23502
Tel 757.461.3768 Fax 757.461.4148 www.ttnus.com

TABLE 1
COMPARISON OF EXISTING DISCHARGE GOALS WITH ACTUAL EMISSIONS AND PROPOSED DISCHARGE GOALS
AIR STRIPPING TOWER GM-38 OFFSITE GROUNDWATER TREATMENT PLANT
NWIRP BETHPAGE, NEW YORK

Chemical	Existing Discharge Goal		Actual January to March 2011 Values (Pre-Off Gas Treatment)		Proposed Revised Discharge Goals based on DAR-1 Analysis	
	Existing Discharge Loading Rate (pounds (lbs)/hour) ⁽¹⁾	Equivalent Existing Discharge Goals ($\mu\text{g}/\text{m}^3$) ⁽²⁾	Actual Jan-Mar 2011 Concentration ($\mu\text{g}/\text{m}^3$) ⁽³⁾	Actual VOC Loading Pre-Off Gas Treatment (lbs/hour) ⁽⁴⁾	Proposed Discharge Loading Rate (lbs/hour) ⁽⁵⁾	Equivalent Proposed Discharge Goal ($\mu\text{g}/\text{m}^3$) ⁽⁵⁾
TCE	0.09	2,600	10,000	0.345	0.09	2,600
PCE	0.02	580	6,800	0.234	0.18	5,100
Vinyl Chloride	0.01	290	76	0.003	0.02	560
1,2-Dichloroethene (total)	0.03	870	750	0.026	11	greater than 100,000

Notes:

⁽¹⁾Existing Discharge Goals are based on the design flow rate of 8,000 cfm. Existing Discharge Goals were taken from the Final Operations and Maintenance Plan for GM-38 Area Groundwater Remediation from Tetra Tech EC. Existing goals were based on emission estimates for a 95% reduction, and not the previous DAR-1 Analysis. Attachment B (provided at the end of this package) provides the original emission estimates.

⁽²⁾Existing Discharge Goals were calculated using the actual flow rate of 9,200 cfm and the existing discharge loading rate in pounds per hour (lb/hr).

⁽³⁾Values were taken from the Quarterly Operations Report First Quarter 2011 from ECOR Federal Services. Values were the maximum effluent concentration in off gas from air stripper stack AS-1 prior to treatment with vapor phase granular activated carbon (GAC), for the months of January, February and March 2011.

⁽⁴⁾Actual VOC Loading was calculated using an average flow rate of 9,200 cfm and the January-March 2011 concentrations. Existing off gas treatment consists of two stage vapor phase GAC followed by potassium permanganate zeolite media to provide additional treatment for vinyl chloride.

⁽⁵⁾Values were calculated using an average flow rate of 9,200 cfm, and the Actual Annual % of the AGCs from the 2011 DAR-1 Model Output to achieve air quality requirements.

ATTACHMENT A
2008 AIR PERMIT SUBMITTAL

New York State Department of Environmental Conservation Air Permit Application



DEC ID									
-									

APPLICATION ID														
-														

OFFICE USE ONLY									

Section I - Certification

Title V Certification	
<p>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.</p>	
Responsible Official	Title
Signature	Date _____ / _____ / _____

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

Section II - Identification Information

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

Owner/Firm			
Name <u>US Navy/NAVFAC Midlant</u>			
Street Address <u>9742 Maryland Ave, Bldg Z-144</u>			
City <u>Norfolk</u>	State <u>VA</u>	Country <u>US</u>	Zip <u>23511-3095</u>
Owner Classification <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Corporation/Partnership		<input type="checkbox"/> State <input type="checkbox"/> Municipal <input type="checkbox"/> Individual	
Taxpayer ID _____			
Facility			<input type="checkbox"/> Confidential
Name <u>Naval Weapons Industrial Reserve Plant (NWIRP) GM-38 Area</u>			
Location Address <u>Bethpage</u>			
<input type="checkbox"/> City / <input checked="" type="checkbox"/> Town / <input type="checkbox"/> Village <u>Oyster Bay, New York</u>			Zip <u>11714</u>
Project Description			<input type="checkbox"/> Continuation Sheet(s)
<u>Air stripping of groundwater to remove VOCs</u>			

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

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Section III - Facility Information

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

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

SIC Codes									
9999									

Facility Description		<input type="checkbox"/> Continuation Sheet(s)
Groundwater Remediation by Air Stripping followed by Vapor-Phase GAC for emission control		

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

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

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

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Section III - Facility Information (continued)

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

Facility Emissions Summary						<input type="checkbox"/> Continuation Sheet(s)	
CAS No.	Contaminant Name	PTE		Actual (lbs/yr)			
		(lbs/yr)	Range Code				
NY075 - 00 - 5	PM-10						
NY075 - 00 - 0	PARTICULATES						
7446 - 09 - 5	SULFUR DIOXIDE						
NY210 - 00 - 0	OXIDES OF NITROGEN						
630 - 08 - 0	CARBON MONOXIDE						
7439 - 92 - 1	LEAD						
NY998 - 00 - 0	VOC	117					
NY100 - 00 - 0	HAP	110					
0079 - 01 - 6	Trichloroethylene	99					
00075 - 01 - 4	Vinyl Chloride	3.7					
00540 - 59 - 0	1,2-Dichloroethylene	7.3					
-	-						
-	-						

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Section IV - Emission Unit Information

Emission Unit Description										<input type="checkbox"/> Continuation Sheet(s)
EMISSION UNIT	0	-	0	0	E	U	1			
Air Stripper AS-1 for groundwater remediation, provided with activated carbon for emission control.										
The emission point is stack 00ST-1. The 2-stage VGAC is followed by a 3rd vessel containing a potassium permanganate zeolite media for increased VC capacity.										

Building					<input type="checkbox"/> Continuation Sheet(s)	
Building	Building Name			Length (ft)	Width (ft)	Orientation
BLDG-1	Treatment Plant			75	75	0

Emission Point							<input type="checkbox"/> Continuation Sheet(s)
EMISSION PT.	00ST1						
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section		
90	40	15	36	80	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	
19	8020			BLDG-1	50		
EMISSION PT.							
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section		
					Length (in)	Width (in)	
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal	

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

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-									

Section IV - Emission Unit Information (continued)

Process Information										<input type="checkbox"/> Continuation Sheet(s)	
EMISSION UNIT 0 - 00 E U 1								PROCESS		PR 1	
Description											
The remedial system is air stripping, using a packed column at a groundwater flow rate of 1,100 gpm (plus 100 gpm recycle, for a total of 1,200 gpm). Vapor phase treatment includes the use of 3 vessels, a 2-stage GAC unit, followed by a 3rd vessel containing a potassium permanganate impregnated zeolite for increased VC capacity. Prior to entering the vapor-phase GAC adsorption system, the humidity of the air stripper exhaust is reduced to approximately 50 percent or less to optimize the efficiency of the vapor-phase GAC.											
Air Stripper AS-1: Existing. Type: Vertical, Cylindrical Construction: Aluminum											
Packing: 25-foot Jaeger Tripack. Dimensions: 10.0 ft. Dia x 47 ft. H											
Source Classification Code (SCC)		Total Thruput		Thruput Quantity Units							
		Quantity/Hr	Quantity/Yr	Code	Description						
<input type="checkbox"/> Confidential <input checked="" type="checkbox"/> Operating at Maximum Capacity <input type="checkbox"/> Activity with Insignificant Emissions		Operating Schedule		Building		Floor/Location					
		Hrs/Day	Days/Yr								
		24	365	BLDG-1		Main					
Emission Source/Control Identifier(s)											
AS-1											
EMISSION UNIT -								PROCESS			
Description											
Source Classification Code (SCC)		Total Thruput		Thruput Quantity Units							
		Quantity/Hr	Quantity/Yr	Code	Description						
<input type="checkbox"/> Confidential <input type="checkbox"/> Operating at Maximum Capacity <input type="checkbox"/> Activity with Insignificant Emissions		Operating Schedule		Building		Floor/Location					
		Hrs/Day	Days/Yr								
Emission Source/Control Identifier(s)											

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Section IV - Emission Unit Information (continued)

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

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

Emission Unit Compliance Certification											<input type="checkbox"/> Continuation Sheet(s)
Rule Citation											
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause		
6	NYCRR	212									
<input checked="" type="checkbox"/> Applicable Federal Requirement				<input type="checkbox"/> State Only Requirement				<input type="checkbox"/> Capping			
Emission Unit	Emission Point	Process	Emission Source	CAS No.			Contaminant Name				
0-00EU1	00ST1	PR1	AS-1	00079 - 01 - 6			Trichloroethylene				
Monitoring Information											
<input type="checkbox"/> Continuous Emission Monitoring				<input type="checkbox"/> Monitoring of Process or Control Device Parameters as Surrogate							
<input checked="" type="checkbox"/> Intermittent Emission Testing				<input type="checkbox"/> Work Practice Involving Specific Operations							
<input type="checkbox"/> Ambient Air Monitoring				<input type="checkbox"/> Record Keeping/Maintenance Procedures							
Description											
Monthly grab samples analyzed for VOCs from the vapor phase treatment system influent, effluent and two intermediate locations.											
Work Practice		Process Material					Reference Test Method				
Type	Code	Description									
Parameter		Manufacturer Name/Model No.									
Code	Description										
23	Concentration										
Limit			Limit Units								
Upper	Lower	Code	Description								
3,125		255	micrograms per cubic meter								
Averaging Method			Monitoring Frequency			Reporting Requirements					
Code	Description	Code	Description	Code	Description						
01	Instantaneous	05	Monthly	10	Upon Request						

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Section IV - Emission Unit Information (continued)

Determination of Non-Applicability (Title V Only) N/A <input type="checkbox"/> Continuation Sheet(s)										
Rule Citation										
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause	
Emission Unit		Emission Point		Process		Emission Source		<input type="checkbox"/> Applicable Federal Requirement <input type="checkbox"/> State Only Requirement		
Description										
Rule Citation										
Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause	
Emission Unit		Emission Point		Process		Emission Source		<input type="checkbox"/> Applicable Federal Requirement <input type="checkbox"/> State Only Requirement		
Description										
Process Emissions Summary <input type="checkbox"/> Continuation Sheet(s)										
EMISSION UNIT	0 - 0 0 E U 1						PROCESS	P	R	1
CAS No.	Contaminant Name			% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined		
0079 - 01 - 6	Trichloroethylene					95	1.87	02		
PTE			Standard Units	PTE How Determined		Actual				
(lbs/hr)	(lbs/yr)	(standard units)				(lbs/hr)	(lbs/yr)			
0.09	99			02						
EMISSION UNIT	0 - 0 0 E U 1						PROCESS	P	R	1
CAS No.	Contaminant Name			% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined		
00075 - 01 - 4	Vinyl Chloride					95	0.17	03		
PTE			Standard Units	PTE How Determined		Actual				
(lbs/hr)	(lbs/yr)	(standard units)				(lbs/hr)	(lbs/yr)			
0.01	3.7			02						
EMISSION UNIT	0 - 0 0 E U 1						PROCESS	P	R	1
CAS No.	Contaminant Name			% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined		
000540 - 59 - 0	1,2-Dichloroethylene					95	0.6	02		
PTE			Standard Units	PTE How Determined		Actual				
(lbs/hr)	(lbs/yr)	(standard units)				(lbs/hr)	(lbs/yr)			
0.03	7.3			02						

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Section IV - Emission Unit Information (continued)

EMISSION UNIT		Emission Unit Emissions Summary				<input type="checkbox"/> Continuation Sheet(s)
0	-	0	0	E	U	1
CAS No.		Contaminant Name				
00107- 06 - 2		1,2-Dichloroethane				
ERP (lbs/yr)	PTE Emissions		Actual			
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
13.4	Below Reporting Threshold BRT					
CAS No.		Contaminant Name				
00108 - 88 - 3		Toluene				
ERP (lbs/yr)	PTE Emissions		Actual			
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
72.7	BRT		BRT			
CAS No.		Contaminant Name				
01330- 20 - 7		Xylene				
ERP (lbs/yr)	PTE Emissions		Actual			
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
77.1	BRT		BRT			
CAS No.		Contaminant Name				
-		1,1,2-Trichloroethane				
ERP (lbs/yr)	PTE Emissions		Actual			
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)		
	BRT		BRT			

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

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-											

Section IV - Emission Unit Information (continued)

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

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



DEC ID									
-									

Supporting Documentation

- 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): _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)
 _____ (____ / ____ / ____)

ATTACHMENT B

2008 EMISSION ESTIMATES BASED ON 95% REMOVAL

**ATTACHMENT 1
Emission Estimate**

POTENTIAL EMISSION ESTIMATES,
USED TO DEVELOP 95% REDUCTION
OF EMISSION VALUES AS BASED ON
INFLUENT GROUNDWATER CONCENTRATIONS
(95% REDUCTION OF EMISSION
VALUES ARE PROVIDED
ON PAGE 7 OF THE 2008 AIR
PERMIT APPLICATION PROCESS
EMISSIONS SUMMARY)

Feed Water Flow 1,100 gpm: max or normal
250 m³/hr
Water Flow Including Recycle 1,200 gpm: max or normal
273 m³/hr
Air Flow 8,000 cfm
13,592 m³/hr
A/W vol ratio 50

EXAMPLE EMISSION CALC: Vinyl Chloride
4.8 ug/L x 1000 L/m³ x 250 m³ water/13,623 m³ air = 88 ug/m³

Name	CAS Number	Toxicity: H/M/L ²	VOC ³	HAP ⁴	GW Conc. ¹		Effluent Conc. ¹		Uncontrolled Stripper Exhaust							
					Max ug/L	Avg ug/L	Max ug/L	Avg ug/L	Max lb/day	Avg lb/day	Max lb/hr	Avg lb/hr	Max gm/sec	Avg gm/sec	Max ug/m ³	Avg ug/m ³
1,1,1-Trichloroethane (Methyl Chloroform)	00071-55-6	L	No	Yes	3	3.0			0.04	0.04	0.00	0.00	2.08E-04	2.08E-04	55	55
1,1,2-Trichloroethane	00079-00-5	M	Yes	Yes	3.5	0.3			0.05	0.00	0.00	0.00	2.43E-04	2.08E-05	64	6
1,1-Dichloroethane	00075-34-3	L	Yes	Yes	4	0.7			0.05	0.01	0.00	0.00	2.77E-04	4.85E-05	74	13
1,2-Dichloroethane	00107-06-2	M	Yes	Yes	3	1.0	0.3	0.1	0.04	0.01	0.00	0.00	1.87E-04	6.24E-05	55	18
1,1-Dichloroethylene (Vinylidene Chloride)	00075-35-4	M	Yes	Yes	9	1.6			0.12	0.02	0.00	0.00	6.24E-04	1.11E-04	165	29
1,2-Dichloroethylene	00540-59-0	M	Yes	No	1,100	31.5	1.3	0.0	14.51	0.42	0.60	0.02	7.62E-02	2.18E-03	20,219	579
Benzene	00071-43-2	H	Yes	Yes	4	0.1			0.05	0.00	0.00	0.00	2.77E-04	6.94E-06	74	2
Carbon Tetrachloride	00056-23-5	H	Yes	Yes	4	0.1			0.05	0.00	0.00	0.00	2.77E-04	6.94E-06	74	2
Chlorobenzene (Monochlorobenzene)	00108-90-7	M	Yes	Yes	1	0.1			0.01	0.00	0.00	0.00	6.94E-05	6.94E-06	18	2
Chloroform	00067-66-3	M	Yes	Yes	2	0.8			0.03	0.01	0.00	0.00	1.39E-04	5.55E-05	37	15
Methyl Tert Butyl Ether	01634-04-4	M	Yes	Yes	2	0.1			0.03	0.00	0.00	0.00	1.39E-04	6.94E-06	37	2
Tetrachloroethylene	00127-18-4	M	Yes	Yes	900	33.8	0.9	0.0	11.88	0.45	0.49	0.02	6.24E-02	2.34E-03	16,543	621
Toluene	00108-88-3	L	Yes	Yes	15	0.7			0.20	0.01	0.01	0.00	1.04E-03	4.85E-05	276	13
Trichloroethylene	00079-01-6	M	Yes	Yes	3,400	411.5	4.5	0.5	44.86	5.43	1.87	0.23	2.35E-01	2.85E-02	62,494	7,564
Vinyl chloride	00075-01-4	H	Yes	Yes	300	4.8	0.0	0.0	3.96	0.06	0.17	0.00	2.08E-02	3.33E-04	5,514	88
Xylenes	01330-20-7	M	Yes	Yes	16	0.2			0.21	0.00	0.01	0.00	1.11E-03	1.39E-05	294	4
Total VOCs					5,764	487.3	7.0	0.6	76.05	6.43	3.17	0.27				
Total HAPs					4,667	458.8	5.7	0.6	61.57	6.05	2.57	0.25				

Total Uncontrolled VOC 2,347 lb/yr
Total Uncontrolled HAP 2,209 lb/yr

1. Source: "GM-38 Groundwater Remedy Analysis Report", February 2003
2. Source: DAR-1 AGC/SGC Tables, NYSDEC Division of Air Resources, Air Toxics Section, September 10, 2007.
3. Source: 6 NYCRR Part 200.1(cg)
4. Source: 6 NYCRR Part 200.1(ag)

**ATTACHMENT 1
Emission Estimate**

Feed Water Flow 1,100 gpm: max or normal
250 m³/hr
Water Flow Including Recycle 1,200 gpm: max or normal
273 m³/hr
Air Flow 8,000 cfm
13,592 m³/hr
A/W vol ratio 50

Controlled Stripper Exhat

Name	CAS Number	Toxicity: H/M/L ²	VOC ³	HAP ⁴	Control by	Max	Avg	Max	Avg
					GAC	lb/day	lb/day	gm/sec	gm/sec
1,1,1-Trichloroethane (Methyl Chloroform)	00071-55-6	L	No	Yes	95%	0.00	0.00	1.04E-05	1.04E-05
1,1,2-Trichloroethane	00079-00-5	M	Yes	Yes	95%	0.00	0.00	1.21E-05	1.04E-06
1,1-Dichloroethane	00075-34-3	L	Yes	Yes	95%	0.00	0.00	1.39E-05	2.43E-06
1,2-Dichloroethane	00107-06-2	M	Yes	Yes	95%	0.00	0.00	9.36E-06	3.12E-06
1,1-Dichloroethylene (Vinylidene Chloride)	00075-35-4	M	Yes	Yes	95%	0.01	0.00	3.12E-05	5.55E-06
1,2-Dichloroethylene	00540-59-0	M	Yes	No	95%	0.73	0.02	3.81E-03	1.09E-04
Benzene	00071-43-2	H	Yes	Yes	95%	0.00	0.00	1.39E-05	3.47E-07
Carbon Tetrachloride	00056-23-5	H	Yes	Yes	95%	0.00	0.00	1.39E-05	3.47E-07
Chlorobenzene (Monochlorobenzene)	00108-90-7	M	Yes	Yes	95%	0.00	0.00	3.47E-06	3.47E-07
Chloroform	00067-66-3	M	Yes	Yes	95%	0.00	0.00	6.94E-06	2.77E-06
Methyl Tert Butyl Ether	01634-04-4	M	Yes	Yes	95%	0.00	0.00	6.94E-06	3.47E-07
Tetrachloroethylene	00127-18-4	M	Yes	Yes	95%	0.59	0.02	3.12E-03	1.17E-04
Toluene	00108-88-3	L	Yes	Yes	95%	0.01	0.00	5.20E-05	2.43E-06
Trichloroethylene	00079-01-6	M	Yes	Yes	95%	2.24	0.27	1.18E-02	1.43E-03
Vinyl chloride	00075-01-4	H	Yes	Yes	95%	0.20	0.00	1.04E-03	1.66E-05
Xylenes	01330-20-7	M	Yes	Yes	95%	0.01	0.00	5.55E-05	6.94E-07
Total VOCs						3.80	0.32		
Total HAPs						3.08	0.30		

Total Controlled VOC 117 lb/yr
Total Controlled HAP 110 lb/yr

1. Source: "GM-38 Groundwater Remedy Analysis Report", February 2003
2. Source: DAR-1 AGC/SGC Tables, NYSDEC Division of Air Resources, Air Tox
3. Source: 6 NYCRR Part 200.1(cg)
4. Source: 6 NYCRR Part 200.1(ag)

ATTACHMENT C

2011 DISCHARGE GOALS AND 2011 DAR-1 ANALYSIS

Tetra Tech NUS		STANDARD CALCULATION SHEET	
CLIENT: US CLEAN	FILE No:	BY: SK	PAGE: 1 of 1
SUBJECT: Calculation of Current Discharge Goals GM-38 Area NWIRP Bethpage, New York		CHECKED BY:	DATE: 9/7/2011

1. Purpose:

To calculate current discharge goals for Trichloroethene (TCE), Tetrachloroethene (PCE), Vinyl Chloride, cis 1,2-Dichloroethene, and 1,2-Dichloroethene (total), for treatment of off-gas from the air stripper stack AS-1.

2. Approach:

From the Contaminant Assessment Summary of the DAR-1 Model output for TCE, PCE, Vinyl Chloride, cis 1,2-Dichloroethene, and 1,2-Dichloroethene (total) (see DAR-1 output for analysis inputs), use the Actual Annual % of the Annual Guideline Concentration (AGC), a current average flow rate of 9,200 cubic feet per minute (cfm), and influent chemical emission rates in pounds per hour (lb/hour) and pounds per year (lb/year) to back calculate current discharge goals.

3. Calculation of Current Discharge Goals:

Chemical	Current Actual Annual % of AGC ⁽¹⁾	Current Maximum Concentration (µg/m ³) ⁽²⁾	Current Chemical Emission Rate Prior to Treatment (lb/hour) ⁽³⁾	Current Chemical Emission Rate Prior to Treatment (lb/year) ⁽³⁾	Calculated Discharge Goal (lb/hr) ⁽⁴⁾	Calculated Discharge Goal (lb/year) ⁽⁴⁾	Maximum Allowable Concentration (µg/m ³) ⁽⁴⁾
TCE	390.6	10,000	0.3446	3,019	0.0882	770	2,600
PCE	132.8	6,800	0.2344	2,053	0.1764	1,500	5,100
Vinyl Chloride	13.49	76	0.0026	22.94	0.0194	170	560
cis 1,2-Dichloroethene	0.2322	750	0.0258	226.4	11.13	98,000	320,000
1,2-Dichloroethene (total)	0.2322	750	0.0258	226.4	11.13	98,000	320,000

Notes:

⁽¹⁾Actual Annual % of the AGCs is from the attached DAR-1 Model Output.

⁽²⁾Values were taken from the Quarterly Operations Report First Quarter 2011 (June 2011) from ECOR Federal Services. Values were the maximum effluent concentration in off gas from air stripper stack AS-1 for the months of January, February, and March 2011.

⁽³⁾Chemical Emission Rates were calculated from maximum concentrations and an average flow rate of 9,200 cfm.

⁽⁴⁾Discharge Goals are based on a flow of 9,200 cfm, and calculated from the Actual Annual % of the AGCs from the DAR-1 Model Output to achieve air quality requirements. The summary of additional inputs for this model run is provided in the DAR-1 Model Output. Stack height is 40 feet, and the property line was evaluated at a distance of 50 feet.

BETHPAGE SITE GM-38 OFF-SITE GROUNDWATER AIR STRIPPER STACK EMISSIONS
 DAR-1 MODEL OUTPUT, POINT SOURCE (STACK EMISSIONS) TYPE
 INCLUDES ISCLT MODELING SUMMARY

- I. Summary of Inputs for Model Run to Nearest Property Line (50 feet), worst case scenario (highest contaminant concentrations seen in first quarter 2011 in untreated effluent from Air Stripper AS-1 prior to treatment with granular activated carbon (GAC))

Chemical	CAS No. 00079-01- 6 (TCE)	CAS No. 00127-18- 4 (PCE)	CAS No. 00075-01-4 (Vinyl Chloride)	CAS No. 00156-59-2 (cis 1,2- Dichloroethene)	CAS No. 00540-59-0 (1,2- Dichloroethene, total)
Emission Rate Prior to Treatment ⁽¹⁾ (lb/hour)	0.3444	0.2342	0.0026	0.0258	0.0258
Emission Rate Prior to Treatment ⁽¹⁾ (lb/year)	3,017	2,052	22.93	226.0	226.0
Maximum Concentration of Untreated Off Gas ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	10,000	6,800	76	750	750
Annual Guideline Concentration (AGC) ($\mu\text{g}/\text{m}^3$)	0.5	1.0	0.11	63	63
Short-term Guideline Concentration (SGC) ($\mu\text{g}/\text{m}^3$)	14,000	1,000	180,000	--	--

HA	Height Above stack/ maximum height of plume (HA, feet)	15
SH	Stack Height/Treatment Building Air Stack (SH, feet)	40
D	Stack Diameter (D, inches)	36
T	Stack Exit Temperature (T, degrees Fahrenheit)	80
V	Stack Exit Velocity (V, ft/sec)	21.69
Q ⁽²⁾	Stack Exit Flow Rate [Q, Actual Cubic Feet per Minute (ACFM)]	9,200
Dpl	Shortest Distance from Source Building (Treatment Building) to Property Line (Dpl, feet) for point sources	50
BW	Building Width (BW, feet) of Source Building (Treatment Building) for point sources	75
BL	Building Length (BL, feet) of Source Building (Treatment Building)	75
Q	Actual Hourly Emission Rate (lbs/hour) for source contaminant	Chemical specific, see above
Qa	Actual Annual Emission Rate (lbs/year) for source contaminant	Chemical specific, see above

⁽¹⁾ Emission rates and maximum concentration values were taken from the Quarterly Operations Report First Quarter (June 2011) as provided by ECOR Services, using January, February, and March 2011 maximum rates of untreated off gas from Air Stripper AS-1 in the

GM-38 Treatment Building. Emission rates are based on continuous operation 24 hours per day, 7 days a week, 52 weeks a year, or approximately 8,760 hours of operation.

⁽²⁾ "Q" is an average value of January and February 2011 monthly flow rates. Effective water and vapor flow rates were reduced during the reporting period of March due to a shutdown of the Treatment Plant on March 23, 2011.

II. Contaminant Assessment Summary of TCE, PCE, Vinyl Chloride, cis 1,2-Dichloroethene, and 1,2-Dichloroethene (total):

CONTAMINANT ASSESSMENT SUMMARY OF DAR-1 ANALYSIS						9/ 8/11
						Page
						1
	SHORT-TERM	CAVITY	POINT or AREA SOURCE			
CAS NUMBER	AGC ug/m3	MAXIMUM (Cav. Pt. Area) % OF SGC	ACTUAL ANNUAL % OF AGC	POTENTIAL ANNUAL % OF AGC	ACTUAL ANNUAL % OF AGC	
00075-01-4	0.11000000	0.0005	0.0000	13.3889	13.4948	
00079-01-6	0.50000000	0.7757	0.0000	390.1734	390.6266	
00127-18-4	1.00000000	7.3852	0.0000	132.6635	132.8415	
00156-59-2	63.00000000	0.0000	0.0000	0.2320	0.2322	
00540-59-0	63.00000000	0.0000	0.0000	0.2320	0.2322	
SUMMARY TOTALS		8.1614	0.0000	536.6897	537.4274	

III. Contaminant Impact Summary of TCE, PCE, Vinyl Chloride, cis 1,2-Dichloroethene, and 1,2-Dichloroethene (total):

CONTAMINANT IMPACT SUMMARY OF DAR-1 ANALYSIS						9/ 8/11
						Page
						1
	SHORT-TERM	CAVITY	POINT or AREA SOURCE			
CAS NUMBER	AGC ug/m3	MAXIMUM (Cav. Pt. Area) ug/m3	ACTUAL ANNUAL ug/m3	POTENTIAL ANNUAL ug/m3	ACTUAL ANNUAL ug/m3	
00075-01-4	0.11000000	0.81988204	0.00000000	0.01472780	0.01484433	
00079-01-6	0.50000000	108.60282900	0.00000000	1.95086694	1.95113296	
00127-18-4	1.00000000	73.85244750	0.00000000	1.32663476	1.32815004	
00156-59-2	63.00000000	8.13575172	0.00000000	0.14614509	0.14630693	
00540-59-0	63.00000000	8.13575172	0.00000000	0.14614509	0.14630693	

IV. Contaminant Impact Summary Step by Step Menu for TCE:

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*****
NWIRP BETHPAGE GM-38 AREA          BETHPAGE          OYSTER BAY, NEW
EMISSION POINT =          TOTAL          CAS NUMBER = 00079-01-6          SIC = 0
AGC =          0.500000000 ug/m3          SGC =          14000.000000 ug/m3
STACK: HA= 15., SH= 40., D= 36., T= 80., U= 21.69, q= 9200.00
BUILDING: Dpl= 50., BW= 75., BL= 75., %CONTROL= 0.0000
** Reported Hourly Emission Rate <Q> is equal to          0.344400000 lbs/hour.
** Reported Annual Emission Rate <Qa> is equal to          3017.000000 lbs/year.
II.B. REFINED CAVITY IMPACT METHOD <DAR-1, APPENDIX B>.
II.B.1. Shortest Distance from building to Property Line < 50. feet >
is less than or equal to the cavity length, or 3 building
heights < 75. feet >. Therefore, this building will have
cavity impacts <if they occur> at receptors off plant property.
II.B.2. The largest building dimension < 75. feet > is greater than or
equal to the building height < 25. feet >. Therefore, the
computer will NOT redefine the cavity length.
II.B.3. Stack height < 40. feet > is greater than cavity height
< 38. feet >. Therefore, this source does not contribute to
the buildings cavity impact. The Computer will assume the
CAVITY Annual Impact equals 0.00 ug/m3.
II.C. CAVITY Annual Impact < 0.000 ug/m3 > is less than AGC
< 0.500 ug/m3 >.
III.A. STANDARD POINT SOURCE METHOD <DAR-1, APPENDIX B>.
III.A.1.b. Momentum flux, Fm, is equal to 1000.331 ft<4>/sec<2>.
III.A.1.b. Effective stack height, he, is equal to 51.001 feet.
III.A.2. STANDARD POINT SOURCE Actual Annual Impact is equal
to 2.604 ug/m3 for 8760. hours/year of operation.
III.A.3. STANDARD POINT SOURCE Potential Annual Impact is equal
to 2.601 ug/m3 assuming 8,760 hours/year of operation.
III.A.4.a. Stack height to building height ratio is greater than
1.5, but less than 2.5. Computer will multiply actual
annual & potential annual impacts by 0.75 factor.

```

III.A.5. STANDARD POINT SOURCE Short-Term Impact is calculated below using the DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.

III.D. STANDARD POINT SOURCE Actual Annual Impact < 1.953 ug/m3 > is greater than AGC < 0.500 ug/m3 >.

**** Refer to DAR-1 Section III.D.1. A refined site specific modeling analysis may be required. ****

III.D. STANDARD POINT SOURCE Potential Annual Impact < 1.951 ug/m3 > is greater than AGC < 0.500 ug/m3 >.

**** Potential Annual Impact is based upon 8760 hours/year operation instead of reported 8760. hours/year. ****

2.0 DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.
See "Technical Reference for the Screening Procedures of the DAR-1 Software Program, Wade/Sedefian," 1/11/94.

2.2 CAVITY Short-Term Impact is equal to 0.00 ug/m3 as the plume escaped the cavity region: $h_s < 40. \text{ feet} > > h_c < 26. \text{ feet} >$.

II.C. CAVITY Short-Term Impact < 0.000 ug/m3 > is less than SGC < 14000.000 ug/m3 >.

2.3 Momentum flux, F_m , is equal to 1000.331 ft(4)/sec(2).

2.3 Effective stack height, h_e , is equal to 51.001 feet.

2.4 Maximum non-downwash GEP stack Short-Term Impact (GSTP) is equal to 38.826 ug/m3, for $h_s/h_b = 1.60$

2.5 Maximum downwash Short-Term Impact (GSTD) is equal to 129.908 ug/m3, for: $h_s/h_b = 1.60$ and ESH = 51. feet.

2.6 Adjusted maximum downwash Short-Term (GSTD) is equal to 108.603 ug/m3, for: RF = 0.84

III.D. Maximum non-cavity Short-Term Impact (CST: 108.603 ug/m3 > is less than the SGC < 14000.000 ug/m3 > for the point source.

2.7 Maximum Short-Term cavity, point, or area source impact (SHORT-TERM MAXIMUM, (Cav,Pt,Area)) equals 108.603 ug/m3 and is reported in the ANALYSIS MENU. This value is less than the SGC < 14000.000 ug/m3 >.

V. Contaminant Impact Summary Step by Step Menu for PCE:

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*****
NWIRP BETHPAGE GM-38 AREA          BETHPAGE          OYSTER BAY, MEV
EMISSION POINT =          TOTAL          CAS NUMBER = 00127-18-4          SIC = 0
AGC =          1.000000000 ug/m3          SGC =          1000.000000 ug/m3
STACK: HA=          15., SH=          40., D=          36., T=          80., U=          21.69, q=          9200.00
BUILDING: Dpl=          50., BW=          75., BL=          75., %CONTROL=          0.0000
** Reported Hourly Emission Rate (Q) is equal to          0.234200000 lbs/hour.
** Reported Annual Emission Rate (Qa) is equal to          2052.000000 lbs/year.
II.B. REFINED CAVITY IMPACT METHOD (DAR-1, APPENDIX B).
II.B.1. Shortest Distance from building to Property Line ( 50. feet )
is less than or equal to the cavity length, or 3 building
heights ( 75. feet ). Therefore, this building will have
cavity impacts (if they occur) at receptors off plant property.
II.B.2. The largest building dimension ( 75. feet ) is greater than or
equal to the building height ( 25. feet ). Therefore, the
computer will NOT redefine the cavity length.
II.B.3. Stack height ( 40. feet ) is greater than cavity height
( 38. feet ). Therefore, this source does not contribute to
the buildings cavity impact. The Computer will assume the
CAVITY Annual Impact equals 0.00 ug/m3.
II.C. CAVITY Annual Impact ( 0.000 ug/m3 ) is less than AGC
( 1.000 ug/m3 ).
III.A. STANDARD POINT SOURCE METHOD (DAR-1, APPENDIX B).
III.A.1.b. Momentum flux, Fm, is equal to 1000.331 ft<4>/sec<2>.
III.A.1.b. Effective stack height, he, is equal to 51.001 feet.
III.A.2. STANDARD POINT SOURCE Actual Annual Impact is equal
to 1.771 ug/m3 for 8762. hours/year of operation.
III.A.3. STANDARD POINT SOURCE Potential Annual Impact is equal
to 1.769 ug/m3 assuming 8,760 hours/year of operation.
III.A.4.a. Stack height to building height ratio is greater than
1.5, but less than 2.5. Computer will multiply actual
annual & potential annual impacts by 0.75 factor.

```

III.A.5. STANDARD POINT SOURCE Short-Term Impact is calculated below using the DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.

III.D. STANDARD POINT SOURCE Actual Annual Impact (1.328 ug/m3) is greater than AGC (1.000 ug/m3).

**** Refer to DAR-1 Section III.D.1. A refined site specific modeling analysis may be required. ****

III.D. STANDARD POINT SOURCE Potential Annual Impact (1.327 ug/m3) is greater than AGC (1.000 ug/m3).

**** Potential Annual Impact is based upon 8760 hours/year operation instead of reported 8762. hours/year. ****

2.0 DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD. See "Technical Reference for the Screening Procedures of the DAR-1 Software Program, Wade/Sedefian," 1/11/94.

2.2 CAVITY Short-Term Impact is equal to 0.00 ug/m3 as the plume escaped the cavity region: hc(40. feet) > hc(26. feet).

II.C. CAVITY Short-Term Impact (0.000 ug/m3) is less than SGC (1000.000 ug/m3).

2.3 Momentum Flux, F_m , is equal to 1000.331 ft⁴/sec².

2.3 Effective stack height, h_e , is equal to 51.001 feet.

2.4 Maximum non-downwash GEP stack Short-Term Impact (CSTP) is equal to 26.403 ug/m3, for $h_c/h_b = 1.60$

2.5 Maximum downwash Short-Term Impact (CSTD) is equal to 88.340 ug/m3, for: $h_c/h_b = 1.60$ and ESH = 51. feet.

2.6 Adjusted maximum downwash Short-Term (CSTD) is equal to 73.852 ug/m3, for: RF = 0.84

III.D. Maximum non-cavity Short-Term Impact (CST: 73.852 ug/m3) is less than the SGC (1000.000 ug/m3) for the point source.

2.7 Maximum Short-Term cavity, point, or area source impact (SHORT-TERM MAXIMUM, (Cav,Pt,Area)) equals 73.852 ug/m3 and is reported in the ANALYSIS MENU. This value is less than the SGC (1000.000 ug/m3).

VI. Contaminant Impact Summary Step by Step Menu for Vinyl Chloride:

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*****
NWIRP BETHPAGE GM-38 AREA          BETHPAGE          OYSTER BAY, NEW
EMISSION POINT =          TOTAL          CAS NUMBER = 00075-01-4          SIC = 0
AGC =          0.110000000 ug/m3          SGC =          180000.000000 ug/m3
STACK: HA=          15., SH=          40., D=          36., I=          80., U=          21.69, q=          9200.00
BUILDING: Dpl=          50., BW=          75., BL=          75., %CONTROL=          0.0000
** Reported Hourly Emission Rate <Q> is equal to          0.002600000 lbs/hour.
** Reported Annual Emission Rate <Qa> is equal to          22.930000 lbs/year.
II.B. REFINED CAVITY IMPACT METHOD <DAR-1, APPENDIX B>.
II.B.1. Shortest Distance from building to Property Line < 50. feet >
is less than or equal to the cavity length, or 3 building
heights < 75. feet >. Therefore, this building will have
cavity impacts <if they occur> at receptors off plant property.
II.B.2. The largest building dimension < 75. feet > is greater than or
equal to the building height < 25. feet >. Therefore, the
computer will NOT redefine the cavity length.
II.B.3. Stack height < 40. feet > is greater than cavity height
< 38. feet >. Therefore, this source does not contribute to
the buildings cavity impact. The Computer will assume the
CAVITY Annual Impact equals 0.00 ug/m3.
II.C. CAVITY Annual Impact < 0.000 ug/m3 > is less than AGC
< 0.110 ug/m3 >.
III.A. STANDARD POINT SOURCE METHOD <DAR-1, APPENDIX B>.
III.A.1.b. Momentum flux, Fm, is equal to 1000.331 ft<4>/sec<2>.
III.A.1.b. Effective stack height, he, is equal to 51.001 feet.
III.A.2. STANDARD POINT SOURCE Actual Annual Impact is equal
to 0.020 ug/m3 for 8819. hours/year of operation.
III.A.3. STANDARD POINT SOURCE Potential Annual Impact is equal
to 0.020 ug/m3 assuming 8,760 hours/year of operation.
III.A.4.a. Stack height to building height ratio is greater than
1.5, but less than 2.5. Computer will multiply actual
annual & potential annual impacts by 0.75 factor.

```

III.A.5. STANDARD POINT SOURCE Short-Term Impact is calculated below using the DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.

III.D. STANDARD POINT SOURCE Actual Annual Impact < 0.015 ug/m3 > is less than AGC < 0.110 ug/m3 >.

III.D. STANDARD POINT SOURCE Potential Annual Impact < 0.015 ug/m3 > is less than AGC < 0.110 ug/m3 >.

**** Potential Annual Impact is based upon 8760 hours/year ****
 **** operation instead of reported 8819. hours/year. ****

2.0 DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.
 See "Technical Reference for the Screening Procedures of the DAR-1 Software Program, Wade/Sedefian," 1/11/94.

2.2 CAVITY Short-Term Impact is equal to 0.00 ug/m3 as the plume escaped the cavity region: hs< 40. feet > hc< 26. feet >.

II.C. CAVITY Short-Term Impact < 0.000 ug/m3 > is less than SGC < 180000.000 ug/m3 >.

2.3 Momentum flux, F_m , is equal to 1000.331 ft<4>/sec<2>.

2.3 Effective stack height, h_e , is equal to 51.001 feet.

2.4 Maximum non-downwash GEP stack Short-Term Impact (CSTP) is equal to 0.293 ug/m3, for $h_s/h_b = 1.60$

2.5 Maximum downwash Short-Term Impact (CSTD) is equal to 0.981 ug/m3, for: $h_s/h_b = 1.60$ and $ESH = 51. feet.$

2.6 Adjusted maximum downwash Short-Term (CSTD) is equal to 0.820 ug/m3, for: $RF = 0.84$

III.D. Maximum non-cavity Short-Term Impact (CST: 0.820 ug/m3 > is less than the SGC < 180000.000 ug/m3 > for the point source.

2.7 Maximum Short-Term cavity, point, or area source impact (SHORT-TERM MAXIMUM, (Cav,Pt,Area)) equals 0.820 ug/m3 and is reported in the ANALYSIS MENU. This value is less than the SGC < 180000.000 ug/m3 >.

VII. Contaminant Impact Summary Step by Step Menu for cis 1,2-Dichloroethene:

```

*****
NWIRP BETHPAGE GM-38 AREA          BETHPAGE          OYSTER BAY, NEW
EMISSION POINT =          TOTAL          CAS NUMBER = 00156-59-2          SIC = 0
AGC =          63.000000000 ug/m3          SGC =          0.000000 ug/m3
STACK: HA=          15., SH=          40., D=          36., I=          80., U=          21.69, q=          9200.00
BUILDING: Dpl=          50., BW=          75., BL=          75., %CONTROL=          0.0000
** Reported Hourly Emission Rate <Q> is equal to          0.025800000 lbs/hour.
** Reported Annual Emission Rate <Qa> is equal to          226.000000 lbs/year.
II.B. REFINED CAVITY IMPACT METHOD <DAR-1, APPENDIX B>.
II.B.1. Shortest Distance from building to Property Line < 50. feet >
is less than or equal to the cavity length, or 3 building
heights < 75. feet >. Therefore, this building will have
cavity impacts <if they occur> at receptors off plant property.
II.B.2. The largest building dimension < 75. feet > is greater than or
equal to the building height < 25. feet >. Therefore, the
computer will NOT redefine the cavity length.
II.B.3. Stack height < 40. feet > is greater than cavity height
< 38. feet >. Therefore, this source does not contribute to
the buildings cavity impact. The Computer will assume the
CAVITY Annual Impact equals 0.00 ug/m3.
II.C. CAVITY Annual Impact < 0.000 ug/m3 > is less than AGC
< 63.000 ug/m3 >.
III.A. STANDARD POINT SOURCE METHOD <DAR-1, APPENDIX B>.
III.A.1.b. Momentum flux, Fm, is equal to 1000.331 ft<4>/sec<2>.
III.A.1.b. Effective stack height, he, is equal to 51.001 feet.
III.A.2. STANDARD POINT SOURCE Actual Annual Impact is equal
to 0.195 ug/m3 for 8760. hours/year of operation.
III.A.3. STANDARD POINT SOURCE Potential Annual Impact is equal
to 0.195 ug/m3 assuming 8,760 hours/year of operation.
III.A.4.a. Stack height to building height ratio is greater than
1.5, but less than 2.5. Computer will multiply actual
annual & potential annual impacts by 0.75 factor.

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III.A.5. STANDARD POINT SOURCE Short-Term Impact is calculated below using the DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.

III.D. STANDARD POINT SOURCE Actual Annual Impact < 0.146 ug/m3 > is less than AGC < 63.000 ug/m3 >.

III.D. STANDARD POINT SOURCE Potential Annual Impact < 0.146 ug/m3 > is less than AGC < 63.000 ug/m3 >.

**** Potential Annual Impact is based upon 8760 hours/year ****
 **** operation instead of reported 8760. hours/year. ****

2.0 DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.
 See 'Technical Reference for the Screening Procedures of the DAR-1 Software Program, Wade/Sedefian,' 1/11/94.

2.2 CAVITY Short-Term Impact is equal to 0.00 ug/m3 as the plume escaped the cavity region: hs(40. feet) > hc(26. feet).

II.C. CAVITY Short-Term Impact is equal to 0.000 ug/m3.
 There is no SGC for this contaminant.

2.3 Momentum flux, Fm, is equal to 1000.331 ft(4)/sec(2).

2.3 Effective stack height, he, is equal to 51.001 feet.

2.4 Maximum non-downwash GEP stack Short-Term Impact (CSTP) is equal to 2.909 ug/m3, for hs/hb = 1.60

2.5 Maximum downwash Short-Term Impact (CSTD) is equal to 9.732 ug/m3, for: hs/hb = 1.60 and ESH = 51. feet.

2.6 Adjusted maximum downwash Short-Term (CSTD) is equal to 8.136 ug/m3, for: RF = 0.84

III.D. Maximum non-cavity Short-Term Impact (CST) equals 8.136 ug/m3 for the point source. There is no SGC for this contaminant.

2.7 Maximum Short-Term cavity, point, or area source impact (SHORT-TERM MAXIMUM, (Cav,Pt,Area)) equals 8.136 ug/m3 and is reported in the ANALYSIS MENU.

VIII. Contaminant Impact Summary Step by Step Menu for 1,2-Dichloroethene (total):

```

*****
NWIRP BETHPAGE GM-38 AREA          BETHPAGE          OYSTER BAY, NEW
EMISSION POINT =          TOTAL          CAS NUMBER = 00540-59-0          SIC = 0
AGC =          63.000000000 ug/m3          SGC =          0.000000 ug/m3
STACK: HA=          15., SH=          40., D=          36., T=          80., U=          21.69, q=          9200.00
BUILDING: Dpl=          50., BW=          75., BL=          75., %CONTROL=          0.0000
** Reported Hourly Emission Rate <Q> is equal to          0.025800000 lbs/hour.
** Reported Annual Emission Rate <Qa> is equal to          226.000000 lbs/year.
II.B. REFINED CAVITY IMPACT METHOD <DAR-1, APPENDIX B>.
II.B.1. Shortest Distance from building to Property Line < 50. feet >
is less than or equal to the cavity length, or 3 building
heights < 75. feet >. Therefore, this building will have
cavity impacts <if they occur> at receptors off plant property.
II.B.2. The largest building dimension < 75. feet > is greater than or
equal to the building height < 25. feet >. Therefore, the
computer will NOT redefine the cavity length.
II.B.3. Stack height < 40. feet > is greater than cavity height
< 38. feet >. Therefore, this source does not contribute to
the buildings cavity impact. The Computer will assume the
CAVITY Annual Impact equals 0.00 ug/m3.
II.C. CAVITY Annual Impact < 0.000 ug/m3 > is less than AGC
< 63.000 ug/m3 >.
III.A. STANDARD POINT SOURCE METHOD <DAR-1, APPENDIX B>.
III.A.1.b. Momentum flux, Pm, is equal to 1000.331 ft<4>/sec<2>.
III.A.1.b. Effective stack height, he, is equal to 51.001 feet.
III.A.2. STANDARD POINT SOURCE Actual Annual Impact is equal
to 0.195 ug/m3 for 8760. hours/year of operation.
III.A.3. STANDARD POINT SOURCE Potential Annual Impact is equal
to 0.195 ug/m3 assuming 8,760 hours/year of operation.
III.A.4.a. Stack height to building height ratio is greater than
1.5, but less than 2.5. Computer will multiply actual
annual & potential annual impacts by 0.75 factor.

```

```

III.A.5. STANDARD POINT SOURCE Short-Term Impact is calculated below
         using the DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.

III.D. STANDARD POINT SOURCE Actual Annual Impact < 0.146 ug/m3 > is
         less than AGC < 63.000 ug/m3 >.

III.D. STANDARD POINT SOURCE Potential Annual Impact < 0.146 ug/m3 >
         is less than AGC < 63.000 ug/m3 >.

**** Potential Annual Impact is based upon 8760 hours/year ****
**** operation instead of reported 8760. hours/year. ****

2.0 DAR-1 SOFTWARE PROGRAM SHORT-TERM METHOD.
    See "Technical Reference for the Screening Procedures of the
    DAR-1 Software Program, Wade/Sedefian," 1/11/94.

2.2 CAVITY Short-Term Impact is equal to 0.00 ug/m3 as the plume
     escaped the cavity region: hs< 40. feet > hc< 26. feet >.

II.C. CAVITY Short-Term Impact is equal to 0.000 ug/m3.
       There is no SGC for this contaminant.

2.3 Momentum flux, Fm, is equal to 1000.331 ft<4>/sec<2>.

2.3 Effective stack height, he, is equal to 51.001 feet.

2.4 Maximum non-downwash GEP stack Short-Term Impact <CSTP> is equal
     to 2.909 ug/m3, for hs/hb = 1.60

2.5 Maximum downwash Short-Term Impact <CSTD> is equal
     to 9.732 ug/m3, for: hs/hb = 1.60 and ESH = 51. feet.

2.6 Adjusted maximum downwash Short-Term <CSTD> is equal
     to 8.136 ug/m3, for: RF = 0.84

III.D. Maximum non-cavity Short-Term Impact <CST> equals 8.136 ug/m3
       for the point source. There is no SGC for this contaminant.

2.7 Maximum Short-Term cavity, point, or area source impact
     <SHORT-TERM MAXIMUM, <Cav.Pt.Area>> equals 8.136 ug/m3
     and is reported in the ANALYSIS MENU.

```

IX. AGCs and SGCs for TCE, PCE, Vinyl Chloride, cis 1,2-Dichloroethene, and 1,2-Dichloroethene (total):

AGCs & SGCs				9/ 8/11	
				Page 1	
CAS NUMBER	CONTAMINANT NAME	SGC ug/m3	II O V	AGC ug/m3	II I O O V X CODES
00075-01-4	VINYL CHLORIDE	18000.00000	D	0.110000000	E H U HA
00079-01-6	TRICHLOROETHYLENE	14000.00000	Z	0.500000000	D M O HO
00127-10-4	TETRACHLOROETHYLENE	1000.00000	H	1.000000000	H M O HI
00156-59-2	DICHLOROETHYLENE, cis	0.00000		63.000000000	D M
00540-59-0	DICHLOROETHYLENE, 12	0.00000		63.000000000	D M

X. Contaminant Emissions Summary for TCE, PCE, Vinyl Chloride, cis 1,2-Dichloroethene, and 1,2-Dichloroethene (total):'

CONTAMINANT EMISSIONS SUMMARY				9/ 8/11
				Page 1
CAS NUMBER	CONTAMINANT NAME	NUM. OF EPs PER CONTAM.	EMISSIONS <lbs/hour>	EMISSIONS <lbs/year>
00075-01-4	VINYL CHLORIDE	1	0.0026000	22.93000
00079-01-6	TRICHLOROETHYLENE	1	0.3444000	3017.00000
00127-10-4	TETRACHLOROETHYLENE	1	0.2342000	2052.00000
00156-59-2	DICHLOROETHYLENE, cis	1	0.0258000	226.00000
00540-59-0	DICHLOROETHYLENE, 12	1	0.0258000	226.00000
SUMMARY TOTALS		5	0.6328000	5543.93000

XI. Meter Grid Modeling Results for Maximum Annual Concentrations of TCE, within 25 meters:

CONCENTRATIONS x 10 ⁻² <ug/m3> for 00079-01-6													09/08/11
AGC = 0.500000000 ug/m3													13:17:58
TIME	367000.	368000.	369000.	370000.	371000.	373000.	375000.	377000.	379000.				
UTM Y	368000.	370000.	372000.	374000.	376000.	378000.							
4511000.	0.04	0.06	0.08	0.14	0.23	0.32	0.41	0.30	0.14	0.10	0.08	0.06	0.05
4510000.	0.03	0.05	0.08	0.13	0.25	0.43	0.60	0.40	0.17	0.12	0.09	0.07	0.06
4509000.	0.02	0.03	0.06	0.11	0.24	0.58	1.01	0.52	0.22	0.14	0.11	0.08	0.06
4508000.	0.02	0.03	0.04	0.06	0.18	0.62	2.16	0.64	0.31	0.19	0.13	0.11	0.09
4507000.	0.02	0.03	0.04	0.06	0.11	0.26	7.27	1.43	0.60	0.34	0.22	0.15	0.12
4506000.	0.03	0.03	0.05	0.07	0.13	0.33	2.58	2.99	1.12	0.51	0.30	0.20	0.14
4505000.	0.03	0.04	0.05	0.08	0.20	0.45	0.94	0.81	0.60	0.45	0.33	0.23	0.16
4504000.	0.03	0.04	0.07	0.12	0.20	0.22	0.47	0.43	0.33	0.27	0.24	0.20	0.16

TOP 100 CONTRIBUTORS TO MAXIMUM CONCENTRATION FOR 00079-01-6							09/08/11
@ UTMX: 373000. UTMN: 4507000.							13:17:58
Emission Point	Facility Name (shortened)	EP DIR	Distance to Max.(m)	CONC. ug/m3	Percent of Max.		
TOTAL	NWIRP BETHPAGE GM-38 AREA	SSE	539.	0.727E-01	100.000		
TOTAL OF ALL	1 CONTRIBUTORS			0.727E-01	100.000		

XII. ISCLT Model Run Information, within 25 meters:

```

MODEL RUN INFORMATION
09/08/11
13:17:58

1. Current GRID SPACING equals 1000. meters.
2. Maximum Concentration (flashing) equals 0.0727115273 ug/m3
   @ UTME: 373000. UTMN: 4507000.

3. RUN FILE: TEMP?.RUN
4. METEOROLOGICAL FILE: ALB.MET
5. RUN MODE: URBAN
6. HALF-LIVES: not used to account for pollutant removal from air.
7. BLD. WAKE EFFECTS: AS-1 METHOD, All data KNOWN (hb, hv, hl, orientation)
8. EMISSIONS: ACTUAL ANNUAL EMISSIONS
9. SOURCES: All sources within 25. meters of
   UTME: 373275. UTMN: 4506537.
10. CONTAMINANT CAS NUMBER(s): 00079-01-6
11. EMISSION POINT - CONTAMINANT(s) found by computer: 1
12. No data is being copied to DUMP file.
```

APPENDIX C

**FIELD LOGS AND CHAIN OF CUSTODY DOCUMENTATION
FIRST QUARTER 2023**

Date: 3-21-2023



Groundwater Level Measurement Sheet

Project Site: NWIPR Bethpage – GM-38
 Location: Bethpage, NY
 Field Crew: R.H.

Water Level Meter: Solinst
 Weather: 56 F, 4 WSW, 65% RH, 30.23 T
 Time of Low Tide: N/A
 Time of High Tide: N/A

Well ID	Time	Depth to Water (Ft.)	Total Depth of Well/ Screened Interval (Ft.)	Comments
RW1-MW1	12:15	39.76	435 / 395 – 435	
RW1-MW2	12:25	41.43	435 / 395 – 435	
RW1-MW3	13:30	42.25	435 / 395 – 435	
RW2-MW1	12:50	42.31	510 / 470 – 510	
RW2-MW2	12:55	41.98	510 / 470 – 510	
RW2-MW3	12:45	41.55	510 / 470 – 510	
RW3-MW1	13:00	42.26	350 / 330 – 350	
RW3-MW2	13:05	43.51	495 / 475 – 495	
RW3-MW3	13:10	44.83	340 / 320 – 340	
RW3-MW4	13:55	40.38	495 / 475 – 495	
TP1:	11:55	34.25	470 / 450 – 470	
IW1-MW1	12:20	40.30 ^{40.30}	470 / 450 – 470	
RW-1	—			Open vault and check integrity of piping, etc. OK
RW-3	—			Open vault and check integrity of piping, etc. OK

Signature: _____

Date: 3-21-2023

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY

Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: RW3-MW4

Project: NWIRP Bethpage - GM38 Date: 04/11/2023
 Location: Bethpage, NY Sampler: Seiler & Goernemann

Well Integrity				Well Information			
	Yes	No	N/A				
Casing Secure	X			Diameter	4"		
Concrete Pad intact			X	Material	PVC		
PVC casing intact	X			Depth to water (ft BTOR)	40.28		
Well gripper present	X			Depth to bottom (ft BTOR)	495		
Bolts present	X			Pump Set Depth (ft BTOR)			
Locked (stickup wells)			X	Screen Interval	475-495		
				Total volume purged (gal)	3.63 gal		

Sampling Type
 Purging Method: Bladder Tubing type: LDPE Dedicated pump (Y/N): NO
 Purge start/stop time: 0822/0917 Tubing diameter: _____ Air source: CO2
 Field Instrument (Model/S/N): VSI pipelogs: 17610 3527
Hach 2100Q: 190100073359

Stabilization Parameters									
Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0827	275	40.31	14.1	4.68	132.8	4.10	267.8	2.40	clear
0832	275	40.31	14.1	4.50	133.6	3.73	305.1	1.91	clear
0837	275	46.33	14.1	4.48	133.1	3.12	320.8	0.78	clear
0842	275	40.33	14.2	4.47	132.6	2.78	326.0	0.66	clear
0847	275	40.33	14.2	4.46	132.3	2.59	329.7	0.64	clear
0852	275	40.33	14.2	4.44	132.1	2.32	336.3	0.63	clear
0857	275	40.33	14.3	4.44	132.0	2.20	337.7	0.54	clear
0902	275	40.33	14.3	4.43	131.9	1.96	339.7	0.43	clear
0907	275	40.33	14.3	4.43	131.8	1.87	339.7	0.47	clear
0912	275	40.35	14.4	4.42	131.8	1.77	335.8	0.30	clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	2" Screen Volume =
Post Cal. Check Variance Observed (Y/N):			Y	Y	-	N	N		0.163 gal/ft or 616 ml/ft

Sampling Details
 Sampling ID: 617-38-GW-RW3-MW4-0423
 Sample Time: 0917 Duplicate (Y/N): _____ MS/MSD (Y/N): _____
 Field Filtered (Y/N): _____ Dup ID: n/a
 Filter Size: n/a Dup Time: n/a

Comments _____
Elizabeth Goernemann Signature Date: 4-11-2023

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY
Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: RW3-MW3

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/11/2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity	Well Information																																										
<table border="1" style="width:100%"> <tr> <th></th> <th>Yes</th> <th>No</th> <th>N/A</th> </tr> <tr> <td>Casing Secure</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Concrete Pad intact</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>PVC casing intact</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Well gripper present</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Bolts present</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Locked (stickup wells)</td> <td></td> <td></td> <td>X</td> </tr> </table>		Yes	No	N/A	Casing Secure	X			Concrete Pad intact			X	PVC casing intact	X			Well gripper present	X			Bolts present	X			Locked (stickup wells)			X	<table border="1" style="width:100%"> <tr> <td>Diameter</td> <td><u>4 1/2</u></td> </tr> <tr> <td>Material</td> <td><u>PVC</u></td> </tr> <tr> <td>Depth to water (ft BTOR)</td> <td><u>39.45</u></td> </tr> <tr> <td>Depth to bottom (ft BTOR)</td> <td><u>340</u></td> </tr> <tr> <td>Pump Set Depth (ft BTOR)</td> <td></td> </tr> <tr> <td>Screen Interval</td> <td><u>320-340</u></td> </tr> <tr> <td>Total volume purged (gal)</td> <td><u>2,389 gal</u></td> </tr> </table>	Diameter	<u>4 1/2</u>	Material	<u>PVC</u>	Depth to water (ft BTOR)	<u>39.45</u>	Depth to bottom (ft BTOR)	<u>340</u>	Pump Set Depth (ft BTOR)		Screen Interval	<u>320-340</u>	Total volume purged (gal)	<u>2,389 gal</u>
	Yes	No	N/A																																								
Casing Secure	X																																										
Concrete Pad intact			X																																								
PVC casing intact	X																																										
Well gripper present	X																																										
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Pump Set Depth (ft BTOR)																																											
Screen Interval	<u>320-340</u>																																										
Total volume purged (gal)	<u>2,389 gal</u>																																										

Sampling Type
 Purging Method blowdown Tubing type LDPE Dedicated pump (Y/N)
 Purge start/stop time 09:32/10:20 Tubing diameter Air source CO2
 Field Instrument (Model/S/N) YSI 610 pUS - 176103527
Hech 2100Q : 190100073359

Stabilization Parameters									
Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm ^o)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0937	225	39.50	15.0	4.44	129.8	6.90	291.8	4.68	clear
0942	225	39.51	14.8	4.67	127.0	3.40	292.7	7.26	clear
0947	225	39.50	14.8	4.63	127.3	3.32	307.5	7.26	clear
0952	225	39.50	14.8	4.63	127.1	3.19	310.9	7.22	clear
0957	225	39.50	14.9	4.64	128.1	2.25	297.9	6.27	clear
1002	225	39.51	15.0	4.64	127.0	3.05	298.1	6.20	clear
1007	225	39.51	14.8	4.63	127.0	3.01	299.4	6.29	clear
1012	225	39.51	14.8	4.63	127.0	2.85	299.2	6.30	clear
Acceptance Criteria:	<0.3ft	±3%	±0.1	±3%	±10%	±10mv	10%	2" Screen Volume = 0.163 gal/ft or 616 ml/ft	
Post Cal. Check Variance Observed (Y/N):			Y	Y	-	N	N		

Sampling Details
 Sampling ID: GM-38-RW3-MW3-0423
 Sample Time: 1017 Duplicate (Y/N): GM-38-RW3-MW3-DUP-MS/MSD (Y/N)
 Field Filtered (Y/N): Dup ID: X^{eq}
 Filter Size: n/a Dup Time: 1022

Comments _____
Elizabeth Seaman 4-11-2023
 Signature Date

186.24 ml = eq 3785.41 ml = 1 gallon

switched CO2 tank

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY

Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: RW3-MW2

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/11/2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity				Well Information			
	Yes	No	N/A	Diameter	<u>4"</u>		
Casing Secure	<u>X</u>			Material	<u>PVC</u>		
Concrete Pad intact			<u>X</u>	Depth to water (ft BTOR)	<u>39.67</u>		
PVC casing intact	<u>X</u>			Depth to bottom (ft BTOR)	<u>495</u>		
Well gripper present	<u>X</u>			Pump Set Depth (ft BTOR)			
Bolts present	<u>X</u>			Screen Interval	<u>475-495</u>		
Locked (stickup wells)			<u>X</u>	Total volume purged (gal)	<u>1.85 gal</u>		

Sampling Type
 Purging Method bladder Tubing type LDPE Dedicated pump (Y/N)
 Purge start/stop time 1143/1227 Tubing diameter Air source CO2
 Field Instrument (Model/S/N) YSI pro plus 176103527
Hach 2100Q: 19010007359

Stabilization Parameters									
Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1148	200								
1153	200	40.20	14.2	4.52	83.8	6.80	316.6	9.57	Clear
1158	200	40.19	13.9	4.55	84.0	6.49	314.8	7.33	Clear
1203	200	40.19	13.9	4.55	83.8	6.37	315.5	7.05	Clear
1208	200	40.15	13.8	4.55	83.7	6.12	317.2	6.01	Clear
1213	200	40.15	13.8	4.50	83.8	5.86	319.4	6.31	Clear
1218	200	40.15	13.8	4.55	83.8	5.62	318.2	2.9656	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	2" Screen Volume =
Post Cal. Check Variance Observed (Y/N):				<u>Y</u>	<u>Y</u>	<u>-</u>	<u>N</u>	<u>N</u>	0.163 gal/ft or 616 ml/ft

Sampling Details

Sampling ID: GM-38-RW3-MW2-0423
 Sample Time: 1223 Duplicate (Y/N): MS/MSD (Y/N):
 Field Filtered (Y/N): Dup ID: N/A
 Filter Size: N/A Dup Time: N/A

Comments hose in well has larger diameter
Elmer Goernemann 4-11-2023
 Signature Date

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY
Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: RWB-MW7

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/11/2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity	Well Information																																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Casing Secure</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>Concrete Pad intact</td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>PVC casing intact</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>Well gripper present</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td> Bolts present</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>Locked (stickup wells)</td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>		Yes	No	N/A	Casing Secure	<input checked="" type="checkbox"/>			Concrete Pad intact			<input checked="" type="checkbox"/>	PVC casing intact	<input checked="" type="checkbox"/>			Well gripper present	<input checked="" type="checkbox"/>			Bolts present	<input checked="" type="checkbox"/>			Locked (stickup wells)			<input checked="" type="checkbox"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Diameter</td> <td style="text-align: center;"><u>4"</u></td> </tr> <tr> <td>Material</td> <td style="text-align: center;"><u>PVC</u></td> </tr> <tr> <td>Depth to water (ft BTOR)</td> <td style="text-align: center;"><u>38.51</u></td> </tr> <tr> <td>Depth to bottom (ft BTOR)</td> <td style="text-align: center;"><u>350</u></td> </tr> <tr> <td>Pump Set Depth (ft BTOR)</td> <td></td> </tr> <tr> <td>Screen Interval</td> <td style="text-align: center;"><u>Neg 330-350</u></td> </tr> <tr> <td>Total volume purged (gal)</td> <td style="text-align: center;"><u>174 gal</u></td> </tr> </table>	Diameter	<u>4"</u>	Material	<u>PVC</u>	Depth to water (ft BTOR)	<u>38.51</u>	Depth to bottom (ft BTOR)	<u>350</u>	Pump Set Depth (ft BTOR)		Screen Interval	<u>Neg 330-350</u>	Total volume purged (gal)	<u>174 gal</u>
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Total volume purged (gal)	<u>174 gal</u>																																										

Sampling Type

Purging Method bladder Tubing type LDPE Dedicated pump (Y/N)

Purge start/stop time 1238/1307 Tubing diameter _____ Air source (02)

Field Instrument (Model/S/N) YSI pro plus: 176103527
Arch 2100Q: 19010073359

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm ^o)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
<u>1245</u>	<u>300</u>	<u>38.58</u>	<u>14.1</u>	<u>4.49</u>	<u>159.2</u>	<u>5.72</u>	<u>308.0</u>	<u>2.36</u>	<u>clear</u>
<u>1250</u>	<u>300</u>	<u>38.60</u>	<u>14.2</u>	<u>4.54</u>	<u>159.9</u>	<u>5.49</u>	<u>318.7</u>	<u>0.38</u>	<u>clear</u>
<u>1255</u>	<u>300</u>	<u>38.61</u>	<u>14.1</u>	<u>4.53</u>	<u>160.4</u>	<u>5.54</u>	<u>323.2</u>	<u>0.45</u>	<u>clear</u>
<u>1300</u>	<u>300</u>	<u>38.62</u>	<u>14.2</u>	<u>4.52</u>	<u>160.4</u>	<u>5.70</u>	<u>325.1</u>	<u>0.56</u>	
Acceptance Criteria:	<u><0.3ft</u>	<u>±3%</u>	<u>±0.1</u>	<u>±3%</u>	<u>±10%</u>	<u>± 10mv</u>	<u>10%</u>	<u>2" Screen Volume =</u>	
Post Cal. Check Variance Observed (Y/N):	<u>Y</u>	<u>Y</u>	<u>-</u>	<u>N</u>	<u>N</u>	<u>0.163 gal/ft or 616 ml/ft</u>			

Sampling Details

Sampling ID: GM-38-^{GW}RWB-MW7-0423

Sample Time: 1305 Duplicate (Y/N): _____ MS/MSD (Y/N): _____

Field Filtered (Y/N): _____ Dup ID: n/a

Filter Size: n/a Dup Time: n/a

Comments hose in well has larger diameter

Signature

4/13/2023
Date

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY

Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: TP01

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/12/2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity <table border="1" style="width:100%"> <tr> <td></td> <td>Yes</td> <td>No</td> <td>N/A</td> </tr> <tr> <td>Casing Secure</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Concrete Pad intact</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>PVC casing intact</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Well gripper present</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Bolts present</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Locked (stickup wells)</td> <td></td> <td></td> <td>X</td> </tr> </table>		Yes	No	N/A	Casing Secure	X			Concrete Pad intact	X			PVC casing intact	X			Well gripper present	X			Bolts present	X			Locked (stickup wells)			X	Well Information <table border="1" style="width:100%"> <tr> <td>Diameter</td> <td><u>4 1/2</u></td> </tr> <tr> <td>Material</td> <td><u>PVC</u></td> </tr> <tr> <td>Depth to water (ft BTOR)</td> <td><u>34.36</u></td> </tr> <tr> <td>Depth to bottom (ft BTOR)</td> <td><u>470</u></td> </tr> <tr> <td>Pump Set Depth (ft BTOR)</td> <td></td> </tr> <tr> <td>Screen Interval</td> <td><u>450-470</u></td> </tr> <tr> <td>Total volume purged (gal)</td> <td><u>1.48</u></td> </tr> </table>	Diameter	<u>4 1/2</u>	Material	<u>PVC</u>	Depth to water (ft BTOR)	<u>34.36</u>	Depth to bottom (ft BTOR)	<u>470</u>	Pump Set Depth (ft BTOR)		Screen Interval	<u>450-470</u>	Total volume purged (gal)	<u>1.48</u>
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Casing Secure	X																																										
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Sampling Type
Purging Method bladder Tubing type LDPE Dedicated pump (Y/N) _____
Purge start/stop time 0811/0906 Tubing diameter _____ Air source CO2
Field Instrument (Model/S/N) YSI proplus: 176103527
Hach 2100Q: 190100693359

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm ^o)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0820	100	34.40	14.3	5.80	268.2	9.28	213.3	1.80	clear
0825	100	34.40	13.2	5.82	270.4	7.56	211.2	2.01	clear
0830	100	34.40	13.5	5.73	279.5	5.10	211.3	0.94	clear
0835	100	34.40	13.6	5.72	311.8	4.61	209.0	1.79	clear
0840	100	34.40	13.5	5.72	331.5	4.29	208.3	1.07	clear
0845	100	34.39	13.6	5.71	339.5	4.01	208.2	0.88	clear
0850	100	34.39	13.7	5.70	340.9	3.92	208.4	0.55	clear

Acceptance Criteria:	<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	2" Screen Volume =
Post Cal. Check Variance Observed (Y/N):			<u>N</u>	<u>Y</u>	<u>Y</u>	<u>N</u>	<u>Y</u>	0.163 gal/ft or 616 ml/ft

Sampling Details

Sampling ID: GM-38-TP01-0423-8 GM-38-GW-TP01-0423
Sample Time: 0855 Duplicate (Y/N) _____ MS/MSD (Y/N) _____
Field Filtered (Y/N): _____ Dup ID: n/a
Filter Size: n/a Dup Time: n/a

Comments _____

Elizabeth Goernemann 4-12-2023
Signature Date

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY

Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: RWI-MWI

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/12/2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity	Well Information																																										
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	Yes	No	N/A																																								
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Screen Interval	<u>395-435</u>																																										
Total volume purged (gal)	<u>1.57 gal</u>																																										

Sampling Type
 Purging Method bladder Tubing type LDPE Dedicated pump (Y/N)
 Purge start/stop time 0933/1018 Tubing diameter Air source CO2
 Field Instrument (Model/S/N) YSI pro plus: 176103527
fact 2100Q: 19010073359

Stabilization Parameters									
Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0942	175	35.60	15.9	5.03	150.7	3.50	236.5	0.49	clear
0947	175	35.60	15.8	4.95	150.6	1.54	252.7	0.96	clear
0952	175	35.60	15.8	4.88	150.7	1.43	266.5	0.43	clear
0957	175	35.60	15.8	4.84	150.8	1.37	276.2	0.64	clear
1002	175	35.60	15.8	4.83	150.7	1.37	282.4	0.63	clear
1007	175	35.61	15.8	4.83	150.4	1.31	284.0	0.84	clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	2" Screen Volume =
Post Cal. Check Variance Observed (Y/N):		N	Y	N	Y	N	N	Y	0.163 gal/ft or 616 ml/ft

Sampling Details

Sampling ID: GM-38-GW-RWI-MWI
 Sample Time: 1012 Duplicate (Y/N): MS/MSD (Y/N):
 Field Filtered (Y/N): Dup ID: n/a
 Filter Size: n/a Dup Time: n/a

Comments _____

Elizabeth Goernemann
 Signature

4-12-2023
 Date

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY

Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: RWI-MW3

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/12/2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity <table border="1" style="width:100%"> <tr> <td></td> <td>Yes</td> <td>No</td> <td>N/A</td> </tr> <tr> <td>Casing Secure</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Concrete Pad intact</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>PVC casing intact</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Well gripper present</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Bolts present</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Locked (stickup wells)</td> <td></td> <td></td> <td>X</td> </tr> </table>		Yes	No	N/A	Casing Secure	X			Concrete Pad intact			X	PVC casing intact	X			Well gripper present	X			Bolts present	X			Locked (stickup wells)			X	Well Information <table border="1" style="width:100%"> <tr> <td>Diameter</td> <td><u>4"</u></td> </tr> <tr> <td>Material</td> <td><u>PVC</u></td> </tr> <tr> <td>Depth to water (ft BTOR)</td> <td><u>29.13</u></td> </tr> <tr> <td>Depth to bottom (ft BTOR)</td> <td><u>435</u></td> </tr> <tr> <td>Pump Set Depth (ft BTOR)</td> <td></td> </tr> <tr> <td>Screen Interval</td> <td><u>395-435</u></td> </tr> <tr> <td>Total volume purged (gal)</td> <td><u>2.72 gal</u></td> </tr> </table>	Diameter	<u>4"</u>	Material	<u>PVC</u>	Depth to water (ft BTOR)	<u>29.13</u>	Depth to bottom (ft BTOR)	<u>435</u>	Pump Set Depth (ft BTOR)		Screen Interval	<u>395-435</u>	Total volume purged (gal)	<u>2.72 gal</u>
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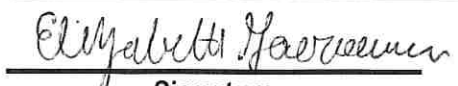
Sampling Type
 Purging Method: bladder Tubing type: LDPE Dedicated pump (Y/N): (N)
 Purge start/stop time: 1125/1216 Tubing diameter: _____ Air source: CO2
 Field Instrument (Model/S/N): YSI pro plus: 176103527
Hach 2100Q: 19010073359

Stabilization Parameters									
Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1132	200	29.25	14.16	5.03	181.7	0.68	216.4	7.65	clear
1137	200	29.26	14.15	5.18	181.2	0.50	187.4	7.82	clear
1142	200	29.27	14.5	5.20	181.3	0.40	182.1	5.05	clear
1147	200	29.27	14.5	5.19	181.3	0.31	182.0	4.93	clear
1152	200	29.30	14.5	5.19	181.1	0.27	180.8	4.39	clear
1157	200	29.30	14.5	5.19	181.1	0.23	181.4	4.88	clear
1202	200	29.31	14.5	5.20	180.9	0.22	180.5	4.37	clear
1207	200	29.31	14.5	5.19	180.8	0.22	180.9	4.25	clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	2" Screen Volume =
Post Cal. Check Variance Observed (Y/N):		N	Y	Y	Y	N	Y	Y	0.163 gal/ft or 616 ml/ft

Sampling Details

Sampling ID: GM-38-CW-RWI-MW3-0423
 Sample Time: 1212 Duplicate (Y/N): _____ MS/MSD (Y/N): _____
 Field Filtered (Y/N): _____ Dup ID: n/a
 Filter Size: n/a Dup Time: n/a

Comments _____


 Signature

4-12-2023
 Date

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY

Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: 2 RWX - MWX1

Project: NWIRP Bethpage - GM38 Date: 04/12/2023
 Location: Bethpage, NY Sampler: Seiler & Goernemann

Well Integrity				Well Information			
	Yes	No	N/A				
Casing Secure	X			Diameter	4 1/2		
Concrete Pad intact	X			Material	Steel		
PVC casing intact	X (Steel)			Depth to water (ft BTOR)	510		
Well gripper present	X			Depth to bottom (ft BTOR)	391.5		
Bolts present		1/2		Pump Set Depth (ft BTOR)			
Locked (stickup wells)			X	Screen Interval	470-510		
				Total volume purged (gal)	211 gal		

Sampling Type
 Purging Method: Diaphragm Tubing type: LDPE Dedicated pump (Y/N):
 Purge start/stop time: 1243/1435 Tubing diameter: Air source: CO2
 Field Instrument (Model/S/N): YST PROLOG: 1761033527
HACH 2100Q: 190100073359

Stabilization Parameters

1300

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm ^o)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1256	100	39.25	15.9	8.26	154.1	1.88	57.2	21.2	clear
1305	100	40.23	15.6	8.89	157.0	1.36	61.2	35.1	clear
1310	100	39.23	15.4	8.97	156.0	0.79	29.3	13.0	clear
1315	100	39.23	15.6	8.97	156.2	0.60	12.5	9.7	clear
1320	100	39.23	15.4	8.89	157.1	0.46	1.0	6.93	clear
1325	100	39.20	15.2	8.85	158.8	0.40	-9.3	5.04	clear
1330	100	39.20	15.4	8.68	159.6	0.35	-12.9	4.92	clear
1335	100	39.20	15.3	8.60	160.3	0.32	-15.9	4.69	clear
1340	100	39.20	15.4	8.52	160.3	0.29	-17.4	4.90	clear
1345	100	39.16	15.5	8.43	160.4	0.26	-17.2	3.44	clear
1350	100	39.15	15.4	8.32	160.8	0.26	-16.1	3.59	clear
1355	100	39.12	15.3	8.36	161.0	0.24	-22.5	4.76	clear

Acceptance Criteria:	<0.3ft	±3%	±0.1	±3%	±10%	±10mv	10%	2" Screen Volume =
Post Cal. Check Variance Observed (Y/N):	N	Y	Y	N	Y			0.163 gal/ft or 616 ml/ft

2 Sampling Details

Sampling ID: GM-38-GW-RWX-MWX1-0423
 Sample Time: 1425 Duplicate (Y/N): MS/MSD (Y/N):
 Field Filtered (Y/N): Dup ID: n/a
 Filter Size: n/a Dup Time: n/a

Comments: replaced tubing, tubing is now in screen
Elizabeth Goernemann
 Signature Date: 4-12-2023

KOMAN GOVERNMENT SOLUTIONS LLC/TRINITY
 Low Flow/ Low Stress Groundwater Sampling Log



Well Identification: _____

Project: <u>NWIRP Bethpage - GM38</u>	Date: <u>04/ /2023</u>
Location: <u>Bethpage, NY</u>	Sampler: <u>Seiler & Goernemann</u>

Well Integrity	Well Information																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:33%;">Yes</th> <th style="width:33%;">No</th> <th style="width:33%;">N/A</th> </tr> <tr> <td>Casing Secure</td> <td></td> <td></td> </tr> <tr> <td>Concrete Pad intact</td> <td></td> <td></td> </tr> <tr> <td>PVC casing intact</td> <td></td> <td></td> </tr> <tr> <td>Well gripper present</td> <td></td> <td></td> </tr> <tr> <td>Bolts present</td> <td></td> <td></td> </tr> <tr> <td>Locked (stickup wells)</td> <td></td> <td></td> </tr> </table>	Yes	No	N/A	Casing Secure			Concrete Pad intact			PVC casing intact			Well gripper present			Bolts present			Locked (stickup wells)			<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>Diameter</td><td>_____</td></tr> <tr><td>Material</td><td>_____</td></tr> <tr><td>Depth to water (ft BTOR)</td><td>_____</td></tr> <tr><td>Depth to bottom (ft BTOR)</td><td>_____</td></tr> <tr><td>Pump Set Depth (ft BTOR)</td><td>_____</td></tr> <tr><td>Screen Interval</td><td>_____</td></tr> <tr><td>Total volume purged (gal)</td><td>_____</td></tr> </table>	Diameter	_____	Material	_____	Depth to water (ft BTOR)	_____	Depth to bottom (ft BTOR)	_____	Pump Set Depth (ft BTOR)	_____	Screen Interval	_____	Total volume purged (gal)	_____
Yes	No	N/A																																		
Casing Secure																																				
Concrete Pad intact																																				
PVC casing intact																																				
Well gripper present																																				
Bolts present																																				
Locked (stickup wells)																																				
Diameter	_____																																			
Material	_____																																			
Depth to water (ft BTOR)	_____																																			
Depth to bottom (ft BTOR)	_____																																			
Pump Set Depth (ft BTOR)	_____																																			
Screen Interval	_____																																			
Total volume purged (gal)	_____																																			

Sampling Type

Purging Method _____ Tubing type _____ Dedicated pump (Y/N) _____

Purge start/stop time _____ Tubing diameter _____ Air source _____

Field Instrument (Model/S/N) _____ ** see page 1*

Stabilization Parameters									
Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1400	100	39.12	15.2	8.27	161.1	0.23	-20.2	3.62	clear
1405	100	39.12	15.6	8.14	161.0	0.22	-20.2	3.10	clear
1410	100	39.12	15.7	8.18	161.6	0.21	-21.0	2.51	clear
1415	100	39.12	15.6	8.17	161.5	0.19	-36.4	2.16	clear
1420	100	39.12	15.7	8.15	162.0	0.19	-29.3	2.91	clear
1425									

Acceptance Criteria:	<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	2" Screen Volume = 0.163 gal/ft or 616 ml/ft
Post Cal. Check Variance Observed (Y/N):								

Sampling Details

Sampling ID: _____

Sample Time: _____ Duplicate (Y/N): _____ MS/MSD (Y/N): _____

Field Filtered (Y/N): _____ Dup ID: _____

Filter Size: _____ Dup Time: _____

Comments _____

 Signature Date

** see page 1* *page 2 of 2*



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SR#: _____

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Report To:		ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER		Preservative																0. None	
Project Name: Bathpage GM38 Semiannual LTM		Project Name: Company Koman Gov Solutions																		1. HCl	
Contact: Bob Gregory		Project Number: 2605-106																		2. HNO3	
Email: Rgregory@KOMANGS.com		ALS Quote #:																		3. H2SO4	
Phone: 610-324-8462		Sampler's Signature: Elizabeth Goernemann																		4. NaOH	
Address: 180 Gordon drive Suite 110		Email CC: egoernemann@komangs.com																		5. Zn Acet.	
Exton PA 19341		Email CC: egeiler@komangs.com																		6. MeOH	
		State Samples Collected (Circle or Write): NY, MA, PA, CT, Other:																		7. NaHSO4	

Lab ID (ALS)	Sample Collection Information:			Matrix	Number of Containers	MS/MSD?	GC/MS VOA - 8260•624•524•TCLP	GC/MS SVOA - 8270 • 625 • TCLP	Pesticides - 8081 • 608 • TCLP	PCBs - 8082 • 608	Herbicides - 8151 • TCLP	Metals, Total - Select Below	Metals, Dissolved - Field / In-Lab Filter	TSS								Notes:	
	Sample ID:	Date	Time																				
	GM-38 ^{-GW} -RW3-MW4-0423	4-11-2023	0917	GW	15	X	9					3	3										
	GM-38 ^{-GW} -RW3-MW3-0423	4-11-2023	1017	GW	5		3					1	1										
	GM-38 ^{-GW} -RW3-MW3-DUP-0423	4-11-2023	1022	GW	5		3					1	1										
	GM-38 ^{-GW} -EB-0423	4-11-2023	1055	Blank	5		3					1	1										Equipment blank
	GM-38 ^{-GW} -RW3-MW2-0423	4-11-2023	1223	GW	5		3					1	1										
	GM-38 ^{-GW} -RW3-MW1-0423	4-11-2023	1305	GW	5		3					1	1										
	GM-38-GW-TP01-0423	4/12/23	0855	GW	5		3					1	1										
	GM-38-GW-RW1-MW1-0423	4/12/23	1012	GW	5		3					1	1										
	GM-38-GW-RW1-MW3-0423	4/12/23	1212	GW	5		3					1	1										
	GM-38-GW-RW2-MW1-0423	4/12/23	1425	GW	5		3					1	1										

Special Instructions / Comments: Total metals = Hg only	Turnaround Requirements		Report Requirements		Metals: RCRA 8•PP 13•TAL 23•TCLP•Other (List)	
	<input type="checkbox"/> Rush (Surcharges Apply) *Subject to Availability* *Please Check with your PM* <input checked="" type="checkbox"/> Standard (10 Business Days)		<input type="checkbox"/> Tier II/Cat A - Results/QC <input type="checkbox"/> Tier IV/Cat B - Data Validation Report w/ Data		VOA/SVOA Report List: TCL • BTEX • TCLP • CP-51/Stars • THM • Other: _____	
	Date Required: _____		EDD: <input type="checkbox"/> Yes <input type="checkbox"/> No		Invoice To: (<input type="checkbox"/> Same as Report To) PO #: _____ Company: _____	
			EDD Type: _____		Contact: _____	

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:	Contact:
Signature: [Signature]	[Signature]	[Signature]	[Signature]	[Signature]	[Signature]	Email:
Printed Name: Randy Hoffmartz	Gregory O. Esmerlin					
Company: KGS	ALS					
Date/Time: 4/12/23 1600ks	4/13/23 09:45					

R2303144 5
 KOMAN Government Solutions, LLC
 Bathpage GM-38 Semiannual LTM



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Report To:		ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER				Preservative		2		0. None													
Company: <u>Koman Government Solutions</u>		Project Name: <u>Bethpage GMSE Semi-Annual LTM</u>				GW WW SW DW S L NA	Number of Containers	MS/MSD?	GC/MS VOA - 8260•624•524•TCLP	GC/MS SVOA - 8270 • 625 • TCLP	Pesticides - 8081 • 608 • TCLP	PCBs - 8082 • 608	Herbicides - 8151 • TCLP	Metals, Total - Select Below	Metals, Dissolved - Field / In-Lab Filter	1. HCl	2. HNO3	3. H2SO4	4. NaOH	5. Zn Acet.	6. MeOH	7. NaHSO4	8. Other
Contact: <u>Bob Gregory</u>		Project Number: <u>2605-006</u>																					
Email: <u>Rgregory@komang.com</u>		ALS Quote #:																					
Phone: <u>610-324-8462</u>		Sampler's Signature: <u>[Signature]</u>																					
Address: <u>180 Gordon Drive sk 110</u> <u>Exton PA 19341</u>		Email CC: <u>eseiler@komang.com</u> <u>egoernemann@komang.com</u>																					
		State Samples Collected (Circle or Write): <u>NY</u> MA, PA, CT, Other:																					
Lab ID (ALS)	Sample Collection Information:			Matrix	Number of Containers	MS/MSD?	GC/MS VOA - 8260•624•524•TCLP	GC/MS SVOA - 8270 • 625 • TCLP	Pesticides - 8081 • 608 • TCLP	PCBs - 8082 • 608	Herbicides - 8151 • TCLP	Metals, Total - Select Below	Metals, Dissolved - Field / In-Lab Filter	Notes:									
	Sample ID:	Date	Time																				
	<u>Trip Blank 1</u>	<u>---</u>	<u>---</u>	<u>Blank</u>	<u>3</u>		<u>3</u>																
	<u>Trip Blank 2</u>	<u>---</u>	<u>---</u>	<u>Blank</u>	<u>3</u>		<u>3</u>																
Special Instructions / Comments:						Turnaround Requirements			Report Requirements			Metals: RCRA 8•PP 13•TAL 23•TCLP•Other (List)											
Trip Blank 1 = <u>RW3-MW4 EB RW22-MW1</u> <u>AW3-MW3 DUP</u>						<input type="checkbox"/> Rush (Surcharges Apply) <input type="checkbox"/> Subject to Availability* <input type="checkbox"/> Please Check with your PM* <input checked="" type="checkbox"/> Standard (10 Business Days)			<input type="checkbox"/> Tier II/Cat A -Results/QC <input type="checkbox"/> Tier IV/Cat B - Data Validation Report w/. Data			VOA/SVOA Report List: TCL • BTEX • TCLP • CP-51/Stars • THM • Other: _____											
Trip Blank 2 = <u>RW3-MW2 RW1-MW1</u> <u>RW3-MW1 RW3-MW3</u> <u>TP01</u>						Date Required:			EDD: <input type="checkbox"/> Yes <input type="checkbox"/> No EDD Type:			Invoice To: <input type="checkbox"/> Same as Report To											
Relinquished By:		Received By:		Relinquished By:		Received By:		Relinquished By:		Received By:		Contact:											
Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Email:											
Printed Name: <u>Randy Hoffmaster</u>		Printed Name: <u>Gregory O. Esmerlan</u>		Printed Name: <u>[Signature]</u>		Printed Name: <u>[Signature]</u>		Printed Name: <u>[Signature]</u>		Printed Name: <u>[Signature]</u>		R2303144 5 KOMAN Government Solutions, LLC Bethpage GM-38 Semiannual LTM 											
Company: <u>KGS</u>		Company: <u>ALS</u>		Company: <u>[Signature]</u>		Company: <u>[Signature]</u>		Company: <u>[Signature]</u>		Company: <u>[Signature]</u>													
Date/Time: <u>4/12/23 1600hrs</u>		Date/Time: <u>4/13/23 0915</u>		Date/Time: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>													



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SR#:

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Report To: Company: <i>Bothpage GM38 Kimmann LTM</i>		ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER										Preservative	0. None
Contact: <i>Bob Gregory</i>		Project Name: <i>Company Kaman Gov Solutions</i>											1. HCl
Email: <i>Rgregory@KIMANGS.com</i>		Project Number: <i>2605-106</i>											2. HNO3
Phone: <i>610-324-8462</i>		ALS Quote #:											3. H2SO4
Address: <i>180 Gordondrive suite 110 Exton PA 19341</i>		Sampler's Signature: <i>Elizabeth Goernemann</i>											4. NAOH
		Email CC: <i>egregory@kimmang.com</i>										GW	5. Zn Acet.
		Email CC: <i>egornemann@kimmang.com</i>										WW	6. MeOH
		State Samples Collected (Circle or Write): <i>NY, MA, PA, CT, Other:</i>										SW	7. NaHSO4
												DW	8. Other
												S	Notes:
												L	
												NA	

Lab ID (ALS)	Sample Collection Information:			Matrix	Number of Containers	MS/MSD?	GC/MS VOA - 8260 • 624 • 524 • TCLP	GC/MS SVOA - 8270 • 625 • TCLP	Pesticides - 8081 • 608 • TCLP	PCBs - 8082 • 608	Herbicides - 8151 • TCLP	Metals, Total - Select Below	Metals, Dissolved - Field / In-Lab Filter	TSS						
	Sample ID:	Date	Time																	
	<i>GM-38-GW-RW3-MW4-0423</i>	<i>4-11-2023</i>	<i>0917</i>	<i>GW</i>	<i>15</i>	<i>X</i>	<i>9</i>					<i>3</i>	<i>3</i>							
	<i>GM-38-GW-RW3-MW3-0423</i>	<i>4-11-2023</i>	<i>1017</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-RW3-MW3-DUP-0423</i>	<i>4-11-2023</i>	<i>1022</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-FB-0423</i>	<i>4-11-2023</i>	<i>1055</i>	<i>Blank</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							<i>equipment blank</i>
	<i>GM-38-GW-RW3-MW2-0423</i>	<i>4-11-2023</i>	<i>1223</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-RW3-MW7-0423</i>	<i>4-11-2023</i>	<i>1305</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-TP01-0423</i>	<i>4/12/23</i>	<i>0855</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-RW1-MW1-0423</i>	<i>4/12/23</i>	<i>1012</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-RW1-MW3-0423</i>	<i>4/12/23</i>	<i>1212</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							
	<i>GM-38-GW-RW2-MW1-0423</i>	<i>4/12/23</i>	<i>1425</i>	<i>GW</i>	<i>5</i>		<i>3</i>					<i>1</i>	<i>1</i>							

Special Instructions / Comments: <i>Total metals = Hg only</i>	Turnaround Requirements	Report Requirements	Metals: RCRA 8 • PP 13 • TAL 23 • TCLP • Other (List)
	<input type="checkbox"/> Rush (Surcharges Apply)	<input type="checkbox"/> Tier II/Cat A - Results/QC	VOA/SVOA Report List: TCL • BTEX • TCLP • CP-51/Stars • THM • Other: _____
	Subject to Availability	<input type="checkbox"/> Tier IV/Cat B - Data	
	Please Check with your PM	<input checked="" type="checkbox"/> Standard (10 Business Days)	Validation Report w/. Data
Date Required:		EDD: <input type="checkbox"/> Yes <input type="checkbox"/> No	PO #:
		EDD Type:	Company:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:	Contact:
Signature: <i>Randy Hoffstadt</i>						Email:
Printed Name: <i>Randy Hoffstadt</i>						Phone:
Company: <i>KGS</i>						Address:
Date/Time: <i>4/12/23 1600h</i>						



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SR#: Page 2 of 2

Report To:		ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER						Preservative														0. None	
Company: Komang Government Solutions		Project Name: Bethpage GM38 Semi-Annual LTM																				1. HCl	
Contact: Bob Gregory		Project Number: 2605-006																				2. HNO3	
Email: Rgregory@komangs.com		ALS Quote #:																				3. H2SO4	
Phone: 610-324-8462		Sampler's Signature: [Signature]						GW														4. NaOH	
Address: 180 Gordon Drive Ste 110 Exton PA 19341		Email CC: eseiler@komangs.com						WW														5. Zn Acet.	
		Email CC: e.guernemann@komangs.com						SW														6. MeOH	
		State/Samples Collected (Circle or Write): NY MA, PA, CT, Other:						DW														7. NaHSO4	
								S														8. Other	
								L															
								NA															

Lab ID (ALS)	Sample Collection Information:			Matrix	Number of Containers	MS/MSD?	GC/MS VOA - 8260 • 624 • 524 • TCLP	GC/MS SVOA - 8270 • 625 • TCLP	Pesticides - 8081 • 608 • TCLP	PCBs - 8082 • 608	Herbicides - 8151 • TCLP	Metals, Total - Select Below	Metals, Dissolved - Field / In-Lab Filter									Notes:	
	Sample ID:	Date	Time																				
	Trip Blank 1	---	---	Blank	3		3																
	Trip Blank 2	---	---	Blank	3		3																

Special Instructions / Comments:

Trip Blank 1 = RW3 MW4 EB RW22 MW1
 RW3 MW3 DUP

Trip Blank 2 = RW3 MW2 RW1 MW1
 RW3 MW1
 -POT

Turnaround Requirements

Rush (Surcharges Apply)
 Subject to Availability
 Please Check with your PM
 Standard (10 Business Days)

Date Required:

Report Requirements

Tier II/Cat A - Results/QC
 Tier IV/Cat B - Data Validation Report w/. Data

EDD: Yes No

EDD Type:

Metals: RCRA 8 • PP 13 • TAL 23 • TCLP • Other (List)

VOA/SVOA Report List: TCL • BTEX • TCLP • CP-51/Stars • THM • Other: _____

Invoice To: Same as Report To

PO #:

Company:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:	Contact:
Signature: [Signature]						Email:
Printed Name: Randy Hoffmest						Phone:
Company: KGS						Address:
Date/Time: 4/12/23 rroohis						

APPENDIX D
DATA VALIDATION REPORT

**DATA VALIDATION REPORT (DVR)
VOLATILE ORGANIC COMPOUNDS**

DoD Level 2B Review

Project Name: Naval Weapons Industrial Reserve Plant, GM-38 Area - LTM
Location: 100 Broadway, Bethpage, NY
SDG #: R2303144
Client: KOMAN Government Solutions, LLC
Date: 05/11/2023
Laboratory: ALS Environmental, Rochester, NY
Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for nine (9) water samples, two (2) trip blanks, and one (1) equipment blank analyzed for Volatiles by EPA Method 624.1.
2. The samples were collected on 04/11-12/2023. The samples were submitted to ALS Environmental, Rochester, NY on 04/13/2023 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
GM-38-GW-RW3-MW4-0423	R2303144-001	04/11/2023	Water	
GM-38-GW-RW3-MW3-0423	R2303144-002	04/11/2023	Water	
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	04/11/2023	Water	Field Duplicate of sample GM-38-GW-RW3-MW3-0423
GM-38-EB-0423	R2303144-004	04/11/2023	Water	Equipment Blank
GM-38-GW-RW3-MW2-0423	R2303144-005	04/11/2023	Water	
GM-38-GW-RW3-MW1-0423	R2303144-006	04/11/2023	Water	
GM-38-GW-TP01-0423	R2303144-007	04/12/2023	Water	
GM-38-GW-RW1-MW1-0423	R2303144-008	04/12/2023	Water	
GM-38-GW-RW1-MW3-0423	R2303144-009	04/12/2023	Water	
GM-38-GW-RW2-MW1-0423	R2303144-010	04/12/2023	Water	
Trip Blank 1	R2303144-011	04/11/2023	Water	Trip Blank (RW3-MW4, EB, RW3-MW3, DUP, RW2-MW1)
Trip Blank 2	R2303144-012	04/11/2023	Water	Trip Blank (RW3-MW2, RW1-MW1, RW1-MW3, RW3-MW3, TP01)

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.

Holding Times:

1. All water samples were analyzed within 14 days from sample collection. No qualifications were required.
2. All water samples were properly preserved (pH<2.0). No qualifications were required.



Initial Calibration Verification (ICV)/Continuing Calibration Verification (CCV):

1. ICV analyzed on 04/17/2023 @ 11:45AM (R-Ms-17) exhibited acceptable %Rs for all compounds. No qualifications were required.
2. CCV analyzed on 04/17/2023 @ 12:22PM (R-Ms-17) exhibited acceptable %Rs for all compounds. No qualifications were required.

Surrogates:

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

Internal Standard (IS) Area Performance:

1. Samples exhibited acceptable area count for the internal standards. 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 (RQ2304378-03) analyzed on 04/17/2023 was free of contamination. No qualifications were required.
2. Equipment Blank (GM-38-EB-0423) (R2303144-004) analyzed on 04/17/2023 contained trichloroethene (0.550 ug/L). Field sample results for trichloroethene were >2X the equipment blank contamination. No qualifications were required.
3. Trip Blank 1 (R2303144-011) analyzed on 04/17/2023 was free of contamination. No qualifications were required.
4. Trip Blank 2 (R2303144-012) analyzed on 04/17/2023 was free of contamination. No qualifications were required.

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

1. Laboratory Control Sample (RQ2304378-02) was analyzed on 04/17/2023. All %RECs were within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample GM-38-GW-RW3-MW3-DUP-0423 (R2303144-003) was collected as field duplicate for sample GM-38-GW-RW3-MW3-0423 (R2303144-002). All RPDs were ≤50.0%.

Field Sample	Compound	Analytical Method	Result	Units	Field Duplicate	Result	Units	RPD	Qualifier
GM-38-GW-RW3-MW3-0423	1,1-Dichloroethane	EPA 624	1.03 J	µg/l	GM-38-GW-RW3-MW3-DUP-0423	1.04 J	µg/L	1.0	NONE
GM-38-GW-RW3-MW3-0423	1,1-Dichloroethene	EPA 624	0.770 J	µg/l	GM-38-GW-RW3-MW3-DUP-0423	0.840 J	µg/L	8.7	NONE
GM-38-GW-RW3-MW3-0423	Tetrachloroethene	EPA 624	0.400 J	µg/l	GM-38-GW-RW3-MW3-DUP-0423	0.520 J	µg/L	26.1	NONE
GM-38-GW-RW3-MW3-0423	Trichloroethene	EPA 624	146	µg/l	GM-38-GW-RW3-MW3-DUP-0423	144	µg/L	1.4	NONE
GM-38-GW-RW3-MW3-0423	Cis-1,2-dichloroethene	EPA 624	0.440 J	µg/l	GM-38-GW-RW3-MW3-DUP-0423	0.480 J	µg/L	8.7	NONE

Matrix Spike (MS)/ Matrix Spike Duplicate (MSD):

1. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were performed on sample GM-38-GW-RW3-MW4-0423 (R2303144-001). All %RECs/RPDs were within the laboratory control limits. No qualifications were required.

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

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

Target Compound Identification:

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

Comments:

1. Validation qualifiers (if required) were entered into the EDD for SDG: R2303144.
2. Summary of the qualified data is listed in the Qualification Summary Table for SDG: R2303144 at the end of the data validation report.

DATA VALIDATION REPORT (DVR)
MERCURY
DoD Level 2B Review

Project Name: Naval Weapons Industrial Reserve Plant, GM-38 Area - LTM
Location: 100 Broadway, Bethpage, NY
SDG #: R2303144
Client: KOMAN Government Solutions, LLC
Date: 05/11/2023
Laboratory: ALS Environmental, Rochester, NY
Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for nine (9) water samples and one (1) field blank analyzed for Mercury by EPA Method 245.1.
2. The samples were collected on 04/11/2023. The samples were submitted to ALS Environmental, Rochester, NY on 04/13/2023 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
GM-38-GW-RW3-MW4-0423	R2303144-001	04/11/2023	Water	
GM-38-GW-RW3-MW3-0423	R2303144-002	04/11/2023	Water	
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	04/11/2023	Water	Field Duplicate of sample GM-38-GW-RW3-MW3-0423
GM-38-EB-0423	R2303144-004	04/11/2023	Water	Equipment Blank
GM-38-GW-RW3-MW2-0423	R2303144-005	04/11/2023	Water	
GM-38-GW-RW3-MW1-0423	R2303144-006	04/11/2023	Water	
GM-38-GW-TP01-0423	R2303144-007	04/12/2023	Water	
GM-38-GW-RW1-MW1-0423	R2303144-008	04/12/2023	Water	
GM-38-GW-RW1-MW3-0423	R2303144-009	04/12/2023	Water	
GM-38-GW-RW2-MW1-0423	R2303144-010	04/12/2023	Water	

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.

Holding Times:

1. All water samples were digested and analyzed within the 28-day holding time for Mercury. No qualifications were required.

Initial and Continuing Calibration Verification (ICV and CCV):

1. All ICVs and CVVs %R values and correlation coefficients for calibration curve analyzed were within the QC limits. No qualifications were required.

Blanks (Method Blank, ICB and CCB):

1. All ICBs and CCBs were free of contamination. No qualifications were required.
2. Method Blank (R2303144) digested on 04/19/2023 and analyzed on 04/20/2023 was free of contamination. No qualifications were required.

Field Blank (FB) and Equipment Blank (EB):

1. Field Blank (GM-38-GW-EB-0423) (R2303144-004) analyzed on 04/20/2023 was free of contamination. No qualifications were required.

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

1. Mercury %REC in Laboratory Control Sample analyzed on 04/20/2023 was within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample GM-38-GW-RW3-MW3-DUP-0423 (R2303144-003) was collected as field duplicate for sample GM-38-GW-RW3-MW3-0423 (R2303144-002). Results for mercury were non-detect in the field duplicate pair. No qualifications were required.

Matrix Spike (MS)/ Matrix Spike Duplicate (MSD) and Duplicate/Laboratory Duplicate:

1. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were performed on sample GM-38-GW-RW3-MW4-0423 (R2303144-001). All %RECs and RPD were within the laboratory control limits. No qualifications were required.

Compound Quantitation and Reported Detection Limits:

1. All sample results were reported within the linear calibration range.

Comments:

1. Validation qualifiers (if required) were entered into the EDD for SDG: R2303144.
2. Summary of the qualified data is listed in the Qualification Summary Table for SDG: R2303144 at the end of the data validation report.

DATA VALIDATION REPORT (DVR)
GENERAL CHEMISTRY
DoD Level 2B Review

Project Name: Naval Weapons Industrial Reserve Plant, GM-38 Area-LTM
Location: 100 Broadway, Bethpage, NY
SDG #: R2303144
Client: KOMAN Government Solutions, LLC
Date: 05/11/2023
Laboratory: ALS Environmental, Rochester, NY
Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for nine (9) water samples and one (1) equipment blank (EB) sample analyzed for Solids, Total Suspended (TSS) by SM2540D.
2. The samples were collected on 04/11/2023. The samples were submitted to ALS Environmental, Rochester, NY on 04/13/2023 for analysis.
3. In general, the data are valid as reported and may be used for decision making purposes. No data points were qualified due to nonconformance of 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
GM-38-GW-RW3-MW4-0423	R2303144-001	04/11/2023	Water	
GM-38-GW-RW3-MW3-0423	R2303144-002	04/11/2023	Water	
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	04/11/2023	Water	Field Duplicate of sample GM-38-GW-RW3-MW3-0423
GM-38-EB-0423	R2303144-004	04/11/2023	Water	Equipment Blank
GM-38-GW-RW3-MW2-0423	R2303144-005	04/11/2023	Water	
GM-38-GW-RW3-MW1-0423	R2303144-006	04/11/2023	Water	
GM-38-GW-TP01-0423	R2303144-007	04/12/2023	Water	
GM-38-GW-RW1-MW1-0423	R2303144-008	04/12/2023	Water	
GM-38-GW-RW1-MW3-0423	R2303144-009	04/12/2023	Water	
GM-38-GW-RW2-MW1-0423	R2303144-010	04/12/2023	Water	

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.

Holding Times:

1. All water samples were analyzed within the 7-day holding time for Solids, Total Suspended. No qualifications were required.

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

1. Method Blank (R2303144-MB) analyzed on 04/17/2023 was free of contamination. No qualifications were required.



- Equipment Blank (GM-38-GW-EB-0423) (R2303144-004) analyzed on 04/17/2023 was free of contamination. No qualifications were required.

Field Duplicate:

- Sample GM-38-GW-RW3-MW3-DUP-0423 (R2303144-003) was collected as field duplicate for sample GM-38-GW-RW3-MW3-0423 (R2303144-002). The RPD for TSS ≤50%. No qualifications were required.

Field Sample	Compound	Analytical Method	Result	Units	Field Duplicate	Result	Units	RPD	Qualifier
GM-38-GW-RW3-MW3-0423	TSS	SM2540D-2015	2.0	mg/L	GM-38-GW-RW3-MW3-DUP-0423	1.6	mg/L	22.2	NONE

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

- Mercury %REC in Laboratory Control Sample analyzed on 04/17/2023 was within the laboratory control limits. No qualifications were required.

Laboratory Duplicate:

- Sample Duplicate was performed on sample GM-38-GW-RW3-MW4-0423 (R2303144-001). TSS RPD was inside the laboratory control limits. No qualifications were required.

Compound Quantitation and Reported Detection Limits:

- All sample results were reported within the linear calibration range.

Comments:

- Validation qualifiers (if required) were entered into the EDD for SDG: R2303144.
- Summary of the qualified data is listed in the Qualification Summary Table for SDG: R2303144 at the end of the data validation report.

NWIRP BETHPAGE, GM-38 AREA LTM
APRIL 2023
QUALIFICATION SUMMARY TABLE
GROUNDWATER
SDG: R2303144
VOCs, MERCURY, and TSS

Sample Name	Lab ID	Analytical Method	Analyte	Unit	Reported Result	Lab Qualifier	Validated Value	DV Qualifier	Reason Code
<div style="border: 1px solid black; width: 30%; margin: auto; padding: 10px;">None Required</div>									

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



NWIRP BETHPAGE GM-38
APRIL 2023 LTM EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: R2303144

Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW3-MW4-0423	R2303144-001	2540D	4/11/2023	1	Solids, Total Suspended (TSS)	1.0	MG_L	U		1.0
GM-38-GW-RW3-MW3-0423	R2303144-002	2540D	4/11/2023	1	Solids, Total Suspended (TSS)	2.0	MG_L			1.0
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	2540D	4/11/2023	1	Solids, Total Suspended (TSS)	1.6	MG_L			1.0
GM-38-GW-EB-0423	R2303144-004	2540D	4/11/2023	1	Solids, Total Suspended (TSS)	1.0	MG_L	U		1.0
GM-38-GW-RW3-MW2-0423	R2303144-005	2540D	4/11/2023	1	Solids, Total Suspended (TSS)	3.5	MG_L			1.0
GM-38-GW-RW3-MW1-0423	R2303144-006	2540D	4/11/2023	1	Solids, Total Suspended (TSS)	1.0	MG_L	U		1.0
GM-38-GW-TP01-0423	R2303144-007	2540D	4/12/2023	1	Solids, Total Suspended (TSS)	1.0	MG_L	U		1.0
GM-38-GW-RW1-MW1-0423	R2303144-008	2540D	4/12/2023	1	Solids, Total Suspended (TSS)	1.0	MG_L			1.0
GM-38-GW-RW1-MW3-0423	R2303144-009	2540D	4/12/2023	1	Solids, Total Suspended (TSS)	1.0	MG_L	U		1.0
GM-38-GW-RW2-MW1-0423	R2303144-010	2540D	4/12/2023	1	Solids, Total Suspended (TSS)	2.4	MG_L			1.0
GM-38-GW-RW3-MW4-0423	R2303144-001	245.1	4/11/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW3-MW3-0423	R2303144-002	245.1	4/11/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	245.1	4/11/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-EB-0423	R2303144-004	245.1	4/11/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW3-MW2-0423	R2303144-005	245.1	4/11/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW3-MW1-0423	R2303144-006	245.1	4/11/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-TP01-0423	R2303144-007	245.1	4/12/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW1-MW1-0423	R2303144-008	245.1	4/12/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW1-MW3-0423	R2303144-009	245.1	4/12/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW2-MW1-0423	R2303144-010	245.1	4/12/2023	1	Mercury	0.10	UG_L	U	0.10	0.20
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,1,1-Trichloroethane (TCA)	0.550	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCA)	3.27	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,1-Dichloroethene (1,1-DCE)	0.760	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Benzene	1.00	UG_L	U	1.00	5.00



NWIRP BETHPAGE GM-38
APRIL 2023 LTM EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: R2303144

Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Tetrachloroethene (PCE)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Trichloroethene (TCE)	5.18	UG_L		1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	cis-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW4-0423	R2303144-001	624.1	4/11/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCA)	1.03	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,1-Dichloroethene (1,1-DCE)	0.770	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Acrylonitrile	100	UG_L	U		100



NWIRP BETHPAGE GM-38
APRIL 2023 LTM EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: R2303144

Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Tetrachloroethene (PCE)	0.400	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Trichloroethene (TCE)	146	UG_L		1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	cis-1,2-Dichloroethene	0.440	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-0423	R2303144-002	624.1	4/11/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCA)	1.04	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,1-Dichloroethene (1,1-DCE)	0.840	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00



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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Tetrachloroethene (PCE)	0.520	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Trichloroethene (TCE)	144	UG_L		1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	cis-1,2-Dichloroethene	0.480	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW3-DUP-0423	R2303144-003	624.1	4/11/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCE)	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00



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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Tetrachloroethene (PCE)	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Trichloroethene (TCE)	0.550	UG_L	J	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	cis-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-EB-0423	R2303144-004	624.1	4/11/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCA)	0.280	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCE)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00



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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Tetrachloroethene (PCE)	0.270	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Trichloroethene (TCE)	56.9	UG_L		1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	cis-1,2-Dichloroethene	0.290	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW2-0423	R2303144-005	624.1	4/11/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,1-Dichloroethane (1,1-DCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,1-Dichloroethene (1,1-DCE)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00



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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Tetrachloroethene (PCE)	1.08	UG_L	J	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Trichloroethene (TCE)	16.9	UG_L		1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	cis-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW3-MW1-0423	R2303144-006	624.1	4/11/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,1-Dichloroethane (1,1-DCA)	0.630	UG_L	J	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,1-Dichloroethane (1,1-DCE)	0.250	UG_L	J	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00



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DATA SUMMARY TABLE
AQUEOUS
SDG: R2303144

Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Tetrachloroethene (PCE)	1.70	UG_L	J	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Trichloroethene (TCE)	7.72	UG_L		1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	cis-1,2-Dichloroethene	0.470	UG_L	J	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-TP01-0423	R2303144-007	624.1	4/12/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,1,1-Trichloroethane (TCA)	0.600	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,1-Dichloroethane (1,1-DCA)	2.88	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,1-Dichloroethane (1,1-DCE)	0.990	UG_L	J	1.00	5.00



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DATA SUMMARY TABLE
AQUEOUS
SDG: R2303144

Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Tetrachloroethene (PCE)	0.290	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Trichloroethene (TCE)	47.9	UG_L		1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	cis-1,2-Dichloroethene	2.98	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW1-0423	R2303144-008	624.1	4/12/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,1,1-Trichloroethane (TCA)	0.520	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,1,2-Trichloroethane	0.330	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,1-Dichloroethane (1,1-DCA)	2.95	UG_L	J	1.00	5.00



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DATA SUMMARY TABLE
AQUEOUS
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Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,1-Dichloroethene (1,1-DCE)	0.780	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,2-Dichloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Chloroform	0.560	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Tetrachloroethene (PCE)	0.380	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Trichloroethene (TCE)	3.27	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	cis-1,2-Dichloroethene	0.270	UG_L	J	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW1-MW3-0423	R2303144-009	624.1	4/12/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,1,1-Trichloroethane (TCA)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,1,2,2-Tetrachloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,1,2-Trichloroethane	1.00	UG_L	U	1.00	5.00



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DATA SUMMARY TABLE
AQUEOUS
SDG: R2303144

Sample Name	Lab ID	Analytical Method	Collection Date	Dilution Factor	Analyte	Result	Unit	Qualifier	LOD	LOQ
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,1-Dichloroethane (1,1-DCA)	2.59	UG_L	J	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,1-Dichloroethene (1,1-DCE)	0.680	UG_L	J	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,2-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,2-Dichloroethane	0.460	UG_L	J	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,2-Dichloropropane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,3-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,4-Dichlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Acrylonitrile	100	UG_L	U		100
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Benzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Bromodichloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Bromoform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Bromomethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Carbon Tetrachloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Chlorobenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Chloroethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Chloroform	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Chloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Dibromochloromethane	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Methylene Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Ethylbenzene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Tetrachloroethene (PCE)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Toluene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Trichloroethene (TCE)	5.95	UG_L		1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Trichlorofluoromethane (CFC 11)	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	Vinyl Chloride	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	cis-1,2-Dichloroethene	9.74	UG_L		1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	cis-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	trans-1,2-Dichloroethene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	trans-1,3-Dichloropropene	1.00	UG_L	U	1.00	5.00
GM-38-GW-RW2-MW1-0423	R2303144-010	624.1	4/12/2023	1	1,3-Dichloropropene, Total	10.0	UG_L	U		10.0